

Lwarp

LATEX HTML5

The lwarp package

LATEX to HTML

v0.914 — 2024/01/11

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GitHub: <https://github.com/bdtc/lwarp>

Abstract

The `lwarp` package converts LATEX to HTML by using LATEX to process the user's document and directly generate HTML tags. External utility programs are only used for the final conversion of text and images. Math may be represented by SVG images or MATHJAX. More than 500 LATEX packages and classes are supported, of which more than 90 also support MATHJAX.

Documents may be produced by DVI or PDF LATEX, LuaLATEX, XeLATEX; by several CJK engines, classes, and packages; or by customized systems such as perltex and pythontex. A `texlua` script automates compilation, index, glossary, and batch image processing, and also supports `latexmk`. Configuration is semi-automatic at the first manual compile. Support files are self-generated. Print and HTML versions of each document may coexist.

Assistance is provided for HTML import into EPUB conversion software and word processors.

Requirements include the commonly-available POPPLER utilities (included with MiKTEX) and PERL. Detailed installation instructions are included for each of the major operating systems and TeX distributions.

A quick-start tutorial is provided, as well as extensive documentation for special cases, a general index, and a troubleshooting index. Automatic error testing is provided for configuration files, package load order, and image generation.

SVG math and many other generated images include LATEX expressions in the alt tags. MATHJAX may be used with advanced equation numbering under the direct control of `lwarp`.

Complicated tables are supported, which copy/paste well into LIBREOFFICE WRITER.

Supported classes and packages include memoir and koma-script, cleveref, caption, mdframed, siunitx, and many popular packages for tabulars, floats, graphics, theorems, the title page, bibliography, indexing, footnotes, and editorial work, as well as a number of CJK-related classes and packages.

TeX is a self-modifying tokenized macro-expansion language. Since `lwarp` is written directly in LATEX, it is able to interpret the document's meaning at a deeper level than external conversions which merely approximate TeX. HTML5 and CSS3 are leveraged to provide advanced features such as booktabs trim, multicolumns, side-by-side minipages, and JAVASCRIPT-free navigation.

For a quick-start tutorial, see section 5, Tutorial.

For a list of supported features, see table 2: Supported packages and features.

To update existing projects, see section 1: Updates.

Need help? See the General Index or the Troubleshooting Index.

Lwarp is still in development. Changes are likely.

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1 Updates

The following is a summary of updates to l warp, highlighting new features and any special changes which must be made due to improvements or modifications in l warp itself.

For a detailed list of the most recent changes, see the end of the Change History on page 1359.

v0.914: Detects changing packages.

- Now verifies many definitions before patching, warning of possible problems if the original has changed.
- Fix: fontawesome5 for XeLATEX, LuaLATEX.

v0.913: HTML sanitization for verbatims.

- Now at GitHub: <https://github.com/bdtc/lwarp>
- Added bibliography usage info to docs and tutorial.
- \verb now uses a css class of verb instead of texttt.
- Improved HTML sanitization for hyperlinks, fancybox, fancyvrb, fvextra, minted.
- Updated fancyvrb, fvextra, simplebnf.
- siunitx: Updated, and improved complex i,j.
- Added doipubmed.

v0.912: Updated for new LATEX label system.

 New labels

- Due to changes in cross referencing, execute `lwarpmk clean` before `recompiling`.
- Fixed for updated kernel label system, name and back references.
- Updated memoir, tcolorbox.
- nameref: Now allowed to load before l warp, such as by memoir.

v0.911: Updated mismatch, tcolorbox.

v0.910: Updated fvextra, minted.

v0.909: \ref fix.

- Fixed \ref*, beamerarticle, lyluatex, realscripts.
- Updated mismatch, nicematrix, pablance, pdfpages, simplebnf, tagpdf.

v0.908: Bug fix.

- Fixed obscure cross-reference issue, seen in some citations.

v0.907: Bug fix.

- Fixed SVG images for WINDOWS.

v0.906: Screen readers

- For each `tabular`, add a hidden HTML header cell to convince screen readers that the tables are data not layout. Also hide from the screen reader any final row used only to produce bottom borders.
- Adjusted SVG math for a margin change in `pdfcrop`.
- Added `\Ref`.
- Added docs regarding math in custom environments. See section 8.7.

v0.905: Bug fixes, internal improvements.

- Fixed conflict between `cleveref` and `splitidx`.
- Improved coexistence with `\AtEndDocument`.
- `acronym`: Updated to v1.47, added hyper links.

v0.904a: Fixed missing l warp-common-mathjax-siunitx package.**v0.904:** Added siunitx v3.

- Fixed HTML tags inside non-Latin text.
- MATHJAX now defaults to SVG rendering.
- Added siunitx v3. Updated siunitx-v2. See section 8.7.15 for limitations.
- Updated caption, chemmacros, fbox, hyperref, multicol, wrapfig2.

v0.903: Various updates and improvements.

l warpmk

- Error if `pdftotext` not available. Ensures that POPPLER programs are installed.

core

 New images

- `ps2pdf`: Allow transparency due to recent changes in `ps2pdf`.

- Due to changes in how automatically-generated SVG image file names are computed, after `l warpmk html` use `l warpmk cleanimages` a single time, and then `l warpmk l images` to generate the new images.

- Improved back refs.

- Fixed `verbatim*`.

- Various internal updates for recent LATEX release.

packages

- `cuted`: Updated to v2.0.

- `flushend`: Updated to v4.0.

- `mathalpha`: Updated for v1.14+.

- `minted`: Updated to v2.6.

- `cases`: Updated to v3.2.

- `siunitx` with MATHJAX: Improved `\per`, `\numlist`, `\SIList`, comma decimal points.

- Added `showlabels`, `wrapfig2`.

v0.902: beamerarticle, footnotes, paragraph tags.

core

- Fixed footnotes inside descriptions, minipages, `amsthm`, `\nameref`.

- Improved various paragraph tags.

packages

- Improved `parnotes`, `sympytex`.

- Added `beamerarticle`.

- Updated `luatexko`, `xetexko`, `tagpdf`.

MATHJAX

- Added missing standard international text symbols for MATHJAX.

v0.901: Tabular columns, float caption css, MATHJAX packages.

- core**
 - Added warpsvg to isolate SVG math, as opposed to warpMathJax.
 - Improved float caption css for newer browsers.
 - Improved emulation of \newcolumntype.
 - Added \HTMLnewcolumntype. See section 7.6,
 - >{\centering\arraybackslash}, etc. now sets HTML css text-align. Also detects \itshape, \bfseries, and \bfseries\itshape. See section 8.10.1.
- MATHJAX**
 - Now uses MATHJAX 3.2 packages for centernot, colortbl, gensymb, mathtools, textcomp, upgreek.
- packages**
 - dcolumn: Now works inside a lateximage.
 - Added mwe.
 - Added lltp-tascmac, which fixed ascmac.

v0.900: Package updates.

- core**
 - Fix for detecting \usepackage{l warp}.
- packages**
 - amsmath: Fixed alignat with MATHJAX.
 - changes: Updated to v4.2.1.
 - froufrou: Updated to v1.4.0.
 - lipsum: Updated to v2.3.

v0.899: Minor updates.

- core**
 - *l warpmk*: Warns if \usepackage{l warp} is not detected.
- packages**
 - graphics: Added support for keepaspectratio.
 - keyfloat: Fix: \w with h.
 - multicol: Improved css.

v0.898: Minor updates.

- Fewer underfull \hbox warnings.
- wrapfig: Improved integration with keyfloat.

v0.897: siunitx rollback.

- docs**
 - Added a table of file extensions to use with \includegraphics. See table 9.
- core**
 - Added tests for additional incompatible packages.
- packages**
 - siunitx: Supports rollback to v2. Does not yet support v3.
 - fixme: Improved to work if the user modifies layouts.
 - float: Improved integration with newfloat, keyfloat.
 - Added centerlastline, decorule, fancypar, froufrou, pbalance.
 - Verified works as-is with fnpct.

v0.896: Back references, accessibility.

- ⚠ New labels
- Due to changes in cross referencing, execute `l warpmk clean before recompiling`.
 - Increased sectioning nesting stack depth. Error if overflow stack.
 - Fixed footnotes at the end of the document, or inside a description label.
 - Added an error if using braces inside `\usepackage` options.
- MATHJAX theorems
- Fixed footnotes in bracket display math with MATHJAX.
 - LATEX theorems, `amsthm`, `ntheorem`, `theorem`: Print theorem footnotes following theorems.
- accessibility
- Added HTML `<main>` element to each page.
 - Added ARIA math role to SVG math images, and note role to margin notes, footnotes, etc.
- packages
- Improved citation backreferences for various packages.
 - `chemfig`: Updated to v1.6a.
 - `bigdelim`: Updated to v2.8.
 - `xetexko`: Updated to v3.1.
 - `hyperxmp`: Fix: Accept and discard additional keys.
 - `hyperef`: Fix: Added `*autorefname` macros.
 - `bilatex`: Fix: Back references.
 - `tocloft`: Fix: `\cftpagenumbersoff`, `\cftpagenumberson`.
 - `threeparttablex`: Fix: `\TPTL@tnotex`.
 - `amsthm`: Fix: Footnotes inside environment optional argument.
 - `listings`: Fixed labels. Accepts but ignores escapes w/o error.
 - `pdflscape`: Fix: Added Landscape environment.
 - Added `ccicons`, `classicthesis`, `orcidlink`.
 - Added `enotez`.
 - Verified support for `doi`, `doipubmed`.

v0.895: Vector packages, greatly improved MATHJAX for siunitx.

- core
- Fixed quotes in HTML tags while using old font packages with XE^LA_TE_X and LuaL^AT_EX.
- MATHJAX packages
- Added `\ifblank` and `\ifstreq` to MATHJAX emulation.
 - `multirow`: Allow `\par` per v2.7.
 - `acro`: Updated to v3.5.
 - `fancyhdr`: Updated to v4.0.
 - `changes`: Updated to v4.0.1.
 - `epsfig`, `rotating`: Now work inside `lateximage`.
 - `amscdx`: Verified to work with SVG math. Warning added about use with MATHJAX.
 - Added MATHJAX emulation for `isomath`, `mattens`, `maybernath`, `skmath`, `tensor`.
 - Improved MATHJAX emulation for `siunitx` `\ang`, `\num`, `\SI`.
 - Added `epsf`, `impnattypo`, `isotope`, `lpic`, `luavlna`, `mdwmath`, `pinlabel`, `rlepsf`, `tikz-imagelabels`, `xevlna`.
 - Verified to work as-is: `tensind`.

v0.894: MATHJAX additions and improvements.

- MATHJAX
 - Improved warning message for enabling SVG graphics for select math expressions while using MATHJAX.
 - Accept and ignore a star for `\hspace`.
 - Ignores `\arabic`, `\number`, `\noalign`.
- packages
 - Added MATHJAX emulation for `backnaur`, `colortbl`, `nicematrix`.
 - `booktabs`: MATHJAX emulation now absorbs and discards trim.
 - `menukeys`: Updated to v1.6.1.

v0.893: Minor fixes, more packages.

- MATHJAX
 - Added MATHJAX emulation for `\mathnormal`.
- packages
 - Fixed `pstricks pspicture*`.
 - Fixed `tikz` font macros.
 - `braket`: Now uses the MATHJAX extension.
 - Added `esvect`, `fixmath`, `keystroke`, `mathastext`, `menukeys`, `picinpar`, `plimsoll`, `repltext`, `selectp`, `seqsplit`, `simplebnf`, `statistics`, `swfigure`.
 - Added MATHJAX emulation for `mathspec`.
 - Verified to work as-is for `apxproof`, `syntaxdi`, `venndiagram`.

v0.892: `minted`, `fverextra`, MATHJAX `\left`/`\right`.

- MATHJAX
 - `fourier`, `libertinust1math`, `newpxmath`, `newtxmath`, `newtxsf`, `unicode-math`: Added MATHJAX `\left`/`\right` support for additional delimiters.
- packages
 - `textpos`: Updated to v1.10.
 - `xcolor`: Fixed optional args for `\fcolorbox` and related.
 - Added `fverextra`, `minted`.

v0.891: MATHJAX additions and improvements.

- core
 - Now displays inline `\verb` text as `\texttt`.
 - Fixed `alltt` and `verbatims` with L^AT_EX lists.
 - Now generates an error if nested each of `warpHTML`, `warpprint`, `warpMathJax` inside itself.
- MATHJAX
 - Added MATHJAX `textmacros` extension, allowing formatting inside `\text`.
- packages
 - `biblatex`, `hyperref`: Added back page references.
 - `fancyvrb`: Fixed `BVerbatim` with a label.
 - `listings`: Fixed MATHJAX with captions, improved HTML sanitation.
 - `babel-french`: Fixed `\texorpdfstring` conflict.
 - Now honors Greek package options for `mathdesign`, `mathpazo`, `mathptmx`, `newpxmath`, `newtxmath`.
 - Improved MATHJAX for `colonequals`, `mathdesign`, `mathdots`, `mathfixs`, `mathtools`, `multiobjective`, `nicefrac`, `shuffle`, `units`.
 - `unicode-math`: Added Greek macros, as well as macros for the first several categories listed in **texdoc unimath-symbols**. Improved symbol shape macros with Greek. Improved documentation.
 - Added `bussproofs`, `cmbright`, `fourier`, `kpffonts`, `kpffonts-otf`, `libertinust1math`, `scalerel`, `txgreeks`.

v0.89: Additional MATHJAX support.**core**

- Adapted to upcoming LATEX kernel changes.
- Allows load of amsmath before l warp.

l warpmk**MATHJAX**

- Also removes *.bb1 when cleaning aux files.

- MATHJAX: Neutralized \protect, \mathcode and related, ligatures. Fixed nested environments.

packages

- caption: Updated for v3.5, fix for label sep.

- thmtools: Updated for v0.72. Fixed swapnumber, margin.

- Improved MATHJAX for centernot, mathtools, mismatch, Slunits, siunitx, statmath.

- Added MATHJAX emulation for accents, hepunits, hhtensor, mathalpha, mathdesign, mathpazo, mathptmx, mlfright, newpxmath, newtxmath, newtxsf, pxfonts, shuffle, txfonts, upgreek, ushort.

- Verified to work as-is: authoraftertitle.

v0.88: Indexing, boxing, theorems.**core**

- Now has programmed support for more than 500 packages and classes, of which more than 60 also support MATHJAX.

- Fixed: \ref*, and also added MATHJAX emulation.

- If starting a new paragraph, \hrulefill creates a <div> with a thin horizontal line across the page. Use instead of \hrule.

- Fixed: Use \chaptername where appropriate.

- Fixed: Inline links causing extraneous paragraphs.

- Added l warpmk -v to print the version number.

indexing

- Added the IndexRef option to control the display of index entries. See section 7.5.

- Added \IndexPageSeparator and \IndexRangeSeparator for custom index styles.

- Added support for gindex, xindex.

- Verified to work as-is with varindex.

packages

- cleverref, varioref: Fix for starred macros.

- varioref: Removed page-related text from HTML output.

- xfakebold: Updated to v0.08, using pdfrender.

- caption, scrextend: Fixed \caption*.

- Added fbox, shadethm, tcolorbox, termcal, thmbox, thmtools.

v0.87: MATHJAX, bibliography packages.**core**

- Added boolean FixSmallCaps for fonts which render small caps as all caps.

- Fixed \bibliography to use the HTML version's .bb1 file. Previously the HTML bibliography relied on the print version's .bb1, thus would fail if the print document had not yet been created.

- Added \ifstar and \ifnextchar to MATHJAX, and removed \DeclareIfstar. See section 8.7.7.

- physics: Now supports the MATHJAX v3 extension.

MATHJAX**⚠ Removed****\DeclareIfstar
packages**

- `mathtools`: Improved `\underbraket`, `\overbracket` for MATHJAX.
- `nccmath`: Improved `\underrel` for MATHJAX.
- `mhchem`: Now supports the MATHJAX v3 extension for `\ce` inside math.
- `cancel`: Now supports the MATHJAX v3 extension.
- `embrac`: Neutralized kerning for improved HTML conversion.
- Added `citeref`, `drftcite`, `jurabib`, `multibib`, `splitbib`.
- Verified to work as-is with `bibtopic`, `collref`, `mciteplus`.

v0.86: MATHJAX major updates.

core

- Fixed: Filename if named files with *, parens, period in section name.
- Fixed: Labels in `eqnarray`, `lateximage`.

MATHJAX

- Updated to MATHJAX v3. New repository.
- Fixed forward references for MATHJAX.

- Improved MATHJAX equation number formatting, now compatible with `amsmath \numberwithin` for chapters, sections, subsections, as well as `amsmath subequations`. See section 8.7.7.
- Added `\DeclareIfstar` to define starred TeX macros in MATHJAX. See section 8.7.7.
- Generates an error if `\MathJaxFilename` file does not exist.

packages

- `mathtools`, `nccmath`, `physics`: Added starred macros for MATHJAX.
- `nccmath`: Fixed `\nr`, `\displaybreak` for MATHJAX.
- `xcolor`: Fixed `\textcolor` with `babel-french`.

v0.85: fontspec

packages

- `fontspec`: Fixed core font change macros for world languages.

⚠ acro formats

- `acro`: Due to v3 changes, when defining acronym formats, use `\textbf` instead of `\bfseries`, etc.
- Fixed `idxlayout`, `mathtools`, `titlesec`, `url`.

v0.84: Previous/next page links, numerous fixes.

docs

- Added documentation of `BlockClass` and `\InlineClass` for css `<div>`s and ``s. See section 7.8.
- Added `\LinkPrevious`, `\LinkNext` page links. See section 7.6.

⚠ home page footer changed

- Added `\FirstPageBottom`. Home page no longer shares `\PageBottom`. See section 7.6.
- Improved coexistence with `comment`, support for nested environments.

core

- No longer requires but still supports the `caption` package.
- Improved filenames and HTML titles when using special characters.

⚠

- Change: Append `-0` to section named `Index` previously `_index` to distinguish from `index.html`
- Fixed style tags for `\multicolumn`, `\multirow`.
- Fixed spacing in tabbing.
- Fixed `lateximage` for: `quote`, `quotation`, `verse`, `center`, `flushleft`, `flushright`, `<par>` tags, packages `verbatim`, `alltt`, `epigraph`.

- Fixed `textcomp` due to integration into L^AT_EX kernel.
 - Fixed `\itshape`, etc. Adapted to L^AT_EX `fontaxes` integration.
 - Fixed `\@fnsymbol`.
 - Warns about section names with dollar-delimited math.
 - Warns about a `` containing a float, caption, section, `mdframed`, or other `<div>` object.
 - Only warn about X_ET_EX logo and `graphics` if actually used `\Xe`.
- l warpmk***
- packages**
- `l warpmk clean` also removes `comment_*.cut`.
 - `scrextend`, `scrartcl`, `scrbook`: Added `\titlehead`, `\subject`, `\subtitle`, `\publishers`.
 - `titling`: Fixed `\printthanks`.
 - `memoir`, `abstract`: Fixed for updated `memoir`.
 - `memoir`: Fixed `\newcomment`, `pagenotes`, `crossreferences`. Fixed setting a recursive name.
 - Fixed or improved: `amsthm`, `backref`, `biblatex`, `fixme`, `nfssext-cfr`, `ntheorem`, `parcolumns`, `realscripts`, `rotfloat`, `titling`.
 - Added `boxedminipage`, renamed from `boxedminipage2e` per author.
 - Verified to work as-is with `mcite`.
- v0.83:** `memoir` fixes.
- packages**
- `memoir`: Various fixes and updates.
 - `physunits`: Updated to v1.0.4.
- v0.82:** MATHJAX notes, `xpinyin` improvements, various updates.
- MATHJAX**
- Improved footnotes with MATHJAX.
 - Added MATHJAX emulation for `endnotes`, `marginnote`, `nccfoots`, `pagenote`, `parnotes`, `sidenotes`.
- packages**
- `xpinyin`: Added pinyin with modern HTML.
 - `luatexko`: Added `\dotemph`, `\ruby`, `\uline`, etc.
 - `soul`: Fixed `\<`.
 - `chemfig`: Updated to v1.5.
 - `draftwatermark`: Updated to v2.0.
 - `ulem`: Fixed: `\dashunderline`.
 - `amsmath`: Fixed: `\intertext` with MATHJAX.
 - `endnotes`: Fixed: Marks in print mode.
 - `tocvsec2`, `tableof`: Verified to work as-is.
 - Added `etoc` (nullified).
- v0.81:** MATHJAX speedup and additional emulations.
- core**
- Improved warning regarding SVG math sizing / baselines and `graphics` / `graphicx`. See section 8.7.
- MATHJAX**
- Improved MATHJAX emulation processing speed.
 - Added MATHJAX emulation for `accsupp`, `axessibilty`, `colonequals`, `decimal`, `dotlessi`, `econometrics`, `engtlc`, `multiobjective`, `physunits`, `Slunits`, `stackrel`, `statmath`.

- packages**
- `axessibility`: Updated to 2020/01/08 version.
 - `gridset`: Updated to v0.3.
 - `Slunits`: Fixed for math mode.
 - Added `DotArrow`, `nolbreaks`, `luamplib`, `returntogrid`, `statex2`, `tagpdf`.
 - Verified to work as-is with `icomma`, `mathpunctspace`, `textualicomma`.
- v0.80:** MATHJAX, biblatex.
- MATHJAX**
- Added docs and warning/info messages re: avoiding slow MATHJAX compilation. See section [8.7.7, Customizing MATHJAX](#).
 - Added MATHJAX emulation for accessibility, `autobreak`, `centernot`, `extarrows`, `fouridx`, `gensymb`, `leftidx`, `mathcomp`, `mathdots`, `mathfixs`, `mismath`, `nccmath`, `noitcrl`, `pdfcomment`, `relsize`, `rmathbr`, `subsupscripts`, `xfrac`.
 - Improved MATHJAX emulation for `unicode-math`.
- packages**
- `biblatex`, `url`: Now create hyperlinks.
 - `amsmath`: Fix to center starred environments.
 - `xcolor`, `graphics`: Made more macros robust.
 - `colortbl`: Fix: Rule color in a `lateximage`.
 - `chemmacros`: Updated to v5.10.
 - Added `fewerfloatpages`, `ghsystem`, `hhline`, `mismath`, `nccmath`.
- v0.79:** MATHJAX, nested tabular.
- MATHJAX**
- Added or improved MATHJAX emulation for `amsmath`, `ar`, `arydshln`, `bm`, `bigdelim`, `bigstrut`, `booktabs`, `braket`, `mathtools`, `multirow`, `physics`, `siunitx`, `slashed`, `unicode-math`, `xfakebold`.
 - Warn if using certain packages not supported by MATHJAX.
- core**
- `tabular`: Now may be nested.
 - `minipage`, `\parbox`, `fminipage`, `\makebox`, `\framebox`: Fix: Adjust for virtual page size.
 - Uses new `iftex`.
- packages**
- `graphicx`: Fix: Negative angles.
 - `caption`: Fix: `\captionlistentry` with `longtable`.
 - `multirow`: Fix: Centered vertical alignment.
 - `siunitx`: Fix: `\square`, `\cubed`.
 - `booktabs`: Fix: `memoir` with `lateximage`.
 - `babel` and `polyglossia`: Added troubleshooting warnings.
 - `fontawesome`, `fontawesome5`: Supports text color and size.
 - `transparent`: Fix: `lateximages`.
 - `epigraph`: Updated to v1.5e.
 - `xurl`: Updated to v0.08.
 - `subcaption`: Fixed with `memoir`.
 - `floatrow`: Fix: `\ linewidth`. No longer require `float`, `graphics`.
 - `floatflt`, `wrapfig`, `niceframe`: Fix: Adjust for virtual page size.
 - Added `widetable`, `witharrows`, `steinmetz`.
 - Added `awesomebox`, `catoptions`.

- Added `svg`, supports `svg-extract`.
- Added `parcolumns`, `pdfcolparcolumns`,
- Added `parallel`, `pdfcolparallel`.
- Added `pdfcol`, `pdfcolfoot`, `pdfcolmk`.

v0.78: Fixes for support files, `alt` tags, hyperlinks, and the 2019/10 L^AT_EX release.

docs

- Docs: Improved documentation regarding package options. See section 8.1.

packages

- `breqn`: Previously broken by the 2019/10 L^AT_EX update, but now working again.
- `graphics`: Fix for `\includegraphics alt` tags.
- `babel-french`: Fix for hyperlinks.
- `media9`, `movie15`, `multimedia`: Fix for the 2019/10 L^AT_EX update.
- `accessibility`: Added.

v0.77: Updates to fix recently-broken packages.

- `booktabs`: Updated to v1.6180339.
- `chemformula`: Updated to v4.15.

v0.76: MATHJAX, updates for L^AT_EX 2019/10 release.

docs

- Docs: Expanded documentation regarding the use of multiple projects in the same directory. See section 5.18.

MATHJAX

packages

- `xr`: Updated to v5.05.
- `xr-hyper`: Updated to v6.1.
- Verified works as-is with `xcite`.
- `acro`: Updated to v2.10.

⚠️ broken

- Currently broken in print mode by the 2019/10 L^AT_EX update, and waiting for fixes: `breqn`, `grffile`, `multimedia`, `movie15`.

v0.75: `keyfloat`, `wrapfig`

packages

- `\minipage`: Fix for `\linewidth`.
- `keyfloat`: Improved color control.
- `wrapfig`: Fix for `\linewidth`.

v0.74: Docs, SVG math, `lwarpmk`, HTML alt and title text, `lyluatex`

docs

- Added to the tutorial the section **What next?**. See section 5.20.

- Added documentation about localization options. See section 7.1.

- Added documentation about accessibility options. See section 7.2.

- Renamed and updated HTML alt text macros:

⚠️ changed names

Old	New
(hard coded as “image”) <code>\mathimagename</code> <code>\packagediagramname</code>	<code>\ImageAltText</code> <code>\MathImageAltText</code> <code>\PackageDiagramAltText</code>

- Added `\ImageAltText` for the default HTML alt text for an image. See section 7.6.
 - Added `\ThisAltText`, which may be used to assign a one-time HTML alt tag to the very next image generated by `l warp`, such as a `\lateximage`, `picture`, `tikzpicture`, an image generated by various chemistry or engineering packages, or an SVG math image. This macro also adds a title tag to a reference or hyperlink. See section 7.6.
- svg math**
- Adjusted `\LateximageFontSize` default from .75 to 1.
 - Fix: Font control for SVG math.
- misc**
- Fix: Ignores negative `\hspace`.
 - Warning if `SideTOCDepth < FileDepth`.
- l warpmk**
- `l warpmk: l warpmk clean` removes additional files.
 - `l warpmk: l warpmk epstopdf` and `l warpmk pdftosvg` now honor directories.
- packages**
- `lyluatex`: Split images by system or per `fullpage`, improved margins and scaling.
 - Tested to work as-is with `mathspec`, `unicode-math`.
- v0.73:** `\include`, `memoir`, `koma-script`, `caption`, `xy`, `datatool`, music scores.
- Fix for `\include`.
 - Warning for a `tabular` inside a ``.
 - `\color`: Added HTML support for rules and frames, but not inline text. Use `\textcolor` if possible.
 - Improved many HTML tags, reducing `tidy` warnings. See Change History.
 - `memoir`: Fixes for `\frontmatter*` and `\mainmatter*`. Added `\book`.
 - `koma-script`: Fix for starred captions in the TOC.
 - `caption`: Fix for starred captions.
 - `datatool`: Added pie, bar, and plot charts.
 - `threeparttable`: Added `measuredfigure`.
 - `intopdf`: Updated to v0.2.1.
 - `tocdata`: Updated to v2.03.
 - `quotchap`: Updated to v1.2.
 - `versonotes`: Updated to v0.4.
 - `backnaur`: Now uses SVG images. Updated to v3.1.
 - `xy`: Fix for `\xybox`, improved `xy`, also now compatible with `qcircuit`.
 - `fancyvrb`: Fix for label HTML tags.
 - Added `stackengine`.
- music**
- Added `lyluatex`. (Music scores.)
 - `musicography`: Updated to 2019/05/28. Added support for `\lateximages`.

v0.72: Font control, `\multicolumn`, `xr` and `xr-hyper`.

- ⚠️ images**
- Due to internal changes, images for inline SVG math and `\lateximages` will have new hash values, and will have to be regenerated using
Enter ⇒ `l warpmk cleanimages`
and
Enter ⇒ `l warpmk limages`

- Docs: Color-codes package names in the table of supported packages and features, table 2, according to each package's level of support by l warp.
 - \multicolumn: Fix for paragraph columns.
 - xr, xr-hyper: Fixes for references, \externaldocument.
 - soulutf8: Fix: Loads soul for emulation.
 - boxedminipage2e: Added support for lateximages.
 - zhlineskip: Updated to v1.0e.
 - Added fontaxes, slantsc, tabfigures.
 - Added nfssext-cfr, thus supporting cfr-lm and several other font packages.
 - Added backnaur, hypbmsec, minibox, pdfcrypt, shapepar.
- v0.71:** Error handling, multimedia, tabular.
- tabular: Added support for '*' columns. Fix for paragraph tags.
 - quotation: Fix for HTML tag.
 - Docs: Added a section about error conditions tested by l warp. See section 13.1.
 - l warpmk: If file l warpmk.conf is an older version, or the incorrect operating system, displays the print command to use to recompile.
- packages**
- chemfig: Updated for v1.4.
 - endfloat: Updated for v2.7.
 - textpos: Updated for v1.9.1.
- multimedia**
- Added media9, movie15, multimedia.
- v0.70:** Error handling, MATHJAX, mathtools.
- Error handling for "Label(s) changed." Refuses to l warpmk l images until recompile first.
 - Fix: If Computer Modern font is used, ensures cm-super or lmodern is used.
 - Fixes for \makebox.
 - Fixes for \parbox inside a .
 - MATHJAX: Updated to v2.7.5. Loads the autoload-all.js extension. Added \MathJaxFilename to select custom scripts.
- packages**
- textcomp, xunicode: Fix for \textinterrobang.
 - mhchem: Works with MATHJAX. See section 414.
 - changes: Updated to v3.1.2.
 - Added autonum, changelayout, inputrc, mathtools, metalogox.
- v0.69:** Error handling, many fixes, improved keyfloat / tocdata.
- Fix for HTML corruption of lateximage displays.
 - \makebox, \framebox: Fix for (<width,height>) arguments.
 - fminipage: Honors \minipagefullwidth.
 - array, longtable: Fix for \tabularnewline.
 - tabularx, tabulary: Fix to require the array package.

- *supertabular*, *xtab*: Fix to clear caption after use.
- *graphics*: Added a warning if used the `\includegraphics scale` option.
- *multirow*: Added an error if didn't use `\mrowcell` or `\mcolrowcell` when using `\multirow` or `\multicolumnrow`.
- *keyfloat*: Updated for v2.00, additional improvements.
- Added *ctable*, *eqlist*, *eqparbox*, *ftcap*, *listliketab*, *minitoc*, *tocdata*, *topcapt*.

v0.68: Error handling, tabulars, footnotes.

- | | |
|----------------|--|
| <i>lwarpmk</i> | <ul style="list-style-type: none"> • <i>lwarpmk</i>: Improved error handling for image generation if compile was incomplete. |
| packages | <ul style="list-style-type: none"> • <i>tabular</i>: Fix for <code>\warpprintonly</code>. • <i>longtable</i>: Improved flexibility for <code>\endhead</code>, etc. Improved error reporting if <code>\endhead</code>, etc. incorrect for <i>l warp</i>. • <i>threeparttable</i>: Fix for caption type. • <i>hyperref</i>: Fix for options with braces. • <i>morefloats</i>: Fix to be loaded early for print output. • <i>listings</i>: Updated for v1.7. • Added <i>bigfoot</i>, <i>fnpara</i>, <i>footnotebackref</i>, <i>manyfoot</i>, <i>tablefootnote</i>, <i>threeparttablex</i>. • Added <i>layouts</i>, <i>niceframe</i>, <i>perpage</i>, <i>showtags</i>. • Prevented <i>alg</i>, <i>algorithmic</i>, <i>pdfcprot</i>, <i>fncylab</i>. |

v0.67: Filename generation, symbol fonts.

- | | |
|-----------|--|
| docs | <ul style="list-style-type: none"> • Documentation fix for <code><project>-images</code>, <code><project>-images.txt</code>. • Added discussion regarding section names. See section 8.4. |
| filenames | <ul style="list-style-type: none"> • Added <code>\FilenameNullify</code> and <code>\FilenameSimplify</code> for filename generation. See section 8.4. • Core, <i>textcomp</i>, <i>xunicode</i>: Nullified additional symbols during filename generation. |
| packages | <ul style="list-style-type: none"> • <i>color</i>: Fix for version number warnings. • Added <i>academicons</i>, <i>bding</i>, <i>dingbat</i>, <i>eurosym</i>, <i>fontawesome</i>, <i>fontawesome5</i>, <i>marvosym</i>, <i>pifont</i>, <i>typicons</i>. • Added <i>changes</i>, <i>easyReview</i>, <i>fitbox</i>, <i>foreign</i>, <i>gloss</i>, <i>karnaugh-map</i>, <i>multicap</i>, <i>nomencl</i>, <i>notes</i>, <i>struktex</i>, <i>umoline</i>, <i>xfakebold</i>. • Tested to work as-is with <i>askmaps</i>, <i>curves</i>, <i>euro</i>, <i>karnaughmap</i>, <i>tikz-karnaugh</i>. |

v0.66: xr, multiple projects, image names/directory, HTML formatting

- | | |
|---------------------------|--|
| ⚠ Reset the configuration | <ul style="list-style-type: none"> • Due to changes in <i>lwarpmk</i>, recompile any existing project a single time using <code>pdflatex filename.tex</code> or similar, after which <i>lwarpmk</i> may then be used with the new configuration files. |
| lateximage | <ul style="list-style-type: none"> • Adds options <code>ImagesDirectory</code> and <code>ImagesName</code> to assign directory and name prefixes for <i>lateximage</i> images. The new defaults include the jobname, allowing the image directories for multiple projects to coexist. |
| ⚠ existing projects | <ul style="list-style-type: none"> • To reuse existing <i>lateximage</i> directories, add <i>l warp</i> options
 <code>\usepackage[</code>
 <code> ImagesDirectory={lateximages},</code>
 <code> ImagesName={lateximage-}</code>
 <code>]{}{l warp}</code> |

If not reused, the existing `lateximages` directory and `lateximages.txt` file may be removed.

[filenames](#)

- Added `\FilenameLimit` to control the maximum length of the filenames generated by `lwarf`.

[\$\Delta\$ Possible filename changes](#)

[WINDOWS](#)

[floats](#)

[lists, table notes](#)

[tabular](#)

[indexing](#)

[minipage](#)

[colors](#)

[HTML](#)

[docs](#)

[packages](#)

- Improved filename generation when special characters or macros are used in section names.

- Fix for `lwarfmk cleanimages` with `WINDOWS`.

- Fixes for floats in the home page.

- Improved css for definition lists, table notes.

- `tabular`: Fixes for `\par` in column specifier, minipage inside `tabular`.

- `Indexing`: Fix for a long line of multiple entries.

- `\minipagewidth`: Fix for global changes.

- Added `\UseMinipageWidths` and `\IgnoreMinipageWidths`. See section [8.3.3](#).

- Improved `\fbox`, `\fboxBlock`, `\fminipage` to use current text color.

- Improved `HTML` output formatting.

- Added discussion regarding invalid `HTML`. See section [8.1.1](#).

- Added discussion regarding math in section names, `\imagegraphics` scale option. See section [6](#).

- Added discussion regarding international languages in section names. See section [8.14](#).

- `caption`: Fix for options clash.

- `xr, xr-hyper`: Now compatible.

- `subcaption`: Improved horizontal spacing.

- `multicol`: Fix for minipage inside `multicols`.

- `multicolrule`: Updated for v1.2.

- `tocbasic`: Minor update.

- `acronym`: Fix for acronym in float caption.

- `kotexutf`: Patch with `pdflatex` and new `lwarf` labels.

- `extramarks, fancyhdr`: Updated for v3.10.

- `memoir`: Added docs regarding version numbers. See section [8.13](#).

- `zref`: No longer required.

- Added `ar, ed, indentfirst, nameauth, truncate`.

- Verified to work as-is with `changelog`.

- Prevented `colortab, epsf, hyper, picinpar, picins, sistyle, ucs`.

[v0.65: css layout, alt tags, Japanese.](#)

[page layout](#)

- Moved the sidetoc to the left side, allowing improved css for margin notes.

- Improved page layout css.

- `graphicx \includegraphics`: Added the `alt` key to assign an `alt` tag to an image. Default is “image”, assigned to pass validation.

[duplicate HTML files](#)

- Detects and causes an error if duplicate `HTML` file names are generated, caused by identical or similar sectioning names.

[fixes](#)

- Fix for `tabular*`.

- Fix for tabular border colors.
- Fixes \quad, \enskip, and figure captions to pass validation.
- Added \tj* classes, bounddvi, gentombow, \tjext, plarydshln, plect, plectarydshln, plectcolortbl, pxatbegshi, pxeveryshi, pxftnright, pxjahyper, tascmac.
- Verified to work with plarray, plautopatch, plectarray, plectdelarray, pxgentombow, plsiunitx, pxpdfpages, pxpgfrcs, pxpgfmark.
- Added support for fontspec \textsi and \sishape.
- Added multicol's \docolaction.
- Added embrac, footnoterange, multicolrule, versonotes.

v0.64: Koma-Script, Japanese, Chinese.

- | | |
|-------------|--|
| Japanese | <ul style="list-style-type: none"> • Added utarticle and related classes. • Improved ujarticle and related classes. |
| Chinese | <ul style="list-style-type: none"> • Fix for biblatex with CTEX and other classes. |
| Koma-Script | <ul style="list-style-type: none"> • Fixes for scrlayer, scrlayer-scrpage. |
| packages | <ul style="list-style-type: none"> • addlines: Updated to v0.3. • Added bsheaders, gmeometric, marginal, rmpage, scrpage2. |

v0.63: mdframed, Chinese, Japanese, Korean

- | | |
|---------------|--|
| localization | <ul style="list-style-type: none"> • Added \linkhomename: A user-definable name for the Home link. • Documented \sidetocname: A user-definable name for the sidetoc. |
| fixes | <ul style="list-style-type: none"> • Fix: \LinkHome for print output. |
| optimizations | <ul style="list-style-type: none"> • Moved package load checks to the l warp core to reduce the number of l warp-* files. |
| packages | <ul style="list-style-type: none"> • mdframed: Fix with amsthm, improved titles and font control. Improved rule widths. |
| Chinese | <ul style="list-style-type: none"> • Fixes for xeCJK. • Added xpinyin, zhlineskip. • Verified to work with cjkpunct, upzhkinsoku, zhspacing. |
| Japanese | <ul style="list-style-type: none"> • Verified to work with zxjatype, luateja, luateja-fontspec. • Added bxjsarticle and related classes. • Added ltjsarticle and related classes. • Added pLATEX, upLATEX, ujarticle and related classes. • Prevented utarticle and related classes. • Prevented bxcjkatype. |
| Korean | <ul style="list-style-type: none"> • Verified to work with kotex, xetexko, luatekxo. |

v0.62: MiKTEX docs, HTML title, CTEX, xeCJK, bitpattern.

- | | |
|--------------|---|
| docs | <ul style="list-style-type: none"> • Docs: Setting a UTF-8 locale. See section 9.9. |
| MiKTEX | <ul style="list-style-type: none"> • MiKTEX: Docs for <i>MiKTeX Console</i> and miktex-poppler-bin. |
| HTML <title> | <ul style="list-style-type: none"> • HTML subpage titles: Added \HTMLTitleBeforeSection and \HTMLTitleAfterSection to select whether the HTML <title> displays the website name before or after the section name. See section 7.6. |
| fixes | <ul style="list-style-type: none"> • Fix for package options handling. |

- Fixes for horizontal white space between `fminipage`, `fcolorminipage`, `colorboxBlock`, `fcolorboxBlock`.
 - Logos: Fix for X^ET_EX logo, improved css, made robust, improved search-engine optimization.
 - `\\\[$1]`: Additional HTML `
` if $$1 > 0 \text{ pt}$.
 - Fixes for `\includgraphics` filename, and with `FormatWP`.
 - Fix: css for `\textup`.
 - Fix: Added `\sllshape`.
- Chinese packages**
- Added `ctex` package and related classes, `xeCJK`.
 - Prevented CJK, CJKutf8 unless `xeCJK`, `ctex` are used.
 - `chemfig`: Docs for new macro `\polymerdelim`.
 - `asymptote`: Docs for compilation.
 - `chngpage`: Fix to load `l warp-changepage`.
 - `algorithm2e`: Fix with non-book classes.
 - `register`: Updated to v1.8.
 - `nicefrac`: Improved font control and css, honors nice and ugly.
 - `units`: Improved font control and css, honors tight and loose.
 - `xfrac`: Improved css.
 - `textcomp` and `xunicode`: Fix conflicts with `\textcircled`.
 - `ulem`: Improved compatibility with `CJKulem`, `latextimage`.
 - `MATHJAX` and `siunitx`: Removed inoperable extension.
 - Added `bitpattern`, `pdfcomment`, `pdfmarginpar`, `tram`, `unitsdef`, `xchangebar`.
 - Added `musicography`, `octave`, `semantic-markup`.
 - Added `2in1`, `flippdf`, `notespages`, `rviewport`, `twoup`.
- v0.61:** Custom compilation, EPS-related packages, documentation, indexes.
- docs**
- Split index into multiple indexes.
 - Improved documentation regarding font selection. See section [7.4](#).
 - Added documentation regarding debugging options. See section [35](#).
 - Added documentation regarding HTML entities inside program listings. See section [8.2.1](#).
 - Added options to specify the shell commands to execute for `l warpmk print` and `l warpmk html`, allowing the use of `l warp` with perltex, pythontex, etc. If not specified, these are set automatically depending on the L^AT_EX engine, `--shell-escape`, and `l warp` options. See section [9](#).
 - Changed macro names to match `\displaymathother`, `\displaymathnormal`:
- | Old | New |
|--------------------------------|--------------------------------|
| <code>\StartDynamicMath</code> | <code>\inlinemathother</code> |
| <code>\StopDynamicMath</code> | <code>\inlinemathnormal</code> |
- custom compiling**
- ⚠ changed names**
- fixes**
- Fix: Paragraph tags in a tabular.
 - Fix: supertabular and xtab captions.
 - Fix: DVI L^AT_EX `\includegraphics` EPS images.
 - Fix: newfloat lists.
 - Fix: css footnotes text align, minipage tabular and footnote margins.

- packages**
 - Added `epsfig`, `psfrag`, `psfragx`, `pstool`.
 - Added `copyrightbox`, `pdfprivacy`, `thinspace`, `threadcol`, `uspace`.
 - Added `chkfloat`, `cmdtrack`, `dprogress`, `lua-visual-debug`, `refcheck`, `srcltx`, `srctex`, `vpe`, `xbmks`.
- v0.60:** Fixes for `longtable`, `listings`.
 - fixes**
 - `longtable`, etc.: Fixes for slowdown and memory management for very long tables.
 - `listings`: Fix for HTML entities, and also when used inside a list.
 - `diagbox`: Fix for incorrect HTML par tags.
 - packages**
 - Added `2up`, `booklet`.
 - Added `bophook`, `draftfigure`, `fullminipage`, `grid-system`, `layaureo`.
 - Added `leading`, `widows-and-orphans`.
 - Added `fancytabs`, `thumb`, `thumbs`.
- v0.59:** DVI `latex`, MATHJAX, `asymptote`, `pdftricks`, `pstricks`, `epstopdf`, `brqen`.
 - ⚠ Reset the configuration**
 - l warpmk***
 - Due to changes in `l warpmk`, **recompile any existing project a single time** using `pdflatex filename.tex` or similar, after which `l warpmk` may then be used with the new configuration files.
 - Added an error if `l warpmk.conf`'s format has changed and the document must be recompiled.
 - Added a warning if the `l warpmk.conf` configuration file appears to be for the wrong operating system, in case files are transferred between systems.
 - Added


```
l warpmk epstopdf <list-of-EPS-files>
```

 to quickly convert a document's EPS images to PDF or SVG. See section 8.8.
 - DVI `latex`**
 - Added support for DVI `latex`. See section 7.5.
 - `latextmk`**
 - Fix for --shell-escape with `latextmk`.
 - math**
 - Updated MATHJAX script to v2.7.4.
 - Fix: MATHJAX chapter number removed from non-numeric tagged equations.
 - Added MATHJAX support for `nicefrac`, `units`.
 - Fix for `\[` and `\]` with `\displaymathnormal`.
 - Fix for `\includegraphics` filename expansion.
 - `\includegraphics` now works with `.pdf` and `.eps` filename extensions.
 - images**
 - Moved `amsmath` out of the `l warp` core.
 - Fix for `chemformula \NMR`.
 - packages**
 - Added `asymptote`, `pdftricks`, `pstricks`, `pst-eps`.
 - Added `breqn`, `Slunits`.
 - Added `bxpaper-size`, `canoniclayout`, `draftcopy`, `fnbreak`, `nccfancyhdr`.
 - Added `accsupp`, `axessibility`.
 - Added `xunicode`.
 - Improved and now supports `epstopdf`.
 - Tested to work as-is: `eepic`, `sepfootnotes`.
 - docs**
 - Added information about setting up a development version of `l warp`.

v0.58: Extensive improvements in indexing, glossaries. Adds PDF-inclusion packages.

⚠ Reset the configuration

- Due to changes in *lwarpmk*, recompile any existing project a single time using `pdflatex filename.tex` or similar, after which *lwarpmk* may then be used with the new configuration files.

lwarpmk
glossaries

- *lwarpmk*: Added the `-p` option to specify the project name.
- *lwarpmk*: Now uses `makeglossaries` for glossary generation, allowing the processing of multiple glossaries at once.
- Added *lwarp* option `GlossaryCmd` to specify the shell command used by `lwarpmk printglossary` and `lwarpmk htmlglossary`. Defaults to `makeglossaries`.
- Docs: Extra indexing options. See section 8.6.15.
- Added support for `makeindex`. (Previously supported only `xindy`.) Also added indexing packages listed below.
- Added *lwarp* options `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to specify shell commands used by `lwarpmk printindex`, `lwarpmk htmlindex`, and `latexmk`. May be preset with the `makeindex` or `xindy lwarp` options. See section 7.5.

index and glossary

- Added *lwarp* options `makeindex` and `xindy` to set `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to sensible values for a typical single index. See section 7.5.
- Added *lwarp* option `makeindexStyle` to tell *lwarpmk* to use a custom style instead of *lwarp.ist*. See section 8.6.21.
- Fix for index entries with `\see`, `\seealso`, `\emph`, `\textbf`, etc.

misc. fixes

- Replaced each `\csuse` with `\@nameuse` for improved error detection.
- Additional internal print/HTML macro selection improvements.
- Fix: `\printindex` finishes pending `\index` writes first.
- Fixes for `memoir`: `makeidx`, `ccaption`, multiple indexes, `\specialindex`.

packages

- Fixes for `komascript`: Indexing improvements.
- Added `imakeidx`, `index`, `repeatindex`, `splitidx`.
- Added `attachfile`, `attachfile2`, `intopdf`, `pdfpages`, `pdfx`.
- Added `cases`.
- Tested to work as-is: `notes2bib`, `hvindex`.

v0.57: algorithm2e, float styles, tabular packages, internal improvements.

MathJax
math macros

- Added support for MATHJAX equations with `\footnote`, `\footnotemark`.

dynamic math

- Added `\StartDefiningMath` and `\StopDefiningMath` for use when defining macros in the preamble which contain `$`. See section 8.7.9.
- Added `\inlinemathother` and `\inlinemathnormal` to delimit math expressions which depend on a variable condition such as a counter. Such expressions will not be hashed for reuse, and will be converted to SVG math images even when MATHJAX is enabled. See section 8.7.10.

⚠ new name

- Renamed `\EndDefiningTabulars` to `\StopDefiningTabulars`.

- lateximage alt tags**
 - Improved localization for `lateximage` HTML alt tags. For SVG math images, the alt tag under some conditions will be set to `\MathImageAltText`, which defaults to `math image`. For packages, the alt tag is set using the package name followed by `\PackageDiagramAltText`, which defaults to `diagram`. Ex:
`(-xy- diagram)`
 See section [7.6](#).
- misc. fixes**
 - Fix: Improved print/HTML macro selection.
 - Fix: `\href` text catcodes.
 - Fix: `\subref` text.
 - Fixes: Colored `\rule` and `\boxframe`.
- packages**
 - `float, rotfloat`: Adds support for float styles ruled and boxed.
 - `float`: Fix: Do not create `\l@<type>` until `\listof` is used.
 - `marginnote`: Fix: Long optional argument.
 - `ellipsis`: Adds `\midwordellipsis`.
 - `breakurl`: Fix for text catcodes.
 - Added `algorithm2e, register, ltablex, xltabular, xellipsis, trimclip, errata, vowel, xpiano`.
 - Prevents `glossary`.
 - Tested to work as-is with `gauss, phonrule, piano, Slunits, tikzcodeblocks`.

v0.56: Shell escape, tabular packages.

- lwarpmk**
 - Added
`lwarpmk pdftosvg <list-of-PDF-files>`
 to quickly convert a document's PDF images to SVG, for use with `HTML`.
 See section [8.8](#).
- tabular**
 - Added support for `--shell-escape`. See section [7.3](#).
 - Added support for `array w` and `W` columns.
 - Fix: `\multicolumn` parameter handling.
 - Added support for double `\hlines`, `\midrules`, and vertical rules.
 - Added support for `arydshln` dashed lines with `HTML tabular`, but reverts to plain rules for `lateximage` and `SVG math array`.
- misc. fixes**
 - Fix: `\thinspace`.
 - Fix: `paralist compact environments`.
- packages**
 - Added `parnotes, quoting, lua-check-hyphen, toccenter, underscore`.
 - Added `bibunits`.
 - Tested to work as-is with `babelbib, bodegraph, fast-diagram, nicematrix, structmech`.

v0.55: Various fixes.

- misc fixes**
 - Fix: Extraneous space in file links, which also prevented `Calibre EPUB` conversions.
 - Fix: Float optional argument regression.
 - Fix: `\ForceHTMLTOC` with `\phantomsection`.
 - Fix: Overfull boxes in `lateximages`.
 - Fix: QED symbols in `lateximage`.
- packages**
 - `koma-script`: Fix: Figure with `\centering`, etc.
 - Added `clrdblpg`.

v0.54: Float \centering, improved image checks.

⚠ Reset the configuration

- Due to changes in *lwarfmk*, **recompile any existing project a single time** using `pdflatex filename.tex` or similar, after which *lwarfmk* may then be used with the new configuration files.

lwarfmk

- *lwarfmk* limages checks for the presence of the HTML version of the document and valid image references before attempting to create the lateximages.
- *lwarfmk*: Improved error message if configuration file does not exist.
- Added documentation for avoiding error with BibTeX and \etalchar. See section 8.6.9.
- Added documentation regarding polyglossia. See section 8.15.4.
- Added documentation regarding the use of macros in section names. See section 8.1.
- Renamed and added package options:

Old Package Option	New Package Option
<code>xdyFilename</code>	<code>xindyStyle</code>
<code>IndexLanguage</code>	<code>xindyLanguage</code>
–	<code>xindyCodepage</code>
–	<code>pdftotextEnc</code>

Use these options along with `inputenc` or `inputenx` to process documents in an encoding other than UTF-8. See section 7.4.

- Floats now honor `\centering`, `\raggedright`, `\raggedleft`, and their `ragged2e` equivalents, when placed directly after:

```
\begin{floattype}
\centering
```

- `tikz`: `\pgfpicture`, `fit`, `align`, `font`.
- `ragged2e`: `\centering` etc.
- `hyperref`: `\hypertarget` was creating duplicate of `\label`.
- `hyperref`: Active chars inside `\hyperref`, `\hyperlink`.
- `hyperref`: `\ref` inside `\hyperlink` caused a nested HTML link.
- `glossaries`: Fix when not using `babel` or `polyglossia`.
- `textcomp`: `\textperthousand`.
- LATEX core verse environment: line spacing.
- Removed `\citetitle`, adjusted `\attribution`.
- `memoir`: Minor update for v3.7g.
- Added `inputenx`, `bibunits`, `chngpage`, `forest`, `magaz`, `gridset`.
- Prevents loading `ae`, `aecc`, `t1enc`, and `wasysym`.

v0.53: Improved image checks.

lwarfmk

- *lwarfmk*: Added a warning about corrupted images due to the need to recompile the document one more time.
- *lwarfmk*: Added the `lwarfmk cleanlimages` command.
- Added documentation for `lwarfmk cleanlimages` and `lwarfmk pdftohtml`.

v0.52: Improved footnotes, SVG math.

- [documentation](#)
 - Improved install instructions regarding `l warp_baseline_marker.png`.
 - Added documentation regarding footnotes in section headings, and footnotes with `\VerbatimFootnotes` from `fancybox`, `fancyvrb`. See section [8.5.4](#).
 - Added documentation regarding font selection when using `XeLaTeX` or `LuaLaTeX` with `fontspec` and traditional font packages. See section [7.4](#).
- [SVG math](#)
 - Fix: Limit the number of background tasks when generating `lateximages`.
 - Added user-adjustable SVG math font scaling. See section [84.3](#).
 - Added warnings if `l warp_baseline_marker.png` is not present, or if `graphicx` or `graphics` is not loaded.
 - Improved `\ensuremath` hashing expansion.
 - Fix: `equation*` with `split`.
 - `tabbing` now works inside a `lateximage`. Use for math in `tabbing`.
- [MathJax](#)
 - Fix: `MATHJAX` script was not executing in some conditions.
 - Added `\CustomizeMathJax` to add custom functions. See section [8.7](#).
- [footnotes](#)
 - Fix: Footnote numbering when using `HTMLDebugComments`.
 - Fix: Footnote paragraph tags.
 - Fix: `FootnoteDepth` defaults to `\subsubsection`.
- [misc. fixes](#)
 - Fix: `\kill` in a `lateximage`.
 - Fix: `\FileDepth`, misc. others, when input encoding is not `utf8`.
 - Fix: `\texorpdfstring` in a section name.
- [packages](#)
 - `hyperref` emulation: Fix for #, %, &, ~, _ characters in URLs.
 - `fancybox`, `fancyvrb`: Initial support for `\VerbatimFootnotes`.
 - `nicefrac`: Added with fix for `\ensuremath`.
 - `graphicx`: Fix for option defaults. Added v1.1a/b options.
 - `endfloat`: Updated for v2.6.
 - `url`: Fixes for active characters.

2 Introduction

The `lwarp` project aims to allow a rich L^AT_EX document to be converted to a reasonable HTML5 interpretation, with only minor intervention on the user's part. No attempt has been made to force L^AT_EX to provide for every HTML-related possibility, and HTML cannot exactly render every possible L^AT_EX concept. Where compromise is necessary, it is desirable to allow the print output to remain typographically rich, and compromise only in the HTML conversion.

Several “modern” features of HTML5, CSS3, and SVG are employed to allow a fairly feature-rich document without relying on the use of JAVASCRIPT. Limited testing on older browsers shows that these new features degrade gracefully.

`lwarp` is a native L^AT_EX package, and operates by either patching or emulating various functions. Source-level compatibility is a major goal, but occasional user intervention is required in certain cases.

As a package running directly in L^AT_EX, `lwarp` has some advantages over other methods of HTML conversion. T_EX itself is still used, allowing a wider range of T_EX trickery to be understood. Lua expressions are still available with LuaT_EX. Entire categories of L^AT_EX packages work as-is when used with `lwarp`: definitions, file handling, utilities, internal data structures and calculations, specialized math-mode typesetting for various fields of science and engineering, and anything generating plain-text output. Blocks of PDF output may be automatically converted to SVG images while using the same font and spacing as the original print document, directly supporting TikZ and picture. Numerous packages are easily adapted for HTML versions, either by loading and patching the originals, or by creating nullified or emulated replacements, and all without resorting to external programming. As a result, several hundred packages have already been adapted (table 2), and an uncounted number more work as-is.

Packages have been selected according to several criteria: perceived importance, popularity lists, recent CTAN updates, CTAN topics, mention in other packages, support by other HTML conversion methods, and from sample documents taken from public archives. These include some “obsolete” packages as well.¹

Assistance is also provided for modifying the HTML output to suit the creation of EPUB documents, and for modifying the HTML output to ease import into a word processor.

`pdflatex`, `xelatex`, or `lualatex` may be used, allowing `lwarp` to process the usual image formats. While generating HTML output, SVG files are used in place of PDF. Other formats such as PNG and JPG are used as-is.

¹An amazing number of decades-old packages are still in use today.

svg images may be used for math, and are also used for picture, TikZ, and similar environments. The svg format has better browser and e-book support than MathML (as of this writing), while still allowing for high-quality display and printing of images (again, subject to potentially bug-ridden² browser support).

Furthermore, svg images allow math to be presented with the same precise formatting as in the print version. Math is accompanied by `<alt>` tags holding the LATEX source for the expression, allowing it to be copy/pasted into other documents.³ Custom LATEX macros may be used as-is in math expressions, since the math is evaluated entirely inside LATEX. An MD5 hash is used to combine multiple instances of the same inline math expression into a single image file, which then needs to be converted to svg only a single time.

The MATHJAX JavaScript display engine may be selected for math display instead of using svg images. Subject to browser support and Internet access, MATHJAX allows an HTML page to display math without relying on a large number of external image files.⁴ lwarf maintains LATEX control for cross-referencing and equation numbering, and attempts to force MATHJAX to tag equations accordingly.

A *texlua* program called *lwarpmk* is used to process either the print or HTML version of the document. A few external utility programs are used to finish the conversion from a LATEX-generated PDF file which happens to have HTML5 tags, to a number of HTML5 plain-text files and accompanying images.

lwarf automatically generates the extra files necessary for the HTML conversion, such as css and .xdy files, and configuration files for the utility *lwarpmk*. Also included is a parallel version of the user's source document, `<sourcename>-html.tex`, which selects HTML output and then inputs the user's own source. This process allows both the printed and HTML versions to co-exist side-by-side, each with their own auxiliary files.

When requesting packages during HTML conversion, lwarf first looks to see if it has its own modified version to use instead of the standard LATEX version. These `lwarf-packagename.sty` files contain code used to emulate or replace functions for HTML output.

²FIREFOX has had an on-again/off-again bug for quite some time regarding printing svgs at high resolution.

³There seems to be some debate as to whether MathML is actually an improvement over LATEX for sharing math. The author has no particular opinion on the matter, except to say that in this case LATEX is much easier to implement!

⁴One svg image file per math expression, except that duplicate inline math expressions are combined into a single file according to the MD5 hash function of its contents. A common scientific paper can easily include several thousand files, and in one case the MD5 hash cut the number of files in half and the rendering time by 30%.

2.1 Typesetting conventions

Font weight, family, and style are used to indicate various objects:

Table 1: Typesetting conventions

package	L ^A T _E X package.
<i>program</i>	Program's executable name.
<i>option</i>	Program or package option.
filename	File name in the operating system.
BRAND NAME	Proper name for a program, operating system, etc.
commands	Commands to be entered by the user.
<i>code</i>	Program code.
\macro	L ^A T _E X macro.
<i>environment</i>	L ^A T _E X environment.
<i>counter</i>	L ^A T _E X counter.
<i>boolean</i>	L ^A T _E X boolean.
<element>	HTML element.
<i>attribute</i>	HTML attribute.
User Interface	A user-interface item.
ACRO	Acronym.

subjects Blue-colored tags in the left margin aid in quickly identifying the subject of each paragraph. These are often the targets of index entries.

Prog Lwarp

Black-colored tags in the left margin are used to identify programming objects such as files, packages, environments, booleans, and counters. Items without a tag

index entries are command macros. Each of these also appears in the index as individual entries, and are also listed together under “files”, “packages”, “environments”, “booleans”, and “counters”.

 **warnings** Special warnings are marked with a warning icon.

2.2 Supported packages and features

Table 2 lists some of the various L^AT_EX features and packages which may be used.

Package names are colored according to their support level:

name: Supported as-is.

name: Modified to work with HTML output, and perhaps also as print output in SVG math or `latextimage` environments.

name: Emulated for HTML output.

name: Ignored for HTML output, but provides source-level compatibility.

MJ: Supported as-is for MATHJAX, subject to limitations.

MJ: Emulated for MATHJAX using custom macros, subject to limitations.

MJ: Ignored by MATHJAX, but may be used in the document source. May be converted to SVG images.

Table 2: L^AT_EX l warp package — Supported features

Category	Status and supported features.
Engines:	DVI L ^A T _E X, PDF L ^A T _E X, X ^E L ^A T _E X, LuaL ^A T _E X, upL ^A T _E X
L ^A T _E X compiling:	<i>latexmk</i> , <i>make</i> , etc.
External compiling:	<i>perltx</i> , <i>pythontex</i> , sympytex
Classes:	article, book, report, scrartcl, scrbook, scrreprt, memoir, CJK-related as listed below.
Koma-script:	scrextend , scrhack, scrlayer . Others as listed below.
Memoir:	memhfixc
Beamer:	beamerarticle , but not the beamer class.
Languages:	babel , cjkpunct , impnattypo , luavlna , polyglossia , xeCJK , xevlna .
Chinese:	C ^T EX, ctex , upzhkinsoku , xpinyin , zhlineskip, zhspacing.
Japanese:	upL ^A T _E X, LuaT _E X-ja, gentombow, lltjext , plarray , plarydshln , plautopatch , plex , plexarray , plexarydshln , plextcolortbl , plextdelarray , pxatbegshi, pxeveryshi, pxftnright, pxgentombow, pxjahyper, pxpdfpages , pxpgfrcs , pxpgfmark , tascmac , zxjatype , bxjsarticle and related, ltjsarticle and related, luatexja , luatexja-fontspec , ujarticle and related, utarticle and related.
Korean:	kotex , luatexko , xetexko .

Page layout:	2in1, 2up, a4, a4wide, a5comb, addlines, anysize, atbegshi , balance, blowup, booklet, bophook, boundddvi, bxpapersize, canoniclayout, centerlastline, changelayout , changepage , chngpage, clrdblpg, continue, draftcopy, draftfigure, draftwatermark, ebook, everyshi, fancyhdr , fancytabs, flippdf, fullminipage, fullpage, fwlw, geometry, gmeometric, grid, grid-system , gridset, layaureo, layout, layouts, leading, lscape, ltxgrid, nccfancyhdr, notespages, nowidow, pagegrid, pagesel, parallel , parcolumns , pbalance, pdfcolparallel, pdfcolparcolumns, pdfcrypt, pdflandscape, pdfprivacy, preview, ragged2e , returntogrid, rmpage, scrlayer-scrpage , scrpage2 , setspace , selectp, textarea, threadcol, thumb, thumbs, titleps, toccenter, turnthepage, twoup, typearea, underlin, vmargin, watermark, widows-and-orphans, zwpagelayout.
Sectioning:	Adds FileDepth for splitting the HTML output. Files may be numbered sequentially or named according to section name. Common short words and punctuation are removed from the filenames. anonchap , bsheaders , decorule , fncychap , froufrou , hypbmsec , indentfirst , quotchap , section , sectionbreak , secdot , sectsty , titlesec , tocvsec2 .
Table of contents, figures, tables:	Supported, with hyperlinks. etoc , minitoc , multitoc , shorttoc , tableof , titletoc , tocbasic , tocbibind , tocdata , tocloft , tocstyle , tocvsec2 .
Title page:	\maketitle , titlepage , authblk , authoraftertitle , titling .
Front & back matter:	abstract , appendix .
Indexing:	makeindex , xindy , and xindex are supported, with hyperlinks. gindex , hvindex , idxlayout , imakeidx , index , makeidx , repeatingindex , splitidx , varindex , xindex .
Glossary:	gloss , glossaries and xindy , nomenc .
Bibliography:	babelbib , bibtopic , backref , biblatex , bibunits , chapterbib , cite , citeref , colref , drftcite , hypernat , jurabib , mcite , mciteplus , multibib , natbib , notes2bib , splitbib , showtags .
Cross-references:	bookmark , breakurl , cleveref , fancyref , hypdestopt , hyperref , perpage , prettyref , titleref , url , varioref , xcite , xr , xr-hyper , xurl , zref .
Margin notes:	marginal , marginfit , marginfix , scrlayer-notecolumn , versonotes .

Footnotes:	Adds <code>FootnoteDepth</code> to print footnotes at section breaks. MATHJAX emulation for <code>\footnote</code> , and also as marked in the following: <code>bigfoot</code> , <code>dblfnote</code> , <code>endheads</code> , <code>endnotes</code> ^{MJ} , <code>enotez</code> ^{MJ} , <code>fixfoot</code> , <code>fnbreak</code> , <code>fnpara</code> , <code>fnpct</code> , <code>fnpos</code> , <code>footmisc</code> , <code>footnote</code> , <code>footnotebackref</code> , <code>footnoterange</code> , <code>footnpag</code> , <code>manyfoot</code> , <code>marginnote</code> ^{MJ} , <code>nccfoots</code> ^{MJ} , <code>pagenote</code> ^{MJ} , <code>parnotes</code> ^{MJ} , <code>pdfcolfoot</code> , <code>pfnote</code> , <code>sepfootnotes</code> , <code>sidenotes</code> ^{MJ} , <code>tablefootnote</code> .
Math:	Converted to SVG images with <code>HTML <alt></code> tags containing the LATEX source for the math expression. MATHJAX supported as an alternative. <code>amsmath</code> ^{MJ} : \mathcal{AM} S environments are supported. User-defined macros are available during conversion, due to native LATEX processing.
Theorems:	Native LATEX theorems, <code>amsthm</code> , <code>apxproof</code> , <code>ntheorem</code> , <code>shadethm</code> , <code>theorem</code> , <code>thmbox</code> , <code>thmttools</code> .
Additional math:	Math fonts via SVG images, <code>accents</code> ^{MJ} , <code>amscd</code> ^{MJ} , <code>amscdx</code> , <code>autobreak</code> ^{MJ} , <code>autonum</code> , <code>backnaur</code> ^{MJ} , <code>bm</code> ^{MJ} , <code>braket</code> ^{MJ} , <code>breqn</code> ^{MJ} , <code>bussproofs</code> ^{MJ} , <code>cases</code> ^{MJ} , <code>centernot</code> ^{MJ} , <code>cmbright</code> ^{MJ} , <code>colonequals</code> ^{MJ} , <code>decimal</code> ^{MJ} , <code>delarray</code> , <code>DotArrow</code> ^{MJ} , <code>dotlessi</code> ^{MJ} , <code>dotlessj</code> ^{MJ} , <code>esvect</code> ^{MJ} , <code>extarrows</code> ^{MJ} , <code>fixmath</code> ^{MJ} , <code>fouridx</code> ^{MJ} , <code>fourier</code> ^{MJ} , <code>guass</code> , <code>hhtensor</code> ^{MJ} , <code>icomma</code> ^{MJ} , <code>isomath</code> ^{MJ} , <code>jkmath</code> , <code>kpfonts</code> ^{MJ} , <code>kpfonts-otf</code> ^{MJ} , <code>leftidx</code> ^{MJ} , <code>libertinust1math</code> ^{MJ} , <code>mathalpha</code> ^{MJ} , <code>mathastext</code> ^{MJ} , <code>mathcomp</code> ^{MJ} , <code>mathdesign</code> ^{MJ} , <code>mathdots</code> ^{MJ} , <code>mathfixs</code> ^{MJ} , <code>mathpazo</code> ^{MJ} , <code>mathptmx</code> ^{MJ} , <code>mathpunctspace</code> ^{MJ} , <code>mathspec</code> ^{MJ} , <code>mathtools</code> ^{MJ} , <code>mattens</code> ^{MJ} , <code>maybemath</code> ^{MJ} , <code>mdwmath</code> ^{MJ} , <code>mismath</code> ^{MJ} , <code>mleftright</code> ^{MJ} , <code>multiobjective</code> ^{MJ} , <code>nccmath</code> ^{MJ} , <code>nicematrix</code> ^{MJ} , <code>noitcrl</code> ^{MJ} , <code>newpxmath</code> ^{MJ} , <code>newtxmath</code> ^{MJ} , <code>newtxsf</code> ^{MJ} , <code>pb-diagram</code> , <code>pxfonts</code> ^{MJ} , <code>resizegather</code> ^{MJ} , <code>rmathbr</code> ^{MJ} , <code>scalerel</code> ^{MJ} , <code>shuffle</code> ^{MJ} , <code>skmath</code> ^{MJ} , <code>stackrel</code> ^{MJ} , <code>statex2</code> ^{MJ} , <code>statistics</code> , <code>statmath</code> ^{MJ} , <code>subsupscripts</code> ^{MJ} , <code>tensind</code> , <code>tensor</code> ^{MJ} , <code>textualicomma</code> ^{MJ} , <code>txfonts</code> ^{MJ} , <code>txgreeks</code> ^{MJ} , <code>unicode-math</code> ^{MJ} , <code>upgreek</code> ^{MJ} , <code>ushort</code> ^{MJ} , <code>witharrows</code> ^{MJ} , <code>xfakebold</code> ^{MJ} , <code>xy</code> . Many others work as-is.
Display math with <code>\displaymathother</code> :	Complicated math objects in display math, such as <code>tikz-cd</code> , etc.
Units and fractions:	<code>nicefrac</code> ^{MJ} , <code>Slunits</code> ^{MJ} , <code>siunitx</code> ^{MJ} , <code>units</code> ^{MJ} , <code>unitsdef</code> , <code>xfrac</code> ^{MJ} .

Floats:	Appear where declared. <code>capt-of</code> , <code>caption</code> , <code>cutwin</code> , <code>dblfloatfix</code> , <code>endfloat</code> , <code>fewerfloatpages</code> , <code>fix2col</code> , <code>flafter</code> , <code>float</code> , <code>floatflt</code> , <code>floatrow</code> , <code>fltrace</code> , <code>ftcap</code> , <code>hypcap</code> , <code>keyfloat</code> , <code>morefloats</code> , <code>multicap</code> , <code>newfloat</code> , <code>nonfloat</code> , <code>picinpar</code> , <code>placeins</code> , <code>rotfloat</code> , <code>stfloats</code> , <code>subcaption</code> , <code>subfig</code> , <code>subfigure</code> , <code>subfloat</code> , <code>swfigure</code> , <code>topcapt</code> , <code>trivfloat</code> , <code>wrapfig</code> , <code>wrapfig2</code> .
Tabular:	<code>tabular</code> environment, <code>array</code> ^{MJ} , <code>arydshln</code> ^{MJ} , <code>bigdelim</code> ^{MJ} , <code>bigstrut</code> ^{MJ} , <code>booktabs</code> ^{MJ} , <code>colortbl</code> ^{MJ} , <code>ctable</code> , <code>dcolumn</code> , <code>diagbox</code> , <code>hhline</code> ^{MJ} , <code>longtable</code> , <code>ltablex</code> , <code>ltxtable</code> , <code>multirow</code> ^{MJ} , <code>supertabular</code> , <code>tabularx</code> , <code>tabulary</code> , <code>threeparttable</code> , <code>threeparttablex</code> , <code>widetable</code> , <code>xltabular</code> , <code>xtab</code> .
Graphics:	<code>graphics</code> and <code>graphicx</code> . <code>\includegraphics</code> supports width, height, origin, angle, and scale tags, and adds class. References to PDF files are changed to SVG, other image types are accepted as well. <code>\rotatebox</code> and <code>\scalebox</code> are supported as well as HTML can handle. <code>rotating</code> is emulated but all objects are unrotated in HTML. <code>picture</code> , <code>tikz</code> , and <code>xy</code> are converted to an SVG image. <code>asymptote</code> , <code>curves</code> , <code>datatool</code> , <code>eepic</code> , <code>epsf</code> , <code>epsfig</code> , <code>epstopdf</code> , <code>figsize</code> , <code>fitbox</code> , <code>grffile</code> , <code>lpic</code> , <code>luamplib</code> , <code>media9</code> , <code>movie15</code> , <code>multimedia</code> , <code>overpic</code> , <code>pict2e</code> , <code>pinlabel</code> , <code>psfrag</code> , <code>psfrags</code> , <code>pst-eps</code> , <code>pstool</code> , <code>pstricks</code> , <code>rlepsf</code> , <code>rviewport</code> , <code>svg</code> , <code>svg-extract</code> , <code>tikz</code> , <code>tikz-3dplot</code> , <code>tikz-imagelabels</code> , <code>xy</code>
<code>xcolor</code> :	Full package color names, any color models, and mixing. <code>\textcolor</code> , <code>\colorbox</code> , <code>\fcolorbox</code> . Enhanced for HTML compatibility.
Lists:	Standard LATEX environments, <code>enumerate</code> , <code>enumitem</code> , <code>eqlist</code> , <code>hang</code> , <code>listliketab</code> , <code>paralist</code> .
Environments:	Standard LATEX environments.
Paragraphs, <code>minipage</code> , <code>\parbox</code> :	Some HTML5-imposed limitations. Nested minipages are supported. <code>eqparbox</code> , <code>fancypar</code> , <code>minibox</code> , <code>pbox</code> , <code>shapepar</code> .
Quotations:	<code>copyrightbox</code> , <code>csquotes</code> , <code>epigraph</code> , <code>quoting</code> , <code>verse</code> .
Verbatim:	<code>fancyvrb</code> , <code>fvextra</code> , <code>moreverb</code> , <code>shortvrb</code> , <code>verbatim</code> .
Frames:	<code>boxedminipage</code> , <code>boxedminipage2e</code> , <code>fancybox</code> , <code>fbox</code> ^{MJ} , <code>framed</code> , <code>mdframed</code> , <code>niceframe</code> , <code>shadow</code> , <code>tcolorbox</code> ^{MJ} , <code>verbbars</code> .
Multi-columns:	<code>adjmulticol</code> , <code>multicol</code> , <code>multicolrule</code> , <code>vwcol</code> .
Margins:	<code>fullwidth</code> , <code>hanging</code> , <code>midpage</code> .
Line numbering:	<code>fnlineno</code> , <code>lineno</code> .

Direct formatting:	<code>\emph</code> , <code>\textsuperscript</code> , <code>\textbf</code> , etc are supported. <code>\bfseries</code> , etc. are only supported in some cases. <code>cancel</code> ^{MJ} , <code>ellipsis</code> , <code>embrac</code> , <code>enparen</code> , <code>hyphenat</code> , <code>letrine</code> , <code>lips</code> , <code>lua-check-hyphen</code> , <code>luicolor</code> , <code>magaz</code> , <code>moresize</code> , <code>nolbreaks</code> , <code>normalcolor</code> , <code>pdfcol</code> , <code>pdfcolmk</code> , <code>pdfrender</code> , <code>realscripts</code> , <code>relsize</code> ^{MJ} , <code>scalefnt</code> , <code>seqsplit</code> ^{MJ} , <code>soul</code> , <code>soulpos</code> , <code>soulutf8</code> , <code>stackengine</code> , <code>textfit</code> , <code>thinsp</code> , <code>trimclip</code> , <code>truncate</code> , <code>ulem</code> , <code>umoline</code> , <code>underscore</code> , <code>uspace</code> , <code>xellipsis</code> .
Acronyms:	<code>acro</code> , <code>acronym</code> .
Ordinals:	<code>engord</code> , <code>fmtcount</code> , <code>nth</code> .
Text ligatures:	Ligatures for symbols are supported. Ligatures for f, q, t are intentionally turned off because many simpler browsers do not display them correctly. Modern full-featured browsers re-create these ligatures on-the-fly.
Horizontal space:	HTML output for thin-unbreakable, unbreakable, <code>\enskip</code> , <code>\quad</code> , <code>\qquad</code> , <code>\hspace</code> .
Rules:	<code>\rule</code> with width, height, raise, text color.
HTML reserved characters:	<code>\&</code> , <code>\textless</code> , and <code>\textgreater</code> are converted to HTML entities.
Fonts:	Used as-is. Appear in SVG math expressions or embedded image environments. <code>fontaxes</code> , <code>nfssext-cfr</code> , <code>slantsc</code> , <code>tabfigures</code> . Tested to work as-is: Special font macros in <code>cfr-lm</code> and others which use <code>nfssext-cfr</code> . Also see the math section for math and MATHJAX support for math font packages.
Symbols:	Native L ^A T _E X diacriticals, <code>academicons</code> , <code>amssymb</code> ^{MJ} , <code>bding</code> , <code>ccicons</code> , <code>chemgreek</code> , <code>dingbat</code> , <code>euro</code> , <code>eurosym</code> , <code>fontawesome</code> , <code>fontawesome5</code> , <code>gensymb</code> ^{MJ} , <code>latexsym</code> ^{MJ} , <code>marvosym</code> , <code>metabang</code> , <code>metalogox</code> , <code>pifont</code> , <code>textalpha</code> , <code>textcomp</code> ^{MJ} , <code>textgreek</code> , <code>typicons</code> , <code>xunicode</code> .
Files:	<code>attachfile</code> , <code>attachfile2</code> , <code>hyperxmp</code> , <code>inputrc</code> , <code>intopdf</code> , <code>pdfpages</code> , <code>pdfx</code> , <code>xmpincl</code> .

Science and engineering:	algorithm2e, algorithmicx, ar ^{MJ} , askmaps, axodraw2, bitpattern, blochsphere, bodegraph, bohr, bytefield, chemfig, chemformula, chemgreek, chemmacros, chemnum, circuitikz, doipubmed, econometrics ^{MJ} , elements, engtlc ^{MJ} , fast-diagram, ghsystem, hepnicenames, heppennames, hepunits ^{MJ} , isotope ^{MJ} , karnaughmap, karnaugh-map, keystroke, listings, listingsutf8, linop, menukeys, mhchem ^{MJ} , minted, pgfagt, phfqt, physics ^{MJ} , physunits ^{MJ} , plimsoll ^{MJ} , qcircuit, register, simplebnf, simpler-wick, slashed ^{MJ} , steinmetz ^{MJ} , structmech, struktex, syntaxdi, tikz-karnaugh, tikzcodeblocks, venndiagram
Arts and humanities:	foreign, forest, llyuatex, musicography, nameauth, octave, phonrule, piano, schemata, semantic-markup, tikz-dependency, vowel, xpiano
Academic:	academicons, classicthesis, doi, doipubmed, orcidlink ^{MJ} , termcal
Admonitions:	awesonebox, notes.
Editorial:	changebar, changelog, changes, easy-todo, easyReview, ed, errata, fixme, fixmetodonotes, pdfcomment ^{MJ} , pdfmarginpar, todo, todonotes, tram, xexchangebar.
Accessibility:	accessibility ^{MJ} , accsupp ^{MJ} , axessibility ^{MJ} , pdfcomment ^{MJ} , repltext ^{MJ} , tagpdf.
Package handling:	catoptions.
Debug:	chkfloat, cmdtrack, dprogress, lipsum, lua-visual-debug, mwe, refcheck, showlabels, showkeys, srcltx, srctex, vpe, xbmks.
Working as-is:	Various utility, calculation, file, and text-only packages, such as calc, fileerr, somedefs, trace, xspace. Also, most math-only packages, including specialized typesetting for various fields of science and engineering.

3 Alternatives

Summarized below are several other ways to convert a L^AT_EX or other document to HTML. Where an existing L^AT_EX document is to be converted to HTML, lwarf may be a good choice. For new projects with a large number of documents, it may be worth investigating the alternatives before decided which path to take.

3.1 internet class

- internet (Cls)** The closest to lwarf in design principle is the `internet` class by Andrew Stacey—an interesting project which directly produces several versions of markdown, and also HTML and EPUB. <https://github.com/loopspace/latex-to-internet>

3.2 TEX4HT

- TeX4ht (Prog)** <http://tug.org/tex4ht/>
htlatex (Prog)

This system uses native L^AT_EX processing to produce a DVI file containing special commands, and then uses additional post-processing for the HTML conversion by way of numerous configuration files. In some cases lwarf provides a better HTML conversion, and it supports a different set of packages. TeX4ht produces several other forms of output beyond HTML, including ODT and a direct path to EPUB, and is still being developed.

3.3 Translators

These systems use external programs to translate a subset of L^AT_EX syntax into HTML. Search for each on CTAN (<http://ctan.org>).

- Hevea (Prog)** **H^Ev^Ea:** <http://hevea.inria.fr/> (not on CTAN)
- TtH (Prog)** **T_TH:** <http://hutchinson.belmont.ma.us/tth/>
- GELLMU (Prog)** **GELLMU:** <http://www.albany.edu/~hammond/gellmu/>
- LaTeXML (Prog)** **LATEXML:** <http://dlmf.nist.gov/LaTeXML/>
- Plastex (Prog)** **PlasTeX:** <https://github.com/tiarno/plastex>
- LaTeX2HTML (Prog)** **LATEX2HTML:** <http://www.latex2html.org/>
and <http://ctan.org/pkg/latex2html>.
- TeX2page (Prog)** **TEX2page:** <http://ds26gte.github.io/tex2page/index.html>

Finally, GladTeX may used to directly insert L^AT_EX math into HTML:

- GladTeX (Prog)** **GladTeX:** <http://humenda.github.io/GladTeX/>

3.4 ASCIIDOC and ASCIIDOCTOR

AsciiDoc is one of the most capable markup languages, providing enough features to produce the typical technical-writing document with cross-references, and it writes L^AT_EX and HTML.

AsciiDoc (*Prog*) **Asciidoc:** <http://asciidoc.org/> (More active.)

AsciiDoctor (*Prog*) **Asciidoc:** <http://asciidoc.org/> (The original project.)

3.4.1 ASCIIDOCTOR-LATEX

The Asciidoc-LaTeX project is developing additional L^AT_EX-related features.

Asciidoc-LaTeX:

<http://www.noteshare.io/book/asciidoc-latex-manual>

<https://github.com/asciidoc/asciidoc-latex>

3.5 PANDOC

Pandoc (*Prog*) A markup system which also reads and writes L^AT_EX and HTML.

Pandoc: <http://pandoc.org/>

(Watch for improvements in cross-references to figures and tables.)

3.6 Word processors

Word (*Prog*) It should be noted that the popular word processors have advanced through

LibreOffice (*Prog*) the years in their abilities to represent math with a L^AT_EX-ish input syntax, unicode
OpenOffice (*Prog*) math fonts, and high-quality output, and also generate HTML with varying success.
See recent developments in MICROSOFT® *Word*® and LIBREOFFICE™ *Writer*.

3.7 Commercial systems

Adobe (*Prog*) Likewise, several professional systems exist whose abilities have been ad-

FrameMaker (*Prog*) vancing in the areas of typesetting, cross-referencing, and HTML generation. See
InDesign (*Prog*) ADOBE® *FrameMaker*®, ADOBE *InDesign*®, and MADCAP *Flare*™.

Flare (*Prog*)

3.8 Comparisons

AsciiDoc, Pandoc, and various other markup languages typically have a syntax which tries to be natural and human-readable, but the use of advanced features tends to require many combinations of special characters, resulting in a complicated mess of syntax. By contrast, L^AT_EX spells things out in readable words but takes longer to type, although integrated editors exist which can provide faster

entry and a graphic user interface. For those functions which are covered by the typical markup language it is arguable that L^AT_EX is comparably easy to learn, while L^AT_EX provides many more advanced features where needed, along with a large number of pre-existing packages which provide solutions to numerous common tasks.

Text-based document-markup systems share some of the advantages of L^AT_EX vs. a typical word processor. Documents formats are stable. The documents themselves are portable, work well with revision control, do not crash or become corrupted, and are easily generated under program control. Formatting commands are visible, cross-referencing is automatic, and editing is responsive. Search/replace with regular expressions provides a powerful tool for the manipulation of both document contents and structure. Markup systems and some commercial systems allow printed output through a L^AT_EX back end, yielding high-quality results especially when the L^AT_EX template is adjusted, but they lose the ability to use L^AT_EX macros and other L^AT_EX source-document features.

The effort required to customize the output of each markup system varies. For print output, L^AT_EX configuration files are usually used. For HTML output, a css file will be available, but additional configuration may require editing some form of control file with a different syntax, such as XML. In the case of lwarf, css is used, and much HTML output is adjusted through the usual L^AT_EX optional macro parameters, but further customization may require patching L^AT_EX code.

The popular word processors and professional document systems each has a large base of after-market support including pre-designed styles and templates, and often include content-management systems for topic reuse.

4 Installation

Table 3 shows the tools which are used for the L^AT_EX to HTML conversion. In most cases, these will be available via the standard package-installation tools.

Detailed installation instructions follow.

Table 3: Required software programs

Provided by your L^AT_EX distribution:

From TeXLive: <http://tug.org/texlive/>.

L^AT_EX: *pdflatex*, *xelatex*, or *lualatex*.

The l warp package: This package.

The *l warpmk* utility: Provided along with this package. This should be an operating-system executable in the same way that *pdflatex* or *latexmk* is. It is possible to have the *l warp* package generate a local copy of *l warpmk* called *l warpmk.lua*. See table 4.

luatex: Used by the *l warpmk* program to simplify and automate document generation.

xindy: The *xindy* program is used by *l warp* to create indexes. On a MiK^TE_X system this may have to be acquired separately, but it is part of the regular installer as of mid 2015.

latexmk: Optionally used by *l warpmk* to compile L^AT_EX code. On a MiK^TE_X system, *Perl* may need to be installed first.

pdfcrop: Used to pull images out of the L^AT_EX PDF.

POPLER PDF utilities:

pdftotext: Used to convert PDF to text.

pdfseparate: Used to pull images out of the L^AT_EX PDF.

pdftocairo: Used to convert images to SVG.

These might be provided by your operating-system package manager, and MiK^TE_X provides *miktek-poppler-bin-** packages.

From POPLER: poppler.freedesktop.org.

For MACOS®, see <https://brew.sh/>, install *Homebrew*, then

Enter ⇒ **brew install poppler**

For WINDOWS, see Mik^TE_X *miktek-poppler-bin-**, or:

<https://sourceforge.net/projects/poppler-win32/> and:

<http://blog.alivate.com.au/poppler-windows/>

Perl:

This may be provided by your operating-system package manager, and may be required for some of the POPLER PDF utilities.

strawberryperl.com (recommended), perl.org

Automatically downloaded from the internet as required:

MATHJAX: Optionally used to display math. From: mathjax.org

4.1 Installing the l warp package

There are several ways to install l warp. These are listed here with the preferred methods listed first:

Pre-installed: Try entering into a command line:

Enter ⇒ **kpsewhich l warp.sty**

If a path to l warp.sty is shown, then l warp is already installed and you may skip to the next section.

TeX Live: If using a TeX Live distribution, try installing via *tlmgr*:

Enter ⇒ **tlmgr install l warp**

MiKTeX:

1. For newer versions of MiKTeX, install or update l warp using the *MiKTeX Console* program.
2. For older versions of MiKTeX, to install l warp the first time, use the *MiKTeX Package Manager (Admin)*. To update l warp, use *MiKTeX Update (Admin)*.
3. Either way, also update the package *miktex-misc*, which will install and update the *lwarpmk* executable.

Operating-system package: The operating-system package manager may already have l warp, perhaps as part of a set of TeX-related packages.

CTAN TDS archive: l warp may be downloaded from the Comprehensive TeX Archive:

1. See <http://ctan.org/pkg/l warp> for the l warp package.
2. Download the TDS archive: l warp.tds.zip
3. Find the TeX local directory:

TeX Live:

Enter ⇒ **kpsewhich -var-value TEXMFLOCAL**

MiKTeX:

In the **Settings** window, **Roots** tab, look for a local TDS root.

This should be something like:

/usr/local/texlive/texmf-local/

4. Unpack the archive in the TDS local directory.
5. Renew the cache:

Enter ⇒ **mktexlsr**

— or —

Enter ⇒ **texhash**

Or, for WINDOWS MiKTeX, start the program called *MiKTeX Settings (Admin)* and click on the button called **Refresh FNDB**.

CTAN .dtx and .ins files: Another form of TeX package is .dtx and .ins source files. These files are used to create the documentation and .sty files.

1. See <http://ctan.org/pkg/l warp> for the l warp package.
2. Download the zip archive l warp.zip into your own l warp directory.
3. Unpack l warp.zip.

4. Locate the contents `l warp.dtx` and `l warp.ins`

5. Create the `.sty` files:

Enter ⇒ **`pdflatex l warp.ins`**

6. Create the documentation:

```
pdflatex l warp.dtx (several times)
makeindex -s gglo.ist -o l warp.gls l warp.glo
makeindex -s gind.ist l warp.idx
pdflatex l warp.dtx (several times)
```

7. Copy the `.sty` files somewhere such as the TeX Live local tree found in the previous CTAN TDS section, under the subdirectory:

<texlocal>/tex/latex/local/l warp

8. Copy `l warp_baseline_marker.png` and `l warp_baseline_marker.eps` to the same place as the `.sty` files.

9. Copy the documentation `l warp.pdf` to a source directory in the local tree, such as:

<texlocal>/doc/local/l warp

10. Renew the cache:

Enter ⇒ **`mktextslr`**

— or —

Enter ⇒ **`texhash`**

Or, for Windows MiKTEX, start the program called

MiKTeX Settings (Admin) and click on the button called **Refresh FNDB**.

11. See section 4.2.1 to generate your local copy of `l warpmk`.

12. Once the local version of `l warpmk.lua` is installed, it may be made available system-wide as per section 4.2.

Project-local CTAN .dtx and .ins files: The `.dtx` and `.ins` files may be downloaded to a project directory, then compiled right there, alongside the document source files. The resultant `*.sty` and `l warpmk.lua` files may be used as-is, so long as they are in the same directory as the document source. The files `l warp_baseline_marker.png` and `l warp_baseline_marker.eps` must also be copied as well. This approach is especially useful if you would like to temporarily test `l warp` before deciding whether to permanently install it.

Just testing!

4.2 Installing the `l warpmk` utility

(Note: If `l warpmk` is not already installed, it is easiest to use a local copy instead of installing it system-wide. See section 4.2.1.)

After the `l warp` package is installed, you may need to setup the `l warpmk` utility:

- At a command line, try executing `l warpmk`. If the `l warpmk` help message appears, then `l warpmk` is already set up. If not, it is easiest to generate and use a local copy. See section 4.2.1.
- For MiKTEX, try updating the `miktex-misc` package. This may install the `l warpmk` executable for you.

Otherwise, continue with the following:

3. Locate the file `lwarpmk.lua`, which should be in the `scripts` directory of the TDS tree. On a TeX Live or MiKTeX system you may use

Enter ⇒ **`kpsewhich lwarpmk.lua`**

(If the file is not found, you may also generate a local copy and use it instead. See section 4.2.1.)

4. Create `lwarpmk`:

Unix: Create a symbolic link and make it executable:

- (a) Locate the TeX Live binaries:

Enter ⇒ **`kpsewhich -var-value TEXMFROOT`**

This will be something like:

`/usr/local/texlive/<year>`

The binaries are then located in the `bin/<arch>` directory under the root:

`/usr/local/texlive/<year>/bin/<architecture>/`

In this directory you will find programs such as `pdflatex` and `makeindex`.

- (b) In the binaries directory, create a new symbolic link from the binaries directory to `lwarpmk.lua`:

Enter ⇒ **`ln -s <path to lwarpmk.lua> lwarpmk`**

- (c) Make the link executable:

Enter ⇒ **`chmod 0755 lwarpmk`**

WINDOWS TeX Live: Create a new `lwarpmk.exe` file:

- (a) Locate the TeX Live binaries as shown above for UNIX.

- (b) In the binaries directory, make a *copy* of `runscript.exe` and call it `lwarpmk.exe`. This will call the copy of `lwarpmk.lua` which is in the `scripts` directory of the distribution.

WINDOWS MiKTeX: Create a new `lwarpmk.bat` file:

- (a) Locate the MiKTeX binaries. These will be in a directory such as:

`C:\Program Files\MiKTeX 2.9\miktex\bin\x64`

In this directory you will find programs such as `pdflatex.exe` and `makeindex.exe`.

- (b) Create a new file named `lwarpmk.bat` containing:

`texlua "C:\Program Files\MiKTeX 2.9\scripts\lwarpmk\lwarpmk.texlua" %*`

This will call the copy of `lwarpmk.lua` which is in the `scripts` directory of the distribution.

4.2.1 Using a local copy of `lwarpmk`

It is also possible to use a local version of `lwarpmk`:

1. When compiling the tutorial in section 5, use the `lwarpmk` option for the `l warp` package:

`\usepackage[lwarpmk]{l warp}`

2. When the tutorial is compiled with `pdflatex`, the file `lwarpmk.lua` will be generated along with the other configuration files.

3. `lwarpmk.lua` may be used for this project:

Unix:

- (a) Make lwarfpmk.lua executable:
Enter ⇒ **chmod 0755 lwarfpmk.lua**
- (b) Compile documents with
Enter ⇒ **./lwarfpmk.lua html**
Enter ⇒ **./lwarfpmk.lua print**
etc.
- (c) It may be useful to rename or link to a version without the .lua suffix.

WINDOWS:

Compile documents with either of the following, depending on which command shell is being used:

Enter ⇒ **texlua lwarfpmk.lua html**
Enter ⇒ **texlua lwarfpmk.lua print**
etc.

Or:

Enter ⇒ **lwarfpmk html**
Enter ⇒ **lwarfpmk print**
etc.

4.3 Installing additional utilities

To test for the existence of the additional utilities:

Enter the following in a command line. If each programs' version is displayed, then that utility is already installed. See table 3 on page 77.

Enter ⇒ **luatex --version**
Enter ⇒ **xindy --version**
Enter ⇒ **latexmk --version**
Enter ⇒ **perl --version**
Enter ⇒ **pdfcrop --version**
Enter ⇒ **pdftotext -v**
Enter ⇒ **pdfseparate --version**
Enter ⇒ **pdftocairo -v**

To install *xindy*, *latexmk*, and *pdfcrop*:

The TeX utilities *xindy*, *latexmk*, and *pdfcrop* may be installed in *TexLive* with *tlmgr*, installed by *MiKTeX*, provided by your operating system's package manager, or downloaded from the *CTAN* archive:

<http://ctan.org/pkg/xindy>
<http://ctan.org/pkg/latexmk>
<http://ctan.org/pkg/pdfcrop>

pdftotext (*Prog*) [requirement] To install the POPPLER utilities to a UNIX/LINUX system:

The tools from the POPPLER project should be provided by your operating system's package manager.

To install the POPPLER utilities to a MACOS machine:

1. Install *Homebrew* from <https://brew.sh/>:
`/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"`

2. Install the POPPLER utilities:

Enter ⇒ **brew install poppler**

To install the POPPLER utilities to a WINDOWS machine:

If using MikTEX, install a **miktex-poppler-bin-*** package. Otherwise:

1. See table 3 on page 77.
2. Download and extract the POPPLER utilities *pdftotext*, *pdfseparate*, and *pdfseparate* to a directory, such as Poppler.
3. In the **Start** window, type "Path" to search for results related to Path. Or, open the control panel and search for "Path".
4. Choose **Edit the system environment variables** in the control panel.
5. Choose the **Environment Variables** button.
6. Choose the **Path** variable, then the **Edit** button.
7. Choose the **New** button to make an additional entry.
8. Enter the bin directory of the POPPLER utilities, such as:
C:\Users\<myname>\Desktop\Poppler\poppler-0.5_x86\poppler-0.5\bin
Be sure to include \bin.
9. Click **Ok** when done.

perl (Prog) [requirement] **To install PERL to a WINDOWS machine:**

1. Download and install a version of PERL, such as STRAWBERRY PERL, to a directory without a space in its name, such as C:\Strawberry.
2. Edit the **Path** as seen above for the POPPLER utilities.
3. Enter the bin directory of the *perl* utility, such as:
C:\Strawberry\perl\bin
Be sure to include \bin.
4. Click **Ok** when done.

Any utilities installed by hand must be added to the PATH.

5 Tutorial

This section shows an example of how to create an lwarf document.

Need help?

See the [General Index](#) for “how-to”, and the [Troubleshooting Index](#) if something doesn’t work. A [Troubleshooting](#) section is also available. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category.

5.1 Starting a new project

1. Create a new project directory called `tutorial`.

`tutorial.tex` (*file*)

2. Inside the `tutorial` directory, create a new file called `tutorial.tex`. This may be done several ways:

Copy from the documentation PDF:

A listing is in fig. 1, which may be copied/pasted from the figure directly into your own editor, depending on the quality of the PDF viewer and editor, or:

Copy from the lwarf documentation directory:

Another copy may be found by entering into a command line:

Enter ⇒ `texdoc -l lwarf_tutorial.txt`

This should be in the `doc/latex/lwarf/` directory along with this PDF documentation. Copy `lwarf_tutorial.txt` directly into your `tutorial` directory, renamed as `tutorial.tex`.

⚠ Note: .txt suffix!

When using Windows, use an editor other than Notepad, since Notepad does not accept the end-of-line from a Unix text file.

3. Compile the project:

Enter ⇒ `pdflatex tutorial.tex`

(several times)

(`xelatex` or `lualatex` may be used as well. lwarf also supports DVI `latex` for use with `.eps` images.)

4. View the resulting `tutorial.pdf` with a PDF viewer.

A number of new files are created when `tutorial.tex` is compiled, as shown in table 4. These files are created by the lwarf package.

(Two of the new files are configuration files for the helper program `lwarpmk`. Whenever a print version of the document is created, the configuration files for `lwarpmk` are updated to record the operating system, LATEX engine (`latex`, `pdflatex`, `xelatex`, or `lualatex`), the filenames of the source code and HTML output, and whether the additional helper program `latexmk` will be used to compile the document.)

Figure 1: tutorial.tex listing

Note: There are two pages!

```
% Save this as tutorial.tex for the lwarp package tutorial.

\documentclass{book}

\usepackage{iftex}

% --- LOAD FONT SELECTION AND ENCODING BEFORE LOADING LWARP ---

\ifPDFTeX
\usepackage{lmodern}           % pdflatex or dvi latex
\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}
\else
\usepackage{fontspec}          % XeLaTeX or LuaLaTeX
\fi

% --- LWARP IS LOADED NEXT ---
\usepackage[
% HomeHTMLFilename=index,      % Filename of the homepage.
% HTMLFilename={node-},        % Filename prefix of other pages.
% IndexLanguage=english,       % Language for xindy index, glossary.
% latexmk,                   % Use latexmk to compile.
% OSWindows,                  % Force Windows. (Usually automatic.)
% mathjax,                    % Use MathJax to display math.
]{lwarp}
% \boolfalse{FileSectionNames} % If false, numbers the files.

% --- LOAD PDFLATEX MATH FONTS HERE ---

% --- OTHER PACKAGES ARE LOADED AFTER LWARP ---
\usepackage{makeidx} \makeindex
\usepackage{xcolor}           % (Demonstration purposes only.)
\usepackage{hyperref,cleveref} % LOAD THESE LAST!

% --- LATEX AND HTML CUSTOMIZATION ---
\title{The Lwarp Tutorial}
\author{Some Author}
\setcounter{tocdepth}{2}        % Include subsections in the \TOC.
\setcounter{secnumdepth}{2}      % Number down to subsections.
\setcounter{FileDepth}{1}        % Split \HTML\ files at sections
\booltrue{CombineHigherDepths} % Combine parts/chapters/sections
\setcounter{SideTOCDepth}{1}     % Include subsections in the side\TOC
\HTMLTitle{Webpage Title}       % Overrides \title for the web page.
\HTMLAuthor{Some Author}        % Sets the HTML meta author tag.
\HTMLLanguage{en-US}            % Sets the HTML meta language.
\HTMLDescription{A description.}% Sets the HTML meta description.
\HTMLFirstPageTop{Name and \fbox{HOMEPAGE LOGO}}
\HTMLPageTop{\fbox{LOGO}}
\HTMLPageBottom{Contact Information and Copyright}
\CSSFilename{lwarp_sagebrush.css}

\begin{document}

\maketitle                         % Or titlepage/titlingpage environment.
```

```

% An article abstract would go here.

\tableofcontents          % MUST BE BEFORE THE FIRST SECTION BREAK!
\listoffigures

\chapter{First chapter}

\section{A section}

This is some text which is indexed.\index{Some text.}

\subsection{A subsection}

See \cref{fig:withtext}.

\begin{figure}\begin{center}
\fbox{\textcolor{blue!50!green}{Text in a figure.}}
\caption{A figure with text\label{fig:withtext}}
\end{center}\end{figure}

\section{Some math}

Inline math: $r = r_0 + vt - \frac{1}{2}at^2$  

followed by display math:  

\begin{equation}
a^2 + b^2 = c^2
\end{equation}

\begin{warpprint} % For print output ...
\cleardoublepage % ... a common method to place index entry into TOC.
\phantomsection
\addcontentsline{toc}{chapter}{\indexname}
\end{warpprint}
\ForceHTMLPage % HTML index will be on its own page.
\ForceHTMLTOC % HTML index will have its own toc entry.
\printindex

\end{document}

```

Table 4: Configuration files created by print version

tutorial.pdf: The PDF output from L^AT_EX. The print version of the document.

tutorial_html.tex: A small .tex file used to create a parallel HTML version of the document, which co-exists with usual the PDF version, and which will have its own auxiliary files. In this way, both PDF and HTML documents may co-exist side-by-side.

Auxiliary files: The usual L^AT_EX files .aux, .log, .out, .toc, .lof, .idx. When an HTML version of the document is created, _html versions of the auxiliary files will also be generated.

lwarpmk.conf: A configuration file for *lwarpmk*, which is used to automate the compilation of PDF or HTML versions of the document.

tutorial.lwarpmkconf: Another configuration file used by *lwarpmk*, which is only useful if you wish to have several projects residing in the same directory.

.css files: lwarf.css, lwarf_formal.css, lwarf_sagebrush.css These files are standard for lwarf, and are not meant to be modified by the user.

sample_project.css: An example of a user-customized css file, which may be used for project-specific changes to the lwarf defaults.

lwarf.ist: Used by lwarf while creating an index using *makeindex*. This file should not be modified by the user. A custom file may be used instead, if necessary.

lwarf_one_limage.txt: For Windows only. Used to process svg images in the background. Copied to lwarf_one_limage.cmd when images are generated.

lwarf_mathjax.txt: Inserted into the HTML files when MATHJAX is used to display math. Do not modify, see \MathJaxFilename instead.

comment_*.cut: Temporary files used by lwarf to conditionally process blocks of text. These files may be ignored.

When the lwarpmk option is given to the lwarf package:

lwarpmk.lua: A local copy of the *lwarpmk* utility.

On UNIX-related operating systems this file must be made executable:

```
chmod u+x lwarpmk.lua
```

This may be useful to have to archive with a project for future use.

5.2 Compiling the print version with *lwarpmk*

The *lwarpmk* utility program is used to compile either the printed or the HTML version of the document.

`lwarpmk print` is used to recompile a printed version of the document.

 **Enable *lwarpmk***

1. If you have not yet done so, add `\usepackage{lwarf}` to the document, then compile the project a single time using *pdflatex*, *lualatex*, or *xelatex*. This generates the file `lwarpmk.conf`, which then allows the *lwarpmk* program to be used.

2. Re-compile the print version:

Enter ⇒ **`lwarpmk print`**

lwarpmk prints an introduction then checks to see if the document must be recompiled. If it seems that the files are up-to-date, then *lwarpmk* informs you of that fact and then exits.

3. Make a small change in the original document, such as adding a space character.

4. Recompile again.

Enter ⇒ **`lwarpmk print`**

The document is recompiled when a change is seen in the source. Several compilations may be necessary to resolve cross-references.

5. Force a recompile to occur.

Enter ⇒ **`lwarpmk again`**

Enter ⇒ **`lwarpmk print`**

lwarpmk again updates the date code for the file, triggering a recompile the next time the document is made.⁵

6. Process the index.⁶ ⁷

Enter ⇒ **`lwarpmk printindex`**

7. Recompile again to include the index.

Enter ⇒ **`lwarpmk print`**

8. To force a single recompile when needed, even if no changes were detected:

Enter ⇒ **`lwarpmk print1`**

Note that the HTML customization commands are ignored while making the print version.

⁵Although, when using the utility *latexmk* (introduced later), the changed date is ignored and an actual change in contents must occur to cause a recompile.

⁶The command `lwarpmk printglossary` is also available to process a glossary produced with the *glossaries* package. See section 8.6.13.

⁷Also see section 8.6.16 for index options.

5.3 Compiling the HTML version with *lwarpmk*

`lwarpmk html` is used to recompile an HTML version of the document.

 **Enable *lwarpmk***

1. If you have not yet done so, add `\usepackage{lwarf}` to the document, then compile the project a single time using *pdflatex*, *lualatex*, or *xelatex*. This generates the file `lwarpmk.conf`, which then allows the `lwarpmk` program to be used.

2. Compile the HTML version:

Enter ⇒ **`lwarpmk html`**

- (a) `lwarpmk` uses L^AT_EX to process `tutorial_html.tex` to create `tutorial_html.pdf`.
- (b) `pdftotext` is then used to convert to the file `tutorial_html.html`. This file is a plain-text file containing HTML tags and content for the entire document.
- (c) `lwarpmk` manually splits `tutorial_html.html` into individual HTML files according to the HTML settings. For this tutorial, the result is `tutorial.html` (the home page), along with `First-chapter.html`⁸, `Some-math.html`, and the document's index in `_Index.html`.⁹

3. View the HTML page in a web browser.

Open the file `tutorial.html` in a web browser.

math images

Note that math images have not yet been generated, so math is still displayed as its alt tag, which is set to the plain-text L^AT_EX source for that expression. Math may be displayed as SVG images (section 5.4) or by a MATHJAX script (section 5.5).

4. Force a recompile:

Enter ⇒ **`lwarpmk again`**

Enter ⇒ **`lwarpmk html`**

Enter ⇒ **`lwarpmk print`**

5. Process the HTML index and recompile:¹⁰¹¹

Enter ⇒ **`lwarpmk htmlindex`**

Enter ⇒ **`lwarpmk html`**

`_Index.html` is updated for the new L^AT_EX index.

6. Reload the web page to see the added index.

7. To force a single recompile when needed, even if no changes were detected:

Enter ⇒ **`lwarpmk html1`**

⁸`First-chapter.html` also contains the first section, even though the second section is its own HTML page. This behavior is controlled by the boolean `CombineHigherDepths`.

⁹`index.html` is commonly used as a homepage, so the document index is in `_Index.html`.

¹⁰The command `lwarpmk htmlglossary` is also available to process a glossary produced with the `glossaries` package. See section 8.6.13.

¹¹Also see section 8.6.16 for index options.

5.4 Generating the svg images

math as svg images By default `lwarf` represents math as svg images, with the L^AT_EX source included in `alt` attributes. In this way, the math is displayed as it was drawn by L^AT_EX, and the L^AT_EX source may be copied and pasted into other documents.

picture and TikZ `lwarf` uses the same mechanism for picture and TikZ environments.

1. Create the svg images:

Enter ⇒ `lwarpmk limages`

Enter ⇒ `lwarpmk html`

2. Move to the tutorial's HTML math page and reload the document in the browser.
3. The math images are displayed using the same font and formatting as the printed version.
4. Copy/paste a math expression into a text editor to see the L^AT_EX source.

⚠️ adding/removing When a math expression, picture, or TikZ environment is added or removed, the svg images must be re-created by entering `lwarpmk limages` to maintain the proper image-file associations. Inline SVG math may be hashed and thus not need to be recreated, but display math and objects such as TikZ may move to new image numbers when the document is changed.

recompile first Before attempting to create the svg image files, `lwarpmk` verifies that the HTML version of the document exists and has correct internal image references.¹² If it is necessary to recompile the document's HTML version one more time, `lwarpmk` usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the L^AT_EX recompile warnings.

⚠️ HTML instead of images If `HTML` appears where an svg image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

⚠️ page counter Incorrect svg images will also occur if the document changes the page counter:

```
\setcounter{page}{<value>}
```

The page counter must *not* be adjusted by the user.

Expressing math as svg images has the advantage of representing the math exactly as L^AT_EX would, but has the disadvantage of requiring an individual file for each math expression. For inline math, and some other objects, `lwarf` uses an MD5 hash on its L^AT_EX source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as picture and TikZ require one image file each. For a document with a large amount of math, see section 5.5 to use MATHJAX instead.

¹²This becomes important when dealing with a document containing thousands of images.

5.5 Using MATHJAX for math

math with MATHJAX Math may also be represented using the MATHJAX JAVASCRIPT project.

1. In the tutorial's source code, uncomment the `mathjax` package option for `l warp`:

```
mathjax, % Use MathJax to display math.
```

2. Recompile

Enter ⇒ `l warpmk html`

3. Reload the math page.

 **MATHJAX requirements** MATHJAX requires web access unless a local copy of MATHJAX is available, and it also requires that JAVASCRIPT is enabled for the web page. The math is rendered by MATHJAX. Right-click on math to see several options for rendering, and for copying the LATEX source.

While using MATHJAX has many advantages, it may not be able to represent complex expressions or spacing adjustments as well as LATEX, and it may not support some math-related packages.

5.6 Changing the css style

For a formal css style, add to the preamble:

```
\usepackage{lwarf}
...
\CSSFilename{lwarf_formal.css}
...
\begin{document}
```

For a modern css style, `lwarf_sagebrush.css` is also provided:

```
\CSSFilename{lwarf_sagebrush.css}
```

See section [7.7](#) for more information about modifying the css styling of the document.

5.7 Customizing the HTML output

A number of settings may be made to control the HTML output, including filename generation, automatic compilation, math output, document splitting, meta data, and page headers and footers.

See section [7.6](#) for more information.

5.8 Using *latexmk*

latexmk is a L^AT_EX utility used to monitor changes in source files and recompile as needed.

1. In the tutorial's source code uncomment the `latexmk` option for the `lwarp` package:

`latexmk, % Use latexmk to compile.`

2. Recompile the printed version of the document.

Enter ⇒ **`lwarpmk print`**

`lwarp` updates its own configuration files (`lwarpmk.conf` and `tutorial.lwarpmkconf`) whenever the printed version of the document is compiled. These configuration files remember that `lwarpmk` should use `latexmk` to compile the document.

3. Recompile the document.

Enter ⇒ **`lwarpmk print`**

and/or

Enter ⇒ **`lwarpmk html`**

Changes are detected by comparing checksums rather than modification times, so `lwarpmk` again will not trigger a recompile, but *latexmk* has a much better awareness of changes than the `lwarpmk` utility does and it is likely to correctly know when to recompile. A recompile may be forced by making a small change to the source, and a single recompile may be forced with:

Enter ⇒ **`lwarpmk print1`**

and/or

Enter ⇒ **`lwarpmk html1`**

[forced single-pass recompile](#)

5.9 Using X_ELATEX or LuaLATEX

X_ELATEX or LuaLATEX may be used instead of LATEX.

1. Remove the auxiliary files for the project:

Enter ⇒ **lwarfmk cleanall**

2. Use *xelatex* or *lualatex* to compile the printed version a single time.

Enter ⇒ **xelatex tutorial.tex**

— or —

Enter ⇒ **lualatex tutorial.tex**

When the compile occurs, the configuration files for *lwarfmk* are modified to remember which TeX engine was used. X_ELATEX or LuaLATEX will be used for future runs of *lwarfmk*.

3. To recompile the document:

Enter ⇒ **lwarfmk print**

-and-

Enter ⇒ **lwarfmk html**

4. Also remember to update the indexes and recompile again:

Enter ⇒ **lwarfmk htmlindex**

Enter ⇒ **lwarfmk html**

Enter ⇒ **lwarfmk printindex**

Enter ⇒ **lwarfmk print**

5.10 Using DVI LATEX

Traditional DVI LaTeX may also be used along with .eps image files. An SVG version of each image must also be provided. *lwarfmk* may be used to convert image formats.

To convert EPS files to PDF:

Enter ⇒ **lwarfmk epstopdf *.eps** (or a list of files)

To convert PDF files to SVG:

Enter ⇒ **lwarfmk pdftosvg *.pdf** (or a list of files)

 **bitmapped fonts** See section 7.4 regarding font selection to avoid the use of bitmapped fonts.

5.11 Using a bibliography

To process the bibliography for the HTML version:

Enter ⇒ **bibtex <filename>.html**

or

Enter ⇒ **biber <filename>.html**

To see the bibliography in the HTML version:

Enter ⇒ **lwarfmk html1**

as many times as necessary.

5.12 Using a glossary

lwarf supports the `gloss` and `glossaries` packages, although this tutorial does not supply an example.

5.12.1 `gloss` package

See section [8.6.12](#).

5.12.2 `glossaries` package

To process the glossary for the print version:

Enter ⇒ **lwarfmk printglossary**

 (If `makeglossaries` is not found, see section [8.6.13](#).)

To process the glossary for the HTML version:

Enter ⇒ **lwarfmk htmlglossary**

In each case, the document will have to be recompiled afterwards:

Enter ⇒ **lwarfmk html1**

Enter ⇒ **lwarfmk html**

Enter ⇒ **lwarfmk print1**

Enter ⇒ **lwarfmk print**

See section [8.6.13](#) to set options for processing glossaries.

5.13 Cleaning auxiliary files

To remove the auxiliary files .aux, .toc, .lof, .lot, .idx, .ind, .log, and .gl*, and a few others:

Enter ⇒ **l warpmk clean**

5.14 Cleaning auxiliary and output files

To remove the auxiliary files, and also remove the .pdf and .html files:

Enter ⇒ **l warpmk cleanall**

5.15 Cleaning the images from the <project>-images directory

The <project>-images directory contains SVG images automatically generated for inline and display math, tikz, etc. To remove all the images from the <project>-images directory:

Enter ⇒ **l warpmk cleanimages**

5.16 Converting PDF or EPS images to SVG

HTML cannot display PDF or EPS images, so any external PDF graphics images must be converted to SVG format. *pdftocairo* and *epstopdf* may be used one image at a time, but *l warpmk* also provides a way to convert PDF or EPS images in bulk:

Enter ⇒ **l warpmk epstopdf *.eps (or a list of files)**

Enter ⇒ **l warpmk pdftosvg *.pdf (or a list of files)**

Be sure to always provide SVG files for HTML output.

5.17 Creating HTML from an incomplete compile

During testing it may be useful to finish the HTML conversion even when the document had errors and did not compile successfully. To attempt an HTML conversion of an incomplete document:

Enter ⇒ **l warpmk pdftohtml [-p project]**

5.18 Processing multiple projects in the same directory

 **xr, xr-hyper, xcite**

It is possible to have several projects in the same directory. *l warpmk* has an optional parameter which is the document to compile.

To create each project:

Enter ⇒ **pdflatex project_a**

Enter ⇒ **pdflatex project_b**

Each project is given its own configuration file:

`project_a.lwarpmkconf`, `project_b.lwarpmkconf`

To compile each project with `lwarkmk`:

Enter ⇒ **lwarpmk print -p project_a**

Enter ⇒ **lwarpmk print -p project_b**

Enter ⇒ **lwarpmk html -p project_a**

Enter ⇒ **lwarpmk html -p project_b**

To generate each project's images:

Enter ⇒ **lwarpmk limages -p project_a**

Enter ⇒ **lwarpmk limages -p project_b**

To clean each project's images:

Enter ⇒ **lwarpmk cleanlimages -p project_a**

Enter ⇒ **lwarpmk cleanlimages -p project_b**

To clean each project's auxiliary files:

Enter ⇒ **lwarpmk cleanall -p project_a**

Enter ⇒ **lwarpmk cleanall -p project_b**

If using `bibtex`, for example, the HTML version must also be processed:

Enter ⇒ **bibtex project_a.html**

5.19 Using the *make* utility

lwarpmk has an action which may be useful for integration with the common *make* utility:

`lwarpmk pdftohtml [-p project]`

make may be used to compile the code to PDF with HTML tags (`project_html.pdf`), then *lwarpmk* may be used to convert each target to HTML files.

5.20 What next?

How do I do something? See the [General Index](#).

Something do not work! See the [Troubleshooting Index](#) or section 13: [Troubleshooting](#).

Package options: See section 29, [Package options](#).

HTML and filename settings: See section 7.6, [Customizing the HTML output](#).

Footnote placement: See section 7.6, [Customizing the HTML output](#).

Title page, indexing, glossaries: See section 8.6, [Front and back matter](#).

Shell escape: See section 7.3, [Shell escape](#).

css customization: See section 7.7, [Customizing the css](#).

MATHJAX customization: See section 8.7.7, [Customizing MATHJAX](#).

Localization: (languages) — See section 7.1, [Localization](#).

Accessibility: (alt and title tags) — See section 7.2, [Accessibility](#).

Converting an existing document: See section 6, [Converting an existing document](#).

EPUB conversion: See section 10, [EPUB conversion](#).

Word processor conversion: See section 11, [Word-processor conversion](#).

6 Converting an existing document

To convert an existing document for use with l warp:

1. Arrange the document in the following order:
 - (a) Declare the \documentclass.
 - (b) Load text fonts.
 - (c) Load inputenc or inputenx, fontenc, or fontspec.
 - (d) Load l warp.
 - (e) Load remaining packages.
2. Modify the document:
 - (a) If using named HTML files, in section names use paren math $\backslash(x+y\backslash)$ instead of dollar math $\$x+y\$$. (Dollar math works, but appears in the filename.) Or, use a short name for the toc entry without the math, or use \texorpdfstring from the hyperref package:

```
\section{Some math \texorpdfstring{\(1+2=3\)}{three}}
```
 - (b) Avoid using the \includegraphics scale option. Change:

```
\includegraphics[scale=<xx>]{...}
```

to:

```
\includegraphics[width=<yy>\linewidth]{...}
```
 - (c) Possible changes to tabular environments include: * columns, multirow, longtable, supertabular, xtab, bigdelim. See section 8.10.1.
 - (d) If using braces in package options, such as with caption, see section 8.1.
 - (e) Possible option clashes with memoir. See section 8.13.
 - (f) If using indexes, see section 8.6.16.
 - (g) If using many indexes, glossaries, .aux files, etc., see section 8.6.16 regarding morewrites. If morewrites is already used, be sure to add the setup with allocate=10.
 - (h) Other changes as per [Special cases and limitations](#), section 8.
3. Convert any PDF images to SVG. See section 8.8.
4. Manually compile the print version with *latex*, *pdflatex*, *lualatex*, or *xelatex*.
5. l warpmk print to finish the print version.
6. l warpmk html to create the HTML version.
7. l warpmk limages to create the SVG images of any SVG math, lateximage, TikZ, etc.

Need help?

See the [General Index](#) for “how-to”, and the [Troubleshooting Index](#) if something doesn’t work. A [Troubleshooting](#) section is also available. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category.

Table 5: Localization settings

Object names: LATEX provides redefinable names for various objects, and lwarp adds a few more. Use \renewcommand to change these.

\abstractname: This macro is honored by lwarp.

\linkhomename: Displayed by the link to the homepage.

\linkpreviousname: Displayed by the link to the previous page

\linknextname: Displayed by the link to the next page.

\sidetocname: Displayed at the head of the sidetoc.

HTML settings: See table 8 and section 7.6 for details.

\HTMLLanguage: The language to declare for each web page.

\ImageAltText, \MathImageAltText, \PackageDiagramAltText,
 \AltTextOpen, \AltTextClose: The defaults used for HTML alt text for images. See section 7.2.

\CSSFilename: The name of the css file to use.

\MathJaxFilename: The name of the MATHJAX script to use.

Package options:

ImagesName and ImagesDirectory: These options control the filenames used by lwarp when it automatically generates images. See table 7 and section 7.5.

xindyStyle, xindyLanguage, xindyCodepage: When using *xindy*, these options may be set according to local use. See section 8.6.22.

pdftotextEnc: To adjust the encoding of *pdftotext*.

7 Additional details

7.1 Localization

Regional localization is supported by lwarp via the package options and macros shown in table 5.

7.2 Accessibility

lwarp provides several methods for improving access to the document using tools such as text-only browsers, copy / paste, text-to-speech readers, or Braille readers. lwarp can use the HTML alt text attribute for images, as described below. lwarp can also use the HTML title attribute, which usually generates a pop-up text. lwarp can add this to a reference or hyperlink. lwarp also uses standard HTML5 elements which are pre-assigned ARIA roles for increased accessibility, and lwarp assigns the math role for SVG math images, and the note role for footnotes, end notes, margin paragraphs and notes, etc. MATHJAX also has provisions for improved accessibility as well. See table 6.

Table 6: Accessibiliy settings

\ImageAltText: The default HTML alt text for \includegraphics and \textrm{images}. Set with \renewcommand.

\includegraphics alt key: For \includegraphics, lwarp adds the alt key/ value. For example:

```
\includegraphics[alt={Some text.}]{filename}
```

SVG math: For simple svg math, lwarp places the L^AT_EX math expression in the alt text, so that the L^AT_EX expression may be copied and pasted to another document as plain text.

\MathImageAltText: For complicated svg math, such as enclosed in \InlineMathOther/\InlineMathNormal, or \DisplayMathOther/\DisplayMathNormal, the HTML alt text will be set to \MathImageAltText. Set with \renewcommand.

MATHJAX: For MATHJAX, the accessibility tools provided by MATHJAX are enabled by default by lwarp's MATHJAX scripts.

\PackageDiagramAltText: Various packages create diagrams which lwarp converts into SVG images. These are given alt text set to \PackageDiagramAltText. Set with \renewcommand.

\ThisAltText: The HTML alt text of the next image may be set with:

```
\ThisAltText{Custom text about the image.}
<SVG math, Tikz, picture, etc.>
```

The next single image will be generated with the given text, and the following images will revert to back to their defaults.

\ThisAltText may also be used to assign an HTML title to the next reference or hyperlink.

```
\ThisAltText{Custom text about the link.}
Text ... \ref{label_name} ... text.
```

See section 7.6.

\AltTextOpen and \AltTextClose: By default, HTML alt text is enclosed by parentheses. This may be changed by redefining \AltTextOpen and \AltTextClose. Set with \renewcommand.

7.3 Shell escape

`-\/-shell-escape (Opt)`

Some documents require the use of an external program, which is allowed when using the `--shell-escape` command-line option. When the document is first compiled manually, and also whenever the print version is recompiled, l warp detects and remembers whether shell escape is enabled. If so, it will also be enabled when the document is recompiled with *l warpmk*.

7.4 Font and utf-8 support

 type 3 bitmapped fonts

l warp uses *pdftotext* to convert PDF output into UTF-8-encoded text. This process requires that UTF-8 information be embedded in the PDF file, which may prevent the use of older “type 3” bit-mapped fonts, and of older packages such as ae. The l warp option `pdftotextEnc` may be useful in some situations. See section 7.5.

vector fonts

Computer Modern

 pdflatex

 DVI latex

cm-super (Pkg)

While using DVI *latex* or PDF *pdflatex*, if no font-related package is specified then the default COMPUTER MODERN font is used, which may be a “type 3” bit-mapped font which may not convert well to plain text. A “type 1” vector font is required.

To use the updated cm-super’s type 1 fonts instead of Computer Modern, install the cm-super font package.

lmodern (Pkg)

To use Latin Modern instead, add

```
\usepackage{lmodern}
```

to the preamble.

dejavu (Pkg)

Another useful option is the Deja Vu series of fonts, which have an increased coverage of language and glyphs:

```
\usepackage{dejavu}
```

latex, pdflatex, T1, UTF8

While using DVI *latex* or PDF *pdflatex*, l warp automatically loads `fontenc` with T1 encoding. `fontenc` may be loaded with an additional encoding after l warp. `inputenc` is automatically loaded with UTF8 encoding if it has not yet been loaded, but may also be specified with another encoding such as latin1. See the next section regarding index encoding.

 xelatex, lualatex, fontspec

X_ELATEX and LuaLATEX users must use the `fontspec` package. Do NOT use `fontenc`!

Place `fontspec` or `fontenc`, `xunicode`, and other font and UTF-8 related commands after the `\documentclass` command and before `\usepackage{l warp}`.

 package conflicts

In some cases, a package conflict may require that a font package be loaded after l warp, which should work as well:

1. `documentclass{article/book/report}` comes first, followed by any of:
2. Font and UTF-8 related commands:

- For X_ELATEX or LuaLATEX:

- `fontspec` and font choices

fontspec (Pkg)

ligatures

l warp sets the following to turn off T_EX ligatures during the generation of HTML tags, and turn off common ligatures in regular text,

since older browsers may not display them correctly and newer browsers can automatically re-create them.

```
\defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
\defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
\defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
```

- For *pdflatex*:

<i>lmodern</i> (<i>Pkg</i>)	(a) \usepackage{lmodern}, or other font-related packages
<i>fontenc</i> (<i>Pkg</i>)	(b) \usepackage[T1]{fontenc}
<i>inputenc</i> (<i>Pkg</i>)	(c) \usepackage[utf8]{inputenc}, or latin1, etc. Or use <i>inputenx</i> .
<i>inputenx</i> (<i>Pkg</i>)	
<i>newunicodechar</i> (<i>Pkg</i>)	(d) \usepackage{newunicodechar} along with related definitions.
<i>glyptounicode.tex</i> (<i>file</i>)	(e) To assist with the PDF-HTML conversion: <ul style="list-style-type: none"> i. \input glyptounicode.tex ii. \input glyptounicode-cmr.tex% from the pdfx package iii. \pdfgentounicode=1
⚠ dotless j	(f) Another option to assist with the PDF-HTML conversion, such as the dotless j (\j): <ul style="list-style-type: none"> – \usepackage{cmap} — or — – \usepackage{mmap} — or — – \usepackage[noTeX]{mmap}
<i>textcomp</i> (<i>Pkg</i>)	(g) \usepackage{textcomp}

3. \usepackage{newtxmath} or other math-related font packages. Many of these load *amsmath*, which may now be loaded before *l warp*.

4. \usepackage{l warp} (section 7.5) is placed after any of the above, followed by:

5. \setmonofont{TeX Gyre Cursor} or similar may be required if using Xe^LA_TE_X or L^au_LA_TE_X and *fontspec* along with traditional font packages such as *txfonts*, *newtxtext*, etc. This is required to turn off the monospaced font's ligatures with *fontspec* after loading the traditional font packages. Monospaced output ligatures must be turned off to produce the correct HTML characters.

Any monospace font with built-in ligatures may require these ligatures to be disabled for HTML. In one example, JETBRAIN MONO, it is required to use

```
\setmonofont{JetBrains Mono}[%  
  ...  
  Contextuals=AlternateOff,  
 ]
```

After *l warp* is loaded, the ligature may be re-enabled for print mode by using \setmonofont again inside a *warpprint* environment.

6. ... the rest of the preamble and the main document.

⚠ UTF-8 locale In some cases, an external program may require a UTF-8 “locale”. See section 9.9.

7.4.1 Indexes, glossaries, and encoding

l warp supports *makeindex*, *xindy*, *xindex*, and *glossaries*, *gloss*, and *nomenc*.

See section 8.6.15 for indexing, and section 8.6.13 for the *glossaries* package.

⚠ JETBRAIN MONO
⚠ HTML corrupted

7.5 l warp package loading and options

l warp supports book, report, and article classes, as well as the equivalent Koma-script classes and memoir, and various CJK-related classes and packages.

Load the l warp package immediately after the font and UTF-8 setup commands.

Package options may be set while loading l warp, or later with

```
\l warpmksetup{<key=value, . . . >}
```

l warp (Pkg) l warp package options are as follows:

mathsvg (Opt) **mathsvg** and **mathjax**: Selects SVG images or MATHJAX for math display. See section 8.7.
mathjax (Opt)

Default: **mathsvg**

latexmk (Opt) **latexmk**: Tells *l warpmk* to use *latexmk* to recompile the document several times if necessary. Otherwise, *l warpmk* attempts to determine for itself whether to recompile. See section 7.6.
Default: **false**

dvips (Opt) **dvips**: Tells *l warpmk* to use *dvips* and *ps2pdf* to convert DVI output to PDF.
Default: **false**

dvipdfm (Opt) **dvipdfm**: Tells *l warpmk* to use *dvipdfm* to convert DVI output to PDF.
Default: **false**

dvipdfmx (Opt) **dvipdfmx**: Tells *l warpmk* to use *dvipdfmx* to convert DVI output to PDF.
Default: **false**

HomeHTMLFilename (Opt) **HomeHTMLFilename**:

Default: \BaseJobname

Filename of the homepage, without the “.html” suffix. Defaults to the \BaseJobname. A common setting is:

```
HomeHTMLFilename=index
```

filename underscores causing the homepage to be the file index.html. Underscores are allowed in HomeHTMLFilename and HTMLFilename options, but may need to be escaped elsewhere, such as when appearing in a list:

```
\item [\href{file\_name.pdf}{text}] \
```

See section 7.6.1 for examples of naming and numbering HTML files.

HTMLFilename (Opt) **HTMLFilename**: A filename prefix for the rest of the HTML web pages. Useful for numbered web pages with a common prefix. May be empty. See section 7.6.1 for examples of naming and numbering HTML files.
Default: <empty>

ImagesName (Opt) **ImagesName**: The prefix for the images automatically generated by l warp for objects such as SVG math and lateximages.
Default: **image-**

ImagesDirectory (Opt) **ImagesDirectory**: The directory for the images automatically generated by l warp for objects such as SVG math and lateximages. By default, these images will appear in a directory named <jobname>-images, and the images will be named and numbered image-<nn>.
Default: \jobname-images

Table 7: Lwarf package options

Option	Description
mathsvg	Show math using SVG images.
mathjax	Show math using MATHJAX.
latexmk	Use <i>latexmk</i> for compiling documents.
dvips	Use <i>dvips</i> and <i>ps2pdf</i> to convert DVI documents.
dvipdfm	Use <i>dvipdfm</i> to convert DVI documents.
dvipdfmx	Use <i>dvipdfmx</i> to convert DVI documents.
HomeHTMLFilename	The filename of the home page.
HTMLFilename	A prefix for the filenames of the remaining web pages.
ImagesName	A prefix for the filenames of generated images.
ImagesDirectory	The directory used to hold generated images.
PrintLatexCmd	The shell commands for lwarpmk print .
HTMLLatexCmd	The shell commands for lwarpmk html .
For indexing (section 8.6.16) and glossaries (section 8.6.13):	
makeindex	Use <i>makeindex</i> to generate indices.
makeindexStyle	Set a custom style for <i>makeindex</i> .
xindy	Use <i>xindy</i> to generate indices.
xindyStyle	Set a custom style for <i>xindy</i> .
xindyLanguage	The <i>xindy</i> language option used for index generation.
xindyCodepage	The <i>xindy</i> codepage option used for index generation.
xindex	Use <i>xindex</i> to generate indices.
xindexConfig	Set a custom configuration file for <i>xindex</i> .
PrintIndexCmd	Shell commands executed by lwarpmk printindex .
HTMLIndexCmd	Shell commands executed by lwarpmk htmlindex .
LatexmkIndexCmd	Shell commands executed by <i>latexmk</i> .
IndexRef	How to format index links.
GlossaryCmd	Shell command executed by lwarpmk printglossary and lwarpmk htmlglossary .
Seldom necessary:	
OSWindows	Force compatibility with MS-WINDOWS.
pdftotextEnc	Set the encoding for <i>pdftotext</i> .
lwarpmk	Generate a local copy of <i>lwarpmk.lua</i> .
Used internally by lwarf:	
warpprint	Generate print output, and also generate configuration files.
warpHTML	Generate HTML output.
BaseJobname	The \jobname to use. Set to the \jobname of the printed version even while generating HTML.
warpdisable	Disables most of lwarf for testing purposes.

`PrintLatexCmd (Opt)` **PrintLatexCmd:** Sets the shell commands executed by `lwarpmk print`. If not specified, will automatically be set according to the detected LATEX engine and the use of --shell-escape.

`HTMLLatexCmd (Opt)` **HTMLLatexCmd:** Sets the shell commands executed by `lwarpmk html`. If not specified, will automatically be set according to the detected LATEX engine and the use of --shell-escape.

`makeindex (Opt)` **makeindex:** Sets PrintIndexCmd, HTMLIndexCmd, and LatexmkImageCmd to use `makeindex` when generating indexes with `lwarpmk printindex`, `lwarpmk htmlindex`, or `latexmk`. If neither `makeindex` nor `xindy` is used, `makeindex` is assumed.

`makeindexStyle (Opt)` **makeindexStyle:** If you wish to use a custom `.ist` file for index generation, see Default: `lwarp.ist` section 8.6.21.

`xindy (Opt)` **xindy:** Sets PrintIndexCmd, HTMLIndexCmd, and LatexmkImageCmd to use `xindy` when generating indexes with `lwarpmk printindex`, `lwarpmk htmlindex`, or `latexmk`.

`xindyStyle (Opt)` **xindyStyle:** If you wish to use a custom `.xdy` file for index generation, see Default: `lwarp.xdy` section 8.6.22.

`xindyLanguage (Opt)` **xindyLanguage:** If using an index or glossary, see section 29.
Default: `english`

`xindyCodepage (Opt)` **xindyCodepage:** If using an index, see section 29.
Default: `utf8`

`xindex (Opt)` **xindex:** Sets PrintIndexCmd, HTMLIndexCmd, and LatexmkImageCmd to use `xindex` when generating indexes with `lwarpmk printindex`, `lwarpmk htmlindex`, or `latexmk`.

`xindexConfig (Opt)` **xindexConfig:** If you wish to use a custom `xindex-*.lua` file for index generation, see section 8.6.23.
Default: <empty>

`PrintIndexCmd (Opt)` **PrintIndexCmd:** Sets the shell commands executed by `lwarpmk printindex`. If Default: <automatic> not specified, will be set by the selection of `makeindex` or `xindy`. May be used to specify the creation of multiple indexes. See section 8.6.16.

Examples:

```
makeindex -s lwarp.ist projectname.idx          (makeindex)
xindy -M lwarp.xdy -L english -C utf8 projectname.idx  (xindy)
```

automatic setting

The use of the `makeindex` or `xindy` options sets `PrintIndexCmd` to sensible values for each of those programs while compiling a single index. `lwarp`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified.

⚠️ xindy

If specifying `PrintIndexCmd` manually, be sure to assign an `xindy` language and codepage with the `-L` and `-C` `xindy` options, as the `lwarp` `xindyLanguage` and `xindyCodepage` options are not used for the `PrintIndexCmd` option when it is set manually.

This option is stored in the configuration files `lwarpmk.conf` and `*.lwarpmkconf`, and is then passed by the `lwarpmk printindex` command to the operating system to compile the print indexes. Since the command string is parsed by TeX, written to a file, read from the file by LuaTeX, and finally passed to the operating system, any attempt at quoting will be problematic. For complicated commands, it would be best to create a shell script, and simply refer to the script with the `lwarf PrintIndexCmd` option.

`HTMLIndexCmd (Opt)`

`Default: <automatic>`

HTMLIndexCmd: Sets the shell commands executed by `lwarpmk htmlindex`. If not specified, will be set by the selection of `makeindex` or `xindy`. May be used to specify the creation of multiple indexes. See section 8.6.16.

⚠ filenames

Example settings are similar to `PrintIndexCmd`, but append `_html` to the filenames:

```
makeindex -s lwarf.ist projectname_html.idx      (makeindex)
xindy -M lwarf.xdy -L english -C utf8 projectname_html.idx
(xindy)
```

`automatic setting`

The use of the `makeindex` or `xindy` options sets `HTMLIndexCmd` to sensible values for each of those programs while compiling a single index. `lwarf`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified.

⚠ xindy

If specifying `HTMLIndexCmd` manually, be sure to assign an `xindy` language and codepage with the `-L` and `-C` `xindy` options, as the `lwarf xindyLanguage` and `xindyCodepage` options are not used for the `HTMLIndexCmd` option when it is set manually.

As with `PrintIndexCmd`, to generate complicated indexes it may be worthwhile to use a shell script, then refer to that script with `HTMLIndexCmd`.

`LatexmkIndexCmd (Opt)`

`Default: <automatic>`

LatexmkIndexCmd: Sets the shell commands executed by `latexmk`. Unlike `PrintIndexCmd` and `HTMLIndexCmd`, `LatexmkIndexCmd` does not include any filenames, which will be provided instead by `latexmk`. See section 8.6.16.

Example settings are similar to `PrintIndexCmd`, but without a filename:

```
makeindex -s lwarf.ist                                (makeindex)
xindy -M lwarf.xdy -L english -C utf8                (xindy)
```

`automatic setting`

The use of the `makeindex` or `xindy` options sets `LatexmkIndexCmd` to either of the two settings shown above. `lwarf`'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options will be used if specified. Unlike `PrintIndexCmd` and `HTMLIndexCmd`, `latexmk` uses either of the single-line settings of `LatexmkIndexCmd` shown above to compile each of multiple indexes if necessary.

⚠ xindy

If specifying `LatexmkIndexCmd` manually, be sure to assign an `xindy` language and codepage with the `-L` and `-C` `xindy` options, as the `lwarf xindyLanguage` and `xindyCodepage` options are not used for the `LatexmkIndexCmd` option when it is set manually.

`IndexRef (Opt)`

`Default: cref`

IndexRef: Describes how to display the index entries for HTML output. Possible values are `ref`, `nameref`, `refnameref`, `cref`, `crefnameref`, `autoref`, or a text string such as `(link)` or `(*)` for each index entry reference. (Adding parentheses around a single character makes the link larger and easier to click on.) The default is `cref`, which is available even if the print document does

not use `\cleverref`, as the `l warp` package relies on `\cleverref` during HTML output. Option `autoref` gives the same results as `\cref`.

`\ref` and `\cref` to starred or otherwise unknown links will display as `(*)` instead of `??`.

 ?? If using `\cref` (the default), and if a reference appears as `??` with a non-functional link, use `\cleverref`'s `\crefname` to give a name to that type of label.

In general, `\crefnameref` gives the most information, but the index can become quite verbose. Using `(*)` or similar yields a very compact index.

`GlossaryCmd` (*Opt*) **GlossaryCmd:** Sets the shell command executed by `l warpmk printglossary` and `l warpmk htmlglossary`. The print or HTML glossary filename is appended to this command. See section 8.6.13.

`OSWindows` (*Opt*) **OSWindows:** `l warp` attempts to automatically sense Windows, but it may be forced with this option. See section 7.9.

`pdftotextEnc` (*Opt*) **pdftotextEnc:** Used to specify the encoding used by `pdftotext` during the PDF-HTML conversion. In most situations, the default is the correct choice.

`l warpmk` (*Opt*) **l warpmk:** If you wish to have `l warp` generate a local copy of `l warpmk.lua` for archival or local-installation purposes, compile the print version with the `l warpmk` option set. See section 29.

The following options are used internally by `l warp`, and usually are not used in the user's document:

`warpprint` (*Opt*) **warpprint** and **warpHTML:** Usually controlled by `l warpmk`, and not set in the document. Select the `warpprint` option to generate print output (default), or the `warpHTML` option to generate HTML5 output. The default is print output, so the print version may be compiled with the usual `pdflatex`, etc. When `l warp` is loaded in print mode, it creates `<project>_html.tex`, which sets the `warpHTML` option before calling the user's source code `<project>.tex`. In this way, `<project>.tex` can `\usepackage{l warp}` without any options to create a printed version, while `<project>_html.tex` will create an HTML version.

`BaseJobname` (*Opt*) **BaseJobname:** Not intended for the user. Used internally by `l warp` when creating the `*_html.tex` file used to compile the HTML version. See section 29.

`warpdisable` (*Opt*) **warpdisable:** Internally disables both `warpprint` and `warpHTML`. This disables most of `l warp`, which may be useful for testing purposes to see whether `l warp` is causing a problem.

7.6 Customizing the HTML output

⚠ Placement! Table 8 shows several settings may be used to customize the HTML output. Watch for the correct placement of each!

⚠ Changes! Note that if changes are made, it is best to first:

1. Clear all the HTML, PDF, and auxiliary files:

Enter ⇒ **lwarfmk cleanall**

2. Recompile the print version in order to recreate the configuration files for **lwarfmk**:

Enter ⇒ **lwarfmk print**

3. Finally, recompile the HTML version with the new settings:

Enter ⇒ **lwarfmk html**

Placed in the preamble before \begin{document}:

\HTMLFirstPageTop
Default: <empty>

\HTMLFirstPageTop: {⟨contents⟩} A user-definable custom action applied to the top of the home page. Useful for logos, etc. \LinkNext may be used to link to the next web page. Defaults empty. Ignored in print output.

\HTMLFirstPageBottom
Default: <empty>

\HTMLFirstPageBottom: {⟨contents⟩} A user-definable custom action applied to the bottom of the home page. Useful for logos, etc. \LinkNext may be used to link to the next web page. Defaults empty. Ignored in print output.

\linkhomename
Default: Home

\linkhomename: Name of the link to the home page. Paragraphs are allowed. Redefine with \renewcommand.

\linkpreviousname
Default: Previous

\linkpreviousname: Name of the link to the previous page. Paragraphs are allowed. Redefine with \renewcommand.

\linknextname
Default: Next

\linknextname: Name of the link to the next page. Paragraphs are allowed. Redefine with \renewcommand.

tocdepth (*Ctr*)

tocdepth: Sectioning depth of the table of contents. See section 16 for a list of LATEX stack depths.

SideTOCDepth (*Ctr*)
Default: 1

SideTOCDepth: Sectioning depth of the sidetoc. Defaults to 1, causing the sidetoc to show sections but not subsections.

sideroc

Each subpage of the website has its own small table of contents on the side (the “sideroc”). Its depth is set by SideTOCDepth. This sideroc is only shown if the browser display is wide enough. When using a narrow web browser window, “responsive web design” is used to show the sideroc at the top of the page, as well as a link back to **Home** at the top and bottom.

It is recommended to set:

SideTOCDepth=FileDepth

or

Table 8: HTML settings

Macro/Cntr/Bool	Loc*	Description
\linkhomename	P	Name of the link to the homepage.
\linkpreviousname	P	Name of the link to the previous page.
\linknextname	P	Name of the link to the next page.
SideTOCDepth	P	Sectioning depth of the sidetoc.
\sidetocname	P	Name of the sidetoc.
FileDepth	P	Sectioning depth of the file splits.
CombineHigherDepths	P	Combine higher section levels.
FileSectionNames	P	Use section names for file names, else use numbers.
\FilenameLimit	P	Maximum length of the generated filenames.
FootnoteDepth	P	Sectioning depth of footnotes.
\abstractname	P	The name of the abstract.
\ImageAltText	PD	\includegraphics and other images' alt tag.
\ThisAltText {\text{}}	PD	Assigns an alt/title tag for the next image or link.
\MathImageAltText	PD	The svg math image lateximage alt tag.
\PackageDiagramAltText	PD	The suffix for a package's lateximage alt tags.
\AltTextOpen	PD	Start an HTML alt tag.
\AltTextClose	PD	End an HTML alt tag.
\CSSFilename	PS	The css for the following files.
\MathJaxFilename	PS	The MATHJAX script for the following files.
\HTMLLanguage	PS	The HTML lang tag.
\HTMLTitle	PS	The homepage's <title>, overriding \title.
\HTMLTitleBeforeSection	PS	Set subpage <title>s to \HTMLTitle - sectionname
\HTMLTitleAfterSection	PS	Set subpage <title>s to sectionname - \HTMLTitle
\HTMLAuthor	PS	The HTML author meta tag, overriding \author.
\HTMLDescription	PS	The HTML description meta tag.
\HTMLFirstPageTop	P	Heading for the home page.
\HTMLFirstPageBottom	P	Footer for the home page.
\HTMLPageTop	PS	Heading for the other pages.
\HTMLPageBottom	PS	Footer for the other pages.
\HTMLnewcolumntype	D	\newcolumntype for HTML.
\IndexPageSeparator	P	Index page list separator.
\IndexRangeSeparator	P	Index page range separator.
FixSmallCaps	P	Set true if small caps rendered as all caps.
HTMLDebugComments	P	Boolean to generate HTML comments.

* **P:** Preamble, **D:** Anywhere in the document. **S:** Before a section.

`SideTOCDepth=FileDepth+1`

⚠ inaccessible pages

`\sidetocname`
Default: `Contents`

`FileDepth (Ctr)`
Default: `-5`



`CombineHigherDepths (bool)`
Default: `true`

⚠ Inaccesible pages!

⚠ Lost in an old page!

`FileSectionNames (bool)`
Default: `true`

⚠ Unique filename!

`\FilenameLimit`
Default: `80`

`FootnoteDepth (Ctr)`
Default: `3`

`FixSmallCaps (bool)`
Default: `false`

If `SideTOCDepth < FileDepth`, web pages will be inaccessible via the `\sidetoc`.

\sidetocname: Name of the sidetoc. Paragraphs are allowed. Redefine with `\renewcommand`.

FileDepth: Sectioning depth of file splits. Defaults to `-5`, causing the entire HTML website to be one single file.

- To place the entire file into one HTML page, use:

`\setcounter{FileDepth}{-5}`

- To split the HTML file at `\section` depth, use:

`\setcounter{FileDepth}{1}`

- To ensure that the HTML pages/files are accessible:

Place a `\tableofcontents` somewhere before the first section break (therefore in the “home page”), and set
`tocdepth >= FileDepth`

CombineHigherDepths: Combine a higher section with its first lower subsections, down to the `FileDepth`. Defaults to `true`. Set to `false` to simulate the concept of a chapter opening on its own page, for example.

The file splits are controlled by the counter `FileDepth` and the boolean `CombineHigherDepths`. Setting `FileDepth` to `0` splits the file at chapters, `1` at sections, etc. `CombineHigherDepths` controls whether to combine pages at levels higher than the chosen `FileDepth`, such as in this tutorial where the page which opens the chapter also contains the first section. Be careful to set `tocdepth` and `SideTOCDepth` to allow access to each page of the website. Set `tocdepth` and `SideTOCDepth` to be greater than or equal to `FileDepth`.

When making changes to the file structure, it is possible to end up with the web browser pointing to an old file which is no longer in use. When this occurs, changes to the web site will not appear in the browser, even if reloading the page, because that page is no longer in use. It is best to return to the home page, clean the files (`lwarpmk cleanall`), change `FileDepth` and/or `CombineHigherDepths`, then finally recompile and renavigate to the desired page using the new file structure.

FileSectionNames: If `true`, web page filenames are derived from a sanitized version of the section names. If `false`, web pages are numbered. Either way, the `HTMLFilename` option is used as a prefix. See section 7.6.1 for examples of naming and numbering HTML files. The user must ensure that filenames are unique after being sanitized. For example, `math` in the section name is removed before creating the filename, so the rest of the filename must be sufficiently unique to avoid name collisions.

\FilenameLimit: The maximum length of the filenames generated by `lwarp`. “`.html`” is added to this length. Redefine with `\renewcommand`.

FootnoteDepth: Determines where to place pending footnotes. `3` places footnotes before each break down to the `\subsubsection` level. `1` places footnotes before each `\section` break. Any pending footnotes are also placed at the bottom of each page before each file break.

FixSmallCaps: Set `true` if `SMALL CAPS` are rendering in all caps (“`SMALL`

CAPS"). May be required for some fonts (*erewhon*, *utopia*, *fbf*, et al.), and packages such as *embrac*.

HTMLDebugComments (*bool*)
Default: false

\abstractname
Default: Abstract

\IndexPageSeparator
Default: “,”

\IndexRangeSeparator
Default: “--”

HTMLDebugComments: Set true to generate HTML comments, such as which section or <div> is being opened or closed.

\abstractname: The name of the abstract. This may also be over-written by the *babel* package. Defaults to “Abstract”. Redefine with \renewcommand.

\IndexPageSeparator: Index page list separator. Adjust to match index style file. If using *gindex*, this is set automatically to *gindex*'s \indexpagessep.

\IndexRangeSeparator: Index page range separator. Adjust to match index style file. If using *gindex*, this is set automatically to *gindex*'s \indexrangesep.

Placed before \begin{document}, or before any sectioning command which causes a file break:

\CSSFilename
Default: lwarf.css

\CSSFilename: {\<filename.css>} Sets the css file to use for the following files. May be changed before each sectioning command which would cause a file split.

The css styles of the web pages are set by the \CSSFilename command. If \CSSFilename is not used, a default plain style is used to mimic printed LATEX output. *lwarf_sagebrush.css* is a semi-fancy colored style as shown in this tutorial. Change it to *lwarf_formal.css* for a more formal look, or comment out the \CSSFilename command to see the default. \CSSFilename may be used before each file break to set the css for individual pages of the website.

\MathJaxFilename
Default: lwarf_mathjax.txt

\MathJaxFilename: {\<filename>} Sets the MATHJAX script file to use for the following files. May be changed before each sectioning command which would cause a file split.

The MATHJAX script file is copied into the head of each HTML file. This may be used to point to a local repository, add extensions, or change the script somewhere in the middle of the document. \MathJaxFilename may be used before each file break to set the script file for individual pages of the website.

\HTMLLanguage
Default: en-US

\HTMLTitle
Default: \thetitle

\HTMLLanguage: {\<langauge>} The HTML file's HTML lang meta tag. Defaults to en-US.

\HTMLTitle: {\<title>} Overrides \title for the HTML header's meta title. Defaults to \thetitle, which is set by \title, or empty otherwise. Unlike the author, \thetitle is set by \title even if not using the *titling* package.

\HTMLTitleBeforeSection: Sets subpage <title> tags to show the website title followed by the section name.

\HTMLTitleAfterSection: Sets subpage <title> tags to show the section name followed by the website title.

To customize subpage <title>s, redefine \theHTMLTitleSection, which defaults to:

custom <title>

\HTMLTitleBeforeSection
Default: \HTMLTitleBeforeSection

\HTMLTitleAfterSection

	<pre>\def\theHTMLTitleSection{% \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%</pre>
\HTMLAuthor Default: \theauthor	\HTMLAuthor: {<author>} The HTML header's meta author. Defaults to \theauthor, which is set by \author if using the titling package, but is empty otherwise. There are several ways to represent the author and affiliations, especially if using the authblk package, most of which do not result in a sensible \theauthor, so \HTMLAuthor is useful to create a list of authors without their affiliations.
\HTMLDescription Default: <empty>	\HTMLDescription: {<description>} Sets the HTML description tag for the following files. May be changed before each sectioning command which would cause a file split.
\HTMLPageTop Default: <empty>	\HTMLPageTop: {<contents>} A user-definable custom action applied to the top of pages other than the home page. Useful for logos, etc. Defaults empty. \LinkHome may be used to place a link back to the homepage, as well as \LinkPrevious and \LinkNext. Ignored in print output.
\HTMLPageBottom Default: <empty>	\HTMLPageBottom: {<contents>} A user-definable custom action applied to the bottom of pages other than the home page. Useful for authors, copyright notices, contact information, etc. Defaults empty. \LinkHome may be used to place a link back to the homepage, as well as \LinkPrevious and \LinkNext. Ignored in print output.
\LinkHome	\LinkHome: Creates a link to the home page. Usually used in \HTMLPageTop and related.
\LinkPrevious	\LinkPrevious: Creates a link to the previous HTML page, unless already at the home page. Usually used in \HTMLPageTop and related.
\LinkNext	\LinkNext: Creates a link to the next HTML page, unless already at the end. Usually used in \HTMLPageTop and related.

Placed in the home page before the first sectioning command which causes a file break:

\tableofcontents ⚠ TOC on the homepage!	\tableofcontents: Used to place a table of contents on the home page. This command must be used before the first file split, so that a way is available to navigate to other files from the homepage. Links to each chapter/section are provided, as selected by tocdepth.
--	--

Placed in the document wherever necessary:

\ImageAltText Default: image	\ImageAltText: Redefine with \renewcommand. \includegraphics and other images are assigned an HTML alt tag according to \ImageAltText along with \AltTextOpen and \AltTextClose. This text is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is "image", and it may be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following \includegraphics and other images.
\ThisAltText	\ThisAltText: {<text>} \ThisAltText can be used to assign an HTML alt text attribute to the next image generated by a \latextimage, picture, tikzpicture, or any other similar environment which generates an

image, or the next SVG math expression. This tag is cleared after use. The tag is also cleared after each MATHJAX expression, in case the user changes between SVG math and MATHJAX.

\ThisAltText also may be used to add an HTML title to a reference or hyperlink, such as a \ref, \cref, \href, \url, \hyperref, or \hyperlink. In each case, the alternative text is cleared after use.

\MathImageAltText
Default: math image

\MathImageAltText: Redefine with \renewcommand. When creating an SVG math image, its HTML alt tag may be set to the math expression, which may be hashed for image reuse. In the case of \ensuremath or after \inlinemathother, where the contents require a unique image for each instance of the same expression, the alt tag is set to \MathImageAltText, along with \AltTextOpen and \AltTextClose, and the image is not reused.

This alt expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “math image”, and it may be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following SVG math images.

\PackageDiagramAltText
Default: diagram

\PackageDiagramAltText: Redefine with \renewcommand. For many packages, the output is placed inside a lateximage with an HTML alt tag set to the package name followed by \PackageDiagramAltText. For example:

(-xy- diagram)

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “diagram”, and may it be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following package diagrams.

\AltTextOpen
Default: (
\AltTextClose
Default:)

\AltTextOpen: Redefine with \renewcommand.

\AltTextClose: Redefine with \renewcommand. HTML alt text is enclosed by the macros \AltTextOpen and \AltTextClose, which default to an opening and closing parenthesis.

\HTMLnewcolumntype

\HTMLnewcolumntype: \newcolumntype may not always work with lwarp for HTML output, since it often involves T_EX boxes and fills. To provide a simplified column type for HTML, add \HTMLnewcolumntype in addition.

warpprint (*env.*)

warpprint: An environment which is only used while generating print output. Place inside anything which does not apply to HTML and which may cause problems with lwarp. If lwarp knows about and emulates or supports a package then its related macros, lengths, counters, etc. probably won’t have to be placed inside a warpprint environment, but unknown packages may cause problems which may be isolated from lwarp using this environment.



Do not place anything else on the same line as \end{warpprint}. Also do not nest warpprint inside itself.

warpHTML (*env.*)

warpHTML: An environment which is only included while generating HTML output. This is useful for website logos and other items which have no purpose in printed output.



Do not place anything else on the same line as \end{warpHTML}. Also do not nest warpHTML inside itself.

\warpprintonly **\warpprintonly:** {<contents>} A macro version of the warpprint environment.

\warpHTMLonly **\warpHTMLOnly:** {<contents>} A macro version of the warpHTML environment.

7.6.1 Example HTML file naming

Examples of ways to name or number HTML files:

Numbered HTML nodes:

Example: Homepage index.html, and node-1, node-2. ¹³

```
\usepackage[
    HomeHTMLFilename=index,
    HTMLFilename={node-}
]{lwarf}
\boolfalse{FileSectionNames}
```

Named HTML sections, no prefix:

Example: index.html, and About.html, Products.html

```
\usepackage[
    HomeHTMLFilename=index,
    HTMLFilename={}
]{lwarf}
\booltrue{FileSectionNames}
```

Named HTML sections, with prefix:

Example: Homepage mywebsite.html, and additional pages such as mywebsite-About.html, mywebsite-Products, etc.

```
\usepackage[
    HomeHTMLFilename=mywebsite,
    HTMLFilename={mywebsite-}
]{lwarf}
\booltrue{FileSectionNames}
```

7.7 Customizing the css

\CSSFilename {<filename>}

Default: lwarf.css

\CSSFilename may be used to choose which .css file is used to display each page of the web site. Use \CSSFilename before \begin{document} to assign the style of the home page. If different parts of the website should have different styles, call \CSSFilename again before each section heading which creates a new file. This may be changed numerous times throughout the file, resulting in different HTML pages having different css files assigned:

¹³See \SetHTMLFileName to number in groups by chapter, for example.

```
...
\CSSFilename{myCSS.css}
\chapter{Another Chapter}
...
```

The styles provided by lwarp include:

lwarp.css: A default style if \CSSFilename is not used. This style is comparable to a plain L^AT_EX document. To set this style, you may use \CSSFilename{lwarp.css}, or no \CSSFilename call at all.

lwarp_formal.css: A formal style with a serif fonts and a traditional look.

lwarp_sagebrush.css: A style with muted colors, gradient backgrounds, additional borders, and rounded corners.

To see each style in use, change the \CSSFilename entry in the tutorial, lwarpmk.html again, and then reload the tutorial webpage.

Custom css A customized style may also be created. For each new project a file called sample_project.css is generated. This may be renamed to <project>.css then used by assigning \CSSFilename{<project>.css}.

⚠ Rename it! Note that sample_project.css is overwritten whenever lwarp is loaded in print mode. It is therefore important to rename the file to something like <project>.css before using it, so that your own changes are not overwritten.

<project>.css has an entry which loads lwarp.css, and this entry may be changed to load lwarp_formal.css or lwarp_sagebrush.css if desired. Additional changes to the css may be made by making entries later in the <project>.css file.

lwarp.css (file) It is best to make a local project-specific css file such as project.css, containing only things which are different from lwarp.css. The file project.css should refer to lwarp.css as follows:
project.css (file)
sample_project.css (file)

```
/* ( --- Start of project.css --- ) */
/* ( --- A sample project-specific CSS file for lwarp --- ) */

/* Uncomment one of the following: */
@import url("lwarp.css") ;
/* @import url("lwarp_formal.css") ; */
/* @import url("lwarp_sagebrush.css") ; */

/* Project-specific CSS setting follow here. */
/* . . . */

/* ( --- End of project.css --- ) */
```

Finally use \CSSFilename{<project>.css} in the document to activate the custom css.

7.8 Assigning css classes and styles

HTML css classes and styles may be assigned to fragments of the document.

`BlockClass (env.) [⟨style⟩] {⟨class⟩}`

An entire block of text, including paragraphs, may be assigned a css class and optional css style using the `BlockClass` environment. The result is placed inside a `<div>`. A `BlockClass` may nest other `BlockClasses` or `\InlineClasses`.

\InlineClass (*wp css style*) [*web css style*] {*css class*} {*text*}

A section of text without paragraphs may be assigned a css class and optional css style using the `\InLineClass` macro. The result is placed inside a ``. `\InLineClass` may be nested, but per the HTML standard it must not contain `BlockClass`, nor may it contain a paragraph, nor several other objects such as HTML figures. `\InLineClass` also accepts a second optional parameter, enclosed inside parentheses, which assigns the style while generating output for a word processor, while ignoring the web style.

Nullified versions of `BlockClass` and `\InlineClass` are provided for the print version, so they may be used in the document without placing them inside `\warpHTML` or `\warpHTMLonly`.

7.9 Selecting the operating system

lwarpc tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as "UNIX" in the configuration files), and MS-WINDOWS is supported as well.

MS-Windows (Prog) If MS-WINDOWS is not correctly detected, use the **lwarpc** option **OSWindows**.

`Windows (Prog)` When detected or specified, the operating-system path separator used by `lwarp` is modified, and the boolean `usingOSWindows` is set true. This boolean may be tested by the user for later use.

`OSWindows (Opt)`

7.10 Selecting actions for print, HTML, or MATHJAX output

The following environments and macros are used to select actions which only apply to either traditional L^AT_EX print-formatted PDF generation, or to HTML generation, or to HTML with MATHJAX.

For most of built-in LATEX and many additional packages there is user-level source code support or emulation, so no special handling will be required. For those cases which `lwrap` does not handle by itself, the following environments and macros may be used to isolate sections of code for print-only or HTML-only.

These environments are also useful for creating a special version of the titlepage for print and another for HTML.

`warpHTML (env.)` Anything which is to be done only for HTML5 output is surrounded by a `warpHTML` environment:

```
\begin{warpHTML}
  ... something to be done only during \HTML\ generation
\end{warpHTML}
```

⚠ \end{warpHTML} Do *not* place anything else on the same line as `\end{warpHTML}`. The exact phrase is used to mark the end of the environment. Do not nest `warpHTML` inside itself. `warpMathJax` may be used inside `warpHTML`.

⚠ nesting `warpprint` (*env*) Anything which is to be done only for print output is surrounded by a `warpprint` environment:

```
\begin{warpprint}
  ... something to be done only during traditional \PDF\ generation
\end{warpprint}
```

⚠ \end{warpprint} As above, do not place anything else on the line with `\end{warpprint}`. Do not nest `warpprint` inside itself.

⚠ nesting `warpall` (*env*) Anything which is to be done for any output may be surrounded by a `warpall` environment. Doing so is optional.

```
\begin{warpall}
  ... something to be done during print \PDF\ or \HTML\ output
\end{warpall}
```

⚠ \end{warpall} As above, do not place anything else on the line with `\end{warpall}`. Do not nest `warpall` inside itself.

Macros are also provided for print-only or HTML-only code:

`\warpprintonly {⟨actions⟩}`

Performs the given actions only when print output is being generated.

`\warpHTMLonly {⟨actions⟩}`

Performs the given actions only when HTML output is being generated.

`warpMathJax` (*env*) Anything which is to be done only while using HTML output with MATHJAX is surrounded by a `warpMathJax` environment. Usually, this is `\CustomizeMathJax`, used to add emulation macros. `\end{warpMathJax}` must appear on its own line.

⚠ \end{warpMathJax} Do not nest `warpMathJax` inside itself. `warpMathJax` may be used inside `warpHTML`.

⚠ nesting `warpsvg` (*env*) Anything which is to be done only while using print output or HTML output with SVG math is surrounded by a `warpsvg` environment. `\end{warpsvg}` must appear on its own line. Do not nest `warpsvg` inside itself. `warpsvg` may be used inside `warpHTML`.

⚠ \end{warpsvg} **⚠ nesting** `\LWR@formatted` To define macros or environments which behave differently depending on print or HTML output, see section 36.

7.11 Commands to be placed into the `warpprint` environment

Certain print-related commands should always be placed inside a `warpprint` environment, or may need other special handling. These are unrelated to HTML output, but are hard to isolate automatically. For example:

- Paragraph formatting: `\parindent \parskip`
- Manual page positions such as the `textpos` package, which is emulated but only in a limited way.
- Anything changing the page counter. `lwarf` requires that the page counter not be adjusted during `HTML` output.

Some packages require additional setup commands. Where these packages are emulated for `HTML`, setup commands may work for the emulated `HTML` output as well as for print output. See the details for each package in this document for more information.

Also see section [13: Troubleshooting](#).

7.12 Title page

In the preamble, place an additional block of code to set the following:

```
\title{Document Title} % One line only
\author{Author One\affiliation{Affiliation One} \and
        Author Two\affiliation{Affiliation Two} }
\date{Optional date}
```

The title is used in the meta tags in the `HTML` files, unless overridden by `\HTMLTitle`, and the rest are used in `\maketitle`. To use a `\subtitle` or `\published` field, see section [69.8](#).

`\maketitle` Use `\maketitle` just after the `\begin{document}`, as this will establish the title of the homepage. Optionally, use a `titlepage` environment instead.

`titlepage (env.)` The `titlepage` environment may be used to hold a custom title page. The `titlepage` will be set in a `<div>` class `titlepage`, and `\printtitle`, etc. may be used inside this environment.

`titlingpage (env.)` Another form of custom title page, where `\maketitle` is allowed, and additional information may be included as well.

`\title` `{<title>}`

 **HTML corrupted**
 **newlines** Avoid newlines in the `\title`; these will interfere with the file break and css detection. Use a `\subtitle` command instead (section [69.8](#)). The title will appear in the document `\maketitle` as a heading `<h1>`. The `HTML` meta title tag will also have this title, unless `\HTMLTitle` is used to set the meta title to something else instead.

`\author` `{<author>}`

In `\author`, `\protect` may be needed before some formatting commands. In `HTML`, the author will appear in a `<div>` of class `author` in the `\maketitle`. If the `titling` package is used, the author will also appear in a `HTML` meta tag, but `\HTMLAuthor` may be necessary to create a plain list of names if `\author` had affiliations added. `\affiliation` is a new addition to `lwarf`.

`\date` `{<date>}`

\date works as expected. In HTML, this will appear in a <div> class titledate.

\thanks {⟨text⟩}

\thanks are allowed in the titlepage fields, and will be rendered as HTML notes at the bottom of the title page.

7.13 HTML page meta descriptions

\HTMLDescription {⟨A description of the web page.⟩}

Default: (none)

limitations Each page of HTML output should have its own HTML meta description, which usually shows up in web search results, is limited to around 150 characters in length, and should not include the ASCII double quote character (").

placement Use \HTMLDescription just before \begin{document} to set the description of the home page, and also just before each sectioning command such as \chapter or \section where a new file will be generated, depending on FileDepth. For example, if FileDepth is 1, use \HTMLDescription just before each \section command, and that description will be placed inside the HTML page for that \section. The same description will be used for all following HTML files as well, until reset by a new \HTMLDescription. It is best to use a unique description for each HTML file.

disabling To disable the generation of HTML description meta tags, use:

```
\HTMLDescription{}
```

7.14 HTML homepage meta title

\HTMLTitle {⟨title⟩}

Default: \HTMLtitle{\thetitle}

Sets the contents of the web page <meta name="title"> element. May be set empty to cancel the meta title tag.

See section 7.6 for \HTMLTitleBeforeSection and \HTMLTitleAfterSection, used to set the title for HTML subpages.

7.15 HTML page meta author

\HTMLAuthor {⟨author⟩}

Default: \HTMLAuthor{\theauthor}

Sets the contents of the web page <meta name="author"> element. May be set empty to cancel the meta author tag.

\author may be used to create a list of authors and their affiliations, in several formats if using authblk, and these may not successfully parse properly into a sensible list for \theauthor. \HTMLAuthor may be used to set the meta tag to a simple list of names.

8 Special cases and limitations

Some commonly-used L^AT_EX expressions should be modified as follows to allow for a smooth conversion to both HTML and print-formatted outputs.

Need help?

See the [General Index](#) for “how-to”, and the [Troubleshooting Index](#) if something doesn’t work. A [Troubleshooting](#) section is also available. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category.

8.1 Things to avoid

In the document, avoid the following:

 **options with braces**

Package options: Package options may cause problems with l warp, especially if they include curly braces.

If selecting options with braces in \usepackage does not work:

```
\usepackage[font={it,small}]{caption}% does not work
... try instead selecting the package options before loading l warp:
\PassOptionsToPackage{font={it,small}}{caption}
...
\usepackage{l warp}
...
\usepackage{caption}
... or try setting package options after the package has been loaded:
\usepackage{caption}
\captionsetup{font={it,small}}
```

page counter: Do not adjust the page counter. If doing so is required for the print version, place the adjustment inside a warpprint environment.

Custom math environment macros: Do not use expressions such as \beq as a replacement for \begin{equation}.

Custom macros in section, figure, table names: Custom macros which appear in sectioning commands or float captions then appear in the . toc, . lof, and . lot lists, and should be made robust using \newrobustcmd or \robustify from etoolbox, xpars, etc.

When setting FileSectionNames to true to name the HTML files from the section names, the file names are created from sanitized versions of the chapter or section names, but the section names must be plain text or something which expands into plain text. Robust macros will not work at the sectioning level which is used for file names, but a robust macro or other complicated name may be used for the mandatory argument of \chapter, \section, etc., if a plain-text version is also included in the optional argument:

```
\chapter[Plain Name]{\ARobustMacro{Fancy Name}}
```

8.1.1 Invalid HTML

Additionally, some objects are valid L^AT_EX, but invalid HTML. An example is a tabular inside \textbf, since HTML does not allow a table inside a span. l warp

will create the table, and the browser may support it, but the result is technically invalid.

8.2 Formatting

8.2.1 Text formatting

- ⚠ `\bfseries, etc.` `\textbf`, etc. are supported, but `\bfseries`, etc. work only in some situations.
- ⚠ **HTML special chars** &, <, and > have special meanings in HTML. If `\&`, `\textless`, and `\textgreater` are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.
- program listings** For program listings, the `listings` package is supported, and its `literate` option is used to automatically convert &, <, and > to proper HTML entities.

`minted` sanitizes HTML automatically by its `colorizing`, which splits the special characters from the rest of the tag.
- ⚠ **verbatim** The `fancyvrb` and `fvextra` packages automatically sanitize HTML entities, but the core L^AT_EX `verbatim`-related environments do not, nor does the `verbatim` package, so care must be taken to avoid accidentally including valid HTML code inside these environments. It may be sufficient to add a space on either side of &, <, and >.
- ⚠ **gobble** `fancyvrb` does not sanitize HTML when using the `gobble` option.

8.2.2 Small caps

- FixSmallCaps (bool)** Some fonts, such as `erewhon`, `utopia`, or `fb`, and some packages such as `embrace`, `copy/paste` “SMALL CAPS” as all caps (“SMALL CAPS”), which `lwarf` then reads as all caps, so the text is printed in all caps. If small caps are being rendered as all caps, set:

```
\booltrue{FixSmallCaps}
```

- ⚠ **CJK fonts** Some CJK fonts may not work if `FixSmallCaps` is set true.

8.2.3 Horizontal and vertical space and rules

- \hspace** `\hspace` is converted to an inline HTML span of the given width, except that `\empty` width is ignored, a width of `.16667em` is converted to an HTML thin breakable space (U+2009), and a `\fill` is converted to a `\qquad`.
- \vspace** `\vspace` is ignored for HTML.
~
`\,` ~ and `\,` are converted to HTML entities.
- \kern** `\kern` and `\hskip` are entered into the HTML PDF output as-is, then interpreted by `pdftotext`, and thus usually appear as a single space.
`\hskip`
- \rule** `\rule` is converted to an HTML rule of the same dimensions, of the currently

selected text color.

- \hrule Both \hrule and \vrule are ignored for HTML. To create a horizontal dividing rule across the page, use \hrulefill in its own paragraph.
- \hrulefill \hrulefill usually creates a one-inch rule, similar to a “fill in the blank”. If it is used at the start of a new paragraph, it creates a <div> with a thin horizontal border across the page, as would often be done with \hrule.

8.2.4 Text alignment

Use the environments center, flushright, flushleft instead of the macros \centering, \raggedright, \raggedleft.

- ⚠ figure & table alignment** \centering, etc. are honored in a figure or table if they are the first command inside the float:

```
\begin{table*}
\centering
\caption{A Table}
...
```

8.2.5 Accents

Native L^AT_EX accents such as \" will work, but many more kinds of accents are available when using Unicode-aware X_EL^AT_EX and LuaL^AT_EX. If using accents in section names which will become file names, it is recommended to use the L^AT_EX accents such as \" and \v instead of Unicode accents. The L^AT_EX accents will have the accents stripped when creating the filenames, whereas the Unicode accents will appear in the file names, which may cause issues with some operating systems.

8.2.6 textcomp package

- textcomp (*Pkg*) Some textcomp symbols do not have Unicode equivalents, and thus are not supported.
- ⚠ missing symbols** Many textcomp symbols are not supported by many system / browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

8.2.7 Superscripts and other non-math uses of math mode

Use x instead of \${}^x\$

8.2.8 Empty \item followed by a new line of text or a nested list:

- lists** Use a trailing backslash: \item[*label*] \

8.2.9 Filenames and URLs in lists or footnotes

filename underscore Escape underscores in the filenames:

```
\item[\href{file\_name.pdf}{text}]
```

8.2.10 relsize package

relsize (Pkg) For HTML, only the inline macros are supported: `\textlarger`, `\textsmaller`, and `\textscale`. Each becomes an inline span of a modified font-size.

`\relsize`, `\larger`, `\smaller`, and `\relscale` are ignored.

While creating SVG math for HTML, the original definitions are temporarily restored, and so should work as expected.

 **not small** The HTML browser's setting for minimum font size may limit how small the output will be displayed.

8.3 Boxes and minipages

8.3.1 Marginpars

`\marginpar` $[\langle left \rangle] \{\langle right \rangle\}$ `\marginpar` may contain paragraphs, but in order to remain inline with the surrounding text lwarf nullifies block-related macros inside the `\marginpar`. Paragraph breaks are converted to `
` tags.

`\marginparBlock` $[\langle left \rangle] \{\langle right \rangle\}$ To include block-related macros, use `\marginparBlock`, which takes the same arguments but creates a `<div>` instead of a ``. A line break will occur in the text where the `\marginBlock` occurs.

8.3.2 Save Boxes

 **HTML corrupted**

 **boxes** TeX boxes are placed inline and do not allow line breaks, so boxes with long contents may overflow the line during HTML conversion. lwarf uses methods which help avoid this problem.

 **minipage, \parbox** `\savebox` and related do not (yet) support `minipage` or `\parbox`.

8.3.3 Minipages

 **inline** A line of text with an inline `minipage` or `\parbox` will have the `minipage` or `\parbox` placed onto its own line, because a paragraph is a block element and cannot be made `inline-block`.

placement `minipages` and `\parboxes` will be placed side-by-side in HTML unless you place a `\newline` between them.

side-by-side Side-by-side `minipages` may be separated by `\quad`, `\quad`, `\enskip`, `\hspace`, `\hfill`, or a `\rule`. When inside a `center` environment, the result is similar in

print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.

- ⚠️ minipage in a span** There is limited support for minipages inside an HTML ``. An HTML `<div>` cannot appear inside a ``. While in a ``, minipages, and `\parboxes`, and any enclosed lists have limited HTML tags, resulting in an “inline” format, without markup except for HTML breaks. Use `\newline` or `\par` for an HTML break.
- ⚠️ minipage size** When using `minipage`, `\parbox`, and `fminipage`, a virtual 6×9 inch text area is used for `\linewidth`, `\textwidth`, and `\textheight`, both for sizing the minipage, and also for its contents.
- if width is `\linewidth`** If a `minipage` or `\parbox` is assigned a width of exactly `\linewidth`, in HTML it is automatically given no HTML width, thus allowed to fill the line as needed, similar to how it appears in print output.
- full-width if HTML** A new macro `\minipagewhite` requests that, during HTML output, the next single `minipage` or `\parbox` be generated without an HTML `width` attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version’s width makes no sense in HTML.
- ⚠️ tabular, multicols** Inside a `tabular` or `multicols` environment, where the width depends on the browser window, `\minipagewhite` is effectively used by default for every `minipage` or `\parbox` inside the environment. `\UseMinipageWidths` may be used to tell `l warp` to honor the specified widths of all following `minipages` and `\parboxes` until the end of the local scope, and `\IgnoreMinipageWidths` may be used to tell `l warp` to ignore the specified widths.
 - ⚠️ multicols** Inside a `multicols`, `\linewidth` is divided by the specified number of columns.
- ⚠️ text alignment** Nested `minipages` adopt their parent’s text alignment in HTML, whereas in regular L^AT_EX PDF output they do not. Use a `flushleft` or similar environment in the child `minipage` to force a text alignment.

8.3.4 Side-by-side minipages

Place side-by-side minipages inside a `center` environment, with horizontal space between them, such as `\quad`, `\qquad`, `\hspace`, or `\hfill`. The result is similar in print and HTML. Do not use space commands at the start or end of the line.

8.3.5 Framed minipages and other environments

`\fbox` can only be used around inline `` items during HTML output, but HTML cannot place a block element such as a `<div>` for a minipage or a list inside of a ``. Several options are provided for framing an object, depending on which kind of object and which packages are loaded:

- `\fbox` For a framed object, options include:
- `\fboxBlock`
- `fminipage (env.)`
- To remove the frame in HTML output:** Place the `\fbox` command and its closing brace inside `warpprint` environments. This will nullify the frame for HTML output.
- To frame the contents inline with some formatting losses in HTML:** This is the default action of `\fbox` when enclosing a minipage. During HTML output,

For inline text:

\fbox nullifies the HTML tags for minipage, \parbox, and lists. The contents are included as inline text inside the \fbox's of class framebox. For lists, line breaks are converted to HTML breaks. The result is a plain-text inline version of the contents, framed inline with the surrounding text, but lacking any extra HTML markup.

To frame the contents on their own line with improved formatting in HTML: A new command \fboxBlock is included, intended to be a direct replacement for \fbox for cases where the \fbox surrounds a minipage, table, or list. For print output, this behaves as \fbox. For HTML output, the contents are placed inside an HTML <div> with the class framed, resulting in the contents being placed on their own line with a frame surrounding them. The contents preserve their HTML formatting, so lists and minipages look nicer, and valid HTML is created for a tabular. While an \fbox containing a tabular is valid L^AT_EX code, the result in HTML is problematic since a table is a <div> not a , so use \fboxBlock around a tabular, or else place the tabular inside a minipage, or use fminipage, described next. Also see below regarding the “Misplaced alignment tab character &.” error.

To create a framed minipage in both print and HTML: A new environment fminipage is included. For print output, this is identical to minipage, except that it is also framed. For HTML output, this forms a <div> of class framed, the contents preserve their HTML formatting, and valid HTML is created for a tabular. Also see section 89 for a new environment fcolorminipage. Also see below regarding the “Misplaced alignment tab character &.” error.

For inline minipage and lists:

For display tabular,
minipages, and lists:

colored boxes and frames: **To create colored frames and boxes:** See section 678 for xcolor's \colorbox and \fcolorbox, and lwarp's additional \colorboxBlock and \fcolorboxBlock.

To frame tables or verbatim environments: Place the contents inside a fminipage, or perhaps a \fboxBlock for a tabular. Also, if using \fboxblock with tabular, you will have to use \StartDefiningTabulars before the start of the macro which uses \fboxBlock and the tabular, and \StopDefiningTabulars afterwards. Also see the lwarp documentation for the fancybox package.

To frame equations: See section 261 for the fancybox package.

For fancy framed minipages: See packages boxedminipage, shadow, fancybox, framed, mdframed.

Custom environments: Use a custom environment to create a sidebar, containing a BlockClass environment with custom css formatting, and \warpprintonly{\hrule} command:

```
\begin{BlockClass}{frameminipage}% ignored in print output
    % use \CSS{} to format div class framedminipage
    \warpprintonly{\hrule} % only appears in print output
    Contents
    \warpprintonly{\hrule} % only appears in print output
\end{BlockClass}
```

8.3.6 fancybox package

fancybox (Pkg)
framed equation example

fancybox's documentation has an example FramedEqn environment which combines math, \Sbox, a minipage, and an \fbox. This combination requires that the entire environment be enclosed inside a lateximage, which is done by adding

\ lateximage at the very start of FramedEqn's beginning code, and \ end lateximage at the very end of the ending code. Unfortunately, the HTML alt attribute is not used here.

```
\newenvironment{FramedEqn}
{
\lateximage% NEW
\setlength{\fboxsep}{15pt}
... ...
[\fbox{\TheSbox}]
\end lateximage% NEW
}
```

framing alternatives \fbox works with fancybox. Also see l warp's \fboxBlock macro and fminipage environment for alternatives to \fbox for framing environments.

framed table example The fancybox documentation's example of a framed table using an \fbox containing a tabular does not work with l warp, but the FramedTable environment does work if \fbox is replaced by \fboxBlock. This method does lose some HTML formatting. A better method is to enclose the table's contents inside a fminipage environment. The caption may be placed either inside or outside the fminipage:

```
\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{lr}
...
\end{tabular}
\end{fminipage}
\end{table}
```

⚠️ framed verbatim l warp does not support the verbatim environment inside a span, box, or fancybox's \Sbox, but a verbatim may be placed inside a fminipage. The fancybox documentation's example FramedVerb may be defined as:

```
\newenvironment{FramedVerb}[1] % width
{
\VerbatimEnvironment
\fminipage{#1}
\begin{Verbatim}
\end{Verbatim}
\endfminipage
}
```

framed \VerbBox fancybox's \VerbBox may be used inside \fbox.

indented alignment LVerbatim, \LVerbatimInput, and \LUseVerbatim indent with horizontal space which may not line up exactly with what pdftotext detects. Some lines may be off slightly in their left edge.

l warp sanitizes HTML for fancybox verbatims, except for the contents of \VerbBox and any \verb inside.

8.3.7 mdframed package

mdframed (Pkg) support Most basic functionality is supported, including frame background colors and

single-border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for `mdframed` environments and frame titles.

 **loading** When used, `l warp` loads `mdframed` in `HTML` with `framemethod=none`.

font For title font, use

```
frametitlefont=\textbf{,
```

instead of

```
frametitlefont=\bfseries,
```

where `\textbf` must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the `mdframed` source). Since `l warp` does not support `\bfseries` and friends, only one font selection may be made at a time.

theoremtitlefont `theoremtitlefont` is not supported, since the following text is not in braces in the `mdframed` source.

ignored options `userdefinedwidth` and `align` are currently ignored.

css classes Environments created or encapsulated by `mdframed` are enclosed in a `<div>` of class `mdframed`, and also class `md<environmentname>` for new environments.

Frame titles are placed in a `<div>` of class `|mdframedtitle|`. Subtitles are in a `<div>` of class `|mdframedsubtitle|`, and likewise for `subsubtitles`.

8.3.8 `tcolorbox` package

tcolorbox (Pkg) `tcolorbox` is emulated for `HTML` and `MATHJAX`, and supported as-is inside a `latextimage` or `SVG` math.

What has been tested to work (at least partly) includes:

- `tcolorbox`, `\tcbox`.
- Title, subtitle.
- Upper, lower parts.
- Colors and title fonts.
- Floating objects.
- Some layered box features.
- Counters, labels, references.
- `listings`, `listingsutf8`.
- theorems: Theorems are supported. `math`, `ams equation`, etc. are not supported. Use a `tcolorbox` with regular math inside it. `\tcboxmath` and `\tcbhighmath` are supported in `SVG` math, and emulated in `MATHJAX`.

 **math**

- Fitting features: `\tboxfit` becomes `\tbox` in `HTML`.

 **footnotes**

- Footnote numbering does not match the printed output.

- `MATHJAX` emulation is provided for common macros.

 **undefined references** If using `cleveref`, it may be necessary to name theorems such as:

```
\crefname{\tcb@cnt@mytheo}{my theorem}{my theorems}
```

8.4 Section names

If using named HTML files, by selecting `\booltrue{FileSectionNames}`, the generated filenames may be simplified by using `\FilenameSimplify` and `\FilenameNullify`:

`\FilenameSimplify {<text>}`

To remove common short words from the automatically-generated filenames, replacing each with a single hyphen “-”, use `\FilenameSimplify`:

```
\FilenameSimplify*{-in-}
\FilenameSimplify*{A-}
```

The first example removes the word “in” in the middle of a filename, and the second example removes “A” at the start of the filename. The star forces the arguments to be detokenized, which is required for a plain-text comparison. (The unstarred form is used for a token-sensitive comparison, which is seldom required by the user.) After simplification, repeated hyphen characters will be further simplified to a single hyphen “-”. Finally, single hyphens at the start or end of the filename are removed.

`\FilenameNullify {<macros>}`

⚠ macros in section names Macro names may appear in the automatically-generated file names. To remove these, create *non-robust* nullified versions of the macros, ensuring that each line ends with a percent character % as shown below. These are placed inside `\FilenameNullify`, which adds them to the list of macros which are nullified during filename generation. Low-level macros such as `\begingroup` will cause problems when nullified. Many macros such as `\textbf` are already nullified. `lwarf` also already nullifies built-in symbol and `textcomp` macros, including if defined by `xunicode`, but not all `xunicode` macros. See the definition of `\LWR@nullfonts` for a complete list.

```
\FilenameNullify{%
  \renewcommand*{\macroname}[1]{#1}%
  \renewcommand*{\anothermacro}{}%
}
```

⚠ duplicate filename Avoid duplicate file names. Section names at levels which result in HTML file splits must be unique. `lwarf` will generate an error if a duplicate HTML filename is generated. Use the optional `toc` caption entry parameter for formatting. Remember to `\protect` L^AT_EX commands which appear in section names and `toc` captions.

⚠ math in section names If using named HTML files, in section names use paren math `\(x+y\)` instead of dollar math `$x+y$`. (Dollar math works, but appears in the filename.) Or, use a short name for the `toc` entry without the math, or use `\texorpdfstring` from the `hyperref` package:

```
\section{Some math \texorpdfstring{$1+2=3$}{three}}
```

8.5 Cross-references

labels Labels with special characters may be a problem. It is best to stick with alphanumeric, hyphen, underscore, and perhaps the colon (if not French).

⚠ label characters `\nameref` refers to the most recently-used section where the `\label` was defined.

- ⚠ empty link** If no section has been defined before the `\label`, the link will be empty. Index entries also use `\nameref` and have the same limitation.

8.5.1 Page references

- ⚠ L^AT_EX page numbers** The printed page does not translate to the HTML page, so `\pageref` references are converted to parentheses containing `\pagerefPageFor`, which defaults to “see”, followed by a hyperlink to the appropriate object.

Ex:

```
\ref{sec:name} on page \pageref{sec:name}
in HTML becomes:
“Sec. 1.23 on page (see sec. 1.23)”.
```

`\pagerefPageFor` may be redefined to “page for”, empty, etc. See page 506.

8.5.2 cleveref and varioref packages

`cleveref (Pkg)` `cleveref` and `varioref` are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for `\cpageref` and `\cpagerefrange`. This phrase includes `\cpagerefFor`, which defaults to “for”.

Ex:

```
\cpageref{tab:first,tab:second}
in html becomes:
“pages for table 4.1 and for table 4.2”
```

See `\cpagerefFor` at page 744 to redefine the message which is printed for page number references.

- ⚠ varioref types** `cleveref` changes the behavior of `varioref` in that the reference type is automatically printed if `cleveref` is loaded. `lwarf` requires `cleveref`, so the HTML version will always automatically print the reference types even if the print mode does not. The simplest way to make them match is to require the `cleveref` package for the document.

8.5.3 Hyperlinks, hyperref, and url

`hyperref (Pkg)` `lwarf` emulates `hyperref`, including the creation of active hyperlinks, but does not require that `hyperref` be loaded by the document.

- ⚠ comments between arguments** Do not place a comment with a % character between arguments for `\hyperref`, etc., as it is neutralized for inclusion in HTML URLs.

`lwarf` can also load `url`, but `url` should not be used at the same time as `hyperref`, since they both define the `\url` command. `lwarf` does not (yet) attempt to convert `url` links into hyperlinks during HTML output, nor does the print version of `url` create hyperlinks.

- ⚠ backref** When generating HTML, `lwarf`’s emulation of `hyperref` does not automatically load `backref`, so `backref` must be loaded explicitly.

8.5.4 Footnotes, endnotes, and page notes

`lwarp` uses native L^AT_EX footnote code, although with its own `\box` to avoid the L^AT_EX output routine. The usual functions mostly work as-is.

footnote numbering To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For `bigfoot`, `manyfoot`, or `perpage`:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by HTML page. This is recommended for `\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

MATHJAX Also for MATHJAX, `\footnotename` is used for a `\footnotemark` if the actual footnote number is not known. To redefine it, provide it before loading `lwarp`:

```
\providecommand{\footnotename}{something}
\usepackage{lwarp}
```

Similar for `sidenotes`. For `endnotes`:

```
\def\endnotename{something}% \def allows name to start with
"end"
```

For the `pagenote` package, there is no `\pagenotename` to define, since there is no `\pagenotemark` command.

footmisc The `footmisc` `stable` option is emulated by `lwarp`.

⚠ sectioning commands When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the `footmisc` package with the `stable` option, provide a short TOC entry, and `\protect` the `\footnote`:

```
\usepackage[stable]{footmisc}
...
\subsection[Subsection Name]
{Subsection Name\protect\footnote{A footnote.}}
```

memoir with footmisc **⚠ memoir** If using `memoir` class, with which `lwarp` preloads `footmisc`, the `stable` option must be declared before `lwarp` is loaded:

```
\PassOptionsToPackage{stable}{footmisc}
\usepackage{lwarp}
...
```

Do not use a starred sectioning command. As an alternative, it may be possible to adjust `\secnumdepth` instead.

If using `fancybox` or `fancyvrb` with `\VerbatimFootnotes`, and using footnotes in a sectioning command or display math, use `\footnotemark` and `\footnotetext`:

```
\subsection[Subsection Name]
{Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbatim+.}
```

⚠ VerbatimFootnotes **⚠ sectioning or displaymath**

and likewise for equations or display math.

⚠ pfnote numbers While emulating `pfnote`, `lwarp` is not able to reset HTML footnote numbers per page number to match the printed version, as HTML has no concept of page numbers. `lwarp` therefore uses continuous footnote numbering even for `pfnote`.

bigfoot, manyfoot Verbatim footnotes are not yet supported.

⚠ verbatim If using the `bigfoot` package, and possibly also `manyfoot`, problems may occur with counter allocation because `lwarp` uses many counters, and there is a difference in how counters numbered 256 and up are handled in PDF L^AT_EX. With `bigfoot` this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining `bigfoot` or `manyfoot` footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use X_EL^AT_EX or LuaL^AT_EX instead of PDF L^AT_EX.

8.5.5 xr, xr-hyper, and xcite packages

See section 5.18.

8.6 Front and back matter

8.6.1 Custom classes with multiple authors and affiliations

Some classes allow multiple authors and affiliations. Often it is possible to emulate these using a standard class along with `authblk`:

```
%\documentclass{customclass} % for print document
\documentclass{article} % for html document

\usepackage{lwarp}
\begin{warpHTML}
\usepackage{authblk}
\let\affiliation\affil % maybe required
\end{warpHTML}
```

8.6.2 Starred chapters and sections

HTML page and toc The following describes `\ForceHTMLPage` and `\ForceHTMLTOC`, which may be used for `endnotes`, `glossaries`, `tocbibind`, `bibliographies`, and the index. See the following sections where applicable. Continue here if interested in the reason for adding these commands to `lwarp`.

Some packages use `\chapter*` or `\section*` to introduce reference material such as notes or lists, often to be placed in the back matter of a book. These starred sections are placed inline instead of on their own HTML pages, and they are not given TOC entries.

l warp provides a method to cause a starred section to be on its own HTML page, subject to `FileDepth`, and also a method to cause the starred section to have its own TOC entry during HTML output.

`\ForceHTMLPage` To place a starred section on its own HTML page, use `\ForceHTMLPage` just before the `\chapter*` or `\section*`. **l warp** will create a new page for the starred sectional unit.

A starred sectional unit does not have a TOC entry unless one is placed manually. The typical method using `\phantomsection` and `\addcontentsline` works for inline text but fails when the new starred section is given its own webpage after the TOC entry is created, or when creating an EPUB where the TOC entry will point to the page before the starred section. If the starred section has its own HTML page but no correct TOC entry pointing to that page, the page will be inaccessible unless some other link is created.

`\ForceHTMLTOC` To automatically force the HTML version of the document to have a TOC entry for a starred section, use `\ForceHTMLTOC` just before the `\chapter*` or `\section*`, and place `\phantomsection` and `\addcontentsline` inside a `\warpprint` environment.

For print output, `\ForceHTMLTOC` and `\ForceHTMLPage` have no effect.

8.6.3 abstract package

`abstract (Pkg)` If using the `number` option with file splits, be sure to place the table of contents before the abstract. The `number` option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

⚠ missing TOC

8.6.4 titling and authblk

`titling (Pkg)` `authblk (Pkg)` **l warp** supports the native L^AT_EX titling commands, and also supports the packages `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.

`package support` **⚠ load order** If using the `titling` package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 69.8.

8.6.5 tocloft package

`titles (Opt) [tocloft]` `tocloft (Pkg)` `tocloft (Pkg)` If using `tocloft` with `tocbibind`, `anonchap`, `fncychap`, or other packages which change chapter title formatting, load `tocloft` with its `titles` option, which tells `tocloft` to use standard L^AT_EX commands to create the titles, allowing other packages to work with it.

⚠ tocloft & other packages

8.6.6 appendix package

`appendix (Pkg)` **⚠ incorrect TOC link** During HTML conversion, the option `toc` without the option `page` results in a TOC link to whichever section was before the `appendices` environment. It is recommended to use both `toc` and also `page` at the same time.

8.6.7 pagenote package

`pagenote` (*Pkg*) `pagenote` works as-is, but the `page` option is disabled.

 **labels** Note that labels in page notes do not appear as expected, even in the print version.

8.6.8 endnotes package

`endnotes` (*Pkg*) To place the endnotes in the TOC, use:

table of contents

```
\usepackage{endnotes}
\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*\notesname{Endnotes} % optional
```

`HTML page` To additionally have the endnotes on their own HTML page, if `FileDepth` allows:

```
\ForceHTMLPage
\theendnotes
```

 **\endnotemark and numbering** If using `MATHJAX`, see section 8.5.4 regarding the use of `\endnotemark` and `\endnotetext`.

8.6.9 BibTeX

To update the HTML version of the bibliography:

Enter ⇒ **bibtex <filename>.html**

`\etalchar` Displays a superscript “+” to indicate “and others”.

 **Modify *.bib** When enough authors are cited for a source, `BIBTeX` may use the `\etalchar` command to display a math superscript with a + character to indicate “and others”. Without modification, this will result in an “Improper `\prevdepth`” error. At present, `lwarf` requires that `\etalchar` be replaced by a text superscript. To do so, add to the start of the .bib file the following:

```
@PREAMBLE{"\let\etalchar\relax \newcommand{\etalchar}[1]{\textsuperscript{#1}}"}
```

8.6.10 biber

To update the HTML version of the bibliography:

Enter ⇒ **biber <filename>.html**

8.6.11 xcite package

See section 5.18.

8.6.12 gloss package

`gloss (Pkg)` To process the HTML glossary:

 **compiling**

`bibtex <projectname>_html.gls`

8.6.13 glossaries package

`glossaries (Pkg)`

processing glossaries

`GlossaryCmd (Opt)`

Default: `makeglossaries`

`printglossary (Opt) [lwarpmk]`

`htmlglossary (Opt) [lwarpmk]`

 **makeglossaries not found**

lwarpmk has the commands `lwarpmk printglossary` and `lwarpmk htmlglossary`, which process the glossaries created by the `glossaries` package using that package's `makeglossaries` program.

The shell command to execute is set by the `lwarf` option `GlossaryCmd`, which defaults to `makeglossaries`. The print or HTML glossary filename is appended to this command.

In some situations it may be required to modify the default command, such as to add the `perl` command in front:

```
\usepackage[
    GlossaryCmd={perl makeglossaries},
] {lwarf}
```

`xindy language` To set the language to use for processing glossaries with `xindy`:

```
\usepackage[
    GlossaryCmd={makeglossaries -L english},
] {lwarf}
```

Other options for `makeglossaries` may be set as well.

placement and toc options

The glossaries may be placed in a numbered or unnumbered section, given a TOC entry, and placed inline or on their own HTML page:

Numbered section, on its own HTML page:

```
\usepackage[xindy,toc,numberedsection=nolabel]{glossaries}
...
\printglossaries
```

Unnumbered section, inline with the current HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\printglossaries
```

Unnumbered section, on its own HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\ForceHTMLPage
\printglossaries
```

 **glossary style**

The default `style=item` option for `glossaries` conflicts with `lwarf`, so the style is forced to `index` instead.

 **number list**

The page number list in the printed form would become `\namerefs` in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

print/HTML versions The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

8.6.14 nomencl package

nomencl (*Pkg*) To process the HTML nomenclature:

```
makeindex      <project>_html.nlo      -s      nomencl.list      -o
<project>_html.nls
```

8.6.15 Indexing overview

There are many ways to process indexes for a L^AT_EX document, including native L^AT_EX capabilities, a number of packages and classes, the possible availability of shell escape and *latexmk*, and the need to process print and HTML versions. lwarf attempts to provide easy recompilation of indexes along with the rest of the document, but the various indexing options must be set correctly. Numerous examples are given below. Some differ in minor details, so the important parts are highlighted in red, and options are in green.

Once set up properly, the entire document may be recompiled with **lwarpmk print** and **lwarpmk html**. In some cases, it will also be necessary to compile the indexes with **lwarpmk printindex** and **lwarpmk htmlindex**. A recompile may then be forced with **lwarpmk print1** and **lwarpmk html1**.

manual processing The user may continue to process indexes manually or by shell script without the use of *lwarpmk*, but adjustments will be required to process HTML indexes as well. In general, *.idx and *.ind files will be accompanied by *_html.idx and *_html.ind files.

custom index style If using a custom indexing style file, see sections 8.6.21 to 8.6.23.

link appearance To control how the index links appear in the HTML output, see the IndexRef option in section 7.5, page 106.

source code See section 79 for lwarf's core index and glossary code, section 344 for index, section 575 for splitidx, section 342 for imakeidx, section 632 for tocbibind, and section 699.17 for memoir's indexing patches.

8.6.16 Indexing with makeidx, makeindex, xindy, xindex, gindex

lwarpmk processing The following allow the user to process indexes automatically, or using *lwarpmk*'s commands:

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

makeindex (*Prog*) For a single index using *makeindex*:

```
\usepackage[makeindex, latexmk] {lwarf}
```

The usual .idx and .ind files will be used, along with the new lwarf.ist style file. When creating the HTML index, “_html” is automatically appended to each of the names.

lwarfmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarfmk printindex**

Enter ⇒ **lwarfmk htmlindex**

to compile the indexes.

To use a custom configuration file, see section [8.6.21](#).

xindy (Prog) For a single index using *xindy*:

```
\usepackage[
    xindy,
    xindyLanguage=english,                                <optional>
    xindyCodepage=utf8,                                 <optional>
    latexmk                                         <optional>
]{lwarf}
```

The usual .idx and .ind files will be used, along with the new lwarf.xdy style file.

lwarfmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarfmk printindex**

Enter ⇒ **lwarfmk htmlindex**

to compile the indexes.

To use a custom configuration file, see section [8.6.22](#).

xindex (Prog) For a single index using *xindex*:

```
\usepackage[
    xindex,
    latexmk                                         <optional>
]{lwarf}
```

The usual .idx and .ind files will be used.

lwarfmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarfmk printindex**

Enter ⇒ **lwarfmk htmlindex**

to compile the indexes.

To use a custom configuration file, see section [8.6.23](#).

gindex (Pkg) For a single index using *gindex*:

```
\usepackage[
    makeindex,
    makeindexStyle=gindex.ist,
    ... or ...
    makeindexStyle=gindexh.ist,
    latexmk                                         <optional>
]{lwarf}
```

The usual .idx and .ind files will be used.

lwarfmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
Enter ⇒ lwarfmk printindex
Enter ⇒ lwarfmk htmlindex
```

to compile the indexes.

To use a custom configuration file, copy `gindex.ist` to a new file, modify, then specify it with `MakeIndexStyle` as above. `lwarf` will automatically adapt to `gindex`'s `\indexpagessep` and `\indexrangesep` settings.

8.6.17 Indexing with index

`index` (*Prog*)

`lwarf` is told how to use `makeindex` using the `PrintIndexCmd` and `HTMLIndexCmd` options. The file `lwarf.ist` is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

For multiple indexes using `makeindex` and `index`:

```
(Assuming that the second index has file extensions .sist and .sind)
\usepackage[
    makeindex, latexmk,
    PrintIndexCmd={
        makeindex -s lwarf.ist <projectname>.idx ;
        makeindex -s lwarf.ist
            -o <projectname>.sind <projectname>.sidx
    },
    HTMLIndexCmd={
        makeindex -s lwarf.ist <projectname>_html.idx ;
        makeindex -s lwarf.ist
            -o <projectname>_html.sind <projectname>_html.sidx
    }
]{lwarf}
\usepackage{index}
...
\makeindex
\newindex{secondname}{sidx}{sind}{Second Index}
```

⚠ WINDOWS

For Windows, replace the two ";" characters with "&".

When creating the HTML index, "_html" is automatically appended to the index filenames.

Use

```
Enter ⇒ lwarfmk printindex
Enter ⇒ lwarfmk htmlindex
```

to compile the indexes.

If the `latexmk` option is selected for `lwarf`, `latexmk` will compile the document but will *not* compile the indexes. `lwarfmk printindex` and `lwarfmk htmlindex` will still be required.

8.6.18 Indexing with splitidx

`splitidx` (*Prog*)

`lwarf` is told how to use `splitindex` using the `PrintIndexCmd` and `HTMLIndexCmd` options. The file `lwarf.ist` is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

If the `latexmk` option is selected for `lwarf`, `latexmk` will compile the document but will *not* compile the indexes. `lwarpmk printindex` and `lwarpmk htmlindex` will still be required.

- ⚠ `\thepage` When using `\AtWriteToIndex` or `\AtNextWriteToIndex`, the user must not refer to `\thepage` during HTML output, as the concept of a page number is meaningless. Instead, do

```
\addtocounter{LWR@autoindex}{1}
\LWR@new@label{LWRindex-\arabic{LWR@autoindex}}
```

where the `\index`-like action occurs, and then refer to `\arabic{LWR@autoindex}` instead of `\thepage` where the reference should occur.

See section 699.17 in the `lwarf-patch-memoir` package for the `\@@wrspindexhyp` macro as an example.

For multiple indexes using `makeindex` and `splitidx`:

```
\usepackage[
    makeindex, latexmk,
    PrintIndexCmd={
        splitindex <projectname> -- -s lwarf.ist
    },
    HTMLIndexCmd={
        splitindex <projectname>_html -- -s lwarf.ist
    }
]{lwarf}
\usepackage{splitidx}
...
\makeindex
\newindex[Second Index]{secondname}
```

When creating the HTML index, “`_html`” is automatically appended to each of the names.

Use

```
Enter ⇒ lwarpmk printindex
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

For multiple indexes using *xindy* and *splitidx*:

```
\usepackage[
    xindy, latexmk,
    PrintIndexCmd={
        splitindex -m xindy <projectname> -- -M lwarf.xdy
        -L english -C utf8                                <optional>
    },
    HTMLIndexCmd={
        splitindex -m xindy <projectname>_html -- -M
        lwarf.xdy
        -L english -C utf8                                <optional>
    }
]{lwarf}
\usepackage{splitidx}
...
\makeindex
\newindex[Second Index]{secondname}
```

When creating the *HTML* index, “*_html*” is automatically appended to each of the names.

Use

```
Enter ⇒ lwarpmk printindex
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

8.6.19 Indexing with *imakeidx*

imakeidx (*Prog*)

Due to the number of methods which may be used to process multiple indexes, the options for style file and *xindy* language and codepage must be specified in one of several different ways. These are described in detail later in this section, but are summarized here.

If shell escape is used, *imakeidx* will automatically compile the indexes by itself. Options specifying a custom style file and *xindy* language and codepage must be specified for each *\makeindex* command using its *options=* option, which must include *lwarf*'s special *lwarf.ist* or *lwarf.xdy* file, or a file based on them. If using a custom indexing style file, see sections 8.6.21 to 8.6.23.

The *splitindex* option is also available if shell escape is used, in which case the *splitidx* package and *splitindex* program will also be used.

If shell escape is not possible, *latexmk* may be used to automatically compile the indexes. The style, language, and codepage options are specified with *lwarf*'s *makeindexStyle*, *xindyStyle*, *xindyLanguage*, and *xindyCodepage* options. These are passed to *latexmk* by *lwarpmk*'s **lwarpmk printindex** and **lwarpmk htmlindex** commands.

Where shell escape and *latexmk* are not possible, *lwarpmk* may be used to manually compile the indexes. *lwarf*'s *PrintIndexCmd* and *HTMLIndexCmd* options are used.

For a single or multiple indexes using *makeindex* and *imakeidx*:

The index style `lwarf.ist` is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```
\usepackage[makeindex, latexmk] {lwarf}
\usepackage[makeindex]{imakeidx}

...
\makeindex[options={-s lwarf.ist}]
\makeindex[name=secondname, options={-s lwarf.ist}]
```

imakeidx will automatically compile the indexes. Shell escape is not required while using *makeindex*. *latexmk* may be specified, and if so it will be used for `lwarpmk print` and `lwarpmk html`, but *imakeidx* will actually create the indexes.

For a single or multiple indexes using *makeindex* and *splitindex* with *imakeidx*:

The index style `lwarf.ist` is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```
\usepackage[makeindex, latexmk] {lwarf}
\usepackage[makeindex, splitindex]{imakeidx}

...
\makeindex[options={-s lwarf.ist}]
\makeindex[name=secondname, options={-s lwarf.ist}]
```

⚠ enable shell escape

Shell escape is required while using *splitindex*. For the first compile, use

```
Enter ⇒ pdflatex --shell-escape projectname.tex
Enter ⇒ pdflatex --enable-write18 projectname.tex (MiKTeX)
```

or similar with *xelatex* or *lualatex*. *lwarf* will remember that shell escape was used.

imakeidx will automatically execute *splitindex*, and will also use *makeindex* to compile the indexes.

latexmk may be specified, and if so it will be used for `lwarpmk print` and `lwarpmk html`, but *imakeidx* will actually create the indexes.

For multiple indexes using *xindy* and *imakeidx*, using shell escape:

Options may be given to *imakeidx*'s `\makeindex` command. The style file `lwarf.xdy` is automatically used for HTML output, and is not necessary for print output since the output will be similar. If language or codepage must be set, they should be specified as options for `\makeindex`, since *imakeidx* will process the indexes.

```
\usepackage[xindy,latexmk]{lwarp}
\usepackage[xindy,splitindex]{imakeidx}
...
\makeindex[
  options={ -M lwarp.xdy -L english -c utf8 }
]
\makeindex[
  name=secondname,
  options={ -M lwarp.xdy -L english -c utf8 }
]
```

 **enable shell escape**

For the first compile, use

```
Enter ⇒ pdflatex --shell-escape projectname.tex
Enter ⇒ pdflatex --enable-write18 projectname.tex (MiKTeX)
```

or similar with *xelatex* or *lualatex*. *lwarp* will remember that shell escape was used.

imakeidx will automatically execute *splitindex* if selected, and will also use *xindy* to compile the indexes.

If selected, *latexmk* will automatically recompile the entire document as necessary.

For indexes using *xindy* and *imakeidx*, without shell escape, but with *latexmk*:

lwarp's options are used, and are passed to *latexmk*.

```
\usepackage[
  xindy,
  xindyLanguage=english, <optional>
  xindyCodepage=utf8, <optional>
  latexmk,
]{lwarp}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]
```

latexmk will create the indexes automatically when **lwarpmk print** and **lwarpmk html** are executed.

For indexes using *xindy* and *imakeidx*, without shell escape, and *without latexmk*:

lwarfmk must be told how to create the indexes:

```
\usepackage[
    xindy,
    PrintIndexCmd={
        xindy -M lwarf.xdy -L english -C utf8
        <projectname>.idx ;
        xindy -M lwarf.xdy -L english -C utf8
        secondname.idx
    },
    HTMLIndexCmd={
        xindy -M lwarf.xdy -L english -C utf8
        <projectname>_html.idx ;
        xindy -M lwarf.xdy -L english -C utf8
        secondname_html.idx
    }
]{lwarf}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]
```

⚠ WINDOWS

For Windows, replace the two “;” characters with “&”.

<projectname> is the \jobname: if compiling “name.tex”, use the filenames name.idx and name_html.idx.

Use

```
Enter ⇒ lwarfmk printindex
Enter ⇒ lwarfmk htmlindex
```

to compile the indexes.

For multiple indexes using *xindex* and *imakeidx*, using shell escape:

xindex, *makeindex*, *imakeidx*, and *splitindex* can all work together:

```
\usepackage[%]
    xindex,
    xindexConfig=-imakeidx,
    latexmk
]{lwarf}
\usepackage[makeindex,splitindex]{imakeidx}
...
\makeindex[%]
    options={ -s lwarf.ist} }
]
\makeindex[
    name=secondname,
    options={ -s lwarf.ist} }
]
```

⚠ enable shell escape

For the first compile, use:

```
Enter ⇒ pdflatex --shell-escape projectname.tex
Enter ⇒ pdflatex --enable-write18 projectname.tex (MiKTeX)
```

or similar with *xelatex* or *lualatex*. *lwarf* will remember if shell escape was used.

xindex will use *imakeidx*, and *imakeidx* will automatically execute *splitindex* if selected.

If selected, *latexmk* will automatically recompile the entire document as necessary.

8.6.20 Indexes with memoir

For a single index with memoir and makeindex:

```
\documentclass{memoir}
\usepackage[makeindex, latexmk]{lwarf}
...
\makeindex
```

The usual .idx and .ind files will be used, along with the *lwarf.ist* style file.

lwarfmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
Enter ⇒ lwarfmk printindex
Enter ⇒ lwarfmk htmlindex
```

to compile the indexes.

For multiple indexes with memoir and makeindex, using latexmk:

lwarf's options are used, and are passed to *latexmk*.

```
\documentclass{memoir}
\usepackage[makeindex, latexmk]{lwarf}
...
\makeindex
\makeindex[secondname]
```

lwarfmk will use *latexmk* to create the indexes automatically when the user executes *lwarfmk print* and *lwarfmk html*.

For multiple indexes with memoir and *makeindex*, without *latexmk*:

lwarpmk must be told how to create the indexes:

```
\documentclass{memoir}
\usepackage[
    makeindex,
    PrintIndexCmd={
        makeindex -s lwarf.ist <projectname>.idx ;
        makeindex -s lwarf.ist secondname.idx
    },
    HTMLIndexCmd={
        makeindex -s lwarf.ist <projectname>_html.idx ;
        makeindex -s lwarf.ist secondname_html.idx
    }
]{lwarf}
...
\makeindex
\makeindex[secondname]
```

 **WINDOWS**

For Windows, replace the two “;” characters with “&”.

<projectname> is the \jobname: if compiling “name.tex”, use the filenames name.idx and name_html.idx.

Use

```
Enter ⇒ lwarpmk printindex
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

For a single index with memoir and *xindy*:

```
\documentclass{memoir}
\usepackage[
    xindy,
    xindyLanguage=english,                                <optional>
    xindyCodepage=utf8,                                 <optional>
    latexmk                                         <optional>
]{lwarf}
...
\xindyindex
\makeindex
```

The usual .idx and .ind files will be used, along with the lwarf.xdy style file.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

```
Enter ⇒ lwarpmk printindex
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

For multiple indexes with memoir and xindy, using latexmk:

lwarf's options are used, and are passed to *latexmk*.

```
\documentclass{memoir}
\usepackage[
    xindy,
    xindyLanguage=english, <optional>
    xindyCodepage=utf8, <optional>
    latexmk
]{lwarf}
...
\xindyindex
\makeindex
\makeindex[secondname]
```

lwarpmk will use *latexmk* to create the indexes automatically.

For multiple indexes with memoir and xindy, without latexmk:

lwarpmk must be told how to create the indexes:

```
\documentclass{memoir}
\usepackage[
    xindy,
    PrintIndexCmd={
        xindy -M lwarf.xdy -L english -C utf8
        <projectname>.idx ;
        xindy -M lwarf.xdy -L english -C utf8
        secondname.idx
    },
    HTMLIndexCmd={
        xindy -M lwarf.xdy -L english -C utf8
        <projectname>_html.idx ;
        xindy -M lwarf.xdy -L english -C utf8
        secondname_html.idx
    }
]{lwarf}
...
\xindyindex
\makeindex
\makeindex[secondname]
```

 **WINDOWS**

For Windows, replace the four “;” characters with “&”

<projectname> is the \jobname: if compiling “name.tex”, use the filenames name.idx and name_html.idx.

Use

```
Enter ⇒ lwarpmk printindex
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

8.6.21 Using a custom *makeindex* style file

makeindex (*Prog*)

When using *makeindex*, *lwarpmk* uses the file *lwarf.ist* to process the index.

lwarf.ist (*file*)

This file is over-written by *lwarf* whenever a print version of the document is processed.

To use a custom *makeindex* style file:

1. Copy `lwarf.ist` to a new filename such as `projectname.ist`
2. Make changes to `projectname.ist`. Keep the lines which refer to `\hyperindexref`. These lines creates the hyperlinks for the HTML index. During print output `\hyperindexref` becomes a null function.
3. If changing
`delim_n -and- delim_r`
 in `projectname.ist`, then in the document preamble redefine
`\IndexPageSeparator -and- \IndexRangeSeparator`
 to match.

`makeindexStyle (Opt)`

4. In the document source use the `makeindexStyle` option for `lwarf`:

```
\usepackage[
    ... other options ...
    makeindex,
    makeindexStyle=projectname.ist,
]{lwarf}
```

Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

5. Recompile the print version, which causes `lwarf` to rewrite the `lwarpmk.conf` configuration file. This tells `lwarpmk` to use the custom `projectname.ist` file instead of `lwarf.ist`.

8.6.22 Using a custom *xindy* style file

`xindy (Prog)`
`lwarf.xdy (file)`

When using *xindy*, `lwarpmk` uses the file `lwarf.xdy` to process the index. This file is over-written by `lwarf` whenever a print version of the document is processed.

To use a custom *xindy* style file:

1. Copy `lwarf.xdy` to a new filename such as `projectname.xdy`
2. Make changes to `projectname.xdy`.

Keep the lines which refer to `\hyperindexref`:

```
(define-attributes ((hyperindexref)))
(markup-locref :open "\hyperindexref{" :close "}")
...
(markup-locref :open "\textit{\hyperindexref{" :close "}}" :attr "textit")
```

These lines create the hyperlinks for the HTML index. During print output `\hyperindexref` becomes a null function.

To create custom styles, refer to the lines for `\textbf` and `\textit`.

3. If changing any of

```
markup-locref-list :sep
markup-locclass-list :open
markup-locclass-list :sep
markup-crossref-layer-list :sep
markup-range :sep
```

in `projectname.xdy`, then in the document preamble redefine
`\IndexPageSeparator` -and- `\IndexRangeSeparator`
to match.

`xindyStyle (Opt)`

4. In the document source use the `xindyStyle` option for `lwarp`:

```
\usepackage[
    ... other options ...
    xindy,
    xindyStyle=projectname.xdy,
]{lwarp}
```

Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

5. Recompile the print version, which causes `lwarp` to rewrite the `lwarpmk.conf` configuration file. This tells `lwarpmk` to use the custom `projectname.xdy` file instead of `lwarp.xdy`.

8.6.23 Using a custom `xindex` style file

`xindex (Prog)`

To use a custom `xindex` style file:

 `filename`

1. Copy `xindex-cfg.lua` to a new filename such as `xindex-projectname.lua`.
The filename must start with `xindex-` and end with `.lua`.
2. Make changes to `xindex-projectname.lua`.
3. If changing

`itemPageDelimiter` -and- `rangeSymbol`

in `xindex-projectname.lua`, then in the document preamble redefine

`\IndexPageSeparator` -and- `\IndexRangeSeparator`

to match.

`xindexConfig (Opt)`

4. In the document source use the `xindexConfig` option for `lwarp`:

```
\usepackage[
    ... other options ...
    xindex,
    xindexConfig=projectname, % (without xindex- or .lua)
]{lwarp}
```

Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

5. Recompile the print version, which causes `lwarp` to rewrite the `lwarpmk.conf` configuration file. This tells `lwarpmk` to use the custom `xindex-projectname.lua` file instead of the default `xindex-cfg.lua`.

8.6.24 Additional indexing limitations

 **xindy with hyperref** *xindy* and *hyperref* may not work well together for print output with “see”, “see also”, reference ranges, or stylized index references. It may be necessary to turn off hyper-referencing for indexes:

```
\usepackage[hyperindex=false]{hyperref}
```

 **empty index** If an HTML index is empty, it may be necessary to add the following before *l warp* is loaded:

```
\usepackage{morewrites}
\morewritessetup{allocate=10}
...
\usepackage{l warp}
```

makeindex custom display styles When using *makeindex*, custom display styles are possible:

```
\begin{warpprint}
\newcommand{\notesstyle}[1]{#1nn}
\end{warpprint}

\begin{warpHTML}
\makeatletter
\newcommand{\notesstyle}[1]{\LWR@doindexentry{#1} notes }
\makeatother
\end{warpHTML}
...
A sentence.\index{key|notesstyle}
```

xindy custom display styles For custom styles with *xindy*, see *l warp.xdy* for *\textbf* and *\textit* as examples.

8.6.25 Index positions, **toc**, **tocbibind**

placement and toc options An index may be placed inline with other HTML text, or on its own HTML page:

makeidx (Pkg) **Inline, with a manual toc entry:**

A commonly-used method to introduce an index in a L^AT_EX document:

```
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname} or chapter
\printindex
```

makeidx (Pkg) **On its own HTML page, with a manual toc entry:**

```
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname} or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex
```

tocbibind (Pkg) **Inline, with an automatic toc entry:**

The *tocbibind* package may be used to automatically place an entry in the TOC.

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex
```

tocbibind (Pkg) **On its own HTML page, with an automatic TOC entry:**

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex
```

numindex (Opt) [tocbibind] **numbered index section** Use the `tocbibind numindex` option to generate a numbered index. Without this option, the index heading has no number.

Other packages, such as `imakeidx`, may also have options for including the index in the Table of Contents.

tocloft (Pkg) If using `tocloft` with `tocbibind`, `anonchap`, `fncychap`, or other packages which change chapter title formatting, load `tocloft` with its `titles` option, which tells `tocloft` to use standard L^AT_EX commands to create the titles, allowing other packages to work with it.

8.7 Math

8.7.1 Math in section names

math in section names If using named HTML files, in section names use paren math `\(x+y\)` instead of dollar math `$x+y$`. (Dollar math works, but appears in the filename.) Or, use a short name for the TOC entry without the math, or use `\texorpdfstring` from the `hyperref` package:

```
\section{Some math \texorpdfstring{$1+2=3$}{three}}
```

8.7.2 Math in custom environments

To create an environment which places its contents inside math, instead of:

```
\newenvironment{mymathenv}{ \(\text{starting math}\)\{ending math \} }
```

use:

```
\NewDocumentEnvironment{mymathenv}{b}
{
  \inlinemathother
  \(\text{starting math #1 ending math }\)
  \inlinemathnormal
}
{}
```

or:

```
\usepackage{environ}
\NewEnviron{mymathenv}{
    \inlinemathother
    \(\ starting math \BODY ending math \)
    \inlinemathnormal
}
```

For display math, use `\[`, `\]`, `\displaymathother`, and `\displaymathnormal`.

8.7.3 Rendering tradeoffs

Math rendering Math may be rendered as SVG graphics or using the MATHJAX JavaScript display engine.

SVG files Rendering math as images creates a new SVG file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to SVG only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.

SVG inline The SVG images are currently stored separately, but they could be encoded in-line directly into the HTML document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.

PNG files Others LATEX-to-HTML converters have used PNG files, sometimes pre-scaled for print resolution but displayed on-screen at a scaled down size. This allows high-quality print output at the expense of larger files, but SVG files are the preferred approach for scalable graphics.

MathML Conversion to MathML might be a better approach, among other things allowing a more compact representation of math than SVG drawings. Problems with MathML include limited browser support and some issues with the fine control of the appearance of the result. Also see section 10 regarding EPUB output with MATHJAX.

8.7.4 svg option

SVG math option For SVG math, math is rendered as usual by LATEX into the initial PDF file using the current font¹⁴, then is captured from the PDF and converted to SVG graphics via a number of utility programs. The SVG format is a scalable-vector web format, so math may be typeset by LATEX with its fine control and precision, then displayed or printed at any size, depending on (sometimes broken) browser support. An HTML alt attribute carries the LATEX code which generated the math, allowing copy/paste of the LATEX math expression into other documents.

SVG image font size For the `lateximage` environment, the size of the math and text used in the SVG image may be adjusted by setting `\LateximageFontSizeName` to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{\normalsize}
```

For inline SVG math, font size is instead controlled by `\LateximageFontSizeScale`, which defaults to:

¹⁴See section 684 regarding fonts and fractions.

\newcommand*{\LateximageFontSize}{.75}

svg math copy/paste

For SVG math, text copy/paste from the HTML <alt> tags lists the equation number or tag for single equations, along with the L^AT_EX code for the math expression. For *AMS* environments with multiple numbers in the same environment, only the first and last is copy/pasted, as a range. No tags are listed inside a starred *AMS* environment, although the \tag macro will still appear inside the L^AT_EX math expression.

⚠️ svg math size, baseline

SVG math sizing and baselines are improved if the *graphics* or *graphicx* package is loaded. An almost-invisible marker is placed at either end of the image to assist in cropping and computing the baseline. A warning is issued at the end of the compile if *graphics* or *graphicx* are not used.

⚠️ svg math in T_EX boxes

SVG math does not work inside T_EX boxes, since a \newpage is required before and after each image.

8.7.5 MATHJAX option

MATHJAX math option

MathJax (*Prog*)

The MATHJAX (mathjax.org) L^AT_EX-math to HTML converter may be used to display math.

When MATHJAX is enabled, math is rendered twice:

1. As regular L^AT_EX PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of L^AT_EX, and
2. As detokenized printed L^AT_EX commands placed directly into the HTML output for interpretation by the MATHJAX display scripts. An additional script is used to pre-set the equation number format and value according to the current L^AT_EX values, and the MATHJAX equation numbering system is ignored in favor of the L^AT_EX internal system, seamlessly integrating with the rest of the HTML output, including any math appearing in non-MATHJAX SVG output.

8.7.6 MATHJAX rendering options

⚠️ fonts

MATHJAX v3 may render using CHTML or SVG. SVG display renders italic characters correctly. To select SVG rendering, right-click on some math, and select

Math Settings → Math Renderer → SVG

Wait a moment for the math to rerender.

8.7.7 Customizing MATHJAX

equation numbering

lwarp detects and adjusts MATHJAX equation numbering format for article and book style equations as well as amsmath \numberwithin for chapters, sections, and subsections. Custom equation number formats may be set as follows, for example:

```
\renewcommand{\theequation}{\Alph{section}.\arabic{equation}}
\AtBeginDocument{
    \renewcommand{\theMathJaxsection}{\Alph{section}.}
}
```

- ⚠ **subequation** The `amsmath` subequations environment is supported, but only with `\alpha` sub-equation numbering.

- global customizations** MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined in the preamble. These will be declared at the start of each HTML page, and thus will have a global effect across all HTML pages.

Examples:

```
\begin{warpMathJax}
\CustomizeMathJax{
    \newcommand{\expval}[1]{\langle#1\rangle}
    \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arcsinh}{\text{arcsinh}}}
\CustomizeMathJax{\newcommand{\arccosh}{\text{arccosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
\end{warpMathJax}
```

- ⚠ **slow compilation** To avoid a slowdown in compile speed, use the `warpMathJax` environment to prevent its contents from being processed in print or SVG math output. Also, place each new definition inside its own `\CustomizeMathJax`. A warning to this effect is issued if an overly-long definition is attempted.

`lwarp` already provides MATHJAX customizations for some packages.

- siunitx** When using `siunitx`, a similar process may be used to add custom units:

```
\begin{warpMathJax}
\CustomizeMathJax{\newcommand{\myunit}{\mathrm{WXYZ}}}
\CustomizeMathJax{\newcommand{\umyunit}{\mathrm{\mu myunit}}}
\end{warpMathJax}
```

- advanced control** For more advanced control over dynamically creating custom definitions, see as an example the `lwarp` definition for `\DeclarePairedDelimiterX`, in section [403, `mathtools`](#).

- local customizations** For customizations local to the current HTML page only, macros may be defined as follows:

```
\begin{warpMathJax}
\(\newcommand{\macroname}{...}\)
\(\newcommand{\anothername}{...}\)
\end{warpMathJax}
```

To maintain compile speed, use the `warpMathJax` environment, and use a separate math environment for each definition.

- \ifstar** For MATHJAX, use `\ifstar` instead of `\@ifstar`:

```
\CustomizeMathJax{
\def\myname{
    \ifstar\starredredaction\nostarredredaction
    % (Do not place anything after!)
}
```

`\ifnextchar` For MATHJAX, use `\ifnextchar` instead of `\@ifnextchar`:

```
\CustomizeMathJax{\def\myname{\ifnextchar X \found\notfound}}
```

“X” may be a single ASCII character, or a hex number inside braces, ex:

```
\CustomizeMathJax{\def\myname{\ifnextchar{0x7B}\found\notfound}}
```

Use “(” or “`{0x28}`” for a left parenthesis, “`{0x7B}`” for a left brace, “`{0x7D}`” for a right brace, or “`{0x5C}`” for a backslash.

8.7.8 MATHJAX limitations

MATHJAX limitations Limitations when using MATHJAX include:

MathJax (*Prog*)

⚠ `\multicolumn`, `multirow`

- MATHJAX does not support `\multicolumn` or `multirow`. These may be used in text tabulars or SVG math, but in MATHJAX math arrays they are emulated. `\multicolumn` only fills a single cell, resulting in a short row. `\multirow` simply prints its text on the first line.

⚠ `footnotes`

- Footnotes are emulated when used inside a MATHJAX expression. For an equation with a single footnote, the correct footnote number is used. For non-equations, `\footnotename` is used instead, since the actual number cannot be tracked. See section 8.5.4 regarding the use of footnotes with MATHJAX.

⚠ `references`

- Inside a MATHJAX expression, references to equations work within the same HTML web page, but do not work when referring to an equation in a different HTML web page. Outside of a MATHJAX expression, in the text body, references work as expected.

`latextimage`

- Math appearing inside a `latextimage`, and therefore also inside a TikZ or picture environment, is rendered as SVG math even if MATHJAX is used in the rest of the document.

`siunitx`

- For `siunitx`, see [siunitx package](#), section 8.7.15.

`physics`

- For `physics`, see [physics package](#), section 8.7.17.

`tabbing`

- A tabbing environment is emulated using an HTML `<pre>`. While MATHJAX is enabled inside tabbing, the browser may not correctly render the horizontal alignment of the math and text following after on the same line.

`\text`

- MATHJAX includes the `textmacros` extension, which supports various macros which are commonly used inside `\text`, such as `\textbf` and text accents. Lwarp supports this extension.

⚠ `Unicode`

- If using DVI LATEX or PDF LATEX, unicode input may not appear correctly in MATHJAX. Either use XeLATEX or LuaLATEX, or replace Unicode special characters such as

```
\text{special character æ}
```

with their special macros, such as

```
\text{special character \ae}
```

⚠ `other macros and packages`

- Many other math-related macros and packages are not directly supported by MATHJAX, including `\ensuremath` and occasionally-used macros such as `\relax`. While using MATHJAX, l warp provides emulation for many of these

macros, as well as for footnotes and emulation for dozens of packages (see table 2). In many cases these emulations simply ignore the package in a source-compatible way. Others produce a result which represents the meaning, even if they don't look exact. Look up each package in this document for a description of the limitations of each.

8.7.9 Catcode changes

preamble macros with math

The math shift character \$ is not set for HTML output until after the preamble. Macros defined in the preamble which contain \$ must be enclosed between \StartDefiningMath and \StopDefiningMath to temporarily change to the HTML meaning of \$:

```
\StartDefiningMath
\newcommand{...}
\StopDefiningMath
```

As an alternative, use \(` and \)` instead of \$, in which case \StartDefiningMath and \StopDefiningMath are not necessary.

If a package defines macros using \$, it may be necessary to use \StartDefiningMath and \StopDefiningMath before and after loading the package.

8.7.10 Complicated inline math objects

\inlinemathnormal \inlinemathother

An inline math expression is usually converted to a reusable hashed SVG math image, or a MATHJAX expression. The hash or expression depends on the contents of the math expression. In most cases this math expression is static, such as \$x+1\$, so the image can be reused for multiple instances of the same expression. In some cases, the math expression includes a counter or other object which may change between uses. Another problem is complicated contents which do not expand well in an alt tag. Yet another problem is math packages which are only partially emulated in MATHJAX. The macro \inlinemathother may be used before a sequence of dynamic or complicated math expressions, and \inlinemathnormal after. Doing so tells lwarp to use unhashed SVG math images for those particular expressions, even if MATHJAX is otherwise in use. See section 44.

changing contents complicated alt tag

MATHJAX limitations

8.7.11 Complicated display math objects

\displaymathnormal

By default, or when selecting \displaymathnormal, MATHJAX math display environments print their contents as text into HTML for MATHJAX to interpret, and SVG display math environments render their contents as SVG images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated TikZ pictures, compilation will fail.

MATHJAX unsupported complicated alt tag

When selecting \displaymathother, it is assumed that the contents are more complicated than "pure" math. An example is an elaborate TikZ picture, which will not render in MATHJAX and will not make sense as an HTML alt tag. In this mode, MATHJAX is turned off, math display environments become SVG images, even if MATHJAX is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as TikZ pictures are more likely to compile successfully.

8.7.12 Theorems

⚠ **cref reference format undefined**

If the print version does not use `cleveref`, place all `\theoremstyle` and `\newtheorem` declarations in the preamble inside `\AtEndPreamble`.¹⁵ For some theorems, it may also be required to add inside `\AtEndPreamble` something such as:

```
\usepackage{etoolbox} % for \ifdef, \AtEndPreamble
\AtEndPreamble{ % if not using cleveref package
    \theoremstyle{definition}
    \newtheorem{dtheorem}{Definition}
    ...
    \ifdef{\cref}{%
        \crefname{Proof}{Proof}{Proofs}
    }{}%
}
```

8.7.13 ntheorem package

`ntheorem (Pkg)`

⚠ **Font control**

⚠ **Equation numbering**

This conversion is not total. Font control is via css, and the custom L^AT_EX font settings are ignored.

`ntheorem` has a bug with equation numbering in *AMS* environments when the option `thref` is used. `lwarf` does not share this bug, so equations with `\split`, etc, are numbered correctly with `lwarf`'s HTML output, but not with the print output. It is recommended to use `cleveref` instead of `ntheorem`'s `thref` option.

8.7.14 mathtools package

`mathtools (Pkg)`

`showonlyrefs` is disabled, as it conflicts with `cleveref`, which is used by `lwarf`. Equation numbers may not match the print version.

⚠ **equation numbering**

⚠ **italic correction**

`mathic` is not emulated for HTML.

⚠ **MATHJAX**

If using MATHJAX:

- Recent changes may not yet be updated in the MATHJAX extension, which is used by `lwarf`.

- `mathtools disallowspaces` does not work for MATHJAX. Protect brackets which are not optional arguments, such as:

```
\begin{gathered}{}\\[p]=1 \\.\.\.\end{gathered}
```

- `showonlyrefs` does not work in MATHJAX, and will result in a difference in equation numbering compared to the print version.

- `alignat` in MATHJAX requires math mode, but in L^AT_EX it doesn't. It may be required to use `warpHTML` and `warpprint` to isolate a version for each mode.

- `\DeclarePairedDelimiter` and related must be in the preamble before `\begin{document}`.

¹⁵`lwarf` uses `cleveref` for the HTML conversion, and loads `cleveref` `\AtEndPreamble`, just before `\AtBeginDocument`. This is also before the `.aux` file is read.

8.7.15 siunitx package

`siunitx (Pkg)` `siunitx` is well supported by `l warp`.

Limitations Some general limitations:

fractions Due to `pdftotext` limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

`\cancel` is not currently supported for `siunitx` v3.

Negative values are not automatically colored.

⚠ tabular Tabular S and s columns are rendered as simple c columns, although key settings will be set. If using scientific notation, table-format, table-align-uncertainty, drop-exponent, etc.. use `\tablenum` for each cell. This is especially required for drop-exponent, without which the value will be shown incorrectly.

⚠ table-auto-round `table-auto-round` is ignored.

Math rendering Math may be rendered in several ways in the same document:

For math mode with SVG display: The original `siunitx` code is used while generating the SVG image.

For HTML text mode: `l warp` uses `siunitx` code patched for HTML, and simplified units.

For math expressions while using MATHJAX: A limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. The result usually looks fine, and otherwise is enough to get the meaning across.

Custom units `siunitx` allows customized units:

`\DeclareSIUnit {⟨name⟩} {⟨definition⟩}`

`\DeclareSIUnit` declares a version of the unit for the print version. This is also used when the unit is printed in SVG math or a `lateximage`. It is also used for HTML if an HTML-specific version is not defined with `\HTMLDeclareSIUnit`.

`\DeclareSIUnit\myunit{\ensuremath{\text{m}_y}}`

`\HTMLDeclareSIUnit {⟨name⟩} {⟨definition⟩}`

⚠ v3 only! Use this after the print unit has been defined. For `siunitx` v3, `\HTMLDeclareSIUnit` declares a simplified version of the unit for HTML, for example if the print-mode unit uses TeX boxes or `\ensuremath`:

`\HTMLDeclareSIUnit\myunit{\text{m}\text{y}}`

It is also possible to provide a custom unit for MATHJAX:

`\CustomizeMathJax{\newcommand{\myunit}{\text{m}_y}}`

Predefined units Most units work as-is with HTML. For the following units, lwarf has already set \HTMLDeclareSIUnit: \celsius, \arcminute, \arcsecond, \elementarycharge, \clight, \bohr, \electronmass, \hartree, \planckbar.

⚠ MathJax

Document modifications required for MATHJAX

⚠ \sisetup

- Place \sisetup in the preamble before \begin{document}. Changes made later may be ignored, especially with MATHJAX. The MATHJAX emulation also ignores most macro options.

⚠ complex numbers

custom units

- Complex numbers are displayed as entered, ignoring output-complex-root.
- Custom units may be added with \CustomizeMathJax. For example, from lwarf-common-mathjax-siunitx:

```
\CustomizeMathJax{\newcommand{\hartree}{\mathit{E}_{\mathrm{h}}}}
\CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\AA}}}
```

- Units work better using ~ between units instead of using periods.

⚠ \square, \cubic

- To square or cube compound units, enclose the following compound units in braces:

```
\cubic{\centi\meter}
```

Single units do not require braces.

- For \numlist, the argument is printed as text as-is, so use space between semicolons for improved readability.
- If using parse-numbers = false, also use \num or \qty. siunitx=siunitx>Missing \$ inserted.

Also see **MATHJAX option**, section 8.7.5.

8.7.16 units and nicefrac packages

units (*Pkg*) units and nicefrac work with lwarf, but MATHJAX does not have an extension for units or nicefrac. These packages do work with lwarf's option svgmath.
 nicefrac (*Pkg*)

8.7.17 physics package

physics (*Pkg*) physics works as-is for HTML with SVG math.

For MATHJAX, the MATHJAX v3 physics extension is used.

8.8 Graphics

graphics (*Pkg*) Per table 9, image filenames may be specified either with or without an extension. If an extension is given it will be used as-is, for either print or HTML output. If no extension is given, a list of possible extensions is tried, which depends on whether print or HTML is being generated. This allows a PDF file for print and a SVG file for HTML, for example. If no extension is given, the automatic search will only return lowercase extensions, even if the filename actually has an uppercase

⚠ case sensitive

Table 9: \includegraphics and file names

Print image file	HTML image file	Command to use
image.pdf ^a	image.svg ^a	\includegraphics{image}
image.eps ^a	image.svg ^a	\includegraphics{image}
image.jpg	— ^b	\includegraphics{image}
image.png	— ^b	\includegraphics{image}
image.JPG	— ^b	\includegraphics{image.JPG} ^c
image.PNG	— ^b	\includegraphics{image.PNG} ^c
image.jpg	image.gif	\includegraphics{image}

^a: Must be a lowercase file extension.^b: The same file is used for print and HTML.^c: The uppercase extension must be specified.

extension, and lwarf cannot get around this problem, so image file extensions must be lowercase to be seen by the HTML browser with lwarf. For example, name the image file `image.pdf` instead of `image.PDF`, but refer to it in the source as `image`, without an extension. For images which may be used as-is with either print or HTML, such as `JPG` or `PNG`, you may use a capitalized extension if it is specified in the source, such as `image.JPG`.

\includegraphics file formats For \includegraphics with `.pdf` or `.eps` files, the user must provide a `.pdf` or `.eps` image file for use in print mode, and also a `.svg`, `.png`, or `.jpg` version of the same image for use in HTML.

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, lwarf will automatically choose the `.pdf` or `.eps` format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a `.pdf` or `.eps` image is referred to with its file extension, the extension will be changed to `.svg` for HTML:

```
\includegraphics{filename.pdf} % uses .svg in html  
\includegraphics{filename.eps} % uses .svg in html
```

**pdftocairo (Prog)
PDF to SVG** To convert a PDF image to SVG, use the utility `pdftocairo`:

```
Enter ⇒ pdftocairo -svg filename.pdf
```

lwarfpmk pdf2svg (Prog) For a large number of images, use `lwarfpmk`:

```
Enter ⇒ lwarfpmk pdf2svg *.pdf      (or a list of filenames)
```

**lwarfpmk epstopdf (Prog)
epstopdf (Prog)
epstopdf package** For EPS images converted to PDF using the package `epstopdf`, use

```
Enter ⇒ lwarfpmk pdf2svg *.PDF
```

to convert to SVG images.

DVI LATEX When using DVI *latex*, it is necessary to convert EPS to PDF and then to SVG:

Enter ⇒ **l warp mk epstopdf *.eps (or a list of filenames)**

Enter ⇒ **l warp mk pdftosvg *.pdf (or a list of filenames)**

PNG and JPG For PNG or JPG while using *pdflatex*, *lualatex*, or *xelatex*, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

GIF GIF files may be used for HTML, but another format must also be provided for print output.

file extension priorities If a file extension is not used, for HTML the file extension priorities are: SVG, GIF, PNG, then JPG.

A complication occurs if a file of the same name exists elsewhere in the TEX tree, such as a test image from some LATEX package. TEX looks in the local document directory before considering the directories specified by \graphicspath, but the TEX tree is found as “local”, so any file in the tree is found before the directories in \graphicspath. To use such an image, it must be copied to the document’s directory to be used for HTML, and furthermore must be in the document’s base directory instead of an images subdirectory.

⚠ duplicate files If using the older *graphics* syntax, use both optional arguments for \includegraphics. A single optional parameter is interpreted as the newer *graphicx* syntax. Note that viewports are not supported by l warp—the entire image will be shown.

units For \includegraphics, avoid px and % units for width and height, or enclose them inside warpHTML environments. For font-proportional image sizes, use ex or em. For fixed-sized images, use cm, mm, in, pt, or pc. Use the keys width=.5\linewidth, or similar for \textwidth or \textheight to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the scale option, since it is not well supported by HTML browsers.

options \includegraphics accepts width and height, origin, rotate and scale, plus new class and alt keys. (alt has recently been incorporated into *graphicx* itself.)

HTML class With HTML output, \includegraphics accepts an optional class=xyz keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.

HTML alt tags Likewise, the \includegraphics alt key adds an HTML alt tag to an image, and is ignored for print output. If not assigned, each image is given an alt tag according to \ImageAltText.

⚠ scale Avoid using the \includegraphics scale option. Change:

```
\includegraphics[scale=<xx>]{ . . . }
```

to:

```
\includegraphics[width=<yy>\linewidth]{ . . . }
```

\rotatebox \rotatebox accepts the optional origin key.

⚠ browser support \rotatebox, \scalebox, and \reflectbox depend on modern browser support. The css3 standard declares that when an object is transformed the whitespace

which they occupied is preserved, unlike L^AT_EX, so expect some ugly results for scaling and rotating.

8.8.1 tikz package

tikz (Pkg) If using display math with `\tikzpicture` or `\tikz`, along with matrices with the & character, the document must be modified as follows:

```
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}
```

and each instance of & in the `tikz` expression must be replaced with \&.

8.8.2 grffile package

grffile (Pkg) `grffile` is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

8.8.3 color package

color (Pkg) `color` is superceded by `xcolor`, and `lwarf` requires several of the features of `xcolor`. When `color` is requested, `xcolor` is loaded as well.

8.8.4 xcolor package

xcolor (Pkg) `\colorboxBlock` and `\fcolorboxBlock` are provided for increased HTML compatibility, and they are identical to `\colorbox` and `\fcolorbox` in print mode. In HTML mode they place their contents into a `<div>` instead of a ``. These `<div>`s are set to `display: inline-block` so adjacent `\colorboxBlocks` appear side-by-side in HTML, although text is placed before or after each.

Print-mode definitions for `\colorboxBlock` and `\fcolorboxBlock` are created by `lwarf`'s core if `xcolor` is loaded.

background: none `\fcolorbox` and `\fcolorboxBlock` allow a background color of `none`, in which case only the frame is drawn, which can be useful for HTML.

color support Color definitions, models, and mixing are fully supported without any changes required.

colored text and boxes `\textcolor`, `\colorbox`, and `\fcolorbox` are supported.

\color and \pagecolor `\color` and `\pagecolor` are ignored. Use `css` or `\textcolor` where possible.

8.8.5 epstopdf package

epstopdf (Pkg) Images with an `.eps` extension will be converted to `.pdf`. The HTML output uses the `.svg` version, so use

convert to .svg

Enter ⇒ **lwarfmk pdftosvg <listofPDFfiles>**

to generate .svg versions.

8.8.6 pstricks package

pstricks (Pkg) All pstricks content should be contained inside a `pspicture` environment.

⚠️ use `pspicture`

8.8.7 pdftricks package

pdftricks (Pkg) The pdftricks image files `<jobname>-fig*.pdf` must be converted to .svg, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

Enter ⇒ **lwarfmk pdftosvg <jobname>-fig*.pdf**

8.8.8 psfrag package

psfrag (Pkg) The psfrags environment is modified to use `lateximage` to encapsulate the image. Always use a psfrags environment to contain any local \psfrag macros and the associated \includegraphics or \epsfig calls. Outside of a psfrags environment, psfrags adjustments will not be seen by lwarf.

⚠️ use `psfrags`

Tip: Use a mono-spaced font for the tags in the EPS file.

8.8.9 pstool package

pstool (Pkg) \graphicspath is ignored, and the file directory must be stated.

⚠️ path and filename The filename must not have a file extension.

Use

Enter ⇒ **lwarfmk html**

followed by

Enter ⇒ **lwarfmk limages**

.

8.8.10 asymptote package

`asymptote (Pkg)` To compile:

```
pdflatex project.tex
asy project-*.asy
pdflatex project.tex

lwarpmk print
asy project-*.asy
lwarpmk print1
lwarpmk print1

lwarpmk html
asy project_html-*.asy
lwarpmk html1
lwarpmk html1
lwarpmk limages
```

8.8.11 overpic package

`overpic (Pkg)` The macros `\overpicfontsize` and `\overpicfontskip` are used during `HTML` generation. These are sent to `\fontsize` to adjust the font size for scaling differences between the print and `HTML` versions of the document. Renew these macros before using the `overpic` and `Overpic` environments.



8.8.12 Multimedia packages

`multimedia (Pkg)` The packages `multimedia`, `movie15`, and `media9` are supported.

`movie15 (Pkg)` `HTML5 <audio>` and `<video>` objects are created for `.mp3` and `.mp4` files.

`media9 (Pkg)`

`HTML5 <embed>` objects are created for `http` and `ftp` links.

`\href` links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by `HTML5`.)

For `media9`, a multimedia object is inserted for each `addresource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each `HTML` multimedia object includes the `poster` text, except for `<embed>` objects. For `movie15`, the `text` option is supported to specify the `poster` text.

The `width`, `height`, and `totalheight` options are supported. The `HTML` object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

`media9 \addmediapath` is supported. It is assumed that the same path structure will exist for the `HTML` document.

`HTML5` media controls are always specified for each `<audio>` and `<video>` object.

`media9` slideshows are not supported.

`\hyperlink{movie}`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a `YOUTUBETM` video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

8.9 Tabbing

The tabbing environment works, except that `SVG` math and `lateximages` do not yet work inside the environment.

⚠️ math in tabbing

If math is used inside tabbing, place tabbing inside a `lateximage` environment, which will render the entire environment as a single `SVG` image.

8.10 Tabular

8.10.1 tabular environment

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, `siunitx` S columns, or the packages `multirow`, `longtable`, `supertabular`, or `xtab`.

Defining macros and environments:

- When defining environments or macros which include tabular and instances of the `&` character, it may be necessary to make `&` active before the environment or macro is defined, then restore `&` to its default catcode after, using the following commands. These are ignored in print mode.

`\StartDefiningTabulars`

`<define macros or environments using tabular and & here>`

`\StopDefiningTabulars`

This includes before and after defining any macro which used `\ttabbox` from `floatrow`.

- When creating a new environment which contains a tabular environment, lwarf’s emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted `HTML` rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

⚠️ floatrow

⚠️ tabular inside another environment

```
\StartDefiningTabulars % (& is used in a
definition)
\newenvironment{outerenvironment}
{
  \tabular{cc}
  left & right \\
}
{
  \TabularMacro\ResumeTabular
  left & right \\
  \endtabular
}
\StopDefiningTabulars
```

For developers:

- To automate the use of `\StartDefiningTabulars` and `\EndDefiningTabulars`, these macros may be embedded inside an HTML environment definition to automatically change the catcode of & before absorbing the arguments. Another environment may be embedded as well.
- ```
% Does the work after the catcode has been changed:
\newcommand*{\LWR@HTML@subsomename}[2]{%
 ...
 \otherenvironmentname [<args>] {<args>} % for
example
}
% Change catcode before absorbing arguments:
\newcommand*{\LWR@HTML@somename}{%
 \StartDefiningTabulars
 \LWR@HTML@subsomename
}
% Change catcode again at the end:
\newcommand*{\LWR@HTML@endsomename}{%
 ...
 \endotherenvironmentname % for example
 \StopDefiningTabulars
}
% Combine with the existing print definition:
\LWR@formattedenv{somename}
```

**Cell contents:****⚠ macro in a table**

- Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use `\TabularMacro` just before the macro. This is ignored in print mode.
- ```
\TabularMacro\somemacro & more row contents \\
```

Column specifiers:**⚠ math**

- Due to the way math is gathered for processing, column specifiers such as `>{$}c<{$}` do not work with l warp. Instead, each cell must specify math mode individually.

@ and !

- Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

- In `\multirow` cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the `\multirow` which do not appear in the HTML version.

⚠ \newcolumntype

- If `\newcolumntype` does not work for HTML, add a simplified column type using `\HTMLnewcolumntype`.

font and alignment

- `\lwarf` detects each of the following, and sets HTML CSS appropriately:

```
>{\centering\arraybackslash}
>{\raggedright\arraybackslash}
>{\raggedleft\arraybackslash}
>{\itshape}
>{\bfseries}
>{\bfseries\itshape}
```

These may be used with `\newcolumntype`, such as:

```
\newcolumntype{P}[1]{>{\centering\arraybackslash}p{#1}}
```

Rules:**vertical rules**

- Doubled `\hlines`, `\midrules`, and vertical rules are supported.
- Vertical rules next to either side of an `@` or `!` column are displayed on both sides of the column.
- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with `@` or `!` columns, and full-width rules ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

combined rules

- If you wish to use `\cmidrule` followed by `\bottomrule`, it may be necessary to use:

```
\cmidrule{2-3} \\[-2ex]
\bottomrule
```

The optional `-2ex` is ignored in HTML, but improves the visual formatting in the print output.

- For `\toprule` and `\bottomrule`, when combined with a `\warpprint` or `\warpHTML` environment, if a “Misplaced `\noalign`” error occurs, change

```
This & That \endhead
```

to

```
\warpprintonly{This & That \endhead}
```

and likewise with the other `\end` headings. Keep the `\endfirsthead` row unchanged, as it is still relevant to HTML output.

Other:**longtable headings**

- `tabularx` ignores the width, but X columns do produce paragraph columns or multicolumns.

- For `longtable`, place headings and footings which do not apply to HTML inside `\warpprintonly{}`.

- For S columns (from the `siunitx` package), while producing print output, anything non-numeric must be placed inside {} braces, including commands such as `\multirow`. While producing HTML output, though, anything placed inside braces is not seen by `lwarf`'s tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

```
\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3 \\
\warpHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\}
```

- In L^AT_EX, a `tabular` may be placed inside a `minipage`, but in HTML a `<table>` may not be inside a ``. If this situation is detected, a warning is printed instructing the user to isolate the `` using `\warpprintonly` or the `\warpprint` environment.

S columns**tabular inside a **

8.10.2 multirow package

- vposn**
- Note that recent versions of multirow include a new optional vposn argument.

- multirow cells**
- For multirow, insert \mrowcell into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

```
... & \multirow{2}{.5in}{text} & ...
... & \mrowcell & ...
```

colored cells

- The multirow documentation regarding colored cells recommends using a negative number of rows. This will not work with l warp, so \warpprintonly and \warpHTMLonly must be used to make versions for print and HTML.

with \multicolumn

⚠ \multicolumn & \multirow

- See section 433.2 for \multicolumnrow.

l warp does not support directly combining \multicolumn and \multirow. Use \multicolumnrow instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for \multicolumn come first, followed by the five arguments for \multirow, many of which are optional, followed by the contents.

As per \multirow, skipped cells to the right of the \multicolumnrow statement are not included in the source code on the same line. On the following lines, \mcolrowcell must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

```
... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
... & \mcolrowcell & \mcolrowcell & ...
```

⚠ MathJax

- MathJax does not support multirow, so it is emulated to only print its text on the first row. \multirow works as expected in text tabulars or SVG math.

8.10.3 longtable package

- longtable (Pkg)**
- Use one of either \endhead or \endfirsthead for both print and HTML, and use a \warpprintonly macro to disable the other head phrase, and also the \endfoot and \endfirstfoot phrases. (See section 8.10.4 if using threeparttable.)

```
\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly% not used in HTML
[ . . . ] \endhead % or \endfirsthead
[ . . . ] \endfoot
[ <lastfoot macros> ] \endlastfoot
}
... table contents ...
\warpHTMLonly%
[ <lastfoot macros> ] % HTML last footer, without \endfoot
% or \endlastfoot.
}
\end{longtable}
```

⚠ Misplaced \noalign Use the `\warpprintonly` macro instead of the `warpprint` environment. Doing so helps avoid “Misplaced `\noalign`.” when using `\begin{warpprint}`.

⚠ \kill `\kill` is ignored, place a `\kill` line inside

```
\begin{warpprint} . . . \end{warpprint}
```

or place it inside `\warpprintonly`.

⚠ lateximage `longtable` is not supported inside a `lateximage`.

8.10.4 `threeparttablex` package

`threeparttablex` (*Pkg*) `threeparttable` is used with `longtable` and `booktabs` as follows:

```
\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
    [ . . . ] \endhead % or \endfirsthead
    [ . . . ] \endfoot
    \bottomrule \insertTableNotes \endlastfoot
}
. . . table contents . .
\warpHTMLonly{ % HTML last footer
    \bottomrule
    \UseMinipageWidths % optional
    \insertTableNotes
    \endlastfoot
}
\end{longtable}
```

table width The table notes are created using a `\multicolumn`. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, `l warp` guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use `\UseMinipageWidths` before `\insertTableNotes`. The width is then specified, and in many cases the result is an improvement in overall table layout.

8.10.5 `supertabular` and `xtab` packages

`supertabular` (*Pkg*) For `\tablefirsthead`, etc., enclose them as follows:

```
\StartDefiningTabulars
\tablefirsthead
. .
\StopDefiningTabulars
```

See section 8.10.1.

⚠ lateximage `supertabular` and `x tab` are not supported inside a `lateximage`.

**⚠ Misplaced alignment
tab character &**

8.10.6 colortbl package

- colortbl (Pkg)** Only use `\rowcolor` and `\cellcolor` at the start of a row, in that order.
- ⚠️ row/cell color** `colortbl` ignores the overhang arguments.
- colored tables** `\rowcolors` is supported, except that the optional argument is ignored so far.

8.10.7 ctable package

- ⚠️ Misplaced alignment tab character &** Use `\StartDefiningTabulars` before one or more `\ctables`, and `\StopDefiningTabulars` after. These change the meaning of the ampersand `&` character.

8.10.8 bigdelim package

- bigdelim (Pkg)** `\ldelim` and `\rdelim` use `\multirow`, so `\mrowcell` must be used in the proper number of empty cells in the same column below `\ldelim` or `\rdelim`, but not in cells which are above or below the delimiter:

```
\begin{tabular}{lll}
<empty> & a & b \\
\ldelim{\{}{\}}{3}{.25in}[left ] & c & d \\
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}
```

<->	a	b
left {	c	d
	e	f
	g	h
<->	i	j

For MATHJAX, limited emulation is provided which merely prints the delimiter and optional text in the first row.

8.11 Floats

8.11.1 Float contents alignment

- ⚠️ figure & table alignment** `\centering`, etc. are honored in a figure or table if they are the first command inside the float:

```
\begin{table*}
\centering
\caption{A Table}
...

```

8.11.2 float, trivfloat, and/or algorithmicx together

`float (Pkg)` If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section 643.1.

`trivfloat (Pkg)`

`algorithmicx (Pkg)`

⚠ package conflicts

`caption (Pkg)`

`subcaption (Pkg)`

Package options may cause problems with `l warp`, especially if they include curly braces.

If selecting options with braces in `\usepackage` does not work:

```
\usepackage[font={it,small}]{caption}% does not work
```

... try instead selecting the package options before loading `l warp`:

```
\PassOptionsToPackage{font={it,small}}{caption}
...
\usepackage{l warp}
...
\usepackage{caption}
```

... or try setting package options after the package has been loaded:

```
\usepackage{caption}
\captionsetup{font={it,small}}
```

⚠ numbering

To ensure proper float numbering, set caption positions such as:

```
\captionsetup[figure]{position=bottom}
\captionsetup[subfigure]{position=bottom}
\captionsetup[table]{position=top}
\captionsetup[subtable]{position=top}
```

Similarly for `longtable`. These positions depend on where the user places the `\caption` command inside each float.

8.11.4 subfig package

`subfig (Pkg)`

⚠ table numbering

To have correct sub table numbers:

```
\usepackage{caption}
\captionsetup[table]{position=top}
```

⚠ lof/lotdepth

At present, the package options for `lofdepth` and `lotdepth` are not working. These counters must be set separately after the package has been loaded.

⚠ horizontal spacing

In the document source, use `\hfill` and `\hspace*` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

8.11.5 floatrow package

`floatrow (Pkg)`

⚠️ Misplaced alignment tab character &
⚠️ subfig package

Use `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros using `\ttabbox` with a tabular inside. See section 8.10.1.

When combined with the `subfig` package, while inside a `subfloatrow` `\ffigbox` and `\ttabbox` must have the caption in the first of the two of the mandatory arguments.

⚠️ `\FBwidth`, `\FBheight`

The emulation of `floatrow` does not support `\FBwidth` or `\FBheight`. These values are pre-set to `.3\linewidth` and `2in`. Possible solutions include:

- Use fixed lengths. `lwarf` will scale the HTML lengths appropriately.
- Use `warpprint` and `warpHTML` environments to select appropriate values for each case.
- Inside a `warpHTML` environment, manually change `\FBwidth` or `\FBheight` before the `\ffigbox` or `\ttabbox`. Use `\FBwidth` or `\FBheight` normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

8.11.6 keyfloat package

`keyfloat (Pkg)`

⚠️ keywrap

If placing a `\keyfig[H]` inside a `keywrap`, use an absolute width for `\keyfig`, instead of `lw`-proportional widths. (The `[H]` option forces the use of a `minipage`, which internally adjusts for a virtual 6-inch wide `minipage`, which then corrupts the `lw` option.)

For wrapped figures, overhang and number of lines are ignored.

8.12 KOMA-SCRIPT classes

`komascript (Cls)`

Many features are ignored during the HTML conversion. The goal is source-level compatibility.

`\captionformat`, `\figureformat`, and `\tableformat` are not yet emulated.

⚠️ Not fully tested! [Please send bug reports!](#)

Some features have not yet been tested. Please contact the author with any bug reports.

8.13 MEMOIR class

`memoir (Cls)`

⚠️ captions

`lwarf` uses `caption`, which causes a warning from `memoir`. This is normal. Adjust captions via `caption`, instead of `memoir`.

While emulating `memoir`, `lwarf` pre-loads a number of packages (section 699.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading `lwarf`:

⚠️ options clash

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{lwarf}
...
\usepackage{package_name}
```

⚠ version numbers memoir emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since lwarf is intended to support the freestanding packages, which are often newer than the date declared by memoir, it is hoped that memoir will update and change its emulated version numbers to match.

\label(bookmark){tag} \label accepts an optional (bookmark) argument, but this is ignored in HTML.

⚠ comment The comment environment is from the comment package, and thus requires that the \begin and \end each be on its own line:

```
\begin{comment}
This is a comment.
\end{comment}
```

\newcomment Comments defined with \newcomment use memoir's definitions, and behave as expected, where the \begin and \end do have to each be on its own line.

⚠ verbatim footnotes \verbfootnote is not supported.

⚠ \newfootnoteseries \newfootnoteseries, etc. are not supported.

⚠ page notes lwarf loads pagenote to perform memoir's pagenote functions, but there are minor differences in \pagenotesubhead and related macros.

page notes with cleveref To add support for pagenotes with cleveref, add:

```
\crefname{pagenote}{page note}{page notes}
\Crefname{pagenote}{Page note}{Page notes}
```

page note \nameref Note that for print mode, \nameref prints the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

⚠ poems Poem numbering is not supported.

⚠ verbatim The verbatim environment does not yet support the memoir enhancements. It is currently recommended to load and use fancyvrb instead.

⚠ glossaries The memoir glossary system is not yet supported by lwarfmk. The glossaries package may be used instead, but does require the glossary entries be changed from the memoir syntax to the glossaries syntax.

⚠ framewithtitle, titledframe The custom frame commands in the memoir manual may be emulated by placing the original definitions in the preamble inside warpprint environments, and then providing an HTML equivalent:

```
\begin{warpHTML}
\newcommand{\FrameTitle}[2]{%
\textbf{\#2}}
}
```

```
\newenvironment{framewithtitle}[2][\FrameFirst@Lab\ (cont.)]{%
  \begin{fminipage}{\linewidth}
    \textbf{\#2}
    \begin{minipage}{\linewidth}
}
{\end{minipage}\end{fminipage}}
```



```
\newcommand{\TitleFrame}[2]{%
  \par
  \textbf{\#1}\par
  \fboxBlock{\#2}
}
```



```
\newenvironment{titledframe}[2][\FrameFirst@Lab\ (cont.)]{%
  \par
  \textbf{\#2}
  \begin{fminipage}{\linewidth}
}
{\end{fminipage}}
\end{warpHTML}
```

8.14 International languages

⚠ **section and file names**

If using *pdflatex* with the setting `\booltrue{FileSectionNames}`, non-ASCII text in section names can result in corrupted HTML file names. *pdflatex* may be used if setting `\boolfalse{FileSectionNames}`, in which case HTML file numbers will be generated.

For correct HTML file names, use *xelatex*, *lualatex*, or dedicated document classes / engines.

(As of this writing, this warning is only relevant to the *kotex* package.)

8.15 Miscellaneous packages

8.15.1 **verse** and **memoir**

verse (*Pkg*) When using **verse** or **memoir**, always place a `\\"` after each line.

memoir (*Cl*s)

`\attrib`

The documentation for the **verse** and **memoir** packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. **lwarf** provides `\attribution`, which works for both print and HTML output. To combine the two so that `\attrib` is used for print and `\attribution` is used for HTML:

```
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

`\vleftskip` (*Len*)
`\vleftmargini` (*Len*)
`\HTMLvleftskip` (*Len*)
`\HTMLleftmargini` (*Len*)

These lengths are used by **verse** and **memoir** to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLvleftskip` and `\HTMLleftmargini` are provided to control the margins in HTML output. These new lengths may be set by the user before any **verse** environment, and persist

until they are manually changed again. One reason to change `\HTMLleftmargini` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargini` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

- ⚠ **spacing** Horizontal spacing relies on `pdftotext`'s ability to discern the layout (-layout option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargini` or `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space. During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused `pdftotext` to shift everything over.
- ⚠ **verse margin**

8.15.2 newclude package

- newclude (Pkg)** **⚠ loading** `newclude` modifies `\label` in a non-adaptive way, so `newclude` must be loaded before `lwarp` is loaded:

```
\documentclass{article}
. . . <font setup>
\usepackage{newclude}
\usepackage[warpHTML]{lwarp}
. . .
```

8.15.3 babel package

- babel (Pkg)** **⚠ \CaptionSeparator** When French is used, the caption separator is changed to a dash. To restore it to a colon, the following may be placed before `lwarp` is loaded:

```
\renewcommand*{\CaptionSeparator}{:~}
```

- punctuation spaces** Also when French is used, `lwarp` creates fixed-width space around punctuation by patching `\FBcolonspace`, `\FBthinspace`, `\FBguillspace`, `\FBmedkern`, `\FBthickkern`, `\FBtextellipsis`, and the tilde. If the user's document also changes these parameters, the user's changes should be placed inside a `warpprint` environment so that the user's changes do not affect the HTML output.
- ⚠ **customized spacing**

8.15.4 polyglossia package

- polyglossia (Pkg)** `lwarp` uses `cleveref`, which has some limitations when using `polyglossia`, possibly resulting in the error

```
! Undefined control sequence. . . . \__hook begindocument
```

To test compatibility, add

```
\usepackage{cleveref}
```

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

```
\setdefaultlanguage{english}
```

or some other language supported by `cleveref`, then select other languages using `\setotherlanguages`.

Once the print version works with `cleveref` and `polyglossia`, the HTML version should work as well using `l warp`.

8.15.5 `todonotes` and `luatodonotes` packages

`todonotes` (*Pkg*) The documentation for `todonotes` and `luatodonotes` have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.

8.15.6 `fixme`

`fixme` (*Pkg*) External layouts (`\fxloadlayouts`) are not supported.

 **external layouts** Customized layouts are overwritten by `l warp`'s versions `\AtBeginDocument` in order to provide the HTML conversion. If creating a new layout, see `l warp`'s changes to provide similar for the new layout, inside a `warpHTML` environment.

User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after `fixme` is loaded:

```
\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}
```

8.15.7 `acro` package

 **formats** Define acronymn formats using `\textbf` instead of `\bfseries` etc.

8.15.8 `chemfig` package

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `lateximage`:

```
\begin{lateximage}[-chemfig-~\PackageDiagramAltText]
\chemfig{...}
\polymerdelim[...]{...}
\end{lateximage}
```

8.15.9 `chemformula` package

 **chemformula with MATHJAX** `chemformula` works best without MATHJAX. If MATHJAX is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The `chemformula` package adapts to `array`, but does not know about MATHJAX, and MATHJAX does not know about `chemformula`.)

While using MATHJAX, `\displaymathother` may also be used for other forms of display and inline math which contain `chemformula` expressions.

8.15.10 mhchem package

See section 414.

8.15.11 kotex package

kotex (*Pkg*) See section 8.14 regarding *pdflatex* and Korean section names.

 Korean section names

9 Compiling using custom shell commands

l warp and *l warpmk* try to make it easy to process print and HTML compilation tasks in most situations. Depending on the operating system, command-line options, TeX engine, and *l warp* options, the commands ***l warpmk print*** and ***l warpmk html*** are automatically set up to correctly recompile the project. These actions may be overridden using *l warp* options, thus allowing the use of packages such as *perltx* and *pythontex*.

9.1 Command options

PrintLatexCmd (*Opt*) The *l warp* options **PrintLatexCmd** and **HTMLLatexCmd** are used to set customized commands to be executed by ***l warpmk print*** and ***l warpmk html***.

PrintLatexCmd should be set to shell commands which take *project.tex* and generate *project.pdf*.

HTMLLatexCmd should be set to take *project_html.tex* and generate *project_html.pdf*. *l warpmk* will then take *project_html.pdf* and automatically convert it and generate *project.html*.

9.2 Literal character macros

The *l warp* package options are parsed by TeX, and so some characters require the use of a special macro to represent them. See table 10. **\LWRopquote** and **\LWRopseq** may be used to increase operating-system portability. **\jobname** must have **_html** appended for processing HTML. **\space** may be necessary between other macros.

 **macro not found** To use these macros, either *kvoptions-patch* must be loaded before *l warp*:

```
\usepackage{kvoptions-patch}
\usepackage[
    PrintLatexCmd={ ... } ,
    HTMLLatexCmd={ ... }
]{l warp}
```

Table 10: Literal character macros

Character	Macro	Comment
%	\LWRpercent	
\$	\LWRdollar	
&	\LWRamp	
%	\LWRhash	
\	\LWRbackslash	
' or "	\LWRopquote	Depends on the operating system.
& or &&	\LWRopseq	Depends on the operating system.
(space)	\space	Forces an extra space.
(jobname)	\jobname	Without file extension.

or \lwarfsetup must be used to set PrintLatexCmd and HTMLLatexCmd:

```
\usepackage[...]{lwarf}
\lwarfsetup{
    PrintLatexCmd=
    {
        latex tm \LWRopseq
        dvips -o tm-pics.ps tm.dvi \LWRopseq
        ps2pdf -dALLOWPSTRANSPARENCY tm-pics.ps \LWRopseq
        pdflatex tm.tex
    } ,
    HTMLLatexCmd=
    {
        latex tm_html \LWRopseq
        dvips -o tm_html-pics.ps tm_html.dvi \LWRopseq
        ps2pdf -dALLOWPSTRANSPARENCY tm_html-pics.ps \LWRopseq
        pdflatex tm_html.tex
    }
}
```

9.3 *latexmk*

latexmk (*Prog*) If *latexmk* is used for a project, it may be easiest to continue using it.

latexmk project.tex would create *project.pdf* as normal.

latexmk project_html.tex would create *project_html.pdf*, then

lwarfmk pdftohtml project_html.pdf would take *project_html.pdf* and convert it to *project.html*.

sagetex (*Pkg*) *latexmk* may simplify the use of packages such as *sagetex*.

9.4 perltex package

`perltx (Pkg)` The `l warp` package option settings to use `perltx` would be similar to:

```
\usepackage[
    ...
    PrintLatexCmd={perltx -latex=pdflatex project.tex} ,
    HTMLLatexCmd={perltx -latex=pdflatex project_html.tex} ,
    ...
]{l warp}
```

⚠ “impure” math Place `perltx` math expressions between `\displaymathother` and `\displaymathnormal`, or `\inlinemathother` and `\inlinemathnormal`. See section [8.7.11](#).

9.5 pythontex package

`pythontex (Pkg)` An example using `pythontex`:

```
\usepackage[
    ...
    PrintLatexCmd={
        pdflatex project.tex \LWRopseq
        pythontex project \LWRopseq
        pdflatex project.tex
    } ,
    HTMLLatexCmd={
        pdflatex project_html.tex \LWRopseq
        pythontex project_html \LWRopseq
        pdflatex project_html.tex
    } ,
    ...
]{l warp}
```

Another possibility is to use `latexmk`, placing the `\Latexmk ...` commands in the `PrintLatexCmd` and `HTMLLatexCmd` options. While using these options, the `l warp` option `latexmk` would not be used.

⚠ “impure” math No attempt has yet been made to make `pythontex` robust with HTML output. Some math objects must be surrounded by `\displaymathother ... \displaymathnormal`, or `\inlinemathother ... \inlinemathnormal`. Displays of code may have to be enclosed inside a `lateximage` environment to prevent `<`, `>` and similar from being interpreted by the browser as HTML entities.

⚠ HTML look-alike

9.6 sympytex package

`sympytex (Pkg)` For `sympytex`:

```
\usepackage[
    ...
    PrintLatexCmd={
        pdflatex project.tex \LWRopseq
        python project.sympy \LWRopseq
        pdflatex project.tex
    } ,
    HTMLLatexCmd={
        pdflatex project_html.tex \LWRopseq
        python project_html.sympy \LWRopseq
        pdflatex project_html.tex
    } ,
    ...
] {l warp}
```

Also see the warnings for `pythontex`, above.

9.7 Other packages

- `rterface (Pkg)` Other packages such as `rterface` would be set up similar to `pythontex`, and the same warnings would apply.

9.8 *make* program

- `make (Prog)` To use `l warp` with the *make* program, have the `makefile` take `project.tex` and generate the print version `project.pdf`, as normal. `\usepackage{l warp}` must be used, and it generates `lwarpmk.conf` when the print version is created.

To generate HTML, first have `project_html.tex` be compiled to generate `project_html.pdf`. This must be in PDF format. Finally, have `project_html.pdf` be converted to HTML using `lwarpmk pdftohtml project_html.pdf`, and convert SVG math with `lwarpmk limages`.

9.9 UTF-8 locale

- ⚠ **UTF-8 locale** `lwarpmk` uses the `texlua` program, which sets the “locale” to “C”, including for external operating-system calls such as when executing `lwarpmk html`. In some cases, an external program called from the user’s document may require the use of a UTF-8 “locale”. For UNIX-related operating systems, it may be required to use `l warp`’s custom compilation options to add a locale change:

```
\usepackage{l warp}[
    PrintLatexCmd={
        env LC_CTYPE=en_US.UTF-8
        xelatex -shell-escape project.tex
    }
    HTMLLatexCmd={
        env LC_CTYPE=en_US.UTF-8
        xelatex -shell-escape project_html.tex
    }
]
```

ditaa (*Pkg*) The only example seen so far where this is required is the **ditaa** package, where the locale change allows the use of UTF-8 with Xe^LA_ET_EX and **ditaa**. To use Lua^LA_ET_EX instead, the locale change would have to be made inside the **ditaa** package where its calls the *ditaa* program.

10 EPUB conversion

lwarf does not produce EPUB documents, but it may be told to modify its HTML output to greatly assist in the conversion. An external program may then be used to finish the conversion to EPUB.

`<meta> author` To assign the author's name for regular lwarf HTML files, and also for the EPUB, use \HTMLAuthor {*name*}. This assigns the name to the `<meta> author` element. It may be set empty, and it defaults to \theauthor.

A special boolean is provided to simplify the process of converting lwarf HTML output to EPUB:

FormatEPUB

`FormatEPUB (bool)`

Default: false

FormatEPUB changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.

To help convert lwarf HTML output to EPUB, add

```
\booltrue{FormatEPUB}
```

to the project's source preamble after \usepackage{lwarf}. The EPUB version of the document cannot co-exist with the regular HTML version, so

```
Enter ⇒ lwarpmk cleanall
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk limages
```

to recompile with the FormatEPUB boolean turned on. Several changes are then made to the HTML output:

- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.

The resulting files will be ready to be loaded into an EPUB conversion program, such as the open-source program *Calibre* (<https://calibre-ebook.com/>).

 **search order** The EPUB conversion program must know what order the files are included. For lwarf projects, set the EPUB conversion software to do a breadth-first search of the files. For *Calibre*, this option is found in

Preferences → Plugins → File type plugins → HTML to Zip

 **encoding** Check the box Add linked files in breadth first order. Set the document encoding as utf-8, which is what lwarf generates for HTML, even if the original printed document uses some other encoding.

 **section breaks** The EPUB-conversion program must also know where the section breaks are located. For a list of lwarf's section headings, see table 12. For example, an article class document would break at \section, which is mapped to HTML heading level

<h4>, whereas a book class document would break at \chapter, which is HTML heading level <h3>. For *Calibre*, this option is found in

Preferences → Conversion (Common Options) → Structure Detection → Detect chapters at (XPath expression)

Select the “magic wand” to the right of this entry box, and set the first entry

Match HTML tags with tag name:

to “h4”. (Or “h3” for document classes with \chapters.) The Detect chapters at field should then show

//h:h4 — or — //h:h3

This option is also available on the main tool bar at the Convert books button.

Once these settings have been made, the lwarf-generated HTML files may be loaded by *Calibre*, and then converted to an EPUB.

MathJax support

MATHJAX may be used in EPUB documents. Some e-readers include MATHJAX, but any given reader may or may not have a recent version, and may or may not include extensions such as support for siunitx.

lwarf adds some modifications to MathML to support equations numbered by chapter. These modifications may not be compatible with the e-reader’s version of MATHJAX, so lwarf requests that a known version be loaded instead. In some cases chapter numbering of equations still doesn’t work.

Until math support in EPUB documents is improved, it is recommended to use SVG images instead of MATHJAX, especially for equations numbered by chapter, or where siunitx support is important.

11 Word-processor conversion

lwarf may be told to modify its HTML output to make it easier to import the HTML document into a word processor. At the time of this writing, it seems that LibreOffice works best at preserving table layout, but it still has some limitations, such as an inability to automatically assign figure and table frames and captions according to user-selected HTML classes. lwarf provides some assistance in locating these frame boundaries, as shown below.

11.1 Activating word-processor conversion

A special boolean is provided to simplify the process of converting lwarf HTML output to EPUB:

FormatWP	
FormatWP (<i>bool</i>) Default: false	Changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments. Additionally, honors the booleans WPMarkFloats, WPMarkMinipages, WPMarkTOC, and WPMarkLOFT.

To help modify lwarf HTML output for easier import to a word processor, add

`\booltrue{FormatWP}`

to the project's source preamble after lwarf is loaded. The following changes are then made to the HTML output:

- If using a class without chapters, `\section` and lower are shifted up in level for the HTML heading tags. The css has not been changed, so the section heading formats will not match the normal HTML output, but when imported to *LibreOffice Writer* the higher section headings will import as **Heading 1** for the title, **Heading 2** for `\section`, etc.
- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.
- Forces single-file output.
- Turns off HTML debugging comments. These are comments appearing inside the HTML code, marking the opening/closing of sections and `<div>`s, but they are no longer useful when the document has been imported into a word processor.
- An additional `<div>` with an id encapsulates each float and minipage, which on import into *LibreOffice Writer* causes a thin frame to appear around the text block for each.
- Float captions are given an explicit italic formatting.
- Tabular rule borders are made explicit for *LibreOffice Writer*. LibreOffice displays a light border around each cell while editing, even those which have

no border when printed, and `lwarp` also uses a light border for thin rules, so it will be best to judge the results using the print preview instead of while editing in LIBREOFFICE.

- `\includegraphics` and `SVG` math width and height are made explicit for LIBREOFFICE.
- `\hspace` is approximated by a number of `\quads`, and rules are approximated by a number of underscores.
- Explicit HTML styles are given to:
 - `\textsc`, etc.
 - `\underline`, `soul` and `ulem` markup.
 - `center`, `flushleft`, `flushright`.
 - `\marginpar`, `keyfloat`, `sidenotes`, `floatflt`, and `wrapfig`.
 - `fancybox` `\shadowbox`, etc.
 - The L^AT_EX and T_EX logos.

- Honors several booleans:

WPMarkFloats: Marks the begin and end of floats.

WPMarkMinipages: Marks the begin and end of minipages.

WPMarkTOC: Marks the location of the Table of Contents.

WPMarkLOFT: Marks the locations of the List of Figures/Tables.

WPMarkMath: Prints L^AT_EX math instead of using images.

WPTitleHeading: Adjusts title and section headings.

Several of these may be used to add markers to the HTML text which help determine where to adjust the word processor document after import.

11.2 Additional modifications

WPMarkFloats

`WPMarkFloats (bool)`

Default: false

Adds

```
==== begin table ====
...
==== end ====
or
```

```
==== begin figure ====
...
==== end ====

```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.

WPMarkMinipages

`WPMarkMinipages (bool)`

Default: false

Adds

```
==== begin minipage ====
...
==== end minipage ===
```

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

WPMarkTOC

WPMarkTOC (bool)

Default: true

While formatting for word processors, adds

```
==== table of contents ===
```

where the Table of Contents would have been. This helps identify where to insert the actual TOC.

If set false, the actual toc is printed instead.

WPMarkLOFT

WPMarkLOFT (bool)

Default: false

While formatting for word processors, adds

```
==== list of figures === and/or
==== list of tables ===
```

where each of these lists would have been. This helps identify where to insert the actual lists.

If set false, the actual lists are printed instead.

WPMarkMath

siunitx

WPMarkMath (bool)

Default: false

TeXMaths (Prog)

While formatting for word processors, prints math as LATEX code instead of creating SVG images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

When using the siunitx package, enter

```
\usepackage{siunitx}
```

in the *TeXMaths* preamble. Equation numbering is problematic for *AMS* math environments.

WPTitleHeading

WPTitleHeading (bool)

Default: false

section headings

While formatting for word processors, true sets the document title to <h1>, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOFFICE. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

Table 11: Section HTML headings for word-processor conversion

Section	HTML headings*			
	With \chapter		Without \chapter	
	WPTitleHeading	WPTitleHeading	WPTitleHeading	WPTitleHeading
Title	<h1>	plain	<h1>	plain
\book	<div>	<div>	<div>	<div>
\part	<h2>	<h1>	<h2>	<h1>
\chapter	<h3>	<h2>	—	—
\section	<h4>	<h3>	<h3>	<h2>
\subsection	<h5>	<h4>	<h4>	<h3>
\paragraph	<h6>	<h5>	<h5>	<h4>
\ subparagraph		<h6>	<h6>	<h5>

* For default depths when not FormatWP, see table 12 on page 202.

See table 11 on page 186.

11.3 Recommendations

TOC, LOF, LOT For use with *LibreOffice Writer*, it is recommended to:

1. Set \booltrue{FormatWP}
2. Set \booltrue{WPMarkTOC} and \boolfalse{WPMarkLOFT}
3. Use lwarf to generate the HTML document.
4. Copy/paste from the HTML document into an empty *LibreOffice Writer* document.
5. Manually insert a LIBREOFFICE TOC in the LIBREOFFICE document.
6. Manually add frames around each float, adding a caption which is cut/pasted from each float's simulated caption.
7. Manually create cross references.

This process yields a document with an actual LIBREOFFICE Table of Contents, but a simulated List of Figures and List of Tables.

siunitx For siunitx, remember to adjust the preamble as mentioned above.

LO view border options LIBREOFFICE has options in the **View** menu to turn on/off the display of thin borders around table cells and text objects.

11.4 Limitations

Floats and captions are not explicitly converted to LIBREOFFICE floats with their own captions. Floats are surrounded by a thin frame in the LIBREOFFICE editor, and may be marked with `WPMarkFloats`, but are not given a proper LIBREOFFICE object frame. Captions are given an explicit italic formatting, but not a proper LIBREOFFICE paragraph style.

Cross references are not actual LIBREOFFICE linked cross references.

The List of Figures and List of Tables are not linked. The pasted pseudo LOF and LOT match the numbering of the L^AT_EX and HTML versions.

Equation numbering is not automatic, but the equation numbers in SVG math will match the L^AT_EX and HTML output. SVG math is recommended when using the `AMS` environments, which may have multiple numbered equations per object.

As of when last checked, LIBREOFFICE ignores the following:

- Minipage alignment.
- Tabular cell vertical alignment.
- Image rotation and scaling.
- Rounded border corners, which are also used by:
 - `\textcircled`
 - `booktabs trim`
- `\hspace` and rules, also used by `algorithmic`.
- Coloring of text decorations, used by `soul` and `ulem`.
- Overline text decoration, used by `romanbar`.

L^IBREOFFICE also has limitations with frames and backgrounds:

- Multiple lines in an object are framed individually instead of as a whole.
- Nested frames are not handled correctly.
- Images inside boxes are not framed correctly.
- Spans with background colors and frames are not displayed correctly.

12 Modifying lwarp

locating something	To quickly find the source for a package in <code>lwarp.dtx</code> , search for <code>*packagename</code> , such as <code>*siunitx</code> . Likewise, to quickly find the source for a file in <code>lwarp.dtx</code> , search for <code>*filename</code> , such as <code>*lwarp.css</code> .
	Purely text-based packages probably will work as-is when generating HTML . Look to existing code for ideas on how to expand into new code.
image of TeX output	An environment may be converted to a <code>\teximage</code> then displayed with an image of the resulting L ^A T _E X output. See section 93 for an example of the <code>picture</code> environment.
css classes	To create a custom HTML block or inline css class , see section 52.10.
print/HTML macros	To create print and HTML versions of the same macro or environment, see section 36.
⚠ TeX boxes	Any TeX boxes must be undone, as SVG math or <code>\teximages</code> require <code>\newpage</code> , which will not work in a TeX box.

12.1 Creating a development system

The following creates a local development system for `lwarp` on a TeXLive system in a UNIX-like environment. Doing so allows anything requesting `lwarp` to use the development version instead of whichever version is installed in TeXLive.

Create a development directory:

Place into this directory `lwarp.dtx` and `lwarp.ins`.

To create `lwarp.sty`, execute

Enter ⇒ **pdflatex lwarp.ins**

which creates `lwarp.sty` and several hundred additional `lwarp-*.sty` files for the various packages which are supported.

To create the initial documentation `lwarp.pdf`, execute

Enter ⇒ **pdflatex lwarp.dtx**

To make the development files visible to other projects:

Create the directory

`/usr/local/texlive/texmf-local/tex/latex/local/lwarp`

Inside this directory, create the file `update`, containing:

```
rm lwarp-*.sty
ln -s /path_to_dev_directory/lwarp*.sty .
ln -s /path_to_dev_directory/lwarp_baseline_marker.png .
ln -s /path_to_dev_directory/lwarp_baseline_marker.eps .
mktextsls
```

Run ./update now, and whenever a new lwarp-* package is added.

To make the development version of *lwarpmk* visible to other projects:

```
cd /opt
ln -s /usr/local/texlive/texmf-local/bin/x86_64-linux texbin_local
cd texbin_local
ln -s ../../scripts/lwarp/lwarpmk.lua lwarpmk
cd /usr/local/texlive/texmf-local/scripts/
mkdir lwarp
cd lwarp
ln -s /path_to_dev_directory/lwarpmk.lua lwarpmk
```

Verify that the correct version is found with

Enter ⇒ **which lwarpmk**

To make the local versions visible to the shell:

Paths must be set by the shell startup, such as in .bashrc and .cshrc:

In .bashrc:

```
PATH=/opt/texbin_local:/opt/texbin:$PATH
```

In .cshrc:

```
setenv PATH ${HOME}/bin:/opt/texbin_local:/opt/texbin:${PATH}
```

To fully compile the *lwarp* documentation and indexes:

```
pdflatex lwarp.ins
pdflatex lwarp.dtx
pdflatex lwarp.dtx <if necessary>
makeindex -s gglo.ist -o lwarp.gls lwarp.glo <indexes>
splitindex lwarp.idx -- gind.ist
pdflatex lwarp.dtx
pdflatex lwarp.dtx <if necessary>
makeindex -s gglo.ist -o lwarp.gls lwarp.glo <indexes>
splitindex lwarp.idx -- gind.ist <again>
pdflatex lwarp.dtx
pdflatex lwarp.dtx <if necessary>
```

(The second round of index processing is required to fully resolve the final Index of Indexes.)

To make it easier to update the documentation after a minor change, it is useful to create a command script called `make_index`, containing:

```
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
splitindex lwarp.idx -- gind.ist
```

 **references**

Note that Index of Indexes and the cross-references to the indexes may not be correct until the above has been accomplished.

12.2 Modifying a package for lwarp

If a class loads additional packages, it will be required to modify the class for `lwarp`, since `lwarp` must be loaded before most other packages.

To work with `lwarp`, a class must first set up anything which replicates the functions of the basic L^AT_EX classes, load any required fonts, then load `lwarp`, then finally load and adjust any other required packages.

When creating `HTML`, `lwarp` redefines the `\usepackage` and `\RequirePackage` macros such that it first looks to see if a `lwarp-<packagename>.sty` version exists. If so, the `lwarp` version is used instead. This modular system allows users to create their own versions of packages for `lwarp` to use for `HTML`, simply by creating a new package with a `lwarp-` prefix. If placed in the local directory along with the source code, it will be seen by that project alone. If placed alongside the other `lwarp`-packages where T_EX can see it, then the user's new package will be seen by any documents using `lwarp`. (Remember `mktexlsr` or `texhash`.)

An `lwarp-<packagename>.sty` package is only used during `HTML` generation. Its purpose is to pretend to be the original package, while modify anything necessary to create a successful `HTML` conversion. For many packages it is sufficient to simply provide nullified macros, lengths, counters, etc. for anything which the original package does, while passing the raw text on to be typeset. See the pre-existing `lwarp-` packages for examples.

Anything the user might expect of the original package must be replaced or emulated by the new `lwarp-` package, including package options, user-adjustable counters, lengths, and booleans, and conditional behaviors. In many of these packages, most of the new definitions have a “local” prefix according to the package name, and @ characters inside the name, which hides these names from the user. In most cases these macros will not need to be emulated for `HTML` output. Only the “user-facing” macros need to be nullified or emulated.

Each `lwarp-*` package should first call either of:

```
\LWR@ProvidesPackageDrop
— or —
\LWR@ProvidesPackagePass
```

If “Drop”ped, the original print-version package is ignored, and only the `lwarp`-version is used. Use this where the original print version is useless for `HTML`. If “Pass”ed, the original package is loaded first, with the user-supplied options, then the `lwarp`- version continues loading as well. See section 461 (`ntheorem`) for an example of selectively disabling user options for a package. Use this when `HTML` output only requires some modifications of the original package. For a case where the original package is usable without changes, there is no need to create a `lwarp`-version.

12.2.1 Adding a package to the `lwarp.dtx` file

When adding a package to `lwarp.dtx` for permanent inclusion in `lwarp`, provide the `lwarp-<packagename>` code in `lwarp.dtx`, add its entry into `lwarp.ins`, and also remember to add

```
\LWR@loadafter{<packagename>}
```

to `lwarf.dtx` in section 20.1. This causes `lwarf` to stop with an error if `packagename` is loaded before `lwarf`. Finally, add an entry in table 2, [Supported packages and features](#), and also the Updates section.

12.3 Modifying a class for lwarf

If a class loads additional packages, it will be required to modify the class for `lwarf`, since `lwarf` must be loaded before most other packages.

To work with `lwarf`, a class must first set up anything which replicates the functions of the basic L^AT_EX classes, load any required fonts, then load `lwarf`, then finally load and adjust any other required packages.

12.4 Testing lwarf

Compiling `lwarf.ins` generates all the `*.sty` files for `lwarf`. It can be useful to create additional `*.ins` files to be able to recompile only the pieces which have changed.

compiling individual packages For example, to be able to recompile the `lwarf` core alone, copy `lwarf.ins` to `core.ins`, then modify `core.ins` to only compile:

```
core.ins (file)
\generate{
  \file{lwarf.sty}{\from{lwarf.dtx}{package}}
}
```

For individual packages, create `packagename.ins`, set to compile only:

```
\generate{
  \file{lwarf-packagename.sty}{\from{lwarf.dtx}{packagename}}
}
```

When changes have been made, test the print output before testing the HTML. The print output compiles faster, and any errors in the printed version will be easier to figure out than the HTML version.

compiling css and other generated files Remember that the configuration files are only rewritten when compiling the printed version of the document.

When changing the source to `lwarpmk` or a css file in `lwarf.dtx`:

1. Change the source in `lwarf.dtx`.
2. `pdflatex lwarf.ins -or- pdflatex core.ins`
3. If modifying `lwarpmk` the new version should now be active.
4. If modifying css files or other files generated by `lwarf`:
 - (a) For the document, `lwarpmk` print to update the css files in the project.
 - (b) Reload the HTML document to see the effect of the new css files.
5. If done testing, `pdflatex lwarf.dtx` to update the `lwarf` documentation.

Sometimes it is worth checking the `<project>_html.pdf` file, which is the PDF containing HTML tags. Also, `<project>_html.html` has the text conversion of these tags, before the file is split into individual HTML files.

It is also worth checking the browser's tools for verifying the correctness of HTML and CSS code.

12.5 Modifying `lwarpmk`

`lwarpmk` (*Prog*) In most installations, `lwarpmk.lua` is an executable file located somewhere the operating system knows about, and it is called by typing `Lwarpmk` into a terminal.

A project-local copy of `lwarpmk.lua` may be generated, modified, and then used to compile documents:

1. Add the `lwarpmk` option to the `l warp` package.
2. Recompile the printed version of the document. The `lwarpmk` option causes `l warp` to create a local copy of `lwarpmk.lua`.
3. The `lwarpmk` option may now be removed from the `l warp` package.
4. Copy and rename `lwarpmk.lua` to a new file such as `mymake.lua`.
5. Modify `mymake.lua` as desired.
6. If necessary, make `mymake.lua` executable.
7. Use `mymake.lua` instead of `lwarpmk.lua`.

13 Troubleshooting

13.1 lwarf package error conditions and warnings

lwarf tests for a number of error conditions and prints appropriate warnings. The following is a summary of these conditions.

13.1.1 Configuration file `lwarpmk.conf`

File does not exist: The configuration file must exist for `lwarpmk`.

Incorrect Unix /Windows selection: The operating system which was detected by `lwarf`. So far only Unix and Windows are supported.

Incorrect delimiter characters. Older versions of `lwarpmk` used a different delimiter.

Source name is set to lwarf: `lwarf` has recently been recompiled in this directory, which overwrote the project's configuration files. This also occurs if `lwarpmk` is executed in `lwarf`'s source directory.

Incorrect operating system: The configuration file was set for a different operating system, perhaps due to sharing in a collaborative project.

Outdated configuration files: `lwarf` has been updated since this project was last compiled. If there appears to be a valid print command in the file, `lwarpmk` displays this to instruct the user how to recompile the print version, which then updates the configuration files.

The designated source file does not exist: For whatever reason...

Unknown engine: `lwarf` cannot determine which engine is being used. Supported are DVI L^AT_EX, PDF L^AT_EX, X_HL^AT_EX, L^ATeX, and upL^AT_EX.

13.1.2 Image generation with `lwarpmk limages`

“Wait a moment for the images to complete before reloading page.”:

Images are generated by background tasks. If the document is reloaded before these tasks are complete, some images may not yet be generated. `lwarpmk` tries to wait for background tasks to complete before exiting.

HTML version does not exist: Images are extracted from the HTML version, which must be compiled before images are generated.

***-images.txt does not exist:** This file tells which images to extract from the HTML file. If the file does not exist, it may be that no SVG math or `lateximages` were used. If so, `lwarpmk limages` is not necessary.

Cross references are not correct: The document must have up-to-date cross references to locate the images to extract. A number of conditions may cause incorrect cross references.

“WARNING: Images will be incorrect.”: An image reference was not found. Re-compile.

`lwarpmk epstopdf *` or `lwarpmk pdftosvg *`: Errors if filenames are not found.

13.1.3 Default bitmapped font

l warp requires the use of a vector font. If l warp detects that the document uses the default COMPUTER MODERN font, and the cm-super package is not installed, it is assumed that the font is bitmapped. An error is generated, along with the recommendation to install cm-super or use lmodern.

13.1.4 Packages

Loaded before l warp: Some packages and classes must be loaded before l warp. These include input and font encoding, morewrites and newclude, and a number of CJK-related packages and classes.

Loaded after l warp: Most packages which are modified by l warp must be loaded after l warp.

Loaded never: Some packages do not work with l warp. An error is generated, along with a list of alternatives to consider.

Specific packages: Some packages enforce a specific load order vs. certain other packages.

Patching error: l warp tries to patch some packages using xpatch. If the original package has been updated more recently than l warp, a patch may not work. It may be necessary to use an older version of the package until l warp is updated.

longtable: l warp's longtable package issues detailed error messages regarding the use of the table headers and footers.

polyglossia: If used, an informative message is printed to instruct the user to be sure to set a language, without which an error will occur.

babel or polyglossia: An informative message is printed to note that not all languages are supported by cleveref.

13.1.5 Compiling

SideTOCDepth < FileDepth: A warning is displayed if these counters are set such that the sidetoc will not be able to access all pages of the website.

Filenames: l warp may generate file names from section names. While doing so, the filenames are simplified, and special characters and math are removed. If this process generates a duplicate filename, an error is generated, describing the filename and which section name generated it. A warning is issued if dollar-delimited math is used. Parenthesis-delimited math is recommended instead.

 **HTML corrupted** **Multirow:** When \multirow or \multicolrow are used, \mrowcell or \mcolrowcell must be placed in the appropriate cells to avoid corrupted HTML output.

(width,height) missing a comma: \makebox and \framebox can accept a parenthesis-delimited width and height, which must be separated by a comma.

"Load graphicx or graphics for improved svg math baselines.": SVG math sizing and baselines are improved if either of these packages are used.

“Load graphicx or graphics for improved XeTeX logo.”: If these packages are loaded, the XeTeX logo can use the reversed “E”.

“It is recommended to use [width=xx\ linewidth] instead of [scale=yy] ”: Browser support of scale does not have the same effect as in LATEX.

13.2 Using the l warp package

The following address problems which may occur, and possible solutions to each.

Also see:

Section 7.11: Commands to be placed into the warpprint environment

Section 8: Special cases and limitations

 **HTML corrupted** **Text is not converting correctly / corrupted HTML tags:**

- Font-related UTF-8 information must be embedded in the PDF file. See section 7.4 regarding bitmapped vs. vector fonts.
- See section 8.2.1 regarding HTML entities and the characters &, <, and >.

 **dotlessj** **Dotless j (\j):** See section 7.4 regarding cmap, mmap.

Undefined HTML settings:

- See the warning regarding the placement of the HTML settings at section 7.6.

Tabular problems: See section 8.10.1.

Obscure error messages:

Print first: Be sure that a print version of the document compiles and that your document’s LATEX code is correct, before attempting to generate an HTML version.

`\end{warpHTML}, \end{warpprint}, \end{warpall}, \end{warpMathJax}:`

Each of these must be without any other characters on the same line.

“Runaway argument? File ended while scanning use of \next:

Don’t use warpHTML, warpprint, warpall, or warpMathJax inside itself.

Options clash: If using memoir, see section 8.13.

“Missing \begin{document}.”: Some packages require that their options be specified before l warp is loaded, or via the package’s setup macro, especially if these options include the use of braces. See section 8.1.

“No room for a new \write.”: Before \usepackage{l warp}, add:

```
\usepackage{morewrites}
\morewritessetup{allocate=10}
```

“! TeX capacity exceeded, sorry [text input levels=15].”: Packages were nested too many levels deep. Locate the file texmf.cnf for your distribution, and add the line

```
max_in_open = 30
```

“Missing \$ inserted.”: If using a filename or URL in a footnote or \item, escape underscores with _.

“Label(s) may have changed. Rerun to get cross-references right.”:

This warning may repeat endlessly if a math expression is used in a caption. Simple math expressions such as $X=1$ may be replaced with

```
\textit{X}\,=\,1
```

“Temporary page! LaTeX was unable to guess the total number of pages ...”:

Harmless. Recompile the document one more time.

“Leaders not followed by proper glue”:

This can be caused by a missing `\@flextyp` or `\@sectontyp` definition. See lwarf’s definitions for examples.

“Improper \prevdepth”: lateximages and SVG math require `\newpage`, which cannot work inside TeX boxes or `\ensuremath`. Anything using `\newsavebox`, `\newbox`, `\lrbox`, `\savebox`, `\hbox`, `\vbox`, `\usebox`, `\sbox`, etc., must be modified to work without box commands.

If you find something using `\ensuremath`, have it temporarily set:

```
\LetLtxMacro\@ensuredmath\LWR@origensuredmath
```

inside a group first.

`LWR@texboxdepth`

As a stop-gap measure, you may wish to try incrementing the counter `LWR@texboxdepth` before the problematic macro, and then decrementing it after. Doing so tells lwarf to avoid using a `\newpage` inside the macro, which may avoid this error.

Also, custom macros which appear inside a section, figure, or table name should be made robust since they appear inside the `.toc`, `.lof`, or `.lot` files. Use `\newrobustcmd` or `\robustify` from `etoolbox`, `xparse`, etc.

 BibTeX

If using BibTeX, see section 8.6.9.

“! Undefined control sequence. . . . __hook begindocument”:
See section 8.15.4 if using polyglossia.**“\begin{equation} ended by \end{document}”:** Do not use custom macros such as `\beq` and `\eeq` to replace

```
\begin{equation}
  ...
\end{equation}
```

“Misplaced \omit”: If using `\LWR@formatted` to define new macros for print and HTML modes, see section 36 regarding `\LWR@expandableformatted`.

“Token not allowed in a PDF string”: This hyperref warning appears while creating the print-mode document, not HTML. A low-level macro is being used in a section name which appears in the PDF bookmarks. hyperref removes this macro from the bookmark, and warns of doing so. To avoid this warning, use `\pdfstringdefDisableCommands` in the preamble to define simplified replacement macros for each, or use `\texorpdfstring` in the `\section` or related macro to declare what to use for the TeX text, v.s. the PDF bookmark. See the hyperref manual.

“Command \textquoteright invalid in math mode”: This can occur when the document source has math containing the slanted quote ‘ character, instead of using the upright quote ‘ character.

“Complicated objects inside math”: Some objects, such as TikZ, may not compile in lwarf’s normal math emulation. Insert

 macros in section, table, figure names

 BibTeX

 polyglossia

 custom macros for environments

 \LWR@formatted

 quote character

 “impure” math objects

\displaymathother — or — \inlinemathother
before the math, and then
\\displaymathnormal — or — \inlinemathnormal
when displaying “normal” math. See section 8.7.11.

Slow compilation of math objects: Complicated math objects can also cause problems with alt tags, resulting in very slow compilation, large alt tags, and possible crashes. Use \inlinemathother ... \inlinemathnormal or \displaymathother ... \displaymathnormal around the math expression.

 **MATHJAX** **Incorrect MATHJAX:** Some objects do not convert to MATHJAX. Use \displaymathother before these objects, then \displaymathnormal to return to “normal” display math. See section 8.7.11.

Missing sections: See section 7.6 regarding the FileDepth and SideTOCDepth counters, and the use of \tableofcontents in the home page.

Misnumbered footnotes from section headings: See section 8.5.4.

Missing HTML files:

- See the warning regarding changes to the HTML settings at section 7.6.
- Ensure that the filenames are unique after math and short words are removed. See FileSectionNames at section 7.6.

Missing / incorrect cross-references:

- Use lwarpmk again followed by lwarpmk html or lwarpmk print to compile the document one more time.

- Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French).

\nameref refers to the most recently-used section where the \label was defined. If no section has been defined before the \label, the link will be empty. Index entries also use \nameref and have the same limitation.

- cleveref and varioref are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for \cpageref and \cpagerefrange. This phrase includes \cpagerefFor, which defaults to “for”.

Ex:

\cpageref{tab:first,tab:second}

in html becomes:

“pages for table 4.1 and for table 4.2”

See \cpagerefFor at page 744 to redefine the message which is printed for page number references.

BibTeX errors with \etalchar: See section 8.6.9.

Malformed URLs: Do not use the % character between arguments of \hyperref, etc., as this character is among those which is neutralized for inclusion in HTML URLs.

Em-dashes or En-dashes in listing captions and titles:

Use XELATEX or LUALATEX.

labels

 **label characters**

\nameref

 **empty link**

 **cleveref** page numbers

Floats out of sequence:

Mixed “Here” and floating: Floats [H]ere and regular floats may become out of order. \clearpage if necessary.

Caption setup: With \captionsetup set the positions for the captions above or below to match their use in the source code.

Images are appearing in strange places:

- When images are added or removed, Enter **lwarpmk limages** to refresh the `\image` images.

SVG images:**⚠️ adding/removing**

When a math expression, picture, or TikZ environment is added or removed, the SVG images must be re-created by entering **lwarpmk limages** to maintain the proper image-file associations. Inline SVG math may be hashed and thus not need to be recreated, but display math and objects such as TikZ may move to new image numbers when the document is changed.

recompile first

Before attempting to create the SVG image files, *lwarpmk* verifies that the HTML version of the document exists and has correct internal image references.¹⁶ If it is necessary to recompile the document’s HTML version one more time, *lwarpmk* usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the LATEX recompile warnings.

⚠️ HTML instead of images

If HTML appears where an SVG image should be, recompile the document one more time to get the page numbers back in sync, then remake the images one more time.

Incorrect SVG images will also occur if the document changes the page counter:

```
\setcounter{page}{<value>}
```

The page counter must *not* be adjusted by the user.

Expressing math as SVG images has the advantage of representing the math exactly as LATEX would, but has the disadvantage of requiring an individual file for each math expression. For inline math, and some other objects, *lwarf* uses an MD5 hash on its LATEX source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as `picture` and `TikZ` require one image file each. For a document with a large amount of math, see section 5.5 to use MATHJAX instead.

Plain-looking document:

- The document’s css stylesheet may not be available, or may be linked incorrectly. Verify any `\CSSfilename` statements point to a valid css file.

⚠️ HTML corrupted**Broken fragments of HTML:**

- Check the PDF file used to create HTML to see if the tags overflowed the margin. (This is why such large page size and margins are used.)

Changes do not seem to be taking effect:

¹⁶This becomes important when dealing with a document containing thousands of images.

- Be sure to `lwarpmk clean`, recompile, then start by reloading the home page. You may have been looking at an older version of the document. If you changed a section name, you may have been looking at the file for the old name.
- See the warning regarding changes to the HTML settings at section 7.6.
- Verify that the proper css is actually being used.
- The browser may compensate for some subtle changes, such as automatically generating ligatures, reflowing text, etc.

Un-matched conditional compiles:

- Verify the proper begin/end of `warpprint`, `warpHTML`, and `warpall` environments.

13.2.1 Debug tracing output

`\tracingl warp` When `\tracingl warp` is used, `l warp` will add extra tracing messages to the `.log` file. The last several messages may help track down errors.

Place `\tracingl warp` just after `\usepackage{l warp}` to activate tracing.

13.3 Compiling the `l warp.dtx` file

`l warp_tutorial.tex`: Copy or link `l warp_tutorial.txt` from the TDS doc directory to the source directory, or wherever you wish to compile the documentation. This file is included verbatim in the documentation, but is in the doc directory so that it may be found by `texdoc` and copied by the user.

Illogical error messages caused by an out-of-sync `l warp.sty` file:

1. Delete the `l warp.sty` file.
2. Enter `pdflatex l warp.ins` to generate a new `l warp.sty` file.
3. Enter `pdflatex l warp.dtx` to recompile the `l warp.pdf` documentation.

Un-nested environments:

Be sure to properly nest:

- `\begin{macrocode}` and `\end{macrocode}`
- `\begin{macro}` and `\end{macro}`
- `\begin{environment}` and `\end{environment}`

14 Trademarks

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File 1 **lwarf.sty**

15 Implementation

This package is perhaps best described as a large collection of smaller individual technical challenges, in many cases solved through a number of erude-hacks clever tricks. Reference sources are given for many of the solutions, and a quick internet search will provide additional possibilities.

Judgement calls were made, and are often commented. Improvements are possible. The author is open to ideas and suggestions.

Packages were patched for re-use where they provided significant functionality. Examples include `xcolor` with its color models and conversion to `HTML` color output, and `siunitx` which provides many number and unit-formatting options, almost all of which are available in pure-text form, and thus easily used by `pdftotext`.

Packages were emulated where their primary purpose was visual formatting which is not relevant to `HTML` output. For example, packages related to sectioning are already patched by numerous other packages, creating a difficult number of combinations to try to support, and yet in `HTML` output all of the formatting is thrown away, so these packages are merely emulated.

Packages with graphical output are allowed as-is, but must be nested inside a `\textrimage` environment to preserve the graphics.

Testing has primarily been done with the Iceweasel/Firefox browser.

Table 12: Section depths and HTML headings

Section	LATEX depth	HTML headings *
Title of the entire website		<h1>
(none)	-5	new for this package
book	-2	<div class = "book">
part	-1	<h2>
chapter	0	<h3>
section	1	<h4>
subsection	2	<h5>
subsubsection	3	<h6>
paragraph	4	
subparagraph	5	
listitem	7	new for this package, used for list items

* If FormatWP is true, section headings may be adjusted, depending on WPTitleHeading. See table 11 on page 186.

16 Section depths and HTML headings

Stacks are created to track depth inside the LATEX document structure. This depth is translated to HTML headings as shown in table 12. “Depth” here is not depth in the traditional computer-science stack-usage sense, but rather a representation of the nesting depth inside the LATEX document structure.

When starting a new section, the program first must close out any existing sections and lists of a deeper level to keep the HTML tags nested correctly.

Support for the memoir package will require the addition of a book level, which may push the HTML headings down a step, and also cause subsubsection to become a <div> due to a limit of six HTML headings.

It is possible to use HTML5 <section> and <h1> for all levels, but this may not be well-recognized by older browsers.

Fixed levels for parts and chapters allow the css to remain fixed as well.

17 Source code

This is where the documented source code for lwarf begins, continuing through the following sections all the way to the change log and index at the end of this document.

The following sections document the actual implementation of the lwarf package.

line numbers The small numbers at the left end of a line refer to line numbers in the lwarf.sty file.

subjects Blue-colored tags in the left margin aid in quickly identifying the subject of each paragraph. These are often the targets of index entries.

Prog Lwarf Black-colored tags in the left margin are used to identify programming objects such as files, packages, environments, booleans, and counters. Items without a tag

index entries are command macros. Each of these also appears in the index as individual entries, and are also listed together under “files”, “packages”, “environments”, “booleans”, and “counters”.

 **warnings** Special warnings are marked with a warning icon.

for HTML output: Green-colored tags in the left margin show which sections of source code apply to the generation of HTML, print, or both forms of output.

for HTML & PRINT:

18 Detecting the **TEX** engine — *pdflatex*, *lualatex*, *xelatex*

See: <http://tex.stackexchange.com/a/47579>.

Detects X_ETEX and LuaL^ATEX:

```

1 \RequirePackage{iftex}[2019/11/07]
2 \RequirePackage{ifpdf}
3 \RequirePackage{ifptex}% in case TL2019 or earlier
4
5 \newif\ifxetexorluatex
6
7 \ifXeTeX
8   \xetexorluatextrue
9 \else
10   \ifLuaTeX
11     \xetexorluatextrue
12   \else
13     \xetexorluatexfalse
14   \fi
15 \fi

```

19 Early package requirements

etoolbox (*Pkg*) Provides `\ifbool` and other functions.

```
16 \RequirePackage{etoolbox}[2020/10/05]%
```

Patch to fix copy of environment with a `\par`:

<https://github.com/josephwright/etoolbox/issues/35>

```
17 \long\def\etb@carsquare#1#2#3\@nil{#1#2}%
```

verifycommand (*Pkg*) Verify macros before patching.

```
18 \RequirePackage{verifycommand}
```

xpatch (*Pkg*) Patches macros with optional arguments.

```
19 \RequirePackage{xpatch}
```

ifplatform (*Pkg*) Provides `\ifwindows` to try to automatically detect WINDOWS OS.

```
20 \RequirePackage{ifplatform}% sense op-system platform
```

letltxmacro (*Pkg*)

```
21 \RequirePackage{letltxmacro}
```

20 Package load order

Several packages must never be used with l warp, others should only be loaded before l warp, and others should only be loaded after. The l warp core checks most of these cases. In some l warp-* packages, \LWR@loadbefore is used to trigger an error if they are loaded after l warp, while additional code provides necessary patches for when they are loaded before.

Packages which must be loaded after l warp are enforced by a large number of \LWR@loadafter statements, below. Some packages are emulated by memoir, and so these are tested by \LWR@notmemoirloadafter, which does not cause an error if memoir is used.

\LWR@checkloadfilename is used to check each filename to see if it must never be loaded, or must always be loaded before l warp.

20.1 Tests of package load order

\LWR@loadafter {<packagename>} Error if this package was loaded before l warp.

```

22 \newcommand*{\LWR@loadafter}[1]{%
23 \IfPackageLoadedTF{#1}{%
24 {
25   \PackageError{l warp}%
26   {%
27     Package #1,\MessageBreak
28     or one which uses #1,\MessageBreak
29     must be loaded after Lwarp.\MessageBreak
30     Enter 'H' for possible solutions%
31   }%
32   {%
33     Move ``\protect\usepackage{#1}'' after
34     ``\protect\usepackage{l warp}''.\MessageBreak
35     Package #1 may also be loaded by something else,\MessageBreak
36     which must also be moved after Lwarp.%%
37   }%
38 }
39 {\relax}
40 }
```

\LWR@notmemoirloadafter {<packagename>} Error if not memoir class and this package was loaded before l warp.

memoir emulates many packages, and pretends that they have already been loaded.

```

41 \IfClassLoadedTF{memoir}{%
42 {\newcommand*{\LWR@notmemoirloadafter}[1]{}}
43 {\LetLtxMacro{\LWR@notmemoirloadafter}{\LWR@loadafter}}
```

\LWR@notltjloadafter {<packagename>} Error if not a ltjs* class and this package was loaded before l warp.

```
44 \LetLtxMacro{\LWR@notltjloadafter}{\LWR@loadafter}
```

```

45 \IfClassLoadedTF{ltjarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
46 \IfClassLoadedTF{ltjbook}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
47 \IfClassLoadedTF{ltjreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
48 \IfClassLoadedTF{ltjsarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
49 \IfClassLoadedTF{ltjsbook}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
50 \IfClassLoadedTF{ltjsreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
51 \IfClassLoadedTF{ltjspf}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
52 \IfClassLoadedTF{ltjskiyou}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
53 \IfClassLoadedTF{ltjtarticle}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
54 \IfClassLoadedTF{ltjtbook}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
55 \IfClassLoadedTF{ltjtreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}
56 \IfClassLoadedTF{ltjtreport}{\renewcommand*{\LWR@notltjloadafter}[1]{}}

```

\LWR@loadbefore {*packagename*} Error if this package is loaded after lwarp.

```

57 \newcommand*{\LWR@loadbefore}[1]{%
58 \IfPackageLoadedTF{#1}{%
59 {\relax}%
60 {%
61   \PackageError{lwarp}{%
62     {%
63       Package #1 must be loaded before lwarp.\MessageBreak
64       Enter 'H' for possible solutions%
65     }%
66     {Move ``\protect\usepackage{#1}'' before ``\protect\usepackage{lwarp}''.}%
67   }%
68 }

```

\LWR@checkloadbefore {*packagename*}

Given \LWR@tempone is the package name to compare to, if package names match, error if it is loaded after lwarp.

```

69 \newcommand*{\LWR@checkloadbefore}[1]{%
70   \ifdefstring{\LWR@tempone}{#1}{%
71     \LWR@loadbefore{#1}%
72   }{}%
73 }

```

\LWR@loadnever {*badpackagename*} {*replacementpkgnames*}

The first packages is not supported, so tell the user to use the second instead. Factored from \LWR@checkloadnever and \LWR@earlyloadnever.

```

74 \newcommand*{\LWR@loadnever}[2]{%
75 \PackageError{lwarp}{%
76 {%
77   Package #1 is not yet supported\MessageBreak
78   by lwarp's HTML conversion%
79   \ifblank{#2}{%
80     .\MessageBreak
81     Package(s)\MessageBreak
82     \space\space#2\MessageBreak
83     may be useful instead%
84   }%
85 }%
86 }

```

```

87     Package #1 might conflict with lwarf in some way, \MessageBreak
88     or is superceded by another package.%  

89     \ifblank{#2}{%  

90         \MessageBreak  

91         For possible alternatives, see package(s) #2.%  

92     }%  

93 }  

94 }
```

\LWR@afterloadnever {\langle badpackagename\rangle} {\langle replacementpkgnames\rangle}

Given: \LWR@tempone is set to the package name being tested against, if this package name is the bad packagename, suggest the replacements instead. This is used when loading packages after lwarf.

```

95 \newcommand*{\LWR@afterloadnever}[2]{%
96     \ifdefstring{\LWR@tempone}{#1}{%
97         \LWR@loadnever{#1}{#2}%
98     }{}%
99 }
```

\LWR@earlyloadnever {\langle badpackagename\rangle} {\langle replacementpkgnames\rangle}

The first package is not supported, so tell the user to use the second instead. This version checks immediately for packages which may have been loaded before lwarf.

```

100 \newcommand*{\LWR@earlyloadnever}[2]{%
101     \IfPackageLoadedTF{#1}{%
102         \LWR@loadnever{#1}{#2}%
103     }{}%
104 }
```

\LWR@earlyclassloadnever {\langle badclassname\rangle} {\langle replacementclassname\rangle}

The first class is not supported, so tell the user to use the second instead. This version checks immediately for classes which may have been loaded before lwarf.

```

105 \newcommand*{\LWR@earlyclassloadnever}[2]{%
106 \IfClassLoadedTF{#1}{%
107 \PackageError{lwarf}%
108 {%
109     Class #1 is not supported\MessageBreak
110     by lwarf's HTML conversion%
111     \ifblank{#2}{%  

112         .\MessageBreak  

113         #2 may be useful instead%
114     }%  

115 }%
116 {%
117     Class #1 might conflict with lwarf in some way, \MessageBreak
118     or is superceded by another class.%  

119     \ifblank{#2}{%  

120         \MessageBreak  

121         For a possible alternative, see #2.%  

122     }%  

123 }}
```

```
124 }{\relax}%
125 }
```

20.2 Error for disallowed packages and classes loaded before l warp

\LWR@checkloadnevers Checks against a list of incompatible packages.

```
126 \newcommand*\{\LWR@checkloadnevers}{%
127 \LWR@checkloadnever{ae}{cm-super, lmodern}%
128 \LWR@checkloadnever{aecompl}{cm-super, lmodern}%
129 \LWR@checkloadnever{aecc}{cm-super, lmodern}%
130 \LWR@checkloadnever{alg}{algorithm2e, algorithmicx}%
131 \LWR@checkloadnever{algorithmic}{algorithm2e, algorithmicx}%
132 \LWR@checkloadnever{bitfield}{bytefield}
```

bxcjkjatype is based on CJK:

```
133 \LWR@checkloadnever{bxcjkjatype}{upLaTeX, bxjsarticle, ujarticle, utarticle}

134 \LWR@checkloadnever{caption2}{caption}
135 % \LWR@checkloadnever{ccaption}{caption}% might be preloaded by memoir
136 \LWR@checkloadnever{colortab}{colortbl}
137 \LWR@checkloadnever{csvtools}{datatool}
138 \LWR@checkloadnever{doublespace}{setspace}
139 \LWR@checkloadnever{fancyheadings}{fancyhdr}
140 \LWR@checkloadnever{fncylab}{cleveref}
141 \LWR@checkloadnever{formula}{siunitx}
142 \LWR@checkloadnever{glossary}{glossaries}
```

hangul is not in TeXLive, and is not tested:

```
143 \LWR@checkloadnever{hangul}{kotex, xetexko, luatexko}

144 \LWR@checkloadnever{hyper}{hyperref}
145 \LWR@checkloadnever{libgreek}{libertinust1math, newtx}
146 \LWR@checkloadnever{newthm}{ntheorem}
147 \LWR@checkloadnever{pdffcprot}{microtype}
148 \LWR@checkloadnever{picins}{floatflt, wrapfig, wrapfig2}
149 \LWR@checkloadnever{rplain}{fancyhdr}
150 \LWR@checkloadnever{si}{siunitx}
151 \LWR@checkloadnever{sistyle}{siunitx}
152 \LWR@checkloadnever{slashbox}{diagbox}
153 \LWR@checkloadnever{statex}{statex2}
154 \LWR@checkloadnever{t1enc}{fontenc, inputenc, inputenx}
155 \LWR@checkloadnever{ucs}{inputenc, inputencx}
156 \LWR@checkloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}
```

The following may one day be supported by l warp:

```
157 % \LWR@checkloadnever{adjustbox}{}% req'd for menukeys
158 \LWR@checkloadnever{animate}{}%
159 \LWR@checkloadnever{auto-pst-pdf}{}%
160 \LWR@checkloadnever{auto-pst-pdf-lua}{}%
161 \LWR@checkloadnever{algorithms}{}%
162 \LWR@checkloadnever{arraycols}{}%
```

```
163 \LWR@checkloadnever{bidi}{}  
164 \LWR@checkloadnever{cals}{}  
  
165 \LWR@checkloadnever{cellspace}{tbls}  
  
166 \LWR@checkloadnever{cgloss4e}{}  
167 \LWR@checkloadnever{collcell}{}  
168 \LWR@checkloadnever{colophon}{}  
169 \LWR@checkloadnever{cooltooltips}{}  
170 \LWR@checkloadnever{covington}{}  
171 \LWR@checkloadnever{crbox}{}  
172 \LWR@checkloadnever{decision-table}{}  
173 \LWR@checkloadnever{dvgloss}{}  
174 \LWR@checkloadnever{ednotes}{}  
175 \LWR@checkloadnever{edfnotes}{}  
176 \LWR@checkloadnever{eledform}{}  
177 \LWR@checkloadnever{eledmac}{}  
178 \LWR@checkloadnever{embedfile}{}  
179 \LWR@checkloadnever{endnotes-hy}{endnotes}  
180 \LWR@checkloadnever{expe}{}  
181 \LWR@checkloadnever{fancytooltips}{}  
182 \LWR@checkloadnever{fixocgx}{}  
183 \LWR@checkloadnever{flowfram}{}  
184 \LWR@checkloadnever{gb4e}{}  
185 \LWR@checkloadnever{gmverse}{}  
186 \LWR@checkloadnever{graphbox}{}  
187 \LWR@checkloadnever{graphicxbox}{}  
188 \LWR@checkloadnever{hvfloat}{}  
189 \LWR@checkloadnever{inline-images}{}  
190 \LWR@checkloadnever{isorot}{rotating}  
191 \LWR@checkloadnever{ledmac}{}  
192 \LWR@checkloadnever{linguex}{}  
193 \LWR@checkloadnever{longdiv}{}  
194 \LWR@checkloadnever{longfigure}{}  
195 \LWR@checkloadnever{longtabu}{}  
196 \LWR@checkloadnever{mdwenv}{}  
197 \LWR@checkloadnever{mdwlist}{}  
198 \LWR@checkloadnever{mdwtab}{}  
199 \LWR@checkloadnever{navigator}{}  
200 \LWR@checkloadnever{nccpic}{}  
201 \LWR@checkloadnever{nccsect}{}  
202 \LWR@checkloadnever{newvbtm}{}  
203 \LWR@checkloadnever{ocg-p}{}  
204 \LWR@checkloadnever{ocgtools}{}  
205 \LWR@checkloadnever{ocgx}{}  
206 \LWR@checkloadnever{ocgx2}{}  
207 \LWR@checkloadnever{parrun}{}  
208 \LWR@checkloadnever{poemscol}{}  
209 \LWR@checkloadnever{poetry}{}  
210 \LWR@checkloadnever{program}{}  
211 \LWR@checkloadnever{proofread}{}  
212 \LWR@checkloadnever{pst-pdf}{}  
213 \LWR@checkloadnever{refstyle}{}  
214 \LWR@checkloadnever{robustindex}{}  
215 \LWR@checkloadnever{robustglossary}{}  
216 \LWR@checkloadnever{semioneside}{}  
217 \LWR@checkloadnever{slempf}{}  
218 \LWR@checkloadnever{snotez}{sidenotes}  
219 \LWR@checkloadnever{spacingtricks}{}  

```

```

220 \LWR@checkloadnever{sverb}{verbatim, fancyvrb}
221 \LWR@checkloadnever{syntax}{}
222 \LWR@checkloadnever{tablists}{}
223 \LWR@checkloadnever{tabto}{}
224 \LWR@checkloadnever{tabu}{}
225 \LWR@checkloadnever{tabularht}{}
226 \LWR@checkloadnever{tabularkv}{}
227 \LWR@checkloadnever{thumby}{}
228 \LWR@checkloadnever{titles}{}
229 \LWR@checkloadnever{typehtml}{}
230 \LWR@checkloadnever{unicode-bidi}{}
231 \LWR@checkloadnever{vcell}{}
232 \LWR@checkloadnever{xhfill}{}
233 }

```

\LWR@checkloadnever {*<badpackagename>*} {*<replacementpkgnname>*}

The first package is not supported, so tell the user to use the second instead.

When **l warp** is first loaded, this is set to \LWR@earlyloadnever to check for incompatible packages which were loaded before **l warp**. After **l warp** is loaded, this is changed to \LWR@afterloadnever to check for incompatible packages during \usepackage.

```
234 \LetLtxMacro\LWR@checkloadnever\LWR@earlyloadnever
```

Now check for incompatible packages which have been loaded before **l warp**:

```
235 \LWR@checkloadnevers
```

The older **CJK** and **CJKutf8** only work with **xeCJK**:

```

236 \IfPackageLoadedTF{xeCJK}{}{
237   \LWR@checkloadnever{CJK}{ctex, xeCJK}
238   \LWR@checkloadnever{CJKutf8}{ctex, xeCJK}
239 }

```

Some classes do not work with **l warp**:

```

240 \LWR@earlyclassloadnever{beamer}{beamerarticle}
241 \LWR@earlyclassloadnever{jarticle}{ujarticle}
242 \LWR@earlyclassloadnever{jbook}{ujbook}
243 \LWR@earlyclassloadnever{jreport}{ujreport}
244 \LWR@earlyclassloadnever{tarticle}{utarticle}
245 \LWR@earlyclassloadnever{tbook}{utbook}
246 \LWR@earlyclassloadnever{treport}{utreport}
247 \LWR@earlyclassloadnever{novel}{}
248 \LWR@earlyclassloadnever{powerdot}{}

```

20.3 Enforcing package loading after l warp

Packages which should only be loaded after **l warp** are tested here to trip an error if they have already been loaded.

The following packages must be loaded after **l warp**:

```
249 \LWR@loadafter{2in1}
250 \LWR@loadafter{2up}
251 \LWR@loadafter{a4}
252 \LWR@loadafter{a4wide}
253 \LWR@loadafter{a5comb}
254 \LWR@notmemoirloadafter{abstract}
255 \LWR@loadafter{academicons}
256 \LWR@loadafter{accents}
257 \LWR@loadafter{accessibility}
258 \LWR@loadafter{accsupp}
259 \LWR@loadafter{acro}
260 \LWR@loadafter{acronym}
261 \LWR@loadafter{adjmulticol}
262 \LWR@loadafter{addlines}
263 \LWR@loadafter{afterpage}
264 \LWR@loadafter{algorithm2e}
265 \LWR@loadafter{algorithmicx}
266 \LWR@loadafter{alltt}
267 \LWR@loadafter{amscdx}
268 % \LWR@loadafter{amsmath}% may be preloaded
269 % \LWR@loadafter{amsthm}% may be preloaded
270 \LWR@loadafter{anonchap}
271 \LWR@loadafter{any size}
272 \LWR@notmemoirloadafter{appendix}
273 \LWR@loadafter{apxproof}
274 \LWR@loadafter{ar}
275 \LWR@loadafter{arabicfront}
276 \LWR@notmemoirloadafter{array}
277 \LWR@loadafter{arydshln}
278 \LWR@loadafter{asymptote}
279 % \LWR@loadafter{atbegshi}% now in LaTeX core, also used by morewrites
280 \LWR@loadafter{attachfile}
281 \LWR@loadafter{attachfile2}
282 \LWR@loadafter{authblk}
283 \LWR@loadafter{authoraftertitle}% Supported as-is, but must be loaded after.
284 \LWR@loadafter{autobreak}
285 \LWR@loadafter{autonum}
286 \LWR@loadafter{awesomebox}
287 \LWR@loadafter{axessibility}
288 \LWR@loadafter{axodraw2}
289 \LWR@loadafter{backnaur}
290 \LWR@loadafter{backref}
291 \LWR@loadafter{balance}
292 \LWR@loadafter{bbding}
293 \LWR@loadafter{beamerarticle}
294 \LWR@loadafter{bigdelim}
295 \LWR@loadafter{bigfoot}
296 \LWR@loadafter{bigstrut}
297 \LWR@loadafter{bitpattern}
298 \LWR@loadafter{blowup}
299 \LWR@loadafter{bm}
300 \LWR@loadafter{booklet}
301 \LWR@loadafter{bookmark}
302 \LWR@notmemoirloadafter{booktabs}
303 \LWR@loadafter{bophook}
304 \LWR@loadafter{bounddvi}
305 \LWR@loadafter{boxedminipage}
306 \LWR@loadafter{boxedminipage2e}
307 \LWR@loadafter{braket}
308 \LWR@loadafter{breakurl}
```

```
309 \LWR@loadafter{breqn}
310 \LWR@loadafter{bsheaders}
311 \LWR@loadafter{bussproofs}
312 \LWR@loadafter{bxpaperwidth}
313 \LWR@loadafter{bytefield}
314 \LWR@loadafter{ccicons}
315 \LWR@loadafter{cancel}
316 \LWR@loadafter{canonictlayout}
317 \LWR@loadafter{caption}
318 \LWR@loadafter{caption2}
319 \LWR@loadafter{caption3}
320 \LWR@loadafter{cases}
321 % catoptions is supported by the lwarf core
322 % \LWR@loadafter{ccaption}% may be preloaded by memoir
323 \LWR@loadafter{centerlastline}
324 % \LWR@loadafter{centernot}% may be preloaded by newtx
325 \LWR@loadafter{changebar}
326 \LWR@loadafter{changelayout}
327 \LWR@notmemoirloadafter{changepage}
328 \LWR@loadafter{changes}
329 \LWR@loadafter{chappg}
330 \LWR@loadafter{chapterbib}
331 \LWR@loadafter{chemfig}
332 \LWR@loadafter{chemformula}
333 \LWR@loadafter{chemgreek}
334 \LWR@loadafter{chemmacros}
335 \LWR@loadafter{chemnum}
336 \LWR@loadafter{chkfloat}
337 \LWR@notmemoirloadafter{chngpage}
338 \LWR@loadafter{cite}
339 \LWR@loadafter{citeref}
340 \LWR@loadafter{classicthesis}
341 \LWR@loadafter{cleveref}
342 % cmbright may be preloaded
343 \LWR@loadafter{cmdtrack}
344 \LWR@loadafter{colonequals}
345 \LWR@loadafter{color}
346 \LWR@loadafter{colortbl}
347 \LWR@loadafter{continue}
348 \LWR@loadafter{copyrightbox}
349 \LWR@notmemoirloadafter{crop}
350 % ctex must be loaded before lwarf
351 \LWR@loadafter{ctable}
352 \LWR@loadafter{cuted}
353 \LWR@loadafter{cutwin}
354 \LWR@loadafter{dblfloatfix}
355 \LWR@loadafter{dblfnote}
356 \LWR@notmemoirloadafter{dcolumn}
357 \LWR@loadafter{decimal}
358 \LWR@loadafter{decorule}
359 \LWR@loadafter{diagbox}
360 \LWR@loadafter{dingbat}
361 \LWR@loadafter{doipubmed}
362 \LWR@loadafter{DotArrow}
363 \LWR@loadafter{dotlessi}
364 \LWR@loadafter{dprogress}
365 \LWR@loadafter{draftcopy}
366 \LWR@loadafter{draftfigure}
367 \LWR@loadafter{draftwatermark}
368 \LWR@loadafter{drftcite}
```

```
369 \LWR@loadafter{easy-todo}
370 \LWR@loadafter{ebook}
371 \LWR@loadafter{econometrics}
372 \LWR@loadafter{ed}
373 \LWR@loadafter{ellipsis}
374 \LWR@loadafter{embrac}
375 \LWR@loadafter{emptypage}
376 \LWR@loadafter{endfloat}
377 \LWR@loadafter{endheads}
378 \LWR@loadafter{endnotes}
379 \LWR@loadafter{engtlc}
380 \LWR@loadafter{enotez}
381 \LWR@notmemoirloadafter{enumerate}
382 \LWR@loadafter{enumitem}
383 \LWR@notmemoirloadafter{epigraph}
384 \LWR@loadafter{epsf}
385 \LWR@loadafter{epsfig}
386 \LWR@loadafter{epstopdf}
387 \LWR@loadafter{epstopdf-base}
388 \LWR@loadafter{eqlist}
389 \LWR@loadafter{eqparbox}
390 \LWR@loadafter{errata}
391 \LWR@loadafter{eso-pic}
392 \LWR@loadafter{esvect}
393 \LWR@loadafter{etoc}
394 \LWR@loadafter{eurosym}
395 \LWR@loadafter{everypage}
396 % \LWR@loadafter{everyshi}% now in LaTeX core
397 \LWR@loadafter{extarrows}
398 \LWR@loadafter{extramarks}
399 \LWR@loadafter{fancybox}
400 \LWR@loadafter{fancyhdr}
401 \LWR@loadafter{fancypar}
402 \LWR@loadafter{fancyref}
403 \LWR@loadafter{fancytabs}
404 \LWR@loadafter{fancyvrb}
405 \LWR@loadafter{fbox}
406 \LWR@loadafter{fewerfloatpages}
407 \LWR@loadafter{figcaps}
408 \LWR@loadafter{figsize}
409 \LWR@loadafter{fitbox}
410 \LWR@loadafter{fix2col}
411 \LWR@loadafter{fixmath}
412 \LWR@loadafter{fixme}
413 \LWR@loadafter{fixmetodonotes}
414 \LWR@loadafter{flafter}
415 \LWR@loadafter{flippdf}
416 \LWR@loadafter{float}
417 \LWR@loadafter{floatflt}
418 \LWR@loadafter{floatpag}
419 \LWR@loadafter{floatrow}
420 \LWR@loadafter{fltrace}
421 \LWR@loadafter{flushend}
422 \LWR@loadafter{fnbreak}
423 \LWR@loadafter{fnchap}
424 \LWR@loadafter{fnlineno}
425 \LWR@loadafter{fnpara}
426 \LWR@loadafter{fnpos}
427 \LWR@loadafter{fontawesome}
428 \LWR@loadafter{fontawesome5}
```

```
429 % fontenc must be loaded before l warp
430 % fontspec must be loaded before l warp
431 \LWR@loadafter{footmisc}
432 \LWR@loadafter{footnote}
433 \LWR@loadafter{footnotebckref}
434 \LWR@loadafter{footnotehyper}
435 \LWR@loadafter{footnoterange}
436 \LWR@loadafter{footnpag}
437 \LWR@loadafter{foreign}
438 \LWR@loadafter{forest}
439 \LWR@loadafter{fouridx}
440 % fourier may be loaded before l warp
441 \LWR@loadafter{framed}
442 \LWR@loadafter{froufrou}
443 \LWR@loadafter{ftcap}
444 \LWR@loadafter{ftnright}
445 \LWR@loadafter{fullminipage}
446 \LWR@loadafter{fullpage}
447 \LWR@loadafter{fullwidth}
448 \LWR@loadafter{fvextra}
449 \LWR@loadafter{fwlw}
450 \LWR@loadafter{gensymb}
451 \LWR@loadafter{gentombow}
452 % geometry is always loaded by l warp, and l warp-geometry is AtBeginDocument
453 \LWR@loadafter{ghsystem}
454 \LWR@loadafter{gindex}
455 \LWR@loadafter{glossaries}
456 \LWR@loadafter{gmeometric}
457 % \LWR@loadafter{graphics}% pre-loaded by xunicode
458 % \LWR@loadafter{graphicx}% pre-loaded by xunicode
459 \LWR@loadafter{gloss}
460 \LWR@loadafter{glossary}
461 \LWR@loadafter{grffile}
462 \LWR@loadafter{grid}
463 \LWR@loadafter{grid-system}
464 \LWR@loadafter{gridset}
465 \LWR@loadafter{hang}
466 \LWR@loadafter{hanging}
467 \LWR@loadafter{hepunits}
468 \LWR@loadafter{hhline}
469 \LWR@loadafter{hhtensor}
470 \LWR@loadafter{hypbmsec}
471 \LWR@loadafter{hypcap}
472 \LWR@loadafter{hypdestopt}
473 \LWR@loadafter{hypernat}
474 \LWR@loadafter{hyperref}
475 \LWR@loadafter{hyperxmp}
476 \LWR@loadafter{hyphenat}
477 \LWR@loadafter{idxlayout}
478 \LWR@loadafter{ifoddpage}
479 \LWR@loadafter{imakeidx}
480 \LWR@loadafter{impnattypo}
481 \LWR@notmemoirloadafter{index}
482 % inputenc must be loaded before l warp
483 % inputenx must be loaded before l warp
484 % inputrc may be loaded before l warp
485 \LWR@loadafter{intopdf}
486 \LWR@loadafter{isomath}
487 \LWR@loadafter{isotope}
488 \LWR@loadafter{jurabib}
```

```
489 \LWR@loadafter{karnaugh-map}
490 \LWR@loadafter{keyfloat}
491 \LWR@loadafter{keystroke}
492 % kpfonts may be loaded before l warp
493 % kpfonts-otf may be loaded before l warp
494 \LWR@loadafter{layaureo}
495 \LWR@loadafter{layout}
496 \LWR@loadafter{layouts}
497 \LWR@loadafter{leading}
498 \LWR@loadafter{leftidx}
499 \LWR@loadafter{letterspace}
500 \LWR@loadafter{lettrine}
501 % libertinust1math may be loaded before l warp
502 \LWR@loadafter{lineno}
503 \LWR@loadafter{lips}
504 \LWR@loadafter{listings}
505 \LWR@loadafter{listliketab}
506 \LWR@loadafter{lltjp-siunitx}
507 \LWR@loadafter{lltjp-tascmac}
508 \LWR@loadafter{longtable}
509 \LWR@loadafter{lpic}
510 \LWR@loadafter{lscape}
511 \LWR@loadafter{ltablex}
512 \LWR@loadafter{ltcaption}
513 \LWR@loadafter{ltxgrid}
514 \LWR@loadafter{ltxtable}
515 \LWR@loadafter{lua-check-hyphen}
516 \LWR@loadafter{lua-visual-debug}
517 \LWR@loadafter{luacolor}
518 \LWR@loadafter{luamplib}
519 \LWR@loadafter{luatodonotes}
520 \LWR@loadafter{luavlna}
521 \LWR@loadafter{lyluatex}
522 \LWR@loadafter{magaz}
523 \LWR@notmemoirloadafter{makeidx}
524 \LWR@loadafter{manyfoot}
525 \LWR@loadafter{marginfit}
526 \LWR@loadafter{marginfix}
527 \LWR@loadafter{marginnote}
528 \LWR@loadafter{marvosym}
529 % mathalpha may be loaded before l warp
530 \LWR@loadafter{mathastext}
531 \LWR@loadafter{mathcomp}
532 \LWR@loadafter{mathdesign}
533 \LWR@loadafter{mathdots}
534 \LWR@loadafter{mathfixs}
535 \LWR@loadafter{mathpazo}
536 \LWR@loadafter{mathptmx}
537 \LWR@loadafter{mathspec}
538 \LWR@loadafter{mathtools}
539 \LWR@loadafter{mattens}
540 \LWR@loadafter{maybemath}
541 \LWR@loadafter{mcaption}
542 \LWR@loadafter{mdframed}
543 \LWR@loadafter{mdwmath}
544 \LWR@loadafter{media9}
545 \LWR@loadafter{memhfixc}
546 \LWR@loadafter{menukeys}
547 \LWR@loadafter{metalogo}
548 \LWR@loadafter{metalogox}
```

```
549 \LWR@loadafter{mhchem}
550 \LWR@loadafter{microtype}
551 \LWR@loadafter{midfloat}
552 \LWR@loadafter{midpage}
553 \LWR@loadafter{minibox}
554 \LWR@loadafter{minitoc}
555 \LWR@loadafter{minted}
556 \LWR@loadafter{mismath}
557 \LWR@loadafter{mleftright}
558 % morefloats must be allowed early for print mode
559 \LWR@notmemoirloadafter{moreverb}
560 % morewrites must be loaded before lwarf
561 \LWR@notmemoirloadafter{movie15}
562 \LWR@notmemoirloadafter{mparhack}
563 \LWR@loadafter{multibib}
564 \LWR@loadafter{multicap}
565 %\LWR@loadafter{multicol}% loaded by ltxdoc
566 \LWR@loadafter{multicolrule}
567 \LWR@loadafter{multimedia}
568 \LWR@loadafter{multiobjective}
569 \LWR@loadafter{multirow}
570 \LWR@loadafter{multitoc}
571 \LWR@loadafter{musicography}
572 \LWR@loadafter{mwe}
573 \LWR@loadafter{nameauth}
574 \LWR@loadafter{natbib}
575 \LWR@notmemoirloadafter{nccfancyhdr}
576 \LWR@loadafter{nccfoots}
577 \LWR@loadafter{nccmath}
578 \LWR@notmemoirloadafter{needspace}
579 % newclude must be loaded before lwarf
580 % newpxmath may be preloaded
581 % newtxmath may be loaded before lwarf
582 % newtxsf may be loaded before lwarf
583 % newunicodechar must be loaded before lwarf
584 \LWR@notmemoirloadafter{nextpage}
585 \LWR@loadafter{nicefrac}
586 \LWR@loadafter{niceframe}
587 \LWR@loadafter{nicematrix}
588 \LWR@loadafter{noitcrul}
589 \LWR@loadafter{nolbreaks}
590 \LWR@loadafter{nomencl}
591 \LWR@loadafter{nonfloat}
592 \LWR@loadafter{nonumonpart}
593 \LWR@loadafter{nopageno}
594 \LWR@loadafter{notes}
595 \LWR@loadafter{notespages}
596 \LWR@loadafter{nowidow}
597 \LWR@loadafter{ntheorem}
598 \LWR@loadafter{octave}
599 \LWR@loadafter{orcidlink}
600 \LWR@loadafter{overpic}
601 \LWR@loadafter{pagegrid}
602 \LWR@notmemoirloadafter{pagenote}
603 \LWR@loadafter{pagesel}
604 \LWR@loadafter{paralist}
605 \LWR@loadafter{parallel}
606 \LWR@loadafter{parcolumns}
607 \LWR@loadafter{parnotes}
608 \LWR@notmemoirloadafter{parskip}
```

```
609 \LWR@loadafter{pbalance}
610 \LWR@loadafter{pbox}
611 \LWR@loadafter{pdfcol}
612 \LWR@loadafter{pdfcolfoot}
613 \LWR@loadafter{pdfcolmk}
614 \LWR@loadafter{pdfcolparallel}
615 \LWR@loadafter{pdfcolparcolumns}
616 \LWR@loadafter{pdfcomment}
617 \LWR@loadafter{pdfcrypt}
618 \LWR@loadafter{pdflscape}
619 \LWR@loadafter{pdfmarginpar}
620 \LWR@loadafter{pdfpages}
621 \LWR@loadafter{pdfprivacy}
622 \LWR@loadafter{pdfrender}
623 \LWR@loadafter{pdfsync}
624 \LWR@loadafter{pdftricks}
625 \LWR@loadafter{pdfx}
626 \LWR@loadafter{perpage}
627 \LWR@loadafter{pfnote}
628 \LWR@loadafter{phfqt}
629 \LWR@loadafter{physics}
630 \LWR@loadafter{physunits}
631 \LWR@loadafter{picinpar}
632 \LWR@loadafter{pifont}
633 \LWR@loadafter{pinlabel}
634 \LWR@loadafter{placeins}
635 \LWR@loadafter{plarray}
636 \LWR@loadafter{plarydshln}
637 \LWR@loadafter{plexarray}
638 \LWR@loadafter{plexarydshln}
639 \LWR@loadafter{plcolortbl}
640 \LWR@loadafter{plexdelarray}
641 \LWR@loadafter{plimsoll}
642 \LWR@loadafter{prelim2e}
643 \LWR@loadafter{prettyref}
644 \LWR@loadafter{preview}
645 \LWR@loadafter{psfrag}
646 \LWR@loadafter{psfragx}
647 \LWR@loadafter{pst-eps}
648 \LWR@loadafter{pstool}
649 \LWR@loadafter{pstricks}
650 % \LWR@loadafter{pxatbegshi}% may be used by morewrites
651 \LWR@loadafter{pxeveryshi}
652 % \LWR@loadafter{pxfonts}% may be loaded before l warp
653 \LWR@loadafter{pxftnright}
654 \LWR@loadafter{pxjahyper}
655 \LWR@loadafter{quotchap}
656 \LWR@loadafter{quoting}
657 \LWR@loadafter{ragged2e}
658 \LWR@loadafter{refcheck}
659 \LWR@loadafter{register}
660 \LWR@loadafter{relszie}
661 \LWR@loadafter{repeatindex}
662 \LWR@loadafter{resizegather}
663 \LWR@loadafter{returntogram}
664 \LWR@loadafter{rlepsf}
665 \LWR@loadafter{rmathbr}
666 \LWR@loadafter{rmpage}
667 \LWR@loadafter{romanbar}
668 \LWR@loadafter{romanbarpagenumber}
```

```
669 \LWR@loadafter{rotating}
670 \LWR@loadafter{rotfloat}
671 \LWR@loadafter{rviewport}
672 \LWR@loadafter{savetrees}
673 % scalefont is loaded by babel-french
674 \LWR@loadafter{scalerel}
675 \LWR@loadafter{schemata}
676 \LWR@loadafter{scrextend}
677 \LWR@loadafter{scrhack}
678 \LWR@loadafter{scrlayer}
679 \LWR@loadafter{scrlayer-notecolumn}
680 \LWR@loadafter{scrlayer-scrpage}
681 \LWR@loadafter{scrpage2}
682 \LWR@loadafter{section}
683 \LWR@loadafter{sectionbreak}
684 \LWR@loadafter{sectsty}
685 \LWR@loadafter{selectp}
686 \LWR@loadafter{semantic-markup}
687 \LWR@notmemoirloadafter{setspace}
688 \LWR@loadafter{shadow}
689 \LWR@loadafter{shapepar}
690 \LWR@notmemoirloadafter{showidx}
691 \LWR@loadafter{showlabels}
692 \LWR@loadafter{showkeys}
693 \LWR@loadafter{showtags}
694 \LWR@loadafter{shuffle}
695 \LWR@loadafter{sidecap}
696 \LWR@loadafter{sidenotes}
697 \LWR@loadafter{simplebnf}
698 \LWR@loadafter{SIunits}
699 \LWR@loadafter{siunitx}
700 \LWR@loadafter{siunitx-v2}
701 \LWR@loadafter{skmath}
702 \LWR@loadafter{slantsc}
703 \LWR@loadafter{slashed}
704 \LWR@loadafter{soul}
705 \LWR@loadafter{soulpos}
706 \LWR@loadafter{soulutf8}
707 \LWR@loadafter{splitbib}
708 \LWR@loadafter{splitidx}
709 \LWR@loadafter{srcltx}
710 \LWR@loadafter{srctex}
711 \LWR@loadafter{stabular}
712 \LWR@loadafter{stackengine}
713 \LWR@loadafter{stackrel}
714 \LWR@loadafter{statex2}
715 \LWR@loadafter{statistics}
716 \LWR@loadafter{statmath}
717 \LWR@loadafter{steinmetz}
718 \LWR@notltjloadafter{stffloats}
719 \LWR@loadafter{struktex}
720 \LWR@loadafter{subcaption}
721 \LWR@loadafter{subfig}
722 \LWR@loadafter{subfigure}
723 \LWR@loadafter{subsubscripts}
724 \LWR@loadafter{supertabular}
725 \LWR@loadafter{svg}
726 \LWR@loadafter{swfigure}
727 \LWR@loadafter{sympytex}
728 \LWR@loadafter{syntonly}
```

```
729 \LWR@loadafter{t1inc}
730 \LWR@loadafter{tabfigures}
731 \LWR@loadafter{tables}
732 \LWR@loadafter{tablefootnote}
733 \LWR@notmemoirloadafter{tabularx}
734 \LWR@loadafter{tabulary}
735 \LWR@loadafter{tagpdf}
736 \LWR@loadafter{tagpdf-mc-code-generic}
737 \LWR@loadafter{tagpdf-mc-code-lua}
738 \LWR@loadafter{tascmac}
739 \LWR@loadafter{tcolorbox}
740 \LWR@loadafter{tensor}
741 \LWR@loadafter{termcal}
742 \LWR@loadafter{textarea}
743 % \LWR@loadafter{textcomp}% maybe before lwarf with font packages
744 \LWR@loadafter{textfit}
745 \LWR@loadafter{textpos}
746 \LWR@loadafter{theorem}
747 \LWR@loadafter{thinsp}
748 \LWR@loadafter{thm-listof}
749 \LWR@loadafter{thm-restate}
750 \LWR@loadafter{thmbox}
751 \LWR@loadafter{thmtools}
752 \LWR@loadafter{threadcol}
753 \LWR@loadafter{threeparttable}
754 \LWR@loadafter{threeparttablex}
755 \LWR@loadafter{thumb}
756 \LWR@loadafter{thumbs}
757 \LWR@loadafter{tikz}
758 \LWR@loadafter{tikz-imagelabels}
759 \LWR@loadafter{titleps}
760 \LWR@loadafter{titlesec}
761 \LWR@loadafter{titletoc}
762 \LWR@notmemoirloadafter{titling}
763 % \LWR@loadafter{tocbasic}% preloaded by koma-script classes
764 \LWR@notmemoirloadafter{tocbibind}
765 \LWR@loadafter{tocdata}
766 \LWR@loadafter{toccenter}
767 \LWR@notmemoirloadafter{tocloft}
768 \LWR@loadafter{tocstyle}
769 \LWR@loadafter{todo}
770 \LWR@loadafter{todonotes}
771 \LWR@loadafter{topcapt}
772 \LWR@loadafter{tram}
773 \LWR@loadafter{transparent}
774 \LWR@loadafter{trimclip}
775 \LWR@loadafter{trivfloat}
776 \LWR@loadafter{truncate}
777 \LWR@loadafter{turnthepage}
778 \LWR@loadafter{twoup}
779 % \LWR@loadafter{txfonts}% may be loaded before lwarf
780 % txgreeks may be loaded before lwarf

781 % \LWR@loadafter{typearea}% preloaded by koma-script classes
782 \LWR@loadafter{typicons}
783 % \LWR@loadafter{ulem}% preloaded by ctexart and related classes
784 \LWR@loadafter{umoline}
785 \LWR@loadafter{underscore}
786 % unicode-math may be loaded before lwarf
787 \LWR@loadafter{units}
```

```

788 \LWR@loadaft{unitsdef}
789 \LWR@loadaft{upgreek}
790 \LWR@loadaft{upref}
791 \LWR@loadaft{url}
792 \LWR@loadaft{ushort}
793 \LWR@loadaft{uspace}
794 \LWR@loadaft{varioref}
795 \LWR@notmemoirloadaft{verse}
796 \LWR@loadaft{versonotes}
797 \LWR@loadaft{vertbars}
798 \LWR@loadaft{vmargin}
799 \LWR@loadaft{vowel}
800 \LWR@loadaft{vpe}
801 \LWR@loadaft{vwcol}
802 \LWR@loadaft{wallpaper}
803 \LWR@loadaft{watermark}
804 \LWR@loadaft{widetable}
805 \LWR@loadaft{widows-and-orphans}
806 \LWR@loadaft{witharrows}
807 \LWR@loadaft{wrapfig}
808 \LWR@loadaft{wrapfig2}
809 \LWR@loadaft{xbmks}
810 \LWR@loadaft{xcolor}
811 \LWR@loadaft{xchangebar}
812 \LWR@loadaft{xellipsis}
813 % xetexko must be loaded before lwarp
814 \LWR@loadaft{xevlna}
815 \LWR@loadaft{xfakebold}
816 \LWR@loadaft{xfrac}
817 \LWR@loadaft{xltabular}
818 \LWR@loadaft{xltxtra}
819 \LWR@loadaft{xmpincl}
820 \LWR@loadaft{xpiano}
821 \LWR@loadaft{xpinyin}
822 \LWR@loadaft{xr}
823 \LWR@loadaft{xr-hyper}
824 \LWR@loadaft{xtab}
825 % xunicode must be loaded before lwarp
826 \LWR@loadaft{xurl}
827 \LWR@loadaft{xy}
828 \LWR@loadaft{zwpagelayout}

```

21 MD5 hashing

The MD5 hash is used for `latextimage` filenames for SVG math.

```

829 \newcommand{\LWR@mdfive}[1]{%
830     \PackageError{lwarp}%
831         {No MD5 macro was found}%
832         {}%
833         Lwarp must find the macros \protect\pdfmdfivesum\space%
834         or \protect\mdfivesum.%%
835     }%
836 }

```

The default for PDF L^AT_EX, DVI L^AT_EX, upL^AT_EX, etc:

```
837 \ifdef{\pdfmdfivesum}
838   {\let\LWR@mdfive\pdfmdfivesum}
839 }
```

For **Lua \backslash TEX**:

```
840 \ifLuaTeX
841 \RequirePackage{pdftexcmds}
842 \let\LWR@mdfive\pdf@mdfivesum
843 \fi
```

For **X \backslash ELATEX**:

```
844 \ifXeTeX
845 @ifundefined{pdffivesum}{}%
846   {\let\LWR@mdfive\pdfmdfivesum}
847 @ifundefined{mdfivesum}{}%
848   {\let\LWR@mdfive\mdfivesum}
849 \fi
```

22 PDF LATEX T1 and UTF-8 encoding

When using **PDF LATEX**, l warp requires T1 font encoding, and recommends UTF-8 input encoding.

If some other input encoding is already defined, l warp will try to use it instead, and hope for the best.

X \backslash ELATEX and **Lua \backslash TEX** are both UTF-8 by nature.

`\LWR@pdfencoding` Sets T1, and also utf8 if not already set.

```
850 \newcommand*{\LWR@pdfencoding}{%
851   \RequirePackage[T1]{fontenc}
852
853   \IfPackageLoadedTF{inputenc}{}{%
854     \IfPackageLoadedTF{inputenx}{}{%
855       \RequirePackage[utf8]{inputenc}
856     }%
857   }%
858 }

859 \ifPDFTeX% pdflatex or dvi latex
860   \LWR@pdfencoding
861 \fi
862
863 \ifpTeX
864   \LWR@pdfencoding
865 \fi
```

23 Unicode input characters

If using *pdflatex*, convert a minimal set of Unicode characters. Additional characters may be defined by the user, as needed.

A commonly-used multiply symbol is declared to be \texttt{textrm}.

The first arguments of \newunicodechar below are text ligatures in the source code, even though they are not printed in the following listing.

```

866 \ifptTeX
867 \else
868 \RequirePackage{newunicodechar}
869
870 \newunicodechar{x}{\texttimes}
871
872 \ifPDFTeX% pdflatex or dvi latex
873 \newunicodechar{ff}{ff}% Here, the first arguments are ligatures.
874 \newunicodechar{fi}{fi}
875 \newunicodechar{fl}{fl}
876 \newunicodechar{ffi}{ffi}
877 \newunicodechar{ffl}{ffl}
878 \newunicodechar{--}{---}
879 \newunicodechar{--}{--}
880 \fi
881
882 \fi

```

24 Avoid a bitmapped font

If DVI or PDF L^AT_EX, and if the default Computer Modern is the selected font family, ensure that cm-super or lmodern is used to provide a vector font.

```

883 \ifxetexorluatex
884 \else
885   \ifdefstring{\f@family}{cmr}{
886     \IfFileExists{type1ec.sty}{% found in cm-super
887       {}
888       {% cm-super not installed
889         \IfFileExists{lmodern.sty}{
890           \PackageInfo{lwarp}{cm-super not installed, loading lmodern}
891           \RequirePackage{lmodern}
892         }{
893           \PackageError{lwarp}{%
894             Lwarp requires a vector font.\MessageBreak
895             Install and load cm-super, lmodern, or another\MessageBreak
896             Type-1 vector font before loading lwarp.\MessageBreak
897             Enter 'H' for possible solutions%
898           }
899         }
900       {%
901         Install cm-super or lmodern.\MessageBreak
902         If lmodern, load it before lwarp:\MessageBreak
903           \space\space\protect\usepackage{lmodern}\MessageBreak
904           \space\space\protect\usepackage{lwarp}%
905         }
906       }
907     }% cm-super not installed
908   }{}% f@family

```

```
909 \fi
```

25 Upright quotes

In PDF TeX, preserve upright quotes in verbatim text. upquote also loads textcomp.

```
910 \ifPDFTeX
911 \RequirePackage{upquote}
912 \fi
913
914 \ifptTeX
915   \RequirePackage{upquote}
916 \fi
```

26 Avoid bad font combinations

For XeLaTeX and LuaLaTeX, certain font combinations cause problems with l warp.

`libertinus-otf` has special handling for `\textquotedbl`. Search for `\LWR@orig@textquotedbl`.

```
917 \ifxetexorluatex
918   \AtBeginDocument{
919     \IfPackageLoadedTF{kpfonts} {
920       \PackageError{l warp}
921       {%
922         When using XeLaTeX or LuaLaTeX, \MessageBreak
923         use kpfonts-otf instead of kpfonts%
924       }
925       {%
926         Replace: \protect\usepackage{kpfonts}\MessageBreak
927         with: \protect\usepackage{kpfonts-otf}
928       }
929     } {}
930   }
931 \fi
```

27 Miscellaneous tools

27.1 Variables

```
932 \newlength{\LWR@templengthone}
933 \newlength{\LWR@templengthtwo}
934 \newlength{\LWR@templengththree}
935 \newcounter{\LWR@tempcountone}
```

27.2 Lengths and units

`\LWR@providelength {<\lengthname>}` Provides the length if it isn't defined yet.

Used to provide source compatibility for lengths which will be ignored, but might or might not be already provided by other packages.

```
936 \newcommand*\LWR@providelength[1]{%
937     \ifdeflength{#1}{}{\newlength{#1}}%
938 }
```

`\LWR@convertto {<dest unit>} {<length>}`

Prints a length in the given units, without printing the unit itself.

```
939 \newcommand*{\LWR@convertto}[2]{\strip@pt\dimexpr #2*65536/\number\dimexpr 1#1}
```

`\LWR@printpercentlength {<smaller>} {<larger>}`

Prints a percent ratio of the two lengths.

```
940 \newcommand*{\LWR@printpercentlength}[2]{%
941     \setcounter{\LWR@tempcountone}{100*\ratio{#1}{#2}}%
942     \arabic{\LWR@tempcountone}%
943 }
```

27.3 Counters

`\defaddtocounter {<name>} {<value>}`

Locally add to a counter.

```
944 \providetcommand*{\defaddtocounter}[2]{%
945     \defcounter{#1}{\value{#1}+#2}%
946 }
```

27.4 Patching macros

`\LWR@patcherror {<packagename>} {<macro>}`

Prints an error if could not patch a macro.

```
947 \newcommand*{\LWR@patcherror}[2]{%
948     \PackageError{lwarp}{%
949         Unable to patch package #1,\MessageBreak
950         macro \LWRbackslash #2.\MessageBreak
951         Lwarp or #1 may need to be updated%
952     }%
953     {Please contact the maintainer of the Lwarp package.}%
955 }
```

27.5 Copying macros

`\csNewCommandCopycs {<dest csname>} {<source csname>}`

Given a cs-name for each, copies a macro to a new definition.

```
956 \providecommand*\csNewCommandCopy[2]{%
957     \expandafter\NewCommandCopy\csname#1\expandafter\endcsname%
958         \csname#2\endcsname%
959 }
```

\NewEnvironmentCopy {*dest*} {*source*}

Copies an environment to a new definition.

```
960 \providecommand*\NewEnvironmentCopy[2]{%
961     \csNewCommandCopy{#1}{#2}%
962     \csNewCommandCopy{end#1}{end#2}%
963 }
```

27.6 Chinese text isolation

\LWR@isolate {*text*} Isolates Chinese characters from the surrounding text. This is required to avoid extra spaces on either side of the Chinese characters, especially when written to a file.

```
964 \newcommand{\LWR@isolate}[1]{#1}%
965
966 \IfPackageLoadedTF{ctexpatch}{%
967     \renewcommand{\LWR@isolate}[1]{\null#1\null}%
968 }{%
969
970 \IfPackageLoadedTF{xeCJK}{%
971     \renewcommand{\LWR@isolate}[1]{\null#1\null}%
972 }}
```

\LWR@disablepinyin Disable xpinyin during file, sidetoc, and footnote generation. Set by xpinyin.

```
973 \newcommand*\LWR@disablepinyin{}
```

27.7 Inserting vertical space

\LWR@forceemptyline Extra vertical space in the HTML output. Use after \LWR@stoppars.

```
974 \newcommand*\LWR@forceemptyline{%
975     \LWR@origrule{0pt}{1\baselineskip}%
976     \LWR@originnewline%
977 }
```

27.8 Argument selection

\LWR@thirdofthree {*first*} {*second*} {*third*}

\LWR@fourthoffour {*first*} {*second*} {*third*} {*fourth*}

```
\LWR@firstoffive {\langle first \rangle} {\langle second \rangle} {\langle third \rangle} {\langle fourth \rangle} {\langle fifth \rangle}

\LWR@secondoffive {\langle first \rangle} {\langle second \rangle} {\langle third \rangle} {\langle fourth \rangle} {\langle fifth \rangle}

\LWR@thirdoffive {\langle first \rangle} {\langle second \rangle} {\langle third \rangle} {\langle fourth \rangle} {\langle fifth \rangle}

\LWR@fourthoffive {\langle first \rangle} {\langle second \rangle} {\langle third \rangle} {\langle fourth \rangle} {\langle fifth \rangle}

\LWR@fifthoffive {\langle first \rangle} {\langle second \rangle} {\langle third \rangle} {\langle fourth \rangle} {\langle fifth \rangle}
```

Expands to the nth of the five arguments. Used for extra cross referencing.

```
978 \long\def\LWR@thirdofthree#1#2#3{#3}%
979 \long\def\LWR@fourthoffour#1#2#3#4{#4}%
980
981 \long\def\LWR@firstoffive#1#2#3#4#5{#1}%
982 \long\def\LWR@secondoffive#1#2#3#4#5{#2}%
983 \long\def\LWR@thirdoffive#1#2#3#4#5{#3}%
984 \long\def\LWR@fourthoffive#1#2#3#4#5{#4}%
985 \long\def\LWR@fifthoffive#1#2#3#4#5{#5}
```

\LWR@edeffirstoffive {\langle first \rangle} {\langle second \rangle} {\langle third \rangle} {\langle fourth \rangle} {\langle fifth \rangle} \edefs to the first of five arguments. Used for back referencing.

```
986 \long\def\LWR@edeffirstoffive#1#2#3#4#5{%
987     \edef\@tempa{#1}%
988 }%
```

27.9 Inside boxes

Greater than zero if currently inside a TEX box, thus should not use \LWR@orignewpage. See section 13.2.

```
989 \newcounter{LWR@texboxdepth}%
990 \setcounter{LWR@texboxdepth}{0}
```

\LWR@maybe@orignewpage Only do \LWR@orignewpage if not inside a TEX box. Avoids nested paragraph tags.

```
991 \newcommand*{\LWR@maybe@orignewpage}{%
992     \LWR@traceinfo{LWR@maybe@orignewpage}%
993     \ifnumgreater{\value{LWR@texboxdepth}}{0}%
994         {}%
995         {\LWR@orignewpage}%
996     \LWR@traceinfo{LWR@maybe@orignewpage done}%
997 }
```

27.10 Global boxes

```
\LWR@gsavebox {\langle macroname \rangle} {\langle contents \rangle}
```

From <https://tex.stackexchange.com/questions/288702/savebox-forgets-its-content-across-columns-inside-align>

```

998 \DeclareRobustCommand{\LWR@gsavebox}[1]{%
999   \@ifnextchar(%)
1000     {\LWR@gsavepicbox#1}{\@ifnextchar[{\LWR@gsavebox#1}{\LWR@gsbox#1}}}}%
1001 \long\def{\LWR@gsbox#1}{\global\setbox#1\hbox{%
1002   \color@setgroup#2\color@endgroup}}
1003 \def{\LWR@gsavebox#1[#2]}{%
1004   \@ifnextchar [{\LWR@igsavebox#1[#2]}{\LWR@igsavebox#1[#2][c]}}%
1005 \long\def{\LWR@igsavebox#1[#2][#3]}{%
1006   \LWR@gsbox#1{\@imakebox[#2][#3]{#4}}}
1007 \def{\LWR@gsavepicbox#1(#2,#3)}{%
1008   \@ifnextchar[%]
1009     {\LWR@igsavepicbox#1(#2,#3)}{\LWR@igsavepicbox#1(#2,#3)[[]]}}%
1010 \long\def{\LWR@igsavepicbox#1(#2,#3)[#4]}{%
1011   \LWR@gsbox#1{\@imakepicbox(#2,#3)[#4]{#5}}}

```

`\LWR@glrbox (env.) {(macroname)}`

```

1012 \def{\LWR@glrbox#1}{%
1013   \edef{\reserved@a}{%
1014     \endgroup
1015     \global\setbox#1\hbox{%
1016       \begingroup\aftergroup}%
1017       \def{\noexpand\currenvir}{\currenvir}%
1018       \def{\noexpand\currenvline}{\on@line}%
1019     \reserved@a
1020     \endpefalse
1021     \color@setgroup
1022     \ignorespaces}
1023 \let{\LWR@endglrbox}{\LWR@endlrbox}

```

27.11 Converting a macro name to a cs name

`\macrotocname {(macro name with backslash)}`

Results in the macro name without the leading backslash.

Ref: <https://tex.stackexchange.com/questions/42318/removing-a-backslash-from-a-character-sequence>

```

1024 \newcommand*{\macrotocname}[1]{%
1025   \ifcat\relax\noexpand#1%
1026     \expandafter\expandafter\expandafter\@gobble\expandafter\string
1027   \fi
1028   #1%
1029 }

```

27.12 Title case

`\LWRtexttitlecase`

```

1030 \ExplSyntaxOn
1031 \newcommand*{\LWRtexttitlecase}[1]{%
1032   \text_titlecase:n{#1}%
1033 }
1034 \ExplSyntaxOff

```

27.13 LetLtxMacros

```
\LWR@LetLtxMacros {\⟨newcsname⟩} {\⟨oldcsname⟩}
```

\LetLtxMacro with cs names.

```
1035 \newcommand*{\LWR@LetLtxMacros}[2]{%
1036   \expandafter\LetLtxMacro\csname #1\expandafter\endcsname%
1037   \csname#2\endcsname%
1038 }
```

27.14 Absorbing a star

```
\LWR@absorbstar {\⟨csname⟩}
```

Modifies a macro to absorb a star. Used for `cleveref`, since `hyperref` is emulated, so the starred macros are not created by `cleveref`.

```
1039 \newcommand*{\LWR@absorbstar}[1]{%
1040   \LWR@LetLtxMacros{\LWR@origns@#1}{#1}%
1041   \csdef{#1}{\@ifstar{\csuse{\LWR@origns@#1}}{\csuse{\LWR@origns@#1}}}
1042   \expandafter\robustify\csname #1\endcsname%
1043 }
```

28 Operating-System portability

- Unix (Prog)** lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as “UNIX” in the configuration files), and MS-WINDOWS is supported as well.
- Mac OS (Prog)**
- Linux (Prog)**
- MS-Windows (Prog)** If MS-WINDOWS is not correctly detected, use the `lwarp` option `OSWindows`.
- Windows (Prog)**
- OSWindows (Opt)** When detected or specified, the operating-system path separator used by `lwarp` is modified, and the boolean `usingOSWindows` is set true. This boolean may be tested by the user for later use.

28.1 Literal characters

Literal characters to be used in `PrintLatexCmd` and `HTMLLatexCmd`. These are defined without @ to easily allow their inclusion in the user’s document.

The literal % character:

```
1044 \let\LWRpercent\@percentchar
```

The literal \$ character:

```
1045 \catcode`\$=12
1046 \def\LWRdollar{\$}
1047 \def\LWRdollar{\$}% syntax highlighting
1048 \catcode`\$=3
```

The literal & character:

```
1049 \catcode`\\&=12
1050 \def\LWRamp{&}
1051 \catcode`\\&=4
```

The literal \ character. The ampersand is temporarily set to the escape character during the definition of the backslash macro.

```
1052 \catcode`\\&=0
1053 &catcode`\\&=12
1054 &def&LWRbackslash{\\}
1055 &catcode`\\&=0
1056 \catcode`\\&=4
```

The literal { character. The ampersand is temporarily set to the begin group character during the definition of the leftbrace macro.

```
1057 \catcode`\\&=1
1058 \catcode`\\{=12
1059 \def\LWRleftbrace&{{
1060 \catcode`\\{=1
1061 \catcode`\\&=4
```

The literal } character. The ampersand is temporarily set to the end group character during the definition of the leftbrace macro.

```
1062 \catcode`\\&=2
1063 \catcode`\\}=12
1064 \def\LWRrightbrace{}&
amp;
1065 \catcode`\\}=2
1066 \catcode`\\&=4
```

The literal # character:

```
1067 \catcode`\\#=12
1068 \def\LWRhash{#}
1069 \catcode`\\#=6
```

\LWRopquote The operating system's quote mark, UNIX default. For WINDOWS, see \LWR@setOSWindows, below.

```
1070 \def\LWRopquote{'}
```

\LWRopseq The operating system's sequential execution command, UNIX default. For WINDOWS, see \LWR@setOSWindows, below.

```
1071 \def\LWRopseq{\space\LWRamp\LWRamp\space\space}
```

28.2 Common portability code

`usingOSWindows (bool)` Set if the OSWindows option is used, or if WINDOWS is automatically detected.

```
1072 \newbool{usingOSWindows}
1073 \boolfalse{usingOSWindows}
```

28.3 UNIX, LINUX, and MAC OS

\OSPathSymbol Symbol used to separate directories in a path.

```
1074 \newcommand{\OSPathSymbol}{/}
```

28.4 MS-WINDOWS

For MS-WINDOWS:

\LWR@setOSWindows Set defaults for the MS-WINDOWS operating system. l warp attempts to auto-detect the operating system, and the OSWindows option may also be used to force MS-WINDOWS compatibility.

```
1075 \newcommand{\LWR@setOSWindows}
1076 {
1077 \booltrue{usingOSWindows}
1078 \renewcommand{\OSPathSymbol}{\backslash}
1079 \def\LWRopquote{"}
1080 \def\LWRopseq{\space\LWRamp\space\space}
1081 }
```

Test for windows during compile. The user may also specify OSWindows package option in case this test fails.

```
1082 \ifwindows
1083 \LWR@setOSWindows
1084 \fi
```

29 Package options

`kvoptions (Pkg)` Allows key/value package options.

```
1085 \RequirePackage{kvoptions}
1086 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

\l warpsetup A user interface to set the keys:

```
1087 \newcommand{\l warpsetup}[1]{\setkeys{LWR}{#1}}
```

`warpingprint (bool)`

`warpingHTML (bool)`

`mathjax (bool)`

`LWR@origmathjax (bool)`

Set to true/false depending on the package option selections for print/HTML/EPUB output and mathsvg/mathjax.

`LWR@origmathjax` remembers the original setting to be restored by \displaymathnormal.

```
1088 \newbool{warpingprint}
```

```
1089 \newbool{warpingHTML}
```

```
1090 \newbool{mathjax}
```

```
1091 \newbool{LWR@origmathjax}
```

defaults The default is print output, and svg math if the user chose HTML output.

```
1092 \booltrue{warpingprint}%
1093 \boolfalse{warpingHTML}%
1094 \boolfalse{mathjax}%
```

warpdisable (Opt) If the `warpdisable` option is given, both boolean `warpingprint` and boolean `warpingHTML` are false, and may be used for `\ifbool` tests. This option may be used to disable almost all of `l warp`, for testing purposes.

```
1095 \DeclareVoidOption{warpdisable}{%
1096   \PackageInfo{l warp}{Using option 'warpdisable'}%
1097   \boolfalse{warpingprint}%
1098   \boolfalse{warpingHTML}%
1099 }
```

warpprint (Opt) If the `warpprint` option is given, boolean `warpingprint` is true and boolean `warpingHTML` is false, and may be used for `\ifbool` tests.

```
1100 \DeclareVoidOption{warpprint}{%
1101   \PackageInfo{l warp}{Using option 'warpprint'}%
1102   \booltrue{warpingprint}%
1103   \boolfalse{warpingHTML}%
1104 }
```

warpHTML (Opt) Anything in the `warpHTML` environment will be generated for HTML output only.

warpHTML (Opt) If the `warpHTML` option is given, boolean `warpingHTML` is true and boolean `warpingprint` is false, and may be used for `\ifbool` tests.

```
1105 \DeclareVoidOption{warpHTML}{%
1106   \PackageInfo{l warp}{Using option 'warpHTML'}%
1107   \booltrue{warpingHTML}%
1108   \boolfalse{warpingprint}%
1109 }
```

mathsvg (Opt) Option `mathsvg` selects SVG math display: If the `mathsvg` option is given, boolean `mathjax` is false, and may be used for `\ifbool` tests.

```
1110 \DeclareVoidOption{mathsvg}{%
1111   \PackageInfo{l warp}{Using option 'mathsvg'}%
1112   \boolfalse{mathjax}%
1113   \boolfalse{LWR@origmathjax}%
1114 }
```

mathjax (Opt) Option `mathjax` selects MATHJAX math display: If the `mathjax` option is given, boolean `mathjax` is true, may be used for `\ifbool` tests.

```
1115 \DeclareVoidOption{mathjax}{%
1116   \PackageInfo{l warp}{Using option 'mathjax'}%
1117   \booltrue{mathjax}%
1118   \booltrue{LWR@origmathjax}%
1119 }
```

`BaseJobname (Opt)` Option `BaseJobname` sets the `\BaseJobname` for this document.
`Default: \jobname` This is the `\jobname` of the printed version, even if currently compiling the `HTML` version. I.e. this is the `\jobname` without `_html` appended. This is used to set `\HomeHTMLFilename` if the user did not provide one.

```
1120 \DeclareStringOption[\jobname]{BaseJobname}
```

`ImagesDirectory (Opt)` Option `ImagesDirectory` sets the name of the directory to use for the `lateximage` images.
`Default: \jobname-images`

```
1121 \DeclareStringOption[\BaseJobname-images]{ImagesDirectory}
```

`ImagesName (Opt)` Option `ImagesName` sets the prefix to use for the `lateximage` images.
`Default: image-`

```
1122 \DeclareStringOption[image-]{ImagesName}
```

`makeindexStyle (Opt)` Selects a custom `.ist` file. A customized file should be based on `lwarf.ist`. See
`Default: lwarf.ist` section 8.6.21.

```
1123 \DeclareStringOption[lwarf.ist]{makeindexStyle}
```

`xindyStyle (Opt)` Selects a custom `.xdy` file. A customized file should be based on `lwarf.xdy`. See
`Default: lwarf.xdy` section 8.6.22.

```
1124 \DeclareStringOption[lwarf.xdy]{xindyStyle}
```

`xindyLanguage (Opt)` Sets the `xindy` language to be assigned in `lwarpmk`'s configuration files. This is
`Default: english` then used by `lwarpmk` while processing the index and glossary.

```
1125 \DeclareStringOption[english]{xindyLanguage}
```

`xindyCodepage (Opt)` Sets the `xindy` codepage to be assigned in `lwarpmk`'s configuration files. This is
`Default: utf8` then used by `lwarpmk` while processing the index.

```
1126 \DeclareStringOption[utf8]{xindyCodepage}
```

`xindexConfig (Opt)` Selects a custom `xindex-*.lua` file. A customized file should be based on
`Default: <empty>` `xindex-cfg.lua`. See section 8.6.23.

```
1127 \DeclareStringOption[]{xindexConfig}
```

`pdftotextEnc (Opt)` The option `pdftotextEnc` sets the encoding used by `pdftotext`. This is passed to
`Default: UTF-8` `pdftotext` using its `-enc` option, and is used when converting L^AT_EX PDF output with
HTML tags into a plain-text file with HTML tags.

```
1128 \DeclareStringOption[UTF-8]{pdftotextEnc}
```

`lwarpmk (Opt)` Tells `lwarf` to generate a local copy of `lwarpmk` called `lwarpmk.lua`. Useful for
archiving for future use. This file may be made executable and acts just like
`lwarpmk`.

If `lwarpmk` option, creates a local copy of `lwarpmk.lua`:

```

1129 \newbool{\LWR@creatinglwarpmk}
1130 \boolfalse{\LWR@creatinglwarpmk}
1131
1132 \DeclareVoidOption{lwarpmk}{
1133   \PackageInfo{lwarp}{Using option 'lwarpmk'}
1134   \booltrue{\LWR@creatinglwarpmk}
1135 }

```

OSWindows (Opt) Tells **lwarp** to use MS-WINDOWS compatibility. Auto-detection of the operating system is attempted, and this option is only necessary if the auto-detection fails. See the automatically-generated **lwarpmk.conf** file to find out whether the operating system was detected correctly.

```

1136 \DeclareVoidOption{OSWindows}{
1137   \PackageInfo{lwarp}{Using option 'OSWindows'}
1138   \LWR@setOSWindows
1139 }

```

HomeHTMLFilename (Opt) The filename of the homepage. The default is the jobname. This option is stored into **\LWR@HomeHTMLFilename**, and later transferred into **\HomeHTMLFilename** for internal use.

```
1140 \DeclareStringOption[]{\HomeHTMLFilename}
```

HTMLFilename (Opt) The filename prefix of web pages after the homepage. The default is empty, no prefix. This option is stored into **\LWR@HTMLFilename**, and later transferred into **\HTMLFilename** for internal use.

```
1141 \DeclareStringOption[]{\HTMLFilename}
```

PrintLatexCmd (Opt) The shell commands to use to compile the print document.

Default: `<automatic>`

```
1142 \DeclareStringOption[]{\PrintLatexCmd}
```

HTMLLatexCmd (Opt) The shell commands to use to compile the HTML document.

Default: `<automatic>`

```
1143 \DeclareStringOption[]{\HTMLLatexCmd}
```

PrintIndexCmd (Opt) The shell commands to use to compile the print indexes.

Default: `<empty>`

```
1144 \DeclareStringOption[]{\PrintIndexCmd}
```

HTMLIndexCmd (Opt) The shell commands to use to compile the HTML indexes.

Default: `<empty>`

```
1145 \DeclareStringOption[]{\HTMLIndexCmd}
```

LatexmkIndexCmd (Opt) The shell commands to be used by **latexmk** to compile the print indexes. Unlike **PrintIndexCmd** and **HTMLIndexCmd**, **LatexmkIndexCmd** does not include the filename, which will be provided by **latexmk**.

```
1146 \DeclareStringOption[]{\LatexmkIndexCmd}
```

makeindex (Opt) Tells **lwarp** to use **makeindex** for index generation. When **lwarpmk.conf** and

*.l warpmkconf are generated, PrintIndexCmd and HTMLIndexCmd will be set for *makeindex* with a single index file.

```
1147 \DeclareBoolOption[false]{makeindex}
```

xindy (*Opt*) Tells *l warp* to use *xindy* for index generation. When *l warpmk.conf* and *.l warpmkconf are generated, PrintIndexCmd and HTMLIndexCmd will be set for *xindy* with a single index file.

```
1148 \DeclareBoolOption[false]{xindy}
```

xindex (*Opt*) Tells *l warp* to use *xindex* for index generation. When *l warpmk.conf* and *.l warpmkconf are generated, PrintIndexCmd and HTMLIndexCmd will be set for *xindex* with a single index file.

```
1149 \DeclareBoolOption[false]{xindex}
```

IndexRef (*Opt*) Tells *l warp* how to display the index entries in *HTMLoutput*. See section 7.5.

Default: *cref*

```
1150 \DeclareStringOption[cref]{IndexRef}
```

GlossaryCmd (*Opt*) The shell command to use to compile the glossary. The print or *HTML* version of *Default: makeglossaries* the glossary filename will be appended to this command.

```
1151 \DeclareStringOption[makeglossaries]{GlossaryCmd}
```

latexmk (*Opt*) Option *latexmk* tells *l warpmk* to use *latexmk* when compiling documents.

```
1152 \DeclareBoolOption[false]{latexmk}
```

dvips (*Opt*) Option *dvips* tells *l warpmk* to use *dvips* when compiling DVI *latex* documents.

```
1153 \DeclareBoolOption[false]{dvips}
```

dvipdfm (*Opt*) Option *dvipdfm* tells *l warpmk* to use *dvipdfm* when compiling DVI *latex* documents.

```
1154 \DeclareBoolOption[false]{dvipdfm}
```

dvipdfmx (*Opt*) Option *dvipdfmx* tells *l warpmk* to use *dvipdfmx* when compiling DVI *latex* documents.

```
1155 \DeclareBoolOption[false]{dvipdfmx}
```

Execute options Execute the package options, with the defaults which have been set just above:

```
1156 \ProcessKeyvalOptions*\relax
```

29.1 Additional options support

Assign the \BaseJobname if the user hasn't provided one:

```
1157 \providecommand*\BaseJobname{\LWR@BaseJobname}
```

Defaults unless already over-ridden by the user:

```
1158 \ifcsempty{\LWR@HomeHTMLFilename}{
1159     \newcommand*{\HomeHTMLFilename}{\BaseJobname}
1160 }{
1161     \csedef{HomeHTMLFilename}{\LWR@HomeHTMLFilename}
1162 }
1163
1164 \csedef{HTMLFilename}{\LWR@HTMLFilename}
```

Special handling for underscores in labels and filenames.

\LWR@sanitized The sanitized version of what was given to \LWR@sanitize. Characters are set to their detokenized versions. Required for underscores in labels and filenames.

```
1165 \newcommand*{\LWR@sanitized}{}{}
```

```
\LWR@sanitize {\text}
```

Sanitizes the text and returns the result in \LWR@sanitized.

```
1166 \newcommand*{\LWR@sanitize}[1]{%
1167 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
1168 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
1169 }
```

Sanitize some string options to neutralize underscores.

```
1170 \LWR@sanitize{\LWR@BaseJobname}
1171 \edef\LWR@BaseJobname{\LWR@sanitized}
1172
1173 \LWR@sanitize{\LWR@ImagesDirectory}
1174 \edef\LWR@ImagesDirectory{\LWR@sanitized}
1175
1176 \LWR@sanitize{\LWR@ImagesName}
1177 \edef\LWR@ImagesName{\LWR@sanitized}
```

\LWR@PrintIndexCmd and \LWR@HTMLIndexCmd are tested to see if they are empty. If so, they are set to a reasonable defaults for a single index using *makeindex*, then possibly set to defaults for *xindy* if the *lwarp xindy* option was selected, then likewise for *xindex* if the *xindex* option was selected.

```
1178 \ifdefempty{\LWR@PrintIndexCmd}{
1179     \renewcommand{\LWR@PrintIndexCmd}{%
1180         makeindex -s \LWR@makeindexStyle \space \jobname.idx%
1181     }
1182     \ifbool{\LWR@xindy}{
1183         \renewcommand{\LWR@PrintIndexCmd}{%
1184             xindy
1185             -M \LWR@xindyStyle \space
1186             -L \LWR@xindyLanguage \space
1187             -C \LWR@xindyCodepage \space
1188             \jobname.idx%
1189         }
1190     }{}
1191     \ifbool{\LWR@xindex}{
1192         \ifdefvoid{\LWR@xindexConfig}{
```

```
1193          \renewcommand{\LWR@PrintIndexCmd}{%
1194              xindex
1195              \jobname.idx%
1196          }
1197      }{
1198          \renewcommand{\LWR@PrintIndexCmd}{%
1199              xindex
1200              -c \LWR@xindexConfig \space
1201              \jobname.idx%
1202          }
1203      }
1204  }{}
1205 }{}
1206
1207 \ifdefempty{\LWR@HTMLIndexCmd}{%
1208     \renewcommand{\LWR@HTMLIndexCmd}{%
1209         makeindex -s \LWR@makeindexStyle \space \jobname_html.idx%
1210     }
1211     \ifbool{\LWR@xindy}{%
1212         \renewcommand{\LWR@HTMLIndexCmd}{%
1213             xindy
1214             -M \LWR@xindyStyle \space
1215             -L \LWR@xindyLanguage \space
1216             -C \LWR@xindyCodepage \space
1217             \jobname_html.idx%
1218         }
1219     }{}
1220     \ifbool{\LWR@xindex}{%
1221         \ifdefvoid{\LWR@xindexConfig}{%
1222             \renewcommand{\LWR@HTMLIndexCmd}{%
1223                 xindex
1224                 \jobname_html.idx%
1225             }
1226         }{
1227             \renewcommand{\LWR@HTMLIndexCmd}{%
1228                 xindex
1229                 -c \LWR@xindexConfig \space
1230                 \jobname_html.idx%
1231             }
1232         }{}
1233     }{}
1234 }{}
1235
1236 \ifdefempty{\LWR@LatexmkIndexCmd}{%
1237     \renewcommand{\LWR@LatexmkIndexCmd}{%
1238         makeindex -s \LWR@makeindexStyle%
1239     }
1240     \ifbool{\LWR@xindy}{%
1241         \renewcommand{\LWR@LatexmkIndexCmd}{%
1242             xindy
1243             -M \LWR@xindyStyle \space
1244             -L \LWR@xindyLanguage \space
1245             -C \LWR@xindyCodepage%
1246         }
1247     }{}
1248     \ifbool{\LWR@xindex}{%
1249         \ifdefvoid{\LWR@xindexConfig}{%
1250             \renewcommand{\LWR@LatexmkIndexCmd}{%
1251                 xindex
1252             }
1253         }{}}
```

```

1253      }{
1254          \renewcommand{\LWR@LatexmkIndexCmd}{%
1255              xindex
1256              -c \LWR@xindexConfig
1257          }
1258      }
1259  }{}
1260 }{}

```

29.2 Conditional compilation

\warpprintonly {*contents*}

Only process the contents if producing printed output.

```
1261 \newcommand{\warpprintonly}[1]{\ifbool{warpingprint}{#1}{}}
```

\warpHTMLonly {*contents*}

Only process the contents if producing HTML output.

```
1262 \newcommand{\warpHTMLonly}[1]{\ifbool{warpingHTML}{#1}{}}
```

comment (Pkg) Provides conditional code blocks.

Attempts to use **versions** or **verbatim** fail in some cases, and do not provide much of a speed benefit even when they do work.

```
1263 \RequirePackage{comment}
```

\LWR@includecomment {*env name*} {*partial filename*}

\LWR@excludecomment {*env name*} {*partial filename*}

Use many **comment** cut files to avoid collision in case the user uses the **comment** package. Each filename is “comment_\#2.cut”. Based on the **comment** package.

```

1264 \def\LWR@includecomment
1265 #1#2{\message{[Lwarp: Including comment '#1']}
1266   \csarg\def{After#1Comment}{%
1267     \CloseAndInputCutFile%
1268     \csundef{\LWR@#1commentused}%
1269   }
1270   \csarg\def{#1}{%
1271     \endgroup
1272     \ifcsdef{\LWR@#1commentused}{%
1273       \PackageError{lwarp}%
1274         {Nested #1 environment}%
1275         {%
1276           Environment #1 cannot be nested.\MessageBreak
1277           This can happen when a package is loaded
1278           from inside a\MessageBreak
1279           #1 environment.%}
1280     }%
1281   }{\relax}

```

```

1282      \csdef{LWR@#1commentused}{}
1283      \message{Including '#1' comment.}%
1284      \def\CommentCutFile{comment_#2.cut}
1285      \SetUpCutFile
1286      \ProcessComment{#1}
1287  }%
1288  \CommentEndDef{#1}
1289 }
1290
1291 \def\LWR@excludecomment
1292 #1#2{\message{Lwarp: Excluding comment '#1'}%
1293 \csarg\def{#1}%
1294 \endgroup
1295 \message{Excluding '#1' comment.}%
1296 \begingroup
1297 \def\CommentCutFile{comment_#2.cut}
1298 \def\ProcessCutFile{}%
1299 \def\ThisComment####1{}%
1300 \ProcessComment{#1}
1301 }%
1302 \csarg\def{After#1Comment}{\CloseAndInputCutFile \endgroup}
1303 \CommentEndDef{#1}}

```

warpall (*env.*) Anything in the warpall environment will be generated for print or HTML outputs.

```
1304 \LWR@includecomment{warpall}{all}
```

warpHTML (*env.*) For HTML output:

```

1305 \ifbool{warpingHTML}
1306   {\LWR@includecomment{warpHTML}{html}}
1307   {\LWR@excludecomment{warpHTML}{html}}

```

warpprint (*env.*) Anything in the warpprint environment will be generated for print output only.

```

1308 \ifbool{warpingprint}
1309   {\LWR@includecomment{warpprint}{print}}
1310   {\LWR@excludecomment{warpprint}{print}}

```

If warpdisable, turn off both print and HTML output:

```

1311 \ifboolexpr{bool {warpingprint} or bool {warpingHTML}}
1312   {}
1313   {
1314     \LWR@excludecomment{warpHTML}{html}
1315     \LWR@excludecomment{warpprint}{print}
1316     \LWR@excludecomment{warpMathJax}{mathjax}
1317   }

```

warpMathJax (*env.*) Only if MATHJAX is being used along with HTML.

```

1318 \begin{warpprint}
1319 \LWR@excludecomment{warpMathJax}{mathjax}
1320 \end{warpprint}
1321
1322 \begin{warpHTML}

```

```

1323 \ifbool{mathjax}
1324     {\LWR@includecomment{warpMathJax}{mathjax}}
1325     {\LWR@excludecomment{warpMathJax}{mathjax}}
1326 \end{warpHTML}

```

`warpsvg` (*env.*) Only if SVG math is being used along with HTML, or in print mode.

```

1327 \begin{warpprint}
1328 \LWR@includecomment{warpsvg}{mathsvg}
1329 \end{warpprint}
1330
1331 \begin{warpHTML}
1332 \ifbool{mathjax}
1333     {\LWR@excludecomment{warpsvg}{mathsvg}}
1334     {\LWR@includecomment{warpsvg}{mathsvg}}
1335 \end{warpHTML}

```

`LWRcreatelwarpmk` (*env.*) Optionally generate a local copy of `lwarpmk`. Default to no.

```

1336 \ifbool{LWR@creatinglwarpmk}
1337     {\LWR@includecomment{LWRcreatelwarpmk}{lwarpmk}}
1338     {\LWR@excludecomment{LWRcreatelwarpmk}{lwarpmk}}

```

30 Required packages

These packages are automatically loaded by `l warp` when generating HTML output. Some of them are also automatically loaded when generating print output, but some are not.

for HTML output: 1339 `\begin{warpHTML}`

`fontspec` (*Pkg*) Load `fontspec` if necessary:

```

1340 \ifxetexorluatex
1341 \IfPackageLoadedTF{fontspec}{}{
1342     \usepackage[no-math]{fontspec}
1343 }

```

The monospaced font is used for HTML tags, so turn off its TeX ligatures and common ligatures:

```

1344 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
1345 \defaultfontfeatures[\sfamily]{Ligatures={NoCommon,TeX}}
1346 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
1347 \else

```

***pdflatex* only:** Only pre-loaded if *pdflatex* is being used.

`microtype` (*Pkg*)

ligatures Older browsers don't display ligatures. Turn off letter ligatures, keeping LATEX dash and quote ligatures, which may fail on older browsers but at least won't corrupt written words.

```
1348 \RequirePackage{microtype}
```

```

1349
1350 \microtypesetup{
1351   protrusion=false,
1352   expansion=false,
1353   tracking=false,
1354   kerning=false,
1355   spacing=false}
1356 %   \begin{macrocode}
1357 %
1358 % Disable ligatures for typewriter fonts.
1359 % The comma was causing issues with \MathJax\ and \cs{,} followed by a comma.
1360 % Ligatures for f, q, t, etc used to be disabled for non-typewriter fonts, but
1361 % are now allowed.
1362 % \changes{v0.89}{2020/08/01}{Disable typewriter ligatures.}
1363 % ^^^A \DisableLigatures[{},f,q,t,T,Q]{encoding = *,family = *}% previous
1364 %   \begin{macrocode}
1365 \DisableLigatures{encoding = *,family = tt*}

1366 \fi

1367 \end{warpHTML}

```

geometry (Pkg) Tactics to avoid unwanted page breaks and margin overflow:

- Uses a very long and wide page to minimize page breaks and margin overflow.
- Uses a scriptsize font.
- Uses extra space at the margin to avoid HTML tag overflow off the page.
- Forces a new PDF page before some environments.
- Forces line break between major pieces of long tags.

for HTML output: 1368 \begin{warpHTML}

If **geometry** has not yet been loaded, use the preexisting page and text sizes to be preserved for later reuse. These will be replaced by **lwarp** \AtBeginDocument with a very large page size to reduce HTML tag overflow off the page.

```

1369 \IfPackageLoadedTF{geometry}
1370 { }{
1371   \RequirePackage[
1372     reset,
1373     paperwidth=\paperwidth,
1374     paperheight=\paperheight,
1375     textwidth=\textwidth,
1376     textheight=\textheight,
1377     left=\oddsidemargin,
1378     top=\topmargin,
1379     marginparsep=\marginparsep,
1380     marginparwidth=\marginparwidth,
1381   ]{geometry}
1382 }

```

Remember the original definitions for later reuse. If the **geometry** package is loaded by the user, **lwarp-geometry** will nullify the user-level originals.

```

1383 \LetLtxMacro{\LWR@origgeometry}{\geometry}
1384 \LetLtxMacro{\LWR@orignewgeometry}{\newgeometry}
1385 \LetLtxMacro{\LWR@origrestoregeometry}{\restoregeometry}
1386 \LetLtxMacro{\LWR@origsavegeometry}{\savegeometry}
1387 \LetLtxMacro{\LWR@origloadgeometry}{\loadgeometry}

```

`LWR@allowanothergeometry` `(bool)` `geometry` may be loaded by the user before `l warp`, after `l warp`, or not at all. If before `l warp`, it will have already been loaded by now and its page layout has already been saved. If `geometry` is loaded after `l warp`, its layout will be set at that time and the user macros nullified. `\AtEndPreamble` this layout will be saved. If the user never loads `geometry`, `l warp-geometry` will be loaded `\AtBeginDocument`, but it should not change the page layout set here. This is controlled by the boolean `LWR@allowanothergeometry`. Geometry may be adjusted throughout the preamble until `\AtEndPreamble`, when this boolean is set false.

```

1388 \newbool{LWR@allowanothergeometry}
1389 \booltrue{LWR@allowanothergeometry}

```

Use `\AtEndPreamble` to avoid class and option conflict by changing settings after other packages load, instead of using `geometry` package options:

```
1390 \AtEndPreamble{
```

Whatever geometry choices the user has made in the preamble, either before or after `l warp` was loaded, are now saved for possible temporary reuse, such as by `lyluatex`.

See the `l warp-geometry` section for what happens if `geometry` is loaded after `l warp`.

```
1391 \LWR@origsavegeometry{LWR@usergeometry}
```

The user's paper size is saved for later reuse, such as by the `pdfpages` or `parallel` packages.

```

1392 \newlength{\LWR@userspaperwidth}
1393 \setlength{\LWR@userspaperwidth}{\paperwidth}
1394
1395 \newlength{\LWR@userspaperheight}
1396 \setlength{\LWR@userspaperheight}{\paperheight}
1397
1398 \newlength{\LWR@usersmarginparwidth}
1399 \setlength{\LWR@usersmarginparwidth}{\marginparwidth}
1400
1401 \newlength{\LWR@userstextwidth}
1402 \setlength{\LWR@userstextwidth}{\textwidth}
1403
1404 \newlength{\LWR@userstextheight}
1405 \setlength{\LWR@userstextwidth}{\textheight}

```

For `l warp`, use a very large page and margins to help avoid letting HTML tags run off the edge:

```

1406 \LWR@origgeometry{
1407   reset,
1408   paperheight=190in,
1409   paperwidth=20in,
1410   left=2in,
1411   right=6in,

```

```
1412     top=1in,  
1413     bottom=1in,  
1414     heightrounded,%  
1415 }
```

The `l warp` page geometry is saved for future restore:

```
1416 \LWR@origsavegeometry{\LWR@l warpgeometry}
```

No longer adjust the page layout when `l warp-geometry` is loaded `\AtBeginDocument`:

```
1417 \boolfalse{\LWR@allowanothergeometry}%
```

`ltjsbook` and other classes can print vertically, and require these to be reset by `l warp`:

```
1418 \setlength{\textheight}{0.8\paperheight}  
1419 \setlength{\textwidth}{0.7\paperwidth}  
1420  
1421 \@twosidefalse  
1422 @mparswitchfalse  
1423 }% \AtEndPreamble  
1424  
1425 \end{warpHTML}
```

for HTML & PRINT: 1426 `\begin{warpall}`

`xparse` (*Pkg*)

LATEX3 command argument parsing

```
1427 \RequirePackage{xparse}
```

`calc` (*Pkg*)

```
1428 \RequirePackage{calc}
```

```
1429 \end{warpall}
```

for HTML output: 1430 `\begin{warpHTML}`

`expl3` (*Pkg*)

LATEX3 programming

```
1431 \RequirePackage{expl3}
```

`getttitlestring` (*Pkg*)

Used to emulate `\nameref`.

```
1432 \RequirePackage{getttitlestring}  
1433  
1434  
1435 \end{warpHTML}
```

for HTML & PRINT: 1436 `\begin{warpall}`

`filecontents (Pkg)`

Used to write helper files while creating the print version.

Recent versions of L^AT_EX (as of Fall 2019) now include the functionality of the `filecontents` package, but with a new optional argument used to specify whether to force the overwriting of an existing file. If an older L^AT_EX kernel is used, the original `filecontents` package is used, but it is patched to throw away the new optional argument.

```
1437 \@ifundefined{filec@ntents@opt}{% older kernel, discard optional args
1438
1439     \RequirePackage{filecontents}
1440
1441     \LetLtxMacro\LWR@orig@filec@ntents\filec@ntents
1442
1443     \IfPackageAtLeastTF{filecontents}{2011/10/08}
1444     {
```

For a newer version of the `filecontents` package, simply discard the optional argument.

```
1445         \renewcommand*\filec@ntents[1][]{{\LWR@orig@filec@ntents}}
1446     }
1447     {% patch older package for morewrites
```

For an older version of `filecontents`, discard the optional argument, and also patch to work with `morewrites`, per <https://tex.stackexchange.com/questions/312830/does-morewrites-not-support-filecontents-and-can-i-write-body-of-environment-us/312910>

```
1448     \newwrite\fcwrite
1449     \renewcommand*\filec@ntents[1][]{{%
1450         \def\chardef##1\write{\let\reserved@c\fcwrite}%
1451         \LWR@orig@filec@ntents%
1452     }
1453 }
1454
1455 }% older kernel
1456 {% newer kernel
```

For a newer kernel with a `filecontents` environment which accepts the optional `overwrite` argument, use the environment as-is.

```
1457 }% newer kernel, filecontents env accepts optional args, do not load package
1458 \end{warpall}
```

for HTML output: 1459 `\begin{warpHTML}`

`xifthen (Pkg)`

```
1460 \RequirePackage{xifthen}
```

`verbatim (Pkg)`

```
1461 \RequirePackage{verbatim}
```

`refcount (Pkg)`

Provides `\setcounterref`, `\setcounterpageref`, etc.

1462 `\RequirePackage{refcount}`

`newfloat (Pkg)`

1463 `\RequirePackage{newfloat}`

1464 `\end{warpHTML}`

for HTML & PRINT: 1465 `\begin{warpall}`

`xstring (Pkg)` There was a short-term bug in `xstring` regarding `\IfInteger` which affected `lwarps` index generation. The updated version is requested here.

1466 `\RequirePackage{xstring}[2019/02/01]`

`environ (Pkg)` Used to encapsulate math environments for re-use in HTML `<alt>` text.

1467 `\RequirePackage{environ}`

1468 `\end{warpall}`

for HTML output: 1469 `\begin{warpHTML}`

`printlen (Pkg)` Used to convert lengths for image width/height options.

1470 `\RequirePackage{printlen}`

`\LWR@printlength {<length>}`

Prints a length using a locally-controlled unit and space. Rounding is used unless the length is small.

```
1471 \newrobustcmd*{\LWR@printlength}[1]{%
1472   \begingroup%
1473   \uselengthunit{PT}%
1474   \renewcommand*{\unitspace}{()}%
1475   \ifdimless{#1}{10pt}{%
1476     \printlength{#1}%
1477   }{%
1478     \rndprintlength{#1}%
1479   }%
1480   \endgroup%
1481 }
```

1482 `\end{warpHTML}`

31 Loading packages

`\RequirePackage` and `\usepackage` are modified to error-check for certain packages, and for HTML they load the `lwarps`- version if it exists.

for HTML & PRINT: 1483 \begin{warpall}

Remember the original \RequirePackage:

```
1484 \LetLtxMacro{\LWR@origRequirePackage}{\RequirePackage}
1485 \LetLtxMacro{\LWR@origRequirePackageWithOptions}{\RequirePackageWithOptions}
```

\LWR@requirepackagenames Stores the list of required package names.

```
1486 \newcommand*{\LWR@requirepackagenames}{}{}
```

\LWR@parsedrequirepackagenames Stores the parsed list of required package names after spaces are removed and l warp- is prepended.

```
1487 \newcommand*{\LWR@parsedrequirepackagenames}{}{}
```

\LWR@nullifycomment Remove the preexisting comment environment. Certain packages define it for their own use.

```
1488 \newcommand*{\LWR@nullifycomment}{}{%
1489     \PackageInfo{l warp}{%
1490         {Nullifying the comment environment before loading \LWR@strresulttwo,}%
1491         \let\comment\relax%
1492         \let\endcomment\relax%
1493 }}
```

\LWR@findword [*1: separator*] [*2: list*] [*3: index*] [*4: destination*]

Note that argument 4 is passed directly to \StrBetween.

```
1494 \newcommand*{\LWR@findword}[3]{}{%
1495     \StrBetween[\#3,\numexpr\#3+1]{\#1\#2\#1}{\#1}{\#1}%
1496 }
```

\LWR@checkloadnever {*bad package name*} {*replacement package names*}

From now on, check for incompatible packages loaded via \usepackage, instead of packages loaded before l warp:

```
1497 \LetLtxMacro{\LWR@checkloadnever}{\LWR@afterloadnever}
```

\LWR@checkloadfilename {*filename*} Checks if this filename should be loaded after l warp, or never at all.

```
1498 \newcommand*{\LWR@checkloadfilename}[1]{}{%
```

Remember the package name to compare with, to be used by \LWR@checkloadnever and \LWR@checkloadbefore.

```
1499 \edef{\LWR@tempone}{\#1}{%
```

Check against the list of packages which should never be loaded:

```
1500 \LWR@checkloadnevers
```

The following should only be loaded before l warp:

```

1501   \LWR@checkloadbefore{ctex}
1502   \LWR@checkloadbefore{fontspec}
1503   \LWR@checkloadbefore{inputenc}
1504   \LWR@checkloadbefore{inputenx}
1505   \LWR@checkloadbefore{nfssext-cfr}
1506   \LWR@checkloadbefore{fontaxes}
1507   \LWR@checkloadbefore{kotex}
1508   \LWR@checkloadbefore{kpffonts}% textcomp option clash
1509   \LWR@checkloadbefore{luatexja}
1510   \LWR@checkloadbefore{luatexja-fontspec}
1511   \LWR@checkloadbefore{luatexko}
1512   \LWR@checkloadbefore{morewrites}
1513   \LWR@checkloadbefore{newclclude}
1514   \LWR@checkloadbefore{newunicodechar}
1515   \LWR@checkloadbefore{plext}
1516   \LWR@checkloadbefore{xeCJK}
1517   \LWR@checkloadbefore{xetexko}
1518   \LWR@checkloadbefore{zxjatype}
1519 }
```

```
\LWR@lookforpackagename {\langle index\rangle}
```

If HTML, and if this is an l warp-supported package name, re-direct it to the l warp version by renaming it l warp- followed by the original name.

Looks index deep into the list of package names, \LWR@requirepackagenames, and builds \LWR@parsedrequirepackagenames which is the modified list of names.

```
1520 \newcommand*\LWR@lookforpackagename}[1]{%
```

Find the index'th package name from the list:

```
1521 \LWR@findword{\LWR@requirepackagenames}{#1}[\LWR@strresult]%
```

Remove blanks. The original name with blanks is in \LWR@strresult and the final name with no blanks goes into \LWR@strresulttwo.

```
1522 \StrSubstitute[100]{\LWR@strresult}{ }{}[\LWR@strresulttwo]%
```

See if the package name was found:

```

1523 \IfStrEq{\LWR@strresulttwo}{}%
1524 {}% no filename
1525 {}% yes filename was found
```

Possible adjustments before loading the package. Maybe nullify the comment environment if the new package will be redefining it for a new purpose.

```

1526   \ifdefstring{\LWR@strresulttwo}{easyReview}{\LWR@nullifycomment}{}%
1527   \ifdefstring{\LWR@strresulttwo}{changes}{\LWR@nullifycomment}{}%
```

If HTML, check if the package should be loaded before l warp, or never at all:

```
1528   \ifbool{warpingHTML}{\LWR@checkloadfilename{\LWR@strresulttwo}}{}%
```

If `HTML`, and if found, and if an `l warp`-equivalent name exists, use `l warp-*` instead.

```

1529     \ifboolexpr{
1530         bool{warpingHTML} and
1531         test{\IfFileExists{l warp-\LWR@strresulttwo.sty}}
1532     }%
1533     {%
1534         l warp-* file found
1535         \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1536             \edef{\LWR@parsedrequirepackagenames{l warp-\LWR@strresulttwo}}%
1537         }{%
1538             \edef{\LWR@parsedrequirepackagenames{%
1539                 \LWR@parsedrequirepackagenames,l warp-\LWR@strresulttwo}}%
1540         }%
1541     }%
1542 }
```

Otherwise, use the current package name.

```

1543     \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1544         \edef{\LWR@parsedrequirepackagenames{\LWR@strresulttwo}}%
1545     }{%
1546         \edef{\LWR@parsedrequirepackagenames{%
1547             \LWR@parsedrequirepackagenames,\LWR@strresulttwo}}%
1548     }%
1549     }%
1550 }% no l warp-* file
1551 }% yes filename
1552 }
```

`\RequirePackage` [*1: options*] [*2: package names*] [*3: version*]

For each of many package names in a comma-separated list, if an `l warp` version of a package exists, select it instead of the `LATEX` version.

```
1553 \RenewDocumentCommand{\RequirePackage}{o m o}{%
```

Redirect up to twenty names:¹⁷

```

1554 \renewcommand*{\LWR@requirepackagenames}{#2}%
1555 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
1556 \LWR@lookforpackagename{1}%
1557 \LWR@lookforpackagename{2}%
1558 \LWR@lookforpackagename{3}%
1559 \LWR@lookforpackagename{4}%
1560 \LWR@lookforpackagename{5}%
1561 \LWR@lookforpackagename{6}%
1562 \LWR@lookforpackagename{7}%
1563 \LWR@lookforpackagename{8}%
1564 \LWR@lookforpackagename{9}%
1565 \LWR@lookforpackagename{10}%
1566 \LWR@lookforpackagename{11}%
1567 \LWR@lookforpackagename{12}%
1568 \LWR@lookforpackagename{13}%
1569 \LWR@lookforpackagename{14}%
1570 \LWR@lookforpackagename{15}%
1571 \LWR@lookforpackagename{16}%

```

¹⁷This was originally nine names, but then I came across a package which used twelve...

```

1572 \LWR@lookforpackagename{17}%
1573 \LWR@lookforpackagename{18}%
1574 \LWR@lookforpackagename{19}%
1575 \LWR@lookforpackagename{20}%

```

Error if braces are used in optional argument. This can cause an error, so tell how to avoid.

```

1576 \IfSubStr{\detokenize\expandafter{#1}}{\LWRleftbrace}%
1577   {%
1578     \PackageError{lwarp}{%
1579       You used:\MessageBreak
1580       \protect\usepackage[#1]{#2}\MessageBreak
1581       Braces in the package options will fail with Lwarp.\MessageBreak
1582       Instead, use:\MessageBreak
1583       \protect\PassOptionsToPackage[#1]{#2}\MessageBreak
1584       \protect\usepackage{#2}\MessageBreak
1585       near the line number given below.\MessageBreak
1586       Enter 'h' for more info%
1587     }%
1588   {%
1589     See the Lwarp manual troubleshooting index entry for\MessageBreak
1590     ‘package, options with braces’%
1591   }%
1592 }
1593 {}% no brace

```

\RequirePackage depending on the options and version:

```

1594 \IfValueTF{#1}%
1595 {%
1596   options given
1597   \IfValueTF{#3}%
1598     {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}{#3}}%
1599   }%
1600 {%
1601   no options given
1602   \IfValueTF{#3}%
1603     {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}{#3}}%
1604   }%
1605 }
1606 \LetLtxMacro\usepackage\RequirePackage
1607 @onlypreamble\RequirePackage
1608 @onlypreamble\usepackage

1609 \end{warpall}

```

for HTML output: 1610 \begin{warpHTML}

\LWR@ProvidesPackagePass {\<pkgnname>} [<version>]

Uses the original package, including options.

```

1611 \NewDocumentCommand{\LWR@ProvidesPackagePass}{m o}{%
1612   \PackageInfo{lwarp}{%
1613     Using package '#1',\MessageBreak
1614     and adding lwarp modifications, including options,\MessageBreak%
1615   }%

```

```

1616     \IfValueTF{#2}%
1617         {\ProvidesPackage{l warp-#1}[#2]}%
1618         {\ProvidesPackage{l warp-#1}}%
1619     \DeclareOption*{%
1620         \PassOptionsToPackage{\CurrentOption}{#1}%
1621     }%
1622     \ProcessOptions\relax%

```

If using `catoptions`, an error occurs if a package is loaded with an option then loaded again with no options. `l warp` does this if a package is preloaded then later patched. To avoid an error while using `catoptions`, if a package has already been loaded, it is loaded again with its original options.

```

1623     \IfPackageLoadedTF{#1}{%
1624         \edef\LWR@tempone{\csuse{opt@#1.sty}}%
1625         \IfValueTF{#2}{%
1626             {%
1627                 \expandafter\lWR@origRequirePackage%
1628                 \expandafter[\lWR@tempone]{#1}[#2]%
1629             }%
1630             {%
1631                 \expandafter\lWR@origRequirePackage%
1632                 \expandafter[\lWR@tempone]{#1}%
1633             }%
1634         }{%
1635             \IfValueTF{#2}{%
1636                 {\lWR@origRequirePackage{#1}[#2]}%
1637                 {\lWR@origRequirePackage{#1}}%
1638             }%

```

In some cases, the following seems to be required to avoid an “unknown option” error, such as when loading `xcolor` with options.

```

1639     \DeclareOption*{}%
1640     \ProcessOptions\relax%
1641 }

```

`\lWR@ProvidesPackageDropA {<name>} {<date or -NoValue->}`

Declares the package. Factored for reuse.

```

1642 \newcommand*{\lWR@ProvidesPackageDropA}[2]{%
1643     \PackageInfo{l warp}{%
1644         Replacing package ‘#1’ with the l warp version,\MessageBreak
1645         and discarding options,%
1646     }%
1647     \IfValueTF{#2}{%
1648         {\ProvidesPackage{l warp-#1}[#2]}%
1649         {\ProvidesPackage{l warp-#1}}%
1650     }%

```

`\lWR@ProvidesPackageDropB` Nullifies then processes the options.

Seems to be required when options contain curly braces, which were causing “Missing `\begin{document}`”.

```

1651 \newcommand*{\lWR@ProvidesPackageDropB}{%
1652 % \ProcessOptions\relax% original LaTeX code

```

```
1653 \let\ds@\empty%           from the original \ProcessOptions
1654 \edef\@curroptions{}%    l warp modification to \ProcessOptions
1655 \atprocess@ptions\relax% from the original \ProcessOptions
1656 }
```

\LWR@ProvidesPackageDrop {*pkgname*} [*version*]

Ignores the original package and uses l warp's version instead. Drops/discards all options.

```
1657 \NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{
```

Declare the package:

```
1658 \LWR@ProvidesPackageDropA{#1}{#2}
```

Ignore all options:

```
1659 \DeclareOption*{}
```

Process the options:

```
1660 \LWR@ProvidesPackageDropB
1661 }
```

```
1662 \end{warpHTML}
```

32 File handles

Defines file handles for writes.

for HTML & PRINT: 1663 \begin{warpall}

\LWR@quickfile For quick temporary use only. This is reused in several places.

```
1664 \newwrite\LWR@quickfile%
```

```
1665 \end{warpall}
```

for HTML output: 1666 \begin{warpHTML}

\LWR@lateximagesfile For <project>-images.txt:

```
1667 \newwrite\LWR@lateximagesfile
```

```
1668 \end{warpHTML}
```

33 Include a file

During HTML output, \include{<filename>} causes the following to occur:

1. l warp creates <filename>_html_inc.tex whose contents are:

```
\input <filename>.tex
```

2. <filename>_html_inc.tex is then \included instead of <filename>.tex.

3. <filename>_html_inc.aux is automatically generated and used by L^AT_EX.

for HTML output: 1669 \begin{warpHTML}

\@include {<filename>} Modified to load _html_inc files.

(Below, \clearpage caused missing text, and was changed to \newpage.)

```

1670 \def\@include#1 {%
1671   \immediate\openout\LWR@quickfile #1_html_inc.tex% l warp
1672   \immediate\write\LWR@quickfile{\string\input{#1.tex}}% l warp
1673   \immediate\closeout\LWR@quickfile% l warp
1674   \LWR@maybe@orignewpage% changed from clearpage
1675   \if@filesw
1676     \immediate\write\@mainaux{\string\@input{#1_html_inc.aux}}% changed
1677   \fi
1678   \@tempswatrue
1679   \if@partsw
1680     \@tempswfalsetrue
1681     \edef\reserved@b{#1}%
1682     \@for\reserved@a:=\@partlist\do
1683       {\ifx\reserved@a\reserved@b\@tempswatrue\fi}%
1684   \fi
1685   \if@tempswa
1686     \let\auxout\@partaux
1687     \if@filesw
1688       \immediate\openout\@partaux #1_html_inc.aux % changed
1689       \immediate\write\@partaux{\relax}%
1690     \fi
1691     \atinput{\#1_html_inc.tex}% changed
1692     \LWR@maybe@orignewpage% changed from clearpage
1693     \@writeckpt{#1}%
1694     \if@filesw
1695       \immediate\closeout\@partaux
1696     \fi
1697   \else
1698     \deadcycles{z@}
1699     \nameuse{cp@#1}%
1700   \fi
1701   \let\auxout\@mainaux%
1702 }

1703 \end{warpHTML}
```

34 Copying a file

for HTML output: 1704 \begin{warpHTML}

\LWR@copyfile {<source filename>} {<destination filename>}

Used to copy the .toc file to .sidetoc to re-print the toc in the sidetoc navigation pane.

```

1705 \newwrite\LWR@copyoutfile    % open the file to write to
1706 \newread\LWR@copyinfile      % open the file to read from
1707
1708 \newcommand*\LWR@copyfile}[2]{%
1709     \LWR@traceinfo{\LWR@copyfile: copying #1 to #2}
1710
1711     \immediate\openout\LWR@copyoutfile=#2
1712     \openin\LWR@copyinfile=#1
1713     \begingroup\endlinechar=-1
1714     \makeatletter
1715
1716     \LWR@traceinfo{\LWR@copyfile: about to loop}
1717
1718     \loop\unless\ifeof\LWR@copyinfile
1719         \LWR@traceinfo{\LWR@copyfile: one line}
1720         \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline
1721 %   \LWR@fileline\par                      % print the content into the pdf
1722 % print the content:
1723     \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
1724     \repeat
1725     \immediate\closeout\LWR@copyoutfile
1726     \LWR@traceinfo{\LWR@copyfile: done}
1727     \endgroup
1728 }

1729 \end{warpHTML}
```

35 Debugging messages

HTML comments To have the HTML output include additional HTML comments, such as which <div> is closing, use

```
\booltrue{HTMLDebugComments}
```

debugging information To have debug information written to the log, use

```
\tracinglwarp
```

for HTML & PRINT: 1730 \begin{warpall}

`LWR@tracinglwarp (bool)` True if tracing is turned on.

```
1731 \newbool{\LWR@tracinglwarp}
```

`\tracinglwarp` Turns on the debug tracing messages.

```
1732 \newcommand{\tracinglwarp}{\booltrue{\LWR@tracinglwarp}}
```

`\LWR@traceinfo {<text>}` If tracing is turned on, writes the text to the .log file.

```
1733 \newcommand{\LWR@traceinfo}[1]{%
1734 \ifbool{\LWR@tracinglwarp}{%
```

```

1735 {%
1736     \typeout{*** l warp: #1}%
1737 }%
1738 {()}%
1739 }

```

`HTMLDebugComments (bool)` Add comments in HTML about closing <div>s, sections, etc.

`Default: false`

```

1740 \newbool{HTMLDebugComments}
1741 \boolfalse{HTMLDebugComments}

```

If `\tracingl warp`, show where preamble hooks occur:

```

1742 \AfterEndPreamble{
1743 \LWR@traceinfo{AfterEndPreamble}
1744 }%
1745
1746 \AtBeginDocument{
1747 \LWR@traceinfo{AtBeginDocument}
1748 }

1749 \end{warpall}

```

36 Defining print and HTML versions of macros and environments

The following refers to defining objects inside `l warp`, and may also be of some use for package authors to adapt their packages for `l warp`. The following is not for the user's document.

Many macros and environments must be provided as both print and HTML versions.

While generating the print version of a document, the original macros as defined by L^AT_EX and its packages are used as-is.

While generating the HTML version of a document, the original macro or environment is redefined to call a new HTML version or a copy of the original print version. The new HTML versions of macros and environments are used most of the time. Copies of the print versions are used inside a `lateximage` environment, which draws and remembers an image of the printed output, and also several other places.

The general structure for providing print and HTML versions of a macro or environment is as follows:

For a preexisting macro: An HTML version is provided with a special name, inside a `warpHTML` environment, then `\LWR@formatted` is used to redefine and patch various macros:

```
\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}

\LWR@formatted{name}
\end{warpHTML}
```

`\LWR@formatted{name}` copies the original print version to a new name `\LWR@print@<name>`, then redefines `\name` to use either the print or HTML version depending on which mode `lwarf` is using.

For a preexisting environment: The process is similar. Note the use of `\LWR@formattedenv` instead of `\LWR@formatted`.

```
\begin{warpHTML}
\newenvironment{\LWR@HTML@name}{...}{...}

\LWR@formattedenv{name}
\end{warpHTML}
```

For a new macro or environment: The print version is defined inside `warpall`, so that it can also be seen and modified by during HTML output.

```
\begin{warpall}
\newcommand{\name}{...}% The print version.
\end{warpall}

\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}

\LWR@formatted{name}
\end{warpHTML}
```

Similar for an environment, using `\formattedenv`.

In general, `\LWR@formatted` or `\LWR@formattedenv` are placed inside a `warpHTML` environment, and while producing an HTML document they do the following:

- Macros are modified:
 1. The pre-existing print version `\name` is saved as `\LWR@print@<name>`, unless `\LWR@print@<name>` is already defined.
 2. The original `\name` is redefined to call either the print or HTML version depending on which format is in use at the moment, as set by `\LWR@formatting`, which is defined as either “print” or “HTML”.
- When `lwarf` is producing a print document, the original definitions are used, as well as any new definitions defined in `warpall` above.
- When `lwarf` is generating HTML output, `\LWR@formatting` is set to “HTML”, and `\name` is directed to `\LWR@HTML@<name>`. For an environment, `\endname` is directed to `\endLWR@HTML@<name>`.
- When `lwarf` is generating HTML output but enters a `lateximage` environment, or for some other reason needs to draw images using the original print definitions, `\LWR@formatting` is changed to “print” and `\name` is then redirected to `\LWR@print@<name>`, which was the original `\name`.

- Since the new \name does not process any arguments, they are processed by \LWR@print@name or \LWR@HTML@name.

Expandable versions are also provided as well. These usually are necessary for anything which could appear inside a `tabular`, without which a “Misplaced \omit” error may occur.

```
\LWR@expandableformatted
\LWR@expandableformattedenv
```

(Older versions of l warp used \LetLtxMacro for everything, but this could fail when using macros defined by `xparse`. This older system is still in use for many definitions.)

Print or disabled versions:

for HTML & PRINT: 1750 `\begin{warpall}`

```
1751 \newcommand*{\LWR@formatted}[1]{}
1752 \newcommand*{\LWR@expandableformatted}[1]{}
1753 \newcommand*{\LWR@formattedenv}[1]{}
1754 \newcommand*{\LWR@expandableformattedenv}[1]{}

1755 \end{warpall}
```

for HTML output: HTML versions:

```
1756 \begin{warpHTML}
```

\LWR@formatting Remembers if selected print/HTML formatting.

Used while \LWR@restoreorigformatting, such as in an `lateximage`. May be set to either “print” or “HTML”.

```
1757 \newcommand*{\LWR@formatting}{HTML}
```

\LWR@formatted@checkname {*name*}

Verify that a print and HTML version exist.

```
1758 \newcommand*{\LWR@formatted@checkname}[1]{%
1759     \ifcsundef{\#1}{%
1760         \ifcsundef{\LWR@print@#1}{%
1761             \PackageError{l warp}%
1762             {%
1763                 \LWRbackslash#1 or \protect\LWR@print@#1\MessageBreak
1764                 must be defined before using \protect\LWR@formatted, etc%
1765             }%
1766             {Perhaps #1 is misspelled.}%
1767         }{\relax}%
1768     }{\relax}%
1769     \ifcsundef{\LWR@HTML@#1}{%
1770         \PackageError{l warp}%
1771         {%
1772             \protect\LWR@HTML@#1 must be defined
1773             before using \protect\LWR@formatted, etc%
1774         }%
1775     }%
1776 }
```

```

1775           {Perhaps #1 is misspelled.}
1776     }{\relax}%
1777 }

\LWR@formatted@checkendname {{name}}

1778 \newcommand*{\LWR@formatted@checkendname}[1]{%
1779   \ifcsundef{end#1}{%
1780     \ifcsundef{endLWR@print@#1}{%
1781       \PackageError{lwarp}{%
1782         \%
1783         \protect\end#1 or \protect\endLWR@print@#1\MessageBreak
1784         must be defined before using \protect\LWR@formatted, etc%
1785       }%
1786       {Perhaps #1 is misspelled.}%
1787     }{\relax}%
1788   }{\relax}%
1789   \ifcsundef{endLWR@HTML@#1}{%
1790     \PackageError{lwarp}{%
1791       \%
1792       \protect\endLWR@HTML@#1 must be defined
1793       before using \protect\LWR@formatted, etc%
1794     }%
1795     {Perhaps #1 is misspelled.}%
1796   }{\relax}%
1797 }

```

\LWR@formatted {{macroname}} No backslash in the macro name.

If not yet defined, defines \LWR@print@<name> as the original print-mode \<name>. Also redefines \<name> to use \LWR@<format>@<name>, where <format> is set by \LWR@formatting, and is print or HTML.

```

1798 \renewcommand*{\LWR@formatted}[1]{%
1799   \LWR@formatted@checkname{#1}%
1800   \ifcsundef{LWR@print@#1}{%
1801     \csNewCommandCopy{\LWR@print@#1}{\#1}%
1802   }{}%
1803   \ifcsundef{#1}{%
1804     \expandafter\newrobustcmd\csname #1\endcsname{%
1805       \nameuse{\LWR@\LWR@formatting @#1}%
1806     }%
1807   }{}%
1808   \expandafter\renewrobustcmd\csname #1\endcsname{%
1809     \nameuse{\LWR@\LWR@formatting @#1}%
1810   }%
1811 }%
1812 }

```

\LWR@expandableformatted {{macroname}} No backslash in the macro name.

An expandable version of \LWR@formatted.

```

1813 \renewcommand*{\LWR@expandableformatted}[1]{%
1814   \LWR@formatted@checkname{#1}%
1815   \ifcsundef{LWR@print@#1}{%
1816     \csNewCommandCopy{\LWR@print@#1}{\#1}%
1817   }{}%

```

```

1818     \ifcsundef{#1}{%
1819         \expandafter\newcommand\csname #1\endcsname{%
1820             \@nameuse{LWR@LWR@formatting @#1}%
1821         }%
1822     }{%
1823         \expandafter\renewcommand\csname #1\endcsname{%
1824             \@nameuse{LWR@LWR@formatting @#1}%
1825         }%
1826     }%
1827 }

```

\LWR@formattedenv {*environmentname*}

If not yet defined, defines the environment LWR@print@<name> as the original print-mode <name>. Also redefines the environment <name> to use environment LWR@<format>@<name>, where <format> is set by \LWR@formatting, and is print or HTML.

```

1828 \renewcommand*{\LWR@formattedenv}[1]{%
1829     \LWR@formatted@checkname{#1}%
1830     \LWR@formatted@checkendname{#1}%
1831     \ifcsundef{LWR@print@#1}{%
1832         \NewEnvironmentCopy{LWR@print@#1}{#1}%
1833     }{%
1834         \DeclareDocumentEnvironment{#1}{}{%
1835             \%
1836             \@nameuse{LWR@LWR@formatting @#1}%
1837         }%
1838     }{%
1839         \@nameuse{endLWR@LWR@formatting @#1}%
1840     }%
1841 }

```

\LWR@expandableformattedenv {*environmentname*}

An expandable version of \LWR@formattedenv.

```

1842 \renewcommand*{\LWR@expandableformattedenv}[1]{%
1843     \LWR@formatted@checkname{#1}%
1844     \LWR@formatted@checkendname{#1}%
1845     \ifcsundef{LWR@print@#1}{%
1846         \NewEnvironmentCopy{LWR@print@#1}{#1}%
1847     }{%
1848         \DeclareExpandableDocumentEnvironment{#1}{}{%
1849             \%
1850             \@nameuse{LWR@LWR@formatting @#1}%
1851         }%
1852     }{%
1853         \@nameuse{endLWR@LWR@formatting @#1}%
1854     }%
1855 }

```

1856 \end{warpHTML}

37 HTML-conversion output modifications

These booleans modify the HTML output in various ways to improve conversion to EPUB or word processor imports.

for HTML & PRINT: 1857 \begin{warpall}

37.1 User-level controls

FormatEPUB (bool) Changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.
Default: false

1858 \newbool{FormatEPUB}
 1859 \boolefalse{FormatEPUB}

FormatWP (bool) Changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments.
Default: false

1860 \newbool{FormatWP}
 1861 \boolefalse{FormatWP}

WPMarkFloats (bool) Adds
Default: false

```
==== begin table ====
...
==== end ====
or
==== begin figure ====
...
==== end ====

```

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.¹⁸

1862 \newbool{WPMarkFloats}
 1863 \boolefalse{WPMarkFloats}

WPMarkMinipages (bool) Adds
Default: false

```
==== begin minipage ====
...
==== end minipage ====

```

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

1864 \newbool{WPMarkMinipages}
 1865 \boolefalse{WPMarkMinipages}

WPMarkTOC (bool) While formatting for word processors, adds
Default: true

¹⁸Perhaps some day word processors will have HTML import options for identifying <figure> and caption tags for figures and tables.

==== table of contents ===

where the Table of Contents would have been. This helps identify where to insert the actual TOC.

If set false, the actual toc is printed instead.

```
1866 \newbool{WPMarkTOC}
1867 \booltrue{WPMarkTOC}
```

WPMarkLOFT (bool) While formatting for word processors, adds

Default: false

==== list of figures === and/or
==== list of tables ===

where each of these lists would have been. This helps identify where to insert the actual lists.

If set false, the actual lists are printed instead.

```
1868 \newbool{WPMarkLOFT}
1869 \boolfalse{WPMarkLOFT}
```

WPMarkMath (bool) While formatting for word processors, prints math as L^AT_EX code instead of creat-

Default: false creating SVG images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

```
1870 \newbool{WPMarkMath}
1871 \boolfalse{WPMarkMath}
```

WPTitleHeading (bool) While formatting for word processors, true sets the document title to <h1>,

Default: false which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOFFICE. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

See table 11 on page 186.

```
1872 \newbool{WPTitleHeading}
1873 \boolfalse{WPTitleHeading}
```

```
1874 \end{warpall}
```

37.2 Heading adjustments

If formatting the HTML for a word processor, adjust heading levels.

If WPTitleHeading is true, adjust so that part is **Heading 1**.

If WPTitleHeading is false, use <h1> for the title, and set part to **Heading 2**.

for HTML output: 1875 \begin{warpHTML}

```
1876 \AtBeginDocument{
1877 \ifbool{FormatWP}{
1878 \@ifundefined{chapter}{
```

```
1879 \ifbool{WPTitleHeading}{% part and section starting at h2
1880 \renewcommand*\{LWR@tagtitle\}{h1}
1881 \renewcommand*\{LWR@tagtitleend\}{/h1}
1882 \renewcommand*\{LWR@tagpart\}{h2}
1883 \renewcommand*\{LWR@tagpartend\}{/h2}
1884 \renewcommand*\{LWR@tagsection\}{h3}
1885 \renewcommand*\{LWR@tagsectionend\}{/h3}
1886 \renewcommand*\{LWR@tagsubsection\}{h4}
1887 \renewcommand*\{LWR@tagsubsectionend\}{/h4}
1888 \renewcommand*\{LWR@tagsubsubsection\}{h5}
1889 \renewcommand*\{LWR@tagsubsubsectionend\}{/h5}
1890 \renewcommand*\{LWR@tagparagraph\}{h6}
1891 \renewcommand*\{LWR@tagparagraphend\}{/h6}
1892 \renewcommand*\{LWR@tagsubparagraph\}{span class=\textquotedbl{}subparagraph\textquotedbl{}}
1893 \renewcommand*\{LWR@tagsubparagraphend\}{/span}
1894 }% WPTitleHeading
1895 {% not WPTitleHeading, part and section starting at h1
1896 \renewcommand*\{LWR@tagtitle\}{div class=\textquotedbl{}title\textquotedbl{}}
1897 \renewcommand*\{LWR@tagtitleend\}{/div}
1898 \renewcommand*\{LWR@tagpart\}{h1}
1899 \renewcommand*\{LWR@tagpartend\}{/h1}
1900 \renewcommand*\{LWR@tagsection\}{h2}
1901 \renewcommand*\{LWR@tagsectionend\}{/h2}
1902 \renewcommand*\{LWR@tagsubsection\}{h3}
1903 \renewcommand*\{LWR@tagsubsectionend\}{/h3}
1904 \renewcommand*\{LWR@tagsubsubsection\}{h4}
1905 \renewcommand*\{LWR@tagsubsubsectionend\}{/h4}
1906 \renewcommand*\{LWR@tagparagraph\}{h5}
1907 \renewcommand*\{LWR@tagparagraphend\}{/h5}
1908 \renewcommand*\{LWR@tagsubparagraph\}{h6}
1909 \renewcommand*\{LWR@tagsubparagraphend\}{/h6}
1910 }% not WPTitleHeading
1911 }% chapter undefined
1912 {% chapter defined
1913 \ifbool{WPTitleHeading}{%
1914 {% not WPTitleHeading, part and chapter starting at h1
1915 \renewcommand*\{LWR@tagtitle\}{div class=\textquotedbl{}title\textquotedbl{}}
1916 \renewcommand*\{LWR@tagtitleend\}{/div}
1917 \renewcommand*\{LWR@tagpart\}{h1}
1918 \renewcommand*\{LWR@tagpartend\}{/h1}
1919 \renewcommand*\{LWR@tagchapter\}{h2}
1920 \renewcommand*\{LWR@tagchapterend\}{/h2}
1921 \renewcommand*\{LWR@tagsection\}{h3}
1922 \renewcommand*\{LWR@tagsectionend\}{/h3}
1923 \renewcommand*\{LWR@tagsubsection\}{h4}
1924 \renewcommand*\{LWR@tagsubsectionend\}{/h4}
1925 \renewcommand*\{LWR@tagsubsubsection\}{h5}
1926 \renewcommand*\{LWR@tagsubsubsectionend\}{/h5}
1927 \renewcommand*\{LWR@tagparagraph\}{h6}
1928 \renewcommand*\{LWR@tagparagraphend\}{/h6}
1929 \renewcommand*\{LWR@tagsubparagraph\}{span class=\textquotedbl{}subparagraph\textquotedbl{}}
1930 \renewcommand*\{LWR@tagsubparagraphend\}{/span}
1931 }% not WPTitleHeading
1932 }% chapter defined
1933 }{% FormatWP
1934 }% AtBeginDocument
1935 \end{warpHTML}
```

38 Remembering original formatting macros

for HTML output: 1936 \begin{warpHTML}

Remember original definitions of formatting commands. Will be changed to HTML commands for most uses. Will be temporarily restored to original meaning inside any `\teximage` environment and inside a tabbing environment. Also nullify unused commands.

Some packages redefine `\#`, which is used to generate HTML, so the original must be remembered here.

```
1937 \chardef\LWR@origpound='\#
1938 \let\LWR@origcomma,
1939 \LetLtxMacro{\LWR@origtilde~}
1940 \LetLtxMacro{\LWR@orignobreakspace\nobreakspace}
1941 \let\LWR@orighfil\hfil
1942 \let\LWR@orighss\hss
1943 \let\LWR@origllap\llap
1944 \let\LWR@origrlap\rlap
1945 \let\LWR@orighfilneg\hfilneg
1946 \let\LWR@orighspace\hspace
1947
1948 \let\LWR@origrule\rule
1949
1950 \let\LWR@origmedskip\medskip
1951 \let\LWR@origbigskip\bigskip
```

`libertinus-otf` has too much kerning for `\textquotedbl`, causing an extra space.

```
1952 \LetLtxMacro{\LWR@orig@@textquotedbl\textquotedbl}
1953 \LetLtxMacro{\LWR@orig@textquotedbl\LWR@orig@@textquotedbl}
1954
1955 \AtEndPreamble{
1956 \IfPackageLoadedTF{libertinus-otf} {
1957   \renewcommand{\LWR@orig@textquotedbl}{\LWR@orig@@textquotedbl\kern-.15em}
1958   \LetLtxMacro{\textquotedbl\LWR@orig@textquotedbl}
1959 }{}}
1960 }

1961 \LetLtxMacro{\LWR@origttfamily\ttfamily}
1962
1963 \LetLtxMacro{\LWR@origem\em}
1964
1965 \LetLtxMacro{\LWR@orignormalfont\normalfont}
1966
1967 \let\LWR@origonecolumn\onecolumn
1968
1969 \let\LWR@origsp\sp
1970 \let\LWR@origsb\sb
1971
1972 \LetLtxMacro{\LWR@origunderline\underline}

1973 \let\LWR@orignewpage\newpage
1974
1975 \let\LWR@origpagestyle\pagestyle
```

```

1976 \let\LWR@origthispagestyle\thispagestyle
1977 \LetLtxMacro{\LWR@origpagenumbering}{\pagenumbering}
1978
1979 \let\LWR@orignewline\newline
1980
1981 \AtBeginDocument{%
1982   \let\LWR@orig@trivlist\@trivlist
1983   \let\LWR@origtrivlist\trivlist
1984   \let\LWR@origendtrivlist\endtrivlist
1985   \LetLtxMacro{\LWR@origitem}{\item}
1986   \LetLtxMacro{\LWR@origitemize}{\itemize}
1987   \LetLtxMacro{\LWR@endorigitemize}{\enditemize}
1988   \LetLtxMacro{\LWR@origenumerate}{\enumerate}
1989   \LetLtxMacro{\LWR@endorigenumerate}{\endenumerate}
1990   \LetLtxMacro{\LWR@origdescription}{\description}
1991   \LetLtxMacro{\LWR@endorigdescription}{\enddescription}
1992   \let\LWR@orig@mklab@\mklab
1993   \let\LWR@origmakelabel\makelabel
1994   \let\LWR@orig@donoparitem\@donoparitem
1995   \LetLtxMacro{\LWR@orig@item}{\item}
1996   \let\LWR@orig@nbitem\@nbitem
1997 }
1998
1999 \let\LWR@origpar\par
2000
2001 \LetLtxMacro{\LWR@origfootnote}{\footnote}
2002 \let\LWR@orig@mpfootnotetext\@mpfootnotetext
2003
2004
2005 \AtBeginDocument{%
2006   \LetLtxMacro{\LWR@orighline}{\hline}
2007   \LetLtxMacro{\LWR@origcline}{\cline}
2008 }

```

2009 \end{warpHTML}

39 Accents

Native L^AT_EX accents such as \" will work, but many more kinds of accents are available when using Unicode-aware X_EL^AT_EX and LuaL^AT_EX. If using accents in section names which will become file names, it is recommended to use the L^AT_EX accents such as \" and \v instead of Unicode accents. The L^AT_EX accents will have the accents stripped when creating the filenames, whereas the Unicode accents will appear in the file names, which may cause issues with some operating systems.

for HTML output: 2010 \begin{warpHTML}

Without \AtBeginDocument, \t was being re-defined somewhere.

2011 \AtBeginDocument{

The following are restored for print when inside a \teximage.

For Unicode engines, only \t needs to be redefined:

2012 \LetLtxMacro{\LWR@origtie}{\t}

For PDF L^AT_EX, additional work is required:

```

2013 \ifPDFTeX% pdflatex or dvi latex
2014 \LetLtxMacro{\LWR@origgraveaccent}{`}
2015 \LetLtxMacro{\LWR@origacuteaccent}{`}
2016 \LetLtxMacro{\LWR@origcircumflexaccent}{^}
2017 \LetLtxMacro{\LWR@origtildeaccent}{\~}
2018 \LetLtxMacro{\LWR@origmacronaccent}{=}
2019 \LetLtxMacro{\LWR@origbreve}{\u}
2020 \LetLtxMacro{\LWR@origdotaccent}{.}
2021 \LetLtxMacro{\LWR@origdiaeresisaccent}{"}
2022 \LetLtxMacro{\LWR@origdoubleacuteaccent}{\H}
2023 \LetLtxMacro{\LWR@origcaronaccent}{\v}
2024 \LetLtxMacro{\LWR@origdotbelowaccent}{\d}
2025 \LetLtxMacro{\LWR@origcedillaaccent}{\c}
2026 \LetLtxMacro{\LWR@origmacronbelowaccent}{\b}
```

The HTML redefinitions follow.

For PDF L^AT_EX, Unicode diacritical marks are used:

```

2027 \renewcommand*{'[1]{#1\HTMLunicode{0300}}
2028 \renewcommand*{'[1]{#1\HTMLunicode{0301}}
2029 \renewcommand*{^}[1]{#1\HTMLunicode{0302}}
2030 \renewcommand*{~}[1]{#1\HTMLunicode{0303}}
2031 \renewcommand*{=}[1]{#1\HTMLunicode{0304}}
2032 \renewcommand*{\u}[1]{#1\HTMLunicode{0306}}
2033 \renewcommand*{.}[1]{#1\HTMLunicode{0307}}
2034 \renewcommand*{"}[1]{#1\HTMLunicode{0308}}
2035 \renewcommand*{\H}[1]{#1\HTMLunicode{030B}}
2036 \renewcommand*{\v}[1]{#1\HTMLunicode{030C}}
2037 \renewcommand*{\d}[1]{#1\HTMLunicode{0323}}
2038 \renewcommand*{\c}[1]{#1\HTMLunicode{0327}}
2039 \renewcommand*{\b}[1]{#1\HTMLunicode{0331}}
2040 \fi
```

For all engines, a Unicode diacritical tie is used:

```

2041 \def\LWR@t#1#2{#1\HTMLunicode{0361}#2}
2042 \renewcommand*{\t}[1]{\LWR@t#1}
```

\LWR@restoreorigaccents Called from \restoreoriginalformatting when a *lateximage* is begun.

```

2043 \ifPDFTeX% pdflatex or dvi latex
2044 \newcommand*{\LWR@restoreorigaccents}{%
2045   \LetLtxMacro{\`}{\LWR@origgraveaccent%}
2046   \LetLtxMacro{\'}{\LWR@origacuteaccent%}
2047   \LetLtxMacro{\^}{\LWR@origcircumflexaccent%}
2048   \LetLtxMacro{\~}{\LWR@origtildeaccent%}
2049   \LetLtxMacro{=}{\LWR@origmacronaccent%}
2050   \LetLtxMacro{\u}{\LWR@origbreve%}
2051   \LetLtxMacro{\.}{\LWR@origdotaccent%}
2052   \LetLtxMacro{\"}{\LWR@origdiaeresisaccent%}
2053   \LetLtxMacro{\H}{\LWR@origdoubleacuteaccent%}
2054   \LetLtxMacro{\v}{\LWR@origcaronaccent%}
2055   \LetLtxMacro{\t}{\LWR@origtie%}
2056   \LetLtxMacro{\d}{\LWR@origdotbelowaccent%}
2057   \LetLtxMacro{\c}{\LWR@origcedillaaccent%}
2058   \LetLtxMacro{\b}{\LWR@origmacronbelowaccent%}
```

```

2059 }%
2060 \else% XeLaTeX, LuaLaTeX:
2061 \newcommand*\LWR@restoreorigaccents{%
2062     \LetLtxMacro\t\LWR@origtie%
2063 }%
2064 \fi%
2065 }% AtBeginDocument

2066 \end{warpHTML}

```

40 Configuration files

40.1 Decide whether to generate configuration files

Configuration files are only written if processing the print version of the document, and not processing a `pstool` image. `pstool` uses an additional compile for each image using the original document's preamble, which includes `l warp`, so the `l warp` configuration files are turned off if `-pstool` is part of the `\jobname`.

Default to no configuration files:

```
2067 \LWR@excludecomment{LWRwriteconf}{writeconf}
```

Generate configuration files if print mode and not `-pstool`:

```

for PRINT output: 2068 \begin{warpprint}
2069 \fullexpandarg%
2070 \IfSubStr*{\jobname}{-pstool}
2071   {
2072     \PackageInfo{l warp}{%
2073       Jobname with -pstool is found.\MessageBreak
2074       Not generating l warp configuration files,%
2075     }
2076   }
2077   {
2078     \PackageInfo{l warp}{Generating l warp configuration files,}%
2079     \LWR@includecomment{LWRwriteconf}{writeconf}
2080   }
2081 \end{warpprint}

```

40.2 <project>.html.tex

`*.html.tex` (*file*) Used to allow an HTML version of the document to exist alongside the print version.

```

Config file: 2082 \begin{LWRwriteconf}
2083 \immediate\openout\LWR@quickfile=\jobname_html.tex
2084 \immediate\write\LWR@quickfile{%
2085 \detokenize{\PassOptionsToPackage}{%
2086 {warpHTML,BaseJobname=\jobname}{l warp}}%
2087 }%
2088 \immediate\write\LWR@quickfile{%
2089 \detokenize{\input}\string{\jobname.tex}\string }%
2090 }

```

```
2091 \immediate\closeout\LWR@quickfile
2092 \end{LWRwriteconf}
```

40.3 *lwarpmk* configuration files

Config file: 2093 \begin{LWRwriteconf}

\LWR@lwarpcfversion The version number of the configuration file, allowing *lwarpmk* to detect an obsolete configuration file format. Incremented by one each time the configuration file format changes. (This is NOT the same as the *l warp* version number.)

```
2094 \newcommand*\{\LWR@lwarpcfversion\}{2}%
also in lwarpmk.lua
```

40.3.1 Helper macros

\LWR@shellescapecmd The LaTeX compile option for shell escape, if used.

```
2095 \ifshellescape
2096   \def\LWR@shellescapecmd{--shell-escape }
2097 \else
2098   \def\LWR@shellescapecmd{}
2099 \fi
```

\LWR@compilecmd {\langle engine\rangle} {\langle suffix\rangle}

Used to form the basic compilation command for a document, adding the optional shell escape.

Engine is *pdflatex*, etc. Suffix is empty or _html

```
2100 \newcommand*\{\LWR@compilecmd\}[2]{%
2101   #1 \LWR@shellescapecmd \jobname#2%
2102 }
```

\LWR@addcompilecmd {\langle cmd\rangle} {\langle suffix\rangle}

Adds to the compilation command.

Cmd is *dvipdfmx*, etc. Suffix is empty or _html

```
2103 \newcommand*\{\LWR@addcompilecmd\}[2]{%
2104   \LWRopseq
2105   #1 \jobname#2%
2106 }
```

\LWR@unknownengine Error message if not sure which L^AT_EX engine is being used.

```
2107 \newcommand*\{\LWR@unknownengine\}{%
2108   \PackageError{l warp}{%
2109     {Unknown LaTeX engine}%
2110     {%
2111       Lwarp only knows about pdflatex, DVI latex,
2112       xelatex, lualatex, and upLateX.%}
2113   }%
2114 }
```

\LWR@latexmkvar {*<varname>*} {*<value>*}

Adds a *latexmk* variable assignment.

```
2115 \newcommand*{\LWR@latexmkvar}[2]{%
2116     -e
2117     \LWRopquote%
2118     \LWRdollar #1=q/#2/%
2119     \LWRopquote
2120 }
```

\LWR@latexmkcmd {*<latexmk options>*}

Sets a call to *latexmk* with the given options, possibly adding --shell-escape, and also adding the indexing program.

```
2121 \newcommand*{\LWR@latexmkcmd}[1]{%
2122     latexmk \space \LWR@shellescapecmd \space #1 \space
2123     -recorder \space
2124     \LWR@latexmkvar{makeindex}{\LWR@LatexmkIndexCmd}%
2125 }
```

\LWR@Latexmkdvipdfm {*<dvipdfm or dvipdfmx>*}

Adds the options settings for *dvipdfm* or *dvipdfmx*.

```
2126 \newcommand*{\LWR@Latexmkdvipdfm}[1]{%
2127     -pdfdvi \space
2128     \LWR@latexmkvar{dvipdf}{%
2129         #1
2130         \@percentchar 0
2131         -o \@percentchar D
2132         \@percentchar S%
2133     }
2134 }
```

\LWR@compileuplatex Sets compile options for upL^AT_EX with *ujarticle* or related classes.

```
2135 \newcommand*{\LWR@compileuplatex}{%
2136     \def\LWR@tempprintlatexcmd{%
2137         \LWR@compilecmd{uplatex}{}
2138         \LWR@addcompilecmd{dvipdfmx}{}
2139     }
2140     \def\LWR@tempHTMLlatexcmd{%
2141         \LWR@compilecmd{uplatex}{_html}
2142         \LWR@addcompilecmd{dvipdfmx}{_html}
2143     }
2144 }
```

\LWR@PrintLatexCmd If not set by the user, the following sets the command to use to compile the source \LWR@HTMLLatexCmd to PDF form.

If using *latexmk*, a complicated string is created, eventually resulting in something such as:

For *xelatex* with --shell-escape:

```
[[latexmk -xelatex --shell-escape -recorder
-e '$makeindex = q/makeindex -s lwarf.ist/' <jobname>_html]]
```

For *dvipdfmx*:

```
[[latexmk -pdfdvi -e '$dvipdf=q/dvipdfmx %0 -o %D %S/'
-recorder
-e '$makeindex=q/makeindex -s lwarf.ist/' <jobname>_html]]
```

For the following, temporary values are computed, but the permanent values are only set if the originals were not assigned by the user.

2145 \ifbool{LWR@latexmk}{

For *latexmk* with *pdflatex* or *lualatex*:

2146 \ifpdf

For *latexmk* with *pdflatex*:

2147 \ifPDFTeX
2148 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}}
2149 \else

For *latexmk* with *lualatex*:

2150 \ifLuaTeX
2151 \def\LWR@latexcmd{\LWR@latexmkcmd{-lualatex}}
2152 \else
2153 \LWR@unknownengine
2154 \fi
2155 \fi
2156 \else% \ifpdf

For *latexmk* with *xelatex* or *DVI latex*:

2157 \ifXeTeX

For *latexmk* with *xelatex*:

2158 \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}}
2159 \else% \ifXeTeX

For *latexmk* with *DVI latex*:

2160 \ifbool{LWR@dvipdfm}{%
2161 \def\LWR@latexcmd{%
2162 \LWR@latexmkcmd{%
2163 \LWR@latexmkdvipdfm{dvipdfm}}%
2164 }%
2165 }%
2166 }{%
2167 \ifbool{LWR@dvipdfmx}{%
2168 \def\LWR@latexcmd{%

```

2169          \LWR@latexmkcmd{%
2170              \LWR@latexmkdvipdfm{dvipdfmx}%
2171          }
2172      }
2173  }{
2174      \def\LWR@latexcmd{\LWR@latexmkcmd{-pdfps}}
2175  }
2176  }
2177  \fi
2178 \fi% \ifpdf

```

The final assignment if *latexmk*:

```

2179 \def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
2180 \def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
2181 }% latexmk

```

Without *latexmk*, the compiling command is simply the compiler name and the optional shell escape:

```

2182 {%
2183     \not latexmk
2184     \ifpdf

```

For *pdflatex* or *lualatex*:

```

2184     \ifPDFTeX

```

For *pdflatex*:

```

2185     \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdflatex}{}}
2186     \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdflatex}{_html}}
2187     \else
2188     \ifLuaTeX

```

For *lualatex*:

```

2189     \def\LWR@tempprintlatexcmd{\LWR@compilecmd{lualatex}{}}
2190     \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{lualatex}{_html}}
2191     \else
2192         \LWR@unknownengine
2193     \fi
2194     \fi
2195 \else% \ifpdf

```

For *dvi* *latex* or *xelatex*:

```

2196     \ifXeTeX

```

For *xelatex*:

```

2197     \def\LWR@tempprintlatexcmd{\LWR@compilecmd{xelatex}{}}
2198     \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{xelatex}{_html}}
2199     \else

```

For *dvi* *latex*. Default to *dvips*, unless told to use *dvipdfm* or *dvipdfmx*:

```

2200     \ifbool{\LWR@dvipdfm}{%

```

For dvi *latex* with *dvipdfm*:

```

2201           \def\LWR@tempprintlatexcmd{%
2202               \LWR@compilecmd{latex}{}%
2203               \LWR@addcompilecmd{dvipdfm}{}%
2204           }%
2205           \def\LWR@tempHTMLlatexcmd{%
2206               \LWR@compilecmd{latex}{_html}%
2207               \LWR@addcompilecmd{dvipdfm}{_html}%
2208           }%
2209       }{%
2210           \ifbool{\LWR@dvipdfmx}{%

```

For dvi *latex* with *dvipdfmx*:

```

2211           \def\LWR@tempprintlatexcmd{%
2212               \LWR@compilecmd{latex}{}%
2213               \LWR@addcompilecmd{dvipdfmx}{}%
2214           }%
2215           \def\LWR@tempHTMLlatexcmd{%
2216               \LWR@compilecmd{latex}{_html}%
2217               \LWR@addcompilecmd{dvipdfmx}{_html}%
2218           }%
2219       }% dvips

```

For dvi *latex* with *dvips* and *ps2pdf*:

```

2220           \def\LWR@tempprintlatexcmd{%
2221               \LWR@compilecmd{latex}{}%
2222               \LWR@addcompilecmd{dvips}{}%
2223               \LWR@addcompilecmd{ps2pdf -dALLOWPSTRANSPARENCY}{}%.ps
2224           }%
2225           \def\LWR@tempHTMLlatexcmd{%
2226               \LWR@compilecmd{latex}{_html}%
2227               \LWR@addcompilecmd{dvips}{_html}%
2228               \LWR@addcompilecmd{ps2pdf -dALLOWPSTRANSPARENCY}{_html}.ps
2229           }%
2230       }%
2231   }%
2232   \fi% \ifXeTeX
2233 \fi% \ifpdf
2234 }% latexmk

```

For *ujarticle*, *utarticle*, and related, using up^LA_TE_X and *dvipdfmx*:

```

2235 \IfClassLoadedTF{ujarticle}{\LWR@compileuplateX}{}
2236 \IfClassLoadedTF{ujbook}{\LWR@compileuplateX}{}
2237 \IfClassLoadedTF{ujreport}{\LWR@compileuplateX}{}
2238 \IfClassLoadedTF{utarticle}{\LWR@compileuplateX}{}
2239 \IfClassLoadedTF{utbook}{\LWR@compileuplateX}{}
2240 \IfClassLoadedTF{utreport}{\LWR@compileuplateX}{}

```

Only make the setting permanent if the original was empty:

```

2241 \ifdefempty{\LWR@PrintLatexCmd}{%
2242     \def\LWR@PrintLatexCmd{\LWR@tempprintlatexcmd}%
2243 }{%
2244 \ifdefempty{\LWR@HTMLLatexCmd}{%
2245     \def\LWR@HTMLLatexCmd{\LWR@tempHTMLlatexcmd}%

```

```
2246 }{}
```

```
\LWR@writeconf {\i<filename>}
```

Common code for each of `lwarpmk.conf` and `<project>.lwarpmkconf`. Each entry is a variable name, the equal sign, and a quoted string inside [[and]], which are *lua*'s long quote characters, allowing the use of single and double quotes inside.

```
2247 \newcommand{\LWR@writeconf}[1]{  
2248 \ifcsdef{\LWR@quickfile}{}{\newwrite{\LWR@quickfile}}  
2249 \immediate\openout\LWR@quickfile=#1  
2250 \immediate\write{\LWR@quickfile{confversion = [[\LWR@lwarpmkconfversion]]}}  
2251 \ifboole{usingOSWindows}{  
2252   \immediate\write{\LWR@quickfile{opsystem = [[Windows]]}}  
2253 }{  
2254   \immediate\write{\LWR@quickfile{opsystem = [[Unix]]}}  
2255 }  
2256 \immediate\write{\LWR@quickfile{sourcename = [[\jobname]]}}  
2257 \immediate\write{\LWR@quickfile{homehtmlfilename = [[\HomeHTMLFilename]]}}  
2258 \immediate\write{\LWR@quickfile{htmlfilename = [[\HTMLFilename]]}}  
2259 \immediate\write{\LWR@quickfile{imagesdirectory = [[\LWR@ImagesDirectory]]}}  
2260 \immediate\write{\LWR@quickfile{imagesname = [[\LWR@ImagesName]]}}  
2261 \immediate\write{\LWR@quickfile{latexmk = [[\ifboole{\LWR@latexmk}{true}{false}]}}}  
2262 \immediate\write{\LWR@quickfile{printlatexcmd = [[\LWR@PrintLatexCmd]]}}  
2263 \immediate\write{\LWR@quickfile{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}}  
2264 \immediate\write{\LWR@quickfile{printindexcmd = [[\LWR@PrintIndexCmd]]}}  
2265 \immediate\write{\LWR@quickfile{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}}  
2266 \immediate\write{\LWR@quickfile{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}}  
2267 \immediate\write{\LWR@quickfile{glossarycmd = [[\LWR@GlossaryCmd]]}}  
2268 \immediate\write{\LWR@quickfile{pdftotextenc = [[\LWR@pdftotextEnc]]}}  
2269 \immediate\closeout{\LWR@quickfile}  
2270 }  
2271  
2272 \end{LWR@writeconf}
```

40.3.2 `lwarpmk.conf`

`lwarpmk.conf` (*file*) `lwarpmk.conf` is automatically (re-)created by the `lwarf` package when executing `pdflatex <project.tex>`, or similar for `xelatex` or `lualatex`, in print-document generation mode, which is the default unless the `warpHTML` option is given. `lwarpmk.conf` is then used by the utility `lwarpmk`.

Config file: 2273 `\begin{LWR@writeconf}`
 2274
 2275 `\AtBeginDocument{\LWR@writeconf{lwarpmk.conf}}`
 2276
 2277 `\end{LWR@writeconf}`

40.3.3 `<project>.lwarpmkconf`

`project.lwarpmkconf` (*file*) A project-specific configuration file for `lwarpmk`.

The `makeindex` and `xindy` options have already been handled for `lwarf.conf`.

```
Config file: 2278 \begin{LWRwriteconf}
2279
2280 \AtBeginDocument{\LWR@writeconf{\jobname.lwarpmkconf}}
2281
2282 \end{LWRwriteconf}
```

40.4 lwarf.css

lwarf.css (*file*) This is the base css layer used by lwarf.

This must be present both when compiling the project and also when distributing the HTML files.

```
Config file: 2283 \begin{LWRwriteconf}
2284 \begin{filecontents*}[overwrite]{lwarf.css}
2285 /*
2286   CSS stylesheet for the LaTeX Lwarf package
2287   Copyright 2016-2022 Brian Dunn - BD Tech Concepts LLC
2288 */
2289
2290
2291 /* a fix for older browsers: */
2292 header, section, footer, aside, nav, main,
2293   article, figure { display: block; }
2294
2295
2296 A:link {color:#000080 ; text-decoration: none ; }
2297 A:visited {color:#800000 ; }
2298 A:hover {color:#000080 ; text-decoration: underline ;}
2299 A:active {color:#800000 ; }
2300
2301 a.tocbook {display: inline-block ; margin-left: 0em ;
2302   font-weight: bold ; margin-top: 1ex ; margin-bottom: 1ex ; }
2303 a.tocpart {display: inline-block ; margin-left: 0em ;
2304   font-weight: bold ;}
2305 a.tocchapter {display: inline-block ; margin-left: 0em ;
2306   font-weight: bold ;}
2307 a.tocsection {display: inline-block ; margin-left: 1em ;
2308   text-indent: -.5em ; font-weight: bold ;}
2309 a.tocsubsection {display: inline-block ; margin-left: 2em ;
2310   text-indent: -.5em ;}
2311 a.tocsubsubsection {display: inline-block ; margin-left: 3em ;
2312   text-indent: -.5em ;}
2313 a.tocparagraph {display: inline-block ; margin-left: 4em ;
2314   text-indent: -.5em ;}
2315 a.tocsubparagraph {display: inline-block ; margin-left: 5em ;
2316   text-indent: -.5em ;}
2317 a.tocfigure {margin-left: 0em}
2318 a.tocsubfigure {margin-left: 2em}
2319 a.toctable {margin-left: 0em}
2320 a.tocsubtable {margin-left: 2em}
2321 a.toctheorem {margin-left: 0em}
2322 a.toclstlisting {margin-left: 0em}
2323
2324 body {
2325   font-family: "DejaVu Serif", "Bitstream Vera Serif",
2326     "Lucida Bright", Georgia, serif;
2327   background: #FAF7F4 ;
2328   color: black ;
```

```
2329     margin:0em ;
2330     padding:0em ;
2331     font-size: 100% ;
2332     line-height: 1.2 ;
2333 }
2334
2335 p {margin: 1.5ex 0em 1.5ex 0em ;}
2336 table p {margin: .5ex 0em .5ex 0em ;}
2337
2338 /* Holds a section number */
2339 span.sectionnumber { margin-right: 0em }
2340
2341 /* Inserted in front of index lines */
2342 span.indexitem {margin-left: 0em}
2343 span.indexsubitem {margin-left: 2em}
2344 span.indexsubsubitem {margin-left: 4em}
2345 div.indexheading {margin-top: 2ex ; font-weight: bold}
2346
2347 div.hidden, span.hidden { display: none ; }
2348
2349 kbd, span.texttt, p span.texttt {
2350     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2351         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2352         "Courier New", monospace;
2353     font-size: 100% ;
2354 }
2355
2356 pre { padding: 3pt ; }
2357
2358 span.strong, span.textbf, div.strong, div.textbf, table td.tdbfseries { font-weight: bold; }
2359
2360 span.textit, div.textit, table td.tditshape { font-style: italic; }
2361
2362 table td.tdbfit { font-weight: bold ; font-style:italic }
2363
2364 span.textnormal, div.textnormal {
2365     font-weight: normal;
2366     font-style: normal;
2367     font-variant: normal;
2368     font-variant-numeric: normal ;
2369     font-family: "DejaVu Serif", "Bitstream Vera Serif",
2370         "Lucida Bright", Georgia, serif;
2371 }
2372
2373 span.textmd, div.textmd { font-weight: normal; }
2374
2375 span.textup, div.textup {
2376     font-style: normal;
2377     font-variant: normal;
2378     font-variant-numeric: normal ;
2379 }
2380
2381
2382 /* For complex number i,j symbols */
2383 span.ijit {font-style: italic; font-variant: normal}
2384 span.ijup {font-style: normal; font-variant: normal}
2385
2386
2387 span.textsc, div.textsc {
2388     font-variant: small-caps;
```

```
2389     font-variant-numeric: oldstyle-nums ;
2390 }
2391
2392 span.textulc, div.textulc {
2393     font-variant: normal ;
2394     font-variant-numeric: normal ;
2395 }
2396
2397 span.textsl, div.textsl { font-style: oblique; }
2398
2399 span.textrm, div.textrm {
2400     font-family: "DejaVu Serif", "Bitstream Vera Serif",
2401     "Lucida Bright", Georgia, serif;
2402 }
2403
2404 span.textsf, div.textsf {
2405     font-family: "DejaVu Sans", "Bitstream Vera Sans",
2406     Geneva, Verdana, sans-serif ;
2407 }
2408
2409 /* nfssext-cfr lining figures */
2410 span.textln, div.textln {
2411     font-variant-numeric: lining-nums ;
2412 }
2413
2414 /* nfssext-cfr proportional figures */
2415 span.textp, div.textp {
2416     font-variant-numeric: proportional-nums ;
2417 }
2418
2419 /* nfssext-cfr tabular figures */
2420 span.texttt, div.texttt {
2421     font-variant-numeric: tabular-nums ;
2422 }
2423
2424 /* nfssext-cfr font weights */
2425 span.textdb, div.textdb {
2426     font-weight: 500 ;
2427 }
2428
2429 span.textsb, div.textsb {
2430     font-weight: 600 ;
2431 }
2432
2433 span.texteb, div.texteb {
2434     font-weight: 800 ;
2435 }
2436
2437 span.textub, div.textub {
2438     font-weight: 900 ;
2439 }
2440
2441 span.textlg, div.textlg {
2442     font-weight: 300 ;
2443 }
2444
2445 span.textel, div.textel {
2446     font-weight: 200 ;
2447 }
2448
```

```
2449 span.textul, div.textul {
2450     font-weight: 100 ;
2451 }
2452
2453
2454
2455 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
2456
2457 span.underline {
2458     text-decoration: underline ;
2459     text-decoration-skip: auto ;
2460 }
2461
2462 span.overline {
2463     text-decoration: overline ;
2464     text-decoration-skip: auto ;
2465 }
2466
2467 div.hrule { border-top: 1px solid silver }
2468
2469
2470 /* for vertical text: */
2471 div.verticalrl { writing-mode: vertical-rl }
2472 div.horizontaltb { writing-mode: horizontal-tb }
2473
2474
2475 /* for diagbox */
2476 div.diagboxtitleN { border-bottom: 1px solid gray }
2477 div.diagboxtitleS { border-top: 1px solid gray }
2478
2479 div.diagboxE {
2480     padding-left: 2em ;
2481     text-align: right ;
2482 }
2483
2484 div.diagboxW {
2485     padding-right: 2em ;
2486     text-align: left ;
2487 }
2488
2489
2490
2491 /* For realscripts */
2492 .supsubscript {
2493     display: inline-block;
2494     text-align:left ;
2495 }
2496
2497 .supsubscript sup,
2498 .supsubscript sub {
2499     position: relative;
2500     display: block;
2501     font-size: .7em;
2502     line-height: 1;
2503 }
2504
2505 .supsubscript sup {
2506     top: .3em;
2507 }
2508
```

```
2509 .supsubscript sub {
2510     top: .3em;
2511 }
2512
2513 div.attribution p {
2514     text-align: right ;
2515     font-size: 80%
2516 }
2517
2518 span.poemtitle {
2519     font-size: 120% ; font-weight: bold;
2520 }
2521
2522 pre.tabbing {
2523     font-family: "Linux Libertine Mono O", "Lucida Console",
2524         "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2525         "Liberation Mono", "FreeMono", "Andale Mono",
2526         "Nimbus Mono L", "Courier New", monospace;
2527 }
2528
2529 blockquote {
2530     display: block ;
2531     margin-left: 2em ;
2532     margin-right: 2em ;
2533 }
2534
2535 /* quotchap is for the quotchap package */
2536 div.quotchap {
2537     display: block ;
2538     font-style: oblique ;
2539     overflow-x: auto ;
2540     margin-left: 2em ;
2541     margin-right: 2em ;
2542 }
2543
2544 blockquote p, div.quotchap p {
2545     line-height: 1.5;
2546     text-align: left ;
2547     font-size: .85em ;
2548 }
2549
2550 /* qauthor is for the quotchap package */
2551 div.qauthor {
2552     display: block ;
2553     text-align: right ;
2554     margin-left: auto ;
2555     margin-right: 2em ;
2556     font-size: 80% ;
2557     font-variant: small-caps;
2558 }
2559
2560 div.qauthor p {
2561     text-align: right ;
2562 }
2563
2564 div.epigraph, div.dictum {
2565     line-height: 1.2;
2566     text-align: left ;
2567     padding: 3ex 1em 0ex 1em ;
2568 /*     margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
```

```
2569     margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
2570 /*      margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
2571     font-size: .85em ;
2572     max-width: 27em ;
2573 }
2574
2575 div.epigraphsource, div.dictumauthor {
2576     text-align:right ;
2577     margin-left:auto ;
2578 /*      max-width: 50% ; */
2579     border-top: 1px solid #A0A0A0 ;
2580     padding-bottom: 3ex ;
2581     line-height: 1.2;
2582 }
2583
2584 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ;}
2585 div.epigraphsource p, div.dictumauthor p { padding: .5ex 0ex 0ex 0ex ; margin: 0ex ;}
2586 div.dictumauthor { font-style:italic }
2587
2588
2589 /* copyrightbox package: */
2590 div.copyrightbox { margin: .5ex .5em }
2591 div.copyrightbox p {margin: 0px .5em ; padding: 0px}
2592 div.copyrightboxnote {text-align: left ; font-size: 60%}
2593
2594
2595 /* lettrine package: */
2596 span.lettrine { font-size: 4ex ; float: left ; }
2597 span.lettrinetext { font-variant: small-caps ; }
2598
2599 /* ulem, soul, umoline packages: */
2600 span.uline {
2601     text-decoration: underline ;
2602     text-decoration-skip: auto ;
2603 }
2604
2605 span.uline {
2606     text-decoration: underline ;
2607     text-decoration-skip: auto ;
2608     text-decoration-style: double ;
2609 }
2610
2611 span.uwave {
2612     text-decoration: underline ;
2613     text-decoration-skip: auto ;
2614     text-decoration-style: wavy ;
2615 }
2616
2617 span.sout {
2618     text-decoration: line-through ;
2619 }
2620
2621 span.oline {
2622     text-decoration: overline ;
2623     text-decoration-skip: auto ;
2624 }
2625
2626 span.xout {
2627     text-decoration: line-through ;
2628 }
```

```
2629
2630 span.dashuline {
2631     text-decoration: underline ;
2632     text-decoration-skip: auto ;
2633     text-decoration-style: dashed ;
2634 }
2635
2636 span.dotuline {
2637     text-decoration: underline ;
2638     text-decoration-skip: auto ;
2639     text-decoration-style: dotted ;
2640 }
2641
2642 span.letterspacing { letter-spacing: .2ex ; }
2643
2644 span.capsspacing {
2645     font-variant: small-caps ;
2646     letter-spacing: .1ex ;
2647 }
2648
2649 span.highlight { background: #F8E800 ; }
2650
2651
2652 /* keystroke package: */
2653 span.keystroke {
2654     border-style: outset ;
2655     padding: 0pt .5em 0pt .5em ;
2656 }
2657
2658
2659 html body {
2660     margin: 0 ;
2661     line-height: 1.2;
2662 }
2663
2664
2665 body div {
2666     margin: 0ex;
2667 }
2668
2669
2670 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2671 {
2672     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2673         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2674         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2675         "Times New Roman", serif;
2676     font-style: normal ;
2677     font-weight: bold ;
2678     text-align: left ;
2679 }
2680
2681 h1 { /* title of the entire website, used on each page */
2682     text-align: center ;
2683     font-size: 2.5em ;
2684     padding: .4ex 0em 0ex 0em ;
2685 }
2686
2687 div.book {
2688     text-align: center ;
```

```
2689     font-size: 2.325em ;
2690     padding: .4ex 0em 0ex 0em ;
2691 }
2692
2693 h2 { font-size: 2.25em }
2694 h3 { font-size: 2em }
2695 h4 { font-size: 1.75em }
2696 h5 { font-size: 1.5em }
2697 h6 { font-size: 1.25em }
2698 span.paragraph {font-size: 1em ; font-variant: normal ;
2699     margin-right: 1em ; }
2700 span.subparagraph {font-size: 1em ; font-variant: normal ;
2701     margin-right: 1em ; }
2702
2703 div.minisec {
2704     font-family: "DejaVu Sans", "Bitstream Vera Sans",
2705         Geneva, Verdana, sans-serif ;
2706     font-style: normal ;
2707     font-weight: bold ;
2708     text-align: left ;
2709 }
2710
2711 h1 {
2712     margin: 0ex 0em 0ex 0em ;
2713     line-height: 1.3;
2714     text-align: center ;
2715 }
2716
2717 h2 {
2718     margin: 1ex 0em 1ex 0em ;
2719     line-height: 1.3;
2720     text-align: center ;
2721 }
2722
2723 h3 {
2724     margin: 3ex 0em 1ex 0em ;
2725     line-height: 1.3;
2726 }
2727
2728 h4 {
2729     margin: 3ex 0em 1ex 0em ;
2730     line-height: 1.3;
2731 }
2732
2733 h5 {
2734     margin: 3ex 0em 1ex 0em ;
2735     line-height: 1.3;
2736 }
2737
2738 h6 {
2739     margin: 3ex 0em 1ex 0em ;
2740     line-height: 1.3;
2741 }
2742
2743
2744 div.titlepage {
2745     text-align: center ;
2746 }
2747
2748 .footnotes {
```

```
2749     text-align: left ;
2750     font-size: .85em ;
2751     margin: 3ex 2em 0ex 2em ;
2752     border-top: 1px solid silver ;
2753 }
2754
2755 .marginpar, .marginparblock {
2756     max-width: 50%;
2757     float: right ;
2758     clear: both ;
2759     text-align: left ;
2760     margin: 1ex 0.5em 1ex 1em ;
2761     padding: 1ex 0.5em 1ex 0.5em ;
2762     font-size: 85% ;
2763     border-top: 1px solid silver ;
2764     border-bottom: 1px solid silver ;
2765     overflow-x: auto ;
2766 }
2767
2768 .marginpar br { margin-bottom: 2ex ; }
2769
2770 div.marginblock, div.marginparblock {
2771     max-width:50%;
2772     min-width: 10em; /* room for caption */
2773     float:right;
2774     text-align:left;
2775     margin: 1ex 0.5em 1ex 1em ;
2776     padding: 1ex 0.5em 1ex 0.5em ;
2777     overflow-x: auto;
2778 }
2779
2780 div.marginblock div.minipage,
2781 div.marginparblock div.minipage {
2782     display: inline-block ;
2783     margin: 0pt auto 0pt auto ;
2784 }
2785
2786 div.marginblock div.minipage p ,
2787 div.marginparblock div.minipage p
2788     { font-size: 85%}
2789
2790 div.marginblock br ,
2791 div.marginparblock br
2792     { margin-bottom: 2ex ; }
2793
2794 main.bodycontainer {
2795     float: left ;
2796     width: 80% ;
2797 }
2798
2799 div.bodywithoutsidetoc main.bodycontainer {
2800     float: none ;
2801     width: 100% ;
2802 }
2803
2804 section.textbody div.footnotes{
2805     margin: 1ex 2em 2ex 2em ;
2806     border-bottom: 2px solid silver ;
2807 }
2808
```

```
2809 .footnoteheader {  
2810     border-top: 2px solid silver ;  
2811     margin-top: 3ex ;  
2812     padding-top: 1ex ;  
2813     font-weight: bold ;  
2814 }  
2815  
2816 .mpfootnotes {  
2817     text-align: left ;  
2818     font-size: .85em ;  
2819     margin-left: 1em ;  
2820     border-top: 1px solid silver ;  
2821 }  
2822  
2823 /* Remove footnote top border in the title page. */  
2824 div.titlepage div.mpfootnotes {  
2825     border-top: none ;  
2826 }  
2827  
2828  
2829  
2830 ul, ol {  
2831     margin: 1ex 1em 1ex 0em;  
2832     line-height: 1.2;  
2833 }  
2834  
2835 body dir, body menu {  
2836     margin: 3ex 1em 3ex 0em;  
2837     line-height: 1.2;  
2838 }  
2839  
2840 li { margin: 0ex 0em 1ex 0em; }  
2841  
2842 li.p { display: inline ; }  
2843  
2844 html {  
2845     margin: 0;  
2846     padding: 0;  
2847 }  
2848  
2849 .programlisting {  
2850     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",  
2851         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",  
2852         "Courier New", monospace;  
2853     margin: 1ex 0ex 1ex 0ex ;  
2854     padding: .5ex 0pt .5ex 0pt ;  
2855     overflow-x: auto;  
2856 }  
2857  
2858 section.textbody>pre.programlisting {  
2859 border-top: 1px solid silver ;  
2860 border-bottom: 1px solid silver ;  
2861 }  
2862  
2863  
2864 div.displaymath {  
2865     text-align: center ;  
2866 }  
2867  
2868 div.displaymathnumbered {
```

```
2869     text-align: right ;
2870     margin-left: 5% ;
2871     margin-right: 5% ;
2872     min-width: 2.5in ;
2873 }
2874
2875 @media all and (min-width: 400px) {
2876     div.displaymathnumbered {
2877         margin-left: 10% ;
2878         margin-right: 10% ;
2879     }
2880 }
2881
2882 @media all and (min-width: 800px) {
2883     div.displaymathnumbered {
2884         margin-right: 20% ;
2885     }
2886 }
2887
2888 @media all and (min-width: 1200px) {
2889     div.displaymathnumbered {
2890         margin-right: 30% ;
2891     }
2892 }
2893
2894
2895 .inlineprogramlisting {
2896     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2897                 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2898                 "Courier New", monospace;
2899     overflow-x: auto;
2900 }
2901
2902 span.listinglabel {
2903     display: inline-block ;
2904     font-size: 70% ;
2905     width: 4em ;
2906     text-align: right ;
2907     margin-right: 2em ;
2908 }
2909
2910 div.abstract {
2911     margin: 2em 5% 2em 5% ;
2912     padding: 1ex 1em 1ex 1em ;
2913 /* font-weight: bold ; */
2914     font-size: 90% ;
2915     text-align: left ;
2916 }
2917
2918 div.abstract dl {line-height:1.5;}
2919 div.abstract dt {color:#304070;}
2920
2921 div.abstracttitle{
2922     font-family: "URW Classico", Optima, "Linux Biolinum 0",
2923                 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2924                 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2925     font-weight:bold;
2926     font-size:1.25em;
2927     text-align: center ;
2928 }
```

```
2929
2930 span.abstractrunintitle{
2931     font-family: "URW Classico", Optima, "Linux Biolinum O",
2932         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2933             "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2934     font-weight:bold;
2935 }
2936
2937
2938 .verbatim {
2939     overflow-x: auto ;
2940 }
2941
2942 .alltt {
2943     overflow-x: auto ;
2944 }
2945
2946
2947 .bverbatim {
2948     margin: 1ex 0pt 1ex 0pt ;
2949     padding: .5ex 0pt .5ex 0pt ;
2950     overflow-x: auto ;
2951 }
2952
2953 .lverbatim {
2954     margin: 1ex 0pt 1ex 0pt ;
2955     padding: .5ex 0pt .5ex 0pt ;
2956     overflow-x: auto ;
2957 }
2958
2959 .fancyvrb {
2960     margin: 3ex 0pt 3ex 0pt ;
2961     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2962         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2963             "Courier New", monospace;
2964 }
2965
2966 .fancyvrblabel {
2967     font-size: .85em ;
2968     text-align: center ;
2969     font-weight: bold ;
2970     margin-top: 1ex ;
2971     margin-bottom: 1ex ;
2972 }
2973
2974
2975 .verse {
2976     font-family: "Linux Libertine Mono O", "Lucida Console",
2977         "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2978             "Liberation Mono", "FreeMono", "Andale Mono",
2979                 "Nimbus Mono L", "Courier New", monospace;
2980     margin-left: 1em ;
2981 }
2982
2983
2984 div.singlespace { line-height: 1.2 ; }
2985 div.onehalfspace { line-height: 1.5 ; }
2986 div.doublespace { line-height: 2 ; }
2987
2988
```

```
2989 /* Word processor format output: */
2990 div.wpfigure { border: 1px solid red ; margin: .5ex ; padding: .5ex ; }
2991 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
2992 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ; }
2993
2994
2995
2996
2997 /* Minipage environments, vertically aligned to top, center, bottom: */
2998 .minipage, .fminipage, .fcolorminipage {
2999     /* display: inline-block ; */
3000     /* Mini pages which follow each other will be tiled. */
3001     text-align:left;
3002     margin: .25em .25em .25em .25em;
3003     padding: .25em .25em .25em .25em;
3004     display: inline-flex;
3005     flex-direction: column ;
3006     overflow: auto;
3007 }
3008
3009 .inlineminipage {
3010     display: inline-block ;
3011     text-align: left
3012 }
3013
3014 /* Paragraphs in the flexbox did not collapse their margins. */
3015 /* Have not yet researched this. */
3016 .minipage p {margin: .75ex 0em .75ex 0em ;}
3017
3018 .fboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
3019 .fcolorbox .minipage, .fcolorboxBlock .minipage
3020     {border: none ; background: none;}
3021
3022 .fbox, .fboxBlock { border: 1px solid black ; padding: 4pt }
3023
3024 .fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
3025 .fminipage, .fcolorminipage
3026     {display: inline-block}
3027
3028 .shadowbox, .shabox {
3029     border: 1px solid black;
3030     box-shadow: 3px 3px 3px #808080 ;
3031     border-radius: 0px ;
3032     padding: .4ex .3em .4ex .3em ;
3033     margin: 0pt .3ex 0pt .3ex ;
3034     display: inline-block ;
3035 }
3036
3037 .doublebox {
3038     border: 3px double black;
3039     border-radius: 0px ;
3040     padding: .4ex .3em .4ex .3em ;
3041     margin: 0pt .3ex 0pt .3ex ;
3042     display: inline-block ;
3043 }
3044
3045 .ovalbox, .Ovalbox {
3046     border: 1px solid black;
3047     border-radius: 1ex ;
3048     padding: .4ex .3em .4ex .3em ;
```

```
3049     margin: 0pt .3ex 0pt .3ex ;
3050     display: inline-block ;
3051 }
3052
3053 .Ovalbox { border-width: 2px ; }
3054
3055 .framebox {
3056     border: 1px solid black;
3057     border-radius: 0px ;
3058     padding: .3ex .2em 0ex .2em ;
3059     margin: 0pt .1ex 0pt .1ex ;
3060     display: inline-block ;
3061 }
3062
3063
3064 /* mdframed, tcolorbox, shadebox packages */
3065 .mdframed, .tcolorbox, .shadebox {
3066     padding: 0ex ;
3067     margin: 2ex 0em 2ex 0em ;
3068     border: 1px solid black ;
3069 }
3070
3071 .tcolorbox {
3072     border-radius: 10pt ;
3073     margin: 2ex 1em 2ex 1em ;
3074 }
3075
3076 .mdframed p, .tcolorbox p { padding: 0ex .5em 0ex .5em ; }
3077
3078 .mdframed dl, .tcolorbox dl { padding: 1ex .5em 0ex .5em ; }
3079
3080 .mdframedtitle, .tcolorboxtitle {
3081     padding: .5ex 0pt 0pt 0pt ;
3082     border-radius: 10pt 10pt 0pt 0pt ;
3083     display: block ;
3084     margin-bottom: 1ex ;
3085     border-bottom: 1px solid silver ;
3086 }
3087
3088 .tcolorboxsubtitle .tcolorbox {
3089     margin: 2ex 0em 2ex 0em ;
3090     border-radius: 0pt ;
3091 }
3092
3093 .mdframedsubtitle {
3094     display: block ;
3095 }
3096
3097 .mdframedsubsubtitle {
3098     display: block ;
3099 }
3100
3101 .mdtheorem {
3102     padding: 0ex .5em 0ex .5em ;
3103     margin: 3ex 5% 3ex 5% ;
3104 }
3105
3106
3107 /* framed package */
3108 .framed, pre.boxedverbatim, fcolorbox {
```

```
3109     margin: 3ex 0em 3ex 0em ;
3110     border: 1px solid black;
3111     border-radius: 0px ;
3112     padding: .3ex 1em 0ex 1em ;
3113     display: block ;
3114 }
3115
3116 .shaded {
3117     margin: 3ex 0em 3ex 0em ;
3118     padding: .3ex 1em .3ex 1em ;
3119     display: block ;
3120 }
3121
3122 .snugframed {
3123     margin: 3ex 0em 3ex 0em ;
3124     border: 1px solid black;
3125     border-radius: 0px ;
3126     display: block ;
3127 }
3128
3129 .framedleftbar {
3130     margin: 3ex 0em 3ex 0em ;
3131     border-left: 3pt solid black;
3132     border-radius: 0px ;
3133     padding: .3ex .2em .3ex 1em ;
3134     display: block ;
3135 }
3136
3137 .framedtitle {
3138     margin: 0em ;
3139     padding: 0em ;
3140     font-size: 130%
3141 }
3142
3143 .framedtitle p { padding: .3em }
3144
3145
3146 /* For the niceframe package: */
3147
3148 div.niceframe, div.curlyframe, div.artdecoframe, div.generalframe {
3149     padding: 1ex ;
3150     margin: 2ex auto ;
3151     border-radius: 2ex ;
3152 }
3153
3154 div.niceframe {
3155     border: 6px groove black ;
3156 }
3157
3158 div.curlyframe {
3159     border-left: 3px dotted black ;
3160     border-right: 3px dotted black ;
3161     border-radius: 6ex ;
3162 }
3163
3164 div.artdecoframe {
3165     border-left: 10px double black ;
3166     border-right: 10px double black ;
3167     border-radius: 6ex ;
3168 }
```

```
3169
3170 div.generalframe {
3171     border: 6px groove black ;
3172 }
3173
3174
3175 /* For beamerarticle: */
3176 div.beamerframe {
3177     margin: 3ex 1em 3ex 1em ;
3178     border: 1px solid gray;
3179     border-radius: 0px ;
3180     padding: .3ex 1em 0ex 1em ;
3181     display: block ;
3182 }
3183
3184
3185 dl {
3186     margin: 1ex 2em 1ex 0em;
3187     line-height: 1.3;
3188 }
3189
3190 dl dt {
3191     display: block ;
3192     float:left ;
3193     font-weight: bold;
3194     padding-right: 1em ;
3195 }
3196
3197 dl dd { display: block ; }
3198
3199 dl dd:after { content: "" ; display: block ; clear: both }
3200
3201 dl dd p { margin-top: 0em; }
3202
3203 dd ul, dd ol, dd dl {
3204     clear: both ;
3205     /* padding-top: 1ex ; */
3206 }
3207
3208
3209 nav {
3210     font-family: "URW Classico", Optima, "Linux Biolinum 0",
3211         "DejaVu Sans", "Bitstream Vera Sans",
3212         Geneva, Verdana, sans-serif ;
3213     margin-bottom: 4ex ;
3214 }
3215
3216 nav p {
3217     line-height: 1.2 ;
3218     margin-top:.5ex ;
3219     margin-bottom:.5ex;
3220     font-size: .9em ;
3221 }
3222
3223
3224
3225 img, img.hyperimage, img.borderimage {
3226     max-width: 600px;
3227     border: 1px solid silver;
3228     box-shadow: 3px 3px 3px #808080 ;
```

```
3229     padding: .5% ;
3230     margin: .5% ;
3231     background: none ;
3232 }
3233
3234 img.inlineimage{
3235     padding: 0px ;
3236     box-shadow: none ;
3237     border: none ;
3238     background: none ;
3239     margin: 0px ;
3240     display: inline-block ;
3241     border-radius: 0px ;
3242 }
3243
3244 img.logoimage{
3245     max-width: 300px ;
3246     box-shadow: 3px 3px 3px #808080 ;
3247     border: 1px solid black ;
3248     background:none ;
3249     padding:0 ;
3250     margin:.5ex ;
3251     border-radius: 10px ;
3252 }
3253
3254
3255 .section {
3256 /*
3257     To have each section float relative to each other:
3258 */
3259 /*
3260     display: block ;
3261     float: left ;
3262     position: relative ;
3263     background: white ;
3264     border: 1px solid silver ;
3265     padding: .5em ;
3266 */
3267     margin: 0ex .5em 0ex .5em ;
3268     padding: 0 ;
3269 }
3270
3271
3272 figure {
3273     margin: 5ex auto 5ex auto ;
3274     padding: 1ex 1em 1ex 1em ;
3275     overflow-x: auto ;
3276 }
3277
3278
3279 /* To automatically center images in figures: */
3280 /*
3281 figure img.inlineimage {
3282     margin: 0ex auto 0ex auto ;
3283     display: block ;
3284 }
3285 /*
3286
3287 /* To automatically center minipages in figures: */
3288 */
```

```
3289 figure div.minipage, figure div.minipage div.minipage {
3290     margin: 1ex auto 1ex auto ;
3291     display: block ;
3292 }
3293 */
3294
3295 figure figure { margin: 0pt }
3296
3297 figure div.minipage p { font-size: 85% ; }
3298
3299 figure.subfigure, figure.subtable {
3300     display: inline-block ; margin: 3ex 1em 3ex 1em ;
3301 }
3302
3303 div.figurecaption .minipage { margin:0 ; padding: 0 }
3304
3305 /* for subcaptions: */
3306 figure div.minipage div.figurecaption {
3307     max-width: 100% ; /* fallback if min() does not work */
3308     max-width: min(30em,100%)
3309 }
3310
3311 div.minipage figure { border: none ; box-shadow: none ; }
3312 div.minipage figure.table { margin: 0ex }
3313 div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }
3314
3315 div.floatrow { text-align: center; }
3316
3317 div.floatrow figure { display: inline-block ; margin: 1ex 2% ; }
3318
3319 div.floatfoot { font-size: .85em ;
3320     border-top: 1px solid silver ; line-height: 1.2 ; }
3321
3322 /* Center if only one line, "start" align if more than one line: */
3323 div.figurecaption , .lstlistingtitle {
3324     font-size: .85em ;
3325     font-weight: bold ;
3326     text-align: start ;
3327     margin: 1ex auto;
3328     width: max-content;
3329     max-width: 100%;
3330 }
3331
3332 /* A marginblock is small, so always center and don't mess with the width. */
3333 div.marginblock div.figurecaption {
3334     width: 100% ;
3335     text-align: center ;
3336 }
3337
3338 figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
3339     border-bottom: none ; background: none ;
3340 }
3341
3342 div.nonfloatcaption {
3343     margin: 1ex auto 1ex auto ;
3344     font-size: .85em ;
3345     text-align: center ;
3346     font-weight: bold ;
3347 }
3348
```

```
3349 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
3350 figure div.floatrow div.minipage div.figurecaption {
3351     border: none ;
3352     background: none ;
3353 }
3354
3355
3356 /* For packages such as float, rotfloat, and algorithm2e: */
3357
3358 figure.boxed, figure.boxruled {
3359     border: 1px solid black ;
3360 }
3361
3362 figure.ruled {
3363     border-top: 1px solid black ;
3364     border-bottom: 1px solid black ;
3365     border-left: 0px ;
3366     border-right: 0px ;
3367     border-radius: 0px ;
3368     background: none ;
3369     box-shadow: none ;
3370 }
3371
3372 figure.ruled div.figurecaption, figure.boxruled div.figurecaption {
3373     border-top: 1px solid silver ;
3374     border-bottom: 1px solid silver ;
3375 }
3376
3377
3378 table {
3379     margin: 1ex auto 1ex auto ;
3380     border-collapse: separate ;
3381     border-spacing: 0px ;
3382     line-height: 1.3 ;
3383 }
3384
3385 table > tbody > tr.hline > td {border-top: 1px solid #808080 ; margin-top: 0ex ;
3386     margin-bottom: 0ex ; } /* for \hline */
3387
3388 tr.tbrule td {border-top: 1px solid black ; margin-top: 0ex ;
3389     margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
3390
3391 td {padding: .5ex .5em .5ex .5em ;}
3392
3393 table td.tdl { text-align: left ; vertical-align: middle ; }
3394 table td.tdc { text-align: center ; vertical-align: middle ; }
3395 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
3396 table td.tdbang { text-align: center ; vertical-align: middle ; }
3397 table td.tdr { text-align: right ; vertical-align: middle ; }
3398 table td.tdp { text-align: left ; vertical-align: bottom ; }
3399 table td.tdm { text-align: left ; vertical-align: middle ; }
3400 table td.tdb { text-align: left ; vertical-align: top ; }
3401
3402 table td.tvertbarl { border-left: 1px solid black }
3403 table td.tvertbarldouble { border-left: 4px double black }
3404 table td.tvertbarr { border-right: 1px solid black }
3405 table td.tvertbarrdouble { border-right: 4px double black }
3406
3407 table td.tvertbarldash { border-left: 1px dashed black }
3408 table td.tvertbarldoubledash { border-left: 2px dashed black }
```

```
3409 table td.tvertbarbdash { border-right: 1px dashed black }
3410 table td.tvertbarrdoubledash { border-right: 2px dashed black }
3411
3412 table td.tdccenter { text-align: center}
3413 table td.tdleft { text-align: left}
3414 table td.tdrigh { text-align: right}
3415
3416
3417 /* for cmidrules: */
3418 table td.tdrule {
3419     border-top: 1px solid #A0A0A0 ;
3420 }
3421
3422 table td.tdrulel {
3423     border-top-left-radius:.5em ;
3424     border-top: 1px solid #A0A0A0 ;
3425 }
3426
3427 table td.tdruler {
3428     border-top-right-radius:.5em ;
3429     border-top: 1px solid #A0A0A0 ;
3430 }
3431
3432 table td.tdrulelr {
3433     border-top-left-radius:.5em ;
3434     border-top-right-radius:.5em ;
3435     border-top: 1px solid #A0A0A0 ;
3436 }
3437
3438
3439 /* Margins of paragraphs inside table cells: */
3440 td.tdp p , td.tdprule p , td.tdP p , td.tdPrule p { padding-top: 1ex ;
3441     padding-bottom: 1ex ; margin: 0ex ; }
3442 td.tdm p , td.tmbrule p , td.tdM p , td.tdMrule p { padding-top: 1ex ;
3443     padding-bottom: 1ex ; margin: 0ex ; }
3444 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
3445     padding-bottom: 1ex ; margin: 0ex ; }
3446
3447 td.tdp , td.tdprule , td.tdP , td.tdPrule
3448     { padding: 0ex .5em 0ex .5em ; }
3449 td.tdm , td.tdmrule , td.tdM , td.tdMrule
3450     { padding: 0ex .5em 0ex .5em ; }
3451 td.tdb , td.tdbrule , td.tdB , td.tdBrule
3452     { padding: 0ex .5em 0ex .5em ; }
3453
3454
3455 /* table notes: */
3456 .tnotes {
3457     margin: 0ex 5% 1ex 5% ;
3458     padding: 0.5ex 1em 0.5ex 1em;
3459     font-size:.80em;
3460     text-align: left ;
3461 }
3462
3463 .minipage .tnotes {
3464     margin: 0pt ;
3465     padding: 0pt ;
3466 }
3467
3468 .tnotes dl dt p {margin-bottom:0px;}
```

```
3469
3470 .tnoteitemheader {margin-right: 1em; }
3471
3472
3473 /* for colortbl and cell color */
3474 div.cellcolor {
3475     width: 100% ;
3476     padding: .5ex .5em .5ex .5em ;
3477     margin: -.5ex -.5em -.5ex -.5em ;
3478 }
3479
3480
3481 /* for lyluatex */
3482 span.lyluatex {
3483     display: inline-block ;
3484 }
3485
3486 div.lyluatex p span.lateximagesource img {
3487     display: block ;
3488     margin-top: 3ex ;
3489     margin-bottom: 3ex ;
3490 }
3491
3492
3493 /* for bigdelim */
3494 .ldelim, .rdelim { font-size: 200% }
3495
3496
3497 /* center, flushleft, flushright environments */
3498 div.center{text-align:center;}
3499 div.center table {margin-left:auto;margin-right:auto;}
3500 div.flushleft{text-align:left;}
3501 div.flushleft table {margin-left:0em ; margin-right:auto;}
3502 div.flushright{text-align:right;}
3503 div.flushright table {margin-left:auto ; margin-right: 0em ;}
3504
3505
3506 /* Fancybox */
3507 div.Btrivlist table tr td {
3508     padding: .2ex 0em ;
3509 }
3510
3511
3512 /* program listing callouts: */
3513 span.callout {
3514     font-family: "DejaVu Sans", "Bitstream Vera Sans",
3515         Geneva, Verdana, sans-serif ;
3516     border-radius: .5em;
3517     background-color:black;
3518     color:white;
3519     padding:0px .25em 0px .25em;
3520     margin: 0 ;
3521     font-weight: bold;
3522     font-size:.72em ;
3523 }
3524
3525 div.programlisting pre.verbatim span.callout{
3526     font-size: .85em ;
3527 }
3528
```

```
3529 span.verbatim, span.verb {
3530     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
3531         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
3532         "Courier New", monospace;
3533 }
3534
3535
3536
3537 div.titlehead
3538 {
3539     text-align: left ;
3540     font-style: normal ;
3541     font-weight: normal ;
3542     font-style: normal ;
3543     font-size: .8em ;
3544     margin: 1ex 0em 1ex 0em ;
3545 }
3546
3547 div.subject
3548 {
3549     text-align: center ;
3550     font-style: normal ;
3551     font-weight: bold ;
3552     font-style: normal ;
3553     font-size: .8em ;
3554     margin: 1ex 0em 1ex 0em ;
3555 }
3556
3557 div.published
3558 {
3559     text-align: center ;
3560     font-variant: normal ;
3561     font-style: italic ;
3562     font-size: 1em ;
3563     margin: 1ex 0em 1ex 0em ;
3564 }
3565
3566 div.subtitle
3567 {
3568     text-align: center ;
3569     font-variant: normal ;
3570     font-style: italic ;
3571     font-size: 1.25em ;
3572     margin: 1ex 0em 1ex 0em ;
3573 }
3574
3575 div.subtitle p { margin: 1ex ; }
3576
3577 div.author
3578 {
3579     text-align: center ;
3580     font-variant: normal ;
3581     font-style: normal ;
3582     font-size: 1em ;
3583     margin: 1ex 0em 1ex 0em ;
3584 }
3585
3586 div.oneauthor {
3587     display: inline-block ;
3588     margin: 0ex 1em 0ex 1em ;
```

```
3589 }
3590
3591 /*
3592 div.author table {
3593     margin: 1ex auto 0ex auto ;
3594     background: none ;
3595 }
3596
3597 div.author table tbody tr td { padding: .25ex ; }
3598 */
3599
3600 span.affiliation {font-size: .85em ; font-variant: small-caps; }
3601
3602 div.titledate {
3603     text-align: center ;
3604     font-size: .85em ;
3605     font-style: italic;
3606     margin: 1ex 0em 1ex 0em ;
3607 }
3608
3609
3610 nav.topnavigation{
3611     text-align: left ;
3612     padding: 0.5ex 1em 0.5ex 1em ;
3613 /*     margin: 2ex 0em 3ex 0em ; */
3614     margin: 0 ;
3615     border-bottom: 1px solid silver ;
3616     border-top: 1px solid silver ;
3617     clear:both ;
3618 }
3619
3620 nav.botnavigation{
3621     text-align: left ;
3622     padding: 0.5ex 1em 0.5ex 1em ;
3623 /*     margin: 3ex 0em 2ex 0em ; */
3624     margin: 0 ;
3625     border-top: 1px solid silver ;
3626     border-bottom: 1px solid silver ;
3627     clear:both ;
3628 }
3629
3630
3631 header {
3632     line-height: 1.2 ;
3633     font-size: 1em ;
3634     border-bottom: 1px solid silver ;
3635     margin: 0px ;
3636     padding: 2ex 1em 2ex 1em ;
3637     text-align:left ;
3638 }
3639
3640
3641 footer {
3642     font-size: .85em ;
3643     line-height: 1.2 ;
3644     margin-top: 1ex ;
3645     border-top: 1px solid silver ;
3646     padding: 2ex 1em 2ex 1em ;
3647     clear:both ;
3648     text-align:left ;
```

```
3649 }
3650
3651
3652 /* for \LinkHome, \LinkPrevious, and \LinkNext: */
3653 a.linkhome { font-weight:bold ; font-size: 1em ;}
3654
3655
3656 div.lateximagesource { padding: 0px ; margin: 0px ; display: none; }
3657
3658 img.lateximage{
3659     padding: 0pt ;
3660     margin: 0pt ;
3661     box-shadow: none ;
3662     border: none ;
3663     background: none ;
3664     max-width: 100% ;
3665     border-radius: 0ex ;
3666     border: none ;
3667 }
3668
3669
3670 div.sidetoccontainer {
3671     font-family: "DejaVu Serif", "Bitstream Vera Serif",
3672         "Lucida Bright", Georgia, serif;
3673     float: left ;
3674     width: 19%; /* room for border-right next to 80% main */
3675     margin: 0pt 0em 3ex 0pt ;
3676     border-right: 1px solid silver;
3677     border-bottom: 1px solid silver;
3678     background: #FAF7F4 ;
3679     font-size:.9em ;
3680     border-radius: 0px 0px 20px 0px ;
3681 }
3682
3683 div.sidetoccocontents {
3684     overflow-y: auto ;
3685     width: 100% ;
3686     text-align: left ;
3687 }
3688
3689
3690 nav.sidetoc p {line-height:1.2 ; margin: 1ex .5em 1ex .5em ;
3691     text-indent: 0 ; }
3692
3693 nav.sidetoc p a {color:black ; font-size: .7em ;}
3694
3695 div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
3696     border-bottom: 1px solid silver ;    }
3697
3698 nav.sidetoc a:hover {text-decoration: underline ; }
3699
3700
3701
3702 section.textbody { margin: 0ex 1em 0ex 1em ;}
3703
3704
3705 div.multicolsheading { -webkit-column-span: all;
3706     -moz-column-span: all; column-span: all; }
3707 div.multicols {
3708     -webkit-columns: 3 auto ;
```

```
3709      -moz-columns: 3 auto ;
3710      columns: 3 auto ;
3711 }
3712 div.multicols p {margin-top: 0ex}
3713
3714
3715 /* Used for xfrac and nicefrac: */
3716 span.numerator {
3717     font-size: 60% ;
3718     vertical-align: .4em ;
3719 }
3720
3721 span.denominator {
3722     font-size: 60%
3723 }
3724
3725
3726 /* Used for algorithm2e: */
3727 div.alg2evline{
3728     margin-left: 1em ;
3729     padding-left: 1em ;
3730     border-left: 1px solid black ;
3731     border-radius: 0px 0px 0px 1ex ;
3732 }
3733
3734 div.alg2evsline{
3735     margin-left: 1em ;
3736     padding-left: 1em ;
3737     border-left: 1px solid black ;
3738 }
3739
3740 div.alg2enoline{
3741     margin-left: 1em ;
3742     padding-left: 1em ;
3743 }
3744
3745 span.alg2elinenumber{
3746     margin-right: .5em ;
3747     font-size: 60% ;
3748     color: red ;
3749 }
3750
3751
3752 /* Used for algorithmicx: */
3753 span.floatright { float: right ; }
3754
3755
3756 /* keyfloat and tocdata: */
3757 .floatnotes {
3758     margin: 0ex 5% 0ex 5% ;
3759     padding: 0ex 1em 0ex 1em ;
3760     font-size:.80em ;
3761     text-align: left ;
3762 }
3763
3764 .authorartist{
3765     display:block ;
3766     font-size:.70em ;
3767     font-style: italic;
3768 }
```

```
3769
3770 nav .authorartist{ display:inline; }
3771
3772
3773
3774 /* Native LaTeX theorems: */
3775
3776 .theoremcontents {
3777     font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ;
3778 }
3779
3780 .theoremlabel {
3781     font-style: normal; font-weight: bold ; margin-right: .5em ;
3782 }
3783
3784
3785
3786 /* theorem, amsthm, and ntheorem packages */
3787
3788 span.theoremheader,
3789 span.theoremheaderplain,
3790 span.theoremheaderdefinition,
3791 span.theoremheaderbreak,
3792 span.theoremheadermarginbreak,
3793 span.theoremheaderchangebreak,
3794 span.theoremheaderchange,
3795 span.theoremheadermargin
3796 {
3797     font-style:normal ; font-weight: bold ; margin-right: 1em ;
3798 }
3799
3800 span.amsthmnameplain,
3801 span.amsthmnamedefinition,
3802 span.amsthmnumberplain,
3803 span.amsthmnumberdefinition
3804 {
3805     font-style:normal ; font-weight: bold ;
3806 }
3807
3808
3809 span.amsthmnameremark,
3810 span.amsthmnumberremark
3811 {font-style:italic ; font-weight: normal ; }
3812
3813
3814 span.amsthmnoteplain,
3815 span.amsthmnotedefinition
3816 {font-style:normal ;}
3817
3818
3819 span.theoremheaderremark,
3820 span.theoremheaderproof,
3821 span.amsthmproofname
3822 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
3823
3824 span.theoremheadersc
3825 {
3826     font-style:normal ;
3827     font-variant: small-caps ;
3828     font-weight: normal ;
```

```
3829     margin-right: 1em ;
3830 }
3831
3832 .theoremendmark {float:right}
3833
3834 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
3835 div.theorembodybreak, div.theorembodynonumberbreak,
3836 div.theorembodymarginbreak,
3837 div.theorembodychangebreak,
3838 div.theorembodychange,
3839 div.theorembodymargin
3840 {
3841     font-style:italic;
3842     margin-top: 3ex ; margin-bottom: 3ex ;
3843 }
3844
3845 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
3846 div.theorembodyplainupright, nonumberplainuprightsc,
3847 div.amsthmbodydefinition, div.amsthmbodyremark,
3848 div.amsthmproof
3849 {
3850     font-style: normal ;
3851     margin-top: 3ex ; margin-bottom: 3ex ;
3852 }
3853
3854 span.amsthmnoteremark {}
3855
3856
3857 /* thmbox */
3858
3859 .thmbox {
3860     font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ;
3861     border: 1px solid gray ;
3862     padding: 1ex ;
3863 }
3864
3865 .thmboxtitle {
3866     font-style: normal; font-weight: bold ; margin-right: .5em ;
3867     border-bottom: 1px solid gray ;
3868 }
3869
3870 span.thmboxproofname, span.thmboxexamplename {
3871     font-weight: bold ;
3872 }
3873
3874 div.thmboxproof, div.thmboxexample {
3875     font-size: 0.85em ;
3876     margin: 2ex ;
3877 }
3878
3879 div.thmboxleftbar {
3880     border-left: 2px solid black ;
3881     padding-left: 1em ;
3882 }
3883
3884
3885
3886 /* For the backnaur package: */
3887 div.backnaur {
3888     display: block ;
```

```
3889     margin: 2ex 2em 2ex 2em ;
3890 }
3891
3892 div.backnaur p {
3893     margin: .25ex 0ex .25ex 0ex ;
3894 }
3895
3896 div.backnaurprod {
3897     display: inline-block ;
3898     min-width: 8em ;
3899     text-align:right ;
3900 }
3901
3902 div.backnaurdesc {
3903     display: inline-block ;
3904 }
3905
3906
3907 /* For the notes package: */
3908 div.notesimportantnote, div.noteswarningnote, div.notesinformationnote {
3909     clear: both ;
3910     margin: 2ex 2em 2ex 2em ;
3911     border: 1px solid silver ;
3912 }
3913
3914 div.notesicon {
3915     float:left ;
3916     display: inline-block ;
3917     background: gold ;
3918     padding: 0ex 1em 0ex 1em ;
3919     margin-right: 1em ;
3920     font-weight: bold ;
3921 }
3922
3923 div.notescontents { font-style: italic }
3924
3925
3926 /* nolbreaks package: */
3927 span.nolbreaks { white-space: nowrap ; }
3928
3929
3930 /*
3931 For CSS LaTeX and related logos:
3932 Based on spacing demonstrated by the metafont package.
3933
3934 The subscripts are shrunk instead of lowered below the baseline,
3935 to avoid browser rendering errors with the line height in lists, etc.
3936 */
3937
3938 .latexlogofont {
3939     font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3940             "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3941     font-variant: normal ;
3942 }
3943
3944 .latexlogo {
3945     font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3946             "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3947 }
3948
```

```
3949 .latexlogosup {
3950   text-transform: uppercase;
3951   letter-spacing: .03em ;
3952   font-size: 0.7em;
3953   vertical-align: 0.25em;
3954   margin-left: -0.4em;
3955   margin-right: -0.15em;
3956 }
3957
3958 .latexlogosub {
3959   text-transform: uppercase;
3960 /* vertical-align: -0.27ex; */
3961   margin-left: -0.08em;
3962   margin-right: -0.07em;
3963 /* font-size: 1em; */
3964   font-size: .7em ;
3965 }
3966
3967 .latexlogotwoe {
3968   text-transform: none ;
3969   font-variant-numeric: oldstyle-nums ;
3970 }
3971
3972 .latexlogotwoesub {
3973   font-style:italic ;
3974 /* vertical-align: -0.27ex; */
3975   margin-left: -0.11em;
3976   margin-right: -0.1em;
3977 /* font-size: 1em; */
3978   font-size: .7em ;
3979 }
3980
3981 .xelatexlogo {
3982   font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3983           "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3984   letter-spacing: .03em ;
3985 }
3986
3987 .xelatexlogosub {
3988 /* vertical-align: -0.27ex; */
3989   margin-left: -0.0667em;
3990   margin-right: -.05em;
3991 /* font-size: 1em; */
3992   font-size: .7em ;
3993   letter-spacing: .03em ;
3994 }
3995
3996 .amslogo {
3997   font-family: "TeXGyreChorus","URW Chancery L",
3998           "Apple Chancery","ITC Zapf Chancery","Monotype Corsiva",
3999           "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
4000           "Hoefler Text", Times, "Times New Roman", serif ;
4001   font-style: italic ;
4002 }
4003
4004 .lyxlogo {
4005   font-family: "URW Classico", Optima, "Linux Biolinum O",
4006           "DejaVu Sans", "Bitstream Vera Sans", Geneva,
4007           Verdana, sans-serif ;
4008 }
```

```
4009
4010
4011 /* Only display top and bottom navigation if a small screen: */
4012 /* Hide the sidetoc if a small screen: */
4013 nav.topnavigation { display:none; }
4014 nav.botnavigation { display:none; }
4015
4016 /* Only display the sidetoc's webpage title if a small screen */
4017 span.sidetocthetitle { display: none }
4018
4019 @media screen and (max-width: 100em) {
4020     div.multicols {
4021         -webkit-columns: 2 auto ;
4022         -moz-columns: 2 auto ;
4023         columns: 2 auto ;
4024     }
4025 }
4026
4027 @media screen and (max-width: 50em) {
4028     div.sidetoccontainer {
4029         float: none ;
4030         width: 100% ;
4031         padding: 0 ;
4032         border-radius: 0 ;
4033         border-bottom: 1px solid black ;
4034         border-top: 1px solid black ;
4035         box-shadow: none ;
4036     }
4037     span.sidetocthetitle { display: inline }
4038     nav.topnavigation { display:block }
4039     nav.botnavigation { display:block }
4040     main.bodycontainer { width: 100% }
4041     .marginpar {
4042         max-width: 100%;
4043         float: none;
4044         display:block ;
4045         margin: 1ex 1em 1ex 1em ;
4046     }
4047     div.multicols {
4048         -webkit-columns: 1 auto ;
4049         -moz-columns: 1 auto ;
4050         columns: 1 auto ;
4051     }
4052 }
4053
4054 @media print {
4055     body {
4056         font-family: "Linux Libertine O",
4057             "DejaVu Serif", "Bitstream Vera Serif",
4058             "Liberation Serif", "Nimbus Roman No 9 L",
4059             "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4060     }
4061     div.sidetoccontainer { display:none; }
4062     nav.topnavigation { display: none; }
4063     nav.botnavigation { display: none; }
4064     main.bodycontainer { width: 100% }
4065 }
4066
4067 @media handheld {
4068     div.sidetoccontainer { display:none; }
```

```

4069    nav.topnavigation { display:block }
4070    nav.botnavigation { display:block }
4071    main.bodycontainer { width: 100% }
4072 }
4073
4074 @media projection {
4075    div.sidetoccontainer { display:none; }
4076    nav.topnavigation { display:block }
4077    nav.botnavigation { display:block }
4078    main.bodycontainer { width: 100% }
4079 }
4080 \end{filecontents*}
4081 % \end{Verbatim} for syntax highlighting
4082 \end{LWRwriteconf}

```

40.5 lwarf_sagebrush.css

`lwarf_sagebrush.css (file)` An optional css which may be used for a semi-modern appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

Config file:

```

4083 \begin{LWRwriteconf}
4084 \begin{filecontents*}[overwrite]{lwarf_sagebrush.css}
4085 @import url("lwarf.css") ;
4086
4087
4088 A:link {color:#105030 ; text-decoration: none ; }
4089 A:visited {color:#705030 ; text-shadow:1px 1px 2px #a0a0a0;}
4090 A:hover {color:#006000 ; text-decoration: underline ; text-shadow:0px 0px 2px #a0a0a0;}
4091 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
4092
4093
4094
4095 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
4096 {
4097     font-family: "URW Classico", Optima, "Linux Biolinum O",
4098                 "Linux Libertine O", "Liberation Serif",
4099                 "Nimbus Roman No 9 L", "FreeSerif",
4100                 "Hoefler Text", Times, "Times New Roman", serif;
4101     font-variant: small-caps ;
4102     font-weight: normal ;
4103     color: #304070 ;
4104     text-shadow: 2px 2px 3px #808080;
4105 }
4106
4107 h1 { /* title of the entire website, used on each page */
4108     font-variant: small-caps ;
4109     color: #304070 ;
4110     text-shadow: 2px 2px 3px #808080;
4111     background-color: #F7F7F0 ;
4112     background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
4113 }
4114
4115 h1 {
4116     border-bottom: 1px solid #304070;
4117 /* border-top: 2px solid #304070; */
4118 }
```

```
4119
4120 h2 {
4121   border-bottom: 1px solid #304070;
4122 /* border-top: 2px solid #304070; */
4123   background-color: #F7F7F0 ;
4124   background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
4125 }
4126
4127
4128
4129 div.abstract {
4130   background: #f5f5eb ;
4131   background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
4132
4133   border: 1px solid silver;
4134   border-radius: 1em ;
4135 }
4136
4137 div.abstract dl {line-height:1.5;}
4138 div.abstract dt {color:#304070;}
4139
4140 div.abstracttitle{
4141   font-family: "URW Classico", Optima, "Linux Biolinum O",
4142     "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4143     "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4144   font-weight:bold;
4145   font-variant: small-caps ;
4146   font-size:1.5em;
4147   border-bottom: 1px solid silver ;
4148   color: #304070 ;
4149   text-align: center ;
4150   text-shadow: 1px 1px 2px #808080;
4151 }
4152
4153 span.abstracttrunintitle{
4154   font-family: "URW Classico", Optima, "Linux Biolinum O",
4155     "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4156     "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4157   font-weight:bold;
4158 }
4159
4160
4161 div.epigraph, div.dictum {
4162   background: #f5f5eb ;
4163   background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
4164
4165   border: 1px solid silver ;
4166   border-radius: 1ex ;
4167   box-shadow: 3px 3px 3px #808080 ;
4168 }
4169
4170
4171 .example {
4172   background-color: #f5f5eb ;
4173   background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
4174 }
4175
4176
4177 div.exampletitle{
4178   font-family: "URW Classico", Optima, "Linux Biolinum O",
```

```
4179     "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4180     "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4181     font-weight:bold;
4182     font-variant: small-caps ;
4183     border-bottom: 1px solid silver ;
4184     color: #304070 ;
4185     text-align: center ;
4186     text-shadow: 1px 1px 2px #808080;
4187 }
4188
4189
4190 .sidebar {
4191     background-color: #f5f5eb ;
4192     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
4193
4194 }
4195
4196 div.sidebarTitle{
4197     font-family: "URW Classico", Optima, "Linux Biolinum 0",
4198     "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4199     "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4200     font-weight:bold;
4201     font-variant: small-caps ;
4202     border-bottom: 1px solid silver ;
4203     color: #304070 ;
4204     text-align: center ;
4205     text-shadow: 1px 1px 2px #808080;
4206 }
4207
4208
4209 .fancyvrblabel {
4210     font-family: "URW Classico", Optima, "Linux Biolinum 0",
4211     "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
4212     "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
4213     font-weight:bold;
4214     font-variant: small-caps ;
4215     font-size: 1.5em ;
4216     color: #304070 ;
4217     text-align: center ;
4218     text-shadow: 1px 1px 2px #808080;
4219 }
4220
4221 div.minipage {
4222     background-color: #eeeeee7 ;
4223     border: 1px solid silver ;
4224     border-radius: 1ex ;
4225 }
4226
4227 table div.minipage { background: none ; border: none ; }
4228
4229 div.framebox div.minipage {border:none ; background:none}
4230
4231 section.textbody > div.minipage {
4232     box-shadow: 3px 3px 3px #808080 ;
4233 }
4234
4235 div.fboxBlock div.minipage { box-shadow: none ; }
4236
4237 .framed .minipage , .framedleftbar .minipage {
4238     border: none ;
```

```
4239     background: none ;
4240     padding: 0ex ;
4241     margin: 0ex ;
4242 }
4243
4244 figure.figure .minipage, div.figurecaption .minipage { border: none; }
4245
4246 div.marginblock div.minipage ,
4247 div.marginparblock div.minipage
4248     { border: none; }
4249
4250 figure , div.marginblock {
4251     background-color: #eeeeee7 ;
4252     border: 1px solid silver ;
4253     border-radius: 1ex ;
4254     box-shadow: 3px 3px 3px #808080 ;
4255 }
4256
4257 figure figure {
4258     border: 1px solid silver ;
4259     margin: 0em ;
4260     box-shadow: none ;
4261 }
4262
4263 /*
4264 div.figurecaption {
4265     border-top: 1px solid silver ;
4266     border-bottom: 1px solid silver ;
4267     background-color: #e8e8e8 ;
4268 }
4269 */
4270
4271
4272 div.table {
4273     box-shadow: 3px 3px 3px #808080 ;
4274 }
4275
4276 /*
4277 .tnotes {
4278     background: #e8e8e8;
4279     border: 1px solid silver;
4280 }
4281 */
4282
4283
4284 nav.topnavigation{
4285     background-color: #b0b8b0 ;
4286     background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0) ;
4287 }
4288
4289 nav.botnavigation{
4290     background-color: #b0b8b0 ;
4291     background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
4292 }
4293
4294
4295
4296 header{
4297     background-color: #F7F7F0 ;
4298     background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
```

```

4299 }
4300
4301 footer{
4302     background-color: #F7F7F0 ;
4303     background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
4304 }
4305
4306
4307
4308 div.sidetoccontainer {
4309     background-color: #F7F7F0 ;
4310     background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
4311     box-shadow: 3px 3px 3px #808080 ;
4312 }
4313
4314 div.sidetotitle {color: #304070 ; }
4315
4316 nav.sidetoc a:hover {
4317     color:#006000 ;
4318     text-decoration: none ;
4319     text-shadow:0px 0px 2px #a0a0a0;
4320 }
4321
4322
4323 @media screen and (max-width: 45em) {
4324     div.sidetoccontainer { border-radius: 0 ; }
4325 }
4326
4327
4328 \end{filecontents*}
4329 % \end{Verbatim}% for syntax highlighting
4330 \end{LWRwriteconf}

```

40.6 lwarf_formal.css

`lwarf_formal.css` (*file*) An optional css which may be used for a more formal appearance.

If used, this must be present both when compiling the project and also when distributing the HTML files.

Config file:

```

4331 \begin{LWRwriteconf}
4332 \begin{filecontents*} [overwrite] {lwarf_formal.css}
4333 @import url("lwarf.css") ;
4334
4335
4336
4337 A:link {color:#802020 ; text-decoration:none; }
4338 A:visited {color:#802020 ; text-decoration:none ;}
4339 A:hover {color:#400000 ; text-decoration:none ;}
4340 A:active {color:#C00000 ; text-decoration:none ;}
4341
4342
4343 body {
4344     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4345         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4346         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4347         "Times New Roman", serif;
4348     background: #ffffcf5;

```

```
4349 }
4350
4351 span.textrm {
4352     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4353         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4354         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4355         "Times New Roman", serif;
4356 }
4357
4358 span.textsf {
4359     font-family: "DejaVu Sans", "Bitstream Vera Sans",
4360         Geneva, Verdana, sans-serif ;
4361 }
4362
4363
4364
4365 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
4366 {
4367     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4368         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4369         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4370         "Times New Roman", serif;
4371     color: #800000 ;
4372     text-shadow: none ;
4373 }
4374
4375 h1, h2 {
4376     background-color: #ffffcf5 ;
4377     background-image: none ;
4378     border-bottom: 1px solid #808080;
4379 /*     border-top: 2px solid #808080; */
4380 }
4381
4382 div.abstracttitle {
4383     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4384         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4385         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4386         "Times New Roman", serif;
4387     color: black ;
4388     text-shadow: none ;
4389 }
4390
4391 span.abstractrunintitle {
4392     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4393         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4394         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4395         "Times New Roman", serif;
4396     color: black ;
4397     text-shadow: none ;
4398 }
4399
4400 div.abstract { font-size: 100% }
4401
4402 .sidebar {
4403     background: #ffffcf5;
4404     background-image: none ;
4405     margin: 2em 5% 2em 5%;
4406     padding: 0.5em 1em;
4407     border: none ;
4408     border-top : 1px solid silver;
```

```
4409 border-bottom : 1px solid silver;
4410 font-size: 90% ;
4411 }
4412
4413 div.sidebartitle{
4414     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4415         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4416         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4417         "Times New Roman", serif;
4418     color: #800000 ;
4419     text-shadow: none ;
4420     border: none ;
4421 }
4422
4423 .example {
4424     background: #ffffcf5;
4425     background-image: none ;
4426     margin: 2em 5% 2em 5%;
4427     padding: 0.5em 1em;
4428     border: none ;
4429     border-top : 1px solid silver;
4430     border-bottom : 1px solid silver;
4431 }
4432
4433 div.exapletitle{
4434     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4435         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4436         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4437         "Times New Roman", serif;
4438     color: #800000 ;
4439     text-shadow: none ;
4440     border: none ;
4441 }
4442
4443 div.fancyvrblabel{
4444     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4445         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4446         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4447         "Times New Roman", serif;
4448     color: #800000 ;
4449     text-shadow: none ;
4450     border: none ;
4451 }
4452
4453
4454
4455 figure {
4456     margin: 5ex 5% 5ex 5% ;
4457     padding: 1ex 1em 1ex 1em ;
4458     background-color: #ffffcf5 ;
4459     overflow-x: auto ;
4460     border: none ;
4461 /*     border-top: 1px solid silver; */
4462 /*     border-bottom: 1px solid silver; */
4463 }
4464
4465
4466 div.figurecaption , .lstlisting {
4467     border: none ;
4468 /*     border-top: 1px solid silver ; */
```

```
4469 /*      border-bottom: 1px solid silver ; */
4470      background-color: #ffffcf5 ;
4471 }
4472
4473 .tnotes {
4474     background: #ffffcf5 ;
4475     border-top: 1px solid silver ;
4476     border-bottom: 1px solid silver ;
4477 }
4478
4479 .theorem {
4480     background: none ;
4481 }
4482
4483 .minipage {
4484     background-color: #ffffcf5 ;
4485     border: none ;
4486 }
4487
4488 div.floatrow figure { border: none ; }
4489
4490 figure figure { border: none ; }
4491
4492
4493 nav.toc, nav.lof, nav.lot, nav.lol {
4494     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4495         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4496         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4497         "Times New Roman", serif;
4498 }
4499
4500 div.sidetoccontainer {
4501     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4502         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4503         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4504         "Times New Roman", serif;
4505     background-image: linear-gradient(to bottom, #ffffcf5, #C0C0C0);
4506 }
4507
4508 div.sidetoctitle{
4509     color: #800000 ;
4510 }
4511
4512 header{
4513     background-color: #e0e0e0 ;
4514     background-image: linear-gradient(to top, #ffffcf5, #b0b0b0);
4515     text-align:center ;
4516 }
4517
4518 footer{
4519     background-color: #e0e0e0 ;
4520     background-image: linear-gradient(to bottom, #ffffcf5, #b0b0b0);
4521     padding: 2ex 1em 2ex 1em ;
4522     text-align:left ;
4523 }
4524
4525 nav.botnavigation {
4526     background: #dedcd5 ;
4527     border-top: 1px solid black ;
4528 }
```

```

4529 \end{filecontents*}
4530 % \end{Verbatim} for syntax highlighting
4531 \end{LWRwriteconf}

```

40.7 sample_project.css

`sample_project.css (file)` The project-specific css file. Use with `\CSS{filename}`.

If used, this must be present both when compiling the project and also when distributing the HTML files.

Config file:

```

4532 \begin{LWRwriteconf}
4533 \begin{filecontents*}[overwrite]{sample_project.css}
4534 /* ( --- Start of project.css --- ) */
4535 /* ( --- A sample project-specific CSS file for lwarf --- ) */
4536
4537 /* Uncomment one of the following: */
4538 @import url("lwarf.css");
4539 /* @import url("lwarf_formal.css"); */
4540 /* @import url("lwarf_sagebrush.css"); */
4541
4542 /* Project-specific CSS setting follow here. */
4543 /* . . . */
4544
4545 /* ( --- End of project.css --- ) */
4546 \end{filecontents*}
4547 % \end{Verbatim} for syntax highlighting
4548 \end{LWRwriteconf}

```

40.8 lwarf.ist

`lwarf.ist (file)` Used to modify the index for lwarf.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The page compositor line is for memoir's `\specialindex`.

Config file:

```

4549 \begin{LWRwriteconf}
4550 \begin{filecontents*}[overwrite]{lwarf.ist}
4551 preamble
4552 "\\begin{theindex}"
4553 "\\providecommand*{\\lettergroupDefault[1]}{}"
4554 "\\providecommand*{\\lettergroup[1]}{%
4555     \\par\\textbf{#1}\\par
4556     \\nopagebreak
4557 }
4558 "
4559 headings_flag 1
4560 heading_prefix "
4561 "\\lettergroup{"
4562 heading_suffix "}"
4563 delim_0 ", \\hyperindexref{"
4564 delim_1 ", \\hyperindexref{"
4565 delim_2 ", \\hyperindexref{"
4566 delim_n "}, \\hyperindexref{"
4567 delim_r "} -- \\hyperindexref{"

```

```

4568 delim_t "}"
4569 page_compositor "."
4570 \end{filecontents*}
4571 % \end{Verbatim} for syntax highlighting
4572 \end{LWRwriteconf}

```

40.9 lwarf.xdy

`lwarf.xdy` (*file*) Used to modify the index for `lwarf`.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

See:

[https://tex.stackexchange.com/questions/80300/
how-can-i-convince-hyperref-and-xindy-to-play-together-nicely](https://tex.stackexchange.com/questions/80300/how-can-i-convince-hyperref-and-xindy-to-play-together-nicely)

```

Config file: 4573 \begin{LWRwriteconf}
4574 \begin{filecontents*}[overwrite]{lwarf.xdy}
4575 (require "tex/inputenc/latin.xdy")
4576 (merge-rule "\\PS *" "Postscript")
4577 (require "texindy.xdy")
4578 (require "page-ranges.xdy")
4579 (require "book-order.xdy")
4580 (define-location-class "arabic-page-numbers"
4581     ("arabic-numbers") :min-range-length 1)
4582 (require "makeindex.xdy")
4583 (define-attributes ((hyperindexref)))
4584 (markup-locref :open "\hyperindexref{" :close "}")
4585 (markup-locref :open "\hyperindexref{" :close "}" :attr "hyperpage")
4586 (markup-locref :open "\textbf{\hyperindexref{" :close "}}" :attr "textbf")
4587 (markup-locref :open "\textit{\hyperindexref{" :close "}}" :attr "textit")
4588 (define-location-class-order ("roman-page-numbers"
4589             "arabic-page-numbers"
4590             "alpha-page-numbers"
4591             "Roman-page-numbers"
4592             "Alpha-page-numbers"
4593             "see"
4594             "seealso"))
4595 \end{filecontents*}
4596 % \end{Verbatim} for syntax highlighting
4597 \end{LWRwriteconf}

```

40.10 lwarf_one_limage.cmd

`lwarf_one_limage.cmd` (*file*) Used by `lwarf` to help make `lateximages` when using WINDOWS.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The arguments are each of the three fields from `<project>-images.txt`, and also the base name of the source file.

MiKTeX does not allow file `lwarf_one_limage.cmd` to be created directly by `lwarpmk`, so `lwarf_one_limage.txt` is created instead, then copied to `lwarf_one_limage.cmd` by `lwarpmk`. This occurs each time `lwarpmk` used to create `lateximages`.

```

Config file: 4598 \begin{LWRwriteconf}
4599 \immediate\openout\LWR@quickfile=lwarp_one_limage.txt
4600 \immediate\write\LWR@quickfile{%
4601     pdfseparate -f \LWRpercent 1 -l \LWRpercent 1 \LWRpercent 4_html.pdf %
4602     \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent\LWRpercent d.pdf%
4603 }
4604 \immediate\write\LWR@quickfile{%
4605     pdfcrop --hires --margins \LWRopquote 1 0 0\LWRopquote\space %
4606     \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf %
4607     \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
4608 }
4609 \immediate\write\LWR@quickfile{%
4610     pdftocairo -svg -no shrink \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf %
4611     \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.svg%
4612 }
4613 \immediate\write\LWR@quickfile{%
4614     del \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
4615 }
4616 \immediate\write\LWR@quickfile{%
4617     del \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf%
4618 }
4619 \immediate\write\LWR@quickfile{exit}
4620 \immediate\closeout\LWR@quickfile
4621 \end{LWRwriteconf}

```

40.11 lwarp_mathjax.txt

(Emulates or patches code by DAVIDE P. CERVONE.)

`lwarp_mathjax.txt` (*file*) The default MATHJAX script used by `lwarp` when using MATHJAX. A recent version of MATHJAX is used, as served by the recommended repository. Adjustments are made to allow LATEX to control the equation tags and provide for starred macros.

`\MathJaxFilename` determines which script file is copied into the HTML pages, and defaults to `lwarp_mathjax.txt`. The script files must be present when compiling the project, but do not need to be present when distributing the resulting HTML files.

custom script To generate a custom script, such as to use a local repository, copy `lwarp_mathjax.txt` to a new file, make changes while keeping `lwarp`'s adjustments for equation numbering and starred macros, and use `\MathJaxFilename` to select the new filename.

```

Config file: 4622 \begin{LWRwriteconf}
4623 \begin{filecontents*}[overwrite]{lwarp_mathjax.txt}
4624 <script>
4625 // Lwarp MathJax emulation code
4626 //
4627 // Based on code by Davide P. Cervone.
4628 // Equation numbering: https://github.com/mathjax/MathJax/issues/2427
4629 // Starred and ifnextchar macros: https://github.com/mathjax/MathJax/issues/2428
4630 // \left, \right delimiters: https://github.com/mathjax/MathJax/issues/2535
4631 //
4632 // Modified by Brian Dunn to adjust equation numbering and add subequations.
4633 //
4634 // LaTeX can use \seteqnumber{subequations?}{section}{number} before each equation.
4635 // subequations? is 0 usually, 1 if inside subequations.
4636 // section is a string printed as-is, or empty.
4637 // number is auto-incremented by MathJax between equations.

```

```
4638 //  
4639 MathJax = {  
4640   subequations: "0",  
4641   section: "",  
4642   loader: {  
4643     load: ['[tex]/tagformat', '[tex]/textmacros'],  
4644   },  
4645   startup: {  
4646     ready() {  
4647       // These would be replaced by import commands if you wanted to make  
4648       // a proper extension.  
4649       const Configuration = MathJax._.input.tex.Configuration.Configuration;  
4650       const CommandMap = MathJax._.input.tex.SymbolMap.CommandMap;  
4651       const Macro = MathJax._.input.tex.Symbol.Macro;  
4652       const TexError = MathJax._.input.tex.TexError.default;  
4653       const ParseUtil = MathJax._.input.tex.ParseUtil.default;  
4654       const expandable = MathJax._.util.Options.expandable;  
4655  
4656       // Insert the replacement string into the TeX string, and check  
4657       // that there haven't been too many maxro substitutions (prevents  
4658       // infinite loops).  
4659       const useArgument = (parser, text) => {  
4660         parser.string = ParseUtil.addArgs(parser, text, parser.string.slice(parser.i));  
4661         parser.i = 0;  
4662         if (++parser.macroCount > parser.configuration.options.maxMacros) {  
4663           throw new TexError('MaxMacroSub1',  
4664             'MathJax maximum macro substitution count exceeded; ' +  
4665             'is there a recursive macro call?');  
4666         }  
4667       }  
4668  
4669       // Create the command map for:  
4670       // \ifstar, \ifnextchar, \ifblank, \ifstrequal, \gsub, \seteqnumber  
4671       new CommandMap('Lwarp-macros', {  
4672         ifstar: 'IfstarFunction',  
4673         ifnextchar: 'IfnextcharFunction',  
4674         ifblank: 'IfblankFunction',  
4675         ifstrequal: 'IfstrequalFunction',  
4676         gsubstitute: 'GsubstituteFunction',  
4677         seteqnumber: 'SeteqnumberFunction'  
4678       }, {  
4679         // This function implements an ifstar macro.  
4680         IfstarFunction(parser, name) {  
4681           const resultstar = parser.GetArgument(name);  
4682           const resultnostar = parser.GetArgument(name);  
4683           const star = parser.GetStar(); // true if there is a *  
4684           useArgument(parser, star ? resultstar : resultnostar);  
4685         },  
4686  
4687         // This function implements an ifnextchar macro.  
4688         IfnextcharFunction(parser, name) {  
4689           let whichchar = parser.GetArgument(name);  
4690           if (whichchar.match(/^(?:(?:0x[0-9A-F]+|[0-9]+)$|i)/)) {  
4691             // $ syntax highlighting  
4692             whichchar = String.fromCodePoint(parseInt(whichchar));  
4693           }  
4694           const resultnextchar = parser.GetArgument(name);  
4695           const resultnotnextchar = parser.GetArgument(name);  
4696           const gotchar = (parser.GetNext() === whichchar);  
4697           useArgument(parser, gotchar ? resultnextchar : resultnotnextchar);  
4698         }  
4699       })  
4700     })  
4701   })  
4702 }  
4703
```

```
4698     },
4699
4700     // This function implements an ifblank macro.
4701     IfblankFunction(parser, name) {
4702         const blankarg = parser.GetArgument(name);
4703         const resultblank = parser.GetArgument(name);
4704         const resultnotblank = parser.GetArgument(name);
4705         const isblank = (blankarg.trim() == "");
4706         useArgument(parser, isblank ? resultblank : resultnotblank);
4707     },
4708
4709     // This function implements an ifstrequal macro.
4710     IfstrequalFunction(parser, name) {
4711         const strequalfirst = parser.GetArgument(name);
4712         const strequalsecond = parser.GetArgument(name);
4713         const resultequal = parser.GetArgument(name);
4714         const resultnotequal = parser.GetArgument(name);
4715         const isequal = (strequalfirst == strequalsecond);
4716         useArgument(parser, isequal ? resultequal : resultnotequal);
4717     },
4718
4719     // This function implements a gsub macro.
4720     GsubstituteFunction(parser, name) {
4721         const gsubfirst = parser.GetArgument(name);
4722         const gsubsecond = parser.GetArgument(name);
4723         const gsubthird = parser.GetArgument(name);
4724         let gsubresult=gsubfirst.replace(gsubsecond, gsubthird);
4725         useArgument(parser, gsubresult);
4726     },
4727
4728     // This function modifies the equation numbers.
4729     SeteqnumberFunction(parser, name) {
4730         // Get the macro parameters
4731         const star = parser.GetStar();           // true if there is a *
4732         const optBrackets = parser.GetBrackets(name); // contents of optional brackets
4733         const newsubequations = parser.GetArgument(name); // the subequations argument
4734         const neweqsection = parser.GetArgument(name); // the eq section argument
4735         const neweqnumber = parser.GetArgument(name); // the eq number argument
4736         MathJax.config.subequations=newsubequations; // a string with boolean meaning
4737         MathJax.config.section=neweqsection;        // a string with numeric meaning
4738         parser.tags.counter = parser.tags.allCounter = neweqnumber ;
4739     }
4740
4741 });
4742
4743 // Create the Lwarp-macros package
4744 Configuration.create('Lwarp-macros', {
4745     handler: {macro: ['Lwarp-macros']}
4746 });
4747
4748 MathJax.startup.defaultReady();
4749
4750 // For forward references:
4751 MathJax.startup.input[0].preFilters.add(({math}) => {
4752     if (math.inputData.recompile){
4753         MathJax.config.subequations = math.inputData.recompile.subequations;
4754         MathJax.config.section = math.inputData.recompile.section;
4755     }
4756 });
4757 MathJax.startup.input[0].postFilters.add(({math}) => {
```

```
4758     if (math.inputData.recompile){
4759         math.inputData.recompile.subequations = MathJax.config.subequations;
4760         math.inputData.recompile.section = MathJax.config.section;
4761     }
4762 });
4763
4764 // For \left, \right with unicode-math:
4765 const {DelimiterMap} = MathJax._.input.tex.SymbolMap;
4766 const {Symbol} = MathJax._.input.tex.Symbol;
4767 const {MapHandler} = MathJax._.input.tex.MapHandler;
4768 const delimiter = MapHandler.getMap('delimiter');
4769 delimiter.add('\\lBrack', new Symbol('\\lBrack', '\u27E6'));
4770 delimiter.add('\\rBrack', new Symbol('\\rBrack', '\u27E7'));
4771 delimiter.add('\\lAngle', new Symbol('\\lAngle', '\u27EA'));
4772 delimiter.add('\\rAngle', new Symbol('\\rAngle', '\u27EB'));
4773 delimiter.add('\\lbrbrak', new Symbol('\\lbrbrak', '\u2772'));
4774 delimiter.add('\\rbrbrak', new Symbol('\\rbrbrak', '\u2773'));
4775 delimiter.add('\\lbag', new Symbol('\\lbag', '\u27C5'));
4776 delimiter.add('\\rbag', new Symbol('\\rbag', '\u27C6'));
4777 delimiter.add('\\llparenthesis', new Symbol('\\llparenthesis', '\u2987'));
4778 delimiter.add('\\rrparenthesis', new Symbol('\\rrparenthesis', '\u2988'));
4779 delimiter.add('\\llangle', new Symbol('\\llangle', '\u2989'));
4780 delimiter.add('\\rrangle', new Symbol('\\rrangle', '\u298A'));
4781 delimiter.add('\\Lbrbrak', new Symbol('\\Lbrbrak', '\u27EC'));
4782 delimiter.add('\\Rbrbrak', new Symbol('\\Rbrbrak', '\u27ED'));
4783 delimiter.add('\\lBrace', new Symbol('\\lBrace', '\u2983'));
4784 delimiter.add('\\rBrace', new Symbol('\\rBrace', '\u2984'));
4785 delimiter.add('\\lParen', new Symbol('\\lParen', '\u2985'));
4786 delimiter.add('\\rParen', new Symbol('\\rParen', '\u2986'));
4787 delimiter.add('\\lbrackubar', new Symbol('\\lbrackubar', '\u298B'));
4788 delimiter.add('\\rbrackubar', new Symbol('\\rbrackubar', '\u298C'));
4789 delimiter.add('\\lbrackultick', new Symbol('\\lbrackultick', '\u298D'));
4790 delimiter.add('\\rbracklrltick', new Symbol('\\rbracklrltick', '\u298E'));
4791 delimiter.add('\\lbracklltick', new Symbol('\\lbracklltick', '\u298F'));
4792 delimiter.add('\\rbrackurtick', new Symbol('\\rbrackurtick', '\u2990'));
4793 delimiter.add('\\angledot', new Symbol('\\angledot', '\u2991'));
4794 delimiter.add('\\rangledot', new Symbol('\\rangledot', '\u2992'));
4795 delimiter.add('\\lparenless', new Symbol('\\lparenless', '\u2993'));
4796 delimiter.add('\\rparengtr', new Symbol('\\rparengtr', '\u2994'));
4797 delimiter.add('\\Lparengtr', new Symbol('\\Lparengtr', '\u2995'));
4798 delimiter.add('\\Rparenless', new Symbol('\\Rparenless', '\u2996'));
4799 delimiter.add('\\lblkbrbrak', new Symbol('\\lblkbrbrak', '\u2997'));
4800 delimiter.add('\\rbblkbrbrak', new Symbol('\\rbblkbrbrak', '\u2998'));
4801 delimiter.add('\\lvzigzag', new Symbol('\\lvzigzag', '\u29D8'));
4802 delimiter.add('\\rvzigzag', new Symbol('\\rvzigzag', '\u29D9'));
4803 delimiter.add('\\Lvzigzag', new Symbol('\\Lvzigzag', '\u29DA'));
4804 delimiter.add('\\Rvzigzag', new Symbol('\\Rvzigzag', '\u29DB'));
4805 delimiter.add('\\lcurvyangle', new Symbol('\\lcurvyangle', '\u29FC'));
4806 delimiter.add('\\rcurvyangle', new Symbol('\\rcurvyangle', '\u29FD'));
4807 delimiter.add('\\Vvert', new Symbol('\\Vvert', '\u2980'));
4808 } // ready
4809 }, // startup
4810
4811 tex: {
4812     packages: {'[+]': ['tagformat', 'Lwarp-macros', 'textmacros']},
4813     tags: "ams",
4814     tagformat: {
4815         number: function (n) {
4816             if(MathJax.config.subequations==0)
4817                 return(MathJax.config.section + n);
```

```

4818           else
4819             return(MathJax.config.section + String.fromCharCode(96+n));
4820           },
4821         },
4822       }
4823     }
4824   </script>
4825
4826 <script
4827   id="MathJax-script"
4828   src="https://cdn.jsdelivr.net/npm/mathjax@3/es5/tex-svg.js"
4829 ></script>
4830 \end{filecontents*}
4831 % \end{Verbatim} for syntax highlighting
4832 \end{LWRwriteconf}

```

40.12 lwarpmk.lua — lwarpmk option

- lwarpmk** (*Opt*) Creates a local copy of *lwarpmk*.
- lwarpmk** (*Prog*) Command-line utility to process lwarf files and images.
- parallel processing** *Lateximages* and *SVG* math images are generated using multiple processes in parallel. For UNIX and LINUX, every 32 images the *wait* command is issued to wait for the previous batch of images to finish processing before starting a new batch. For WINDOWS, every 32 images one task is dispatched with

```
START /B /WAIT /BELOWNORMAL
```

which causes the operating system to wait until this lesser-priority tasks finishes, hopefully also waiting for the normal priority tasks which were already in progress to also complete. Afterwards, the next batch of images is started.

The following is only generated if the *lwarpmk* option was given to *lwarf*.

```

4833 \begin{LWRcreatelwarpmk}

4834 \begin{filecontents*}[overwrite]{lwarpmk.lua}
4835 #!/usr/bin/env texlua
4836
4837 -- Copyright 2016-2024 Brian Dunn
4838
4839
4840 printversion = "v0.914"
4841 requiredconfversion = "2" -- also at *lwarpmk.conf
4842
4843 function printhelp ()
4844   print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.") ;
4845 end
4846
4847
4848 function printusage ()
4849 --
4850 -- Print the usage of the lwarpmk command:
4851 --
4852   print ( [[
4853     lwarpmk print [-p project]: Compile the print version if necessary.

```

```
4855 lwarpmk print1 [-p project]: Forced single compile of the print version.
4856 lwarpmk printindex [-p project]: Process print indexes.
4857 lwarpmk printglossary [-p project]: Process the glossary for the print version.
4858 lwarpmk html [-p project]: Compile the HTML version if necessary.
4859 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
4860 lwarpmk htmlindex [-p project]: Process HTML indexes.
4861 lwarpmk htmlglossary [-p project]: Process the glossary for the html version.
4862 lwarpmk again [-p project]: Touch the source code to trigger recompiles.
4863 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
4864 lwarpmk pdftohtml [-p project]:
4865     For use with latexmk or a Makefile:
4866     Converts project_html.pdf to project_html.html and individual HTML files.
4867     Finishes the HTML conversion even if there was a compile error.
4868 lwarpmk pdftosvg <list of file names>: Converts each PDF file to SVG.
4869 lwarpmk epstopdf <list of file names>: Converts each EPS file to PDF.
4870 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
4871     *.idx, *.ind, *.bbl, *.log, *_html_inc.*., .gl*.,
4872     *_html.pdf, *_html.html, *_html.sidetoc
4873 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
4874 lwarpmk cleanlimages: Removes all images from the "lateximages" directory.
4875 lwarpmk -v: Print the version number.
4876 lwarpmk -h: Print this help message.
4877 lwarpmk --help: Print this help message.
4878
4879 ]] )
4880 -- printconf ()
4881 end
4882
4883
4884 function splitfilename ( pathandfilename )
4885 --
4886 -- Separates out the path and extension from a filename.
4887 -- Returns path, filename with extension, and extension.
4888 -- Ex: thispath, thisfilename, thisextension = splitfilename ("path/to/filename.ext")
4889 --
4890 -- https://www.fhug.org.uk/wiki/wiki/doku.php?id=plugins:code_snippets:
4891 --     split_filename_in_to_path_filename_and_extension
4892 --
4893     if lfs.attributes(pathandfilename,"mode") == "directory" then
4894         local strPath = pathandfilename:gsub("[\\/]$", "") -- $ (syntax highlighting)
4895         return strPath.."\\", "", ""
4896     end
4897     pathandfilename = pathandfilename.."."
4898     return pathandfilename:match("^(.-)([^\\/]-%.(^[^\\/.]-)%.)?%$")
4899 end
4900
4901
4902 function splitfile (destfile,sourcefile)
4903 --
4904 -- Split one large sourcefile into a number of files,
4905 -- starting with destfile.
4906 -- The file is split at each occurrence of <!--|Start file|newfilename|*
4907 -- If lwarp is in use, sets usinglwarp.
4908 --
4909 usinglwarp = false ;
4910 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
4911 local sfile = io.open(sourcefile)
4912 io.output(destfile)
4913 for line in sfile:lines() do
4914 i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*)|") ;
```

```
4915 if ( (i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
4916     -- split the file
4917     io.output(newfilename) ;
4918 else
4919 if ( (i~= nil) and (copen == "<!--") and (cstart == "Using lwarf")) then
4920     -- verified the use of \usepackage{lwarf}
4921     usinglwarf = true ;
4922 else
4923     -- not a splitpoint
4924     io.write (line .. "\n") ;
4925 end end
4926 end -- do
4927 io.close(sfile)
4928 if ( usinglwarf == false ) then
4929     print ("lwarpmk: ===")
4930     print ("lwarpmk: \\usepackage{lwarf} was not detected.")
4931     print ("lwarpmk: The HTML output will not be correct.")
4932     print ("lwarpmk: Ensured that \\usepackage{lwarf} is enabled,")
4933     print ("lwarpmk: then lwarpmk print and lwarpmk html again.")
4934     print ("lwarpmk: ===")
4935 end
4936 end -- function
4937
4938
4939 function cvalueerror ( line, linenum , cvalue )
4940 --
4941 -- Incorrect value, so print an error and exit.
4942 --
4943     print ("lwarpmk: ===")
4944     print ("lwarpmk: " .. linenum .. " : " .. line ) ;
4945     print (
4946         "lwarpmk: incorrect variable value \""
4947         .. cvalue ..
4948         "\" in lwarpmk.conf.\n"
4949     );
4950 --     printconf () ;
4951     os.exit(1) ;
4952 end
4953
4954
4955 function printhowtorecompile ()
4956 -- Tells the user how to recompile to regenerate the configuration files.
4957     print ("lwarpmk: The configuration files lwarpmk.conf and "..sourcename.."lwarpmkconf" )
4958     print ("lwarpmk: must be updated. To do so, recompile" )
4959     print ("lwarpmk: " , sourcename.."tex" )
4960     if ( printlatexcmd == "" ) then
4961         print ("lwarpmk: using xe/lua/pdflatex," )
4962     else
4963         print ("lwarpmk: using the command:")
4964         print ("lwarpmk: " , printlatexcmd )
4965     end
4966     print ("lwarpmk: then use lwarpmk again.")
4967 end -- printhowtorecompile
4968
4969
4970 function ignoreconf ()
4971 -- Global argument index
4972 argindex = 2
4973 end
4974
```

```
4975 function loadconf ()
4976 --
4977 -- Load settings from the project's "lwarpmk.conf" file:
4978 --
4979 -- Default configuration filename:
4980 local conffile = "lwarpmk.conf"
4981 local confroot = "lwarpmk"
4982 -- Global argument index
4983 argindex = 2
4984 -- Optional configuration filename:
4985 if ( arg[argindex] == "-p" ) then
4986     argindex = argindex + 1
4987     confroot = arg[argindex]
4988     conffile = confroot.."lwarpmkconf"
4989     argindex = argindex + 1
4990 end
4991 -- Additional defaults:
4992 confversion = "0"
4993 opsystem = "Unix"
4994 imagesdirectory = "lateximages"
4995 imagesname = "image-"
4996 latexmk = "false"
4997 printlatexcmd = ""
4998 HTMLlatexcmd = ""
4999 printindexcmd = ""
5000 HTMLindexcmd = ""
5001 latexmkindexcmd = ""
5002 -- to be removed:
5003 -- indexprog = "makeindex"
5004 -- makeindexstyle = "lwarp.ist"
5005 -- xindylanguage = "english"
5006 -- xindycodepage = "utf8"
5007 -- xindystyle = "lwarp.xdy"
5008 -- pdftotextenc = "UTF-8"
5009 glossarycmd = "makeglossaries"
5010 -- Verify the file exists:
5011 if (lfs.attributes(conffile,"mode")==nil) then
5012     -- file not exists
5013     print ("lwarpmk: ===")
5014     print ("lwarpmk: File \"\" .. conffile ..\"\" does not exist.")
5015     print ("lwarpmk: Move to the project's source directory,")
5016     print ("lwarpmk: recompile using pdflatex, xelatex, or lualatex,")
5017     print ("lwarpmk: then try using lwarpmk again.")
5018     if ( arg[argindex] ~= nil ) then
5019         print (
5020             "lwarpmk: (\\" .. confroot ..
5021             "\\" does not appear to be a project name.)"
5022         )
5023     end
5024     print ("lwarpmk: ===")
5025     printhelp () ;
5026     os.exit(1) -- exit the entire lwarpmk script
5027 else -- file exists
5028 -- Read the file:
5029 print ("lwarpmk: Reading \" .. conffile ..\"")
5030 local cfile = io.open(conffile)
5031 -- Scan each line, parsing each line as: name = [[string]]
5032 local linenum = 0
5033 for line in cfile:lines() do -- scan lines
5034     linenum = linenum + 1
```

```
5035 i,j,cvarname,cvalue = string.find (line,"([%w-_]*)%s*=%s*[%([%^%]*%)%]%" ) ;
5036 -- Error if incorrect enclosing characters:
5037 if ( i == nil ) then
5038     print ("lwarpmk: ===")
5039     print ("lwarpmk: " .. linenum .. " : " .. line ) ;
5040     print ("lwarpmk: Incorrect entry in " .. conffile .. ".\n" ) ;
5041     print ("lwarpmk: ===")
5042 --     printconf () ;
5043     os.exit(1) ;
5044 end -- nil
5045 if ( cvarname == "confversion" ) then
5046     confversion = cvalue
5047 elseif ( cvarname == "opsystem" ) then
5048     -- Verify choice of opsistem:
5049     if ( (cvalue == "Unix") or (cvalue == "Windows") ) then
5050         opsistem = cvalue
5051     else
5052         cvalueerror ( line, linenum , cvalue )
5053     end
5054 elseif ( cvarname == "sourcename" ) then sourcename = cvalue
5055 elseif ( cvarname == "homehtmlfilename" ) then homehtmlfilename = cvalue
5056 elseif ( cvarname == "htmlfilename" ) then htmlfilename = cvalue
5057 elseif ( cvarname == "imagesdirectory" ) then imagesdirectory = cvalue
5058 elseif ( cvarname == "imagesname" ) then imagesname = cvalue
5059 elseif ( cvarname == "latexmk" ) then latexmk = cvalue
5060 elseif ( cvarname == "printlatexcmd" ) then printlatexcmd = cvalue
5061 elseif ( cvarname == "HTMLlatexcmd" ) then HTMLlatexcmd = cvalue
5062 elseif ( cvarname == "printindexcmd" ) then printindexcmd = cvalue
5063 elseif ( cvarname == "HTMLindexcmd" ) then HTMLindexcmd = cvalue
5064 elseif ( cvarname == "latexmkindexcmd" ) then latexmkindexcmd = cvalue
5065 elseif ( cvarname == "glossarycmd" ) then glossarycmd = cvalue
5066 elseif ( cvarname == "pdftotextenc" ) then pdftotextenc = cvalue
5067 else
5068     print ("lwarpmk: ===")
5069     print ("lwarpmk: " .. linenum .. " : " .. line ) ;
5070     print (
5071         "lwarpmk: Incorrect variable name \"\" .. cvarname .. \"\" in " ..
5072         conffile .. ".\n"
5073     ) ;
5074     print ("lwarpmk: ===")
5075 --     printconf () ;
5076 os.exit(1) ;
5077 end -- cvarname
5078 end -- do scan lines
5079 io.close(cfile)
5080 end -- file exists
5081 -- Error if sourcename is "lwarp".
5082 -- This could happen if a local copy of lwarp has recently been recompiled.
5083 if sourcename=="lwarp" then
5084     print ("lwarpmk: ===")
5085     print ("lwarpmk: lwarp.sty has recently been recompiled in this directory,")
5086     print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
5087     print ("lwarpmk: (Perhaps you are not in your project's directory?)")
5088     print ("lwarpmk: In your project directory, recompile your project")
5089     print ("lwarpmk: using pdf/lua/xelatex <projectname>.")
5090     print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
5091     print ("lwarpmk: and you may again use lwarpmk.")
5092     print ("lwarpmk: ===")
5093     os.exit(1)
5094 end -- sourcename of "lwarp"
```

```
5095 -- Select some operating-system commands:  
5096 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:  
5097     rmname = "rm"  
5098     mvname = "mv"  
5099     cpname = "cp"  
5100     touchnamepre = "touch"  
5101     touchnamepost = ""  
5102     newtouchname = "touch"  
5103     dirslash = "/"  
5104     opquote= "\'"  
5105     cmdgroupopenname = " ("  
5106     cmdgroupcloseename = " )" "  
5107     seqname = " && "  
5108     bgname = " &"  
5109 elseif opsystem=="Windows" then -- For Windows  
5110     rmname = "DEL"  
5111     mvname = "MOVE"  
5112     cpname = "COPY"  
5113     touchnamepre = "COPY /b"  
5114     touchnamepost = "+,"  
5115     newtouchname = "echo empty >"  
5116     dirslash = "\\\""  
5117     opquote= "\\""  
5118     cmdgroupopenname = ""  
5119     cmdgroupcloseename = ""  
5120     seqname = " & "  
5121     bgname = ""  
5122 else  
5123     print ("lwarpmk: ===")  
5124     print ("lwarpmk: Select Unix or Windows for opsystem." )  
5125     print ("lwarpmk: ===")  
5126     os.exit(1)  
5127 end --- for Windows  
5128 -- Warning if the operating system does not appear to be correct,  
5129 -- in case files were transferred to another system.  
5130 if ( (package.config:sub(1,1)) ~= dirslash ) then  
5131     print ("lwarpmk: ===")  
5132     print ("lwarpmk: It appears that lwarpmk.conf is for a different operating system." )  
5133     printhowtorecompile ()  
5134     print ("lwarpmk: ===")  
5135     os.exit(1)  
5136 end  
5137 -- Error if the configuration file's version is not current:  
5138 if ( confversion ~= requiredconfversion ) then  
5139     print ("lwarpmk: ===")  
5140     printhowtorecompile ()  
5141     print ("lwarpmk: ===")  
5142     os.exit(1)  
5143 end  
5144 end -- loadconf  
5145  
5146  
5147 function executecheckerror ( executecommands , errormessage )  
5148 --  
5149 -- Execute an operating system call,  
5150 -- and maybe exit with an error message.  
5151 --  
5152 local err  
5153 err = os.execute ( executecommands )  
5154 if ( err ~= 0 ) then
```

```
5155     print ("lwarpmk: ===")
5156     print ("lwarpmk: " .. errormessage )
5157     print ("lwarpmk: ===")
5158     os.exit(1)
5159 end
5160 end -- executecheckerror
5161
5162
5163 function refreshdate ()
5164 os.execute(touchnamepre .. " " .. sourcename .. ".tex" .. touchnamepost)
5165 end
5166
5167
5168
5169 function reruntoget (filesource)
5170 --
5171 -- Scan the LaTeX log file for the phrase "Rerun to get",
5172 -- indicating that the file should be compiled again.
5173 -- Return true if found.
5174 --
5175 local fsource = io.open(filesource)
5176 for line in fsource:lines() do
5177 if ( string.find(line,"Rerun to get") ~= nil ) then
5178   io.close(fsource)
5179   return true
5180 end -- if
5181 end -- do
5182 io.close(fsource)
5183 return false
5184 end
5185
5186
5187
5188 function onetime (latexcmd, fsuffix)
5189 --
5190 -- Compile one time, return true if should compile again.
5191 -- fsuffix is "" for print, "_html" for HTML output.
5192 --
5193 print("lwarpmk: Compiling with: " .. latexcmd)
5194 executecheckerror (
5195   latexcmd ,
5196   "Compile error."
5197 )
5198 return (reruntoget(sourcename .. fsuffix .. ".log") ) ;
5199 end
5200
5201
5202 function manytimes (latexcmd, fsuffix)
5203 --
5204 -- Compile up to five times.
5205 -- fsuffix is "" for print, "_html" for HTML output
5206 --
5207 if onetime(latexcmd, fsuffix) == true then
5208 if onetime(latexcmd, fsuffix) == true then
5209 if onetime(latexcmd, fsuffix) == true then
5210 if onetime(latexcmd, fsuffix) == true then
5211 if onetime(latexcmd, fsuffix) == true then
5212 end end end end end
5213 end
5214
```

```
5215
5216 function verifyfileexists (filename)
5217 --
5218 -- Exit if the given file does not exist.
5219 --
5220 if (lfs.attributes ( filename , "modification" ) == nil ) then
5221     print ("lwarpmk: ===")
5222     print ("lwarpmk: " .. filename .. " not found." );
5223     print ("lwarpmk: ===")
5224     os.exit (1) ;
5225 end
5226 end
5227
5228
5229
5230 function pdftohtml ()
5231 --
5232 -- Convert <project>.pdf into HTML files:
5233 --
5234 -- Convert to text:
5235 print ("lwarpmk: Converting " .. sourcename
5236     .. "_html.pdf" .. " " .. sourcename .. "_html.html")
5237 err = os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
5238     .. sourcename .. "_html.pdf" .. sourcename .. "_html.html")
5239 if (err ~= 0) then
5240     print ("lwarpmk: ===")
5241     print ("lwarpmk: Ensure that the Poppler utilities are installed." )
5242     print ("lwarpmk: See the Lwarp manual: 'Installing additional utilities'." )
5243     print ("lwarpmk: ===")
5244     os.exit(1)
5245 end
5246 -- Split the result into individual HTML files:
5247 splitfile (homehtmlfilename .. ".html" , sourcename .. "_html.html")
5248 end
5249
5250
5251 function removeaux ()
5252 --
5253 -- Remove auxiliary files:
5254 -- All .aux files are removed since there may be many bbl*.aux files.
5255 -- Also removes sourcename_html.pdf, sourcename_html.html,
5256 -- and sourcename_html.sidetoc, plus comment_*.cut.
5257 --
5258 os.execute ( rmname .. " *.aux " ..
5259     sourcename .. ".toc" .. sourcename .. "_html.toc" ..
5260     sourcename .. ".lof" .. sourcename .. "_html.lof" ..
5261     sourcename .. ".lot" .. sourcename .. "_html.lot" ..
5262     sourcename .. ".bbl" .. sourcename .. "_html.bbl" ..
5263     " *.idx" ..
5264     " *.ind" ..
5265     sourcename .. ".ps" .. sourcename .. "_html.ps" ..
5266     sourcename .. ".log" .. sourcename .. "_html.log" ..
5267     sourcename .. ".gl*" .. sourcename .. "_html.gl*" ..
5268     sourcename .. "_html.pdf" ..
5269     sourcename .. "_html.html" ..
5270     sourcename .. "_html.sidetoc" ..
5271     " *_html_inc.*" ..
5272     " comment_*.cut"
5273 )
5274 end
```

```
5275
5276 function checkhtmlpdfexists ()
5277 --
5278 -- Error if the HTML document does not exist.
5279 -- The lateximages are drawn from the HTML PDF version of the document,
5280 -- so "lwarpmk html" must be done before "lwarpmk limages".
5281 --
5282 local htmlpdffile = io.open(sourcename .. "_html.pdf", "r")
5283 if ( htmlpdffile == nil ) then
5284     print ("")
5285     print ("lwarpmk: ===")
5286     print ("lwarpmk: The HTML version of the document does not exist.")
5287     print ("lwarpmk: Enter \"lwarpmk html\" to compile the HTML version.")
5288     print ("lwarpmk: ===")
5289     os.exit(1)
5290 end
5291 io.close (htmlpdffile)
5292 end -- checkhtmlpdfexists
5293
5294
5295 function warnlimages ()
5296 --
5297 -- Warning of a missing <sourcename>-images.txt file:
5298     print ("lwarpmk: ===")
5299     print ("lwarpmk: \" .. sourcename .. "-images.txt\" does not exist.")
5300     print ("lwarpmk: Your project does not use SVG math or other lateximages,")
5301     print ("lwarpmk: or the file has been deleted somehow.")
5302     print ("lwarpmk: Use \"lwarpmk html1\" to recompile your project")
5303     print ("lwarpmk: and recreate \" .. sourcename .. "-images.txt\"")
5304     print ("lwarpmk: If your project does not use SVG math or other lateximages,")
5305     print ("lwarpmk: then \" .. sourcename .. "-images.txt\" will never exist, and")
5306     print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
5307     print ("lwarpmk: ===")
5308 end -- warnlimages
5309
5310
5311 function warnlimagesrecompile ()
5312 -- Warning if must recompile before creating limages:
5313     print ("")
5314     print ("lwarpmk: ===")
5315     print ("lwarpmk: Cross-references are not yet correct.")
5316     print ("lwarpmk: The document must be recompiled before creating the lateximages.")
5317     print ("lwarpmk: Enter \"lwarpmk html1\" again, then try \"lwarpmk limages\" again.")
5318     print ("lwarpmk: ===")
5319 end --warnlimagesrecompile
5320
5321
5322 function checklimages ()
5323 --
5324 -- Check <sourcename>.txt to see if need to recompile first.
5325 -- If any entry has a page number of zero, then there were incorrect images.
5326 --
5327 print ("lwarpmk: Checking for a valid " .. sourcename .. "-images.txt file.")
5328 local limagesfile = io.open(sourcename .. "-images.txt", "r")
5329 if ( limagesfile == nil ) then
5330     warnlimages ()
5331     os.exit(1)
5332 end
5333 -- Track warning to recompile if find a page 0
5334 local pagezerowarning = false
```

```
5335 -- Scan <sourcename>.txt
5336 for line in imagesfile:lines() do
5337     -- lwimgpage is the page number in the PDF which has the image
5338     -- lwimghash is true if this filename is a hash
5339     -- lwimgname is the lateximage filename root to assign for the image
5340     i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
5341     -- For each entry:
5342     if ( (i~nil) ) then
5343         -- If the page number is 0, image references are incorrect
5344         -- and must recompile the source document:
5345         if ( lwimgpage == "0" ) then
5346             pagezerowarning = true
5347         end
5348     end -- if i~nil
5349 end -- do
5350 -- The last line should be |end|end|end|.
5351 -- If not, the compile must have aborted, and the images are incomplete.
5352 if ( lwimgpage ~= "end" ) then
5353     warnimagesrecompile()
5354     os.exit(1) ;
5355 end
5356 if ( pagezerowarning ) then
5357     warnimagesrecompile()
5358     os.exit(1) ;
5359 end -- pagezerowarning
5360 end -- checklimages
5361
5362
5363 function createuniximage ( lwimgfullname )
5364 --
5365 -- Create one lateximage for Unix / Linux / Mac OS.
5366 --
5367 executecheckerror (
5368     cmdgroupopenname ..
5369     "pdfseparate -f " .. lwimgpage .. " -l " .. lwimgpage .. " " ..
5370     sourcename .. "_html.pdf" ..
5371     imagesdirectory .. dirslash .. "lateximagetemp-%d" .. ".pdf" ..
5372     seqname ..
5373     -- Crop the image:
5374     "pdfcrop --hires --margins \"0 1 0 0\" " .. imagesdirectory .. dirslash .. "lateximagetemp-" ..
5375     lwimgpage .. ".pdf" ..
5376     imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
5377     seqname ..
5378     -- Convert the image to svg:
5379     "pdftocairo -svg -noshrink " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
5380     imagesdirectory .. dirslash .. lwimgname .. ".svg" ..
5381     seqname ..
5382     -- Remove the temporary files:
5383     rmname .. " " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" .. seqname ..
5384     rmname .. " " .. imagesdirectory .. dirslash .. "lateximagetemp-" .. lwimgpage .. ".pdf" ..
5385     cmdgroupclose .. " >/dev/null " .. bgname
5386     ,
5387     "File error trying to convert " .. lwimgfullname
5388 )
5389 -- Every 32 images, wait for completion at below normal priority,
5390 -- allowing other image tasks to catch up.
5391 numimageprocesses = numimageprocesses + 1
5392 if ( numimageprocesses > 32 ) then
5393     numimageprocesses = 0
5394     print ( "lwarpmk: waiting" )
```

```

5395 executecheckerror ( "wait" , "File error trying to wait." )
5396 end
5397 end -- createuniximage
5398
5399
5400 function createwindowsimage ( lwimgfullname )
5401 --
5402 -- Create one lateximage for Windows.
5403 --
5404 -- Every 32 images, wait for completion at below normal priority,
5405 -- allowing other image tasks to catch up.
5406 numimageprocesses = numimageprocesses + 1
5407 if ( numimageprocesses > 32 ) then
5408     numimageprocesses = 0
5409     thiswaitcommand = "/WAIT /BELOWNORMAL"
5410     print ( "lwarpmk: waiting" )
5411 else
5412     thiswaitcommand = ""
5413 end
5414 -- Execute the image generation command
5415 executecheckerror (
5416     "start /B " .. thiswaitcommand .. " \\\" larp_one_limage " ..
5417     lwimgpage .. " " ..
5418     lwimghash .. " " ..
5419     lwimgname .. " " ..
5420     sourcename .. " <nul>nul"
5421 ,
5422     "File error trying to create image."
5423 )
5424 end -- createwindowsimage
5425
5426
5427 function createonelateximage ( line )
5428 --
5429 -- Given the next line of <sourcename>.txt, convert a single image.
5430 --
5431 -- lwimgpage is the page number in the PDF which has the image
5432 -- lwimghash is true if this filename is a hash
5433 -- lwimgname is the lateximage filename root to assign for the image
5434 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
5435 -- For each entry:
5436 if ( i~=nil ) then
5437     -- Skip if the page number is 0:
5438     if ( lwimgpage == "0" ) then
5439         pagezerowarning = true
5440     -- Skip if the page number is "end":
5441     else if ( lwimgpage == "end" ) then
5442     else
5443         -- Skip if this image is hashed and already exists:
5444         local lwimgfullname = imagesdirectory .. dirslash .. lwimgname .. ".svg"
5445         if (
5446             (lwimghash ~= "true") or
5447             (lfs.attributes(lwimgfullname,"mode")==nil) -- file not exists
5448         )
5449     then -- not hashed or not exists:
5450         -- Print the name of the file being generated:
5451         print ( "lwarpmk: " .. lwimgname )
5452         -- Touch/create the dest so that only once instance tries to build it:
5453         executecheckerror (
5454             newtouchname .. " " .. lwimgfullname ,

```

```
5455             "File error trying to touch " .. lwimgfullname
5456         )
5457         -- Separate out the image into its own single-page pdf:
5458         if opsystem=="Unix" then
5459             createuniximage (lwimgfullname)
5460         elseif opsystem=="Windows" then
5461             createwindowsimage (lwimgfullname)
5462         end
5463         end -- not hashed or not exists
5464     end -- not page "end"
5465     end -- not page 0
5466 end -- not nil
5467 end -- createonelateximage
5468
5469
5470 function createlateximages ()
5471 --
5472 -- Create lateximages based on <sourcename>-images.txt:
5473 --
5474 -- See if the document must be recompiled first:
5475 checklimages ()
5476 -- See if the HTML version exists:
5477 checkhtmlpdfexists ()
5478 -- Attempt to create the lateximages:
5479 print ("lwarpmk: Creating lateximages.")
5480 local limagesfile = io.open(sourcename .. "-images.txt", "r")
5481 if ( limagesfile == nil ) then
5482     warnlimages ()
5483     os.exit(1)
5484 end
5485 -- Create the lateximages directory, ignore error if already exists
5486 err = os.execute("mkdir " .. imagesdirectory)
5487 -- For Windows, create lwarp_one_limage.cmd from lwarp_one_limage.txt:
5488 if opsystem=="Windows" then
5489     executecheckerror (
5490         cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd" ,
5491         "File error trying to copy lwarp_one_limage.txt to lwarp_one_limage.cmd"
5492     )
5493 end -- create lwarp_one_limage.cmd
5494 -- Track the number of parallel processes
5495 numimageprocesses = 0
5496 -- Track warning to recompile if find a page 0
5497 pagezerowarning = false
5498 -- Scan <sourcename>.txt
5499 for line in limagesfile:lines() do
5500     createonelateximage ( line )
5501 end -- do
5502 io.close(limagesfile)
5503 print ( "lwarpmk limages: ===" )
5504 print ( "lwarpmk limages: Wait a moment for the images to complete" )
5505 print ( "lwarpmk limages: before reloading the page." )
5506 print ( "lwarpmk limages: ===" )
5507 print ( "lwarpmk limages: Done." )
5508 if ( pagezerowarning == true ) then
5509     print ( "lwarpmk limages: WARNING: Images will be incorrect." )
5510     print ( "lwarpmk limages: Enter \"lwarpmk cleanimages\", then" )
5511     print ( "lwarpmk limages: recompile the document one more time, then" )
5512     print ( "lwarpmk limages: repeat \"lwarpmk images\" again." )
5513 end -- pagezerowarning
5514 end -- function
```

```
5515
5516
5517 function convertepstopdf ()
5518 --
5519 -- Converts EPS files to PDF files.
5520 -- The filenames are arg[argindex] and up.
5521 -- arg[1] is the command "epstopdf".
5522 --
5523 ignoreconf ()
5524 for i = argindex , #arg do
5525     if (lfs.attributes(arg[i],"mode")==nil) then
5526         print ("lwarpmk: File \\" .. arg[i] .. "\\ does not exist.")
5527     else
5528         print ("lwarpmk: Converting \\" .. arg[i] .. "\\")
5529         thispath, thisfilename, thisextension = splitfilename(arg[i])
5530         if ( thispath == nil ) then
5531             os.execute ( "epstopdf " .. arg[i] )
5532         else
5533             os.execute (
5534                 "epstopdf " ..
5535                 thispath .. thisfilename .. "." .. thisextension .. " " ..
5536                 thispath .. thisfilename .. ".pdf"
5537             )
5538         end
5539     end -- if
5540 end -- do
5541 end --function
5542
5543
5544 function convertpdftosvg ()
5545 --
5546 -- Converts PDF files to SVG files.
5547 -- The filenames are arg[argindex] and up.
5548 -- arg[1] is the command "pdftosvg".
5549 --
5550 ignoreconf ()
5551 for i = argindex , #arg do
5552     if (lfs.attributes(arg[i],"mode")==nil) then
5553         print ("lwarpmk: File \\" .. arg[i] .. "\\ does not exist.")
5554     else
5555         print ("lwarpmk: Converting \\" .. arg[i] .. "\\")
5556         thispath, thisfilename, thisextension = splitfilename(arg[i])
5557         if ( thispath == nil ) then
5558             os.execute ( "pdftocairo -svg " .. arg[i] )
5559         else
5560             os.execute (
5561                 "pdftocairo -svg " ..
5562                 thispath .. thisfilename .. "." .. thisextension .. " " ..
5563                 thispath .. thisfilename .. ".svg"
5564             )
5565         end
5566     end -- if
5567 end -- do
5568 end --function
5569
5570
5571 -- Force an update and conclude processing:
5572 function updateanddone ()
5573 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
5574 refreshdate ()
```

```
5575 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
5576 print ("lwarpmk: Done.")
5577 end -- function
5578
5579
5580 -- Start of the main code: --
5581
5582
5583 -- lwarpmk --version :
5584
5585 if (arg[1] == "--version") then
5586 print ( "lwarpmk: " .. printversion )
5587
5588 else -- not --version
5589
5590
5591 -- print intro:
5592
5593 print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX Lwarf package.")
5594
5595
5596 -- lwarpmk print:
5597
5598 if arg[1] == "print" then
5599 loadconf ()
5600 if ( latexmk == "true" ) then
5601     print ("lwarpmk: Compiling with: " .. printlatexcmd)
5602     executecheckerror (
5603         printlatexcmd ,
5604         "Compile error."
5605     )
5606     print ("lwarpmk: Done.")
5607 else -- not latexmk
5608     verifyfileexists (sourcename .. ".tex") ;
5609     -- See if up to date:
5610     if (
5611         ( lfs.attributes ( sourcename .. ".pdf" , "modification" ) == nil ) or
5612         (
5613             lfs.attributes ( sourcename .. ".tex" , "modification" ) >
5614             lfs.attributes ( sourcename .. ".pdf" , "modification" )
5615         )
5616     ) then
5617         -- Recompile if not yet up to date:
5618         manytimes(printlatexcmd, "")
5619         print ("lwarpmk: Done.");
5620     else
5621         print ("lwarpmk: " .. sourcename .. ".pdf is up to date.");
5622     end
5623 end -- not latexmk
5624
5625
5626 -- lwarpmk print1:
5627
5628 elseif arg[1] == "print1" then
5629     loadconf ()
5630     verifyfileexists (sourcename .. ".tex") ;
5631     onetime(printlatexcmd, "")
5632     print ("lwarpmk: Done.");
5633
5634
```

```
5635 -- lwarfpmk printindex:  
5636 -- Compile the index then touch the source  
5637 -- to trigger a recompile of the document:  
5638  
5639 elseif arg[1] == "printindex" then  
5640 loadconf ()  
5641 os.execute ( printindexcmd )  
5642 print ("lwarfpmk: -----")  
5643 updateanddone ()  
5644  
5645  
5646 -- lwarfpmk printglossary:  
5647 -- Compile the glossary then touch the source  
5648 -- to trigger a recompile of the document:  
5649  
5650 elseif arg[1] == "printglossary" then  
5651 loadconf ()  
5652 print ("lwarfpmk: Processing the glossary.")  
5653  
5654 os.execute(glossarycmd .. " " .. sourcename)  
5655 updateanddone ()  
5656  
5657  
5658 -- lwarfpmk html:  
5659  
5660 elseif arg[1] == "html" then  
5661 loadconf ()  
5662 if ( latexmk == "true" ) then  
5663     print ("lwarfpmk: Compiling with: " .. HTMLlatexcmd)  
5664     executecheckerror (  
5665         HTMLlatexcmd ,  
5666         "Compile error."  
5667     )  
5668     pdftohtml ()  
5669     print ("lwarfpmk: Done.")  
5670 else -- not latexmk  
5671     verifyfileexists ( sourcename .. ".tex" ) ;  
5672     -- See if exists and is up to date:  
5673     if (  
5674         lfs.attributes ( homehtmlfilename .. ".html" , "modification" ) == nil ) or  
5675         (  
5676             lfs.attributes ( sourcename .. ".tex" , "modification" ) >  
5677             lfs.attributes ( homehtmlfilename .. ".html" , "modification" )  
5678         )  
5679     ) then  
5680         -- Recompile if not yet up to date:  
5681         manytimes(HTMLlatexcmd, "_html")  
5682         pdftohtml ()  
5683         print ("lwarfpmk: Done.")  
5684     else  
5685         print ("lwarfpmk: " .. homehtmlfilename .. ".html is up to date.")  
5686     end  
5687 end -- not latexmk  
5688  
5689  
5690 -- lwarfpmk html1:  
5691  
5692 elseif arg[1] == "html1" then  
5693     loadconf ()  
5694     verifyfileexists ( sourcename .. ".tex" ) ;
```

```
5695     onetime(HTMLlateXcmd, "_html")
5696     pdftohtml_()
5697     print ("lwarfpmk: Done.")
5698
5699
5700 -- lwarfpmk pdftohtml:
5701 elseif arg[1] == "pdftohtml" then
5702     loadconf_()
5703     pdftohtml_()
5704
5705
5706 -- lwarfpmk htmlindex:
5707 -- Compile the index then touch the source
5708 -- to trigger a recompile of the document:
5709
5710 elseif arg[1] == "htmlindex" then
5711 loadconf_()
5712 os.execute(HTMLIndexcmd)
5713 print("lwarfpmk: -----")
5714 updateanddone_()
5715
5716
5717 -- lwarfpmk htmlglossary:
5718 -- Compile the glossary then touch the source
5719 -- to trigger a recompile of the document.
5720 -- The <sourcename>.xdy file is created by the glossaries package.
5721
5722 elseif arg[1] == "htmlglossary" then
5723 loadconf_()
5724 print("lwarfpmk: Processing the glossary.")
5725 os.execute(glossarycmd .. " " .. sourcename .. "_html")
5726 updateanddone_()
5727
5728
5729 -- lwarfpmk limages:
5730 -- Scan the <sourcename>.txt file to create lateximages.
5731
5732 elseif arg[1] == "limages" then
5733 loadconf_()
5734 print("lwarfpmk: Processing images.")
5735 createlateximages_()
5736 print("lwarfpmk: Done.")
5737
5738
5739 -- lwarfpmk again:
5740 -- Touch the source to trigger a recompile.
5741
5742 elseif arg[1] == "again" then
5743 loadconf_()
5744 updateanddone_()
5745
5746
5747 -- lwarfpmk clean:
5748 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.* , .gl*
5749
5750 elseif arg[1] == "clean" then
5751 loadconf_()
5752 removeaux_()
5753 print("lwarfpmk: Done.")
5754
```

```
5755
5756 -- lwarfpmk cleanall
5757 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.* , .gl*
5758 --     and also project.pdf, project.dvi, *.html
5759
5760 elseif arg[1] == "cleanall" then
5761 loadconf ()
5762 removeaux ()
5763 os.execute ( rmname .. " " ..
5764     sourcename .. ".pdf" .. sourcename .. "_html.pdf" ..
5765     sourcename .. ".dvi" .. sourcename .. "_html.dvi" ..
5766     "*.*html"
5767 )
5768 print ("lwarfpmk: Done.")
5769
5770
5771 -- lwarfpmk cleanimages
5772 -- Remove images from the imagesdirectory.
5773
5774 elseif arg[1] == "cleanimages" then
5775 loadconf ()
5776 os.execute ( rmname .. " " .. imagesdirectory .. dirslash .. "*" )
5777 print ("lwarfpmk: Done.")
5778
5779 -- lwarfpmk epstopdf <list of file names>
5780 -- Convert EPS files to PDF using epstopdf
5781 elseif arg[1] == "epstopdf" then
5782 convertepstopdf ()
5783 print ("lwarfpmk: Done.")
5784
5785
5786 -- lwarfpmk pdftosvg <list of file names>
5787 -- Convert PDF files to SVG using pdftocairo
5788 elseif arg[1] == "pdftosvg" then
5789 convertpdftosvg ()
5790 print ("lwarfpmk: Done.")
5791
5792
5793 -- lwarfpmk with no argument :
5794
5795 elseif (arg[1] == nil) then
5796 printhelp ()
5797
5798
5799 -- lwarfpmk -v:
5800
5801 elseif (arg[1] == "-v" ) then
5802 -- The version number has already been printed
5803 -- by the lwarfpmk intro.
5804
5805 -- lwarfpmk -h or lwarfpmk --help :
5806
5807 elseif (arg[1] == "-h" ) or (arg[1] == "--help") then
5808 printusage ()
5809
5810
5811 -- Unknown command:
5812
5813 else
5814 printhelp ()
```

```

5815 print ("\\nlwarpmk: ***** Unknown command \"..arg[1]..\". *****\\n")
5816 end
5817
5818 end -- not --version
5819 \end{filecontents*}
5820 % \end{Verbatim}% for syntax highlighting

5821 \end{LWRcreatelwarpmk}

```

41 Stacks

for HTML output: 5822 \begin{warpHTML}

⚠️ Stacks are used to remember how to close sections and list items. Before a new section is started, previously nested sections and items must be closed out (un-nested) in proper order. Note that starting a new section may close several levels of previously nested items at the same time. For example, starting a new \section would close any currently open subsection, subsubsection, and paragraph. General environments are not nested on the stack since they have their own close mechanism. List environments are nested, and items inside those environments are nested one level deeper still. List environments may be nested inside other list environments, and list items are nested inside list environments as well. Thus, the stack may have items which are not necessarily in order, since a description may contain an enumerate, for example. Depths to be recorded in \LWR@closedepthone, etc.

41.1 Assigning depths

initial depths for empty stack entries:

```
5823 \newcommand*\{\LWR@depthnone\}{-5}
```

All sectioning depths are deeper than \LWR@depthfinished:

```

5824 \newcommand*\{\LWR@depthfinished\}{-4}
5825 \newcommand*\{\LWR@depthbook\}{-2}
5826 \newcommand*\{\LWR@depthpart\}{-1}
5827 \newcommand*\{\LWR@depthchapter\}{0}
5828 \newcommand*\{\LWR@depthsection\}{1}
5829 \newcommand*\{\LWR@depthsubsection\}{2}
5830 \newcommand*\{\LWR@depthsubsubsection\}{3}
5831 \newcommand*\{\LWR@depthparagraph\}{4}
5832 \newcommand*\{\LWR@depth subparagraph\}{5}

```

Used by \itemize, \enumerate, \description:

```
5833 \newcommand*\{\LWR@depthlist\}{6}
```

Used by \item:

```

5834 \newcommand*\{\LWR@depthlistitem\}{7}
5835 \let\LWR@depthdescitem\LWR@depthlistitem

```

41.2 Closing actions

A stack to record the action to take to close each nesting level: Add more levels of stack if necessary for a very deeply nested document, adding to \pushclose and \popclose as well.

```

5836 \newcommand*{\LWR@closeone}{}% top of the stack
5837 \newcommand*{\LWR@closetwo}{}%
5838 \newcommand*{\LWR@closethree}{}%
5839 \newcommand*{\LWR@closefour}{}%
5840 \newcommand*{\LWR@closefive}{}%
5841 \newcommand*{\LWR@closesix}{}%
5842 \newcommand*{\LWR@closeseven}{}%
5843 \newcommand*{\LWR@closeeight}{}%
5844 \newcommand*{\LWR@closenine}{}%
5845 \newcommand*{\LWR@closeten}{}%
5846 \newcommand*{\LWR@closeeleven}{}%
5847 \newcommand*{\LWR@closetwelve}{}%
5848 \newcommand*{\LWR@closethirteen}{}%
5849 \newcommand*{\LWR@closefourteen}{}%
5850 \newcommand*{\LWR@closefifteen}{}%
5851 \newcommand*{\LWR@closesixteen}{}%
5852 \newcommand*{\LWR@closeseventeen}{}%
5853 \newcommand*{\LWR@closeeighteen}{}%
5854 \newcommand*{\LWR@closenineteen}{}%

```

41.3 Closing depths

A stack to record the depth of each level:

-  Note that nested L^AT_EX structures may push depths which are non-sequential.

Ex:

```
\begin{itemize}
  \item{A}
    \begin{description}
      \item{B}
    \end{description}
\end{itemize}
```

```

5855 \newcommand*{\LWR@closedepthonne}{}% top of the stack
5856 \newcommand*{\LWR@closedepthtwo}{}{\LWR@depthnone}
5857 \newcommand*{\LWR@closedepththree}{}{\LWR@depthnone}
5858 \newcommand*{\LWR@closedepthfour}{}{\LWR@depthnone}
5859 \newcommand*{\LWR@closedepthfive}{}{\LWR@depthnone}
5860 \newcommand*{\LWR@closedepthsix}{}{\LWR@depthnone}
5861 \newcommand*{\LWR@closedepthseven}{}{\LWR@depthnone}
5862 \newcommand*{\LWR@closedeptheight}{}{\LWR@depthnone}
5863 \newcommand*{\LWR@closedepthnine}{}{\LWR@depthnone}
5864 \newcommand*{\LWR@closedepthten}{}{\LWR@depthnone}
5865 \newcommand*{\LWR@closedeptheleven}{}{\LWR@depthnone}
5866 \newcommand*{\LWR@closedepthtwelve}{}{\LWR@depthnone}
5867 \newcommand*{\LWR@closedepththirteen}{}{\LWR@depthnone}
5868 \newcommand*{\LWR@closedepthfourteen}{}{\LWR@depthnone}

```

```

5869 \newcommand*{\LWR@closedepthfifteen}{\LWR@depthnone}
5870 \newcommand*{\LWR@closedepthsixteen}{\LWR@depthnone}
5871 \newcommand*{\LWR@closedepthseventeen}{\LWR@depthnone}
5872 \newcommand*{\LWR@closedeptheighteen}{\LWR@depthnone}
5873 \newcommand*{\LWR@closedepthnineteen}{\LWR@depthnone}

```

41.4 Pushing and popping the stack

\LWR@pushclose {<sectiontype>}

Pushes one return action and its L^AT_EX depth onto the stacks.

```

5874 \NewDocumentCommand{\LWR@pushclose}{m}
5875 {%
5876 \global\let\LWR@closeineteen\LWR@closeeighteen%
5877 \global\let\LWR@closeeighteen\LWR@closeseventeen%
5878 \global\let\LWR@closeseventeen\LWR@closesixteen%
5879 \global\let\LWR@closesixteen\LWR@closefifteen%
5880 \global\let\LWR@closefifteen\LWR@closefourteen%
5881 \global\let\LWR@closefourteen\LWR@closethirteen%
5882 \global\let\LWR@closethirteen\LWR@closetwelve%
5883 \global\let\LWR@closetwelve\LWR@closeeleven%
5884 \global\let\LWR@closeeleven\LWR@closeten%
5885 \global\let\LWR@closeten\LWR@closenine%
5886 \global\let\LWR@closenine\LWR@closeeight%
5887 \global\let\LWR@closeeight\LWR@closeseven%
5888 \global\let\LWR@closeseven\LWR@closesix%
5889 \global\let\LWR@closesix\LWR@closefive%
5890 \global\let\LWR@closefive\LWR@closefour%
5891 \global\let\LWR@closefour\LWR@closethree%
5892 \global\let\LWR@closethree\LWR@closetwo%
5893 \global\let\LWR@closetwo\LWR@closeone%
5894 \global\csletcs{\LWR@closeone}{\LWR@printclose#1}%
5895 \global\let\LWR@closedepthnineteen\LWR@closedeptheighteen%
5896 \global\let\LWR@closedeptheighteen\LWR@closedepthseventeen%
5897 \global\let\LWR@closedepthseventeen\LWR@closedepthsixteen%
5898 \global\let\LWR@closedepthsixteen\LWR@closedepthfifteen%
5899 \global\let\LWR@closedepthfifteen\LWR@closedepthfourteen%
5900 \global\let\LWR@closedepthfourteen\LWR@closedepththirteen%
5901 \global\let\LWR@closedepththirteen\LWR@closedepthtwelve%
5902 \global\let\LWR@closedepthtwelve\LWR@closedeptheleven%
5903 \global\let\LWR@closedeptheleven\LWR@closedepthten%
5904 \global\let\LWR@closedepthten\LWR@closedepthnine%
5905 \global\let\LWR@closedepthnine\LWR@closedeptheight%
5906 \global\let\LWR@closedeptheight\LWR@closedepthseven%
5907 \global\let\LWR@closedepthseven\LWR@closedepthsix%
5908 \global\let\LWR@closedepthsix\LWR@closedepthfive%
5909 \global\let\LWR@closedepthfive\LWR@closedepthfour%
5910 \global\let\LWR@closedepthfour\LWR@closedepththree%
5911 \global\let\LWR@closedepththree\LWR@closedepthtwo%
5912 \global\let\LWR@closedepthtwo\LWR@closedepthonen%
5913 \global\csletcs{\LWR@closedepthonen}{\LWR@depth#1}%

```

Error if the deepest depth is no longer \LWR@depthnone, which means that it somehow has been nested too deeply, or things are not being unnested correctly.

```

5914 \ifdefstring{\LWR@closedepthnineteen}{\LWR@depthnone}%
5915     {}%

```

```

5916      {%
5917          \PackageError{l warp}{%
5918              The document is nested too deeply for L warp}%
5919              {PLEASE inform the L warp maintainer!}%
5920      }%
5921 }

```

\LWR@popclose Pops one action and its depth off the stacks.

```

5922 \newcommand*\LWR@popclose{%
5923 {%
5924 \global\let\LWR@closeone\LWR@closetwo%
5925 \global\let\LWR@closetwo\LWR@closethree%
5926 \global\let\LWR@closethree\LWR@closefour%
5927 \global\let\LWR@closefour\LWR@closefive%
5928 \global\let\LWR@closefive\LWR@closesix%
5929 \global\let\LWR@closesix\LWR@closeseven%
5930 \global\let\LWR@closeseven\LWR@closeeight%
5931 \global\let\LWR@closeeight\LWR@closenine%
5932 \global\let\LWR@closenine\LWR@closeten%
5933 \global\let\LWR@closeten\LWR@closeeleven%
5934 \global\let\LWR@closeeleven\LWR@closetwelve%
5935 \global\let\LWR@closetwelve\LWR@closethirteen%
5936 \global\let\LWR@closethirteen\LWR@closefourteen%
5937 \global\let\LWR@closefourteen\LWR@closefifteen%
5938 \global\let\LWR@closefifteen\LWR@closesixteen%
5939 \global\let\LWR@closesixteen\LWR@closeseventeen%
5940 \global\let\LWR@closeseventeen\LWR@closeeighteen%
5941 \global\let\LWR@closeeighteen\LWR@closenineteen%
5942 \global\let\LWR@closedepthone\LWR@closedepthtwo%
5943 \global\let\LWR@closedepthtwo\LWR@closedepththree%
5944 \global\let\LWR@closedepththree\LWR@closedepthfour%
5945 \global\let\LWR@closedepthfour\LWR@closedepthfive%
5946 \global\let\LWR@closedepthfive\LWR@closedepthsix%
5947 \global\let\LWR@closedepthsix\LWR@closedepthseven%
5948 \global\let\LWR@closedepthseven\LWR@closedeptheight%
5949 \global\let\LWR@closedeptheight\LWR@closedepthnine%
5950 \global\let\LWR@closedepthnine\LWR@closedepthten%
5951 \global\let\LWR@closedepthten\LWR@closedeptheleven%
5952 \global\let\LWR@closedeptheleven\LWR@closedepthtwelve%
5953 \global\let\LWR@closedepthtwelve\LWR@closedepththirteen%
5954 \global\let\LWR@closedepththirteen\LWR@closedepthfourteen%
5955 \global\let\LWR@closedepthfourteen\LWR@closedepthfifteen%
5956 \global\let\LWR@closedepthfifteen\LWR@closedepthsixteen%
5957 \global\let\LWR@closedepthsixteen\LWR@closedepthseventeen%
5958 \global\let\LWR@closedepthseventeen\LWR@closedeptheighteen%
5959 \global\let\LWR@closedeptheighteen\LWR@closedepthnineteen%
5960 }

```

```

5961 \end{warpHTML}

```

42 Data arrays

These macros are similar to the `arrayjobx` package, except that `\LWR@setexparray`'s argument is expanded only once when assigned.

name has no backslash, index can be a number or a text name, and an empty value must be `\relax` instead of empty.

To assign an empty value:

```
\LWR@setexpparray{name}{index}{}{}
```

for HTML output: 5962 `\begin{warpHTML}`

```
\LWR@setexpparray {<name>} {<index>} {<contents>}
```

```
5963 \newbool{\LWR@setexpparray@doingparhooks}
5964
5965 \NewDocumentCommand{\LWR@setexpparray}{m m m}{%
```

Temporarily disable paragraph handling during the assignment. This is not done in a group with global assignments because a table may be nested.

```
5966 \let\ifLWR@setexpparray@doingparhooks\ifLWR@doingparhooks%
5967 \setbool{\LWR@doingparhooks}{false}%
5968 \let\LWR@setexpparray@par\par%
5969 \let\par\relax%
```

The name of the control sequence is the given name with the index appended.

```
5970 \xdef\LWR@thisexpparrayname{#1#2}%
```

Locally assign the value to the control sequence:

```
5971 \ifstrempty{#3}%
5972   {\csdef{\LWR@thisexpparrayname}{}%}
5973   {\csedef{\LWR@thisexpparrayname}{#3}}%
```

Restore the paragraph handling:

```
5974 \let\ifLWR@doingparhooks\ifLWR@setexpparray@doingparhooks%
5975 \let\par\LWR@setexpparray@par%
5976 }
```

```
\LWR@getexpparray {<name>} {<index>}
```

```
5977 \newcommand*\LWR@getexpparray[2]{%
5978   @_nameuse{#1#2}%
5979 }
```

```
5980 \end{warpHTML}
```

43 Localizing catcodes

for HTML & PRINT: 5981 `\begin{warpall}`

- ⚠ **Misplaced alignment tab character &** Place `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros or environments which include the tabular & character in their definitions.

The catcode of & must be changed before the definitions begin, and must be restored afterwards. Doing so avoids the error
 Misplaced alignment tab character &.

\StartDefiningTabulars Place before defining something with & in it.

```
5982 \newcommand{\StartDefiningTabulars}{%
5983     \LWR@traceinfo{StartDefiningTabulars}%
5984     \warpHTMLonly{\catcode`\&=\active}%
5985 }
```

\StopDefiningTabulars Place after defining something with & in it.

```
5986 \newcommand{\StopDefiningTabulars}{%
5987     \LWR@traceinfo{StopDefiningTabulars}%
5988     \warpHTMLonly{\catcode`\&=4}%
5989 }
```

`LWR@mathmacro (bool)` True if currently defining math macros. Used to disable SVG math hashing and MATHJAX math contents while defining a macro using inline math. Begin a macro, it is not guaranteed that the contents are static, and so the image must be unique. The contents also almost certainly will not be parsed correctly by MATHJAX.

```
5990 \newbool{LWR@mathmacro}
5991 \boolfalse{LWR@mathmacro}
```

\StartDefiningMath Place before defining something with \$ in it.

```
5992 \newcommand{\StartDefiningMath}{%
5993     \LWR@traceinfo{StartDefiningMath}%
5994     \warpHTMLonly{\catcode`\$=\active}%
5995 }
```

\StopDefiningMath Place after defining something with \$ in it.

```
5996 \newcommand{\StopDefiningMath}{%
5997     \LWR@traceinfo{StopDefiningMath}%
5998     \warpHTMLonly{\catcode`\$=3}% math shift
5999 }

6000 \end{warpall}
```

for HTML output: 6001 \begin{warpHTML}

A definition for & in case it is referred to after \StartDefiningTabulars but outside a tabular.

```
6002 \StartDefiningTabulars
6003 \protected\gdef&{%
6004     \PackageWarning{lwarp}{%
6005         An ampersand is being used inside a tabular\MessageBreak
6006     }%
6007 }%
6008 \StopDefiningTabulars

6009 \end{warpHTML}
```

44 Localizing dynamic math

Inline SVG math usually uses a hash of its contents to generate `lateximages` which are reusable for multiple instances with the same contents. If the contents may change for each use, such as depending on the current value of a counter, then `\inlinemathother` must be used before the inline math expression, and `\inlinemathnormal` must be used after.

For MATHJAX, the inline math expression is usually printed for MATHJAX to interpret. When marked as dynamic math, the following inline math expression will be displayed as an unhashed inline SVG image instead.

For existing code and packages, it may be possible to patch macros after they have been defined, using the `xpatch` package, which is pre-loaded by `l warp`:

```
\xpatchcmd{\macro}
  {$math expression$}
  {\inlinemathother$math expression$\inlinemathnormal}
  {}
  {\typeout{Error patching macro.}}
```

for HTML & PRINT: 6010 `\begin{warpall}`

`LWR@dynamicmath (bool)` True to mark inline math which is dynamic in nature, thus should not be hashed
Default: `false` for reuse.

```
6011 \newbool{LWR@dynamicmath}
6012 \boolfalse{LWR@dynamicmath}
```

`\inlinemathother` Place before using `$... $` or `\(... \)` if the contents of the math are not static, depending on counters or dynamic macros.

```
6013 \newcommand{\inlinemathother}{%
6014 \LWR@traceinfo{\inlinemathother}%
6015 \booltrue{LWR@dynamicmath}%
6016 }
```

`\inlinemathnormal` Place after using `$... $` or `\(... \)` with dynamic contents.

```
6017 \newcommand{\inlinemathnormal}{%
6018 \LWR@traceinfo{\inlinemathnormal}%
6019 \boolfalse{LWR@dynamicmath}%
6020 }

6021 \end{warpall}
```

45 HTML entities

for HTML output: 6022 `\begin{warpHTML}`

HTML Unicode entities:

```
6023 \let\LWR@origampersand\&
```

```
\LWR@fontfortags {\langle macro name\rangle} {\langle argument\rangle}
```

Forces roman TT font for HTML tags.

```
6024 \newrobustcmd*\LWR@fontfortags[2]{%
6025     \ifmmode%
6026         \PackageError{l warp}{%
6027             {%
6028                 An HTML tag was generated inside math.\MessageBreak
6029                 This should never occur.\MessageBreak
6030                 Something is broken in L warp.\MessageBreak
6031                 Enter 'h' for details%
6032             }%
6033             {({Using #1{#2}.})}%
6034     \else%
```

Used by `ltjtbook`, `platex`, and related.

```
6035     \ifdef{\romanencoding}{%
6036         {%
6037             \romanencoding{\encodingdefault}%
6038         }%
6039     }%
```

Used by `babel`:

```
6040     \ifdef{\latintext}{%
6041         {\latintext}%
6042         {\fontencoding\encodingdefault}%
6043     }%
6044     \LWR@print@normalfont%
6045     \LWR@origttfamily%
6046 \fi%
6047 }
```

```
\HTMLentity {\langle entitytag\rangle}
```

`\protect` is in case the tag appears in TOC, LOF, LOT.

```
6048 \newcommand*\HTMLentity[1]{%
6049 % \LWR@traceinfo{HTMLentity \detokenize{\#1}}%
6050 \begingroup%
6051 \LWR@hook@processingtags%
6052 \LWR@fontfortags{HTMLentity}{\detokenize{\#1}}%
6053 \protect\LWR@origampersand\LWR@isolate{\#1};%
6054 \endgroup%
6055 % \LWR@traceinfo{HTMLentity done}%
6056 }
```

```
\HTMLunicode {\langle hex_unicode\rangle}
```

```
6057 \newcommand*\HTMLunicode[1]{\HTMLentity{\LWR@origpound{}x#1}}
```

```
\&

6058 \renewrobustcmd*{\&}{\HTMLentity{amp}}


\textless

6059 \let\LWR@origtextless\textless
6060 \renewrobustcmd*{\textless}{\HTMLentity{lt}}


\textgreater

6061 \let\LWR@origtextgreater\textgreater
6062 \renewrobustcmd*{\textgreater}{\HTMLentity{gt}}


6063 \end{warpHTML}
```

46 HTML filename generation

The filename of the homepage is set to `\HomeHTMLFilename.html`. The filenames of additional sections start with `\HTMLFilename`, to which is appended a section number or a simplified section name, depending on `FileSectionNames`.

for HTML & PRINT: 6064 `\begin{warpall}`

`\BaseJobname` The `\jobname` of the printed version, even if currently compiling the `HTML` version. I.e. this is the `\jobname` without `_html` appended. This is used to set `\HomeHTMLFilename` if the user did not provide one.

6065 `\providecommand*{\BaseJobname}{\jobname}`

`\HTMLFilename` The prefix for all generated `HTML` files other than the home page, defaulting to empty. See section [7.6.1](#).

6066 `\providecommand*{\HTMLFilename}{}{}`

`\HomeHTMLFilename` The filename of the home page, defaulting to the `\BaseJobname`. See section [7.6.1](#).

6067 `\providecommand*{\HomeHTMLFilename}{\BaseJobname}`

`\SetHTMLFileName {⟨number⟩}`

Sets the file number for the next file to be generated. 0 is the home page. Use just before the next sectioning command, and set it to one less than the desired number of the next section. May be used to generate numbered groups of nodes such as 100+ for one chapter, 200+ for another chapter, etc.

```
6068 \newcommand*{\SetHTMLFileName}[1]{%
6069     \setcounter{LWR@htmlfilename}{#1}%
6070 }
```

FileSectionNames (bool) Selects how to create HTML file names.

Defaults to use section names in the filenames.

```
6071 \newbool{FileSectionNames}
6072 \booltrue{FileSectionNames}

6073 \end{warpall}
```

for HTML output: 6074 \begin{warpHTML}

Updated each time a new HTML file is begun. Used to provide HTML previous/next web page links.

```
6075 \newcounter{LWR@HTMLpagenum}
6076 \setcounter{LWR@HTMLpagenum}{0}
```

LWR@htmlseqfilenumber (Ctr) A sequential count of the number of each HTML file as it is being created. Number 0 is the home page. Unlike \LWR@htmlfilenumber, this one is known to increment by one for each file. This is used to generate previous /next links for each web page, via labels called \BaseJobname-autofile-*, and the last page is also labelled \BaseJobname-autofile-last.

```
6077 \newcounter{LWR@htmlseqfilenumber}
6078 \setcounter{LWR@htmlseqfilenumber}{0}
```

LWR@setseqfilelabel (bool) At each new HTML file, this is false until a sectional unit is used, at which point this is set true and a label is placed. In this way, the previous/next labels will point to a named section.

```
6079 \newbool{LWR@setseqfilelabel}
6080 \setbool{LWR@setseqfilelabel}{false}
```

LWR@htmlfilenumber (Ctr) Records the number of each HTML file as it is being created. Number 0 is the home page. This might not be sequential, as the user may use \SetHTMLFileName to create groups of numbered nodes.

```
6081 \newcounter{LWR@htmlfilenumber}
6082 \setcounter{LWR@htmlfilenumber}{0}
```

\LWR@htmlsectionfilename {<htmlfilename or name>}

Prints the filename for a given section: \HTMLfilename{}filenumber/name.html

```
6083 \newcommand*{\LWR@htmlsectionfilename}[1]{%
6084 \LWR@traceinfo{\LWR@htmlsectionfilename A !\detokenize{\#1}!}%
6085 \begingroup%
```

Disable CJK xpinyin while generating file names.

```
6086 \LWR@disablepinyin%
```

Section 0 or empty is given the home filename. The filename must be detokenized for underscores.

```
6087 % \LWR@traceinfo{about to assign temp}%
```

```

6088 \LWR@sanitize{#1}%
6089 \LWR@traceinfo{about to compare with ??}%
6090 \ifdefstring{\LWR@sanitized}{??}%
6091   {\LWR@traceinfo{found ??}}%
6092   {\LWR@traceinfo{not found ??}}%
6093 \LWR@traceinfo{about to compare with zero or empty}%
6094 \ifboolexpr{%
6095   test {\ifdefstring{\LWR@sanitized}{0}} or
6096   test {\ifdefstring{\LWR@sanitized}{}} or
6097   test {\ifdefstring{\LWR@sanitized}{??}}}
6098 }%
6099 {%
6100   \LWR@traceinfo{LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
6101   \HomeHTMLFilename.html%
6102 }%

```

For a **LATEX** section named “Index” or “index” without a prefix, create a filename with a trailing **-0** to avoid colliding with the **HTML** filename **index.html**:

```

6103 {%
6104   \LWR@traceinfo{LWR@htmlsectionfilename C \LWR@sanitized}%
6105   \ifboolexpr{%
6106     test{\ifdefvoid{\HTMLFilename}} and
6107     (
6108       test{\ifdefstring{\LWR@sanitized}{Index}} or
6109       test{\ifdefstring{\LWR@sanitized}{index}}%
6110     )
6111   }%
6112 {%
6113   \LWR@traceinfo{Adding a zero to the index filename.}%
6114   \LWR@sanitized-0.html%
6115 }%

```

Otherwise, create a filename with the chosen prefix:

```

6116 {%
6117   \HTMLFilename\LWR@isolate{\LWR@sanitized}.html%
6118 }%
6119 }%
6120 \LWR@traceinfo{LWR@htmlsectionfilename Z}%
6121 \endgroup%
6122 }

```

\LWR@htmlrefsectionfilename {*label*}

Prints the filename for the given label

```

6123 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
6124   \LWR@traceinfo{LWR@htmlrefsectionfilename: !\detokenize{#1}!}%

```

\LWR@nullfonts to allow math in a section name.

```

6125 \begingroup%
6126 \LWR@nullfonts%
6127 \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
6128 \endgroup%
6129 \LWR@traceinfo{LWR@htmlrefsectionfilename: done}%
6130 }

```

```
6131 \end{warpHTML}
```

47 Homepage link

for HTML & PRINT: 6132 \begin{warpall}

\linkhomename Holds the default name for the home link.

```
6133 \newcommand{\linkhomename}{Home}
```

```
6134 \end{warpall}
```

for HTML output: 6135 \begin{warpHTML}

\LinkHome May be used wherever you wish to place a link back to the homepage. The filename must be detokenized for underscores.

```
6136 \newcommand*\LinkHome{%
6137   \LWR@subhyperrefclass{\HomeHTMLfilename.html}{\linkhomename}{linkhome}%
6138 }
```

```
6139 \end{warpHTML}
```

for PRINT output: 6140 \begin{warpprint}

\LinkHome May be used wherever you wish to place a link back to the homepage. For print output, if hyperref is available a hyperlink to the first page is used, named by \linkhomename. If hyperref is not available, a pageref is used instead.

\BaseJobname is included in the link label in case multiple documents are cross-referenced.

```
6141 \AtBeginDocument{
6142 \@ifundefined{hyperref}{
6143   \newcommand*\LinkHome{%
6144     \linkhomename\ --- page \pageref{\BaseJobname-page-LWRfirstpage}%
6145   }
6146 }{
6147   \newcommand*\LinkHome{%
6148     \hyperref[\BaseJobname-page-LWRfirstpage]{\linkhomename}%
6149   }
6150 }
6151 }
6152
6153 \AfterEndPreamble{\label{\BaseJobname-page-LWRfirstpage}}
```

```
6154 \end{warpprint}
```

for HTML output: 6155 \begin{warpHTML}

\LWR@topnavigation Creates a link to the homepage at the top of the page for use when the window is too narrow for the sidetoc.

```
6156 \newcommand*\LWR@topnavigation{%
6157     \LWR@htmlelementclassline{nav}{topnavigation}{\LinkHome}%
6158 }
```

\LWR@botnavigation Creates a link to the homepage at the bottom of the page for use when the window is too narrow for the sidetoc.

```
6159 \newcommand*\LWR@botnavigation{%
6160     \LWR@htmlelementclassline{nav}{botnavigation}{\LinkHome}%
6161 }%
```



```
6162 \end{warpHTML}
```

48 Previous/next navigation links

for HTML & PRINT: 6163 \begin{warpall}

\linkpreviousname What to call the link to the previous web page.

```
6164 \newcommand*\linkpreviousname{Previous}
```

\linknextname What to call the link to the next web page.

```
6165 \newcommand*\linknextname{Next}
```

```
6166 \end{warpall}
```

for PRINT output: 6167 \begin{warpprint}

\LinkPrevious Creates a link to the previous web page if there is one.

```
6168 \newcommand*\LinkPrevious{}
```

\LinkNext Creates a link to the next web page if there is one.

```
6169 \newcommand*\LinkNext{}
```

```
6170 \end{warpprint}
```

for HTML output: 6171 \begin{warpHTML}

\LinkPrevious Creates a link to the previous web page if there is one.

The links refer to the L^AT_EX labels \Basejobname-autofile-*

```
6172 \newcommand*\LinkPrevious{%
6173     \ifnumless{\value{LWR@htmlseqfilenumber}}{1}{}{%
6174         \setcounter{LWR@tempcountone}{\value{LWR@htmlseqfilenumber}-1}%
6175         \LWR@subhyperrefclass{%
6176             \LWR@htmlrefsectionfilename{%
6177                 \BaseJobname-autofile-\arabic{LWR@tempcountone}}%
```

```

6178      }%
6179      }{\linkpreviousname}{linkhome}%
6180      }%
6181 }

```

\LinkNext Creates a link to the next web page if there is one.

The links refer to the L^AT_EX labels \Basejobname-autofile-* and the last is the label \Basejobname-autofile-last

```

6182 \newcommand*\LinkNext{%
6183     \ifcsdef{r@\BaseJobname-autofile-last@lwarp}{%
6184         \edef\LWR@tempone{%
6185             \LWR@htmlfileref{\BaseJobname-autofile-\arabic{\LWR@htmlseqfilenumber}}%
6186         }%
6187         \edef\LWR@temptwo{%
6188             \LWR@htmlfileref{\BaseJobname-autofile-last}%
6189         }%
6190         \ifdefequal{\LWR@tempone}{\LWR@temptwo}{%
6191             \setcounter{\LWR@tempcountone}{\value{\LWR@htmlseqfilenumber}+1}%
6192             \LWR@subhyperrefclass{%
6193                 \LWR@htmlrefsectionfilename{%
6194                     \BaseJobname-autofile-\arabic{\LWR@tempcountone}%
6195                 }%
6196                 }{\linknextname}{linkhome}%
6197             }%
6198         }%
6199     }%
6200 \end{warpHTML}

```

49 \LWRPrintStack diagnostic tool

⚠ Diagnostics tool: Prints the L^AT_EX nesting depth values for the stack levels. \LWR@startpars is used before printing the stack, so that \LWRPrintStack may be called from anywhere in the normal text flow.

for HTML output: 6201 \begin{warpHTML}

\LWRPrintStack Prints the closedepth stack.

```

6202 \newcommand*\LWR@subprintstack{%
6203 \LWR@closedepthonet\ \LWR@closedepthtwo\ \LWR@closedepththree\%
6204 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\%
6205 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\%
6206 \LWR@closedepthten\ \LWR@closedeptheleven\ \LWR@closedepthtwelve\%
6207 \LWR@closedepththirteen\ \LWR@closedepthfourteen\ \LWR@closedepthfifteen\%
6208 \LWR@closedepthsixteen\ \LWR@closedepthseventeen\ \LWR@closedeptheighteen\%
6209 \LWR@closedeptnineteen\%
6210 }%
6211
6212 \newcommand*\LWRPrintStack{%
6213 \LWR@startpars
6214 \LWR@subprintstack
6215 }

```

```

6216 \end{warpHTML}

for PRINT output: 6217 \begin{warpprint}

6218 \newcommand*{\LWRPrintStack}{{}}
6219 \end{warpprint}

```

50 Closing stack levels

for HTML output: 6220 \begin{warpHTML}

Close one nested level:

```

6221 \newcommand*{\LWR@closeoneprevious}{%
6222
6223 \LWR@closeone
6224
6225 \LWR@popclose
6226 }

```

\LWR@closeprevious {<sectintype>} Close everything up to the given depth:

```

6227 \newcommand*{\LWR@closeprevious}[1]{%
6228 \LWR@traceinfo{%
6229     LWR@closeprevious to depth \csuse{\LWR@depth#1}, %
6230     depths are \LWR@subprintstack%
6231 }%

```

Close any pending paragraph:

```
6232 \LWR@stopars%
```

Close anything nested deeper than the desired depth. First close anything deeper, then at most one of the same level.

```

6233 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{>}{\csuse{\LWR@depth#1}}}}{%
6234 }%
6235     \LWR@traceinfo{LWR@closeprevious: closing out depth \LWR@closedepthone}%
6236     \LWR@closeoneprevious%
6237 }%
6238 \ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}{\csuse{\LWR@depth#1}}}}{%
6239 }%
6240     \LWR@traceinfo{LWR@closeprevious: closing out depth \LWR@closedepthone}%
6241     \LWR@closeoneprevious%
6242 }{%
6243 \LWR@traceinfo{LWR@closeprevious: done, depths are \LWR@subprintstack}%
6244 }

6245 \end{warpHTML}

```

51 PDF pages and styles

for HTML output: 6246 \begin{warpHTML}

\LWR@forcenewpage New PDF page a before major environment.

This is used just before major environments, such as verse. Reduces the chance of an environment overflowing the HTML PDF output page.

```
6247 \newcommand{\LWR@forcenewpage}{%
6248 \LWR@traceinfo{\LWR@forcenewpage}%
6249 \ifinner\else%
6250   \LWR@traceinfo{\LWR@forcenewpage A}%
6251   \LWR@stoppars%
6252   \LWR@traceinfo{\LWR@forcenewpage B}%
6253   \LWR@maybe@orignewpage%
6254   \LWR@traceinfo{\LWR@forcenewpage C}%
6255   \LWR@startpars%
6256 \fi%
6257 \LWR@traceinfo{\LWR@forcenewpage done}%
6258 }
```

\pagestyle, etc. are nullified for HTML output.

\pagestyle {\langle style \rangle}

```
6259 \renewcommand*{\pagestyle}[1]{}
```

\thispagestyle {\langle style \rangle}

```
6260 \renewcommand*{\thispagestyle}[1]{}
```

\markboth {\langle left \rangle} {\langle right \rangle}

```
6261 \renewcommand*{\markboth}[2]{}
```

\markright {\langle right \rangle}

```
6262 \renewcommand*{\markright}[1]{}
```

\raggedbottom

```
6263 \renewcommand*{\raggedbottom}{}{}
```

\flushbottom

```
6264 \renewcommand*{\flushbottom}{}{}
```

\sloppy

```
6265 \renewcommand*{\sloppy}{}{}
```

```
\fussy

6266 \renewcommand*{\fussy}{{}

\pagenumbering * {\langle commands \rangle}

6267 \RenewDocumentCommand{\pagenumbering}{s m}{{}

6268 \end{warpHTML}}
```

52 HTML tags, spans, divs, elements

for HTML output: 6269 \begin{warpHTML}

52.1 Mapping L^AT_EX sections to HTML sections

```
6270 \newcommand*{\LWR@tagtitle}{h1}
6271 \newcommand*{\LWR@tagtitleend}{/h1}
6272 \newcommand*{\LWR@tagbook}{div class=\textquotedbl{}book\textquotedbl{}}
6273 \newcommand*{\LWR@tagbookend}{/div}
6274 \newcommand*{\LWR@tagpart}{h2}
6275 \newcommand*{\LWR@tagpartend}{/h2}
6276 \newcommand*{\LWR@tagchapter}{h3}
6277 \newcommand*{\LWR@tagchapterend}{/h3}
6278 \newcommand*{\LWR@tagsection}{h4}
6279 \newcommand*{\LWR@tagsectionend}{/h4}
6280 \newcommand*{\LWR@tagsubsection}{h5}
6281 \newcommand*{\LWR@tagsubsectionend}{/h5}
6282 \newcommand*{\LWR@tagsubsubsection}{h6}
6283 \newcommand*{\LWR@tagsubsubsubsectionend}{/h6}
6284 \newcommand*{\LWR@tagparagraph}{span class=\textquotedbl{}paragraph\textquotedbl{}}
6285 \newcommand*{\LWR@tagparagraphend}{/span}
6286 \newcommand*{\LWR@tagsubparagraph}{span class=\textquotedbl{}subparagraph\textquotedbl{}}
6287 \newcommand*{\LWR@tagsubparagraphend}{/span}
6288
6289 \newcommand*{\LWR@tagregularparagraph}{p}
```

52.2 Hook while processing tags

\LWR@hook@processingtags This is used to disable special text processing while processing HTML tags. Special (*Hook*) [lwarp] processing includes that done by *babel-french*, *luavina*, *xevlna*.

\LWR@hook@processingtags Disable special text processing while generating tags. Replaces \LWR@FBcancel in most places.

```
6290 \newcommand*{\LWR@hook@processingtags}{{}}
```

52.3 Babel-French tag modifications

Adjust *babel-french* for HTML spaces. So far, this only works for *pdflatex* and *xelatex*.

(Emulates or patches code by DANIEL FLIPO.)

```
6291 \providecommand*\LWR@FBcancel{}%
6292
6293 \AtBeginDocument{%
6294   @ifundefined{NoAutoSpacing}%
6295     {}%
6296     {%
6297       \LetLtxMacro{\LWR@FBcancel}{\NoAutoSpacing}%
6298       \appto{\LWR@hook@processingtags}{\LWR@FBcancel}%
6299     }%
6300
6301   @ifundefined{frenchbsetup}%
6302   {}%
6303   {%
6304     \frenchbsetup{FrenchFootnotes=false}%
6305   }%
6306   \renewrobustcmd*{\FBcolonspace}{%
6307     \begingroup%
6308     \LWR@hook@processingtags%
6309     \LWR@origampersand{}nbsp;%
6310     \endgroup%
6311   }%
6312   \renewrobustcmd*{\FBthinspace}{%
6313     \begingroup%
6314     \LWR@hook@processingtags%
6315     \LWR@origampersand{\LWR@origpound{}x202f;}%,%
6316     \endgroup%
6317   }%
6318   \renewrobustcmd*{\FBguillspace}{%
6319     \begingroup%
6320     \LWR@hook@processingtags%
6321     \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}%
6322     \endgroup%
6323   }%
6324   \DeclareDocumentCommand{\FBmedkern}{}{%
6325     \begingroup%
6326     \LWR@hook@processingtags%
6327     \LWR@origampersand{\LWR@origpound{}x202f;}%,%
6328     \endgroup%
6329   }%
6330   \DeclareDocumentCommand{\FBthickkern}{}{%
6331     \begingroup%
6332     \LWR@hook@processingtags%
6333     \LWR@origampersand{}nbsp;% ~
6334     \endgroup%
6335   }%
6336   \renewrobustcmd*{~}{\HTMLentity{nbsp}}% was overwritten by babel-french
6337   \iffBunicode%
6338   \else%
6339     \DeclareTextSymbol{\FBtextellipsis}{LY1}{133}%
6340     \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
6341   \fi%
6342 }%
```

```
6343 }
```

52.4 HTML output formatting

Helps format the output HTML code for human readability.

\LWR@indentHTML Newline and indent the output HTML code.

```
6344 \newcommand*{\LWR@indentHTML}{%
6345     \LWR@newline\LWR@origrule{2em}{0pt}%
6346 }
```

\LWR@indentHTMLtwo Newline and indent the output HTML code.

```
6347 \newcommand*{\LWR@indentHTMLtwo}{%
6348     \LWR@newline\LWR@origrule{4em}{0pt}%
6349 }
```

52.5 HTML tags

\LWR@htmlltagc {\langle tag \rangle} Break ligatures and use upright apostrophes in HTML tags.

\protect is in case the tag appears in TOC, LOF, LOT.

```
6350 \newcommand*{\LWR@htmlltagc}[1]{%
6351     \LWR@traceinfo{\LWR@htmlltagc !\detokenize{\#1}!}%
6352     \begingroup%
6353     \LWR@hook@processingtags%
6354     \LWR@fontfortags{\LWR@htmlltagc}{\detokenize{\#1}}%
6355     \protect\LWR@origtextless%
6356     \LWR@isolate{\#1}%
6357     \protect\LWR@origtextgreater%
6358     \endgroup%
6359 }
```

\LWR@spanwarnformat {\langle object \rangle}

Warns if the given object is used inside a span.

```
6360 \newcommand*{\LWR@spanwarnformat}[1]{%
6361     \ifnumcomp{\value{\LWR@spandepth}}{>}{0}{%
6362         \PackageWarning{lwarf}{%
6363             A #1 is being used inside a span.\MessageBreak
6364             Formatting may be lost,%
6365         }%
6366     }%
6367 }
```

\LWR@spanwarninvalid {\langle object \rangle}

Warns if the given object is used inside a span.

```
6368 \newcommand*{\LWR@spanwarninvalid}[1]{%
```

```

6369   \ifnumcomp{\value{LWR@spandepth}}{>}{0}{%
6370     \PackageWarning{lwarp}{%
6371       A #1 is being used inside a span.\MessageBreak
6372       This generates invalid HTML,%
6373     }%
6374   }{%
6375 }

```

LWR@nestspan (*env*) Disable `minipage`, `\parbox`, and `HTML <div>`s inside a ``.

- ⚠ `\begin{LWR@nestspan}` must follow the opening `` tag to allow a paragraph to start if the span is at the beginning of a new paragraph.
- ⚠ `\end{LWR@nestspan}` must follow the `` or a `<p>` may appear inside the span.

```

6376 \newcommand*\{LWR@nestspanitem}{%
6377   \if@newlist\else{%
6378     \LWR@htmltagc{br /}%
6379     \LWR@orignewline%
6380   }\fi%
6381   \LWR@origitem%
6382 }
6383
6384 \newenvironment*{LWR@nestspan}
6385 {%
6386   \LWR@traceinfo{LWR@nestspan starting}%
6387   \ifnumcomp{\value{LWR@lateimagedepth}}{>}{0}{%
6388     %
6389     \LWR@traceinfo{LWR@nestspan: inside a lateximage}%
6390   }%
6391   {%
6392     \LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
6393     \addtocounter{LWR@spandepth}{1}%

```

Nullify several objects inside the span:

```

6394   \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}%
6395     {\LWR@spanwarnformat{minipage or \protect\parbox}}%
6396   {%
6397     \RenewDocumentEnvironment{BlockClass}{o m}%
6398       {\LWR@spanwarnformat{multi-paragraph object}}%
6399     {%
6400       \RenewDocumentEnvironment{LWR@BlockClassWP}{m m D(){} m}%
6401         {\LWR@spanwarnformat{multi-paragraph object}}%
6402       {%
6403         \renewcommand{\BlockClassSingle}[2]{%
6404           {\LWR@spanwarnformat{multi-paragraph object}}%
6405           ##2%
6406         }%
6407         \renewcommand{\LWR@forcenewpage}{}%
6408         \renewcommand{\LWR@liststart}{\LetLtxMacro{\item}{\LWR@nestspanitem}}%
6409         \renewcommand{\LWR@listend}{\leavevmode}%
6410         \renewenvironment{quote}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
6411         \renewenvironment{quotation}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
6412       }%
6413       \LWR@traceinfo{LWR@nestspan starting: done}%
6414     }%
6415   }%

```

```

6416   \LWR@traceinfo{\LWR@nestspan ending}%
6417   \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
6418   {}%
6419   {\addtocounter{\LWR@spandepth}{-1}}%
6420   \LWR@traceinfo{\LWR@nestspan ending: done}%
6421 }

```

\LWR@htmlspan {\tag} {\text}

⚠ \LWR@spandepth is used to ensure that paragraph tags are not generated inside a span. The exact sequence of when to add and subtract the counter is important to correctly handle the paragraph tags before and after the span.

```

6422 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
6423   \LWR@ensuredoingapar%
6424   \LWR@htmllagc{#1}%
6425   \begin{\LWR@nestspan}%
6426   #2%
6427   \LWR@htmllagc{/#1}%
6428   \end{\LWR@nestspan}%
6429 }

```

\LWR@htmlspanclass [style] (aria role) {\class} {\text}

```

6430 \NewDocumentCommand{\LWR@htmlspanclass}{o D(){} m +m}{%
6431   \LWR@traceinfo{\LWR@htmlspanclass #3}%
6432   \LWR@ensuredoingapar%
6433   \ifblank{#2}{%
6434     {\LWR@subhtmlelementclass{span}[#1]{#3}}%
6435     {\LWR@subhtmlelementclass{span}[#1](#2){#3}}%
6436   \begin{\LWR@nestspan}%
6437   #4%
6438   \LWR@htmllagc{/span}%
6439   \end{\LWR@nestspan}%
6440   \LWR@traceinfo{\LWR@htmlspanclass done}%
6441 }

```

\LWR@htmllag {\tag}

Print an HTML tag: <tag>

```

6442 \newcommand*{\LWR@htmllag}[1]{%
6443   \LWR@htmllagc{#1}%
6444 }

```

52.6 Block tags and comments

In the following, \origttfamily breaks ligatures, which may not be used for HTML codes:

```

\LWR@htmlopencomment
\LWR@htmlclosecomment
6445 \newcommand*{\LWR@htmlopencomment}{%
6446 % \LWR@traceinfo{\LWR@htmlopencomment}%
6447   \begingroup%

```

```

6448      \LWR@hook@processingtags%
6449      \LWR@fontfortags{\LWR@htmlopencomment}{ }%
6450      \LWR@print@mbox{\LWR@origtextless{!}-\/-}%
6451      \endgroup%
6452 }
6453
6454 \newcommand*\LWR@htmclosecomment[1]{%
6455 % \LWR@traceinfo{\LWR@htmclosecomment}%
6456      \begingroup%
6457      \LWR@hook@processingtags%
6458      \LWR@fontfortags{\LWR@htmclosecomment}{ }%
6459      \LWR@print@mbox{-\/-\LWR@origtextgreater}%
6460      \endgroup%
6461 }

\LWR@htmlcomment {{comment}}


6462 \newcommand{\LWR@htmlcomment}[1]{%
6463     \ifmmode%
6464     \else%
6465         \LWR@htmlopencomment{}%
6466     {%
6467         \LWR@print@normalfont%
6468         \LWR@origttfamily% break ligatures
6469         #1%
6470     }%
6471     \LWR@htmclosecomment{}%
6472     \fix%
6473 }

```

\LWR@htmlblockcomment {{comment}}

```

6474 \newcommand{\LWR@htmlblockcomment}[1]
6475     {\LWR@stoppars\LWR@htmlcomment{#1}\LWR@startpars}

```

\LWR@htmlblocktag {{tag}} print a stand-alone HTML tag

```

6476 \newcommand*\LWR@htmlblocktag[1]{%
6477     \LWR@stoppars%
6478     \LWR@htmltag{#1}%
6479     \LWR@startpars%
6480 }

```

52.7 Div class and element class

\LWR@subhtmlelementclass {{element}} [[style]] ((aria role)) {{class}}

Factored and reused in several places.

The trailing spaces allow more places for a line break.

The use of \textquotedbl instead of " provides improved compatibility with xeCJK.

```

6481 \NewDocumentCommand{\LWR@subhtmlelementclass}{m O{} D(){} m}{%

```

```

6482   \LWR@traceinfo{\LWR@subhtmlelementclass !#1!#4!}%
6483   \ifblank{#2}%
6484   {%
6485     \empty style
6486     \LWR@htmntag{%
6487       #1%
6488       \ifblank{#3}{}{ role=\textquotedbl#3\textquotedbl}% spaces
6489       \ifblank{#4}{}{ class=\textquotedbl#4\textquotedbl}% spaces
6490     }%
6491   }%
6492   {%
6493     \non-empty style
6494     \LWR@htmntag{%
6495       #1\LWR@indentHTML%
6496       \ifblank{#3}{}{role=\textquotedbl#3\textquotedbl\LWR@indentHTML}%
6497       \ifblank{#4}{}{class=\textquotedbl#4\textquotedbl\LWR@indentHTML}%
6498       style=\textquotedbl#2\textquotedbl\LWR@newline%
6499     }%
6500   }%
6501 \LWR@traceinfo{\LWR@subhtmlelementclass done}%
6500 }

\LWR@htmlelementclass {\element} [\style] {\class}

6501 \NewDocumentCommand{\LWR@htmlelementclass}{m o D(){} m}{%
6502   \LWR@stoppars%
6503   \LWR@forceemptyline%
6504   \ifblank{#3}%
6505     {\LWR@subhtmlelementclass{#1}[#2]{#4}}%
6506     {\LWR@subhtmlelementclass{#1}[#2](#3){#4}}%
6507   \LWR@startpars%
6508 }

\LWR@htmlelementclassend {\element} {\class}

6509 \newcommand*{\LWR@htmlelementclassend}[2]{%
6510   \LWR@stoppars%
6511   \LWR@htmntag{/#1}%
6512   \ifbool{HTMLDebugComments}{%
6513     \LWR@htmlcomment{End of #1 '#2'}%
6514   }{%
6515   \LWR@startpars%
6516 }

\LWR@htmldivclass [\style] (\aria{role}) {\class}

6517 \NewDocumentCommand{\LWR@htmldivclass}{o D(){} m}{%
6518   \ifblank{#2}%
6519     {\LWR@htmlelementclass{div}[#1]{#3}}%
6520     {\LWR@htmlelementclass{div}[#1](#2){#3}}%
6521 }

\LWR@htmldivclassend {\class}

6522 \newcommand*{\LWR@htmldivclassend}[1]{%
6523   \LWR@htmlelementclassend{div}{#1}%
6524 }

```

52.8 Single-line elements

A single-line element, without a paragraph tag for the line of text:

```
\LWR@htmlelementclassline {\langle element \rangle} [\langle style \rangle] {\langle class \rangle} {\langle text \rangle}

6525 \NewDocumentCommand{\LWR@htmlelementclassline}{m o m +m}{%
6526   \LWR@stoppars
6527   \LWR@forceemptyline%
6528   \LWR@subhtmlelementclass{#1}[#2]{#3}%
6529   #4%
6530   \LWR@htmltag{/#1}
6531   \LWR@startpars
6532 }
```

52.9 HTML5 semantic elements

```
\LWR@htmlelement {\langle element \rangle}

6533 \newcommand*{\LWR@htmlelement}[1]{%
6534   \LWR@htmlblocktag{#1}
6535 }
```

```
\LWR@htmlelementend {\langle element \rangle}

6536 \newcommand*{\LWR@htmlelementend}[1]{%
6537   \LWR@stoppars
6538   \LWR@htmltag{/#1}
6539   \LWR@startpars
6540 }
6541
6542 \end{warpHTML}
```

52.10 High-level block and inline classes

These are high-level commands which allow the creation of arbitrary block or inline sections which may be formatted with css.

Nullified versions are provided for print mode.

For other direct-formatting commands, see section 95.

`BlockClass (env.) [\langle style \rangle] (\langle aria role \rangle) {\langle class \rangle}` High-level interface for <div> classes.

Ex: `\begin{BlockClass}{class} text \end{BlockClass}`

for HTML & PRINT: 6543 `\begin{warpall}`
 6544 `\NewDocumentEnvironment{BlockClass}{o D(){} m}{}{}`
 6545 `\end{warpall}`

for HTML output: 6546 `\begin{warpHTML}`
 6547
 6548 `\NewDocumentEnvironment{LWR@HTML@BlockClass}{o D(){} m}{}%`

```

6549      {\LWR@htmldivclass[#1](#2){#3}}%
6550      {\LWR@htmldivclassend{#3}}
6551
6552 \LWR@formattedenv{BlockClass}
6553 \end{warpHTML}

```

\BlockClassSingle {<class>} {<text>} A single-line <div>, without a paragraph tag for the line of text.

for HTML & PRINT: 6554 \begin{warpall}
6555 \newcommand{\BlockClassSingle}[2]{#2}
6556 \end{warpall}

for HTML output: 6557 \begin{warpHTML}
6558 \newcommand{\LWR@HTML@BlockClassSingle}[2]{%
6559 \LWR@htmlelementclassline{div}{#1}{#2}%
6560 }
6561
6562 \LWR@formatted{BlockClassSingle}
6563 \end{warpHTML}

\InlineClass (<WP style>) [<style>] {<class>} {<text>}

High-level interface for inline span classes.

(<WP style>) is css styling to add when formatting for a word processor import.

[<style>] is the css styling to add when not formatting for a word processor.

for HTML & PRINT: 6564 \begin{warpall}
6565 \NewDocumentCommand{\InlineClass}{D{()}{}}{ o m +m}{#4}%
6566 \end{warpall}

for HTML output: 6567 \begin{warpHTML}
6568 \NewDocumentCommand{\LWR@HTML@InlineClass}{D{()}{}}{ o m +m}{%
6569 \LWR@traceinfo{\LWR@HTML@InlineClass #3}%
6570 \ifbool{FormatWP}{%
6571 \LWR@traceinfo{\LWR@HTML@InlineClass: FormatWP}%
6572 \LWR@htmlspanclass[#1]{#3}{#4}%
6573 }{%
6574 \LWR@traceinfo{\LWR@HTML@InlineClass: not FormatWP}%
6575 \LWR@htmlspanclass[#2]{#3}{#4}%
6576 }%
6577 \LWR@traceinfo{\LWR@HTML@InlineClass: done}%
6578 }
6579
6580 \LWR@formatted{InlineClass}
6581 \end{warpHTML}

\LWR@BlockClassWP (*env*) {<WP style>} {<HTML style>} (<aria role>) {<class>} Low-level interface for <div> classes with an automatic float ID. These are often used when \ifbool{FormatWP}.

The use of \textquotedbl instead of " provides improved compatibility with xeCJK.

for HTML & PRINT: 6582 \begin{warpall}
6583 \NewDocumentEnvironment{\LWR@BlockClassWP}{m m D{}{} m}{}
6584 \end{warpall}

```

for HTML output: 6585 \begin{warpHTML}
6586 \NewDocumentEnvironment{\LWR@HTML@LWR@BlockClassWP}{m m D(){} m}%
6587   {%
6588     \LWR@stoppars%
6589     \ifbool{FormatWP}%
6590     {%
6591       \addtocounter{\LWR@thisautoidWP}{1}%
6592       \LWR@htmltag{%
6593         div class=\textquotedbl#4\textquotedbl\ % space
6594         id=\textquotedbl%
6595         \LWR@print@mbox{autoidWP-\arabic{\LWR@thisautoidWP}}%
6596         \textquotedbl%
6597         \ifblank{#3}{}{ role=\textquotedbl#3\textquotedbl}%
6598         \ifblank{#1}{}{ style=\textquotedbl#1\textquotedbl}%
6599       }%
6600     }% FormatWP
6601     {%
6602       \not FormatWP
6603       \LWR@htmltag{%
6604         div class=\textquotedbl#4\textquotedbl%
6605         \ifblank{#3}{}{ role=\textquotedbl#3\textquotedbl}%
6606         \ifblank{#2}{}{ style=\textquotedbl#2\textquotedbl}%
6607       }%
6608     }% not FormatWP
6609   }%
6610   {\LWR@htmldivclassend{#4}}
6611
6612 \LWR@formattedenv{\LWR@BlockClassWP}
6613 \end{warpHTML}

```

52.11 Closing HTML tags

for HTML output: 6614 \begin{warpHTML}

Sections H1, H2, etc. do not need a closing HTML tag, but we add a comment for readability:

```

6615 \newcommand*\LWR@printclosebook{%
6616   \ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing book}}{}}
6617 \newcommand*\LWR@printclosepart{%
6618   \ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{}}
6619 \newcommand*\LWR@printclosechapter{%
6620   \ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
6621 \newcommand*\LWR@printclosesection{%
6622   \ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
6623 \newcommand*\LWR@printclosesubsection{%
6624   \ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
6625 \newcommand*\LWR@printclosesubsubsection{%
6626   \ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsubsection}}{}}
6627 \newcommand*\LWR@printcloseparagraph{%
6628   \ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
6629 \newcommand*\LWR@printclosesubparagraph{%
6630   \ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}

```

Lists require closing HTML tags:

```

6631 \newcommand*{\LWR@printcloselistitem}
6632     {\LWR@htmltag{/li}}
6633 \newcommand*{\LWR@printclosedescitem}
6634     {\LWR@htmltag{/dd}}
6635 \newcommand*{\LWR@printcloseitemize}
6636     {\LWR@htmltag{/ul}}
6637 \newcommand*{\LWR@printcloseenumerate}
6638     {\LWR@htmltag{/ol}}
6639 \newcommand*{\LWR@printclosedescription}
6640     {\LWR@htmltag{/dl}}


6641 \end{warpHTML}

```

53 Paragraph handling

These commands generate the HTML paragraph tags when allowed and required.

Paragraph tags are or are not allowed depending on many conditions. Section 54 has high-level commands which allow paragraph-tag generation to start/stop. Even when allowed (`LWR@doingstartpars`), tags are not generated until a L^AT_EX paragraph is being used (`LWR@doingapar`). `LWR@lateximagedepth` is used to prevent nesting tags inside a `lateximage`. `LWR@spandepth` is used to prevent nesting paragraph tags inside a paragraph, which became important inside `\fbox` commands and other spans.

The L^AT_EX paragraph hooks are used to manage tag creation.

for HTML output: 6642 `\begin{warpHTML}`

`LWR@spandepth (Ctr)` Do not create paragraph tags inside of an HTML span.

```

6643 \newcounter{LWR@spandepth}
6644 \setcounter{LWR@spandepth}{0}

```

`LWR@doingparhooks (bool)` Tells whether the `lwarp` paragraph hooks are to be active.

```

6645 \newbool{LWR@doingparhooks}
6646 \boolfalse{LWR@doingparhooks}

```

`LWR@in@multirow@par (bool)` Tells whether to generate break instead of paragraph tags inside a `\multirow`.

```

6647 \newbool{LWR@in@multirow@par}
6648 \boolfalse{LWR@in@multirow@par}

```

`LWR@starting@fancybox (bool)` Suppresses `
` if beginning a `fancybox` environment.

```

6649 \newbool{LWR@starting@fancybox}
6650 \boolfalse{LWR@starting@fancybox}

```

`LWR@doingstartpars (bool)` Tells whether paragraphs may be generated.

```

6651 \newbool{LWR@doingstartpars}
6652 \boolfalse{LWR@doingstartpars}

```

`LWR@doingapar (bool)` Tells whether have actually generated and are currently processing paragraph

text.

```
6653 \newbool{LWR@doingapar}
6654 \global\boolfalse{LWR@doingapar}
```

`LWR@algocf@dopars (bool)` Tells whether algorithm2e has patched paragraph handling using `\everypar`. If so, the open paragraph tags are generated by algorithm2e's `\algocf@everypar` instead of `\LWR@openparagraph`.

```
6655 \newbool{LWR@algocf@dopars}
6656 \boolfalse{LWR@algocf@dopars}
```

`\PN@parnotes@auto` Redefined by `parnotes` to print paragraph notes at the end of each paragraph.

```
6657 \def\PN@parnotes@auto{}%
```

`\LWR@ensuredoingapar` These were different in older versions of l warp, but are now the same thing.

`\LWR@openparagraph`

```
6658 \newcommand*{\LWR@openparagraph}{}
6659 {}%
```

See if paragraph handling is enabled:

```
6660     \ifboolexpr{
6661         bool{LWR@doingparhooks} and
6662         bool{LWR@doingstartpars}
6663     }%
6664     {% handling pars
```

See if have already started a `lateximage` or a ``. If so, do not generate nested paragraph tags.

```
6665     \ifboolexpr{
6666         test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6667         test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
6668     }% nested par tags?
```

If so: Do nothing if already started a `lateximage` page. Cannot nest a `lateximage`. Also do nothing if already inside a ``. Do not nest paragraph tags inside a ``.

```
6669     {}% no nested par tags
```

Else: No `lateximage` or `` has been started yet, so it's OK to generate paragraph tags.

```
6670     {% yes nest par tags
6671         \ifbool{LWR@doingapar}{}{%
```

If `parnotes` is used, paragraph notes are inserted before starting the next paragraph:

```
6672     \PN@parnotes@auto%
```

Set flag before creating the tag, so that the tag itself does not trigger a new paragraph:

```
6673 \global\booltrue{LWR@doingapar}%
```

The opening paragraph tag. Do not create tag if doing `algorithm2e` handling or inside a `\multirow`.

```
6674 \ifbool{LWR@algocf@dopars}{}{%
6675   \ifbool{LWR@in@multirow@par}{}{%
6676     {}%
6677     {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%
6678   }%
6679 }%
6680 }% end of yes nest par tags
6681 }% end of handling pars
6682 {}% not handling pars
6683 }
6684
6685 \let\LWR@ensuredoingapar\LWR@openparagraph
```

`\LWR@closeparagraph@br` Add an `HTML` break if in a `span`, and not in a `lateximage`, and not in tabular metadata. Factored from `\LWR@closeparagraph`.

```
6686 \newcommand*{\LWR@closeparagraph@br}{%
6687 {%
6688   \ifboolexpr{%
6689     test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
6690     test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} and
6691     not bool {LWR@starting@fancybox} and
6692     not bool {LWR@intabularmetadata} or
6693     bool {LWR@in@multirow@par}%
6694   }%
6695   {\unskip\LWR@htmltagc{br /}}%
6696   {}%
6697 }
```

`\LWR@closeparagraph`

```
6698 \newcommand*{\LWR@closeparagraph}{%
6699 {%
6700 % \LWR@traceinfo{LWR@closeparagraph}%
}
```

See if paragraph handling is enabled:

```
6701 \ifbool{LWR@doingparhooks}{%
6702   \ifbool{LWR@doingapar}{%
```

If currently in paragraph mode:

```
6703 {}% handling pars
```

See if already started a `lateximage` or a ``:

```
6704 \ifboolexpr{%
6705   test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6706   test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} or
6707   bool{LWR@in@multirow@par}%
6708 }%
```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```
6709      {% no nested par tags
6710          \LWR@closeparagraph@br%
6711      }% no nested par tags
```

If have not already started a `lateximage` or a ``:

```
6712      {% yes nest par tags
```

Print a closing tag.

(The fill seems to be required to force the `caption` package to create flush left caption text in the HTML.)

```
6713          \@hspacer{\fill}%
6714          \leavevmode\LWR@orignewline%
6715          \LWR@htmlltagc{/}\LWR@tagregularparagraph}%
```

No longer doing a paragraph:

```
6716          \global\boolfalse{LWR@doingapar}%
```

Disable the special `minipage` & `\hspace` interaction until a new minipage is found:

```
6717          \global\boolfalse{LWR@minipagethispar}%
```

If `parnotes` is used, paragraph notes are inserted after ending the previous paragraph:

```
6718          \PN@parnotes@auto%
6719          }% end of yes nest par tags
6720          }% LWR@doingapar: end of handling pars
```

Add a parbreak if in a span, not in a `lateximage`, and not in table metadata.

```
6721      {% not LWR@doingapar: not handling pars
6722          \LWR@closeparagraph@br%
6723      }% not handling pars
```

In most cases, finish with a L^AT_EX `\par`, but in the case of paragraphs between lines in a tabular fetch the next token instead. Required for `\multicolumn`.

```
6724          \ifboolexpr{%
6725              not bool {LWR@doingapar} and
6726              test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
6727              test {
6728                  \ifnumcomp{\value{LWR@tabulardepth}}{=}{\value{LWR@tabularpardepth}}
6729                      } and
6730                      bool {LWR@intabularmetadata} and
6731                      not bool {LWR@tableparcell} and
6732                      test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}}
6733              }%
6734              {\LWR@getmynexttoken}%
6735              {}%
6736          }% LWR@doingparhooks
```

```

6737      {}% not LWR@doingparhooks
6738 % Do not place anything here, due to the above \LWR@getmynexttoken.
6739 }

```

53.1 Paragraph Hooks

para/begin (*Hook*) [LaTeX]

```
6740 \AddToHook{para/begin}[lwarp]{\LWR@openparagraph}
```

para/end (*Hook*) [LaTeX]

```
6741 \AddToHook{para/end}[lwarp]{\LWR@closeparagraph}
```

```
6742 \end{warpHTML}
```

54 Paragraph start/stop handling

These commands allow/disallow the generation of HTML paragraph tags.

Section 53 has the commands which actually generate the tags.

The L^AT_EX paragraph hooks are used to generate the opening and closing paragraph tags.

for HTML output: 6743 \begin{warpHTML}

\LWR@startpars Begin handling HTML paragraphs. This allows an HTML paragraph to start, but one has not yet begun.

```

6744 \newcommand*{\LWR@startpars}%
6745 {%

```

Ignore if inside a `lateximage` or ``:

```

6746 \ifboolexpr{
6747     test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6748     test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
6749 }%
6750     {}% nesting
6751     {}% not nesting

```

The L^AT_EX paragraph hook controls tag generation for the start and end of paragraphs.

See if currently handling HTML paragraphs:

```
6752 \ifboolexpr {bool{LWR@doingparhooks} and bool{LWR@doingstartpars}}%
```

If already in paragraph mode, do nothing.

```
6753 {}%
```

If not currently in paragraph mode:

```
6754          {\par}%
```

Are now handling paragraphs, but have not yet actually started one:

```
6755          \global\booltrue{LWR@doingstartpars}%
```

No <par> tag yet to undo:

```
6756          \global\boolfalse{LWR@doingapar}%
6757          }% not nesting
6758 }
```

\LWR@stopars Stop handling HTML paragraphs. Any currently open HTML paragraph is closed, and no more will be opened.

```
6759 \newcommand*{\LWR@stopars}{%
6760 {%
```

Ignore if inside a `lateximage` or :

```
6761      \ifboolexpr{
6762          test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
6763          test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
6764      }%
6765      {}% nesting
6766      {}% not nesting
```

See if currently handling HTML paragraphs:

```
6767      \ifboolexpr{bool{LWR@doingparhooks} and bool{LWR@doingapar}}{%
```

if currently in an HTML paragraph:

```
6768          {%
```

Print a closing tag:

```
6769          \leavevmode\LWR@orignewline%
6770          \LWR@htmltagc{/LWR@tagregularparagraph}%
6771          \LWR@orignewline%
```

No longer have an open HTML paragraph:

```
6772          \global\boolfalse{LWR@doingapar}%
```

Disable the special `minipage` & `\hspace` interaction until a new minipage is found:

```
6773          \global\boolfalse{LWR@minipagethispar}%
6774          }%
```

If was not in an HTML paragraph:

```
6775          {}%
```

No longer in paragraph mode:

```
6776 \global\setbool{LWR@doingstartpars}{false}%
```

No <p> tag to undo:

```
6777 \global\boolfalse{LWR@doingapar}%
6778 }% not nesting
6779 }
```

```
6780 \end{warpHTML}
```

55 Indentfirst

indentfirst (Pkg) `indentfirst` redefines `\@afterindentfalse` to be `\@afterindenttrue`. This is reversed `\AtBeginDocument` here.

for HTML output: 6781 `\begin{warpHTML}`

```
6782 \AtBeginDocument{
6783   \def\@afterindentfalse{\let\if@afterindent\iffalse}
6784   \@afterindentfalse
6785 }
6786 \let\LWR@afterindent@syntaxhighlight\fi% syntax highlighting
6787 \end{warpHTML}
```

56 Page headers and footers

for HTML & PRINT: 6788 `\begin{warpall}`

In the following, catcode is manually changed back and forth without groups, since new macros are being defined which must not be contained within the groups.

```
6789 \newcommand{\LWR@firstpagetop}{}% for the home page alone
6790 \newcommand{\LWR@firstpagebottom}{}% for the home page alone
6791 \newcommand{\LWR@pagetop}{}% for all other pages
6792 \newcommand{\LWR@pagebottom}{}%
```

`\HTMLFirstPageTop {<text and logos>}`

```
6793 \newcommand{\HTMLFirstPageTop}[1]{%
6794   \renewcommand{\LWR@firstpagetop}{#1}%
6795 }
```

`\HTMLFirstPageBottom {<text and logos>}`

```
6796 \newcommand{\HTMLFirstPageBottom}[1]{%
6797   \renewcommand{\LWR@firstpagebottom}{#1}%
6798 }
```

```
\HTMLPageTop {\text and logos}

6799 \newcommand{\HTMLPageTop}[1]{%
6800     \renewcommand{\LWR@pagetop}{#1}%
6801 }

\HTMLPageBottom {\text and logos}

6802 \newcommand{\HTMLPageBottom}[1]{%
6803     \renewcommand{\LWR@pagebottom}{#1}%
6804 }

6805 \end{warpall}
```

57 CSS

for HTML output: 6806 \begin{warpHTML}

\LWR@currentcss The css filename to use. This may be changed mid-document using \CSSFilename, allowing different css files to be used for different sections of the document.

```
6807 \newcommand*\{\LWR@currentcss\}{lwarf.css}
```

\CSSFilename {\new-css-filename.css} Assigns the css file to be used by the following HTML pages.

```
6808 \newcommand*\{\CSSFilename\}[1]{%
6809     \renewcommand*\{\LWR@currentcss\}{#1}%
6810     \@onelvel@sanitize\LWR@currentcss%
6811 }
6812
6813 \end{warpHTML}
```

for PRINT output: 6814 \begin{warpprint}
6815 \newcommand*\{\CSSFilename\}[1]{}
6816 \end{warpprint}

58 MATHJAX script

for HTML output: 6817 \begin{warpHTML}

Default: lwarf_mathjax.txt

\LWR@mathjaxfilename The MATHJAX script filename to use. This file is copied into the head of each HTML page. This may be changed mid-document using \MathJaxFilename, allowing the use of a custom MATHJAX script, such as for a local repository, or different MATHJAX script files to be used for different sections of the document.

```
6818 \newcommand*\{\LWR@mathjaxfilename\}{lwarf_mathjax.txt}
```

\MathJaxFilename {*filename*} Assigns the MATHJAX script file to be used by the following HTML pages.

```

6819 \newcommand*\MathJaxFilename[1]{%
6820     \renewcommand*\LWR@mathjaxfilename{\#1}%
6821     @onelvel@sanitize\LWR@mathjaxfilename%
6822 }
6823
6824 \end{warpHTML}

```

for PRINT output: 6825 \begin{warpprint}

```

6826 \newcommand*\MathJaxFilename[1]{}
6827 \end{warpprint}

```

59 Title, HTML meta author, HTML meta description

for HTML output: 6828 \begin{warpHTML}

\title {*title*} Modified to remember \thetitle, which is used to set the HTML page titles.

```

6829 \let\origtitle\title
6830
6831 \renewcommand*\title[1]{%
6832     \origtitle{\#1}%
6833     \begingroup%
6834         \renewcommand\thanks[1]{}
6835         \protected@xdef\thetitle{\#1}%
6836     \endgroup%
6837 }

```

```
6838 \end{warpHTML}
```

for HTML & PRINT: 6839 \begin{warpall}

\HTMLTitle {*TitleName*} The Title to place into an HTML meta tag. The default is to use the document \title's setting.

```

6840 \providecommand{\thetitle}{\BaseJobname}
6841
6842 \newcommand{\theHTMLTitle}{\thetitle}
6843
6844 \newcommand{\HTMLTitle}[1]{\renewcommand{\theHTMLTitle}{#1}}

```

\HTMLAuthor {*authorname*} The author to place into an HTML meta tag. If none given, the default is \theauthor, which is empty unless the titling package is used.

```

6845 \providecommand{\theauthor}{}
6846
6847 \newcommand{\theHTMLAuthor}{\theauthor}
6848
6849 \newcommand{\HTMLAuthor}[1]{\renewcommand{\theHTMLAuthor}{#1}}

```

This is placed inside an `HTML` meta tag at the start of each file. This may be changed mid-document using `\HTMLDescription`, allowing different `HTML` descriptions to be used for different sections of the document.

 **HTML author** Do not use double quotes, and do not exceed 150 characters.

`\HTMLDescription {<New html meta description.>}` Assigns the `HTML` file's description meta tag.

```
6850 \newcommand{\LWR@currentHTMLDescription}{}  
6851  
6852 \newcommand{\HTMLDescription}[1]{%  
6853 \renewcommand{\LWR@currentHTMLDescription}{#1}  
6854 }  
6855  
6856 \end{warpall}
```

60 Footnotes

`lwarp` uses native `LATEX` footnote code, although with its own `\box` to avoid the `LATEX` output routine. The usual functions mostly work as-is.

footnote numbering To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For `bigfoot`, `manyfoot`, or `perpage`:

```
\MakePerPage{footnoteX}  
— or —  
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by `HTML` page. This is recommended for `\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

MATHJAX Also for `MATHJAX`, `\footnotename` is used for a `\footnotemark` if the actual footnote number is not known. To redefine it, provide it before loading `lwarp`:

```
\providecommand{\footnotename}{something}  
\usepackage{lwarp}
```

Similar for `sidenotes`. For `endnotes`:

```
\def\endnotename{something}% \def allows name to start with  
"end"
```

For the `pagenote` package, there is no `\pagenotename` to define, since there is no `\pagenotemark` command.

footmisc The `footmisc` `stable` option is emulated by `lwarp`.

 **sectioning commands** When using footnotes in sectioning commands, to generate consistent results between print and `HTML`, use the `footmisc` package with the `stable` option, provide a short TOC entry, and `\protect` the `\footnote`:

```
\usepackage[stable]{footmisc}
...
\subsection[Subsection Name]
{Subsection Name\protect\footnote{A footnote.}}
```

memoir with footmisc If using **memoir** class, with which **l warp** preloads **footmisc**, the **stable** option must be declared before **l warp** is loaded:

```
\PassOptionsToPackage{stable}{footmisc}
\usepackage{l warp}
...
```

Do not use a starred sectioning command. As an alternative, it may be possible to adjust **\secnumdepth** instead.

Several kinds of footnotes are used: in a regular page, in a minipage, or as thanks in the titlepage. Each of these is handled differently.

60.1 Regular page footnotes

In **HTML** documents, footnotes are placed at the bottom of the web page or the section, depending on **FootnoteDepth**, using the **LATEX** box **\LWR@footnotebox**. Using this instead of the original **\footins** box avoids having footnotes be printed by the output routine, since footnotes should be printed per **HTML** page instead of per **PDF** page.

See section 60.4 for the implementation.

60.2 Minipage footnotes

See section 60.5 for how minipage footnotes are gathered. See section 94.4 for how minipage footnotes are placed into the document.

60.3 Titlepage thanks

See section 69.7 for titlepage footnotes.

60.4 Regular page footnote implementation

for HTML & PRINT: 6857 \begin{warpall}

FootnoteDepth (Ctr) Determines how deeply to place footnotes in the **HTML** files, similar to **tocdepth**.
Default: 3 The default of 3 places footnotes before each **\subsubsection** or higher. See table 12 for a table of **LATEX** section headings.

```
6858 \newcounter{FootnoteDepth}
6859 \setcounter{FootnoteDepth}{3}
```

footnoteReset (Ctr) If non-zero, the footnote counter is reset to this value each time the footnotes are printed, as controlled by **FootnoteDepth**. For the **manyfoot** and **bigfoot** packages, additional counters such as **footnote<suffix>Reset** will be defined
Default: 0

as well. These counters may be set non-zero by the user, and are also set if the `perpage`'s `\MakePerPage` or `\MakeSortedPerPage` macros are used for the footnote or footnote<suffix> counters.

(The name is not capitalized because it is made from the counter's name with “Reset” appended.)

```
6860 \newcounter{footnoteReset}
6861 \setcounter{footnoteReset}{0}

6862 \end{warpall}
```

for HTML output: 6863 `\begin{warpHTML}`

Required for footnotes inside `description` or `amstheorem` square braces:

```
6864 \AtBeginDocument{
6865 \robustify{\footnote}
6866 \robustify{\footnotemark}
6867 }
```

`\LWR@footnotebox` Patch L^AT_EX footnotes to use a new `\box` instead of an insert for `l warp` footnotes.
This avoids having the original `\footins` appear at the bottom of a `lateximage`, which is on its own new page.

```
6868 \newbox\LWR@footnotebox
```

`\LWR@spewingnotes (bool)` Used with the `footnote` package to suppress paragraph tags before and after `\spewnotes`.

```
6869 \newbool{\LWR@spewingnotes} % For the footnote package.
```

Much of the following has unneeded print-mode formatting removed.

```
\@makefntext {\langle text\rangle}

6870 \long\def\@makefntext#1{\textsuperscript{\@thefnmark}{\#1}}
```

`\@makefnmark`

```
6871 \def\@makefnmark{%
6872   \textsuperscript{\@thefnmark}{%
6873 }}
```

Footnotes may be in regular text, in which case paragraphs are tagged, or in a table data cell or `lateximage`, in which case paragraph tags must be added manually.

In a `lateximage` during HTML output, the `lateximage` is placed inside a print-mode `minipage`, but the footnotes are broken out by:

```
\def\@mpfn{footnote}
\def\thempfn{\thefootnote}
\let\@footnotetext\LWR@footnotetext
```

```
\LWR@@footnotetext {\text} {\footnote box name}
```

Factored to allow multiple footnote boxes for `manyfoot`.

```
6874 \long\def\LWR@@footnotetext#1#2{%
6875 \LWR@traceinfo{\LWR@footnotetext}{%}
```

Perhaps generate an autopage in the text to link a citation backreference closer to its usage.

```
6876 \LWR@newautopagelabel{page}%
6877 \LWR@ensuredoingapar%
```

Locally disable auto page labels inside the footnote text. Footnotes are accumulated in the current page before finally being placed in a potentially later page, so the autopages would be incorrect.

```
6878 \begingroup%
6879 \let\LWR@newautopagelabel\LWR@null@newautopagelabel%
```

Take the existing footnote box and add the new content:

```
6880 \global\setbox\csname #2\endcsname=\vbox{%
6881     \unvbox\csname #2\endcsname%
```

Remember the footnote number for `\ref`:

```
6882     \protected@edef@\currentlabel{%
6883         \csname p@footnote\endcsname\atethfnmark%
6884     }% \currentlabel
```

Open a group:

```
6885     \color@begingroup%
```

Disable CJK `xpinyin` while generating footnotes.

```
6886     \LWR@disablepinyin%
```

Use `HTML` superscripts in the footnote even when the main text is inside a `lateximage`, because the footnote will be in `HTML`:

```
6887     \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
6888     \ifbool{\LWR@spewingnotes}{}{%
6889         \LWR@htmlltagc{\LWR@tagregularparagraph}\LWR@orignewline%
6890     }%
```

Append the footnote to the list:

```
6891     \makefntext{#1}%
```

Closing paragraph tag:

```

6892     \ifbool{LWR@spewingnotes}{}{%
6893         \LWR@orignobreakspace\LWR@newline%
6894         \LWR@htmltagc{/LWR@tagregularparagraph}%
6895         \LWR@newline%
6896     }%

```

Close the group:

```

6897     \color@endgroup%
6898 }% vbox
6899 \endgroup%
6900 }%

```

```

\long\def\LWR@footnotetext#1{\LWR@@footnotetext{#1}{\LWR@footnotebox}}%
\@footnotetext {\langle text\rangle}
6902 \LetLtxMacro\@footnotetext\long\def\@footnotetext{\LWR@footnotetext}

```

60.5 Minipage footnote implementation

Patch L^AT_EX minipage footnotes to use a new `\box` instead of an insert for `lwarp` minipage footnotes. This avoids having the original `\@mpfootins` appear at the bottom of a `lateximage`, which is on its own new page.

```

6903 \newbox\long\def\@mpfootnotetext#1{%
6904 \long\def\@mpfootnotetext#1{%
6905 \LWR@traceinfo{@mpfootnotetext}%
6906 \LWR@ensuredoingapar%
6907 \global\setbox\long\def\@mpfootnotes\vbox{%
6908     \unvbox\long\def\@mpfootnotes{%
6909         \reset@font\footnotesize%
6910         \hsize\columnwidth%
6911         \parboxrestore%
6912         \protected@edef\@currentlabel{%
6913             \csname p@mpfootnote\endcsname\@thefnmark}%
6914         \color@begingroup%

```

Add paragraph tag:

```

6915     \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@newline%
6916     \makefntext{%
6917         \ignorespaces#1%
6918     }%

```

Add the closing paragraph tag:

```

6919     \leavevmode\LWR@newline%
6920     \LWR@htmltagc{/LWR@tagregularparagraph}%

```

```
6921     \color@endgroup%
6922 }% vbox
```

Paragraph handling:

```
6923 \LWR@ensuredoingapar%
6924 \LWR@traceinfo{@mpfootnotetext: done}%
6925 }
```

\thempfootnote Redefined to remove the \itshape, which caused an obscure compiling error in some situations.

```
6926 \AtBeginDocument{
6927     \def\thempfootnote{\@alph\c@mpfootnote}
6928 }
```

60.6 Printing pending footnotes

\LWR@@printpendingfootnotes {*footnote counter name*}

```
6929 \newcommand*{\LWR@printpendingfootnotes}[1]{%
6930 \expandafter\ifvoid\csname LWR@#1box\endcsname\else
6931     \LWR@forcenewpage
6932     \begin{BlockClass}{note}{footnotes}%
```

Create a new autopage in case citation back references occur inside the footnotes:

```
6933     \LWR@newautopagelabel{page}%
6934     \null
6935     \unvbox\csuse{\LWR@#1box}
6936     \setbox\csuse{\LWR@#1box}=\vbox{%
6937     \end{BlockClass}
6938     \ifltxcounter{\#1Reset}{%
6939         \ifnumgreater{\value{\#1Reset}}{0}{%
6940             \setcounter{\#1}{\value{\#1Reset}}%
6941             \addtocounter{\#1}{-1}%
6942         }{}%
6943     }{}%
6944 \fi
6945 }
```

\LWR@printpendingfootnotes Enclose the footnotes in a class, print, then clear. For manynotes, new footnotes may be added via \appto.

```
6946 \newcommand*{\LWR@printpendingfootnotes}{%
6947     \LWR@printpendingfootnotes{footnote}%
6948 }
```

\LWR@maybeprintpendingfootnotes {*depth*} Used to print footnotes before sections only if formatting for an EPUB or word processor:

```
6949 \newcommand*{\LWR@maybeprintpendingfootnotes}[1]{%
6950 \ifboolexpr{
```

```

6951     not test{\ifnumcomp{#1}{>}{\value{FootnoteDepth}}} or
6952     bool{FormatEPUB} or
6953     bool{FormatWP}
6954 }%
6955 {\LWR@printpendingfootnotes}%
6956 }%
6957 }

```

\LWR@printpendingmpfootnotes Enclose the minipage footnotes in a class, print, then clear.

```

6958 \newcommand*{\LWR@printpendingmpfootnotes}{%
6959 \ifvoid\LWR@mpfootnotes\else
6960   \LWR@forcenewpage
6961   \begin{BlockClass}{note}{footnotes}%
6962   \null
6963   \unvbox\LWR@mpfootnotes
6964   \setbox\LWR@mpfootnotes=\vbox{%
6965   \end{BlockClass}
6966 \fi
6967 }

```

\LWR@nullifyfootnotes Cancels footnotes, such as inside an HTML comment or a \nameref.

```

6968 \newcommand*{\LWR@nullifyfootnotes}{%
6969   \renewcommand{\footnote}[2][]{%
6970     \renewcommand{\footnotemark}[1][]{%
6971   }

```

6972 \end{warpHTML}

61 Marginpars

\marginpar [⟨left⟩] {⟨right⟩} \marginpar may contains paragraphs, but in order to remain inline with the surrounding text lwarf nullifies block-related macros inside the \marginpar. Paragraph breaks are converted to
 tags.

\marginparBlock [⟨left⟩] {⟨right⟩} To include block-related macros, use \marginparBlock, which takes the same arguments but creates a <div> instead of a . A line break will occur in the text where the \marginBlock occurs.

for HTML output: 6973 \begin{warpHTML}

```

\marginpar [⟨left⟩] {⟨right⟩}

6974 \renewcommand{\marginpar}[2][]{%
6975 \ifbool{FormatWP}{%
6976 {%
6977   \begin{LWR@BlockClassWP}{%
6978     {width:2in; float:right; margin:10pt}{}(note){marginblock}%
6979   #2
6980   \end{LWR@BlockClassWP}{%
6981 }%
6982 {%
6983   \LWR@htmlspanclass(note){marginpar}{#2}%

```

```
6984 }%
6985 }
```

```
\marginparBlock [⟨left⟩] {⟨right⟩}
```

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

HTML version.

```
6986 \newcommand{\marginparBlock}[2][]{%
6987     \LWR@stoppars%
6988     \ifbool{FormatWP}{%
6989         {%
6990             \begin{LWR@BlockClassWP}%
6991                 {width:2in; float:right; margin:10pt;}%
6992                 (note){marginblock}%
6993             #2
6994             \end{LWR@BlockClassWP}%
6995         }%
6996         {%
6997             \begin{BlockClass}[width:2in; float:right; margin:10pt]%
6998                 (note){marginparblock}%
6999             #2
7000             \end{BlockClass}%
7001         }%
7002     \LWR@startpars%
7003 }
```

```
\reversemarginpar
```

```
7004 \renewcommand*{\reversemarginpar}{}%
```

```
\normalmarginpar
```

```
7005 \renewcommand*{\normalmarginpar}{}%
```

```
7006 \end{warpHTML}
```

for PRINT output: 7007 \begin{warpprint}

```
\marginparBlock [⟨left⟩] {⟨right⟩}
```

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

Print version.

```
7008 \LetLtxMacro\marginparBlock\marginpar
```

```
7009 \end{warpprint}
```

62 Tracking internal cross references

Cross references are generated using the PDF file's page number during L^AT_EX compilation. Internal labels are generated which include these page numbers in the label.

`*_html.aux (file)` A new entry in the `*_html.aux` file is used to help cross-references:

```
\newlabel{autopage-<nnn>}{{<x>}{<y>}}
```

`LWR@currentautosecpage (Ctr)` Records the page number when the section was created. (If a math expression is included in the section name, and SVG math is used, the corresponding `lateximage` will cause the page number to change by the time the following autosec label is created, thus the initial page number is recorded here.) `LWR@currentautosecfloatpage` is updated more often than `LWR@currentautosecpage`.

```
7010 \newcounter{LWR@currentautosecpage}
7011 \setcounter{LWR@currentautosecpage}{1}
```

`LWR@currentautosecfloatpage (Ctr)` The HTML output's PDF page number at the start of a new HTML file, section, or float. Updated more often than `LWR@currentautosecpage`, such as when a new float occurs. Used only for table of contents, list of figures, list of tables, but not for general cross references such as `\label`, citation backlinks, etc.

`\LWRsetnextfloat` is written with this and the autoid by the modified `\addcontentsline` just before each float's entry.

```
7012 \newcounter{LWR@currentautosecfloatpage}
7013 \setcounter{LWR@currentautosecfloatpage}{1}
```

`LWR@previousautopagelabel (Ctr)` Remembers which autopage label was most recently generated. Used to avoid duplicates.

```
7014 \newcounter{LWR@previousautopagelabel}
7015 \setcounter{LWR@previousautopagelabel}{-1}
```

`\LWR@newautopagelabel {<pagenumber counter>}`

`\BaseJobname` is added to the label in case `xr` or `xr-hyper` are used.

```
7016 \newcommand*{\LWR@newautopagelabel}[1]{%
```

No action if this autopage label has already been defined:

```
7017 \ifnumequal{\value{LWR@previousautopagelabel}}{\value{page}}%
7018   {}%
```

If the PDF page has changed, create a label using the desired counter.

If the counter is `LWR@currentautosecpage`, that was the page number when the section generation began, but the current PDF page may be different by now if the section name had an SVG image, such as SVG math. To allow the cross-reference to point just after the section heading, the label must be made after the section heading is complete, which may have generated a new PDF page. Thus, the label

is made with the given counter, which may be the PDF page number where the section heading began, then if the PDF page number has changed, another label is made for the current page number.

```
7019      {%
7020          \label{\BaseJobname-autopage-\csuse{the#1}}%
```

If there are intervening pages, such as an SVG image, define another label for the new page:

```
7021      \ifnumequal{\value{#1}}{\value{page}}%
7022          {}%
7023          {\Label{\BaseJobname-autopage-\csuse{thepage}}}%
```

Remember the latest autopage label:

```
7024      \setcounter{LWR@previousautopagelabel}{\value{page}}%
7025      {}%
7026 }
```

`\LWR@null@newautopagelabel {<pagenumber counter>}`

Inside a footnote, the page numbers will be incorrect, so this is nullified.

```
7027 \newcommand*{\LWR@null@newautopagelabel}[1]{}
```

63 Splitting HTML files

- Files are split according to `FileDepth` and `CombineHigherDepths`.
- Filenames are sanitized by `\LWR@filenamenoblanks`.
- `\LWR@newhtmlfile` finishes an HTML page, adds a comment to tell where and how to split the file, then starts a new HTML page.

for HTML & PRINT: 7028 `\begin{warpall}`

`FileDepth (Ctr) {<section depth>}` determines how deeply to break into new HTML files, similar to `tocdepth`. The default of -5 produces one large HTML file.

```
7029 \newcounter{FileDepth}
7030 \setcounter{FileDepth}{-5}
```

`CombineHigherDepths (bool)` Comile higher-level sections together into one file?

```
7031 \newbool{CombineHigherDepths}
7032 \booltrue{CombineHigherDepths}
```

`\FilenameLimit` Maximum length of the generated filenames.

```
7033 \newcommand*{\FilenameLimit}{80}
```

```
7034 \end{warpall}
```

for HTML output: 7035 \begin{warpHTML}

\LWR@thisfilename The currently-active filename or number. At first, this is the homepage.

```
7036 \AtBeginDocument{
7037 \ifbool{FileSectionNames}%
7038   {\newcommand*\{\LWR@thisfilename}{\HomeHTMLFilename}%
7039   {\newcommand*\{\LWR@thisfilename}{0}%
7040 }
```

\LWR@thisnewfilename The filename being sanitized.

```
7041 \newcommand*\{\LWR@thisnewfilename}{}%
```

\LWR@simplifyname * {*expression*} Simplify \LWR@thisnewfilename.

If starred, detokenizes the input expression. If found, changes the expression to a single detokenized dash.

```
7042 \NewDocumentCommand{\LWR@simplifyname}{s m}{%
7043 \IfBooleanTF{#1}{%
7044   \StrSubstitute{\LWR@thisnewfilename}%
7045   {\detokenize{#2}}%
7046   {\detokenize{-}}[\LWR@thisnewfilename]%
7047 }{%
7048   \StrSubstitute{\LWR@thisnewfilename}%
7049   {#2}%
7050   {\detokenize{-}}[\LWR@thisnewfilename]%
7051 }%
7052 }
```

\LWR@simplifycustom User-defined filename simplifications. Redefine with \newcommand.

```
7053 \newcommand*\{\LWR@simplifycustom}{}%
```

\FilenameSimplify * {*phrase*} Assign a user-defined filename simplification. Appends to \LWR@simplifycustom.

```
7054 \NewDocumentCommand{\FilenameSimplify}{s m}{%
7055 \IfBooleanTF{#1}{%
7056   \appto{\LWR@simplifycustom}{%
7057     \LWR@simplifyname*{#2}%
7058   }%
7059 }{%
7060   \appto{\LWR@simplifycustom}{%
7061     \LWR@simplifyname{#2}%
7062   }%
7063 }%
7064 }
```

\LWR@avoiddupfilenames Instructions for how to avoid duplicate filenames. This is used in a warning in \LWR@filenamenoblanks, and in an error in \LWR@newhtmlfile.

```
7065 \newcommand*\{\LWR@avoiddupfilenames}{%
7066   To avoid duplicate filenames, use the optional\MessageBreak
```

```

7067 short Table of Contents entry:\MessageBreak
7068 \space\space\protect\section[Unique name, no math]{Name with math}%
7069     \MessageBreak
7070 or use \protect\texorpdfstring, from the hyperref package:\MessageBreak
7071 \space\space%
7072     \protect\section{\MessageBreak
7073         \space\space\space\space\protect\texorpdfstring\MessageBreak
7074             \space\space\space\space\space\space%
7075             {Name with math}{Unique name, no math}\MessageBreak
7076         \space\space}
7077 }
```

\LWR@filenamenoblanks {*filename*}

Convert blanks into dashes, removes short words, store result in
\LWR@thisfilename.

Also see \LWR@nullfonts for nullified macros.

```

7078 \newcommand*\LWR@filenamenoblanks}[1]{%
7079 \begingroup
```

Locally temporarily disable direct-formatting commands, not used in filenames:

```

7080 \LWR@nullfonts%
7081 \renewcommand*\LWR@htmntagc}[1]{}%
```

7082 \edef\LWR@thisnewfilename{\#1}%

Replaces common macros with hyphens. (\& is done by \LWR@nullfonts.)

```

7083 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
7084 \LWR@simplifyname{\_}
7085 \LWR@simplifyname{\#}
7086 \LWR@simplifyname{\textbackslash}
7087 \LWR@simplifyname{\protect}
7088 \LWR@simplifyname{\_}
7089 \LWR@simplifyname{\textless}
7090 \LWR@simplifyname{\textgreater}
```

```
7091 \edef\LWR@thisnewfilename{\detokenize\expandafter{\LWR@thisnewfilename}}%
```

Warn if there is dollar math in the section name:

```

7092 \ifboolexist{FileSectionNames}{%
7093     \IfSubStr{\LWR@thisnewfilename}{\LWRdollar}{%
7094         \PackageWarning{lwarp}%
7095     }{%
7096         This section name:\MessageBreak
7097         \space\space‘\detokenize\expandafter{\#1}’\MessageBreak
7098         at the line number listed below,\MessageBreak
7099         is using $dollar-delimited math$,
7100         which generates\MessageBreak
7101         complicated file names. It is better to use\MessageBreak
7102         \space\space%%
7103         \protect\section{Name with \protect\left( parenthesis math\protect\right)}%
7104     }\MessageBreak
}
```

```

7105           The math then will be removed from the file name.\MessageBreak
7106           \MessageBreak
7107           \LWR@avoiddupfilenames%
7108           \MessageBreak
7109           This section is found before or%
7110       }
7111   }{ }%
7112 }{ }

7113 \LWR@traceinfo{\LWR@filenamenoblanks edef: !\LWR@thisnewfilename!}%
7114 \fullexpandarg%

```

Convert spaces into hyphens:

```
7115 \LWR@simplifyname*{ }
```

Convert punctuation into hyphens:

```

7116 \LWR@simplifyname*{*}
7117 \LWR@simplifyname*{()}
7118 \LWR@simplifyname*{}}
7119 \LWR@simplifyname*{.}
7120 \LWR@simplifyname*{!}
7121 \LWR@simplifyname*{,}
7122 \LWR@simplifyname*{'}
7123 \LWR@simplifyname*{+}
7124 \LWR@simplifyname*{/}
7125 \LWR@simplifyname*{:}
7126 \LWR@simplifyname*{;}
7127 \LWR@simplifyname*{=}
7128 \LWR@simplifyname*{?}
7129 \LWR@simplifyname*{@}
7130 \LWR@simplifyname*{^}
7131 \LWR@simplifyname*{&}
7132 \LWR@simplifyname*{"}
7133 \LWR@simplifyname*{<}
7134 \LWR@simplifyname*{>}

```

```
7135 \LWR@simplifyname{\LWRbackslash}
```

Braces are removed entirely to avoid extra dashes in the result.

```

7136 \StrSubstitute{\LWR@thisnewfilename}%
7137   {\LWRleftbrace}{\LWRrightbrace}[\LWR@thisnewfilename]%
7138 \StrSubstitute{\LWR@thisnewfilename}%
7139   {\LWRrightbrace}[\LWR@thisnewfilename]%

```

```

7140 \LWR@simplifyname{\LWRpercent}
7141 \LWR@simplifyname{\LWRdollar}

7142 \LWR@simplifyname*{|}
7143 \LWR@simplifyname*{^}
7144 \LWR@simplifyname*{~}
7145 \LWR@simplifyname*{[]}
7146 \LWR@simplifyname*{[]}
7147 \LWR@simplifyname*{'}

```

Convert short words:

```
7148 \LWR@simplifyname*{-s-}
7149 \LWR@simplifyname*{-S-}
7150 \LWR@simplifyname*{-a-}
7151 \LWR@simplifyname*{-A-}
7152 \LWR@simplifyname*{-an-}
7153 \LWR@simplifyname*{-AN-}
7154 \LWR@simplifyname*{-to-}
7155 \LWR@simplifyname*{-TO-}
7156 \LWR@simplifyname*{-by-}
7157 \LWR@simplifyname*{-BY-}
7158 \LWR@simplifyname*{-of-}
7159 \LWR@simplifyname*{-OF-}
7160 \LWR@simplifyname*{-and-}
7161 \LWR@simplifyname*{-AND-}
7162 \LWR@simplifyname*{-for-}
7163 \LWR@simplifyname*{-FOR-}
7164 \LWR@simplifyname*{-the-}
7165 \LWR@simplifyname*{-THE-}
```

Convert custom words:

```
7166 \LWR@simplifycustom%
```

If PDF L^AT_EX and not utf8 encoding, don't try to convert emdash, endash:

```
7167 \ifPDFTeX% pdflatex or dvi latex
7168 \ifdefstring{\inputencodingname}{utf8}{%
7169     \LWR@simplifyname*{-}
7170 %     emdash
7171     \LWR@simplifyname*{-}
7172 %     endash
7173 }{}%
7174 \else% not PDFTeX
7175     \LWR@simplifyname*{-}
7176     \LWR@simplifyname*{-}
7177 \fi%
```

Convert multiple hyphens:

```
7178 \LWR@simplifyname*{----}
7179 \LWR@simplifyname*{---}
7180 \LWR@simplifyname*{--}
7181 \LWR@simplifyname*{-}
```

If starts with a dash, remove the leading dash:

```
7182 \IfBeginWith{\LWR@thisnewfilename}{\detokenize{-}}{%
7183     \StrGobbleLeft{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
7184 }{}%
```

If ends with a dash, remove the trailing dash:

```
7185 \IfEndWith{\LWR@thisnewfilename}{\detokenize{-}}{%
7186     \StrGobbleRight{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
7187 }{}%
```

Limits the length of the filename:

```
7188 \StrLeft{\LWR@thisfilename}{\FilenameLimit}[\LWR@thisfilename]%
```

Return the global result:

```
7189 \global\let\LWR@thisfilename\LWR@thisfilename%
7190 \endgroup%
7191 \LWR@traceinfo{LWR@filenamenoblocks: result is \LWR@thisfilename}%
7192 }
```

63.1 Sanitizing expressions for HTML

Math expressions are converted to `lateximages`, and some math environments may contain &, <, or >, which should not be allowed inside an HTML `<alt>` tag, so must convert them to HTML entities.

```
\LWR@replacestrings {\langle search\rangle} {\langle replace\rangle}
```

Replaces strings inside `\tmpb`.

Modified from the original, by PETR OLSAK, from the `opmac` package.

```
7193 \bgroup
7194 \catcode`!=3 \catcode`?=3
7195
7196 \long\gdef\LWR@replacestrings@addto#1#2{%
7197   \expandafter\def\expandafter#1\expandafter{#1#2}%
7198 }
7199
7200 \gdef\LWR@replacestrings#1#2{%
7201   \long\def\LWR@replacestringsA##1{\def\tmpb{##1}\LWR@replacestringsB}%
7202   \long\def\LWR@replacestringsB##1{%
7203     \ifx##1\relax \else\LWR@replacestrings@addto\tmpb{##1}%
7204     \expandafter\LWR@replacestringsB\fi%
7205   }%                                         improved version <May 2016> inspired
7206   \expandafter\LWR@replacestringsA\tmpb?##1% from pysyntax.tex by Petr Krajnik
7207   \long\def\LWR@replacestringsA##1{%
7208     \def\tmpb{##1}%
7209   }\expandafter\LWR@replacestringsA\tmpb%
7210 }
7211 \egroup
```

`LWR@HTMLsanitize@tmpb@enable` Allow to disable sanitization while inside a `lateximage`, or while using `minted`.
`(bool)` HTML sanitizaiton was occurring too early, and `minted` would then colorize the
⚠ sanitized results, breaking the HTML entities in lwarf's HTML output.

```
7212 \newbool{LWR@HTMLsanitize@tmpb@enable}
7213 \booltrue{LWR@HTMLsanitize@tmpb@enable}
```

`LWR@HTMLsanitize@tmpb@removebackslash`
`(bool)` Allow to enable / disable sanitization of the macros `\%`, `\#`, `\%`. This is usually enabled to allow the user to enter these macros in URLs, for example, but is disabled

for ALT tags and MATHJAX output where the literal L^AT_EX source must be preserved.

```
7214 \newbool{LWR@HTMLsanitize@tmpb@removebackslash}
7215 \booltrue{LWR@HTMLsanitize@tmpb@removebackslash}
```

LWR@MathJax@silentquotes If true, double quotes (" and ") are removed (used for **mathspec**). This unfortunately includes double quotes used inside \text with MATHJAX. If false, double quotes are escaped.

```
7216 \newbool{LWR@MathJax@silentquotes}
7217 \boolfalse{LWR@MathJax@silentquotes}
```

\LWR@HTMLsanitize@tmpb Sanitizes HTML for \tmpb. These characters may be interpreted by the browser.

```
7218 \catcode`&=12
7219 \newcommand*{\LWR@HTMLsanitize@tmpb}{%
7220     \ifbool{LWR@HTMLsanitize@tmpb@enable}{%
7221         {%
```

HTML entities:

```
7222     \LWR@replacesstrings{&}{&#} must be first because & is used for lt, gt, etc.
7223     \LWR@replacesstrings{<}{&lt;}%
7224     \LWR@replacesstrings{>}{&gt;}%
7225     \LWR@replacesstrings{'}{&apos;}%
7226     \LWR@replacesstrings{'}{&grave;}%
7227     \LWR@replacesstrings{_}{\detokenize{_}}%
```

Neutralize \%, \#, \& in case used by the author.

\@tempa is built to be

```
\LWR@replacesstrings{\#}{#}
```

and similar for % and &.

```
7228     \ifbool{LWR@HTMLsanitize@tmpb@removebackslash}{%
7229         {%
7230             \def\@tempa{\LWR@replacesstrings}%
7231             \expandafter\appto\expandafter\@tempa\expandafter{\expandafter{\detokenize{\#}}}%
7232             \expandafter\appto\expandafter\@tempa\expandafter{\expandafter{\LWRhash}}%
7233                 \atempa%
7234                 \def\@tempa{\LWR@replacesstrings}%
7235                 \expandafter\appto\expandafter\@tempa\expandafter{\expandafter{\detokenize{\%}}}%
7236                 \expandafter\appto\expandafter\@tempa\expandafter{\expandafter{\LWRpercent}}%
7237                     \atempa%
7238                     \def\@tempa{\LWR@replacesstrings}%
7239                     \expandafter\appto\expandafter\@tempa\expandafter{\expandafter{\detokenize{\&}}}%
7240                     \expandafter\appto\expandafter\@tempa\expandafter{\expandafter{\LWRamp}}%
7241                         \atempa%
7242             }%
7243         }%
```

The quotes occasionally causes problems. For MathJax, also allow neutralization of \" and the " character.

```

7244      \ifbool{LWR@MathJax@silentquotes}
7245          {%
7246              \expandafter\LWR@replacestrings\expandafter{\LWRbackslash"}{}%
7247                  \LWR@replacestrings{"}{}%
7248          }%
7249          {\LWR@replacestrings{"}{"}}%
7250      }% enabled
7251      {}% not enabled
7252 }
7253 \catcode`\&=4

```

\LWR@HTMLsanitize@use@tmpb {*<text>*}

Sanitizes via \LWR@HTMLsanitize@tmpb and then immediately uses the result.

```

7254 \newcommand{\LWR@HTMLsanitize@use@tmpb}[1]{%
7255     \ifbool{LWR@HTMLsanitize@tmpb@enable}{%
7256         {%
7257             \def\tmpb{\#1}%
7258             \LWR@HTMLsanitize@tmpb%
7259             \tmpb%
7260         }%
7261         {\#1}%
7262     }

```

\LWR@subHTMLsanitize \LWR@strresult must first be set by \LWR@HTMLsanitizedetokenized, \LWR@HTMLsanitizeexpanded, or \CustomizeMathJax.

```

7263 \catcode`\#=12
7264 \newcommand{\LWR@subHTMLsanitize}{%
7265     \edef\tmpb{\detokenize\expandafter{\LWR@strresult}}%
7266     \LWR@HTMLsanitize@tmpb%

```

MATHJAX allows expressions to be defined with \newcommand. These expressions would appear with ## for each argument, and each must be changed to a single #. This must be done after all the above changes. Attempting another conversion after this causes an error upon further expansion.

```

7267     \LWR@replacestrings{##}{#}%
7268     \edef\LWR@strresult{\detokenize\expandafter{\tmpb}}%
7269 }
7270 \catcode`\#=6

```

\LWR@HTMLsanitizedetokenized {*<detokenized text>*}

Prints the sanitized text, already detokenized.

```

7271 \newrobustcmd{\LWR@HTMLsanitizedetokenized}[1]{%
7272     \LWR@traceinfo{LWR@HTMLsanitizedetokenized !#1!}%

```

Cancel French babel character handling, and fully expand the strings:

```

7273     \begingroup%
7274     \LWR@hook@processingtags%
7275     \edef\LWR@strresult{\#1}%
7276     \LWR@subHTMLsanitize%

```

```

7277     \LWR@strresult%
7278     \endgroup%
7279     \LWR@traceinfo{\LWR@HTMLsanitize done}%
7280 }

```

\LWR@HTMLsanitizeexpanded {*(text)*}

This version must be given the detokenized and expanded text. This is only used for adding math to MATHJAX expressions or `lateximage alt` tags.

```

7281 \edef\LWR@beginspaceleftbrace{\begin \LWRleftbrace}
7282 \edef\LWR@beginspaceleftbrace{\detokenize\expandafter{\LWR@beginspaceleftbrace}}
7283 \edef\LWR@beginleftbrace{\begin\LWRleftbrace}
7284 \edef\LWR@beginleftbrace{\detokenize\expandafter{\LWR@beginleftbrace}}
7285
7286 \edef\LWR@endspacerrightbrace{\end \LWRrightbrace}
7287 \edef\LWR@endspacerrightbrace{\detokenize\expandafter{\LWR@endspacerrightbrace}}
7288 \edef\LWR@endrightbrace{\end\LWRrightbrace}
7289 \edef\LWR@endrightbrace{\detokenize\expandafter{\LWR@endrightbrace}}
7290
7291 \newrobustcmd{\LWR@HTMLsanitizeexpanded}[1]{%

```

Cancel French `babel` character handling, and fully expand the strings:

```

7292     \begingroup%
7293     \LWR@hook@processingtags%
7294     \edef\LWR@strresult{\#1}%

```

The math expression may includes spaces between tokens, but MATHJAX does not want a space between `\begin` or `\end` and the following brace. This space is removed here.

```

7295     \protect\StrSubstitute{\LWR@strresult}%
7296     {\LWR@beginspaceleftbrace}{\LWR@beginleftbrace}[\LWR@strresult]%
7297     \protect\StrSubstitute{\LWR@strresult}%
7298     {\LWR@endspacerrightbrace}{\LWR@endrightbrace}[\LWR@strresult]%
7299
7300     \LWR@subHTMLsanitize%
7301     \LWR@strresult%
7302     \endgroup%

```

63.2 Customizing MATHJAX

\LWR@customizedMathJax Additional MATHJAX definitions to be added to the start of each HTML page.

```
7303 \newcommand*\LWR@customizedMathJax{}
```

`LWR@warnedcustomizemathjax` Used to issue only one warning about using a `\CustomizeMathJax` per macro.
(bool)

```
7304 \newbool{LWR@warnedcustomizemathjax}
7305 \boolfalse{LWR@warnedcustomizemathjax}
```

```
\LWR@subcustomizedmathjax {\langle macro definition \rangle}

7306 \newcommand*{\LWR@subcustomizedmathjax}[1]{%
7307     \begingroup%
7308     \LWR@hook@processingtags%
7309     \boolfalse{\LWR@HTMLsanitize@tmpb@removebackslash}%
7310     \edef\LWR@strresult{\detokenize{\#1}}%
7311     \LWR@subHTMLsanitize%
7312     \xdef\LWR@customizedMathJax{%
7313         \LWR@customizedMathJax%
7314         \LWR@strresult%
7315     }%
7316     \endgroup%
7317 }
7318 \@onlypreamble\LWR@subcustomizedmathjax
```

\CustomizeMathJax {\langle macro definition \rangle}

A warning is issued if a very long argument is given.

```
7319 \newcommand*{\CustomizeMathJax}[1]{%
7320     \ifbool{\LWR@warnedcustomizemathjax}{}{%
7321         \StrLen{\detokenize{\#1}}[\LWR@tempone]%
7322         \ifnumgreater{\LWR@tempone}{350}{%
7323             \AtEndDocument{%
7324                 \PackageNoteNoLine{l warp}{%
7325                     To ensure faster MathJax compilation, place each\MessageBreak
7326                     custom macro in its own \protect\CustomizeMathJax.\MessageBreak
7327                     See the L warp documentation regarding customizing\MessageBreak
7328                     MathJax%
7329                 }%
7330             }%
7331             \booltrue{\LWR@warnedcustomizemathjax}%
7332         }{}%
7333     }%
7334     \appto{\LWR@customizedMathJax}{\LWRbackslash()}%
7335     \LWR@subcustomizedmathjax{\#1}%
7336     \appto{\LWR@customizedMathJax}{\LWRbackslash)\par}%
7337 }
7338 \@onlypreamble\CustomizeMathJax
```

\LWR@infoprocessingmathjax {\langle package name \rangle}

```
7339 \newcommand*{\LWR@infoprocessingmathjax}[1]{%
7340 \typeout{---}
7341 \typeout{Package l warp: Processing MathJax customizations for #1.}
7342 \typeout{\space\space This may take a moment.}
7343 \typeout{---}
7344 }
```

defaults Default customizations:

In the MATHJAX code, footnotes are only referenced. For equations, they are also generated in the HTML when the LATEX math is generated inside the HTML comment. For other math environments, the \footnotemark / \footnotetext method must be used. See section 8.5.4 regarding \footnotemark.

 \footnotemark

For footnotes, `\footnotename` is used in most cases, however for equation the footnote is picked up from L^AT_EX in `\LWR@doendequation`.

First, `\footnotename` for MATHJAX is copied from L^AT_EX.

```

7345 \providetcommand{\footnotename}{\footnote}
7346
7347 % due to warpMathJax:
7348 \end{warpHTML}
7349
7350 \begin{warpMathJax}
7351 \xdef\LWR@customizedMathJax{\LWR@customizedMathJax%
7352   \LWRbackslash(%
7353   \LWRbackslash{}newcommand%
7354   \{\LWRbackslash{}footnotename\}%
7355   \{\footnotename\}%
7356   \LWRbackslash)\par%
7357 }
7358 \end{warpMathJax}
```

`\LWRfootnote` is set per equation if a footnote is detected in the equation's math expression, otherwise it defaults to `\footnotename`.

```

7359 \begin{warpMathJax}
7360 \CustomizeMathJax{\def\LWRfootnote{1}}
7361 \CustomizeMathJax{\newcommand{\footnote}[2][\LWRfootnote]{{}^{\mathrm{#1}}}}
7362 \CustomizeMathJax{\newcommand{\footnotemark}[1][\LWRfootnote]{{}^{\mathrm{#1}}}}
```

`\hspace` is modified to accept and ignore a star:

```

7363 \CustomizeMathJax{\let\LRorighspace\hspace}
7364 \CustomizeMathJax{\renewcommand{\hspace}{\ifstar\LRorighspace\LRorighspace}}
```

Various other customizations:

```

7365 \CustomizeMathJax{\newcommand{\mathnormal}[1]{\#1}}
7366 \CustomizeMathJax{\newcommand\ensuremath[1]{\#1}}
7367 \CustomizeMathJax{\% absorb two optional arguments
7368   \newcommand{\LWRframebox}[2][]{\fbox{\#2}}
7369   \newcommand{\framebox}[1][]{\LWRframebox}
7370 }
7371 \CustomizeMathJax{\newcommand{\setlength}[2]{}}
7372 \CustomizeMathJax{\newcommand{\addtolength}[2]{}}
7373 \CustomizeMathJax{\newcommand{\setcounter}[2]{}}
7374 \CustomizeMathJax{\newcommand{\addtocounter}[2]{}}
7375 \CustomizeMathJax{\newcommand{\arabic}[1]{}}
7376 \CustomizeMathJax{\newcommand{\number}[1]{}}
7377 \CustomizeMathJax{\newcommand{\noalign}[1]{\text{\#1}\notag \\}}
7378 \CustomizeMathJax{\newcommand{\cline}[1]{}}
7379 \CustomizeMathJax{\newcommand{\directlua}[1]{\text{(directlua)}}}
7380 \CustomizeMathJax{\newcommand{\luatexdirectlua}[1]{\text{(directlua)}}}
```

`\protect`, `\mathchar`, and `\delimiter` are silently discarded; and `\mathcode` and `\delcode` are ignored.

```

7381 \CustomizeMathJax{\newcommand{\protect}{}}
7382 \CustomizeMathJax{\def\LRabsorbnumber{\#1}}
7383 \CustomizeMathJax{\def\LRabsorbquotenumber{\#1}}
7384 \CustomizeMathJax{\newcommand{\LRabsorboption}[]{}}
```

```

7385 \CustomizeMathJax{\newcommand{\LWRabsorbtwooptions}[1][]{\LWRabsorboption}}
7386 \CustomizeMathJax{\def\mathchar{\ifnextchar"\LWRabsorbquotenumber\LWRabsorbnumber}}
7387 \CustomizeMathJax{\def\mathcode#1={\mathchar}}
7388 \CustomizeMathJax{\let\delcode\mathcode}
7389 \CustomizeMathJax{\let\delimiter\mathchar}

```

Some text symbols missing from MATHJAX:

```

7390 \CustomizeMathJax{\def\oe{\unicode{x0153}}}
7391 \CustomizeMathJax{\def\OE{\unicode{x0152}}}
7392 \CustomizeMathJax{\def\ae{\unicode{x00E6}}}
7393 \CustomizeMathJax{\def\AE{\unicode{x00C6}}}
7394 \CustomizeMathJax{\def\aa{\unicode{x00E5}}}
7395 \CustomizeMathJax{\def\AA{\unicode{x00C5}}}
7396 \CustomizeMathJax{\def\o{\unicode{x00F8}}}
7397 \CustomizeMathJax{\def\O{\unicode{x00D8}}}
7398 \CustomizeMathJax{\def\l{\unicode{x0142}}}
7399 \CustomizeMathJax{\def\L{\unicode{x0141}}}
7400 \CustomizeMathJax{\def\ss{\unicode{x00DF}}}
7401 \CustomizeMathJax{\def\SS{\unicode{x1E9E}}}
7402 \CustomizeMathJax{\def\dag{\unicode{x2020}}}
7403 \CustomizeMathJax{\def\ddag{\unicode{x2021}}}
7404 \CustomizeMathJax{\def\P{\unicode{x00B6}}}
7405 \CustomizeMathJax{\def\copyright{\unicode{x00A9}}}
7406 \CustomizeMathJax{\def\pounds{\unicode{x00A3}}}
7407 \end{warpMathJax}
7408
7409
7410 \begin{warpHTML}% due to warpMathJax

```

\LWR@customizeMathJax Prints MATHJAX commands to the HTML output.

```

7411 \newcommand{\LWR@customizeMathJax}{%
7412 \ifbool{mathjax}{%
7413 \LWR@stopars
7414 \LWR@htmlcomment{MathJax customizations:}
7415
7416 \begin{BlockClass}{hidden}
7417 \LWR@stopars

```

Avoid ligatures while printing MATHJAX customizations:

```

7418 {
7419     \LWR@print@ttfamily
7420     \LWR@customizedMathJax
7421 }
7422 \end{BlockClass}
7423 }{ }
7424 }

7425 \end{warpHTML}

```

for PRINT output: 7426 \begin{warpprint}

\CustomizeMathJax The print-mode version:

```

7427 \newcommand*{\CustomizeMathJax}[1]{}

```

```
\FilenameSimplify * {\<expression>}

7428 \NewDocumentCommand{\FilenameSimplify}{s m}{}

7429 \end{warpprint}

for HTML output: 7430 \begin{warpHTML}
```

\LWR@createfooter If specified, create the first or later web page footer.

```
7431 \newcommand*{\LWR@createfooter}{%
7432     \ifnumless{\value{LWR@htmlseqfilenumber}}{1}{%
7433         \ifdefempty{\LWR@firstpagebottom}{\{}{%
7434             \LWR@htmlelement{footer}
7435             \LWR@firstpagebottom
7436         \LWR@htmlelementend{footer}
7437     \}%
7438     \ifdefempty{\LWR@pagebottom}{\{}{%
7439         \LWR@htmlelement{footer}
7440     \}%
7441     \ifdefempty{\LWR@pagebottom}{\{}{%
7442         \LWR@htmlelement{footer}
7443         \LWR@pagebottom
7444     \LWR@htmlelementend{footer}
7445     \}%
7446     \LWR@htmlelementend{footer}
7447     \}%
7448   \}%
7449 }
```

\LWR@newhtmlfile {\<section name>}

Finishes the current HTML page with footnotes, footer, navigation, then starts a new HTML page with an HTML comment telling where to split the page and what the new filename and css are, then adds navigation, side toc, header, and starts the text body.

```
7450 \newcommand*{\LWR@newhtmlfile}[1]{%
7451 \LWR@traceinfo{\LWR@newhtmlfile}}
```

At the bottom of the ending file:

```
7452 \LWR@htmlelementclassend{section}{textbody}
7453 \LWR@htmlelementclassend{main}{bodycontainer}
7454 \LWR@htmlelementclassend{div}{bodyandsidetoc}
7455
7456 \LWR@printpendingfootnotes
7457
```

No footer between files if EPUB:

```
7458 \ifbool{FormatEPUB}{}{\LWR@createfooter}
```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```
7459 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
7460   {}
7461   {\ifnumcomp{\value{LWR@htmlfilename}}{>}{0}{\LWR@botnavigation}{}}
```

End of this HTML file:

```
7462 \LWR@stopars
7463 \LWR@htmlltag{/body}\LWR@orignewline
7464 \LWR@htmlltag{/html}\LWR@orignewline
7465 \LWR@traceinfo{LWR@newhtmlfile: about to LWR@orignewline}
7466 \LWR@maybe@orignewline

7467 \addtocounter{LWR@htmlfilename}{1}%
7468 \addtocounter{LWR@htmlseqfilename}{1}%
```

If using a filename based on section name, create a version without blanks. The filename without blanks will be placed into \LWR@thisfilename. Duplicates will be detected using MD5 hashes.

If not using a filename, the file number will be used instead.

```
7469 \ifbool{FileSectionNames}%
7470 {%
```

Convert the section name to a filename with blanks and common words removed. The resulting filename is in \LWR@thisfilename.

```
7471 \LWR@filenamenoblanks{#1}%
```

Create a macro name from the MD5 hash of the file name, to detect duplicates:

```
7472 \edef\LWR@hashedname{\LWR@mdfive{\LWR@thisfilename}}%
```

If the macro name is not yet defined, this filename is unique.

```
7473 \ifcsundef{LWR@filename\LWR@hashedname}{%
```

If the filename is unique, create a macro using the hashed name, to be used to test for additional duplicates in the future.

```
7474 \csdef{LWR@filename\LWR@hashedname}{%
7475 }{%
```

If the filename is not unique, create an error.

```
7476 \PackageError{lwarp}%
7477   {%
7478     The section name:\MessageBreak
7479     '#1',\MessageBreak
7480     at the line number listed below,\MessageBreak
7481     generates the filename\MessageBreak
7482     '\LWR@thisfilename',\MessageBreak
7483     which appears to be a duplicate. There is a\MessageBreak
7484     previous section with an identical or similar name.\MessageBreak
7485     While generating file names, Lwarp sanitizes math,\MessageBreak
7486     most symbols, and a few common short words,\MessageBreak
7487     and this may cause a conflict.\MessageBreak
```

```

7488           Enter 'H' for possible solutions%
7489       }%
7490     {%
7491           \LWR@avoiddupfilenames%
7492       }%
7493   }%
7494 }%

```

If using file numbers instead of names, the name is set to the next file number.

```
7495 {\renewcommand*{\LWR@thisfilename}{\arabic{\LWR@htmlfilename}}}
```

Include an HTML comment to instruct lwarfmk where to split the files apart. Uses pipe-separated fields for `split_html.gawk`. Uses monospaced font with ligatures disabled for everything except the title.

```
7496 \LWR@traceinfo{\LWR@newhtmlfile: about to print start file}%


```

`\LWR@nullfonts` to allow math in a section name.

```

7497 \begin{group}%
7498 \LWR@nullfonts%
7499 \LWR@htmlblockcomment{%
7500 |Start file|%
7501 \LWR@htmlsectionfilename{\LWR@thisfilename}|%
7502 }%
7503 \end{group}%

```

At the top of the starting file:

```
7504 \LWR@stopars
7505
```

Start a new file with the given section name:

```
7506 \LWR@filestart[#1]
7507
```

Track the PDF page numbers of the HTML output. This is updated more frequently than `LWR@currentautosecpage`.

```
7508 \setcounter{\LWR@currentautosecfloatpage}{\value{page}}%
7509 \LWR@newautopagelabel{\LWR@currentautosecfloatpage}%
```

No navigation between files if formatting for an EPUB or word processor:

```

7510 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}%
7511   {}%
7512   {\LWR@topnavigation}
7513
```

No header if between files if formatting for an EPUB or word processor:

```

7514 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}%
7515   {}%
7516   {
```

```

7517      \ifdefempty{\LWR@pagetop}{}{
7518          \LWR@htmlelement{header}
7519
7520          \LWR@pagetop
7521
7522          \LWR@htmlelementend{header}
7523      }
7524  }
7525

```

The container for the sidetoc and text body:

```
7526 \LWR@htmlelementclass{div}{bodyandsidetoc}
```

No sidetoc if formatting for an EPUB or word processor:

```

7527 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
7528     {}
7529     {\LWR@sidetoc}
7530

```

Start of the <textbody>:

```

7531 \LWR@htmlelementclass{main}{bodycontainer}
7532 \LWR@htmlelementclass{section}{textbody}

```

Not yet found a new section in this file. Once one is found, a label will be placed for previous/next links.

```
7533 \boolfalse{\LWR@setseqfilelabel}
```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```

7534 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}%
7535     {}%
7536     {%
7537         \ifcvoid{\thetitle}{}{%
7538             \LWR@printthetitle%
7539         }%
7540     }%

```

Keep paragraph tags disabled for now:

```

7541 \LWR@stopars
7542

```

If using MATHJAX, print the customizations here.

```
7543 \LWR@customizeMathJax
```

```

7544 \LWR@traceinfo{\LWR@newhtmlfile: done}
7545 }

```

```
7546 \end{warpHTML}
```

64 Sectioning

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing L^AT_EX code and packages. Formatting is handled by css, so the emulated code has much less work to do than the print versions.

Unicode	Section names and the resulting filenames with accented characters are partially supported, depending on the ability of <i>pdflatex</i> to generate characters and <i>pdftotext</i> to read them. If extra symbols appear in the text, it may be that <i>pdflatex</i> is actually producing a symbol over or under a character, resulting in <i>pdftotext</i> picking up the accent symbol separately.
⚠ accents in filenames	X _E L ^A T _E X and LuaL ^A T _E X directly support accented section and file names, but it may be necessary to use L ^A T _E X accents instead of native Unicode accents. L ^A T _E X accents will have the accents stripped when creating file names, whereas using Unicode accents will create filenames which include accents, which may cause issues with some operating systems.

for HTML output: 7547 \begin{warpHTML}

64.1 User-level starred section commands

\ForceHTMLPage For HTML output, forces the next section to be on its own HTML page, if FileDepth allows, even if starred. For use with \printindex and others which generate a starred section which should be on its own HTML page. Also see \ForceHTMLTOC.

For print output, no effect.

```
7548 \newbool{LWR@forcinghtmlpage}
7549 \boolfalse{LWR@forcinghtmlpage}
7550
7551 \newcommand*\{\ForceHTMLPage}{%
7552 \global\booltrue{LWR@forcinghtmlpage}%
7553 }
```

\ForceHTMLTOC For HTML output, forces the next section to have a TOC entry, even if starred. For use with \printindex and others which generate a starred section which should be in the TOC so that it may be accessed via HTML. Not necessary if used with tocbind. Also see \ForceHTMLPage.

For print output, no effect.

```
7554 \newbool{LWR@forcinghtmltoc}
7555 \boolfalse{LWR@forcinghtmltoc}
7556
7557 \newcommand*\{\ForceHTMLTOC}{%
7558 \global\booltrue{LWR@forcinghtmltoc}%
7559 }
```

7560 \end{warpHTML}

for PRINT output: 7561 \begin{warpprint}
7562 \newcommand*\{\ForceHTMLPage}{}
7563 \newcommand*\{\ForceHTMLTOC}{}
7564 \end{warpprint}

for HTML output: 7565 \begin{warpHTML}

64.2 Book class commands

\mainmatter Declare the main matter section of the document. Does not reset the page number,
⚠ which must be consecutive arabic numbers for the HTML conversion.

```
7566 \newbool{LWR@mainmatter}
7567 \DeclareDocumentCommand{\mainmatter}{}{%
7568 \booltrue{LWR@mainmatter}}%
7569 }
```

\frontmatter Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```
7570 \DeclareDocumentCommand{\frontmatter}{}{%
7571 \boolfalse{LWR@mainmatter}}%
7572 }
```

\backmatter Declare the back matter section of the document. Does not reset the page number.

```
7573 \DeclareDocumentCommand{\backmatter}{}{%
7574 \boolfalse{LWR@mainmatter}}%
7575 }
```

64.3 Sectioning support macros

\LWR@sectionnumber {*<section type>*}

Typeset a section number and its trailing space with css formatting:

```
7576 \newcommand*\LWR@sectionnumber[1]{%
7577 \InlineClass{sectionnumber}{#1}}%
7578 }
```

autosec A tag used by the TOC and index.

\LWR@createautosec {*<section type>*}

Create an autosection tag.

The use of \textquotedbl instead of " provides improved compatibility with xeCJK.

```
7579 \newcommand*\LWR@createautosec[1]{%
7580 \LWR@htmntag{%
7581     #1 % space
7582     id=\textquotedbl\LWR@print@mbox{autosec-\arabic{page}}\textquotedbl}%
7583 }%
7584 }
```

\LWR@pushoneclose {*<sectiontype>*} Stacks the new sectioning level's closing tag, to be used when this section is closed some time later.

 \LWR@stopars must be executed first.

```
7585 \NewDocumentCommand{\LWR@pushoneclose}{m}{%
7586 \LWR@traceinfo{\LWR@pushoneclose #1}%
7587   \LWR@pushclose{#1}%
7588 }
```

\LWR@startnewdepth {*<sectiontype>*}

Closes currently stacked tags of a lesser level, then opens the new nesting level by saving this new sectioning level's closing tag for later use.

 \LWR@stopars must be executed first.

```
7589 \NewDocumentCommand{\LWR@startnewdepth}{m}{%
```

Close any stacked sections up to this new one.

```
7590 \LWR@closeprevious{#1}%
```

Push a new section depth:

```
7591 \LWR@pushoneclose{#1}%
7592 }
```

\LWR@prevFileDepth (*Ctr*) Remembers the previous LWR@FileDepth.

Initialized to a deep level so that any section will trigger a new HTML page after the home page.

```
7593 \newcounter{\LWR@prevFileDepth}%
7594 \setcounter{\LWR@prevFileDepth}{\LWR@depthsubparagraph}
```

\@secCntFormat {*<sectiontype>*}

```
7595 \def@\secCntFormat#1{\csname the#1\endcsname\quad}
```

\simplechapterdelim Used by `tocbibind` and `anonchap`.

```
7596 \newcommand*\simplechapterdelim{}
```

\@chapCntFormat {*<sectiontype>*}

\let to \@secCntFormat by default, but may be redefined by \simplechapter and \restorechapter from `tocbibind` or `anonchap`.

```
7597 \let@\chapCntFormat@\secCntFormat
```

\@partCntFormat {*<sectiontype>*}

\let to \@secCntFormat by default, but may be redefined by `ctex`.

```
7598 \let@\partCntFormat@\secCntFormat
```

\@partnameformat Prints “Part” for part sections.

Nullified by ctex.

```
7599 \newcommand*{\@partnameformat}{\LWR@isolate{\partname}~}%
```

\LWR@printchaptername Print \chaptername in most cases, but this is nullified for ctexbook, komascript, ujt* classes.

```
7600 \newcommand*{\LWR@printchaptername}{%
7601     \ifdefvoid{\chaptername}{}{\chaptername~}%
7602 }
```

\LWR@section * [*TOC name*] {*name*} {*sectiontype*}

The common actions for the high-level sectioning commands.

```
7603 \DeclareDocumentCommand{\LWR@section}{m m m m}{%
7604 \IfValueTF{#2}{%
7605     {\LWR@traceinfo{\LWR@section: starting #4 #2}}%
7606     {\LWR@traceinfo{\LWR@section: starting #4 #3}}%
```

Warn if starting a section inside a :

```
7607     \LWR@spanwarninvalid{section}%
7608 \LWR@maybeprintpendingfootnotes{\csuse{\LWR@depth#4}}%
7609 \LWR@stopars%
7610 \LWR@startnewdepth{#4}%
```

Cancel special minipage horizontal space interaction:

```
7611 \global\boolfalse{\LWR@minipagethispar}%
```

Start a new HTML file unless starred, and if is a shallow sectioning depth.

Exception: Also start a new HTML file for \part*, for appendix.

Generate a new LATEX page so that toc and index page number points to the section:

```
7612 \LWR@traceinfo{\LWR@section: testing whether to start a new HTML file}%
7613 \IfBooleanT{#1}{\LWR@traceinfo{\LWR@section: starred}}%
7614 \ifbool{\LWR@forcinghtmlpage}{\LWR@traceinfo{\LWR@section: forcinghtmlpage}}{}%
7615 \ifthenelse{%
7616     \%
7617     \(\NOT\equal{#1}{\BooleanTrue}\)\OR%
7618     \(\cnttest{\@nameuse{\LWR@depth#4}}{=}{\LWR@depthpart}\)\OR%
7619     \(\boolean{\LWR@forcinghtmlpage}\)\%
7620     \%
7621     \AND%
7622     \cnttest{\@nameuse{\LWR@depth#4}}{<=}{\value{FileDepth}}\%
7623     \AND%
7624     \%
7625     \NOT\boolean{CombineHigherDepths}\OR%
7626     \cnttest{\@nameuse{\LWR@depth#4}}{<=}{\value{\LWR@prevFileDepth}}\%
7627     \%
7628     \AND%
```

```

7629      \(% phantomsection
7630          \NOT\isempty{#3}%
7631          \OR%
7632          \(\NOT\equal{#1}{\BooleanTrue}\)%
7633      \)%
7634 }%

```

If so: start a new HTML file:

```

7635 {%
7636     \LWR@traceinfo{LWR@section: new HTML file}%

```

See if there was an optional TOC name entry:

```

7637     \IfNoValueTF{#2}%

```

If no optional entry

```

7638         {\LWR@newhtmlfile{#3}}%

```

If yes an optional entry

```

7639         {\LWR@newhtmlfile{#2}}%
7640 }% new file

```

Else: No new HTML file:

```

7641 {%

```

Generate a new L^AT_EX page so that TOC and index page number points to the section:

```

7642     \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
7643     \LWR@stopars%
7644     \LWR@maybe@orignewpage%
7645 }% not new file

```

```

7646 %
7647 % Remember this section's name for \cs{nameref}:
7648 %   \begin{macrocode}
7649 \IfValueT{#3}{%
7650     \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
7651     \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
7652 }%

```

Print an opening comment with the level and the name; ex: “section” “Introduction” Footnotes may be used in section names, which would also appear in the HTML section opening comments, so the short TOC entry is used if possible, and a limited opening comment is made if the sectional unit is starred.

Avoid extra <par> tag:

```

7653 \LWR@stopars%

```

Form a sectioning comment:

```

7654 \begingroup%

```

```

7655 \LWR@nullfonts%
7656 \LWR@nullifyfootnotes%
7657 \LWR@htmlcomment{%
7658     \LWR@orignewline%
7659     \IfValueTF{#2}{%
7660         {..... #4 #2 .....}%
7661         {..... #4 #3 .....}%
7662     \LWR@orignewline%
7663 }%
7664 \LWR@orignewline%
7665 \ifbool{HTMLDebugComments}{%
7666     {%
7667         \IfBooleanTF{#1}{starred}{%
7668             {%
7669                 \IfNoValueTF{#2}{short TOC}{%
7670                     {\LWR@htmlcomment{Opening #4* '#3'}}%
7671                     {\LWR@htmlcomment{Opening #4* '#2'}}%
7672                 }%
7673                 {%
7674                     \IfNoValueTF{#2}{short TOC}{%
7675                         {\LWR@htmlcomment{Opening #4 '#3'}}%
7676                         {\LWR@htmlcomment{Opening #4 '#2'}}%
7677                     }%
7678                 \LWR@orignewline%
7679             }%
7680         }%
7681 \endgroup%

```

For inline sections paragraph and subparagraph, start a new paragraph now:

```

7682 \ifthenelse{%
7683     \cnttest{\@nameuse{\LWR@depth#4}}{>=}{\LWR@depthparagraph}%
7684 }%
7685     {\LWR@startpars}%
7686     {}%

```

Create the opening tag with an autosec:

```

7687 \LWR@traceinfo{\LWR@section: about to \LWR@createautosec}%
7688 \LWR@createautosec{\@nameuse{\LWR@tag#4}}%
7689 \setcounter{\LWR@currentautosecpage}{\value{page}}%

```

Check if starred:

```

7690 \IfBooleanTF{#1}{%
7691     {%
7692         \LWR@traceinfo{\LWR@section: starred}%

```

Starred, but also forcing a TOC entry, so add unnumbered TOC name or regular name:

```

7693     \ifbool{\LWR@forcinghtmltoc}{%
7694         {%
7695             \addcontentsline{toc}{#4}{%
7696                 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
7697             }%
7698         }%

```

```
7699      {}%
7700 }% starred
```

Not starred, so step counter and add to toc:

```
7701 { % not starred
```

Only add a numbered toc entry if section number is not too deep:

```
7702      \ifthenelse{%
7703          \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}}{%
7704      }%
7705      {}% if secnumdepth
```

If in the main matter, step the counter and add the toc entry. For article class, l warp assumes that all is mainmatter.

```
7706      \LWR@traceinfo{LWR@section: about to test main matter}%
7707      \ifbool{LWR@mainmatter}{%
7708      }%
7709          \LWR@traceinfo{LWR@section: yes mainmatter}%
7710          \refstepcounter{#4}
```

Add main matter numbered toc entry with the toc name or the regular name:

```
7711      \LWR@traceinfo{LWR@section: about to addcontentsline}%
7712      \addcontentsline{toc}{#4}%
7713      {}%
7714          \protect\newline{%
7715              \@nameuse{pre#4name}%
7716              \@nameuse{the#4}%
7717              \@nameuse{post#4name}%
7718          }%
7719          {}%
7720              \ignorespaces%
7721              \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}\protect\relax%
7722          }%
7723      }%
7724      \LWR@traceinfo{LWR@section: finished addcontentsline}%
7725  }% end of if main matter
```

If not main matter, add unnumbered toc name or regular name:

```
7726      {}% not main matter
7727          \LWR@traceinfo{LWR@section: no main matter}%
7728          \addcontentsline{toc}{#4}{%
7729              \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
7730          }%
7731      }% end of not main matter
7732  }% end of secnumdepth
```

Deeper than secnumdepth, so add an unnumbered toc entry:

```
7733      {}%
7734          \addcontentsline{toc}{#4}{%
7735              \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
7736          }%
7737      }%
```

For part, print “Part”:

```

7738     \ifbool{LWR@mainmatter}%
7739     {%
7740         \ifthenelse{%
7741             \(\cnttest{\@nameuse{LWR@depth#4}}{<=}\}%
7742             {\value{secnumdepth}}\} \AND%
7743             \(\cnttest{\@nameuse{LWR@depth#4}}{=}\}{\LWR@depthpart}\}%
7744         }%
7745         {\@partnameformat}%
7746     {}%

```

Print the section number:

```

7747     \LWR@traceinfo{LWR@section: about to print section number}%
7748     \ifthenelse{%
7749         \cnttest{\@nameuse{LWR@depth#4}}{<=}\{\value{secnumdepth}\}%
7750     }%
7751     {%
7752         \ifstreq{\#4}{part}%
7753             \protect\LWR@sectionnumber{\@partcntformat{\#4}}%
7754         {}%
7755         \ifstreq{\#4}{chapter}%
7756             {}%
7757             \LWR@printchaptername%
7758             \protect\LWR@sectionnumber{\@chapcntformat{\#4}}%
7759         {}%
7760         \protect\LWR@sectionnumber{\@seccntformat{\#4}}%
7761     }%
7762     {}%
7763     {}%
7764     \LWR@traceinfo{LWR@section: finished print section number}%
7765 }{}%
7766 }% not starred

```

Print the section name:

```

7767 \LWR@traceinfo{LWR@section: about to print the section name}%
7768 \LWR@isolate{\#3}%

```

Close the heading tag, such as /H2:

```

7769 \LWR@traceinfo{LWR@section: about to close the heading tag}%
7770 \LWR@htmlltag{\@nameuse{LWR@tag#4end}}%
7771 \LWR@orignewline%

```

Generate a L^AT_EX label.

Track the PDF page numbers of the HTML output. A new autopage label may be generated for LWR@currentautosecpage for the start of the section, and also for the current page if it is different due to an SVG image in the section name. Also, the final page after the section has been created is updated in LWR@currentautosecfloatapage.

```

7772 \LWR@traceinfo{LWR@section: about to create the LaTeX label}%
7773 \setcounter{LWR@currentautosecfloatapage}{\value{page}}%
7774 \LWR@newautopagelabel{LWR@currentautosecpage}\LWR@orignewline%

```

If this is the first section found in this file, create a label for previous/next links:

```
7775 \ifbooleq{\LWR@setseqfilelabel}{}{%
7776     \label{\BaseJobname-autofile-\arabic{\LWR@htmlseqfilenumber}}%
7777     \booltrue{\LWR@setseqfilelabel}%
7778 }%
```

Start paragraph handing unless is an inline paragraph or subparagraph:

```
7779 \ifthenelse{%
7780     \cnttest{\@nameuse{\LWR@depth#4}}{<}{\LWR@depthparagraph}%
7781 }%
7782     {\LWR@startpars}%
7783 }
```

If not starred, remember the previous depth to possibly trigger a new HTML page.

HOWEVER, allow a `\part*` to start a new HTML page. This is used by appendix.

A starred section does not trigger a new HTML page at the beginning of this macro, so it should not affect it here at the end either. This became an issue when a `\listoftables` was tested in the middle of the document. The `\chapter*` for the list was not allowing a new HTML page for the section following it while `CombineHigherDepths` was true.

```
7784 \ifthenelse{%
7785     \NOT\equal{\#1}{\BooleanTrue}\OR%
7786     \cnttest{\@nameuse{\LWR@depth#4}}{=}{\LWR@depthpart}%
7787 }%
7788     {%
7789         \setcounter{\LWR@prevFileDepth}{\@nameuse{\LWR@depth#4}}%
7790     }%
7791 }
```

Reset to defaults if not a phantomsection:

```
7792 \ifstrempty{\#3}{%
7793     {}%
7794     {%
7795         \global\boolfalse{\LWR@forcinghtmlpage}%
7796         \global\boolfalse{\LWR@forcinghtmltoc}%
7797     }%
7798 }%
7799 \LWR@traceinfo{\LWR@section: done}%
7800 }
```

64.4 Pre- and post- sectioning names

`\prebookname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postbookname`

```
7801 \providecommand*{\prebookname}{}%
7802 \providecommand*{\postbookname}{}%
```

`\prepartname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postpartname`

```
7803 \providecommand*{\prepartname}{}%
7804 \providecommand*{\postpartname}{}%
```

\prechaptername Usually null, but is used by `uj*` and `ut*` Japanese classes.
\postchaptername

7805 \providecommand*\{\prechaptername\}{}
7806 \providecommand*\{\postchaptername\}{}

\presectionname Always null, but provided here for algorithmic simplicity in `\LWR@section`.
\postsectionname

7807 \providecommand*\{\presectionname\}{}
7808 \let\postsectionname\presectionname
7809
7810 \let\presubsectionname\presectionname
7811 \let\postsubsectionname\postsectionname
7812
7813 \let\presubsubsectionname\presectionname
7814 \let\postsubsubsectionname\postsectionname
7815
7816 \let\preparagraphname\presectionname
7817 \let\postparagraphname\postsectionname
7818
7819 \let\presubparagraphname\presectionname
7820 \let\postsubparagraphname\postsectionname

64.5 \section and friends

For `memoir`, a second optional argument is allowed.

For `hypbmsec`, a second optional argument or either parenthesis argument is allowed.

Each of these additional arguments are for headers or PDF bookmarks, and are ignored for HTML output.

\part * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}

7821 \newcommand{\part@preamble}{}% for koma-script
7822
7823 \DeclareDocumentCommand{\part}{s d() o o d() m}{%
7824 \LWR@section{#1}{#3}{#6}{part}}%
7825
7826 \part@preamble% for koma-script
7827 \renewcommand{\part@preamble}{}%
7828 }

\chapter * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}

7829 \let\@printcites\relax% for quotchap package
7830
7831 \newcommand{\chapter@preamble}{}% for koma-script
7832
7833 \@ifundefined{chapter}
7834 {}
7835 {%
7836 \DeclareDocumentCommand{\chapter}{s d() o o d() m}{%
7837 \LWR@section{#1}{#3}{#6}{chapter}}%
7838 }

```

7839      \@printcites% for quotchap package
7840
7841      \chapter@preamble% for koma-script
7842      \renewcommand{\chapter@preamble}{}%
7843  }
7844 }

\section * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}

7845 \DeclareDocumentCommand{\section}{s d() o o d() m}{%
7846     \LWR@section{#1}{#3}{#6}{section}%
7847 }

\subsection * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}

7848 \DeclareDocumentCommand{\subsection}{s d() o o d() m}{%
7849     \LWR@section{#1}{#3}{#6}{subsection}%
7850 }

\subsubsection * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}

7851 \DeclareDocumentCommand{\subsubsection}{s d() o o d() m}{%
7852     \LWR@section{#1}{#3}{#6}{subsubsection}%
7853 }

\paragraph * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}

7854 \DeclareDocumentCommand{\paragraph}{s d() o o d() m}{%
7855     \LWR@section{#1}{#3}{#6}{paragraph}%
7856 }

\ subparagraph * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}

7857 \DeclareDocumentCommand{\subparagraph}{s d() o o d() m}{%
7858     \LWR@section{#1}{#3}{#6}{subparagraph}%
7859 }

7860 \end{warpHTML}

```

65 Starting a new file

for HTML & PRINT: 7861 \begin{warpall}

\HTMLLanguage Default language for the HTML lang tag.

```

7862 \newcommand*{\LWR@currentHTMLLanguage}{en-US}
7863

```

```
7864 \newcommand*{\HTMLLanguage}[1]{%
7865     \renewcommand*{\LWR@currentHTMLLanguage}{#1}%
7866 }
```

\theHTMLTitleSeparator May be used inside **\theHTMLTitleSection** to separate the website's overall **HTML** title and the particular page's section name.

```
7867 \ifPDFTeX% pdflatex or dvi latex
7868     \ifdefstring{\inputencodingname}{utf8}{%
7869         \newcommand*{\theHTMLTitleSeparator}{ -\ }% EMdash
7870     }{%
7871         \newcommand*{\theHTMLTitleSeparator}{ -\ }% hyphen
7872     }%
7873 \else%
7874     \ifpTeX%
7875         \newcommand*{\theHTMLTitleSeparator}{ -\ }% hyphen
7876     \else%
7877         \newcommand*{\theHTMLTitleSeparator}{ -\ }% EMdash
7878     \fi%
7879 \fi%
```

\HTMLTitleBeforeSection Sets the **HTML** page's meta **title** tag to show the website title before the section name.

```
7880 \newcommand*{\HTMLTitleBeforeSection}{%
7881     \def\theHTMLTitleSection{%
7882         \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
7883     }%
7884 }
```

\HTMLTitleAfterSection Sets the **HTML** page's meta **title** tag to show the section name before the website title.

```
7885 \newcommand*{\HTMLTitleAfterSection}{%
7886     \def\theHTMLTitleSection{%
7887         \theHTMLSection\theHTMLTitleSeparator\theHTMLTitle%
7888     }%
7889 }
```

\theHTMLTitleSection Forms the **HTML** page's meta **title** tag. The default is to show the website title before the section name.

```
7890 \HTMLTitleBeforeSection
```

\theHTMLSection The section name is passed to **\LWR@filestart**, which then sets **\theHTMLSection** for use inside **\theHTMLTitleSection** to create an **HTML** meta **title** tag.

```
7891 \newcommand*{\theHTMLSection}{}%
7892 \end{warpall}
```

for HTML output: 7893 \begin{warpHTML}

\LWR@filestart [*<section name>*] Creates the opening **HTML** tags.

```
7894 \newcommand*\LWR@filestart}[1][]{%
7895 \LWR@traceinfo{\LWR@filestart !#1!}%
```

Locally temporarily disable direct-formatting commands:

```
7896 \begin{group}%
7897 \LWR@nullfonts%
```

Save the section name for use while creating the HTML meta title tag:

```
7898 \edef\theHTMLSection{\#1}%
```

Remove extra material:

```
7899 \StrSubstitute{\theHTMLSection}{\protect}{\detokenize{-}}[\theHTMLSection]%
7900 \StrSubstitute{\theHTMLSection}{%
7901   {\detokenize{---}}{\detokenize{-}}[\theHTMLSection]%
7902 \StrSubstitute{\theHTMLSection}{%
7903   {\detokenize{---}}{\detokenize{-}}[\theHTMLSection]%
7904 \StrSubstitute{\theHTMLSection}{%
7905   {\detokenize{---}}{\detokenize{-}}[\theHTMLSection]%
7906 \StrSubstitute{\theHTMLSection}{%
7907   {\detokenize{--}}{\detokenize{-}}[\theHTMLSection]%
```

If starts with a dash, remove the leading dash:

```
7908 \IfBeginWith{\theHTMLSection}{\detokenize{-}}{%
7909   \StrGobbleLeft{\theHTMLSection}{1}[\theHTMLSection]%
7910 }{}
```

Create the page's HTML header:

```
7911 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline
```

The language is user-adjustable:

NOTE: \LWR@orig@textquotedbl is used here because \textquotedbl is nullified by \LWR@nullfonts while starting the new file.

```
7912 \LWR@htmltag{%
7913   html lang=\LWR@orig@textquotedbl\LWR@currentHTMLLanguage\LWR@orig@textquotedbl%
7914 }\LWR@orignewline
```

Start of the meta data:

```
7915 \LWR@htmltag{head}\LWR@orignewline
```

Charset is fixed at UTF-8:

```
7916 \LWR@htmltag{%
7917   meta charset=\LWR@orig@textquotedbl{}UTF-8\LWR@orig@textquotedbl\ /%
7918 }\LWR@orignewline
```

Author:

```
7919 \ifthenelse{\equal{\theHTMLAuthor}{}}{%
7920   {}%
```

```

7921      {%
7922          \LWR@htmltag{%
7923              meta name=\LWR@orig@textquotedbl{}author\LWR@orig@textquotedbl\ % space
7924              content=\LWR@orig@textquotedbl{}\theHTMLAuthor\LWR@orig@textquotedbl\ /%
7925          }\LWR@orignewline%
7926      }%

```

`l warp` is the generator:

```

7927 \LWR@htmltag{%
7928     meta % space
7929     name=\LWR@orig@textquotedbl{}generator\LWR@orig@textquotedbl\ % space
7930     content=\LWR@orig@textquotedbl{}LaTeX L warp package\LWR@orig@textquotedbl\ /%
7931 }\LWR@orignewline%

```

If there is a description, add it now:

```

7932 \ifdefempty{\LWR@currentHTMLDescription}{}{%
7933     \LWR@htmltag{%
7934         meta name=\LWR@orig@textquotedbl{}description\LWR@orig@textquotedbl\ % space
7935         content=\LWR@orig@textquotedbl{}\LWR@currentHTMLDescription\LWR@orig@textquotedbl\ /%
7936     }\LWR@orignewline%
7937 }%

```

Mobile-friendly viewport:

```

7938 \LWR@htmltag{%
7939     meta % space
7940     name=\LWR@orig@textquotedbl{}viewport\LWR@orig@textquotedbl\ % space
7941     content=\LWR@orig@textquotedbl{}width=device-width, initial-scale=1.0\LWR@orig@textquotedbl\ /%
7942 }\LWR@orignewline

```

The page's title, if there is one. A section name is also added if given.

```

7943 \ifthenelse{\equal{\theHTMLTitle}{}}{%
7944     {}%
7945     {%
7946         \LWR@htmltag{title}%
7947         \ifdefempty{\theHTMLSection}{%
7948             {\theHTMLTitle}%
7949             {\theHTMLTitleSection}%
7950         }\LWR@htmltag{/title}\LWR@orignewline%
7951     }%

```

The page's stylesheet:

```

7952 \LWR@htmltag{%
7953     link % space
7954     rel=\LWR@orig@textquotedbl{}stylesheet\LWR@orig@textquotedbl\ % space
7955     type=\LWR@orig@textquotedbl{}text/css\LWR@orig@textquotedbl\ % space
7956     href=\LWR@orig@textquotedbl{}\LWR@currentcss\LWR@orig@textquotedbl\ /%
7957 }%
7958 \LWR@orignewline

```

Optional MATHJAX support. The `HTML` tags must be turned off during the verbatim input, and the paragraph handling which was turned on at the end of verbatim input must be immediately turned off again.

```

7959 \ifbool{mathjax}%
7960 {%
7961     \begingroup%
7962     \LWR@restoreoriglists%
7963     \boolexpr{LWR@verbtags}%
7964     \boolexpr{LWR@HTMLsanitize@tmpb@removebackslash}%

7965         \IfFileExists{\LWR@mathjaxfilename}%
7966             {\verb+input{\LWR@mathjaxfilename}+}%
7967             {%
7968                 \PackageError{lwarp}%
7969                 {%
7970                     \protect\MathJaxFilename\space specified the file\MessageBreak
7971                         \space\space\LWR@mathjaxfilename\MessageBreak
7972                         which does not exist%
7973                 }%
7974             {Specify an existing file, or remove \protect\MathJaxFilename.}%
7975         }%
7976     \endgroup%
7977     \LWR@stopars%
7978 }% end of mathjax
7979 {}%

```

End of the header:

```
7980 \LWR@htmlltag{/head}\LWR@orignewline
```

Start of the body:

```

7981 \LWR@htmlltag{body}\LWR@orignewline

7982 \endgroup%
7983 \LWR@traceinfo{LWR@filestart: done}%
7984 }

7985 \end{warpHTML}

```

66 Starting HTML output

for HTML output: 7986 \begin{warpHTML}

\LWR@LwarpStart Executed at the beginning of the entire document.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```

7987 \catcode`\$=\active
7988 \newcommand*\LWR@LwarpStart{%
7989 }%
7990 \LWR@traceinfo{LWR@l warpStart}

```

If formatting for a word processor, force filedepth to single-file only, force HTML debug comments off.

```

7991 \ifbool{FormatWP}{%
7992     \setcounter{FileDepth}{-5}%
7993     \boolfalse{HTMLDebugComments}%
7994 }{}
```

Expand and detokenize \HomeHTMLFilename and \HTMLFilename:

```

7995 \edef\LWR@strresult{\HomeHTMLFilename}
7996 \edef\HomeHTMLFilename{\detokenize\expandafter{\LWR@strresult}}
7997 \edef\LWR@strresult{\HTMLFilename}
7998 \edef\HTMLFilename{\detokenize\expandafter{\LWR@strresult}}
```

Force onecolumn and empty page style:

```

7999 \LWR@origonecolumn%
8000 \LWR@origpagestyle{empty}%
```

No black box for overfull lines:

```
8001 \overfullrule=0pt
```

Reduce chance of line overflow when HTML tags are added:

```
8002 \LWR@print@footnotesize%
```

In PDF output, don't allow line breaks to interfere with HTML tags:

```

8003 \LWR@print@raggedright%
8004 \LetLtxMacro{\\"}{\LWR@endofline}%
```

Spread the lines for *pdftotext* to read them well:

```
8005 \linespread{1.3}%
```

For *pdftotext* to reliably identify paragraph splits:

```

8006 \setlength{\parindent}{0pt}
8007 \setlength{\parskip}{2ex}
```

For the lateximage record file:

```
8008 \immediate\openout\LWR@lateximagesfile=\BaseJobname-images.txt
```

Removes space around the caption in the HTML:

```

8009 \setlength{\belowcaptionskip}{0ex}
8010 \setlength{\abovecaptionskip}{0ex}
```

Redefine the plain page style to be empty when used by index pages:

```
8011 \renewcommand{\ps@plain}{}%
```

Plug in some new actions. This is done just before the document start so that they won't be over-written by some other package.

Float captions:

```
8012 \let\LWR@origcaption\caption
```

Not yet started any paragraph handling:

```
8013 \global\booltrue{LWR@doingparhooks}
8014 \global\boolfalse{LWR@doingapar}
8015 \global\boolfalse{LWR@doingstartpars}
```

\color@endgroup's \endgraf was conflicting with lwarf's paragraph handling.

```
8016 \let\color@endgroup\endgroup
```

Document and page settings:

```
8017 \mainmatter
8018 \LWR@origpagenumbering{arabic}
```

Start a new HTML file and a header:

```
8019 \LWR@traceinfo{LWR@lwarfStart: Starting new file.}
8020 \LWR@filestart%
```

Tell *lwarpmk* that the *lwarf* package is in use. This allows *lwarpmk* to warn if usepackage{lwarf} was somehow disabled.

```
8021 \begin{group}%
8022 \LWR@nullfonts%
8023 \LWR@htmlblockcomment{%
8024 |Using lwarf|%
8025 \LWR@htmlsectionfilename{\LWR@thisfilename}|%
8026 }%
8027 \end{group}%

```

```
8028 \LWR@traceinfo{LWR@lwarfStart: Generating first header.}
8029 \ifdefempty{\LWR@firstpagetop}{}{%
8030   \LWR@htmlltag{header}\LWR@orignewline
8031   \LWR@startpars
8032   \LWR@firstpagetop
8033   \LWR@stoppars
8034   \LWR@htmlltag{/header}\LWR@orignewline
8035 }%
```

```
8036 \LWR@htmlelementclass{div}{bodywithoutsidetoc}
8037 \LWR@htmlelementclass{main}{bodycontainer}
8038 \LWR@traceinfo{LWR@lwarfStart: Generating textbody.}
8039 \LWR@htmlelementclass{section}{textbody}
```

Create a label for previous/next links, and remember it has been done:

```
8040 \booltrue{LWR@setseqfilelabel}%
8041 \label{\BaseJobname-autofile-\arabic{LWR@htmleqfilenumber}}%
```

Patch the itemize, enumerate, and description environments and \item. This works with the native L^AT_EX environments, as well as those provided by enumitem, enumerate, and paralist.

```
8042 \LWR@patchlists
```

Ensure that math mode is active to call lwarf's patches:

```
8043 \catcode`\$=\active
```

Required for \nameref to work with SVG math:

```
8044 \immediate\write\@mainaux{\catcode`\string$\active}%
8045 \LetLtxMacro\LWR@syntaxhighlightone$% balance for editor syntax highlighting
```

Allow HTML paragraphs to begin:

```
8046 \LWR@startpars
```

If using MATHJAX, disable \ensuremath by printing a nullified definition at the start of each file, and add further customizations:

```
8047 \ifbool{mathjax}{
8048   \typeout{---}
8049   \typeout{Package lwarf:}
8050   \typeout{Processing MathJax customizations for the first HTML page.}
8051   \typeout{Later HTML pages will take the same amount of time.}
8052   \typeout{If this takes too long, see the Lwarf manual regarding customizing MathJax.}
8053 }{}
8054
8055 \LWR@customizeMathJax
8056
8057 \ifbool{mathjax}{
8058   \typeout{Done.}
8059   \typeout{---}
8060 }{}  

```

First autopage label in case a figure occurs early before the first section: A new autopage label may be generated for LWR@currentautosecpage for the start of the section, and also for the current page if it is different due to an SVG image in the section name. Also, the final page after the section has been created is updated in LWR@currentautosecfloatpage.

```
8061 \setcounter{LWR@currentautosecfloatpage}{\value{page}}%
8062 \LWR@newautopagelabel{LWR@currentautosecpage}%
```

```
8063 \LWR@traceinfo{LWR@lwarfStart: done}
8064 }
8065 \catcode`\$=3% math shift until lwarf starts

8066 \end{warpHTML}
```

67 Ending HTML output

for HTML output: 8067 \begin{warpHTML}

\LWR@requesttoc {\langle boolean \rangle} {\langle suffix \rangle} Requests that a TOC, LOF, or LOTbe generated.

```
8068 \newcommand*{\LWR@requesttoc}[2]{%
8069 \ifbool{#1}{%
```

```

8070 {
8071     \expandafter\newwrite\@nameuse{tf@#2}
8072     \immediate\openout \@nameuse{tf@#2} \jobname.\#2\relax
8073 }()
8074 }

```

\LWR@LwarfEnd Final stop of all HTML output:

```

8075 \newcommand*\LWR@LwarfEnd}
8076 {
8077 \LWR@stopars
8078 \LWR@closeprevious{finished}

```

At the bottom of the ending file:

Print any pending footnotes:

```
8079 \LWR@printpendingfootnotes
```

Close the textbody.

(The \LWR@orignobreakspace is in case no autopage is required for the label, which would not print anything, and something must be printed before the newline.)

```
8080 \label{\BaseJobname-autofile-last}\LWR@orignobreakspace\LWR@orignewline
```

```

8081 \LWR@htmlelementclassend{section}{textbody}
8082 \LWR@htmlelementclassend{main}{bodycontainer}
8083 \LWR@htmlelementclassend{div}{bodyandsidetoc}

```

Create the footer if not EPUB

```
8084 \ifbool{FormatEPUB}{}{\LWR@createfooter}
```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```

8085 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
8086   {}
8087   {
8088     \ifnumcomp{\value{LWR@htmlfilename}}{>}{0}{\LWR@botnavigation}{}
8089   }

```

```
8090 \LWR@stopars% final stop of all paragraphs
```

Finish the HTML file:

```

8091 \LWR@htmlltag{/body}\LWR@orignewline
8092 \LWR@htmlltag{/html}\LWR@orignewline

```

Seems to be required sometimes:

```

8093 \LWR@maybe@orignewline
8094 }

```

`enddocument/info (Hook)` Used to close the `*-images.txt` file.
 [LaTeX]

`\enddocument` If labels have not changed, mark successful completion of the `lateximages.txt` file. Executed as everything is being shut down.

For the newer kernel hooks, see **texdoc lthooks-doc** and **texdoc ltshipout-doc**.

```
8095 \ifdef{\AddToHook}{% newer kernel
8096   \AddToHook{enddocument/info}{%
8097     \if@filesw
8098       \ifx \atmultiplelabels \relax
8099         \if@tempswa
```

This is where warnings of duplicate labels would appear.

```
8100   \else
```

No duplicate labels, so safe to create images.

```
8101   \immediate\write\LWR@lateximagesfile{%
8102     |end|end|end|%
8103   }%
8104   \fi
8105   \fi\fi
8106 }
8107 }% newer kernel
8108 {%
8109   \xpatchcmd{\enddocument}
8110   {%
8111     \if@tempswa
8112       \@latex@warning@no@line{Label(s) may have changed.
8113       Rerun to get cross-references right}%
8114     \fi
8115   }%
8116   {%
8117     \if@tempswa
8118       \@latex@warning@no@line{Label(s) may have changed.
8119       Rerun to get cross-references right}%
8120   }
```

No duplicate labels, so safe to create images.

```
8121   \immediate\write\LWR@lateximagesfile{%
8122     |end|end|end|%
8123   }%
8124   \fi
8125 }
8126 {}
8127 {
8128   \AtEndDocument{
8129     \PackageWarningNoLine{lwarp}
8130     {%
8131       Could not patch \protect\enddocument.\MessageBreak
8132       If labels have changed, be sure to recompile before\MessageBreak
8133       creating lateximages with\MessageBreak
8134       \space\space\lwarpmk limages,\MessageBreak
8135       or the images may be corrupt%
8136 }
```

```

8137         }
8138     }
8139 }% older kernel

```

68 Nullifying foreground/background hooks

See `texdoc lthooks-doc` and `texdoc ltshipout-doc`.

```

shipoout/background (Hook) Nullified.
[LaTeX]
shipoout/foreground (Hook) Nullified.
[LaTeX]
8140 \ifdef{\RemoveFromHook}{%
8141   \AfterEndPreamble{%
8142     \IfHookEmptyTF{shipoout/background}{}{%
8143       \PackageInfo{l warp}{Removing background hook}%
8144       \RemoveFromHook{shipoout/background}[*]%
8145     }%
8146     \IfHookEmptyTF{shipoout/foreground}{}{%
8147       \PackageInfo{l warp}{Removing foreground hook}%
8148       \RemoveFromHook{shipoout/foreground}[*]%
8149     }%
8150   }%
8151 }{}%
8152 \end{warpHTML}

```

69 Title page

package support l warp supports the native L^AT_EX titling commands, and also supports the packages `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.

⚠ load order

\published and \subtitle If using the `titling` package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 69.8.

affiliation l warp provides for the `\author` macro an additional `\affiliation` macro to provide an affiliation and other additional information for each author in the title page. The affiliation information is removed when using `titlingpage`'s `\theauthor` in the main text.

reusing titlepage information The `titling` package maintains the definitions of `\thetitle`, `\theauthor`, etc., after the title has been typeset. These commands are to be used to refer to the document's title and author, etc., in the main text. These definitions have the `\thanks` and `\affiliation` removed, and for `\author` the `\and` is replaced to generate a simple inline list of authors separated by commas. Note: `\theauthor` does not work well with `authblk` unless the traditional L^AT_EX syntax is used.

⚠ \theauthor, authblk

custom titlepages `\printtitle`, `\printauthor`, etc., are provided for use inside a custom `titlepage` or `titlingpage` environment, and these retain the `\thanks` and `\affiliation`.

\printhanks `\printhanks` has been added to force the printing of thanks inside a `titlingpage` environment when `\maketitle` is not used.

⚠ \thanks Inside a `\titlepage` or `\titlingpage` environment, use `\thanks` instead of

\footnote for acknowledgements, etc.

69.1 Setting the title, etc.

The following provide setting commands for both HTML and print outputs.

\author{*author*} While using \maketitle and print mode, the author is treated as a single-column tabular and the \and feature finishes the current tabular then starts a new one for the next author. Each author thus is placed into its own tabular, and an affiliation may be placed on its own line such as

```
\author{Name \\ Affiliation \and Second Name \\ Second Affiliation}
```

For HTML, the entire author block is placed inside a <div> of class author, and each individual author is inside a <div> of class oneauthor.

\@title, \@author, and \@date store the values as originally assigned, including any \thanks, \and, or \affiliation. These are low-level macros intended to be used by other macros only inside a titlepage or titlingpage, and are used by \maketitle. The author is printed inside a single-column tabular, which becomes multiple single-column tabulars if multiples authors are included. For HTML, these tabulars become side-by-side <div>s of class oneauthor, all of which are combined into one <div> of class author.

\printtitle, \printauthor, and \printdate are user-level macros intended to be used in custom titlepage or titlingpage environments in cases where \maketitle is not desired. These commands preserve the \thanks, etc., and should not be used in the main text.

\thetitle, \theauthor, and \thedate are available if titling has been loaded, and are sanitized user-level versions from which have been removed the \thanks and \affiliation, and \and is changed for inline text usage. The author is printed inline without \affiliation or \thanks, with \and placing commas between multiple authors. Thus, these commands are to be used in the main text whenever the user wishes to refer to the document's title and such. One practical use for this is to place the authors at the bottom of each HTML page, such as:

```
\HTMLPageBottom{
  \begin{center} \textcopyright~20xx \theauthor \end{center}
}
```

⚠ **\theauthor, authblk** \theauthor does not work well if authblk is used. If \theauthor is important, it is recommended to use the standard L^AT_EX syntax for \author, optionally with l warp's \affiliation macro as well.

⚠ **affiliations** After \maketitle has completed, \theauthor retains the definition of the author, but \and is changed to become a comma and a space, intending to print the authors names separated by spaces. This fails when affiliations are included on their own table rows.

\affiliation A solution, provide here, is to define a macro \affiliation which, during \maketitle, starts a new row and adds the affiliation, but after \maketitle is finished \affiliation is re-defined to discard its argument, thus printing only the author names when \author is later used inline.

69.2 \if@titlepage

for HTML & PRINT: 8153 \begin{warpall}

\if@titlepage Some classes do not provide \if@titlepage. In this case, provide it and force it false.

```
8154 \ifcsvoid{@titlepagefalse}{}  
8155     \newif\if@titlepage  
8156     @titlepagefalse  
8157 }{}  
  
8158 \end{warpall}
```

69.3 Changes for \affiliation

\affiliation {\text{}}

Adds the affiliation to the author for use in \maketitle.

Inside titlepage, this macro prints its argument. Outside, it is null.

for HTML & PRINT: 8159 \begin{warpall}
8160 \providerobustcmd{\affiliation}[1]{}
8161 \end{warpall}

for PRINT output: 8162 \begin{warpprint}

```
8163 \AtBeginEnvironment{titlepage}{  
8164 \renewrobustcmd{\affiliation}[1]{\\ \textsc{\small#1}}}  
8165 }  
8166  
8167 \AtBeginDocument{  
8168 \IfPackageLoadedTF{titling}{  
8169 \AtBeginEnvironment{titlingpage}{  
8170 \renewrobustcmd{\affiliation}[1]{\\ \textsc{\small#1}}}  
8171 }  
8172 }% titling loaded  
8173 }% AtBeginDocument
```

8174 \end{warpprint}

for HTML output: 8175 \begin{warpHTML}

titlepage (*env.*) Sets up a <div> of class titlepage. Provided even for memoir class, since it is used by \maketitle.

```
8176 \DeclareDocumentEnvironment{titlepage}{}  
8177 {  
8178     \renewrobustcmd{\affiliation}[1]{\\ \InlineClass{affiliation}{##1}}%  
8179     \LWR@printpendingfootnotes  
8180     \LWR@forcenewpage  
8181     \BlockClass{titlepage}  
8182 }
```

```

8183 {
8184     \endBlockClass
8185     \LWR@printpendingfootnotes
8186 }

8187 \end{warpHTML}

```

69.4 Printing the thanks

`\printthanks` Forces the `\thanks` to be printed. This is necessary in a `titlingpage` environment when `\maketitle` was not used.

for PRINT output: 8188 `\begin{warpprint}`
 8189 `\newcommand*{\printthanks}{\@thanks}`
 8190 `\end{warpprint}`

for HTML output: 8191 `\begin{warpHTML}`
 8192 `\newcommand*{\printthanks}{\LWR@stoppars\@thanks\LWR@startpars}`
 8193 `\end{warpHTML}`

69.5 Printing the title, etc. in HTML

The following are for printing the title, etc. in a `titlepage` or a `titlingpage` in HTML:

for HTML output: 8194 `\begin{warpHTML}`

```

\printtitle

8195 \newcommand*{\printtitle}
8196 {%
8197     \LWR@stoppars%
8198     \LWR@htmltag{\LWR@tagtitle}%
8199     \@title%
8200     \LWR@htmltag{\LWR@tagtitleend}%
8201     \LWR@startpars%
8202 }

```

`\LWR@printthetitle` A private version which prints the title without footnotes, used to title each HTML page.

```

8203 \newcommand*{\LWR@printthetitle}
8204 {%
8205     \LWR@stoppars%
8206     \LWR@htmltag{\LWR@tagtitle}%
8207     \thetitle%
8208     \LWR@htmltag{\LWR@tagtitleend}%
8209     \LWR@startpars%
8210 }

```

`\printauthor` HTML version.

```

8211 \newcommand*{\printauthor}{}

```

The entire author block is contained in a <div> named author:

```
8212 \begin{BlockClass}{author}
```

\and finishes one author and starts the next:

```
8213 \renewcommand{\and}{%
8214 \end{BlockClass}%
8215 \begin{BlockClass}{oneauthor}%
8216 }
```

Individual authors are contained in a <div> named oneauthor:

```
8217 \begin{BlockClass}{oneauthor}
8218 @author
8219 \end{BlockClass}
8220 \end{BlockClass}
8221 }
```

\printdate

```
8222 \newcommand*{\printdate}{%
8223 \begin{BlockClass}{titledate}%
8224 @date
8225 \end{BlockClass}%
8226 }
```

```
8227 \end{warpHTML}
```

69.6 Printing the title, etc. in print form

The following are for printing the title, etc. in a titlepage or a titlingpage in print form:

for PRINT output: 8228 \begin{warpprint}

\printtitle

```
8229 \newcommand*{\printtitle}{{\Huge @title}}
```

\printauthor Print mode.

```
8230 \newcommand*{\printauthor}%
8231     {{\large\begin{tabular}[t]{c}@author\end{tabular}}}
```

\printdate

```
8232 \newcommand*{\printdate}{{\small\textit{@date}}}
```

```
8233 \end{warpprint}
```

69.7 \maketitle for HTML output

An HTML <div> of class titlepage is used.

\thanks are a form of footnotes used in the title page. See section 60 for other kinds of footnotes.

See \thanksmarkseries{series}, below, to set the style of the footnote marks.

for HTML output: 8234 \begin{warpHTML}

```

8235 \IfClassLoadedTF{memoir}
8236 {
8237 \newcommand{\LWR@setfootnoteseries}{%
8238   \renewcommand\thefootnote{\@arabic\c@footnote}%
8239 }
8240 }% not memoir
8241 \if@titlepage
8242 \newcommand{\LWR@setfootnoteseries}{%
8243   \renewcommand\thefootnote{\@arabic\c@footnote}%
8244 }
8245 \else
8246 \newcommand{\LWR@setfootnoteseries}{%
8247   \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
8248 }
8249 \fi
8250 }% not memoir

```

\LWR@maketitlesetup Patches \thanks macros.

```
8251 \newcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```

8252 \LWR@setfootnoteseries%
8253 \def\@makefnmark{%
8254   \textsuperscript{\thefootnote}%
8255 }
```

\thefootnote \Rightarrow \nameuse{arabic}{footnote}, or
\thefootnote \Rightarrow \nameuse{fnsymbol}{footnote}

Redefine the footnote text:

```
8256 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
8257 \textsuperscript{\@thefnmark}~%
```

\makethanksmark \Rightarrow \thanksfootmark \Rightarrow \tamark \Rightarrow
\@thefnmark \Rightarrow \itshape a (or similar)

Print the text:

```
8258 {##1}%
8259 }%
8260 }
```

\@fnsymbol {\(*counter*)}

Re-defined to use an **HTML** entity for the double vertical bar symbol. The original definition used \| which was not being seen by *pdftotext*.

```
8261 \def\LWR@HTML@@fnsymbol#1{%
8262     \ifcase#1\or *\or
8263     \HTMLentity{dagger}\or
8264     \HTMLentity{Dagger}\or
8265     \HTMLentity{sect}\or
8266     \HTMLentity{para}\or
8267     \HTMLunicode{2016}\or
8268     **\or
8269     \HTMLentity{dagger}\HTMLentity{dagger} \or
8270     \HTMLentity{Dagger}\HTMLentity{Dagger} \else
8271     \@ctrerr\fi%
8272 }
8273 \LWR@formatted{@fnsymbol}
```

\maketitle **HTML** mode. Creates an **HTML** titlepage div and typesets the title, etc.

Code from the *titling* package is adapted, simplified, and modified for **HTML** output.

The name \LWR@maketitle is used to preserve its definition in case a later package overwrites \maketitle.

```
8274 \newcommand*{\LWR@maketitle}{%
```

An **HTML** titlepage <div> is used for all classes.

```
8275 \begin{titlepage}
```

Set up special patches:

```
8276 \LWR@maketitlesetup
```

Typeset the title, etc:

```
8277 \maketitle
```

Immediately generate any \thanks footnotes:

```
8278 \LWR@stopars\@thanks\LWR@startpars
```

Close the **HTML** titlepage div and cleanup:

```
8279 \end{titlepage}
8280 \setcounter{footnote}{0}%
8281 \global\let\thanks\relax
8282 \global\let\maketitle\relax
8283 \global\let\@maketitle\relax
8284 \global\let\@thanks\@empty
8285 \global\let\@author\@empty
```

```

8286 \global\let@\date@\empty
8287 \global\let@\title@\empty
8288 \global\let\title\relax
8289 \global\let\author\relax
8290 \global\let\date\relax
8291 \global\let\and\relax
8292 }
8293
8294 \LetLtxMacro\maketitle\LWR@maketitle

```

\@maketitle HTML mode. Typesets the title, etc.:

```

8295 \providecommand*{\@maketitle}{}%
8296 \renewrobustcmd{\@maketitle}{%
8297   \LWR@stoppars%
8298   \LWR@htmlltag{\LWR@tagtitle}%
8299   \@title%
8300   \LWR@htmlltag{\LWR@tagtitleend}%
8301   \LWR@startpars%
8302   \begin{BlockClass}{author}%

```

For **IEEEtran** class:

```

8303   \renewcommand*{\cr}{\%}
8304   \renewcommand*{\crcr}{\%}
8305   \renewcommand*{\noalign}{\%}

8306   \renewcommand{\and}{%
8307     \end{BlockClass}%
8308     \begin{BlockClass}{oneauthor}%
8309   }%
8310     \begin{BlockClass}{oneauthor}%
8311       \@author%
8312       \end{BlockClass}%
8313     \end{BlockClass}%
8314     \begin{BlockClass}{titldate}%
8315       \@date%
8316     \end{BlockClass}%
8317 }

```

\LWR@titlingmaketitle \maketitle for use inside an **HTML titlingpage** environment.

```
8318 \newcommand*{\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
8319 \LWR@stoppars\@thanks\LWR@startpars
```

Set up special patches:

```
8320 \LWR@maketitlesetup
```

Typeset the title, etc:

```
8321 \@maketitle
```

Immediately generate any \thanks footnotes:

```
8322 \LWR@stopars\@thanks\LWR@startpars
8323 }
8324 \end{warpHTML}
```

69.8 \published and \subtitle

\subtitle and \published To add \subtitle and \published to the titlepage, load the `titling` package and use \AddSubtitlePublished in the preamble.

The default `lwarf.css` has definitions for the `published` and `subtitle` classes.

If `titling` is loaded, \AddSubtitlePublished creates a number of additional macros, and also assigns some of the `titling` hooks. If `titling` is not loaded, \AddSubtitlePublished creates null macros.

 **titling hooks** Do not use \AddSubtitlePublished if the user has patched the `titling` hooks for some other reason. Portions are marked \warpprintonly to reduce extra tags in HTML. Similarly, `BlockClass` has no effect in print mode. Thus, the following may be marked warpall.

for HTML & PRINT: 8325 \begin{warpall}

\AddSubtitlePublished Adds \published and \subtitle, and related.

```
8326 \newcommand*\AddSubtitlePublished{%
8327 \IfPackageLoadedTF{titling}{% yes titling package
8328   \newcommand{\@published}{}%
8329   \newcommand{\published}[1]{\gdef\@published{\#1}}%
8330   \renewcommand*\maketitlehooka{\printpublished}%
8331   \newcommand*\printpublished{%
8332     \warpprintonly{\begin{center}\unskip}%
8333     \begin{BlockClass}{published}%
8334     \warpprintonly{\large\itshape}%
8335     \@published%
8336     \end{BlockClass}%
8337     \warpprintonly{\end{center}}%
8338   }%
8339   \newcommand{\@subtitle}{}%
8340   \newcommand{\subtitle}[1]{\gdef\@subtitle{\#1}}%
8341   \renewcommand*\maketitlehookb{\printsubtitle}%
8342   \newcommand*\printsubtitle{%
8343     \warpprintonly{\begin{center}\unskip}%
8344     \begin{BlockClass}{subtitle}%
8345     \warpprintonly{\Large\itshape}%
8346     \@subtitle%
8347     \end{BlockClass}%
8348     \warpprintonly{\end{center}}%
8349   }%
8350 }% yes titling package
8351 {%
8352   \def\@published{}%
8353   \DeclareDocumentCommand{\published}{m}{\gdef\@published{\#1}}%
```

```

8354     \DeclareDocumentCommand{\printpublished}{}{%
8355     \def\@subtitle{}%
8356     \DeclareDocumentCommand{\subtitle}{m}{\gdef\@subtitle{\#1}}%
8357     \DeclareDocumentCommand{\printsubtitle}{}{%
8358 }% no titling package
8359 }% \AddSubtitlePublished

8360 \end{warpall}

```

70 Abstract

The following code replaces the L^AT_EX default, and will itself be replaced later if the `abstract` package is loaded.

for HTML output: 8361 `\begin{warpHTML}`

`\abstractname` User-redefinable title for the abstract.

Also over-written by the `babel` package.

```
8362 \providecommand*\abstractname{Abstract}
```

Some classes allow an optional name, so it is allowed here.

`abstract (env.)`

```

8363 \DeclareDocumentEnvironment{abstract}{O{\abstractname}}{%
8364 {
8365     \LWR@forcenewpage
8366     \BlockClass{abstract}
8367     \BlockClassSingle{abstracttitle}{#1}
8368 }
8369 {
8370     \endBlockClass
8371 }

```

```
8372 \end{warpHTML}
```

71 Quote and verse

71.1 Attributions

`\attribution {<name>}`

For use with quote, quotation, verse:

Ex: "A quotation." `\attribution{\textsc{Author Name}\textsl{Book Title}}`

for HTML & PRINT: 8373 `\begin{warpall}`
 8374 `\newcommand{\attribution}[1]{`
 8375 `\begin{flushright}`

```

8376     \unskip
8377     #1
8378     \end{flushright}%
8379 }
8380 \end{warpall}

for HTML output: 8381 \begin{warpHTML}
8382 \newcommand{\LWR@HTML@attribution}[1]{%
8383   \LWR@stoppars%
8384   \begin{BlockClass}{attribution}
8385   #1
8386   \end{BlockClass}
8387   \LWR@startpars%
8388 }
8389 \LWR@formatted{attribution}
8390 \end{warpHTML}

```

71.2 Quotes, quotations

for HTML output: 8391 \begin{warpHTML}

quote (*env.*)

```

8392 \newenvironment*{\LWR@HTML@quote}{%
8393   \LWR@forcenewpage
8394   \LWR@htmlblocktag{blockquote}%
8395 }
8396 {\LWR@htmlblocktag{/blockquote}}
8397
8398 \LWR@formattedenv{quote}

```

quotation (*env.*)

```

8400 \newenvironment*{\LWR@HTML@quotation}{%
8401   \LWR@forcenewpage
8402   \LWR@htmlblocktag{blockquote}%
8403 }
8404 {\LWR@htmlblocktag{/blockquote}}
8405
8406 \LWR@formattedenv{quotation}

```

8407 \end{warpHTML}

71.3 Verse

When using `verse` or `memoir`, always place a `\\"` after each line.

`\attrib` The documentation for the `verse` and `memoir` packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. `lwarf` provides `\attribution`, which works for both print and HTML output. To combine the two so that `\attrib` is used for print and `\attribution` is used for HTML:

```
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

`\vleftskip (Len)`
`\leftmargini (Len)`
`\HTMLvleftskip (Len)`
`\HTMLleftmargini (Len)`

These lengths are used by `verse` and `memoir` to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLvleftskip` and `\HTMLleftmargini` are provided to control the margins in `HTML` output. These new lengths may be set by the user before any `verse` environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargini` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargini` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

- △ **spacing** Horizontal spacing relies on `pdftotext`'s ability to discern the layout (`-layout` option) of the text in the `HTML`-tagged PDF output. For some settings of `\HTMLleftmargini` or `\HTMLvleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space. During translation to `HTML`, the stanza numbers are kept out of the left margin, which would have caused `pdftotext` to shift everything over.
- △ **verse margin**

71.3.1 LATEX core verse environment

for **HTML output**: 8409 `\begin{warpHTML}`

`verse (env.)`

```
8410 \newenvironment{LWR@HTML@verse}
8411           {\let\\newline% l warp
8412             \list{}{\itemsep      \z@
8413               \itemindent   -1.5em%
8414               \listparindent\itemindent
8415               \rightmargin \leftmargin
8416               \advance\leftmargin 1.5em}%
8417             \item\relax
8418           {\endlist}
8419
8420 \LWR@formattedenv{verse}
```

8421 `\end{warpHTML}`

for **HTML & PRINT**: 8422 `\begin{warpall}`

71.3.2 verse and memoir

The following lengths are used by `verse` and `memoir`. They may be set in either print or `HTML` output, but are only used in `HTML`. This allows the user to set `\vleftskip` and `\leftmargini` for print output, and optionally select different values for `HTML`.

`\HTMLvleftskip (Len)` Sets `\vleftskip` inside a `verse` environment in `HTML`.

```
8423 \newlength{\HTMLvleftskip}
8424 \setlength{\HTMLvleftskip}{1em}
```

\HTMLleftmargini (*Len*) Sets \leftmargini inside a verse environment in HTML.

```
8425 \newlength{\HTMLleftmargini}
8426 \setlength{\HTMLleftmargini}{4.5em}

8427 \end{warpall}
```

72 Verbatim and tabbing

for HTML & PRINT: 8428 \begin{warpall}

\VerbatimHTMLWidth (*Len*) Width to use in HTML Verbatim environment.

This width is used when placing line numbers to the right. Ignored during print output.

```
8429 \newlength{\VerbatimHTMLWidth}
8430 \setlength{\VerbatimHTMLWidth}{4in}
8431 \end{warpall}
```

for HTML output: 8432 \begin{warpHTML}

\@setupverbvisiblespace For X_ET_EX or LuaT_EX, the default visible space was drawn in PDF, but not a text character which could be copied to HTML.

```
8433 \ifxetexorluatex
8434
8435 \newcommand*{\LWR@HTML@@setupverbvisiblespace}{\let\@obeysp\textvisible}
8436
8437 \LWR@formatted{@setupverbvisiblespace}
8438
8439 \fi
```

LWR@verbtags (*bool*) Used to temporarily turn off verbatim tags while doing \verbatiminput in the HTML head, or during MATHJAX. Verbatim tags are also disabled separately inside an HTML span.

```
8440 \newbool{\LWR@verbtags}
8441 \booltrue{\LWR@verbtags}
```

\verb Patched to encapsulate the verbatim text inside span with a class of verb.

```
8442 \LetLtxMacro{\LWR@orig@verb@egroup}{\verb@egroup}
8443
8444 \def\LWR@verb@egroup@endspan{%
8445   \LWR@orig@verb@egroup%
8446   \ifbool{\LWR@verbtags}{%
8447     {\LWR@htmltag{/span}}%
8448   }%
8449   \endgroup%
8450 }
```

```
8451 \xpretocmd{\verb}
```

```

8452      {%
8453          \begingroup%
8454          \ifbool{LWR@verbtags}{%
8455              {\LWR@htmltag{span class=\textquotedbl{}verb\textquotedbl{}}}%
8456              {}%
8457              \let\verb@egroup\LWR@verb@egroup@endspan%
8458          }%
8459          {}%
8460          {\LWR@patcherror{LaTeX}{verb}}}

```

\LWR@atbeginverbatim [*1: style*] {[*2: class*]}

Encloses a verbatim environment with the given css class.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```

8461 \newcommand*{\LWR@atbeginverbatim}[2][]{%
8462 {%

```

Stop generating HTML paragraph tags:

```
8463 \LWR@stopars%
```

Avoid excessive space between lines:

```

8464 \setlength{\parskip}{0ex}%
8465 \setlength{\topsep}{0pt}%
8466 \setlength{\partopsep}{0pt}%

```

Inside the verbatim, temporarily prevent underfull \hbox warnings.

```
8467 \hbadness=10000\relax%
```

Create a new pre of the given class. The tags may temporarily be turned off for internal use, such as loading the MATHJAX script, or inside a .

```

8468 \ifbool{LWR@verbtags}{%
8469 {%
8470     \ifnumcomp{\value{LWR@spandepth}}{=}{0}{%
8471         \LWR@htmltag{pre class=\textquotedbl#2\textquotedbl{}%
8472             \ifthenelse{\equal{#1}{}}{}{ style=\textquotedbl#1\textquotedbl{}}}%
8473         {}%
8474         \par%
8475     }%
8476     {%
8477         \LWR@spanwarnformat{verbatim}%
8478     }%
8479 }{%

```

Use a mono-spaced font to preserve horizontal positioning. If horizontal alignment is important for the user, use a mono-spaced font in the css for the verse class.

```
8480 \begingroup%
```

```

8481 \LWR@print@normalfont%
8482 \LWR@origttfamily%

```

If not inside a `\teximage`, use a small font to avoid line overflow.

```
8483 \ifnumcomp{\value{LWR@teximagedepth}}{=}{0}%
8484     {\LWR@print@scriptsize}%
8485     {}%
```

Since inside a `<pre>`, restore the original list processing:

```
8486 \LWR@restoreoriglists%
```

Turn off `babel-french` extra space before punctuation:

```
8487 \LWR@hook@processingtags%
```

Do not produce HTML tags for `\hspace` inside a verse par. Restore plain L^AT_EX `\hspace` functionality:

```
8488 \let\hspace\LWR@print@hspace%
```

Do not produce HTML tags for `\nbsp`.

```
8489 \boolfalse{LWR@HTMLsanitize@nobreakspace}%
8490 }
```

`\LWR@afterendverbatim` Finishes enclosing a verbatim environment.

```
8491 \newcommand*{\LWR@afterendverbatim}{%
8492 \endgroup%
8493 \par%
```

At the end of the environment, close the pre:

```
8494 \ifboolexpr{
8495     bool{LWR@verbtags} and
8496     test {\ifnumcomp{\value{LWR@spandepth}}{=}{0}}%
8497 }%
8498 {%
8499     \noindent\LWR@htmltag{/pre}\par% pre
8500 }{}%
```

Resume regular paragraph handling:

```
8501 \LWR@startpars%
8502 }
```

`\verbinput {<filename>}`

Patch `\verbinput` to add HTML tags:

```
8503 \newcommand{\LWR@HTML@verbinput}[2]{%
8504     \ifbool{LWR@verbtags}{\LWR@forcenewpage}{}%
8505     \LWR@atbeginverbatim{Verbatim}%
8506     \LWR@print@verbinput{#1}{#2}%
8507     \LWR@afterendverbatim%
8508 }%
8509 \LWR@formatted{verbinput}
```

`verbatim (env.)`

```

8511 \AfterEndPreamble{
8512 \LWR@traceinfo{Patching verbatim.}
8513 \AtBeginEnvironment{verbatim}{%
8514   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8515     {}%
8516     {%
8517       \LWR@forcenewpage%
8518       \LWR@atbeginverbatim{verbatim}%
8519     }%
8520   }%
8521 \AfterEndEnvironment{verbatim}{%
8522   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8523     {}%
8524     {%
8525       \LWR@afterendverbatim%
8526     }%
8527   }%
8528 %
8529 \AtBeginEnvironment{verbatim*}{%
8530   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8531     {}%
8532     {%
8533       \LWR@forcenewpage%
8534       \LWR@atbeginverbatim{verbatim}%
8535     }%
8536   }%
8537 \AfterEndEnvironment{verbatim*}{%
8538   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8539     {}%
8540     {%
8541       \LWR@afterendverbatim%
8542     }%
8543   }%
8544 }
```

`tabbing (env.)` The tabbing environment works, except that `svg` math and `lateximages` do not yet work inside the environment.

⚠ **math in tabbing** If math is used inside tabbing, place tabbing inside a `lateximage` environment, which will render the entire environment as a single `svg` image.

```

8545 \newenvironment*{\LWR@HTML@tabbing}{%
8546   {}%
8547   \LWR@forcenewpage%
8548   \LWR@atbeginverbatim{tabbing}%
8549   \let\enskip\LWR@print@enskip%
8550   \let\quad\LWR@print@quad%
8551   \let\qquad\LWR@print@qquad%
8552   \LetLtxMacro{\LWR@origtilde}{\LWR@origtilde}%
8553   \LetLtxMacro{\nobreakspace}{\LWR@originnobreakspace}%
8554   \let\,,\LWR@origcomma%
8555   \let\thinspace{\LWR@print@thinspace}%
8556   \let\negthinspace{\LWR@print@negthinspace}%
8557   \LWR@print@tabbing%
8558 }%
8559 {}%
8560 \endLWR@print@tabbing%
```

```

8561     \LWR@afterendverbatim%
8562 }
8563
8564 \LWR@formattedenv{tabbing}

8565 \end{warpHTML}

```

73 Theorems

\newtheorem {⟨text⟩} [⟨counter⟩] — or — [⟨oldname⟩] {⟨text⟩}

A few minor changes are made to supply HTML tags.

- The entire theorem is placed into a <div> of class theoremcontents.
- The label for each theorem is placed inside a of class theoremlabel.
- The contents are placed inside a <div> of class theoremcontents.

for HTML output: 8566 \begin{warpHTML}

\@begintheorem {⟨name⟩} {⟨number⟩}

```

8567 \renewcommand{\@begintheorem}[2]{%
8568 \LWR@forcenewpage

```

```
8569 \LWR@printpendingfootnotes%           lwarp
```

```

8570 \BlockClass{theoremcontents}
8571 \trivlist
8572 \item[\InlineClass{theoremlabel}{#1\ #2\ }]\itshape
8573 }

```

\@opargbegintheorem {⟨name⟩} {⟨number⟩} {⟨oparg⟩}

L^AT_EX defines this, but **amsthm** \relaxes it, so it will not be defined if **amsthm** is loaded before **lwarp**.

```

8574 \ifundef{\@opargbegintheorem}{}{
8575   \renewcommand{\@opargbegintheorem}[3]{%
8576     \LWR@forcenewpage
8577     \BlockClass{theoremcontents}
8578     \trivlist
8579     \item[\InlineClass{theoremlabel}{#1\ #2\ (#3)\ }]\itshape
8580   }
8581 }

```

\@endtheorem

```

8582 \renewcommand*{\@endtheorem}{%
8583 \endtrivlist

```

```
8584 \LWR@printpendingfootnotes%           lwarp
```

```
8585 \endBlockClass% theoremcontents
8586 }
8587 \end{warpHTML}
```

74 Lists

The environments `itemize`, `enumerate`, and `description` are patched when `lwarp` is started. These patches support the standard L^AT_EX environments, as well as those of `enumerate`, `enumitem`, and `paralist`, and at least the French version of `babel`. Additional patches are done on a package-specific basis.

The L^AT_EX source for `itemize` and `enumerate` are found in `source2e`, but the source for `description` is found in `article.cls`, etc.

- empty item** To have an empty item, use `\mbox{}` or a trailing backslash. This forces a new line in print output, matching the new line which will appear in HTML output. Ex:

```
begin{itemize}
item \mbox{}
\begin{itemize}
...
\end{itemize}
item \
\begin{itemize}
...
\end{itemize}
```

- `\makelabel` While inside a list environment, `lwarp` nullifies a number of T_EX horizontal skip and fill commands, allowing the user to define `\makelabel` for print mode while HTML mode ignores those commands.

-  **label font** When defining `\makelabel` in a list environment, use `\textbf` etc. instead of `\bfseries`.

74.1 List environment

for HTML output: 8588 `\begin{warpHTML}`

`\LWR@printcloselist` May be locally redefined by `enumerate` or `description`.

```
8589 \newcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
```

`\LWR@printopenlist` May be locally redefined by `enumerate` or `description`.

```
8590 \newcommand*{\LWR@printopenlist}{%
8591   \ul style=\textquotedbl\textbackslash LWR@print@mbox{list-style-type:none}\textquotedbl{}%
8592 }
```

\@mklab Removes PDF spacing.

```
8593 \AtBeginDocument{  
8594 \def\@mklab#1{  
8595 %      \hfil %  
8596 #1}  
8597 \let\makelabel\@mklab  
8598 }
```

\@donoparitem Modified for HTML output by replacing TeX boxes with plain text. Also removes PDF spacing.

```
8599 \def\@donoparitem{  
8600   \@noparitemfalse  
8601 %   \global\setbox\@labels\hbox{\hskip -\leftmargin  
8602 %                                         \unhbox\@labels  
8603 %                                         \hskip \leftmargin} %  
8604 %   \if@minipage\else  
8605 %     \tempskipa\lastskip  
8606 %     \vskip -\lastskip  
8607 %     \advance\tempskipa\outerparskip  
8608 %     \advance\tempskipa -\parskip  
8609 %     \vskip\tempskipa  
8610 %   \fi  
8611 }
```

\@item Modified for HTML output by replacing TeX boxes with plain text. Also removes PDF spacing.

```
8612 \def\LWR@HTML@item[#1]{  
8613 \LWR@traceinfo{@item}{%  
8614   \if@noparitem  
8615     \@donoparitem  
8616   \else  
8617 %     \if@inlabel  
8618 %       \indent  
8619 %     \fi  
8620 %     \ifhmode  
8621 %       \unskip\unskip  
8622 %     \fi  
8623 %     \if@newlist  
8624 %       \if@nobreak  
8625 %         \nbitem  
8626 %       \else  
8627 %         \addpenalty\beginparpenalty  
8628 %         \addvspace\topsep  
8629 %         \addvspace{-\parskip} %  
8630 %       \fi  
8631 %     \else  
8632 %       \addpenalty\itempenalty  
8633 %       \addvspace\itemsep  
8634 %     \fi  
8635 %     \global\@inlabeltrue  
8636 %   \fi  
8637 %   \everypar{  
8638 %     \minipagefalse  
8639 %     \global\@newlistfalse
```

```

8640 %     \if@inlabel
8641 %         \global\@inlabelfalse

8642 %     {\setbox\z@\lastbox
8643 %         \ifvoid\z@
8644 %             \kern-\itemindent
8645 %         \fi}%

8646 %     \box\@labels
8647 %     \penalty\z@
8648 %     \fi

8649 %     \if@nobreak
8650 %         \@nobreakfalse
8651 %         \clubpenalty \zM
8652 %     \else
8653 %         \clubpenalty \clubpenalty
8654 %         \everypar{}%
8655 %     \fi}%

8656 \if@noitemarg
8657   \@noitemargfalse
8658   \if@nmbrlist

8659     \refstepcounter\@listctr
8660     \fi
8661   \fi

8662   \makelabel{\#1} % extra space
8663 %   \sbox\@tempboxa{\makelabel{\#1}%
8664 %   \global\setbox\@labels\hbox{%
8665 %     \unhbox\@labels
8666 %     \hskip \itemindent
8667 %     \hskip -\labelwidth
8668 %     \hskip -\labelsep
8669 %     \ifdim \wd\@tempboxa >\labelwidth
8670 %       \box\@tempboxa

8671 %     \else
8672 %       \hbox to\labelwidth {\unhbox\@tempboxa}%
8673 %     \fi
8674 %     \hskip \labelsep}%
8675   \ignorespaces%
8676 }

\@nbitem

8677 \def\@nbitem{%
8678 %   \@tempskipa\@outerparskip
8679 %   \advance\@tempskipa -\parskip
8680 %   \addvspace\@tempskipa
8681 }

\lwr@listitem [<label>]

Handles \item inside a list, itemize, or enumerate.

```

See `\LWR@openparagraph` where extra `\hspace` is used to leave room for the label while inside a list during paragraph construction.

```
8682 \newcommand*\LWR@listitem{%
8683   \LWR@stoppars%
8684   \LWR@startnewdepth{listitem}%
8685   \LWR@htmlltag{li}%
8686   \LWR@orignewline%
8687   \LWR@startpars%
8688   \LWR@ensuredoingapar%
8689   \LWR@origitem%
8690 }
```

`\LWR@nulllistfills` Nullifies various TeX fill commands, in case they are used inside `\makelabel`. Problems are caused when these are nullified all the time.

```
8691 \newcommand*\LWR@nulllistfills{%
8692   \renewcommand*\hss{}%
8693   \renewcommand*\llap[1]{##1}%
8694   \renewcommand*\rlap[1]{##1}%
8695   \renewcommand*\hfil{}%
8696   \renewcommand*\hfilneg{}%
8697   \renewcommand*\hfill{}%
8698 }
```

`list (env) {<label>} {<commands>}`

```
8699 \newcommand*\LWR@liststart{%
8700   \LWR@traceinfo{\LWR@liststart}%
8701   \LWR@stoppars%
8702   \LWR@pushoneclose{list}%
8703   \LWR@htmlltag{\LWR@printopenlist}\LWR@orignewline%
8704   \LWR@startpars%
8705   \setlength{\topsep}{0pt}%
8706   \setlength{\partopsep}{0pt}%
8707   \setlength{\itemsep}{0pt}%
8708   \setlength{\parsep}{0pt}%
8709   \setlength{\leftmargin}{0pt}%
8710   \setlength{\rightmargin}{0pt}%
8711   \setlength{\listparindent}{0pt}%
8712   \setlength{\itemindent}{0pt}%
8713   \setlength{\labelsep}{1em}%
8714   \LWR@nulllistfills%
8715 }

8716 \newcommand*\LWR@listend{%
8717   \LWR@traceinfo{\LWR@listend}%
8718   \LWR@stoppars%
8719   \LWR@closeprevious{list}%
8720   \LWR@startpars%
8721 }
```

74.2 Itemize

`\LWR@itemizeitem [<label>]`

Handles `\item` inside an itemize or enumerate.

The optional argument is passed to `\LWR@origitem`.

See `\LWR@openparagraph` where extra `\hspace` is used to leave room for the label while inside a list during paragraph construction.

```

8722 \newcommand*{\LWR@itemizeitem}{%
8723   \LWR@stoppars%
8724   \LWR@startnewdepth{listitem}%
8725   \LWR@htmlltag{li}%
8726   \LWR@orignewline%
8727   \LWR@startpars%
8728   \LWR@ensuredoingapar%
8729   \LWR@origitem%
8730 }
```

`itemize (env.) [<options>]`

```

8731 \newcommand*{\LWR@itemizestart}{%
8732   \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}%
8733   \renewcommand*{\LWR@printopenlist}{%
8734     ul style=\textquotedbl\LWR@print@mbox{list-style-type:none}\textquotedbl{}%
8735   }%
8736   \LetLtxMacro\item\LWR@itemizeitem%
8737   \LWR@nulllistfills%
8738 }
```

74.3 Enumerate

An HTML unordered list is used with customized L^AT_EX-generated labels.

`enumerate (env.) [<options>]`

```

8739 \newcommand*{\LWR@enumeratestart}{%
8740   \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}%
8741   \renewcommand*{\LWR@printopenlist}{%
8742     ul style=\textquotedbl\LWR@print@mbox{list-style-type:none}\textquotedbl{}%
8743   }%
8744   \LetLtxMacro\item\LWR@itemizeitem%
8745   \LWR@nulllistfills%
8746 }
```

74.4 Description

`\LWR@descitem [<label>]` Handles an `\item` inside a description.

```

8747 \newcommand*{\LWR@descitem}[1][]{%
8748   \LWR@stoppars%
8749   \LWR@setlatestname{#1}%
8750   \LWR@startnewdepth{descitem}%
```

While creating the label, encase it inside tags and disable `\hspace`, which is used by the standard classes to add space to the labels.

```

8751 \begingroup%
8752 \let\LWR@orig@desc\makelabel\makelabel
8753 \renewcommand*\{\makelabel}[1]{%
8754     \LWR@htmltag{dt}%
8755     \LWR@orig@desc\makelabel{#1}%
8756     \LWR@htmltag{/dt}%
8757 }
8758 \RenewDocumentCommand{\hspace}{s m}{}%
8759 \LWR@origitem[#1]%
8760 \endgroup%
8761 \LWR@orignewline%
8762 \LWR@htmltag{dd}%
8763 \LWR@startpars%
8764 }
```

`description (env.) [<(options)>]`

Footnotes are modified to correctly parse optional arguments.

```

8765 \newcommand*\{\LWR@descriptionstart}{%
8766     \renewcommand*\{\LWR@printclosedlist}{\LWR@printcloseddescription}%
8767     \renewcommand*\{\LWR@printopenlist}{\LWR@printopenlist}%
8768     \LetLtxMacro\item\LWR@descitem%
8769     \LWR@nulllistfills%
8770 }
```

74.5 Patching the lists

`\LWR@patchlists` Patches list environments.

`\LWR@patchlists` remembers `\item` as defined by whatever packages have been loaded, then patches the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native L^AT_EX environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```

8771 \newcommand*\{\LWR@patchlists}{%
8772     \LetLtxMacro\item\LWR@listitem%
8773     \LetLtxMacro\@item\LWR@HTML@item%
8774     \renewcommand*\{@trivlist}{%
8775         \LWR@traceinfo{@trivlist start}%
8776         \LWR@liststart%
8777         \LWR@orig@trivlist%
8778         \LWR@traceinfo{@trivlist done}%
8779     }%
8780     \renewcommand*\{@trivlist}{%
8781         \LWR@traceinfo{@trivlist}%
8782         \LWR@origtrivlist%
8783     }%
8784     \renewcommand*\{@endtrivlist}{%
8785         \LWR@traceinfo{@endtrivlist start}%
8786         \LWR@origendtrivlist\LWR@listend%
8787         \LWR@traceinfo{@endtrivlist done}%
8788     }%
8789     \renewcommand*\{@itemize}{%
8790         \LWR@itemizestart\LWR@origitemize%
8791     }%
8792     \renewcommand*\{@enumerate}{%
```

```

8793      \LWR@enumeratestart\LWR@origenumerate%
8794      }%
8795      \renewcommand*\{\description}{%
8796          \LWR@descriptionstart\LWR@origdescription%
8797      }%
8798 }

```

\LWR@restoreoriglists Restores the original trivlist environment.

```

8799 \newcommand*\{\LWR@restoreoriglists}{%
8800     \LWR@traceinfo{\LWR@restoreoriglists}%
8801     \LetLtxMacro\item\LWR@origitem%
8802     \LetLtxMacro\@item\LWR@orig@item%
8803     \let\@trivlist\LWR@orig@trivlist%
8804     \let\trivlist\LWR@origtrivlist%
8805     \let\endtrivlist\LWR@origendtrivlist%
8806     \LetLtxMacro\itemize\LWR@origitemize%
8807     \LetLtxMacro\enditemize\LWR@endorigitemize%
8808     \LetLtxMacro\enumerate\LWR@origenumerate%
8809     \LetLtxMacro\endenumerate\LWR@endorigenumerate%
8810     \LetLtxMacro\description\LWR@origdescription%
8811     \LetLtxMacro\enddescription\LWR@endorigdescription%
8812     \let\@mklab\LWR@orig@mklab%
8813     \let\makelabel\LWR@origmakelabel%
8814     \let\@donoparitem\LWR@orig@donoparitem%
8815     \let\@nbitem\LWR@orig@nbitem%
8816 }

```

```
8817 \end{warpHTML}
```

75 Tabular

This is arguably the most complicated part of the entire package. Numerous tricks are employed to handle the syntax of the L^AT_EX core and the various tabular-related packages.

75.1 Limitations

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, siunitx S columns, or the packages multirow, longtable, supertabular, or xtab.

Defining macros and environments:

- When defining environments or macros which include tabular and instances of the & character, it may be necessary to make & active before the environment or macro is defined, then restore & to its default catcode after, using the following commands. These are ignored in print mode.

```

\StartDefiningTabulars
<define macros or environments using tabular and &
here>
\StopDefiningTabulars

```

⚠ Misplaced alignment
tab character &

⚠ floatrow

This includes before and after defining any macro which used `\ttabbox` from `floatrow`.

⚠ tabular inside another environment

- When creating a new environment which contains a `tabular` environment, lwarf's emulation of the `tabular` does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

```
\StartDefiningTabulars % (& is used in a
definition)
\newenvironment{outerenvironment}
{
  \tabular{cc}
  left & right \\
}
{
  \TabularMacro\ResumeTabular
  left & right \\
  \endtabular
}
\StopDefiningTabulars
```

For developers:

- To automate the use of `\StartDefiningTabulars` and `\EndDefiningTabulars`, these macros may be embedded inside an HTML environment definition to automatically change the catcode of `&` before absorbing the arguments. Another environment may be embedded as well.

```
% Does the work after the catcode has been changed:
\newcommand*{\LWR@HTML@subsome}{[2]}{%
  ...
  \otherenvironmentname [<args>] {<args>} % for
example
}
% Change catcode before absorbing arguments:
\newcommand*{\LWR@HTML@some}{%
  \StartDefiningTabulars
  \LWR@HTML@subsome
}
% Change catcode again at the end:
\newcommand*{\LWR@HTML@endsome}{%
  ...
  \endotherenvironmentname % for example
  \StopDefiningTabulars
}
% Combine with the existing print definition:
\LWR@formattedenv{some}
```

Cell contents:**⚠ macro in a table**

- Using a custom macro inside a `tabular` data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use `\TabularMacro` just before the macro. This is ignored in print mode.

```
\TabularMacro{somemacro} & more row contents \\
```

Column specifiers:**⚠ math**

- Due to the way math is gathered for processing, column specifiers such as `>{$}c<{$}` do not work with lwarf. Instead, each cell must specify math mode individually.

@ and !

- Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

- In \multirow cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the \multirow which do not appear in the HTML version.

⚠ \newcolumntype

- If \newcolumntype does not work for HTML, add a simplified column type using \HTMLnewcolumntype.

font and alignment

- lwarp detects each of the following, and sets HTML CSS appropriately:

```
>{\centering\arraybackslash}
>{\raggedright\arraybackslash}
>{\raggedleft\arraybackslash}
>{\itshape}
>{\bfseries}
>{\bfseries\itshape}
```

These may be used with \newcolumntype, such as:

```
\newcolumntype{P}[1]{>{\centering\arraybackslash}p{#1}}
```

Rules:

vertical rules

- Doubled \hlines, \midrules, and vertical rules are supported.
- Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.

width and trim

- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

combined rules

- If you wish to use \cmidrule followed by \bottomrule, it may be necessary to use:

```
\cmidrule{2-3} \\[-2ex]
\bottomrule
```

The optional -2ex is ignored in HTML, but improves the visual formatting in the print output.

- For \toprule and \bottomrule, when combined with a \warpprint or \warphHTML environment, if a “Misplaced \noalign” error occurs, change

This & That \endhead

to

\warpprintonly{This & That \endhead}

and likewise with the other \end headings. Keep the \endfirsthead row unchanged, as it is still relevant to HTML output.

Other:

longtable headings

- tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.

- For longtable, place headings and footings which do not apply to HTML inside \warpprintonly{}.

- For S columns (from the siunitx package), while producing print output, anything non-numeric must be placed inside {} braces, including commands such as \multirow. While producing HTML output, though, anything placed inside braces is not seen by lwarp’s tabular handling algorithm. To resolve this problem, make a copy of the row, with one

⚠ S columns

⚠ \warpprintonly

⚠ Misplaced \noalign

version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

```
\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3
\\}
\warpHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\}
```

⚠ tabular inside a

- In L^AT_EX, a tabular may be placed inside a minipage, but in HTML a <table> may not be inside a . If this situation is detected, a warning is printed instructing the user to isolate the using \warpprintonly or the w arpprint environment.

for HTML output: 8818 \begin{warpHTML}

75.2 Temporary package-related macros

These macros are temporary placeholders for macros defined by various packages. If the relevant package is not loaded, these placeholders are used instead.

75.2.1 arydshln

Emulated by the original L^AT_EX non-dashed versions.

```
8819 \LetLtxMacro{\hdashline}{\hline}
8820 \LetLtxMacro{\cdashline}{\cline}
8821 \LetLtxMacro{\firstdashline}{\hline}
8822 \LetLtxMacro{\lastdashline}{\hline}
```

75.3 Token lookahead

Used by \LWR@futureonospacelet to look at the next token.

\LWR@mynexttoken

```
8823 \newcommand{\LWR@mynexttoken}{\relax}
```

\LWR@futureonospacelet \futurelet copies the next token then executes a function to analyze it.

\LWR@futureonospacelet does the same, but ignores intervening spaces and paragraphs.

Based on the booktabs style:

```
8824 \def{\LWR@futureonospacelet#1{\def{\LWR@cs{#1}}%}
8825 \afterassignment{\LWR@fnslone\let\nexttoken= } }
8826
8827 \def{\LWR@fnslone{\expandafter{\futurelet{\LWR@cs{\LWR@fnsltwo}}%
8828
8829 \def{\LWR@fnsltwo{%
8830 \expandafter{\ifx{\LWR@cs}{\sptoken}{%
8831 \let\next=\LWR@fnslthree{%
8832 \else{%
8833 \expandafter{\ifx{\LWR@cs}{\par}{%
```

```

8834           \let\next=\LWR@fnslthree%
8835           \else%
8836           \let\next=\nexttoken%
8837           \fi%
8838           \fi\next}
8839
8840 \def\LWR@fnslthree{\afterassignment\LWR@fnslone\let\next= }

```

\LWR@getmynexttoken Looks ahead and copies the next token into \LWR@mynexttoken.

```

8841 \newcommand*{\LWR@getmynexttoken}{%
8842   \LWR@traceinfo{\LWR@getmynexttoken}%

```

 Nothing must follow this next line:

```

8843   \LWR@futurenonspacelet\LWR@mynexttoken\LWR@tabledatacolumntag
8844 }

```

75.4 Tabular variables

In order to support nested tabulars, each of these is used locally. For local counters, etoolbox's \defcounter and l warp's new \defaddtocounter are used.

\LWR@startedrow (*bool*) True if should print a row tag before this column.

```

8845 \newbool{\LWR@startedrow}
8846 \boolfalse{\LWR@startedrow}

```

\LWR@tabularcelladded (*bool*) True if have added a data cell for this position.

```

8847 \newbool{\LWR@tabularcelladded}
8848 \boolfalse{\LWR@tabularcelladded}

```

\LWR@hlines (*Ctr*) Number of \hlines or \midrules above the next row.

```

8849 \newcounter{\LWR@hlines}

```

\LWR@hdashedlines (*Ctr*) Number of *arydshln* dashed lines above the next row.

```

8850 \newcounter{\LWR@hdashedlines}

```

\LWR@doingtbrule (*bool*) True if the next row will have a top/bottom rule above it.

```

8851 \newbool{\LWR@doingtbrule}
8852 \boolfalse{\LWR@doingtbrule}

```

\LWR@doingcmidrule (*bool*) True if the next row will have a cmidrule above it.

This is used by \LWR@tabularfinishrow to force a final empty row to create the border for the \cmidrule.

```

8853 \newbool{\LWR@doingcmidrule}
8854 \boolfalse{\LWR@doingcmidrule}

```

\LWR@tableparcell (*bool*) True if are handling a paragraph inside a table cell, so must close the paragraph

tag before moving on.

```
8855 \newbool{LWR@tableparcell}
```

LWR@skippingmrowcell (*bool*) True if are doing an empty \multirow cell, and thus there is no data tag to close.

```
8856 \newbool{LWR@skippingmrowcell}
```

LWR@skippingmcolrowcell True if are doing an empty \multicolumnrow cell, and thus there is no data tag (*bool*) to close, and do not print @ and ! columns.

```
8857 \newbool{LWR@skippingmcolrowcell}
```

LWR@usedmultirow (*bool*) Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

```
8858 \newbool{LWR@usedmultirow}
```

LWR@foundmrowcell (*bool*) Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

```
8859 \newbool{LWR@foundmrowcell}
```

LWR@skipatbang (*bool*) True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.

```
8860 \newbool{LWR@skipatbang}
```

LWR@emptyatbang (*bool*) True if finishing a row and should print empty @ or ! column table data cells.

```
8861 \newbool{LWR@emptyatbang}
```

LWR@intabularmetadata (*bool*) True if are in a tabular but not in a data cell. Used to prevent extra HTML breaks if not inside table data.

```
8862 \newbool{LWR@intabularmetadata}
```

```
8863 \boolfalse{LWR@intabularmetadata}
```

LWR@exittingtabular (*bool*) When \end is found, turns off the next opening data tag.

```
8864 \newbool{LWR@exittingtabular}
```

LWR@tabularmutemods (*bool*) Mutes HTML output for @, !, < and >.

This is used while printing the final row to generate \bottomrules.

```
8865 \newbool{LWR@tabularmutemods}
```

LWR@tabularfinalrow (*bool*) Used to set aria-hidden if adding a final row for the purpose of adding the bottom border.

```
8866 \newbool{LWR@tabularfinalrow}
```

LWR@validtablecol (*bool*) True if found a valid table column type.

```
8867 \newbool{LWR@validtablecol}
```

`LWR@opttablecol (bool)` True if found a table column optional argument.

```
8868 \newbool{LWR@opttablecol}
```

Used to add a style to a table data cell:

```
8869 \newbool{LWR@tdhavecellstyle}
```

`LWR@tabularDepth (Ctr)` Tracks whether & is being used inside a tabular.

```
8870 \newcounter{LWR@tabulardepth}
8871 \setcounter{LWR@tabulardepth}{0}
```

`LWR@tabularpardepth (Ctr)` Tracks whether should look ahead at the next token when encountering a \par while processing tabular contents.

When `LWR@tabularpardepth` is deeper than `LWR@tabulardepth` then `l warp` has started looking at the contents of the tabular, and thus any \pars encountered must be followed by another token lookahead.

```
8872 \newcounter{LWR@tabularpardepth}
8873 \setcounter{LWR@tabularpardepth}{0}
```

```
8874 \newcommand*{\LWR@colsresult}{}%temp storage for column format results
8875 \newcommand*{\LWR@pposition}{}%
8876 \newcommand*{\LWR@pleft}{}%
8877 \newcommand*{\LWR@pright}{}%
```

`LWR@tablecolspec` Holds the parsed column specification, of total width `LWR@tabletotalLaTeXcols`, not counting @ and ! columns.

Will contain a string such as llrrccpc, exactly one letter per L^AT_EX table column, without @, !, >, <, or the vertical bar.

`\LWR@strresult` Holds the result of Str functions.

```
8878 \providecommand*{\LWR@strresult}{}%
8879 \providecommand*{\LWR@strresulttwo}{}%
```

`\LWR@origcolspec` Holds the original column specs given to tabular.

```
8880 \newcommand*{\LWR@origcolspec}{}%
```

`LWR@tablecolspecwidth (Ctr)` Holds the number of tokens in the table columns specification.

This is includes one for each @, !, <, > column, and also one for each of the parameters of p, @, !, <, > columns, and three for each D column.

(This is not the total # of L^AT_EX columns in the table.)

```
8881 \newcounter{LWR@tablecolspecwidth}
```

`LWR@tablecolspecindex (Ctr)` While parsing the L^AT_EX table column specification, starts at 1 and is incremented per token of the specification.

```
8882 \newcounter{LWR@tablecolspecindex}
```

LWR@tableLaTeXcolindex (*Ctr*) While producing the table, resets to 1 at the start of the table and also at each end of line, and is incremented by 1 by each ampersand.

```
8883 \newcounter{LWR@tableLaTeXcolindex}
```

LWR@tabletotalLaTeXcols (*Ctr*) While parsing a table column specification, begins at 0 and increments by 1 per LATEX table column. Eventually holds the final number of LATEX table columns in each row, not counting @ and ! columns. (In HTML, @ and ! cells become their own columns, but are not included in LWR@tabletotalLaTeXcols.)

```
8884 \newcounter{LWR@tabletotalLaTeXcols}
```

LWR@tabletotalLaTeXcolsnext (*Ctr*) Holds the next LATEX table column index while parsing, equal to one more than LWR@tabletotalLaTeXcols.

```
8885 \newcounter{LWR@tabletotalLaTeXcolsnext}
```

LWR@colatspec A data array of specifications for @ columns. The leftmost's index is leftedge, the others are counter values. See section 42.

LWR@colbangspec A data array of specifications for ! columns. The leftmost's index is leftedge, the others are counter values. See section 42.

LWR@colbeforespec A data array of specifications for > columns.

LWR@colafterspec A data array of specifications for < columns.

LWR@colbarspec A data array of specifications for vertical rules.

LWR@coladdclass A data array of extra css class, as set by >.

LWR@cellcolordepth (*Ctr*) Counts how many cell color <div>s were added to the current tabular data cell.

```
8886 \newcounter{LWR@cellcolordepth}
```

75.4.1 Multicolumn variables

```
8887 \newcounter{LWR@tablemulticolwidth}
```

Indexes into the multicolumn specification:

```
8888 \newcounter{LWR@tablemulticolpos}
```

Remembers multicolumn vertical rules if found in the column spec.

```
8889 \newcounter{LWR@mcolvertbarsl}
8890 \newcounter{LWR@mcolvertbarsr}
8891 \newcounter{LWR@mcolvertbarsldash}
8892 \newcounter{LWR@mcolvertbarsrdash}
8893 \newbool{LWR@mcolvertbaronleft}
```

75.4.2 Longtable variables

LWR@starredlongtable (*bool*) Per the caption package, step the counter if longtable*.

```
8894 \newbool{LWR@starredlongtable}
8895 \boolefalse{LWR@starredlongtable}
```

75.4.3 Midrule variables

`\LWR@midrulecounter (Ctr)` Indexes across the `\LWR@midrules` and `\LWR@trim<l/r>rules` data arrays.

```
8896 \newcounter{\LWR@midrulecounter}
```

75.5 Handling &, @, !, and bar

For technical discussion regarding problems redefining `\&`, See:

<http://tex.stackexchange.com/questions/11638/where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860>

`\LWR@insertatbangcols`

```
8897 \newcommand*{\LWR@insertatbangcols}{%
8898     \ifbool{\LWR@skipatbang}{%
8899         {}%
8900         {}%
8901         \LWR@printatbang{at}{\arabic{\LWR@tableLaTeXcolindex}}%
8902         \LWR@printatbang{bang}{\arabic{\LWR@tableLaTeXcolindex}}%
8903     }%
8904 }
```

`\LWR@closetabledatacell` If `\LWR@skippingmrowcell` or `\LWR@skippingmcolrowcell` then there is no data tag to close. Otherwise, close any paragraphs, then close the data tag.

```
8905 \newcommand*{\LWR@closetabledatacell}{%
8906     \booltrue{\LWR@intabularmetadata}%
8907     \ifbool{\LWR@exittingtabular}{%
8908         {}%
8909         \LWR@stoppars%
8910     }%
8911     {%
8912         \ifboolexpr{\bool{\LWR@skippingmrowcell} \or \bool{\LWR@skippingmcolrowcell}}{%
8913             {}%
8914             \LWR@stoppars%
8915         }%
8916     }%
8917     {\LWR@insertatbangcols}%
8918 }%
8919 {%
8920     \unskip%
8921     \ifboolexpr{%
```

If not skipping a `\multicolumn` cell, insert the `@` and `!` columns after this non-existent column.

```
8915     \ifbool{\LWR@skippingmcolrowcell}{%
8916         {}%
8917         {\LWR@insertatbangcols}%
8918     }%
8919 {%
8920     \unskip%
8921     \ifboolexpr{%
```

Insert any `<` then any `@` and `!` column contents, unless muted for the `\bottomrule` or a `\multicolumn`:

```
8920     \unskip%
8921     \ifboolexpr{%
```

```

8922           bool{LWR@tabularmutemods} or
8923           bool{LWR@skipatbang} or
8924           bool{LWR@emptyatbang}
8925       }%
8926   {}%
8927   {}%
8928   \LWR@getexparray{LWR@colaftherspec}%
8929   {\arabic{LWR@tableLaTeXcolindex}}%
8930 }%

```

Close paragraphs:

```

8931   \LWR@stoppars%
8932   \boolfalse{LWR@tableparcell}%

```

Close the table data cell.

Close any color <div>s.

```

8933   \whileboolexpr{test {\ifnumcomp{\value{LWR@cellcolordepth}}{>}{0}}}{}{%
8934     \LWR@htmlltag{/div}\LWR@orignewline%
8935     \defaddtocounter{LWR@cellcolordepth}{-1}%
8936   }%

```

Skip the @ and ! cells if are closing a multicolumn cell.

```

8937   \leavevmode\unskip\LWR@htmlltag{/td}\LWR@orignewline%
8938   \global\booltrue{LWR@tabularcelladded}%
8939   \LWR@insertatbangcols%
8940   }% not skipping mrowcell
8941   }% not exiting tabular
8942   \boolfalse{LWR@skippingmrowcell}%
8943   \boolfalse{LWR@skippingmcolrowcell}%
8944   \boolfalse{LWR@skipatbang}%

```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```

8945   \def\LWR@cellHTMLcolor{}%
8946   \def\LWR@columnHTMLcolor{}%
8947   \defcounter{LWR@cellcolordepth}{0}%
8948 }

```

When not used inside a `tabular`, & performs its original function as recorded here (with catcode 4).

```

8949 \let\LWR@origampmacro&
8950 \end{warpHTML}

```

75.5.1 Handling &

for HTML output: 8951 `\begin{warpHTML}`

& Will behave depending on whether it is being used inside `tabular`.

& is redefined to test whether it is inside a tabular environment, in which case it performs special processing for HTML conversion. If not, it behaves normally.

```
8952 \newcommand*{\LWR@tabularampersand}{%
8953   \LWR@traceinfo{\LWR@tabularampersand}%
8954   \ifnumcomp{\value{\LWR@tabulardepth}}{>}{0}%
8955 }
```

If not skipping a multirow cell, close the current data cell.

```
8956   \unskip%
8957   \LWR@closetabledatacell%
```

Move to the next column.

```
8958   \defaddtocounter{\LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
8959   \global\boolfalse{\LWR@tabularcelladded}%
```

Look at the next token to decide multi or single column data tag.

```
8960   \LWR@getmynexttoken%
8961 }
```

If not inside a tabular, performs the original action:

```
8962   {%
8963     \LWR@origampmacro%
8964   }%
8965 }
```

& is left with its original catcode for now.

tikz package seems to require & be left alone until after tikz has been loaded. Also, cleveref uses the ampersand in one of its options.

& is made active inside a tabular.

& is left alone when in math alignments.

75.6 Filling an unfinished row

\LWR@tabularfinishrow Adds empty table cells if necessary to finish the row.

At the end of the table, if any bottom rules are requested then an empty row must be generated to form the borders which show the rules.

```
8966 \newcommand*{\LWR@tabularfinishrow}{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```
8967   \ifboolexpr{%
```

```

8968      not bool {LWR@exittingtabular} or%
8969      bool{LWR@doingtbrule} or%
8970      bool{LWR@doinggcmidrule} or%
8971      test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
8972      test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
8973      bool{LWR@startedrow}%
8974  }{%

```

Temporarily turn off LWR@exittingtabular so that table data tags will still be generated.

If generating a final row for the \bottomrule borders, turn off the @, !, <, and > column output:

```

8975  \ifbool{LWR@exittingtabular}{%
8976      \booltrue{LWR@tabularmutemods}%
8977  }{%
8978      \boolfalse{LWR@tabularmutemods}%
8979  }%

```

Locally reenable the table data tags until finished with the final row:

```
8980  \boolfalse{LWR@exittingtabular}%
```

Generate table data tags and ampersands until the right edge:

```

8981  \whileboolexpr{%
8982      test {
8983          \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
8984              {\value{LWR@tabletotalLaTeXcols}}
8985      } or %
8986      (%
8987          bool{LWR@intabularmetadata} and%
8988          not bool{LWR@tabularcelladded} and%
8989          test {
8990              \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}
8991                  {\value{LWR@tabletotalLaTeXcols}}
8992          }%
8993      )%
8994  }%
8995  {%
8996      \LWR@tabledatasinglecolumntag%

```

The following is essentially \LWR@tabularampersand with LWR@emptyatbang added to empty the following cells:

```

8997  \LWR@closetabledatagrid%
8998  \defaddtocounter{LWR@tableLaTeXcolindex}{1}%
8999  \global\boolfalse{LWR@tabularcelladded}%
9000  \booltrue{LWR@emptyatbang}%

```

Starts the next cell:

```

9001  \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
9002      {\value{LWR@tabletotalLaTeXcols}}%
9003      {\LWR@getmynexttoken}%
9004      {}%
9005  }%

```

Reenable the original `\LWR@exittingtabular` to close the entire table:

```

9006   \ifbool{\LWR@tabularmutemods}{%
9007     \booltrue{\LWR@exittingtabular}%
9008   }{%
9009     \boolfalse{\LWR@exittingtabular}%
9010   }%
9011   \boolfalse{\LWR@tabularmutemods}%

9012   \boolfalse{\LWR@emptyatbang}%
9013 }{}% ifboolexpr
9014 }
```

75.7 Handling \\

Inside tabular, `\\\` is redefined to `\LWR@tabularendofline`

Throws away options `\\\[dim]` or `*`

`\LWR@tabularendofline`

```
9015 \NewDocumentCommand{\LWR@tabularendofline}{s o}{%
```

Finish the row:

```

9016   \ifnumcomp{\value{\LWR@tableLaTeXcolindex}}{<}%
9017     {\value{\LWR@tabletotalLaTeXcols}}{%
9018       {\LWR@tabularfinishrow}%
9019       {\LWR@closetabledatacell}%
9020       {\LWR@htmltag{/tr}}{\LWR@orignewline}%
```

`xcolor` row color support:

```
9021   \@rowc@lors%
```

No longer inside a data cell:

```
9022   \booltrue{\LWR@intabularmetadata}%
```

Not yet started a table row:

```
9023   \boolfalse{\LWR@startedrow}%
```

Additional setup:

```

9024   \defcounter{\LWR@hlines}{0}%
9025   \defcounter{\LWR@hdashedlines}{0}%
9026   \boolfalse{\LWR@doingtbrule}%
9027   \boolfalse{\LWR@doingcmidrule}%
9028   \LWR@clearmidrules%
```

```
9029   \def\LWR@rowHTMLcolor{}
```

Start at first column:

```
9030   \defcounter{\LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
9031 \global\boolfalse{LWR@tabularcelladded}%
```

Allow TeX to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

```
9032 \LWR@stoppars%
9033 \LWR@forceemptyline%
```

Look at the next token to decide between single column data tag or a special case:

```
9034 \LWR@getmynexttoken%
9035 }
```

75.8 Looking ahead in the column specifications

```
\LWR@columnspeclookahead {\langle offset\rangle}
```

Looks offset tokens ahead in the column specification, setting \LWR@strresulttwo.

The w column alignment will be seen as a single unit such as {c}.

```
9036 \newcommand*{\LWR@columnspeclookahead}[1]{%
9037   \setcounter{LWR@tempcountone}{\value{LWR@tablecolspectindex}}%
9038   \addtocounter{LWR@tempcountone}{#1}%
9039   \fullexpandarg%
9040   \StrChar{\LWR@origcolspec}{\arabic{LWR@tempcountone}}[\LWR@strresulttwo]%
```

Get the contents of the first group in \LWR@strresulttwo:

```
9041 \exploregroups%
9042 \StrChar{\LWR@strresulttwo}{1}[\LWR@strresulttwo]%
9043 \noexploregroups%
9044 }
```

75.9 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```
9045 \newcommand*{\LWR@colparameter}{}%
```

```
\LWR@parseatcolumn {\langle this column type\rangle}
```

Handles @{text} columns.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

```
9046 \newcommand*{\LWR@parseatcolumn}[1]{%
```

Move to the next token after the '@':

```
9047 \LWR@traceinfo{at column}%
9048 \defaddtocounter{LWR@tablecolspectindex}{1}%
```

Read the next token into `\LWR@colparameter`, expanding once:

```
9049 \LWR@traceinfo{about to read the next token:}%
9050 \expandarg%
9051 \StrChar{\LWR@origcolspe}%
9052 {\arabic{\LWR@tablecolspeindex}}[\LWR@colparameter]%
9053 \fullexpandarg%
```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
9054 \LWR@traceinfo{have now read the next token}%
9055 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
9056 {%
9057   \LWR@traceinfo{at the left edge}%
9058   \LWR@setexpparray{\LWR@colatspec}%
9059   {\leftedge}%
9060   {\expandafter\@firstofone\LWR@colparameter}%
9061   \LWR@traceinfo{at the left edge: \%}
9062   \LWR@getexpparray{\LWR@colatspec}{\leftedge}%
9063 }%
9064 {%
9065   \LWR@traceinfo{not at the left edge}%
9066   \LWR@setexpparray{\LWR@colatspec}%
9067   {\arabic{\LWR@tabletotalLaTeXcols}}%
9068   {\expandafter\@firstofone\LWR@colparameter}%
9069   \LWR@traceinfo{at \arabic{\LWR@tabletotalLaTeXcols}}%
9070   : \% space
9071   \LWR@getexpparray{\LWR@colatspec}{\arabic{\LWR@tabletotalLaTeXcols}}%
9072 }%
9073 \let\LWR@colparameter\relax%
9074 \booltrue{\LWR@validtablecol}%
9075 }
```

`\LWR@parsebangcolumn {<this column type>}` Handles !{text} columns.

The argument is ignored, but provided for compatibility with `\LWR@parsenormalcolumn`.

```
9076 \newcommand*{\LWR@parsebangcolumn}[1]{%
```

Move to the next token after the '!':

```
9077 \LWR@traceinfo{bang column}%
9078 \defaddtocounter{\LWR@tablecolspeindex}{1}%
```

Read the next token into `\LWR@colparameter`, expanding once:

```
9079 \LWR@traceinfo{about to read the next token:}%
9080 \expandarg%
9081 \StrChar{\LWR@origcolspe}%
9082 {\arabic{\LWR@tablecolspeindex}}[\LWR@colparameter]%
9083 \fullexpandarg%
```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
9084 \LWR@traceinfo{have now read the next token}%
9085 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
9086 {%
9087   \LWR@traceinfo{at the left edge}%
```

```

9088      \LWR@setexpparray{\LWR@colbangspec}%
9089          {\leftedge}%
9090          {\expandafter\@firstofone\LWR@colparameter}%
9091      }%
9092      {%
9093          {not at the left edge:}%
9094          \LWR@traceinfo{not at the left edge}%
9095          \LWR@setexpparray{\LWR@colbangspec}%
9096              {\arabic{\LWR@tabletotalLaTeXcols}}%
9097              {\expandafter\@firstofone\LWR@colparameter}%
9098          \LWR@traceinfo{bang \arabic{\LWR@tabletotalLaTeXcols}: \LWR@colparameter!}%
9099      }%
9100      \let\LWR@colparameter\relax%
9101      \booltrue{\LWR@validtablecol}%
9101 }

```

\LWR@checkbeforeaddclass {*compared csname*} {*css class to add*}

```

9102 \newcommand*{\LWR@checkbeforeaddclass}[2]{%
9103     \ifcsstreq{\LWR@tempone}{#1}%
9104         {%
9105             \LWR@setexpparray{\LWR@coladdclass}%
9106                 {\arabic{\LWR@tabletotalLaTeXcolsnext}}%
9107                 { #2}%
9108         }%
9109     }%

```

\LWR@checkmathcolpar Error if using math in column parameters.

```

9110 \newcommand*{\LWR@checkmathcolpar}{%
9111     \IfSubStr{\detokenize\expandafter{\LWR@colparameter}}{\LWRdollar}%
9112         {%
9113             \PackageError{lwarp}{%
9114                 Lwarp does not support '$' in column specifiers.\MessageBreak
9115                 Specify '$' math for each cell in the column.\MessageBreak
9116                 Enter 'h' for more info%
9117             }%
9118         }%
9119         {%
9120             For example, replace '>${}c<${}' with 'c', and then\MessageBreak
9121                 use '$cell contents$' for each cell in the column.%%
9122         }%
9123     }%
9124 }

```

\LWR@parsebeforecolumn {*this column type*}

Handles >{*text*} columns.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

```
9125 \newcommand*{\LWR@parsebeforecolumn}[1]{%
```

Move to the next token after the '>':

```
9126     \defaddtocounter{\LWR@tablecolsindex}{1}%
```

Read the next token, expanding once into \LWR@colparameter:

```

9127      \expandarg%
9128      \StrChar{\LWR@origcolspec}%
9129          {\arabic{\LWR@tablecolspeccindex}}[\LWR@colparameter]%
9130      \fullexpandarg%

```

Error if using >{\$}, which is not supported by l warp.

```
9131      \LWR@checkmathcolpar%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

9132      \LWR@setexparray{\LWR@colbeforespec}%
9133          {\arabic{\LWR@tabletotalLaTeXcolsnext}}%
9134          {\expandafter\@firstofone\LWR@colparameter}%
9135 %
9136      \edef\tempone{\expandafter\@firstofone\LWR@colparameter}%

```

If detect >{\centering\arraybackslash} or related, add a css class.

```

9137      \LWR@checkbeforeaddclass{\LWR@detect@centeringarraybackslash}{tdcenter}
9138      \LWR@checkbeforeaddclass{\LWR@detect@raggedrightarraybackslash}{tdleft}
9139      \LWR@checkbeforeaddclass{\LWR@detect@raggedleftarraybackslash}{tdright}
9140      \LWR@checkbeforeaddclass{\LWR@detect@itshape}{tditshape}
9141      \LWR@checkbeforeaddclass{\LWR@detect@bfseries}{tdbfseries}
9142      \LWR@checkbeforeaddclass{\LWR@detect@bfit}{tdbfit}

9143      \let\colparameter\relax%
9144      \booltrue{\validtablecol}%
9145 }

```

\LWR@parseaftercolumn {\textit{this column type}}

Handles <{text} columns.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

```
9146 \newcommand*{\LWR@parseaftercolumn}[1]{%
```

Move to the next token after the '<':

```
9147      \defaddtocounter{\LWR@tablecolspeccindex}{1}%
```

Read the next token, expanding once into \LWR@colparameter:

```

9148      \expandarg%
9149      \StrChar{\LWR@origcolspec}%
9150          {\arabic{\LWR@tablecolspeccindex}}[\LWR@colparameter]%
9151      \fullexpandarg%

```

Error if using >{\$}, which is not supported by l warp.

```
9152      \LWR@checkmathcolpar%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

9153      \LWR@setexparray{\LWR@col afterspec}%
9154          {\arabic{\LWR@tabletotalLaTeXcols}}%

```

```

9155      {\expandafter\@firstofone\LWR@colparameter}%
9156      \let\LWR@colparameter\relax%
9157      \booltrue{\LWR@validtablecol}%
9158 }

\LWR@parsebarcolumn {\i<this column type>}
```

Handles vertical rules.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

```

9159 \newcommand*{\LWR@parsebarcolumn}[1]{%
9160     \LWR@traceinfo{\LWR@parsebarcolumn}%
}
```

Remember the bar at this position:

```

9161 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
9162 {%
9163     \% left edge of the table:
9164     \edef\LWR@tempone{\LWR@getexpparray{\LWR@colbarspec}{leftedge}}%
9165     \ifdefstring{\LWR@tempone}{tvertbarl}%
9166     {\LWR@setexpparray{\LWR@colbarspec}{leftedge}{tvertbarldouble}}%
9167     {\LWR@setexpparray{\LWR@colbarspec}{leftedge}{tvertbarl}}%
9168 }%
9169 {%
9170     \% not at the left edge:
9171     \edef\LWR@tempone{%
9172         \LWR@getexpparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalLaTeXcols}}%
9173     }%
9174     \ifdefstring{\LWR@tempone}{tvertbarr}%
9175     {%
9176         \LWR@setexpparray{\LWR@colbarspec}{%
9177             \arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdouble}}%
9178     {%
9179         \LWR@setexpparray{\LWR@colbarspec}{%
9180             \arabic{\LWR@tabletotalLaTeXcols}}{tvertbarr}}%
9181 }%
9182 \booltrue{\LWR@validtablecol}%
9183 }
```

```
\LWR@parsecoloncolumn {\i<this column type>}
```

Handles vertical rules.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

```

9184 \newcommand*{\LWR@parsecoloncolumn}[1]{%
9185     \LWR@traceinfo{\LWR@parsecoloncolumn}%
}
```

Remember the bar at this position:

```

9186 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
9187 {%
9188     \% left edge of the table:
9189     \edef\LWR@tempone{\LWR@getexpparray{\LWR@colbarspec}{leftedge}}%
9190     \ifdefstring{\LWR@tempone}{tvertbarldash}%
9191     {\LWR@setexpparray{\LWR@colbarspec}{leftedge}{tvertbarldoubledash}}%
9192     {\LWR@setexpparray{\LWR@colbarspec}{leftedge}{tvertbarldash}}%
9193 }
```

```

9193   {%
9194     not at the left edge:
9195     \edef\LWR@tempone{%
9196       \LWR@getexpparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalLaTeXcols}}%
9197     }%
9198     \ifdefstring{\LWR@tempone}{tvertbarrdash}%
9199       {\LWR@setexpparray{\LWR@colbarspec}{%
9200         \arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdoubledash}}%
9201       {\LWR@setexpparray{\LWR@colbarspec}{%
9202         \arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdash}}%
9203     }%
9204   }%
9205   \booltrue{\LWR@validtablecol}%
9206 }

```

\LWR@parsesemicoloncolumn {*this column type*}

Handles vertical rules.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

The arguments to the column type are absorbed by \LWR@columntype@<char>, defined by \LWR@modifycolumntype.

```
9205 \newcommand*{\LWR@parsesemicoloncolumn}[1]{%
```

Treat ; as a : column:

```

9206   \LWR@parsecoloncolumn{}%
9207 }
```

75.10 Parsing common column types

\LWR@parsenormalcolumn {*this column type*}

Add to the accumulated column specs, advance counters, and pre-clear another column of at, before, and after specs.

\newcolumntype definitons use \LWR@parsenormalcolumn, so an HTML and print version are given so that they may work inside a `teximage`.

The arguments to the column type are absorbed by \LWR@columntype@<char>, defined by \LWR@modifycolumntype.

```

9208 \newcommand*{\LWR@HTML@LWR@parsenormalcolumn}[1]{%
9209   \defaddtocounter{\LWR@tabletotalLaTeXcols}{1}%
9210   \defaddtocounter{\LWR@tabletotalLaTeXcolsnext}{1}%
9211   \LWR@setexpparray{\LWR@tablecolspec}{\arabic{\LWR@tabletotalLaTeXcols}}{#1}%
9212   \LWR@traceinfo{normal column \arabic{\LWR@tabletotalLaTeXcols}: #1}%
9213   \LWR@setexpparray{\LWR@colatspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
9214   \LWR@setexpparray{\LWR@colbangspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
9215   \LWR@setexpparray{\LWR@colbeforespec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
9216   \LWR@setexpparray{\LWR@colafterspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
9217   \LWR@setexpparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
9218   \LWR@setexpparray{\LWR@coladdclass}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
9219   \booltrue{\LWR@validtablecol}%

```

```

9220 }
9221
9222 \newcommand*{\LWR@print@LWR@parsenormalcolumn}[1]{}
9223
9224 \LWR@formatted{\LWR@parsenormalcolumn}

```

75.11 Parsing ‘w’ columns

W and w columns are handled via array with \HTMLnewcolumntype.

75.12 Parsing ‘*’ columns

\LWR@parsestarcolumn {*this column type*} Star columns should already have been expanded, so this should never be used.

The arguments to the column type are absorbed by \LWR@columntype@<char>, defined by \LWR@modifycolumntype.

The argument is ignored, but provided for compatibility with \LWR@parsenormalcolumn.

```
9225 \newcommand*{\LWR@parsestarcolumn}[1]{}
```

75.13 Expanding the star column specifications

\LWR@expandpreamble {*tabular preamble*}

From array \@mkpream.

The resulting expanded preamble is stored in \the\@temptokena. Assign as:

```

\edef\destination{\the\@temptokena}

9226 \newcommand*{\LWR@expandpreamble}[1]{%
9227     \edef\@tempa{\@temptokena={#1}}%
9228     \@tempa%
9229     \@tempswatrue%
9230     \@whilesw\if@tempswafalse\fi{%
9231         \@tempswafalse\the\NC@list%
9232     }%
9233 }
```

75.14 Parsing the column specifications

⚠ tabular baselines

HTML CSS cannot exactly match the L^AT_EX concept of a baseline for a table row. Table 13 shows the L^AT_EX results for various vertical-alignment choices, with the baseline of the first column drawn across all the columns for comparison. See the p column specification in table 14 for details.

Table 14 describes how each kind of column is converted to HTML.

Table 15 shows the various internal macros generated for each column type.

Table 13: Tabular baseline

l	p	m	b	r
			bot	
		mid	bot	
l	par	mid	bot	r
	par	mid		
	par			

Table 14: Tabular HTML column conversions

Each cell is given a css class of `td<columntype>`.

l, r, c: Converted to table cells without paragraph tags.

Uses css `vertical-align:middle` so that top or bottom-aligned cells may go above or below this cell.

p: Converted to table cells with paragraph tags. Ref: Table 13, L^AT_EX places the top line of a parbox aligned with the rest of the text line, so css `vertical-align:bottom` is used to have the HTML result appear with the paragraph extending below the L, R, C cells at the middle, if possible. This may be confusing as a P cell may not top-align with an L,R,C cell in the HTML conversion, especially in the presence of a B cell, and two P cells side-by-side will be aligned at the bottom instead of the top. Some adjustment of the css may be desired, changing `td.tdp`, `td.tdP`, `td.tdprule`, and `td.tdPrule` to `vertical-align: middle`. Another possibility is to change L,R,C, and P to `vertical-align: top` and not worry about the alignment of B and M cells or trying to approximate L^AT_EX baselines.

m: With paragraph tags, css `vertical-align:middle`.

b: With paragraph tags, css `vertical-align:top` so that the bottom of the text is closest to the middle of the text line.

w and W: Converted to l, c, or r. No paragraph tags.

P, M, B: Horizontally-centered versions.

S: Treated as 'c'. Ignores optional argument. From the `siunitx` package.

D: Treated as 'c'. From the `dcolumn` package.

@, !, >, <: One each, in that order.

|: Vertical rule.

Unknown: Converted to 'l'.

\newcolumntype: Expands to its replacement text.

\HTMLnewcolumntype: Provides simplified replacement text for HTML.

Table 15: HTML column type internal macros

<coltype>: The single-letter column type, such as c or X.

Created by \LWR@modifycolumntype: Used by l warp to add HTML functionality to each built-in column type.

\LWR@columntype@<coltype>: Handles tabular columns depending on the type. Calls \LWR@parsenormalcolumn or related, then advances \LWR@tablecolsindex.

\LWR@columntype@mctype@<coltype>: Generates the \multicolumn HTML cell css class. Calls \LWR@printmccoltype@normal or related.

\LWR@columntype@madata@<coltype>: Generates the \multicolumn HTML cell data. Calls \LWR@printmccoldata@normal or related.

Created by \newcolumntype: From array.

\NC@find@<coltype>: Internally used to parse the column specifier.

\NC@rewrite@<coltype>: Stores the print-mode replacement text.

Created by \HTMLnewcolumntype: From l warp.

\LWR@print@NC@rewrite@<coltype>: Copied from \NC@rewrite@<type>.

\LWR@HTML@NC@rewrite@<coltype>: Stores the HTML-mode replacement text.

\NC@rewrite@<coltype>: Redefined to use the print or HTML version.

```
\LWR@modifycolumntype {{1: column type letter}} {{2: number args to ignore}} {{3: csname of the cell action}} {{4: csname of the multicolumn print type action}} {{5: csname of the multicolumn print data action}}
```

Add HTML functionality to an existing print version column type.

```

9234 \newcommand*{\LWR@modifycolumntype}[5]{%
9235   \LWR@traceinfo{\LWR@modifycolumntype !#1#!#2#!#3#!#4#!#5!}%
9236   \LWR@traceinfo{\LWR@modifycolumntype #1}%
9237   \edef\@tempa{%
9238     \noexpand\csdef{\LWR@columntype@#1}{%
9239       \noexpand\@nameuse{#3}{#1}%
9240       \noexpand\def\@tempa{\LWR@tablecolsindex}{#2}%
9241     }%
9242     \noexpand\csdef{\LWR@columntype@mctype@#1}{%
9243       \noexpand\@nameuse{#4}{#1}%
9244     }%
9245     \noexpand\csdef{\LWR@columntype@madata@#1}{%
9246       \noexpand\@nameuse{#5}{#2}%
9247     }%
9248   }%
9249   \@tempa%
9250   \LWR@traceinfo{\LWR@modifycolumntype done}%
9251 }

9252 \LWR@modifycolumntype{l}{0}{\LWR@parsenormalcolumn}
9253   {\LWR@printmccoltype@normal}{\LWR@printmccoldata@normal}
9254

```

```

9255 \LWR@modifycolumntype{c}{0}{\LWR@parsenormalcolumn}
9256     {\LWR@printmccoltype@normal}{\LWR@printmccoldata@normal}
9257
9258 \LWR@modifycolumntype{r}{0}{\LWR@parsenormalcolumn}
9259     {\LWR@printmccoltype@normal}{\LWR@printmccoldata@normal}

9260 \LWR@modifycolumntype{@}{0}{\LWR@parseatcolumn}
9261     {\LWR@printmccoltype@ignore}{\LWR@printmccoldata@other}
9262
9263 \LWR@modifycolumntype{!}{0}{\LWR@parsebangcolumn}
9264     {\LWR@printmccoltype@ignore}{\LWR@printmccoldata@other}
9265
9266 \LWR@modifycolumntype{>}{0}{\LWR@parsebeforecolumn}
9267     {\LWR@printmccoltype@ignore}{\LWR@printmccoldata@other}
9268
9269 \LWR@modifycolumntype{<}{0}{\LWR@parseaftercolumn}
9270     {\LWR@printmccoltype@ignore}{\LWR@printmccoldata@other}
9271
9272 \LWR@modifycolumntype{|}{0}{\LWR@parsebarcolumn}
9273     {\LWR@printmccoltype@vertbar}{\LWR@printmccoldata@skip}
9274
9275 \LWR@modifycolumntype{:}{0}{\LWR@parsecoloncolumn}
9276     {\LWR@printmccoltype@colon}{\LWR@printmccoldata@skip}
9277
9278 \LWR@modifycolumntype{;}{1}{\LWR@parsingsemicoloncolumn}
9279     {\LWR@printmccoltype@semicolon}{\LWR@printmccoldata@skip}

9280 \LWR@modifycolumntype{p}{1}{\LWR@parsenormalcolumn}
9281     {\LWR@printmccoltype@normal}{\LWR@printmccoldata@paragraph}
9282
9283 \LWR@modifycolumntype{m}{1}{\LWR@parsenormalcolumn}
9284     {\LWR@printmccoltype@normal}{\LWR@printmccoldata@paragraph}
9285
9286 \LWR@modifycolumntype{b}{1}{\LWR@parsenormalcolumn}
9287     {\LWR@printmccoltype@normal}{\LWR@printmccoldata@paragraph}

```

A star column:

```

9288 \LWR@modifycolumntype{*}{2}{\LWR@parsestarcolumn}
9289     {\LWR@printmccoltype@ignore}{\LWR@printmccoldata@skip}

```

\HTMLnewcolumntype {*col type*} [*num args*] [*optional arg*] {*replacement text*}

A user-level macro to creates an HTML version of the replacement text for the column type.

This is the equivalent to:

```

\newcommand*{\LWR@HTML@NC@rewrite@<columntype>}[<num args>]
    {\NC@find <replacement text>}
    \LWR@formatted{NC@rewrite@<columntype>}

```

```

9290 \NewDocumentCommand{\HTMLnewcolumntype}{m O{0} o m}{%
9291     \IfValueTF{#3}
9292     {
9293         \expandafter\newcommand\expandafter*%
9294             \csname LWR@HTML@NC@rewrite@#1\endcsname[#2][#3]{\NC@find #4}%

```

```

9295      \LWR@formatted{NC@rewrite@#1}%
9296  }
9297  {
9298      \expandafter\newcommand\expandafter*%
9299      \csname LWR@HTML@NC@rewrite@#1\endcsname[\#2]{\NC@find #4}%
9300      \LWR@formatted{NC@rewrite@#1}%
9301  }
9302 }

9303 \end{warpHTML}

```

for PRINT output: 9304 \begin{warpprint}

```

9305 \NewDocumentCommand{\HTMLnewcolumntype}{m O{0} o m}{}
9306 \end{warpprint}

```

for HTML output: 9307 \begin{warpHTML}

```
\LWR@parsetablecols {\langle colspecs \rangle}
```

Scans the column specification left to right.

Builds \LWR@tablecolspec with the final specification, one L^AT_EX column per entry.
The final number of L^AT_EX columns in each row is stored in LWR@tabletotalLaTeXcols,
which is the number of & and \\ in each line, but which does not include @, !, <, >
specifications in the count.

```

9308 \newcommand*{\LWR@parsetablecols}[1]{%
9309   \LWR@traceinfo{\LWR@parsetablecols}%

```

Remember the original supplied column spec:

```
9310   \renewcommand*{\LWR@origcolspec}{#1}{}
```

Remove spaces:

```

9311   \expandarg%
9312   \StrSubstitute{\LWR@origcolspec}{ }{}[\LWR@origcolspec]%

```

Expand any star columns:

```

9313   \LWR@expandpreamble{\LWR@origcolspec}%
9314   \edef\LWR@origcolspec{\the\@temptokena}%

```

The parsed column spec data array, LWR@tablecolspec, will be overwritten with new values.

Total number of columns found so far. Also pre-initialize the first several columns of specs:

```

9315   \defcounter{LWR@tabletotalLaTeXcols}{0}%
9316   \defcounter{LWR@tabletotalLaTeXcolsnext}{1}%
9317   \LWR@setexparray{\LWR@colatspec}{leftedge}{}%
9318   \LWR@setexparray{\LWR@colatspec}{1}{}%
9319   \LWR@setexparray{\LWR@colatspec}{2}{}%

```

```

9320  \LWR@setexparray{\LWR@colatspec}{3}{ }%
9321  \LWR@setexparray{\LWR@colbangspec}{leftedge}{ }%
9322  \LWR@setexparray{\LWR@colbangspec}{1}{ }%
9323  \LWR@setexparray{\LWR@colbangspec}{2}{ }%
9324  \LWR@setexparray{\LWR@colbangspec}{3}{ }%
9325  \LWR@setexparray{\LWR@colbeforespec}{1}{ }%
9326  \LWR@setexparray{\LWR@colbeforespec}{2}{ }%
9327  \LWR@setexparray{\LWR@colbeforespec}{3}{ }%
9328  \LWR@setexparray{\LWR@colafterspec}{1}{ }%
9329  \LWR@setexparray{\LWR@colafterspec}{2}{ }%
9330  \LWR@setexparray{\LWR@colafterspec}{3}{ }%
9331  \LWR@setexparray{\LWR@colbarspec}{leftedge}{ }%
9332  \LWR@setexparray{\LWR@colbarspec}{1}{ }%
9333  \LWR@setexparray{\LWR@colbarspec}{2}{ }%
9334  \LWR@setexparray{\LWR@colbarspec}{3}{ }%
9335  \LWR@setexparray{\LWR@coladdclass}{1}{ }%
9336  \LWR@setexparray{\LWR@coladdclass}{2}{ }%
9337  \LWR@setexparray{\LWR@coladdclass}{3}{ }%

```

Starting at the first column specification:

```
9338  \defcounter{\LWR@tablecolspecindex}{1}{}
```

Place the colspecs string length into `\LWR@strresult`, and remember the number of characters in the column specification:

```

9339  \expandarg%
9340  \StrLen{\LWR@origcolspect}{\LWR@strresult}%
9341  \fullexpandarg%
9342  \LWR@traceinfo{original column spec length: \LWR@strresult}%
9343  \defcounter{\LWR@tablecolspecwidth}{\LWR@strresult}%

```

Haven't seen any optional arguments so far

```
9344  \boolefalse{\LWR@opttablecol}{}
```

Scan through the column specifications:

```

9345  \whileboolexpr{%
9346    not test{%
9347      \ifnumcomp{\value{\LWR@tablecolspecindex}}{>}{}
9348        {\value{\LWR@tablecolspecwidth}}%
9349    }%
9350  }%
9351  {%

```

Place the next single-character column type into `\LWR@strresult`:

```

9352  \expandarg%
9353  \StrChar{\LWR@origcolspect}{\arabic{\LWR@tablecolspecindex}}[\LWR@strresult]%
9354  \LWR@traceinfo{position \arabic{\LWR@tablecolspecindex}: \LWR@strresult}%
9355  \fullexpandarg%

```

Not yet found a valid column type:

```
9356  \boolefalse{\LWR@validtablecol}{}
```

Skip over any optional arguments, such as siunitx S column:

```
9357 \IfStrEq{\LWR@strresult}{[]}{\booltrue{\LWR@opttablecol}}{ }%
```

Throw away anything found inside the optional argument:

```
9358 \ifbool{\LWR@opttablecol}{ }% inside an optional argument
9359 { }% not an optional tabular argument
```

Not inside an optional argument, so consider the column type:

```
9361 \ifcsdef{\LWR@columntype@\LWR@strresult}{ }%
9362 { \csuse{\LWR@columntype@\LWR@strresult} }%
9363 { }%
```

If an unknown column type, use l:

```
9364 \ifbool{\LWR@validtablecol}{ }{ }%
9365 { \LWR@traceinfo{invalid column type: \LWR@strresult} }%
9366 { \LWR@parsonormalcolumn{l} }%
9367 { }%
9368 { }% not an optional column argument
```

If read the closing bracket, no longer inside the optional argument:

```
9369 \IfStrEq{\LWR@strresult}{[]}{\boolfalse{\LWR@opttablecol}}{ }%
```

Move to the next character:

```
9370 \defaddtocounter{\LWR@tablecolsindex}{1}%
9371 { }% whiledo
9372 }%
```

75.15 colortbl and xcolor tabular color support

These macros provide a minimal emulation of some `colortbl` macros which might appear between table cells. If `colortbl` is loaded, these macros will be replaced with functional versions.

For each of the HTML colors below, the text for the HTML color is set if requested, but the macro is empty if none has been set.

`\rownum` Reserve a counter register.

```
9373 \@ifundefined{\rownum}{\newcount\rownum}{ }%
```

`\@rowcolors` Emulated in case `xcolor` is not used.

```
9374 \newcommand*{\@rowcolors}{ }%
```

`\@rowc@lors` Emulated in case `xcolor` is not used.

```
9375 \newcommand*{\@rowc@lors}{ }%
```

\LWR@xcolorrowHTMLcolor Emulated xcolor row color.

```
9376 \newcommand*{\LWR@xcolorrowHTMLcolor}{}%
```

\LWR@columnHTMLcolor HTMLstyle code for the column color.

```
9377 \def\LWR@columnHTMLcolor{}%
```

\LWR@rowHTMLcolor HTMLstyle code for the row color.

```
9378 \def\LWR@rowHTMLcolor{}%
```

\LWR@cellHTMLcolor HTMLstyle code for the cell color.

```
9379 \def\LWR@cellHTMLcolor{}%
```

\LWR@ruleHTMLcolor HTMLstyle code for the rule color.

```
9380 \newcommand*{\LWR@ruleHTMLcolor}{}%
```

\rowcolor [*model*] {[*color*] [*left overhang*] [*right overhang*] Print version. The HTML version is in l warp-colortbl. Used before starting a tabular data cell, thus \LWR@getmynexttoken.

```
9381 \newcommand*{\rowcolor}{\LWR@getmynexttoken}%
```

\arrayrulecolor [*model*] {[*color*]}

\arrayrulecolornexttoken [*model*] {[*color*]}

Print versions for use outside and inside a tabular:

```
9382 \newcommand{\arrayrulecolor}[2][named]{}%
```

```
9383 \newcommand{\arrayrulecolornexttoken}[2][named]{\LWR@getmynexttoken}%
```

\doublerulesepcolor [*model*] {[*color*]}

\doublerulesepcolornexttoken [*model*] {[*color*]}

Print versions for use inside and outside a tabular:

```
9384 \newcommand{\doublerulesepcolor}[2][named]{}%
```

```
9385 \newcommand{\doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}%
```

75.16 Starting a new row

\LWR@maybenewtablerow If have not yet started a new table row, begin one now. Creates a new row tag, adding a class for hline or tbrule if necessary.

```
9386 \newcommand*{\LWR@maybenewtablerow}{}%
```

```
9387 {%
```

```

9388     \ifbool{LWR@startedrow}%
9389     {}% started the row
9390     {}% not started the row

```

Pre-compute the `aria-hidden` attribute, used to hide from screen readers the final row if it is only used to create the bottom border:

```

9391     \ifbool{LWR@tabularfinalrow}%
9392     {}%
9393     \renewcommand*\{\LWR@tempone}%
9394     { aria-hidden=\textquotedbl{}true\textquotedbl}%
9395     {}%
9396     {}%
9397     \renewcommand*\{\LWR@tempone}{}%
9398     {}%

```

Start a new row if doing `\hline`:

```

9399     \ifboolexpr{%
9400         test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
9401         test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}}%
9402     }%
9403     {}%
9404     \LWR@htmltag{%
9405         tr %
9406         class=\textquotedbl{}hline\textquotedbl%
9407         \LWR@tempone% aria-hidden
9408     }%
9409     \LWR@newline%

```

Remember that now have started the row, and create the row tag, with a class if necessary.

```

9410     \booltrue{LWR@startedrow}%
9411     \booltrue{LWR@intabularmetadata}%
9412     {}%

```

If not doing `\hline`, start a row if doing a top or bottom rule:

```

9413     {}% not doing hline
9414     \ifbool{LWR@doingtbrule}%
9415     {}%
9416     \ifdefvoid{\LWR@ruleHTMLcolor}{%
9417         \LWR@htmltag{%
9418             tr %
9419             class=\textquotedbl{}tbrule\textquotedbl%
9420             \LWR@tempone% aria-hidden
9421         }%
9422     }{%
9423         \LWR@htmltag{%
9424             tr class=\textquotedbl{}tbrule\textquotedbl\ % space
9425             style=\textquotedbl{}border-top: 1px solid % space
9426             \LWR@origpound\LWR@ruleHTMLcolor \textquotedbl{}%
9427             \LWR@tempone% aria-hidden
9428         }%
9429     }%
9430     \LWR@newline%

```

Remember that now have started the row, and create the row tag, with a class if necessary.

```
9431           \booltrue{LWR@startedrow}%
9432           \booltrue{LWR@intabularmetadata}%
9433       }%
9434   {%
```

If not the final row, start a new row:

```
9435           \ifbool{LWR@tabularfinalrow}%
9436           {}%
9437           {%
9438               \LWR@htmlltag{tr}\LWR@orignewline%
```

Remember that now have started the row, and create the row tag, with a class if necessary.

```
9439           \booltrue{LWR@startedrow}%
9440           \booltrue{LWR@intabularmetadata}%
9441       }%
9442       }%
9443   }% end of not doing hline
9444   }% end of not started the row
9445 }
```

75.17 Printing vertical bar tags

\LWR@printbartag {\langle index\rangle}

Adds to a tabular data cell an HTML class name for a left/right vertical bar.

```
9446 \newcommand*{\LWR@printbartag}[1]{%
9447     \LWR@traceinfo{\LWR@printbartag !#1!}%
9448     \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}{%
9449         {}% muting or empty
9450         {}% not muting
9451         \edef\tempone{\LWR@getexpparray{\LWR@colbarspec}{#1}}%
9452         \ifdefempty{\tempone}{}{\LWR@tempone}%
9453     }% not muting
9454     \LWR@traceinfo{\LWR@printbartag done}%
9455 }
```

75.18 Printing @ or ! tags

\LWR@printatbang {\langle at—or—bang\rangle} {\langle index\rangle}

```
9456 \newcommand*{\LWR@printatbang}[2]{%
```

Fetch the column at or bang spec:

```
9457     \xdef\atbangspec{\LWR@getexpparray{\LWR@col#1spec}{#2}}%
9458     \LWR@traceinfo{@bang: #2 !\LWR@atbangspec!}%
```

Only generate if is not empty;

```

9459     \ifdefempty{\LWR@atbangspec}%
9460     {}%
9461     {%
9462         \LWR@htmltag{%
9463             td class=\textquotedbl{}td#1%
9464             \LWR@subaddcmidruletrim{}{}%
9465             \LWR@printbartag{#2}%
9466             \textquotedbl{}%
9467             \LWR@tdstartstyles%
9468             \LWR@addcmidrulewidth%
9469             \LWR@addcdashline%
9470             \LWR@addtabularrulecolors%
9471             \LWR@tdendstyles%
9472         }%

```

Create an empty cell if muting for the \bottomrule:

```

9473     \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}{%
9474     {}%
9475     {\LWR@atbangspec}%
9476 }%
9477     \LWR@htmltag{/td}\LWR@orignewline%
9478     \global\booltrue{\LWR@tabularcelladded}%
9479     {%
9480 }

```

\LWR@addlefleftmostbartag

```

9481 \newcommand*{\LWR@addlefleftmostbartag}{%
9482     \ifnumcomp{\value{\LWR@tableLaTeXcolindex}}{=}{1}{%
9483         \LWR@printbartag{leftedge}%
9484     }%
9485 }

```

\LWR@tabularleftedge

```

9486 \newcommand*{\LWR@tabularleftedge}{%
9487     \ifnumcomp{\value{\LWR@tableLaTeXcolindex}}{=}{1}{%
9488         {%
9489             \LWR@printatbang{at}{leftedge}%
9490             \LWR@printatbang{bang}{leftedge}%
9491         }%
9492         {%
9493             {%
9494             }%
9495         }%
9496     }%
9497 }

```

75.19 Cell opening tag

\LWR@thiscolspe Temporary storage.

```
9494 \newcommand*{\LWR@thiscolspe}{}
```

\LWR@tabledatasinglecolumntag Print a table data opening tag with style for alignment and color.

```

9495 \newcommand*{\LWR@tabledatasinglecolumntag}{%
9496 {%
9497     \LWR@traceinfo{\LWR@tabledatasinglecolumntag}{%
9498     \LWR@maybenewtablerow}

```

Don't start a new paragraph tag if have already started one, or have found the end of the tabular, or if are inside a `\multirow`:

```

9499     \ifboolexpr{%
9500         bool{\LWR@intabularmetadata}%
9501         and not bool{\LWR@exittingtabular}%
9502         and not bool {\LWR@in@multirow@par}%
9503     }%
9504     {% making a tabular data cell

```

Print the @ and ! contents before first column:

```
9505             \LWR@tabularleftedge%
```

Fetch the current column's alignment character into `\LWR@strresult`:

```

9506             \xdef\LWR@strresult{%
9507                 \LWR@getexpparray{\LWR@tablecols}{\arabic{\LWR@tableLaTeXcolindex}}%
9508             }%

```

Print the start of a new table data cell:

```

9509             \LWR@traceinfo{\LWR@tabledatasinglecolumntag: about to print td tag}{%
9510                 \LWR@htmltag{%
9511                     td class=\textquotedbl{}td%

```

Append this column's spec:

```
9512             \LWR@strresult%
```

If this column has a cmidrule, add “rule” to the end of the HTML class tag. Also add vertical bar tags.

```

9513             \LWR@addcmidruletrim{%
9514                 \LWR@addleftmostbartag{%
9515                     \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%

```

Add any tabular > column text alignment or font control css:

```

9516             \LWR@getexpparray{\LWR@coladdclass}{%
9517                 {\arabic{\LWR@tableLaTeXcolindex}}%

```

Close the class description:

```
9518             \textquotedbl{}%
```

Add styles for rules, alignment:

```

9519             \LWR@tdstartstyles{%
9520                 \LWR@addcmidrulewidth{%
9521                     \LWR@addcdashline{%

```

```

9522          \xdef\LWR@thiscolspec{%
9523              \LWR@getexpparray{\LWR@tablecolspec}{%
9524                  {\arabic{\LWR@tableLaTeXcolindex}}}{%
9525              }%
9526          \LWR@addformatwpaignment{\LWR@thiscolspec}%

```

Add styles for cell and rule colors:

```

9527          \LWR@addtabulararrowcolor%
9528          \LWR@addtabularrulecolors%

9529          \LWR@tdendstyles%
9530      }% HTML td
9531      \LWR@traceinfo{\LWR@tabledatasinglecolumntag: done printing td tag}%

```

If this is a p, m, b, or X column, allow paragraphs:

```

9532          \ifboolexpr{%
9533              test{ \ifdefstring{\LWR@strresult}{p} } or
9534              test{ \ifdefstring{\LWR@strresult}{m} } or
9535              test{ \ifdefstring{\LWR@strresult}{b} }%
9536          }%
9537          {% allow pars
9538          \LWR@traceinfo{\LWR@tabledatasinglecolumntag: about to LWR@startpars}%
9539          \booltrue{\LWR@tableparcell}%
9540          \LWR@startpars%
9541          \LWR@traceinfo{\LWR@tabledatasinglecolumntag: done with LWR@startpars}%
9542          }% allow pars
9543          {}% no pars

```

Print the > contents unless muted for the \bottomrule:

```

9544          \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}{%
9545          }%
9546          {}%
9547          \LWR@getexpparray{\LWR@colbeforespec}{\arabic{\LWR@tableLaTeXcolindex}}{%
9548          }%
9549          \boolfalse{\LWR@intabularmetadata}%
9550      }% making a tabular data cell
9551      {}% not making a tabular data cell
9552      \LWR@traceinfo{\LWR@tabledatasinglecolumntag: done}%
9553 }%

```

75.20 Midrules

- LWR@midrules LWR@midrules is a data array (section 42) of columns each containing a non-zero width if a midrule should be created for this column.
- LWR@trimlrules LWR@trimlrules is a data array (section 42) of columns containing l if a midrule should be left trimmed for each column.
- LWR@trimrrules LWR@trimrrules is a data array (section 42) of columns containing r if a midrule should be right trimmed for each column.
- LWR@cdashlines LWR@cdashlines is a data array (section 42) of columns each containing a Y if an arydshln package "cdashed line" should be created for this column.

\LWR@heavyrulewidth (*Len*) The default width of the rule.

```
9554 \newlength{\LWR@heavyrulewidth}
9555 \setlength{\LWR@heavyrulewidth}{.08em}
```

\LWR@lightrulewidth (*Len*) The default width of the rule.

```
9556 \newlength{\LWR@lightrulewidth}
9557 \setlength{\LWR@lightrulewidth}{.05em}
```

\LWR@cmidrulewidth (*Len*) The default width of the rule.

```
9558 \newlength{\LWR@cmidrulewidth}
9559 \setlength{\LWR@cmidrulewidth}{.03em}
```

\LWR@thiscmidrulewidth (*Len*) The width of the next rule, defaulting to \LWR@cmidrulewidth.

If not \LWR@cmidrulewidth, a style will be used to generate the custom width.

Assigned from the LWR@midrules array.

```
9560 \newlength{\LWR@thiscmidrulewidth}
9561 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}
```

\LWR@clearmidrules Start new midrules. Called at beginning of tabular and also at \\.

Clears all LWR@midrules and LWR@trimrules markers for this line.

```
9562 \newcommand*{\LWR@clearmidrules}
9563 {%
9564     \defcounter{LWR@midrulecounter}{1}%
9565     \whileboolexpr{%
9566         not test{%
9567             \ifnumcomp{\value{LWR@midrulecounter}}{>}%
9568                 {\value{LWR@tabletotalTeXcols}}%
9569         }%
9570     }%
9571     {%
9572         \LWR@setexpparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{0pt}%
9573         \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
9574         \LWR@setexpparray{LWR@trimlrules}{\arabic{LWR@midrulecounter}}{}%
9575         \LWR@setexpparray{LWR@trimrrules}{\arabic{LWR@midrulecounter}}{}%
9576         \LWR@setexpparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{N}%
9577         \defaddtocounter{LWR@midrulecounter}{1}%
9578     }%
9579 }
```

\LWR@subcmidrule {*width*} {*trim*} {*leftcolumn*} {*rightcolumn*}

Marks LWR@midrules data array elements to be non-zero widths from left to right columns. Also marks trimming for the L and/or R columns.

LWR@doingcmidrule is set to force an empty row at the end of the tabular to create the rule.

```
9580 \newcommand*{\LWR@subcmidrule}[4]{%
9581     \defcounter{LWR@midrulecounter}{#3}%
9582     \whileboolexpr{%
```

```

9583      not test {%
9584          \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
9585      }%
9586  }%
9587  {%
9588      \LWR@setexpparray{\LWR@midrules}{\arabic{\LWR@midrulecounter}}{#1}%
9589      \defaddtocounter{\LWR@midrulecounter}{1}%
9590  }% whiledo
9591  \IfSubStr{#2}{l}{\LWR@setexpparray{\LWR@trimlrules}{#3}{l}}{}%
9592  \IfSubStr{#2}{r}{\LWR@setexpparray{\LWR@trimrrules}{#4}{r}}{}%
9593  \booltrue{\LWR@doingcmidrule}%
9594 }

```

`\LWR@docmidrule [width] (trim) {leftcolumn-rightcolumn}`

Marks `LWR@midrules` array elements to be a non-zero width from left to right columns. Also marks trimming for the L and/or R columns.

```

9595 \NewDocumentCommand{\LWR@docmidrule}{%
9596     O{\LWR@cmidrulewidth} D{} {} >{\SplitArgument{1}{-}m}%
9597     {\LWR@subcmidrule{#1}{#2}{#3}}

```

`\LWR@subcdashline {leftcolumn} {rightcolumn}`

Marks `LWR@cdashlines` data array elements to be Y from left to right columns.

`LWR@doingcmidrule` is set to force an empty row at the end of the tabular to create the rule.

```

9598 \newcommand*{\LWR@subcdashline}[2]{%
9599     \defcounter{\LWR@midrulecounter}{#1}%
9600     \whileboolexpr{%
9601         not test {%
9602             \ifnumcomp{\value{\LWR@midrulecounter}}{>}{#2}%
9603         }%
9604     }%
9605     {%
9606         \LWR@setexpparray{\LWR@cdashlines}{\arabic{\LWR@midrulecounter}}{Y}%
9607         \defaddtocounter{\LWR@midrulecounter}{1}%
9608     }% whiledo
9609     \booltrue{\LWR@doingcmidrule}%
9610 }

```

`\LWR@docdashline {leftcolumn-rightcolumn}`

Marks `LWR@cdashlines` data array elements to be Y from left to right columns.

```

9611 \NewDocumentCommand{\LWR@docdashline}{>{\SplitArgument{1}{-}m}}{%
9612 {%
9613     \LWR@subcdashline#1%
9614 }

```

`\LWR@tdstartstyles` Begins possibly adding a table data cell style.

```
9615 \newcommand*{\LWR@tdstartstyles}{\boolfalse{\LWR@tdhavecellstyle}}
```

\LWR@tdaddstyle Starts adding a table data cell style.

```

9616 \newcommand*{\LWR@tdaddstyle}{%
9617     \ifbool{LWR@tdhavecellstyle}{%
9618         {} ; }%
9619         { style=\textquotedbl}%
9620     \booltrue{LWR@tdhavecellstyle}%
9621 }
```

\LWR@tdendstyles Finishes possibly adding a table data cell style. Prints the closing quote.

```

9622 \newcommand*{\LWR@tdendstyles}{%
9623     \ifbool{LWR@tdhavecellstyle}{%
9624         {} %
9625             \textquotedbl%
9626             \boolfalse{LWR@tdhavecellstyle}%
9627         }{}%
9628 }
```

\LWR@subaddcmidruletrim {\(lefttrim\)} {\(righttrim\)} Adds a \cmidrule with optional trim.

```

9629 \newcommand*{\LWR@subaddcmidruletrim}[2]{%
9630     \setlength{\LWR@templengthone}{%
9631         \LWR@getexpparray{LWR@midrules}{\arabic{LWR@tableLaTeXcolindex}}%
9632     }%
9633     \ifdimcomp{\LWR@templengthone}{>}{0pt}{%
9634         {}%
```

Print the class with left and right trim letters appended:

```
9635     \space tdrule#1#2%
```

Remember the width of the rule:

```

9636     \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
9637     }%
9638     {}%
9639     \setlength{\LWR@thiscmidrulewidth}{0pt}%
9640     }%
9641 }
```

\LWR@addcmidruletrim Adds left or right trim to a \cmidrule.

```

9642 \newcommand*{\LWR@addcmidruletrim}{%
9643     \LWR@subaddcmidruletrim{%
9644         {\LWR@getexpparray{LWR@trimlrules}{\arabic{LWR@tableLaTeXcolindex}}}%
9645         {\LWR@getexpparray{LWR@trimrrules}{\arabic{LWR@tableLaTeXcolindex}}}%
9646 }}
```

\LWR@addrulewidth {\(thiswidth\)} {\(defaultwidth\)}

If not default width, add a custom style with width and color depending on thiswidth.

Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

```
9647 \newcommand{\LWR@addrulewidth}[2]{%
```

Only add a custom width if `thiswidth` is different than the `defaultwidth`, or if a color is being used:

```

9648      \ifboolexpr{%
9649          test{\ifdimcomp{#1}{=}{0pt}} or
9650          (
9651              ( test{\ifdimcomp{#1}{=}{#2}} and not bool{FormatWP} )
9652                  and ( test {\ifdefvoid{\LWR@ruleHTMLcolor}} )
9653          )
9654      }%
9655      {}% default width and color
9656      {}% custom width and/or color

```

Ensure that the width is wide enough to display in the browser:

```
9657      \LWR@forceminwidth{#1}%
```

Begin adding another style:

```
9658      \LWR@tdaddstyle%
```

The style itself:

```
9659      border-top:\LWR@printlength{\LWR@atleastonept} solid % space
```

If default gray, the darkness of the color depends on the thickness of the rule:

```

9660      \ifdefvoid{\LWR@ruleHTMLcolor}{%
9661          \ifdimcomp{#1}{<}{\LWR@lightrulewidth}{%
9662              {\LWR@origpound{A0A0A0}}%
9663              {% lightrule or heaver
9664                  \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}{%
9665                      {\LWR@origpound{808080}}%
9666                      {black}}%
9667                  {% lightrule or heavier
9668          }{%
9669              \LWR@origpound{\LWR@ruleHTMLcolor}}%
9670          }%
9671      }% custom width and/or color
9672 }

```

`\LWR@addcmidrulewidth` Adds a style for the rule width.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

9673 \newcommand{\LWR@addcmidrulewidth}{%
9674     \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
9675 }

```

`\LWR@addcdashline` Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

9676 \newcommand{\LWR@addcdashline}{%
9677     \edef\LWR@tempone{%
9678         \LWR@getexpparray{\LWR@cdashlines}{\arabic{\LWR@tableLaTeXcolindex}}%
9679     }%
9680     \ifdefstring{\LWR@tempone}{Y}{%
9681         \LWR@tdaddstyle%
}

```

```

9682      border-top: 1pt dashed %
9683      \ifdefvoid{\LWR@ruleHTMLcolor}{%
9684          {black}%
9685          {\LWR@origpound\LWR@ruleHTMLcolor}%
9686      }{}%
9687 }

\LWR@WPcell {\text-align} {\vertical-align}

9688 \newcommand*{\LWR@WPcell}[2]{%
9689     \LWR@tdaddstyle%
9690     \LWR@print@mbox{text-align:#1}; \LWR@print@mbox{vertical-align:#2}%
9691 }

```

\LWR@addformatwpalignment {\colspec}

If FormatWP, adds a style for the alignment.

Must be placed between \LWR@tdstartstyles and \LWR@tdendstyles.

```

9692 \newcommand*{\LWR@addformatwpalignment}[1]{%
9693     \ifbool{FormatWP}{%
9694         \IfSubStr{#1}{l}{\LWR@WPcell{left}{middle}}{}%
9695         \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{}%
9696         \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{}%
9697         \IfSubStr{#1}{p}{\LWR@WPcell{left}{bottom}}{}%
9698         \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{}%
9699         \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{}%
9700     }{}%
9701 }

```

75.21 Cell colors

\LWR@addtabularrowcolor Adds a cell's row color style, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```

9702 \newcommand*{\LWR@addtabularrowcolor}{%
9703     \ifbool{\LWR@tabularmutemods}{}
9704         \ifdefvoid{\LWR@rowHTMLcolor}{%
9705             \ifdefvoid{\LWR@xcolorrowHTMLcolor}{%
9706                 \% xcolor row color
9707                 \LWR@tdaddstyle%
9708                 background:\LWR@origpound\LWR@xcolorrowHTMLcolor%
9709             }%
9710         }%
9711         \% explicit row color
9712         \LWR@tdaddstyle%
9713         background:\LWR@origpound\LWR@rowHTMLcolor%
9714     }%
9715 }%
9716 }

```

\LWR@addtabularhrulecolor Adds a cell's horizontal rule color style, if needed.

```
9717 \newcommand*{\LWR@addtabularhrulecolor}{%
```

If either form of horizontal rule is requested:

```
9718     \ifboolexpr{%
9719         test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
9720         test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
9721         bool{LWR@doingtbrule}%
9722     }{%
```

If there is a no custom color:

```
9723     \ifdefvoid{\LWR@ruleHTMLcolor}{%
9724     }{%
9725         \ifnumcomp{\value{LWR@hlines}}{>}{1}{%
9726             \LWR@tdaddstyle{%
9727                 border-top: 4px double%
9728             }{%
9729             \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}{%
9730                 \LWR@tdaddstyle{%
9731                     border-top: 2px dashed%
9732                 }{%
9733                 \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}{%
9734                     \LWR@tdaddstyle{%
9735                         border-top: 1px dashed%
9736                     }{%
9737                     }{%
9738                     }{%
9739                     }{%
9740                 }{%
9741             }{%
9742             \ifnumcomp{\value{LWR@hlines}}{>}{1}{%
9743                 \LWR@tdaddstyle{%
9744                     border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
9745                 }{%
9746                 \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}{%
9747                     \LWR@tdaddstyle{%
9748                         border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
9749                     }{%
9750                     \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}{%
9751                         \LWR@tdaddstyle{%
9752                             border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
9753                         }{%
9754                         \LWR@tdaddstyle{%
9755                             border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
9756                         }{%
9757                         \LWR@tdaddstyle{%
9758                             border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
9759                         }{%
9760                         }{%
9761                     }{%
9762                 }{%
9763             }{%
9764         }{%
9765     }{%
9766 }{%
9767 }{%
9768 }
```

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

```
9740     }{%
9741 }
```

If there is a custom color:

```
9741     }{%
9742     \ifnumcomp{\value{LWR@hlines}}{>}{1}{%
9743     }{%
9744         \LWR@tdaddstyle{%
9745             border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
9746         }{%
9747         \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}{%
9748             \LWR@tdaddstyle{%
9749                 border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
9750             }{%
9751             \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}{%
9752                 \LWR@tdaddstyle{%
9753                     border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
9754                 }{%
9755                 \LWR@tdaddstyle{%
9756                     border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
9757                 }{%
9758                 \LWR@tdaddstyle{%
9759                     border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
9760                 }{%
9761                 }{%
9762             }{%
9763         }{%
9764     }{%
9765 }
```

\LWR@addtabularrulecolors Adds a cell's rule color styles, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```
9763 \newcommand*\LWR@addtabularrulecolors}{%
```

Custom horizontal rule color:

```
9764 \LWR@addtabularhrulecolor%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
9765 \ifbool{\LWR@tabularmutemods}{}{%
```

If at the leftmost cell, possibly add a leftmost vertical rule:

```
9766 \ifnumequal{\value{\LWR@tableTeXcolindex}}{1}{%
```

Fetch the left edge's vertical bar specification:

```
9767 \edef\LWR@tempone{\LWR@getexpparray{\LWR@colbarspec}{leftedge}}%
```

Add a custom style if a vertical bar was requested:

```
9768 \ifdefstring{\LWR@tempone}{tvertbarl}{%
9769   \LWR@tdaddstyle%
9770   border-left: 1px solid % space
9771   \LWR@vertruleHTMLcolor%
9772 }{%
9773 \ifdefstring{\LWR@tempone}{tvertbarldouble}{%
9774   \LWR@tdaddstyle%
9775   border-left: 4px double % space
9776   \LWR@vertruleHTMLcolor%
9777 }{%
9778 \ifdefstring{\LWR@tempone}{tvertbarldash}{%
9779   \LWR@tdaddstyle%
9780   border-left: 1px dashed % space
9781   \LWR@vertruleHTMLcolor%
9782 }{%
9783 \ifdefstring{\LWR@tempone}{tvertbarldoubledash}{%
9784   \LWR@tdaddstyle%
9785   border-left: 2px dashed % space
9786   \LWR@vertruleHTMLcolor%
9787 }{%
9788 }}
```

Possibly add a right vertical rule for this cell:

```
9789 \edef\LWR@tempone{%
9790   \LWR@getexpparray{\LWR@colbarspec}{\arabic{\LWR@tableTeXcolindex}}%
9791 }%
9792 \ifdefstring{\LWR@tempone}{tvertbarr}{%
```

Add a custom style if a vertical bar was requested:

```
9793 \LWR@tdaddstyle%
9794 border-right: 1px solid \LWR@vertruleHTMLcolor%
9795 }{%
9796 \ifdefstring{\LWR@tempone}{tvertbarrdouble}{%
9797   \LWR@tdaddstyle%
```

```

9798         border-right: 4px double \LWR@vertruleHTMLcolor%
9799     }{%
9800     \ifdefstring{\LWR@tempone}{tvertbarrdash}{%
9801         \LWR@tdaddstyle%
9802         border-right: 1px dashed \LWR@vertruleHTMLcolor%
9803     }{%
9804     \ifdefstring{\LWR@tempone}{tvertbarrdashedash}{%
9805         \LWR@tdaddstyle%
9806         border-right: 2px dashed \LWR@vertruleHTMLcolor%
9807     }{%
9808 }%
9809 }

\LWR@subaddtabularcellcolor {\langle html color\rangle}

9810 \newcommand*{\LWR@subaddtabularcellcolor}[1]{%
9811     \LWR@htmlltag{div class=\textquotedbl{}cellcolor\textquotedbl\ % space
9812         style=\textquotedbl{}%
9813         background:\LWR@origpound{}{}#1 %
9814         \textquotedbl\ %
9815     }% space
9816     \defaddtocounter{\LWR@cellcolordepth}{1}%
9817 }

```

\LWR@addtabularcellcolor Adds a cell color style, if needed.

```

9818 \newcommand*{\LWR@addtabularcellcolor}{%
9819     \ifdefvoid{\LWR@cellHTMLcolor}{%
9820     }{%
9821         \ifdefvoid{\LWR@rowHTMLcolor}{%
9822             \ifdefvoid{\LWR@xcolorrowHTMLcolor}{%
9823                 \ifdefvoid{\LWR@columnHTMLcolor}{%
9824                     \LWR@subaddtabularcellcolor{\LWR@columnHTMLcolor}%
9825                 }%
9826                 \LWR@subaddtabularcellcolor{\LWR@xcolorrowHTMLcolor}%
9827             }%
9828             \LWR@subaddtabularcellcolor{\LWR@rowHTMLcolor}%
9829         }%
9830         \LWR@subaddtabularcellcolor{\LWR@cellHTMLcolor}%
9831     }%
9832 }%
9833 \LWR@subaddtabularcellcolor{\LWR@cellHTMLcolor}%
9834 }

```

75.22 Multicolumns

75.22.1 Parsing multicolumns

\LWR@printmccoltype@normal {\langle col type\rangle}

Prints the column type, and remembers that any vertical bars are no longer on the left edge.

```

9835 \newcommand*{\LWR@printmccoltype@normal}[1]{%
9836     #1%
9837     \boolefalse{\LWR@mcolvertbaronleft}%
9838 }

```

```
\LWR@printmccoltype@ignore {\langle col type \rangle}
```

This type does not print a multi-column data cell.

```
9839 \newcommand*{\LWR@printmccoltype@ignore}[1]{}
```

```
\LWR@printmccoltype@vertbar {\langle col type \rangle}
```

Adds a left or right vertical bar.

```
9840 \newcommand*{\LWR@printmccoltype@vertbar}[1]{%
9841     \ifbool{LWR@mcolvertbaronleft}{%
9842         {\defaddtocounter{LWR@mcolvertbarsl}{1}}% left edge
9843         {\defaddtocounter{LWR@mcolvertbarsr}{1}}% not left edge
9844     }}
```

```
\LWR@printmccoltype@colon {\langle col type \rangle}
```

Adds a left or right vertical bar.

```
9845 \newcommand*{\LWR@printmccoltype@colon}[1]{%
9846     \ifbool{LWR@mcolvertbaronleft}{%
9847         {\defaddtocounter{LWR@mcolvertbarsldash}{1}}% left edge
9848         {\defaddtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
9849     }}
```

```
\LWR@printmccoltype@semicolon {\langle col type \rangle}
```

Adds a left or right vertical bar.

```
9850 \let\lwr@printmccoltype@semicolon\lwr@printmccoltype@colon
```

\LWR@printmccoltype {\langle colspec \rangle} Print any valid column type found. Does not print @, !, >, or < columns or their associated tokens.

This is printed as part of the table data tag's class.

\LWR@columntype@mctype@<type> is defined by \LWR@modifycolumntype.

```
9851 \newcommand*{\LWR@printmccoltype}[1]{%
9852     \LWR@traceinfo{lwr@printmccoltype -#1-}}
```

Get one token of the column spec:

```
9853     \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]
```

Detokenize to avoid problems with special characters:

```
9854     \edef\lwr@strresult{\detokenize\expandafter{\LWR@strresult}}
```

Add to the HTML tag depending on which column type is found:

```
9855     \ifcsdef{LWR@columntype@mctype@\LWR@strresult}{%
9856         {\csuse{LWR@columntype@mctype@\LWR@strresult}}{%
9857             {\boolfalse{LWR@mcolvertbaronleft}}{%
9858                 \LWR@traceinfo{lwr@printmccoltype done}}{%
9859             }}}{}}
```

\LWR@printmccoldata@other {*num args to skip*} {*entire colspec*}

For @, !, >, <, print the next token without paragraph tags:

```
9860 \newcommand*{\LWR@printmccoldata@other}[2]{%
9861     \defaddtocounter{\LWR@tablemulticolspos}{1}%
9862     \StrChar{#2}{\arabic{\LWR@tablemulticolspos}}[\LWR@strresult]%
9863     \LWR@strresult%
```

A valid column data type was found:

```
9864     \booltrue{\LWR@validtablecol}%
9865 }
```

\LWR@printmccoldata@skip {*num args to skip*} {*entire colspec*}

Nothing to print for this column type.

```
9866 \newcommand*{\LWR@printmccoldata@skip}[2]{%
9867     \defaddtocounter{\LWR@tablemulticolspos}{#1}%
```

A valid column data type was found:

```
9868     \booltrue{\LWR@validtablecol}%
9869 }
```

For \LWR@printmccoldata@...>, {*num args to skip*} is provided by \LWR@columntype@mldata@<coltype> when it was defined by \LWR@modifycolumntype. \entire colspec is provided by \LWR@printmccoldata when it uses \LWR@columntype@mldata@<coltype>.

\LWR@printmccoldata@normal {*num args to skip*} {*entire colspec*}

```
9870 \newcommand*{\LWR@printmccoldata@normal}[2]{%
9871     \LWR@multicoltext%
9872     \defaddtocounter{\LWR@tablemulticolspos}{#1}%
9873 }
```

\LWR@printmccoldata@paragraph {*num args to skip*} {*entire colspec*}

```
9874 \newcommand*{\LWR@printmccoldata@paragraph}[2]{%
9875     \LWR@startpars%
9876     \LWR@multicoltext%
9877     \defaddtocounter{\LWR@tablemulticolspos}{#1}%
9878     \LWR@stoppars%
9879 }
```

\LWR@printmccoldata {*entire colspec*}

Print the data for any valid column type found.

```
9880 \newcommand*{\LWR@printmccoldata}[1]{%
9881     \LWR@traceinfo{lwr@printmccoldata -#1}%
```

Not yet found a valid column type:

```
9882     \boolfalse{\LWR@validtablecol}%
```

Get one token of the column spec, into a local copy in case nested.

```
9883     \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
9884     \edef\LWR@printmccoldatatoken{\LWR@strresult}%
```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```
9885     \ifcsdef{\LWR@columntype@mdata@}{\LWR@printmccoldatatoken}%
9886         {\csuse{\LWR@columntype@mdata@}{\LWR@printmccoldatatoken}{#1}}%
9887     {}%
```

If an unknown column type, print the text:

```
9888     \ifbool{\LWR@validtablecol}{}{\LWR@multicoltext{}}%
```

Tracing:

```
9889     \LWR@traceinfo{lwr@printmccoldata done}%
9890 }
```

\parsemulticolumnalignment {⟨1: colspec⟩} {⟨2: printresults cname⟩}

Scan the multicolumn specification and execute the printfunction for each entry.

Note that the spec for a p{spec} column, or @, >, <, is a token list which will NOT match l, c, r, or p.

```
9891 \newcommand*{\LWR@parsemulticolumnalignment}[2]{%
9892     \defcounter{LWR@tablemulticolspos}{1}%
9893     \StrLen{#1}[\LWR@strresult]%
9894     \defcounter{LWR@tablemulticolswidth}{\LWR@strresult}%
```

Scan across the tokens in the column spec:

```
9895     \whileboolexpr{%
9896         not test {}%
9897         \ifnumcomp{\value{LWR@tablemulticolspos}}{>}%
9898             {\value{LWR@tablemulticolswidth}}%
9899         }%
9900     }%
9901     {}%
```

Execute the assigned print function for each token in the column spec:

```
9902     \csuse{#2}{#1}%
```

Move to the next token in the column spec:

```
9903     \defaddtocounter{LWR@tablemulticolspos}{1}%
9904     }%
9905 }
```

75.22.2 Multicolumn factored code

```
9906 \newcommand{\LWR@addmulticolvertrulecolor}{%
```

No vertical rules if finishing the `tabular` with a row of empty cells:

```
9907 \ifbool{\LWR@tabularmutemods}{}{%
```

Left side:

```
9908     \ifnumcomp{\value{\LWR@mcolvertbarsl}}{=}{1}{%
9909         \LWR@tdaddstyle%
9910         border-left: 1px solid \LWR@vertruleHTMLcolor%
9911     }{%
9912     \ifnumcomp{\value{\LWR@mcolvertbarsl}}{>}{1}{%
9913         \LWR@tdaddstyle%
9914         border-left: 4px double \LWR@vertruleHTMLcolor%
9915     }{%
9916     \ifnumcomp{\value{\LWR@mcolvertbarsldash}}{=}{1}{%
9917         \LWR@tdaddstyle%
9918         border-left: 1px dashed \LWR@vertruleHTMLcolor%
9919     }{%
9920     \ifnumcomp{\value{\LWR@mcolvertbarsldash}}{>}{1}{%
9921         \LWR@tdaddstyle%
9922         border-left: 2px dashed \LWR@vertruleHTMLcolor%
9923     }{%

```

Right side:

```
9924     \ifnumcomp{\value{\LWR@mcolvertbarsr}}{=}{1}{%
9925         \LWR@tdaddstyle%
9926         border-right: 1px solid \LWR@vertruleHTMLcolor%
9927     }{%
9928     \ifnumcomp{\value{\LWR@mcolvertbarsr}}{>}{1}{%
9929         \LWR@tdaddstyle%
9930         border-right: 4px double \LWR@vertruleHTMLcolor%
9931     }{%
9932     \ifnumcomp{\value{\LWR@mcolvertbarsrdash}}{=}{1}{%
9933         \LWR@tdaddstyle%
9934         border-right: 1px dashed \LWR@vertruleHTMLcolor%
9935     }{%
9936     \ifnumcomp{\value{\LWR@mcolvertbarsrdash}}{>}{1}{%
9937         \LWR@tdaddstyle%
9938         border-right: 2px dashed \LWR@vertruleHTMLcolor%
9939     }{%
9940     }%
9941 }
```

```
9942 \newcommand{\LWR@multicoltext}{}
```

To find multicolumn right trim:

```
9943 \newcounter{\LWR@lastmulticolumn}
```

```
\LWR@domulticolumn [<1: vpos>] [<2: #rows>] [<3: numLaTeXcols>] [<4: numHTMLcols>] [<5: colspec>]
    [<6: text>]
```

```
9944 \NewDocumentCommand{\LWR@domulticolumn}{o o m m m +m}{%
9945     \LWR@traceinfo{\LWR@domulticolumn -#1- -#2- -#4- -#5-}%
```

Remember the text to be inserted, and when used remember that a valid column type was found:

```
9946      \renewcommand{\LWR@multicoltext}{%
9947          #6%
9948          \booltrue{\LWR@validtablecol}%
9949      }%
```

Expand the preamble and save it.

```
9950      \LWR@expandpreamble{#5}%
9951      \edef\LWR@origmccolspec{\the\@temptokena}%
```

Compute the rightmost column to be included. This is used to create the right trim.

```
9952      \defcounter{\LWR@lastmulticolumn}{\value{\LWR@tableTeXcolindex}}%
9953      \defaddtocounter{\LWR@lastmulticolumn}{#3}%
9954      \defaddtocounter{\LWR@lastmulticolumn}{-1}%
```

Row processing:

```
9955      \LWR@maybenewtablerow%
```

Begin the opening table data tag:

```
9956      \LWR@htmlltag{%
9957          td colspan=\textquotedbl#4\textquotedbl\ %
9958          \IfValueT{#2}{ % rows?
9959              rowspan=\textquotedbl#2\textquotedbl\ %
9960          }%
9961          class=\textquotedbl{}td%
```

Print the column type and vertical bars:

```
9962      \defcounter{\LWR@mcolvertbarsl}{0}%
9963      \defcounter{\LWR@mcolvertbarsr}{0}%
9964      \defcounter{\LWR@mcolvertbarsldash}{0}%
9965      \defcounter{\LWR@mcolvertbarsrdash}{0}%
9966      \booltrue{\LWR@mcolvertbaronleft}%
9967      \LWR@parsemulticolumnalignment{\LWR@origmccolspec}{\LWR@printmccoltype}%

```

If this column has a cmidrule, add “rule” to the end of the HTML class tag.

If this position had a “Y” then add “rule” for a horizontal rule:

```
9968      \LWR@subaddcmidruletrim%
9969      {%
9970          \LWR@getexparray{\LWR@trimlrules}%
9971          {\arabic{\LWR@tableTeXcolindex}}%
9972      }%
9973      {%
9974          \LWR@getexparray{\LWR@trimrrules}%
9975          {\arabic{\LWR@lastmulticolumn}}%
9976      }%
```

Also add vertical bar class.

```

9977      \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{ tvertbarl}{}
9978      \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{ tvertbarldouble}{}
9979      \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{ tvertbarr}{}
9980      \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{ tvertbarrdouble}{}
9981      \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{ tvertbarldash}{}
9982      \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{ tvertbarldashed}{}
9983          { tvertbarldoubledash}{}
9984      \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{ tvertbarrdash}{}
9985      \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{ tvertbarrdashed}{}

```

Close the class tag's opening quote:

```

9987      \textquotedbl{}%
9988      \LWR@tdstartstyles%

```

Style for vertical position:

```

9989      \IfValueT{#1}{%
9990          \ifstreq{\#1}{b}{%
9991              {%
9992                  \LWR@tdaddstyle%
9993                  \LWR@print@mbox{vertical-align:bottom}%
9994              }{%
9995          \ifstreq{\#1}{t}{%
9996              {%
9997                  \LWR@tdaddstyle%
9998                  \LWR@print@mbox{vertical-align:top}%
9999              }{%
10000      }% vpos?

```

Style for row colors:

```
10001      \LWR@addtabulararrowcolor%
```

Other styles:

```

10002      \LWR@addcmidrulewidth%
10003      \LWR@addcdashline%
10004      \LWR@addtabularhrulecolor%
10005      \LWR@addmulticolvertrulecolor%
10006      \LWR@addformatwpalignment{\LWR@origmccolspec}%
10007      \LWR@tdendstyles%
10008      }% end of the opening table data tag
10009      \boolfalse{\LWR@intabularmetadata}%
10010      \LWR@parsemulticolumnalignment{\LWR@origmccolspec}{\LWR@printmccoldata}%
10011  }

```

75.22.3 Multicolumn

```
\LWR@htmlmulticolumn {\langle numcols \rangle} {\langle alignment \rangle} {\langle text \rangle}
```

```

10012 \NewDocumentCommand{\LWR@htmlmulticolumn}{m m +m}%
10013 {%

```

Figure out how many extra HTML columns to add for @ and ! columns:

```
10014 \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}%
```

Create the multicolumn tag:

```
10015 \LWR@domulticolumn{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#3}%
```

Move to the next LATEX column:

```
10016 \defaddtocounter{LWR@tableLaTeXcolindex}{#1}%
10017 \defaddtocounter{LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
10018 \booltrue{LWR@skipatbang}%
10019 }%
```

75.22.4 Longtable captions

longtable captions use \multicolumn.

Per the caption package. User-redefinable float type.

```
10020 \providetcommand*\LTcaptype{table}
```

```
\LWR@longtabledatacaptiontag * [<toc entry>] {<caption>}
```

```
10021 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m}%
10022 {%
```

Remember the latest name for \nameref:

```
10023 \IfValueTF{#2}{% optional given?
10024   \ifblank{#2}{% optional empty?
10025     {\LWR@setlatestname{#3}}% empty
10026     {\LWR@setlatestname{#2}}% given and non-empty
10027   }% optional given
10028   {\LWR@setlatestname{#3}}% no optional
```

Create a multicolumn across all the columns:

Figure out how many extra HTML columns to add for @ and ! columns found between the first and the last column:

```
10029 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalLaTeXcols}}%
```

Create the multicolumn tag. The caption will be centered by the css caption class.

```
10030 \LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcols}}%
10031   {\arabic{LWR@tabhtmlcoltotal}}%
10032   {p}%
10033   { \LWR@domulticolumn
10034   \IfBooleanTF{#1}{ star?}
```

Star version, show a caption but do not make a LOT entry:

```

10035      {%
10036          yes star
10037          \LWR@figcaption%
10038          \LWR@isolate{#3}%
10039          \endLWR@figcaption%
10040      }%
10041      {%

```

Not the star version:

Don't step the counter if \caption[]{}{A caption.}

```

10041      \ifbool{\LWR@starredlongtable}{%
10042          {%
10043              \ifblank{#2}{%
10044                  TOC entry
10045                  {}%
10046                  \refstepcounter{\LTcaptype}%
10047                  \protected@edef\@currentlabel{%
10048                      \nameuse{p@\LTcaptype}\nameuse{the\LTcaptype}}%
10049                  {}%
10050                  {}%
10051          }%

```

Create an HTML caption. Afterwards, maybe make a LOT entry.

```

10052      \LWR@figcaption%
10053      \LWR@isolate{\nameuse{fnum@\LTcaptype}}%
10054      \CaptionSeparator%
10055      \LWR@isolate{#3}%
10056      \endLWR@figcaption%

```

See if an optional caption was given:

```
10057      \ifblank{#2}{%

```

if the optional caption was given, but empty, do not form a TOC entry

```
10058      {}%

```

If the optional caption was given, but might only be []:

```

10059      {%
10060          TOC entry not empty
10061          \IfNoValueTF{#2}{%

```

The optional caption is []:

```

10061      {%
10062          No TOC entry
10063          \addcontentsline{%
10064              \nameuse{ext@\LTcaptype}}{%
10065              \LTcaptype}%
10066          {}%
10067          \protect\numberline{%
10068              \LWR@isolate{\nameuse{p@\LTcaptype}}\nameuse{the\LTcaptype}}%
10069          {}%
10070      }%

```

The optional caption has text enclosed:

```

10071      {%
10072          yes TOC entry
10073          \addcontentsline%
10074          {\@nameuse{ext@\LTcaptype}}%
10075          {\LTcaptype}%
10076          {%
10077              \protect\newline%
10078              {\LWR@isolate{\@nameuse{p@\LTcaptype}}\@nameuse{the\LTcaptype}}%
10079              {\ignorespaces \LWR@isolate{\#2}\protect\relax}%
10080          }%
10081      }%
10082      end of yes TOC entry
10083      }%
10084      end of TOC entry not empty
10085      }%
10086      end of no star

```

Skip any trailing @ or ! columns for this cell:

```

10083      \booltrue{\LWR@skipatbang}%
10084      }%
10085      \defaddtocounter{\LWR@tableLaTeXcolindex}{\value{\LWR@tabletotalLaTeXcols}}%
10086      \defaddtocounter{\LWR@tableLaTeXcolindex}{-1}
10087
10088 }

```

75.22.5 Counting HTML tabular columns

The L^AT_EX specification for a table includes a number of columns separated by the & character. These columns differ in content from line to line. Additional virtual columns may be specified by the special @ and ! columns. These columns are identical from line to line, but may be skipped during a multicolumn cell.

For HTML output, @ and ! columns are placed into their own tabular columns. Thus, a L^AT_EX \multicolumn command may span several additional @ and ! columns in HTML output. These additional columns must be added to the total number of columns spanned by an HTML multi-column data cell.

```

10089 \newcounter{\LWR@tabhtmlcolindex}
10090 \newcounter{\LWR@tabhtmlcolend}
10091 \newcounter{\LWR@tabhtmlcoltotal}

```

\LWR@subtabularhtmlcolumns {\langle index\rangle}

Factored from \LWR@tabularhtmlcolumns, which follows.

```
10092 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%
```

Temporarily define a macro equal to the @ specification for this column:

```
10093 \edef\LWR@atbangspec{\LWR@getexarray{\LWR@colatspec}{#1}}%
```

If the @ specification is not empty, add to the count:

```

10094 \ifdefempty{\LWR@atbangspec}%
10095 {}%
10096 {\defaddtocounter{\LWR@tabhtmlcoltotal}{1}}%

```

Likewise for the ! columns:

```
10097 \edef\LWR@atbangspec{\LWR@getexparray{\LWR@colbangspec}{#1}}%
10098 \ifdefempty{\LWR@atbangspec}%
10099 {}%
10100 {\defaddtocounter{\LWR@tabhtmlcoltotal}{1}}%
10101 }
```

```
\LWR@tabularhtmlcolumns {\langle starting LATEX column\rangle} {\langle number LATEX columns\rangle}
```

Compute the total number of HTML columns being spanned, considering the starting L^AT_EX table column and the number of L^AT_EX tabular columns being spanned. Any @ and ! columns within this span are included in the total count. The resulting number of HTML columns is returned in the counter L^AT_EX@tabhtmlcoltotal.

```
10102 \newcommand*{\LWR@tabularhtmlcolumns}[2]{%
```

Count the starting index, compute ending index, and begin with the count being the L^AT_EX span, to which additional @ and ! columns may be added:

```
10103 \defcounter{\LWR@tabhtmlcolindex}{#1}%
10104 \defcounter{\LWR@tabhtmlcoltotal}{#2}%
10105 \defcounter{\LWR@tabhtmlcolend}{#1}%
10106 \defaddtocounter{\LWR@tabhtmlcolend}{#2}%
```

If at the left edge, add the at/bang columns for the left edge:

```
10107 \ifnumcomp{\value{\LWR@tabhtmlcolindex}}{=}{1}{%
10108   \LWR@subtabularhtmlcolumns{leftedge}%
10109 }{}
```

Walk across the L^AT_EX columns looking for @ and ! columns:

```
10110 \whileboolexpr{%
10111   test {%
10112     \ifnumcomp{\value{\LWR@tabhtmlcolindex}}{<}{\value{\LWR@tabhtmlcolend}}{%
10113       }%
10114     }%
10115   }{%
10116     \LWR@subtabularhtmlcolumns{\arabic{\LWR@tabhtmlcolindex}}%
10117     \defaddtocounter{\LWR@tabhtmlcolindex}{1}%
10118   }% whiledo
10119 }

10120 \end{warpHTML}
```

75.23 Multirow if not loaded

A default defintion in case multirow is not loaded. This is used during table parsing.

```
10121 \begin{warpHTML}
10122 \newcommand{\multirow}[2][c]{}%
10123 \end{warpHTML}
```

75.24 Multicolumnrow

A print-mode version is defined here, and is also used during HTML output while inside a `\teximage`.

See section 433 for the HTML versions.

for HTML & PRINT

```
10124 \begin{warpall}

\multicolumnrow {\{1:cols\}} {\{2:halign\}} [\{3:vpos\}] {\{4:numrows\}} [\{5:bigstruts\}] {\{6:width\}} [\{7:fixup\}]
{\{8:text\}}
```

For discussion of the use of `\DeclareExpandableDocumentCommand`, see:
<https://tex.stackexchange.com/questions/168434/problem-with-abbreviation-of-multirow-and-multicolumn-latex>

`\AtBeginDocument` to adjust after the user may have loaded `multirow`, which requires several tests to determine which version is loaded and thus which options are available.

```
10125 \AtBeginDocument{
```

`\@ifundefined{@xmultirow}` determines if `multirow` was never loaded.

Null action if not loaded:

```
10126 \@ifundefined{@xmultirow}
10127 {
10128 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}{%
10129 {+m +m +0{c} +m +0{0} +m +0{0pt} +m}%
10130 {}%
10131 }% no version of multirow was loaded
10132 {%
10132 \% \@xmultirow defined, so some version of multirow was loaded
```

`\IfPackageLoadedTF{multirow}` determines if v2.0 or later of `multirow` was used, which included the `\ProvidesPackage` macro.

The print version:

```
10133 \IfPackageLoadedTF{multirow}{%
10134 \% v2.0 or newer
10134 \% 2016/09/01 2016/09/27 for v2.0
10135 \% v2.0+:
10136 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}{%
10137 {+m +m +0{c} +m +0{0} +m +0{0pt} +m}%
10138 {\multicolumn{\#1}{\#2}{\@xmultirow[\#3]{\#4}{\#5}{\#6}{\#7}{\#8}}}%
10139 }%
10140 \% loaded but older, probably not executed:
10141 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}{%
10142 {+m +m +0{c} +m +0{0} +m +0{0pt} +m}%
10143 {\multicolumn{\#1}{\#2}{\@xmultirow[\#4]{\#5}{\#6}{\#7}{\#8}}}%
10144 }%
10145 \% package loaded{multirow}
```

If not `\IfPackageLoadedTF{multirow}` but `\@xmultirow` is defined, then this must be v1.6 or earlier, which did not `\ProvidesPackage{multirow}`, and did not have the `vpos` option.

```
10146 \% v1.6 or older did not \ProvidePackage
```

```

10147 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}{%
10148   +m +m +0{c} +m +0{0} +m +0{0pt} +m}%
10149   {\multicolumn{#1}{#2}{\@xmultirow{#4}{#5}{#6}{#7}{#8}}}}%
10150 }%
10151 }% \@ifundefined{@xmultirow}%
10153
10154 \providecommand*{\multicolumnrow}{\LWR@print@multicolumnrow}%
10155
10156 }% AtBeginDocument

10157 \end{warpall}

```

75.25 Utility macros inside a table

for HTML output

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```
10159 \newcommand*{\LWR@donothing}{}%
```

In case `array` is not loaded:

```

10160 \let\firsthline\relax
10161 \let\lasthline\relax
10162 \newcommand*{\firsthline}{}%
10163 \newcommand*{\lasthline}{}%

```

In case `bigdelim` is not loaded:

```

10164 \newcommand*{\ldelim}{}%
10165 \newcommand*{\rdelim}{}%
10166 \end{warpHTML}

```

75.26 Special-case tabular markers

for HTML & PRINT

`\TabularMacro` Place this just before inserting a custom macro in a table data cell. Doing so tells `l warp` not to automatically start a new HTML table data cell yet. See section 8.10.1.

```

10168 \newcommand*{\TabularMacro}{}%
10169 \end{warpall}

```

`\ResumeTabular` Used to resume tabular entries after resuming an environment.

- ⚠ **tabular inside another environment** When creating a new environment which contains a `tabular` environment, `l warp`'s emulation of the `tabular` does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

```

\StartDefiningTabulars % (& is used in a definition)
\newenvironment{outerenvironment}
{
    \tabular{cc}
    left & right \\
}
{
    \TabularMacro\ResumeTabular
    left & right \\
    \endtabular
}
\StopDefiningTabulars

for HTML output 10170 \begin{warpHTML}

10171 \newcommand*\ResumeTabular[]{%
10172     \boolfalse{LWR@exittingtabular}%
10173     \boolfalse{LWR@tabularmutemods}%
10174     \boolfalse{LWR@tabularfinalrow}%
10175     \LWR@getmynexttoken%
10176 }

10177 \end{warpHTML}

for PRINT output 10178 \begin{warpprint}

10179 \newcommand*\ResumeTabular{}{}

10180 \end{warpprint}

```

75.27 Checking for a new table cell

for HTML output 10181 \begin{warpHTML}

\LWR@tabledatacolumnntag Open a new HTML table cell unless the next token is for a macro which does not create data, such as \hline, \toprule, etc:

```

10182 \newcommand*\LWR@tabledatacolumnntag{%
10183 {%
10184     \LWR@traceinfo{\LWR@tabledatacolumnntag}%
                     \show\LWR@mynexttoken to see what tokens to look for

```

If not any of the below, start a new table cell:

```
10185 \global\let\LWR@mynextaction\LWR@tabledatasinglecolumnntag%
```

If find \end, exit the tabular:

```

10186 \ifdefequal{\LWR@mynexttoken}{\end}%
10187 {%
10188     \booltrue{LWR@tabularfinalrow}%
10189     \booltrue{LWR@exittingtabular}%
10190 }{}%

```

`\longtable` can have a caption in a cell

```
10191 \ifdefequal{\LWR@mynexttoken}{\caption}%
10192     {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

Look for other things which would not start a table cell:

```
10193 \ifdefequal{\LWR@mynexttoken}{\multicolumn}%
10194     {\global\let\LWR@mynextaction\LWR@donothing}{}%
10195 \ifdefequal{\LWR@mynexttoken}{\multirow}%
10196     {\global\let\LWR@mynextaction\LWR@donothing}{}%
10197 \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%
10198     {\global\let\LWR@mynextaction\LWR@donothing}{}%
10199 \ifdefequal{\LWR@mynexttoken}{\noalign}%
10200     {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

If an `\mrowcell`, this is a cell to be skipped over:

```
10201 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%
10202     {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

If an `\mcolrowcell`, this is a cell to be skipped over:

```
10203 \ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
10204     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10205 \ifdefequal{\LWR@mynexttoken}{\TabularMacro}%
10206     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10207 \ifdefequal{\LWR@mynexttoken}{\hline}%
10208     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10209 \ifdefequal{\LWR@mynexttoken}{\firsthline}%
10210     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10211 \ifdefequal{\LWR@mynexttoken}{\lasthline}%
10212     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10213 \ifdefequal{\LWR@mynexttoken}{\toprule}%
10214     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10215 \ifdefequal{\LWR@mynexttoken}{\midrule}%
10216     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10217 \ifdefequal{\LWR@mynexttoken}{\cmidrule}%
10218     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10219 \ifdefequal{\LWR@mynexttoken}{\morecmidrules}%
10220     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10221 \ifdefequal{\LWR@mynexttoken}{\specialrule}%
10222     {\global\let\LWR@mynextaction\LWR@donothing}{}%

10223 \ifdefequal{\LWR@mynexttoken}{\cline}%
10224     {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

```

10225  \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
10226      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10227  \ifdefequal{\LWR@mynexttoken}{\hhline}%
10228      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10229  \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
10230      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10231  \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
10232      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10233  \ifdefequal{\LWR@mynexttoken}{\doublerulesepcolor}%
10234      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10235  \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
10236      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10237  \ifdefequal{\LWR@mynexttoken}{\warpHTMLonly}%
10238      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10239  \ifdefequal{\LWR@mynexttoken}{\ldelim}%
10240      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10241  \ifdefequal{\LWR@mynexttoken}{\rdelim}%
10242      {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

For `arydshln`:

```

10243  \ifdefequal{\LWR@mynexttoken}{\hdashline}%
10244      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10245  \ifdefequal{\LWR@mynexttoken}{\cdashline}%
10246      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10247  \ifdefequal{\LWR@mynexttoken}{\firstdashline}%
10248      {\global\let\LWR@mynextaction\LWR@donothing}{}%
10249  \ifdefequal{\LWR@mynexttoken}{\lastdashline}%
10250      {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

Ignore an empty line between rows:

```

10251  \ifdefequal{\LWR@mynexttoken}{\par}%
10252      {%
10253          \global\let\LWR@mynextaction\LWR@donothing%
10254      }{}%

```

No action for an `\end` token.

Add similar to the above for any other non-data tokens which might appear in the table.

Start the new table cell if was not any of the above:

```

10255  \LWR@traceinfo{\LWR@tabledatacolumntag: done, about to do \LWR@mynextaction}%
10256      \LWR@mynextaction%
10257 }

```

```
10258 \end{warpHTML}
```

75.28 \mrowcell

for HTML & PRINT¹⁰²⁵⁹ \begin{warpall}

\mrowcell The user must insert \mrowcell into any \multirow cells which must be skipped.
⚠ multirow cells This command has no action during print output.

```
10260 \newcommand*\{\mrowcell\}{}%
```

```
10261 \end{warpall}
```

75.29 \mcolrowcell

for HTML & PRINT¹⁰²⁶² \begin{warpall}

\mcolrowcell The user must insert \mcolrowcell into any \multicolumnrow cells which must be skipped.
⚠ multirow cells This command has no action during print output.

```
10263 \newcommand*\{\mcolrowcell\}{}%
```

```
10264 \end{warpall}
```

75.30 HTML tabular environment

for HTML output¹⁰²⁶⁵ \begin{warpHTML}

These are default definitions in case booktabs is not loaded, and are not expected to be used, but must exist as placeholders. memoir may have already loaded booktabs.

```
10266 \providecommand*\{\toprule\}[1][]{\hline}
10267 \providecommand*\{\midrule\}[1][]{\hline}
10268 \providecommand*\{\cmidrule\}{\cline}
10269 \providecommand*\{\bottomrule\}[1][]{\hline}
10270 \providecommand*\{\addlinespace\}[1][]{}
10271 \providecommand*\{\morecmidrules\}{}%
10272 \providecommand*\{\specialrule\}[3]{\hline}
```

\noalign {*(text)*} Redefined for use inside tabular.

```
10273 \LetLtxMacro\LWR@orignoalign\noalign
10274
10275 \newcommand{\LWR@tabularnoalign}[1]{%
10276   \advance\rownum\m@ne%
10277   \LetLtxMacro\lWR@save@xcolorrowHTMLcolor\lWR@xcolorrowHTMLcolor%
10278   \renewcommand*\{\lWR@xcolorrowHTMLcolor\}{%}
10279   \multicolumn{\value{\lWR@tabletotalLaTeXcols}}{l}{\#1} \\
10280   \LetLtxMacro\lWR@xcolorrowHTMLcolor\lWR@save@xcolorrowHTMLcolor%
10281   \% \rowc@lors%
10282   \lWR@getmynexttoken%
10283 }
```

\LWR@HTMLhline The definition of \hline depends on whether `tbls` has been loaded. If so, optional space below the line may be specified, but will be ignored.

```

10284 \AtBeginDocument{
10285
10286 \IfPackageLoadedTF{lwarp-tables}
10287 {
10288     \newcommand*\LWR@HTMLhline[1][]{%
10289         \ifbool{FormatWP}{%
10290             {\LWR@docmidrule{1-\arabic{LWR@tabletotalLaTeXcols}}}{%
10291                 {\defaddtocounter{LWR@hlines}{1}}{%
10292                     \LWR@getmynexttoken}{%
10293                 }{%
10294             \newcommand*\LWR@HTMLhline[]{%
10295                 \ifbool{FormatWP}{%
10296                     {\LWR@docmidrule{1-\arabic{LWR@tabletotalLaTeXcols}}}{%
10297                         {\defaddtocounter{LWR@hlines}{1}}{%
10298                             \LWR@getmynexttoken}{%
10299                         }{%
10300                     }{%
10301                 }{%
10302             }% AtBeginDocument

```

\LWR@HTMLcline {\i<columns>}

```

10303 \NewDocumentCommand{\LWR@HTMLcline}{m}{%
10304 {%
10305     \LWR@docmidrule{#1}{%
10306     \LWR@maybenewtablerow{%
10307         \LWR@getmynexttoken{%
10308 }% 
```

\LWR@tabular@warpprintonly {\i<contents>}

Only process the contents if producing printed output. Modified inside a `tabular` to grab the next token.

```

10309 \newcommand{\LWR@tabular@warpprintonly}[1]{%
10310     \ifbool{warpingprint}{#1}{}{%
10311         \LWR@getmynexttoken{%
10312 }% 
```

\LWR@nullifyNoAutoSpacing For `babel-french`, turn off auto spacing at the start of the tabular, then nullify the autospacing commands inside the tabular, since they were not compatible with the tabular parsing code for each cell, which uses `xstring`.

```

10313 \AtBeginDocument{
10314 \@ifundefined{NoAutoSpacing}{%
10315 {%
10316     \newcommand*\LWR@nullifyNoAutoSpacing{}{%
10317 }% no babel-french
10318 {%
10319     \newcommand*\LWR@nullifyNoAutoSpacing{}{%
10320         \NoAutoSpacing{%
10321             \renewcommand*\NoAutoSpacing{}{%
10322                 \renewcommand*\LWR@FBcancel{}{%
10323             }{%

```

```
10324 }% yes babel-french
10325 }% AtBeginDocument
```

`tabular (env.) <direction> [<vertposition>] {<colspecs>}`

The `<direction>` is from plect for Japanese documents, and is ignored.

```
10326 \StartDefiningTabulars
10327
10328 \NewDocumentCommand{\LWR@HTML@@tabular}{d<> o m}
10329 {%
10330     \LWR@traceinfo{LWR@HTML@@tabular started}%

```

- ⚠ `<table>` inside `` In L^AT_EX, a `tabular` may be placed inside a `minipage`, but in HTML a `<table>` may not be inside a ``. Since there may be several nested ``s, with an unknown number of other objects between, it is hard to undo all these ``s before the `<table>` then redo them after. The browser probably compensates for this situation, but formatting may be lost inside the `<table>` because several things are neutralized inside a ``. Furthermore, in the HTML output, the entire `<table>` is placed on a single line of HTML code, since the line breaking commands are neutralized inside a ``. Since this is such a sloppy situation, a warning is issued here instructing the user to please isolate the `` to print-only.

```
10331     \LWR@spanwarnformat{tabular}%
10332     \addtocounter{LWR@tabulardepth}{1}%

```

Not yet started a table row:

```
10333     \boolearnfalse{LWR@startedrow}%

```

Not yet doing any rules:

```
10334     \defcounter{LWR@hlines}{0}%
10335     \defcounter{LWR@hdashedlines}{0}%
10336     \boolearnfalse{LWR@doingtbrule}%
10337     \boolearnfalse{LWR@doingcmidrule}%

```

For `babel-french`, turn off auto spacing one time, then nullify the autospacing commands since were not compatible with the `tabular` parsing code.

```
10338     \LWR@nullifyNoAutoSpacing%

```

Have not yet found the end of `tabular` command. Unmute the @ and ! columns.

```
10339     \boolearnfalse{LWR@exittingtabular}%
10340     \boolearnfalse{LWR@tabularlarmutemods}%

```

Not adding final row for the lower border:

```
10341     \boolearnfalse{LWR@tabularfinalrow}%

```

Error if failed to use `\mrowcell` or `\mcolrowcell` when needed.

```
10342     \boolearnfalse{LWR@usedmultirow}%
10343     \boolearnfalse{LWR@foundmrowcell}%

```

In case of nesting:

```
10344 \renewcommand*\{\\LWR@multicoltext\}{}
10345 \booltrue{LWR@intabularmetadata}%
```

New PDF page, unless in a \multirow:

```
10346 \ifbool{LWR@in@multirow@par}{%
10347   {\leavevmode\\LWR@newline}%
10348   {\LWR@forcenewpage}}%
```

In case of nesting, locally no longer in a \multirow:

```
10349 \boolfalse{LWR@in@multirow@par}%
```

Create the table tag:

```
10350 \\LWR@htmlblocktag{table}%
```

Parse the table columns:

```
10351 \\LWR@parsetablecols{\#3}%
```

Table col spec is: \\LWR@tablecols which is a string of llccrr, etc.

Do not place the table inside a paragraph:

```
10352 \\LWR@stopars%
```

Without at least one header cell, some screen readers think that the table is just for page layout, and do not read it as data. Add a hidden row with a single non-empty header cell to tell the screen readers that this is a table of data for the user.

```
10353 \\LWR@htmltag{tr style="display:none"}%
10354   \\LWR@htmltag{th}.\\LWR@htmltag{/th}%
10355   \\LWR@htmltag{/tr}%
10356   \\LWR@newline%
10357   \\LWR@forceemptyline%
```

Track column #:

```
10358 \\defcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
10359 \\global\\boolfalse{LWR@tabularcelladded}%
```

Start looking for midrules:

```
10360 \\LWR@clearmidrules%
```

\\ becomes a macro to end the table row:

```
10361 \\LetLtxMacro{\\}{\\LWR@tabularendofline}%
```

\\warpprintonly inside a tabular must grab the next token.

```
10362 \\LetLtxMacro{\\warpprintonly}{\\LWR@tabular@warpprintonly}%
```

The following adjust for colortbl.

```

10363   \LetLtxMacro{\arrayrulecolor}{\arrayrulecolor\nexttoken}%
10364   \LetLtxMacro{\doublerulesepcolor}{\doublerulesepcolor\nexttoken}%
10365   \def\LWR@columnHTMLcolor{}%
10366   \def\LWR@rowHTMLcolor{}%
10367   \def\LWR@cellHTMLcolor{}%
10368   \@rowcolors%

```

The vertical rules are set to the color active at the start of the tabular. `\arrayrulecolor` will then affect horizontal rules inside the tabular, but not the vertical rules.

```

10369   \ifdefvoid{\LWR@ruleHTMLcolor}%
10370     {\edef\LWR@vertruleHTMLcolor{black}}%
10371     {\edef\LWR@vertruleHTMLcolor{\LWR@origpound\LWR@ruleHTMLcolor}}%

```

Tracking the depth of cell color <div>s:

```

10372   \defcounter{LWR@cellcolordepth}{0}%

```

The following may appear before a data cell is created, so after doing their actions, we look ahead with `\LWR@getmynexttoken` to see if the next token might create a new data cell:

The optional parameter for `\hline` supports the `tbls` package.

```

10373   \LWR@traceinfo{LWR@HTML@tabular: redefining macros}%
10374   \LetLtxMacro{\noalign}{\LWR@tabularnoalign}%
10375   \LetLtxMacro{\hline}{\LWR@HTMLhline}%
10376   \LetLtxMacro{\cline}{\LWR@HTMLcline}%

10377   \DeclareDocumentCommand{\hdashline}{o}{%
10378     \ifbool{FormatWP}{%
10379       {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
10380       {\defaddtocounter{LWR@hdashedlines}{1}}%
10381       \LWR@getmynexttoken%
10382     }%
10383   \DeclareDocumentCommand{\cdashline}{m}{%
10384     \LWR@docdashline{\#1}\LWR@getmynexttoken%
10385   }%
10386   \DeclareDocumentCommand{\firsthdashline}{o}{%
10387     \ifbool{FormatWP}{%
10388       {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
10389       {\defaddtocounter{LWR@hdashedlines}{1}}%
10390       \LWR@getmynexttoken%
10391     }%
10392   \DeclareDocumentCommand{\lasthdashline}{o}{%
10393     \ifbool{FormatWP}{%
10394       {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
10395       {\defaddtocounter{LWR@hdashedlines}{1}}%
10396       \LWR@getmynexttoken%
10397     }%

```

The following create data cells and will have no more data in this cell, so we do not want to look ahead for a possible data cell, so do not want to use `\LWR@getmynexttoken`.

```

10398      \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
10399      \renewcommand*{\mrowcell}{%
10400          \LWR@maybenewtablerow%
10401          \LWR@tabularleftedge%
10402          \booltrue{\LWR@skippingmrowcell}%
10403          \booltrue{\LWR@foundmrowcell}%
10404      }%
10405      \renewcommand*{\mcolrowcell}{%
10406          \LWR@maybenewtablerow%
10407          \booltrue{\LWR@skippingmcolrowcell}%
10408          \booltrue{\LWR@foundmrowcell}%
10409      }%
10410      \LetLtxMacro\caption{\LWR@longtabledatacaptiontag}

```

Reset for new processing:

```

10411      \boolfalse{\LWR@tableparcell}%
10412      \boolfalse{\LWR@skippingmrowcell}%
10413      \boolfalse{\LWR@skippingmcolrowcell}%
10414      \boolfalse{\LWR@skipatbang}%
10415      \boolfalse{\LWR@emptyatbang}%

```

Set & for its special meaning inside the tabular:

```

10416      \StartDefiningTabulars%
10417      \protected\gdef&{\LWR@tabularampersand}%

```

Locally force any minipages to be fullwidth, until the end of the tabular:

```
10418      \booltrue{\LWR@forceminipagefullwidth}%
```

Nest one level deeper of tabular paragraph handling:

```
10419      \addtocounter{\LWR@tabularpardepth}{1}%
```

Look ahead for a possible table data cell:

```

10420      \LWR@traceinfo{\LWR@HTML@tabular: about to \LWR@getmynexttoken}%
10421      \LWR@getmynexttoken%
10422 }%

```

Ending the environment:

```

10423 \newcommand*{\LWR@HTML@endtabular}%
10424 {%
10425     \LWR@traceinfo{\LWR@HTML@endtabular}%

```

Unnest one level of tabular paragraph handling:

```
10426      \addtocounter{\LWR@tabularpardepth}{-1}%
```

Finish a row which is not yet done:

```
10427      \ifboolexpr{%
```

```

10428      test {%
10429          \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}%
10430              {\value{LWR@tabletotalLaTeXcols}}
10431      } or %
10432      (%
10433          bool{LWR@intabularmetadata} and%
10434          not bool{LWR@tabularcelladded} and%
10435          test {%
10436              \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}%
10437                  {\value{LWR@tabletotalLaTeXcols}}%
10438          }%
10439      )%
10440  }%
10441  {%

10442      \booltrue{LWR@tabularfinalrow}%
10443      \LWR@tabularfinishrow%
10444      \boolfalse{LWR@tabularfinalrow}%
10445  }%
10446  {%
10447      \LWR@closetabledatacell%
10448  }%
10449  \ifbool{LWR@startedrow}%
10450      {\LWR@htmltag{/tr}\LWR@orignewline}%
10451  {}%

```

xcolor row color support:

```

10452      @rowc@lors%
10453      \LWR@htmlblocktag{/table}%
10454      \boolfalse{LWR@intabularmetadata}%

```

Unnest one level of tabular:

```
10455      \addtocounter{LWR@tabulardepth}{-1}%
```

Restore & to its usual meaning:

```

10456      \ifnumequal{\value{LWR@tabulardepth}}{0}{%
10457          \protected\gdef&{\LWR@origampmacro}%
10458          \StopDefiningTabulars%
10459      }{}%

```

Error if used \multirow or \multicolumn without using \mrowcell or \mcolrowcell.

```

10460      \ifbool{LWR@usedmultirow}{%
10461          \ifbool{LWR@foundmrowcell}{%
10462              {\relax}%
10463              {%
10464                  \PackageError{l warp}%
10465                  {%
10466                      When using \protect\multirow, \protect\multicolumn, \MessageBreak
10467                          or the bigdelim package, \MessageBreak
10468                          place \protect\mrowcell\space or \protect\mcolrowcell\MessageBreak
10469                          in empty cells which are to be skipped.\MessageBreak
10470                          See the Lwarp package documentation:\MessageBreak

```

```

10471           "Special cases and limitations" -> "Tabular"
10472       }%
10473   {%
10474       See the Lwarp package documentation:\MessageBreak
10475       "Special cases and limitations" -> "Tabular".
10476   }%
10477   }%
10478 }{}}%


10479 \LWR@traceinfo{\LWR@HTML@endtabular finished}%
10480 }
10481
10482 \csletcs{\LWR@HTML@endtabular*}{\LWR@HTML@endtabular}
10483
10484 \StopDefiningTabulars

```

`siunitx` may redefine `tabular`, so set the following later:

```

10485 \AtBeginDocument{
10486     \LetLtxMacro{\LWR@origendtabular}{\endtabular}
10487     \csletcs{\LWR@origendtabular*}{\endtabular*}
10488     \LWR@formatted{@tabular}
10489     \LWR@formatted{endtabular}
10490     \LWR@formatted{endtabular*}
10491 }

10492 \end{warpHTML}

```

76 Cross-references

Sectioning commands have been emulated from scratch, so the cross-referencing commands are custom-written for them. Emulating both avoids several layers of patches.

`*_html.aux (file)` A new entry in `*_html.aux` is used to remember section name, file, and `lateximage` depth and number for each label:

```
\newlabel{<labelname>}@lwarf}{{<section name>}{{<filename>}}
{<imagedepth>}{{<imagenum>}}}
```

Table 16 shows the data structures related to cross-referencing.

for HTML output 10493 \begin{warpHTML}

76.1 Setup

`\@currentlabelname` To remember the most recently defined section name, description, or caption, for `\nameref`.

```
10494 \def\@currentlabelname{\linkhomename}%
```

```
\LWR@stripperiod {{text}} [(.)]
```

Table 16: Cross-referencing data structures

Original L ^A T _E X:	(print and HTML)
<p>\refstepcounter: Steps the counter and sets \currentlabel.</p> <p>\currentlabel: \p@<ctr>\the<ctr> Updated by \refstepcounter.</p> <p>\label: Writes to the .aux file: $\newlabel{<label>}{{\currentlabel}{\thepage}{name}{Href}{()}}$</p> <p>\newlabel: When the .aux file is read, sets \r@<label>.</p> <p>\r@<label>: Set to: {\currentlabel}{\thepage}{name}{Href}{}</p> <p>\ref: Returns the first part of \r@<label>.</p> <p>\pageref: Returns the second part of \r@<label>.</p>	
Added by l warp:	(HTML only)
<p>\label: Adds HTML tags (section 76.3), and another .aux entry (section 76.2) for $\r@<label>@\l warp.$ (nameref changes to \ref, etc. are undone \AtBeginDocument.)</p> <p>\newlabel: Unchanged. When the .aux file is read, used to set \r@<label>, and then \r@<label>@\l warp.</p> <p>\r@<label>@\l warp: Set to {{section_name}{file_name}{depth}{number}}: \LWR@nameref: The section or object name for this label. \LWR@currentautosecpageref: The LWR@currentautosecpage for this label. \LWR@htmlfileref: The filenumber or name for this label. \LWR@lateximagedepthref: The lateximagedepth for this label. \LWR@lateximagenumberref: The lateximagenumber for this label.</p> <p>\nameref: Emulated from hyperref for l warp. See section 76.4.</p> <p>\ref and \nameref: Adds HTML tags. See section 76.4.</p>	
Added by amsmath:	(print and HTML)
<p>\label: Execution is delayed until the math environment is completed.</p> <p>\ltx@Label: L^AT_EX \label, (HTML: patched by l warp,) later patched by cleveref.</p>	
Added by cleveref:	(print and HTML)
<p>\refstepcounter: Added: sets \cref@currentlabel.</p> <p>\cref@currentlabel: (<type>=<ctr> unless an alias is used): [<type>][\arabic{<ctr>}][<parent ctrs>]{\p@<ctr>\the<ctr>} Also see section 60.4 for use with footnotes.</p> <p>\label: Also writes to the .aux file: $\newlabel{<label>@\cref}{{\cref@currentlabel}{\thepage}}$</p> <p>\newlabel: Unchanged. When the .aux file is read, sets \r@<label>@\cref.</p> <p>\r@<label>@\cref: Set to: {{\cref@currentlabel}{\thepage}}</p> <p>Utility functions: See \cref@getlabel, \cref@gettype, \cref@getcounter, \cref@getprefix.</p> <p>Cross-referencing names: \crefname and \Crefname assign human-readable names for references to this counter type.</p>	
Additionally patched by l warp:	(HTML only)
<p>\cref, etc.: Modified for l warp. See section 203.</p> <p>\label inside math: See section 83.7.1.</p>	
Footnotes: See \noteentry in section 60.4.	

Removes a trailing period.

```
10495 \def\LWR@stripperiod#1.\ltx@empty#2@nil{#1}%
```

```
\LWR@setlatestname {\i<object name>}
```

Removes \label, strips any final period, and remembers the result.

```
10496 \newcommand*{\LWR@setlatestname}[1]{%
```

Remove \label and other commands from the name, the strip any final period.
See `gettitlestring`.

```
10497   \GetTitleStringExpand{#1}%
10498   \edef@\currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
10499   \edef@\currentlabelname{%
10500     \expandafter\LWR@stripperiod@\currentlabelname%
10501     \ltx@empty.\ltx@empty\@nil%
10502   }%
10503 }
```

76.2 New l warp labels.

`*_html.aux` (*file*) A new entry in *_html.aux is used to remember section name, file, and lateximage depth and number for each label:

```
\newlabel{<labelname>}@l warp}{{<section name>}{{<filename>}%
{<limagedepth>}{{<limagenumber>}}}
```

See:

<http://tex.stackexchange.com/questions/57194/extract-section-number-from-equation-reference>

```
\LWR@setref {\i<args list>} {\i<selector>} {\i<label>}
```

\@setref without the \null (\hbox), and without the warning messages. Each caused problems with l warp references. The regular reference will cause the warning.

```
10504 \def\LWR@setref#1#2#3{%
10505   \ifx#1\relax%
10506     ??%
10507   \else%
10508     \expandafter#2#1%
10509   \fi}
```

`\LWR@nameref` (*label*) Returns the section name for this label:

```
10510 \newcommand*{\LWR@nameref}[1]{%
10511   \begingroup%
10512   \LWR@nullifyfootnotes%
10513   \expandafter\lWR@setref\csname r@#1@l warp\endcsname\lWR@firstoffive{#1}%
10514   \endgroup%
10515 }
```

\LWR@currentautosecpageref {*label*} Returns the \LWR@currentautosecpage for this label:

```
10516 \newcommand*{\LWR@currentautosecpageref}[1]{%
10517     \expandafter\LWR@setref\csname r@#1@lwarf\endcsname\LWR@secondoffive{#1}%
10518 }
```

\LWR@htmlfileref {*label*} Returns the file number or name for this label:

```
10519 \newcommand*{\LWR@htmlfileref}[1]{%
10520     \expandafter\LWR@setref\csname r@#1@lwarf\endcsname\LWR@thirdoffive{#1}%
10521 }
```

\LWR@lateximagedepthref {*label*} Returns the \lateximagedepth for this label:

```
10522 \newcommand*{\LWR@lateximagedepthref}[1]{%
10523     \expandafter\LWR@setref\csname r@#1@lwarf\endcsname\LWR@fourthoffive{#1}%
10524 }
```

\LWR@lateximagenumberref {*label*} Returns the \lateximagenumber for this label:

```
10525 \newcommand*{\LWR@lateximagenumberref}[1]{%
10526     \expandafter\LWR@setref\csname r@#1@lwarf\endcsname\LWR@fifthoffive{#1}%
10527 }
```

\LWR@write@lwarplabel {*label*} Sanitize the name and then creates the label:

```
10528 \newcommand*{\LWR@write@lwarplabel}[1]{%
10529     \LWR@traceinfo{\LWR@write@lwarplabel !#1!}%
10530     \LWR@setlatestname{@currentlabelname}%
10531     \@bsphack%
10532     \protected@write\@auxout{}{%
10533         {%
10534             \string\newlabel{#1@lwarf}{%
10535                 {@currentlabelname}%
10536                 {\the\LWR@currentautosecpage}%
10537                 {%
10538                     \ifbool{FileSectionNames}{%
10539                         {\LWR@thisfilename}%
10540                         {\arabic{\LWR@htmlfilenumber}}%
10541                     }%
10542                     {\arabic{\LWR@lateximagedepth}}%
10543                     {\arabic{\LWR@lateximagenumber}}%
10544                 }%
10545             }%
10546             \@esphack%
10547 }
```

76.3 Labels

\LWR@label@subcreatetag Creates the tag from \LWR@sanitized.

```
10548 \newcommand*{\LWR@label@subcreatetag}{%
10549     \LWR@htmltag{a \LWR@print@mbox{id=\textquotedbl\textquotedbl}\LWR@sanitized\textquotedbl\textquotedbl}%
10550     \LWR@htmltag{/a}%
10551 }
```

\LWR@label@inmathcomment

```
10552 \newcommand*{\LWR@label@inmathcomment}{%
10553     \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }{%
10554     {%
```

The combined L^AT_EX & HTML label is printed in a \mbox field:

```
10555     \mbox{%
```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
10556     \ifdef{\totwidth}{\ifbool{LWR@amsmultiline}{}{\hspace*{\totwidth}}}{}
```

Temporarily end the HTML comment, insert the L^AT_EX & HTML label, then resume the HTML comment. \@firstofone is required to remove extra braces introduced by the amsmath package.)

```
10557         \LWR@htmclosecomment%
10558         \LWR@label@subcreatetag%
10559         \LWR@htmopencomment%
10560     }% mbox
10561 }% mathjax
10562 {%
10563     \LWR@label@subcreatetag%
10564 }%
10565 }
```

\LWR@label@createtag {<*label*>} Creates an HTML id tag.

Used by \LWR@new@label and \hyperdef.

\detokenize is used to allow underscores in the labels.

```
10566 \newcommand*{\LWR@label@createtag}[1]{%
10567     \LWR@traceinfo{LWR@label@createtag !#1!}}
```

Create an HTML id tag unless are inside a lateximage, since it would appear in the image:

```
10568     \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{%
10569     {}%
10570     {%
10571         \LWR@sanitize{#1}%
10572         \ifbool{LWR@insidemathcomment}{%
10573             {%
10574                 \LWR@label@inmathcomment%
10575             }%
10576             \LWR@label@subcreatetag%
10577             \ifbool{LWR@doingstartpars}{%
10578                 {%
10579                     \ifbool{LWR@doingapar}{%
10580                         {%
10581                             \LWR@label@subcreatetag%
```

If not doing a lateximage, create an HTML ID tag.

```
10571         \LWR@sanitize{#1}%
10572         \ifbool{LWR@insidemathcomment}{%
10573             {%
10574                 \LWR@label@inmathcomment%
10575             }%
10576             \LWR@label@subcreatetag%
10577             \ifbool{LWR@doingstartpars}{%
10578                 {%
10579                     \ifbool{LWR@doingapar}{%
10580                         {%
10581                             \LWR@label@subcreatetag%
```

```

10582          }% par started
10583          { % par not started
10584              \LWR@stoppars%
10585              \LWR@label@subcreatetag%
10586              \LWR@startpars%
10587          }% par not started
10588          }% pars allowed
10589          { % pars not allowed
10590              \LWR@label@subcreatetag%
10591          }% pars not allowed
10592          }% not inside HTML math comment
10593      }% not lateximage
10594 }

```

\LWR@new@label {\langle label \rangle}

\Label during HTML output when not in SVG math mode, removing extra spaces around the label, as done by a regular L^AT_EX \label.

The is also used during a lateximage, including SVG math, since the special label handling is required, but \LWR@label@createtag does not generate HTML tags inside a lateximage.

clevereref later encases this to add its own cross-referencing.

nameref patches are undone \AtBeginDocument.

```

10595 \newcommand*{\LWR@new@label}[1]{%
10596     \LWR@traceinfo{\LWR@new@label: starting}%
10597     \LWR@traceinfo{\LWR@new@label: !#1!}%
10598 % \@bsphack%

```

Create a traditional L^AT_EX label, as modified by cleveref:

```
10599 \LWR@orig@label{#1}%
```

Create a special label which holds the section number, section name, LWR@htmlfilename, LWR@lateximagedept, and LWR@lateximagenumber:

```

10600 \LWR@traceinfo{%
10601     LWR@new@label: filesectionnames is %
10602     \ifbool{FileSectionNames}{true}{false}%
10603 }%
10604 \LWR@traceinfo{%
10605     LWR@new@label: LWR@thisfilename is !\LWR@thisfilename!%
10606 }%
10607 \LWR@traceinfo{%
10608     LWR@new@label: LWR@htmlfilename is \arabic{LWR@htmlfilename}%
10609 }%
10610 \LWR@write@lwarplabel{#1}%
10611 \LWR@label@createtag{#1}%
10612 % \@esphack%
10613 \LWR@traceinfo{\LWR@new@label: done}%
10614 }

```

76.4 References

```
\LWR@addlinktitle

10615 \newcommand*\LWR@addlinktitle{%
10616   \ifdefvoid{\LWR@ThisAltText}{}{ % space
10617     title=\textquotedbl\text{\LWR@ThisAltText}\textquotedbl\ % space
10618     \gdef\LWR@ThisAltText{}%
10619   }%
10620 }
```

\LWR@startref {*(label)*} (Common code for \ref and \nameref.)

Open an HTML tag reference to a filename, # character, and a label.

```
10621 \newcommand*\LWR@startref[1]{%
10622 {%
10623   \LWR@sanitize{#1}%
10624   \LWR@traceinfo{\LWR@startref A: !#1!}%
}
```

Create the filename part of the link:

```
10625   \LWR@htmltag{a href=\textquotedbl%
10626     \LWR@traceinfo{\LWR@startref B}%
10627     \LWR@print@mbox{\LWR@htmlrefsectionfilename{#1}}%
10628     \LWR@traceinfo{\LWR@startref C}%
10629     \LWR@origpound%
```

Create the destination id:

See if \LWR@lateximagedepth is unknown:

```
10630   \LWR@traceinfo{\LWR@startref D: !#1!}%
10631   \ifcsundef{r@#1@l warp}{%
```

“??” if \LWR@lateximagedepth is unknown, so create a link with an unknown destination:

```
10632   {%
10633     \LWR@traceinfo{\LWR@startref D0: ??}%
10634     ??%
10635   }%
```

If \LWR@lateximagedepth is known. Use a lateximage if the depth is greater than zero, or a regular link otherwise:

(Using `xifthen \ifthenelse` here failed in some cases, but `etoolbox \ifnumgreater` works.)

```
10636   {%
10637     \ifnumgreater{\LWR@lateximagedepthref{#1}}{0}{%
10638       {%
10639         lateximage-\BaseJobname-\LWR@lateximagenumberref{#1}%
10640       }%
10641       {%
10642         \LWR@traceinfo{\LWR@startref D3}%
}}
```

\detokenize is used to allow underscores in the labels:

```
10643           \LWR@print@mbox{\LWR@sanitized}%
10644           }%
10645           }%
10646           \LWR@traceinfo{\LWR@startref E}%
```

Closing quote:

```
10647   \textquotedbl%
```

Maybe add a title:

```
10648   \LWR@addlinktitle%
10649   }%
10650   \LWR@traceinfo{\LWR@startref F}%
10651 }
```

\LWR@subnewref {\langle label \rangle} {\langle label or sub@label \rangle}

Factored for the subfig package. Uses the original label for the hyper-reference, but prints its own text, such as “1(b)”.

```
10652 \NewDocumentCommand{\LWR@subnewref}{m m}{%
10653   \LWR@traceinfo{\LWR@subnewref #1 #2}%
10654   \LWR@startref{#1}%
10655   \LWR@print@ref{#2}%
10656   \LWR@htmltag{/a}%
10657 }
```

\ref * {\langle label \rangle}

\ref is redefined to \LWR@HTML@ref, except inside the text part of a \hyperref, where it is redefined to \LWR@ref@ignorestar.

\LWR@HTML@ref * {\langle label \rangle} Create an internal document reference link, or without a link if starred per hyperref.

The HTML version:

```
10658 \NewDocumentCommand{\LWR@HTML@ref}{s m}{%
10659   \LWR@traceinfo{\LWR@HTML@ref !#2!}%
10660   \IfBooleanTF{#1}%
10661     {\LWR@print@ref{#2}}%
10662     {\LWR@subnewref{#2}{#2}}%
10663 }
10664
10665 \AtBeginDocument{**8*}
10666 \LWR@formatted{ref}
10667 }
10668
10669 \NewDocumentCommand{\LWR@HTML@Ref}{s m}{%
10670   \LWR@traceinfo{\LWR@HTML@Ref !#2!}%
10671   \IfBooleanTF{#1}%
10672     {\LWR@print@Ref{#2}}%
10673     {\LWR@subnewref{#2}{#2}}%
10674 }
```

```

10675
10676 \AtBeginDocument{%
10677 \LWR@formatted{Ref}
10678 }

```

\LWR@refwithsection * {*<label>*}

Creates a reference, printing the section number as the text. Used for back references.

```

10679 \NewDocumentCommand{\LWR@refwithsection}{s m}{%
10680     \LWR@traceinfo{\LWR@refwithsection !#2!}%

```

If starred, just use the text without a hyperlink:

```

10681     \IfBooleanTF{#1}{%
10682         {\LWR@print@ref{\BaseJobname-autopage-\LWR@currentautosecpageref{#2}}}}%

```

If not starred: Check for a reference to the start of the document. (Generated by backref.

```

10683     {% not starred
10684         \ifstreq{\#2}{Doc-Start}{%
10685             %
10686             \LWR@startref{\BaseJobname-autopage-1}%
10687             *%
10688             \LWR@htmltag{/a}%
10689         }%
10690         {% not Doc-Start

```

Open the reference:

```
10691         \LWR@startref{#2}%
```

Add the text of the link.

Check for and handle an undefined reference:

```

10692         \edef\@tempa{\LWR@currentautosecpageref{#2}}%
10693         \ifdefstring{\@tempa}{??}{%
10694             {??}%

```

For a defined reference:

```
10695             {% not ??
```

Set \@tempa to \r@<label>, which is {section number}{page number}{name}{Href}{}.

```

10696         \edef\@tempa{\csexpandonce{r@\BaseJobname-autopage-\@tempa}}%
10697             \expandafter\LWR@edeffirstoffive\@tempa%

```

Check the section number alone:

If the reference has no section number print an asterisk:

```

10698             \expandafter\ifblank\expandafter{\@tempa}{%
10699                 {*}%

```

If there is a section number, print it:

```

10700          {%
10701              \LWR@print@ref{%
10702                  \BaseJobname-autopage-\LWR@currentautosecpageref{#2}%
10703                      }%
10704              }%
10705          }% not ??

```

Close the reference:

```

10706          \LWR@htmlltag{/a}%
10707      }% not Doc-Start
10708      }% not starred
10709 }

```

For MATHJAX:

```

10710 \CustomizeMathJax{\let\LWRref\ref}
10711 \CustomizeMathJax{\renewcommand{\ref}{\ifstar\LWRref\LWRref}}

```

\pagerefPageFor Text for page references.

```
10712 \newcommand*{\pagerefPageFor}{see }
```

\pageref * {*label*} Create an internal document reference, or just the unlinked number if starred, per `hyperref`.

```

10713 \NewDocumentCommand{\LWR@new@pageref}{s m}{%
10714     \IfBooleanTF{#1}{%
10715         {(\pagerefPageFor\LWR@print@ref{#2})}%
10716         {(\cpageref{#2})}%
10717 }

```

\nameref {*label*}

`nameref` may have already defined `\nameref`. Redefine it here.

```

10718 \providecommand{\nameref}[1]{%
10719
10720 \renewrobustcmd*{\nameref}[1]{%
10721     \LWR@traceinfo{\nameref}%
10722     \LWR@startref{#1}%
10723     \LWR@traceinfo{\nameref B}%
10724     \LWR@nameref{#1}%
10725     \LWR@traceinfo{\nameref C}%
10726     \LWR@htmlltag{/a}%
10727     \LWR@traceinfo{\nameref: done}%
10728 }

```

\Nameref {*label*} In print, adds the page number. In HTML, does not.

Overwrites `nameref` definition if already defined.

```
10729 \LetLtxMacro{\Nameref}{\nameref}
```

\NR@getttitle {\text} From nameref, used by caption.

```
10730 \def\NR@getttitle#1{%
10731   \GetTitleString{#1}%
10732   \let\@currentlabelname\GetTitleStringResult
10733 }
```

76.5 Hyper-references

 Note that the code currently only sanitizes the underscore character. Additional characters should be rendered inert as well. See the `hyperref.sty` definition of `\gdef\hyper@normalise` for an example.

`hyperref (Pkg)`

 Do not tell other packages that `hyperref` is emulated. Some packages patch various commands if `hyperref` is present, which will probably break something, and the emulation already handles whatever may be emulated anyhow.

```
10734 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it:
10735 % \EmulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.
```

Emulates `hyperref`:

`\@currentHref` Added to support backref.

```
10736 \AtBeginDocument{%
10737   \def\@currentHref{\BaseJobname-autopage-\theLWR@previousautopagelabel}%
10738 }
```

`\LWR@linkcatcodes` Sets catcodes before processing macros which have hyperlinks as arguments.

```
10739 \newcommand*{\LWR@linkcatcodes}{%
10740   \catcode`\#=12%
10741   \catcode`\%=12%
10742   \catcode`\&=12%
10743   \catcode`\~=12%
10744   \catcode`\_=12%
```

For `babel-french`:

```
10745   \LWR@hook@processingtags%
10746 }
```

`\LWR@linkmediacatcodes` Sets catcodes before processing macros which have hyperlinks as arguments. Modified for multimedia links.

```
10747 \newcommand*{\LWR@linkmediacatcodes}{%
10748   \catcode`\#=12%
10749   \catcode`\%=12%
10750 %   \catcode`\&=12% left alone for splitting flash variables
10751   \catcode`\~=12%
10752   \catcode`\_=12%
```

For babel-french:

```
10753     \LWR@hook@processingtags%
10754 }
```

\LWR@subhyperref {⟨URL⟩}

Starts a link for \LWR@hrefb. A group must have been opened first, with nullified catcodes. The text name is printed afterwards, after the group is closed and catcodes restored.

```
10755 \NewDocumentCommand{\LWR@subhyperref}{m}{%
10756     \LWR@traceinfo{\LWR@subhyperref !#1!}%
10757     \edef\tmpb{\detokenize\expandafter{\#1}}%
10758     \LWR@HTMLsanitize@\tmpb%
10759     \LWR@htmltag{%
10760         a href=\textquotedbl\tmpb\textquotedbl\ % space
10761         \LWR@addlinktitle % space
10762         target=\textquotedbl\_{}blank\textquotedbl\ % space
10763     }%
10764 }
```

\LWR@subhyperreftext@sanitized {⟨text⟩}

Finishes the hyperref for \LWR@hrefb. Catcodes must have been restored already. To be used after \LWR@subhyperref, and after its group has been closed.

```
10765 \newcommand{\LWR@subhyperreftext@sanitized}[1]{%
10766     \edef\tmpb{\#1}%
10767     \LWR@HTMLsanitize@\tmpb%
10768     \tmpb%
10769     \LWR@htmltag{/a}%
10770     \LWR@ensuredoingapar%
10771 }
```

\LWR@subhyperreftext@unsanitized {⟨text⟩}

Finishes the hyperref for \LWR@hrefb. Catcodes must have been restored already. To be used after \LWR@subhyperref, and after its group has been closed.

```
10772 \newcommand{\LWR@subhyperreftext@unsanitized}[1]{%
10773     #1%
10774     \LWR@htmltag{/a}%
10775     \LWR@ensuredoingapar%
10776 }
```

\LWR@subhyperrefclass {⟨URL⟩} {⟨text⟩} {⟨htmlclass⟩}

```
10777 \NewDocumentCommand{\LWR@subhyperrefclass}{m +m m}{%
10778     \LWR@htmltag{%
10779         a % space
10780         href=\textquotedbl\begingroup\@sanitize#\endgroup\textquotedbl\ % space
10781         class=\textquotedbl#3\textquotedbl\ % space
10782         \LWR@addlinktitle % space
10783     }\LWR@newline%
10784     #2%
```

```

10785     \LWR@htmltag{/a}%
10786     \LWR@ensuredoingapar%
10787 }

```

\LWR@href [⟨options⟩] {⟨URL⟩} {⟨text⟩}

Create a link with accompanying text. The accompanying text is sanitized for HTML.

```

10788 \DeclareDocumentCommand{\LWR@hrefb}{O{} m}{%
10789     \LWR@ensuredoingapar%
10790     \LWR@subhyperref{#2}%
10791     \endgroup% restore catcodes

```

If use \LWR@subhyperref{text}@sanitized here, some forms of text may not expand correctly, and thus break.

```

10792     \LWR@subhyperref{text}@unsanitized% takes the following text as an argument
10793 }
10794
10795 \newrobustcmd*\LWR@href{%
10796     \begingroup%
10797     \LWR@linkcatcodes%
10798     \LWR@hrefb%
10799 }

```

A version which sanitizes both the URL and the text. Used by \LWR@url.

```

10800 \DeclareDocumentCommand{\LWR@hrefb@sanitized}{O{} m}{%
10801     \LWR@ensuredoingapar%
10802     \LWR@subhyperref{#2}%
10803     \endgroup% restore catcodes

```

Used by \LWR@url to sanitize the text argument before printing.

```

10804     \LWR@subhyperref{text}@sanitized% takes the following text as an argument
10805 }
10806
10807 \newrobustcmd*\LWR@href@sanitized{%
10808     \begingroup%
10809     \LWR@linkcatcodes%
10810     \LWR@hrefb@sanitized%
10811 }

```

\LWR@href@partsanitized [⟨options⟩] {⟨URL⟩} {⟨text⟩}

Create a link with accompanying text. The accompanying text is not sanitized, for use internally with algorithmically derived tags.

```

10812 \DeclareDocumentCommand{\LWR@hrefb@partsanitized}{O{} m}{%
10813     \LWR@ensuredoingapar%
10814     \LWR@subhyperref{#2}%
10815     \endgroup% restore catcodes
10816     \LWR@subhyperref{text}@unsanitized% takes the following text as an argument
10817 }
10818
10819 \newrobustcmd*\LWR@href@partsanitized{%

```

```

10820      \begingroup%
10821      \LWR@linkcatcodes%
10822      \LWR@hrefb@partsanitized%
10823 }

```

\LWR@nolinkurl {⟨URL⟩}

Print the name of the link without creating the link:

```

10824 \newcommand*{\LWR@nolinkurlb}[1]{%
10825     \LWR@ensuredoingapar%
10826     \edef\tmpb{\#1}%
10827     \LWR@HTMLsanitize@tmpb%
10828     \tmpb%
10829     \endgroup%
10830 }
10831
10832 \newrobustcmd*{\LWR@nolinkurl}{%
10833     \begingroup%
10834     \LWR@linkcatcodes%
10835     \LWR@nolinkurlb%
10836 }

```

\LWR@url {⟨URL⟩}

Create a link whose text name is the address of the link.

The url package may redefine \url, so it is \let to \LWR@urlahere and also redefined by l warp-url.

```

10837 \DeclareDocumentCommand{\LWR@urlb}{m}{%
10838     \LWR@ensuredoingapar%
10839     \LWR@href@sanitized{\#1}{\#1}%
10840     \endgroup%
10841 }
10842
10843 \newrobustcmd*{\LWR@url}{%
10844     \begingroup%
10845     \LWR@linkcatcodes%
10846     \LWR@urlb%
10847 }

```

\LWR@subinlineimage {⟨1: alt tag⟩} {⟨2: class⟩} {⟨3: filename⟩} {⟨4: extension⟩} {⟨5: css style⟩} {⟨6: aria role⟩}

Factored from \teximage.

```

10848 \newcommand*{\LWR@subinlineimage}[6]{%
10849     \begingroup%
10850     \boolfalse{\LWR@HTMLsanitize@tmpb@removebackslash}%
10851     \ifblank{\#6}{%
10852         {\renewcommand*{\LWR@tempone}{}{}}%
10853         {\renewcommand*{\LWR@tempone}{\role="#6"\LWR@indentHTML}{}}%
10854     \ifblank{\#1}{%
10855         {%
10856             \LWR@htmltag{img \LWR@indentHTML%
10857                 src=\textquotedbl#3.\#4\textquotedbl \LWR@indentHTML%
10858                 alt=\textquotedbl#3\textquotedbl \LWR@indentHTML%

```

```
10859          \LWR@tempone
10860          style=\textquotedbl#5\textquotedbl \LWR@indentHTML
10861          class=\textquotedbl#2\textquotedbl \LWR@newline
10862      }%
10863  }%
10864  {%
10865      \LWR@htmltag{img \LWR@indentHTML
10866          src=\textquotedbl#3.#4\textquotedbl \LWR@indentHTML
10867          alt=\textquotedbl#1\textquotedbl \LWR@indentHTML
10868          \LWR@tempone
10869          style=\textquotedbl#5\textquotedbl \LWR@indentHTML
10870          class=\textquotedbl#2\textquotedbl \LWR@newline
10871      }%
10872  }%
10873  \endgroup%
10874 }

10875 \end{warpHTML}
```

Table 17: Float data structures

For each <type> of float (figure, table, etc.) there exists the following:

counter <type>: A counter called <type>, such as figure, table.

\<type>name: Name. \figurename prints “Figure”, etc.

\ext@<type>: File extension. \ext@figure prints “lof”, etc.

\fps@<type>: Placement.

\the<type>: Number. \thetable prints the number of the table, etc.

\p@<type>: Parent’s number. Prints the number of the [within] figure, etc.

\fnum@<type>: Prints the figure number for the caption.
\<type>name \the<type>, “Figure 123”.

\<type>: Starts the float environment. \figure or \begin{figure}

\end<type>: Ends the float environment. \endfigure or \end{figure}

\tf@<ext>: The L^AT_EX file identifier for the output file.

\LWR@have<type>: A boolean remembering whether a \listof was requested for a float of this type.

File with extension lo<f,t,a-z>: An output file containing the commands to build the \listof<type> “table-of-contents” structure.

Cross-referencing names: For cleveref’s \cref and related, \crefname and \Crefname assign human-readable names for references to this float type.

77 Floats

Floats are supported, although partially through emulation.

Table 17 shows the data structure associated with each <type> of float.

77.1 Float environment

for HTML output¹⁰⁸⁷⁶ \begin{warpHTML}

\LWR@floatbegin {\<type>} [<placement>] Begins a \newfloat environment.

10877 \NewDocumentCommand{\LWR@floatbegin}{m o}{%

Warn if starting a float inside a :

10878 \LWR@spanwarninvalid{float}%

10879 \ifbool{FormatWP}{\newline}{}

10880 \LWR@stoppars%

There is a new float, so increment the unique float counter:

```
10881     \addtocounter{LWR@thisautoid}{1}%
10882     \booltrue{LWR@freezethisautoid}%
10883     \begingroup%
```

Settings while inside the environment:

```
10884     \LWR@print@raggedright%
```

Open an **HTML figure** tag. The figure is assigned a `class` equal to its type, and another class according to the `float` package style, if used. Note that `\csuse` returns an empty string if `\LWR@floatstyle@<type>` is not defined.

```
10885     \LWR@htmlltag{%
10886         figure id=\textquotedbl%
10887             \LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}%
10888             \textquotedbl\ % space
10889             class=\textquotedbl#1 \nameuse{LWR@floatstyle@#1}\textquotedbl%
10890         }%
10891         \ifbool{FormatWP}{%
10892             \LWR@newline%
10893             \LWR@BlockClassWP{}{}{wp#1}%
10894     }{}%
```

Update the caption type:

```
10895     \renewcommand*{\@capttype}{#1}%
```

Mark the float for a word processor conversion:

```
10896     \LWR@startpars%
10897     \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
10898     === begin #1 ===
10900
10901     }{}%
```

After each `\LWR@floatbegin`, look for `\centering`, etc next, using `\LWR@floatalignment`.

```
10902 }
```

For **koma-script**. The following does not work for tables.

```
10903 \AtBeginDocument{
10904
10905 \IfPackageLoadedTF{tocbasic}{
10906
10907 \appto\figure@atbegin{%
10908     \LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment%
10909 }
10910
10911 }{}% tocbasic
10912
10913 }% AtBeginDocument
```

\@xfloat Support packages which create floats directly.
 \@xdlbfloat Look for \centering, etc using \LWR@floatalignment.

```

10914 \AtBeginDocument{
10915   \def\@xfloat #1[#2]{%
10916     \LWR@floatbegin{#1}[#2]
10917     \LWR@futurenonospacelet\LWR@mynexttoken\LWR@floatalignment%
10918   }
10919   \def\@dblfloat #1[#2]{%
10920     \LWR@floatbegin{#1}[#2]
10921     \LWR@futurenonospacelet\LWR@mynexttoken\LWR@floatalignment%
10922   }
10923 }
```

\LWR@floatend Ends a \newfloat environment.

```
10924 \newcommand*\{\LWR@floatend}{%
```

If saw a \centering, finish the center environment:

```
10925   \LWR@endfloatalignment%
```

Mark the float end for a word processor conversion:

```

10926   \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
10927
10928   === end ===
10929
10930   }{}%
10931   \LWR@stoppars%
```

Close an HTML figure tag:

```

10932   \ifbool{FormatWP}{\endLWR@BlockClassWP}{}
10933   \LWR@htmlelementend{figure}%
10934   \endgroup%
10935   \boolfalse{\LWR@freezethisautoid}%
10936   \LWR@startpars%
10937   \ifbool{FormatWP}{\newline}{}
10938 }
```

\end@float Support packages which create floats directly.
 \end@dblfloat

```

10939 \AtBeginDocument{
10940   \let\end@float\endLWR@floatend
10941   \let\end@dblfloat\endLWR@floatend
10942 }
```

77.2 Float tracking

LWR@thisautoid (Ctr) A sequential counter for all floats and theorems. This is used to identify the float or theorem then reference it from the List of Figures and List of Tables.

```
10943 \newcounter{LWR@thisautoid}
```

`\LWR@thisautoidWP (Ctr)` A sequential counter for all word processor conversion <div>s. This is used to convince LIBREOFFICE to form a frame around this element.

```
10944 \newcounter{\LWR@thisautoidWP}
```

`\LWR@freezethisautoid (bool)` Prevents multiple increments of \LWR@thisautoid inside a float.

```
10945 \newbool{\LWR@freezethisautoid}
10946 \boolfalse{\LWR@freezethisautoid}
```

`\LWR@forcenewautoidanchor` Adds a new <autoid> anchor.

```
10947 \newcommand*{\LWR@forcenewautoidanchor}{%
10948     \addtocounter{\LWR@thisautoid}{1}%
10949     \ifbool{\LWR@doingapar}{%
10950         {%
10951             \LWR@htmltag{a id=\textquotedbl%}
10952                 \LWR@print@mbox{autoid-\arabic{\LWR@thisautoid}}%
10953                 \textquotedbl\ }% space
10954             \LWR@htmltag{/a}%
10955         }%
10956     {%
10957         \LWR@stoppars%
10958         \LWR@htmltag{a id=\textquotedbl%
10959             \LWR@print@mbox{autoid-\arabic{\LWR@thisautoid}}%
10960             \textquotedbl\ }% space
10961         \LWR@htmltag{/a}%
10962         \LWR@startpars%
10963     }%
10964 }
```

`\LWR@newautoidanchor` Sometimes adds a new <autoid> anchor.

```
10965 \newcommand*{\LWR@newautoidanchor}{%
10966     \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}{%
10967         {}%
10968         \ifbool{\LWR@freezethisautoid}{}{\LWR@forcenewautoidanchor}%
10969 }
```

`\@capttype` Remembers which float type is in use.

```
10970 \newcommand*{\@capttype}{}
```

`\LWR@floatalignmentname` Set to center, flushleft, or flushright if saw \centering, \raggedright, or \raggedleft.

```
10971 \newcommand*{\LWR@floatalignmentname}{}
```

`\LWR@floatalignment` If sees a \centering, \raggedleft, or \raggedright, creates a center, flushright, or flushleft environment.

```
10972 \newcommand*{\LWR@floatalignment}{%
10973     \ifdef\streq{\LWR@mynexttoken}{\centering}{%
10974         \center%
10975         \renewcommand*{\LWR@floatalignmentname}{center}%
10976     }{}%
```

```

10977   \ifdefstreq{\LWR@mynexttoken}{\raggedright}{%
10978     \flushleft%
10979     \renewcommand*{\LWR@floatalignmentname}{flushleft}%
10980   }{%
10981   \ifdefstreq{\LWR@mynexttoken}{\raggedleft}{%
10982     \flushright%
10983     \renewcommand*{\LWR@floatalignmentname}{flushright}%
10984   }{%
10985 }

```

\LWR@endfloatalignment Closes an environment from \LWR@floatalignment.

```

10986 \newcommand*{\LWR@endfloatalignment}{%
10987   \ifdefvoid{\LWR@floatalignmentname}{%
10988     {}{%
10989     \nameuse{end\LWR@floatalignmentname}}{%
10990     \renewcommand*{\LWR@floatalignmentname}{}{%
10991 }

```

77.3 Caption inside a float environment

\CaptionSeparator How to separate the float number and the caption text, if not defined by the user.
In most cases, `caption`'s settings are used instead.

```
10992 \AtBeginDocument{\providecommand*{\CaptionSeparator}{:~}}
```

\@caption {\posn} [\name] {\long name}

\@makecaption {\name and num} {\text}

Prints the float type and number, the caption separator, and the caption text.

\@caption is provided here in case `caption` is not loaded, and is based on the `nameref` package.

```

10993 \AtBeginDocument{
10994   \IfPackageLoadedTF{caption}{}{%
10995     \let\LWR@orig@caption\caption%
10996     \long\def\@caption#1[#2]{%

```

Warn if using a caption inside a :

```

10997           \LWR@spanwarnformat{caption}%
10998           \LWR@setlatestname{#2}%
10999           \LWR@orig@caption{#1}[{#2}]% also takes third argument
11000         }{%
11001         \renewcommand{\@makecaption}[2]{%
11002           \LWR@traceinfo{@makecaption}%
11003           \caption@begin{@capttype}%
11004           \LWR@isolate{#1}%
11005           \edef\LWR@tempone{#1}%
11006           \ifdefvoid{\LWR@tempone}{}{\CaptionSeparator}%
11007           \LWR@isolate{#2}%

```

```

11009          \caption@end%
11010          \LWR@traceinfo{@makecaption: done}%
11011      }%
11012  }
11013 }
```

77.4 Caption and lof linking and tracking

When a new HTML file is marked in the L^AT_EX PDF file, or at the start of a new section, the L^AT_EX PDF page number at that point is stored in `LWR@currentautosecfloatpage`, (and the associated filename is remembered by the special L^AT_EX labels). This page number is used to generate an autopage HTML `<id>` in the HTML output at the start of the new HTML file or section. Meanwhile, there is a float counter used to generate an HTML autoid `<id>` at the start of the float itself in the HTML file. The autopage and autoid values to use for each float are written to the `.lof`, etc. files just before each float's entry. These values are used by `\l@figure`, etc. to create the HTML links in the List of Figures, etc.

- `LWR@nextautoid (Ctr)` Tracks autoid for floats. Tracks autopage for floats.
- `LWR@nextautopage (Ctr)` These are updated per float as the `.lof`, `.lot` file is read.

```

11014 \newcounter{LWR@nextautoid}
11015 \newcounter{LWR@nextautopage}
```

`\LWRsetnextfloat {<autopage>} {<float autoid>}`

- `*_html.lof (file)` This is written to the `*_html.lof` or `*_html.lot` file just before each float's usual `*_html.lot (file)` entry. The autopage and the float's autoid are remembered for `\l@figure` to use when creating the HTML links.

```

11016 \newcommand*{\LWRsetnextfloat}[2]{%
11017     \setcounter{LWR@nextautopage}{#1}%
11018     \setcounter{LWR@nextautoid}{#2}%
11019 }
```

- `LWR@figcaption (env.)` An HTML `<figcaption>` is not allowed in places where L^AT_EX does allow a figure caption, such as inside a `longtable` where the tabular has already started, or inside a `center` environment. Therefore, a `<div>` of class `figurecaption` is used instead.

```

11020 \newenvironment*{\LWR@figcaption}{%
11021     {%
11022         \ifbool{FormatWP}{%
11023             \BlockClass[font-style:italic]{figurecaption}%
11024         }{%
11025             \BlockClass{figurecaption}%
11026         }%
11027     }%
11028 }
```

Inside the caption, temporarily prevent underfull `\hbox` warnings, such as when the caption contains a math SVG image.

```

11027     \hbadness=10000\relax%
11028 }
11029 {\endBlockClass}
```

```
\LWR@HTML@caption@begin {<type>}
```

Low-level code to create HTML tags for captions.

The print versions are from the `caption` package, if loaded.

```
11030 \newcommand*\LWR@HTML@caption@begin}[1]
11031 {%
11032     \LWR@traceinfo{\LWR@HTML@caption@begin}%

```

Keep par and minipage changes local:

```
11033     \begingroup%
```

No need for a `minipage` or `\parbox` inside the caption:

```
11034     \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}{}{%
11035         \RenewDocumentCommand{\parbox}{O{t} O{} O{t} m +m}##5}%

```

Enclose the original caption code inside an HTML tag:

```
11036     \LWR@figcaption%
11037     \LWR@traceinfo{\LWR@HTML@caption@begin: about to \LWR@origcaption@begin}%
11038     \LWR@print@caption@begin{#1}%
11039     \LWR@traceinfo{\LWR@HTML@caption@begin: done}%
11040 }
```

`\LWR@HTML@caption@end` Low-level patches to create HTML tags for captions.

```
11041 \newcommand*\LWR@HTML@caption@end}
11042 {%
11043     \LWR@traceinfo{\LWR@HTML@caption@end}%
11044     \LWR@print@caption@end%
```

Closing tag:

```
11045     \endLWR@figcaption%
11046     \endgroup%
11047     % \leavevmode% avoid bad space factor (0) error
11048     \LWR@traceinfo{\LWR@HTML@caption@end: done}%
11049 }
```

`\caption@begin` Low-level patches to create HTML tags for captions. These are assigned `\AtBeginDocument` `\caption@end` so that other packages which modify captions will have already been loaded before saving the print-mode version.

Print versions are provided here in case `caption` is not loaded.

```
11050 \AtBeginDocument{
11051     \providecommand{\caption@begin}[1]{}
11052     \LWR@formatted{caption@begin}
11053
11054     \providecommand{\caption@end}{}
11055     \LWR@formatted{caption@end}
11056 }
```

\captionlistentry Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```

11057 \AtBeginDocument{%
11058 \IfPackageLoadedTF{caption}{%
11059   \let\LWR@origcaptionlistentry\captionlistentry
11060
11061   \renewcommand*\captionlistentry{%
11062     \LWR@ensuredoingapar%
11063     \LWR@origcaptionlistentry%
11064   }
11065
11066   \def\LWR@LTcaptionlistentry{%
11067     \LWR@ensuredoingapar%
11068     \LWR@forcenewautoidanchor%
11069     \bgroup%
11070       \@ifstar{\egroup\LWR@LT@captionlistentry}{% gobble *
11071         {\egroup\LWR@LT@captionlistentry}%
11072       }%
11073   \def\LWR@LT@captionlistentry#1{%
11074     \caption@listentry@firstoftwo[\LTcaptype]{#1}%
11075   }%
11076 }% caption loaded
11077 {%
11078   \newcommand{\captionlistentry}[2][]{%
11079     \newcommand{\LWR@LT@captionlistentry}[2][]{%
11080   }%
11081 }% AtBeginDocument

```

\addcontentsline Patched to write the autopage and autoid before each float's entry. No changes if writing . toc For a theorem, automatically defines \ext@<type> as needed, to mimic and reuse the float mechanism.

f

```

11082 \let\LWR@origaddcontentsline\addcontentsline
11083
11084 \renewcommand*\addcontentsline[3]{%
11085   \ifstreq{\#1}{toc}{% not TOC
11086     \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}{%
11087       {}%
11088       {\LWR@newautoidanchor}%
11089     \ifcsvvoid{\ext@#2}{\csdef{\ext@#2}{\#1}}{%
11090       \addtocontents{\@nameuse{\ext@#2}}{%
11091         \protect\WRsetnextfloat%
11092         {\arabic{\LWR@currentautosecfloatpage}}%
11093         {\arabic{\LWR@thisautoid}}%
11094       }%
11095     }% not TOC
11096     \LWR@origaddcontentsline{\#1}{\#2}{\#3}%
11097   }%

```

capt-of (*Pkg*) Either package provides \captionof, which is later patched at the beginning of
 caption (*Pkg*)

the document.

\captionof Patched to handle paragraph tags.

```

11098 \RequirePackage{capt-of}
11099
11100 \AtBeginDocument{
11101     \let\LWR@origcaptionof\captionof
11102
11103     \renewcommand*\captionof[]{%
11104         \LWR@stoppars%
11105         \LWR@origcaptionof%
11106     }
11107 }% AtBeginDocument

11108 \end{warpHTML}

```

78 Table of Contents, LOF, LOT

This section controls the generation of the TOC, LOF, and LOT.

The .toc, .lof, and .lot files are named by the source code \jobname.

In HTML, the printed tables are placed inside a <div> of class toc, lof, or lot.

A “sidetoc” is provided which prints a subset of the TOC on the side of each page other than the homepage.

The regular L^AT_EX infrastructure is used for TOC, along with some patches to generate HTML output.

for HTML output 1109 \begin{warpHTML}

78.1 Reading and printing the TOC

\LWR@myshorttoc {\langle toc/lof/lot/sidetoc\rangle}

Reads in and prints the TOC/LOF/LOT at the current position. While doing so, makes the @ character into a normal letter to allow formatting commands in the section names.

Unlike in regular L^AT_EX, the file is not reset after being read, since the sidetoc may be referred to again in each HTML page.

```

11110 \newcommand*\LWR@myshorttoc[1]{%
11111     \LWR@traceinfo{\LWR@myshorttoc: #1}%

```

Only if the file exists:

```

11112     \IfFileExists{\jobname.#1}{%
11113         \LWR@traceinfo{\LWR@myshorttoc: loading}%

```

 Many of the commands in the file will have @ characters in them, so @ must be

made a regular letter.

```
11114      \begingroup%
11115      \makeatletter%
```

Disable \ref to avoid nested HTML references.

```
11116      \LetLtxMacro\ref\LWR@print@ref%
11117      \LWR@disablepinyin%
```

Read in the TOC file:

```
11118      \@input{\jobname.\#1}%
11119      \endgroup%
11120      }%
11121      {}%
11122      \LWR@traceinfo{\LWR@myshorttoc: done}%
11123 }
```

\LWR@subtableofcontents {\<toc/lof/lot>} {\<sectionstarname>}

Places a TOC/LOF/LOT at the current position.

```
11124 \NewDocumentCommand{\LWR@subtableofcontents}{m m}{%
```

Closes previous levels:

```
11125      \@ifundefined{chapter}%
11126      {\LWR@closeprevious{section}}%
11127      {\LWR@closeprevious{chapter}}%
```

Prints any pending footnotes so that they appear above the potentially large TOC:

```
11128      \LWR@printpendingfootnotes%
```

Place the list into its own chapter (if defined) or section:

```
11129      \@ifundefined{chapter}{\section*{\#2}}{\chapter*{\#2}}%
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
11130      \LWR@htmlelementclass{nav}{\#1}%
```

Create the actual list:

```
11131      \LWR@myshorttoc{\#1}%
```

Close the nav:

```
11132      \LWR@htmlelementclassend{nav}{\#1}%
11133 }
```

\@starttoc {\<ext>}

Patch \@starttoc to encapsulate the TOC inside HTML tags:

```

11134 \let\LWR@orig@starttoc\@starttoc
11135
11136 \renewcommand{\@starttoc}[1]{
11137     \LWR@htmlelementclass{nav}{#1}%
11138     \LWR@orig@starttoc{#1}%
11139     \LWR@htmlelementclassend{nav}{#1}%
11140 }

```

`\LWR@copiedsidetoc (bool)` Used to only copy the toc file to the sidetoc a single time.

(`listings` and perhaps other packages would re-use `\tableofcontents` for their own purposes, causing the sidetoc to be copied more than once, and thus end up empty.)

```

11141 \newbool{\LWR@copiedsidetoc}
11142 \boolfalse{\LWR@copiedsidetoc}

```

`\tableofcontents` Patch `\tableofcontents`, etc. to print footnotes first. `newfloat` uses `\listoffigures` for all future float types.

```

11143 \AtBeginDocument{
11144
11145 \LetLtxMacro{\LWR@origtableofcontents}\tableofcontents
11146
11147 \renewcommand*{\tableofcontents}{%

```

Do not print the table of contents if formatting for a word processor, which will presumably auto-generate its own updated table of contents:

```

11148     \ifboolexpr{bool{FormatWP} and bool{WPMarkTOC}}{
11149         === table of contents ===
11150     }
11151
11152     }
11153     {

```

Copy the `.toc` file to `.sidetoc` for printing the sidetoc. The original `.toc` file is renewed when `\tableofcontents` is finished.

```

11154     \ifbool{\LWR@copiedsidetoc}{}{%
11155         \LWR@copyfile{\jobname.toc}{\jobname.sidetoc}%
11156         \booltrue{\LWR@copiedsidetoc}%
11157     }%
11158     \LWR@printpendingfootnotes

```

Disable `\ref` to avoid nested HTML references.

```

11159     \begingroup%
11160     \LetLtxMacro{\ref}{\LWR@print@ref}%
11161     \LWR@disablepinyin%
11162     \LWR@origtableofcontents%
11163     \endgroup%
11164     }
11165 }% \tableofcontents
11166
11167 }% AtBeginDocument

```

```
\listoffigures
```

```
11168 \let\LWR@origlistoffigures\listoffigures
11169
11170 \renewcommand*\listoffigures{%
11171   \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{%
11172
11173   === list of figures ===
11174
11175   }%
11176   {%
11177     \LWR@printpendingfootnotes
```

Disable \ref to avoid nested HTML references.

```
11178   \begingroup%
11179   \LetLtxMacro\ref\LWR@print@ref%
11180   \LWR@disablepinyin%
11181   \LWR@origlistoffigures%
11182   \endgroup%
11183 }
11184 }
```

```
\listoftables
```

```
11185 \let\LWR@origlistoftables\listoftables
11186
11187 \renewcommand*\listoftables{%
11188   \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{%
11189
11190   === list of tables ===
11191
11192   }%
11193   {%
11194     \LWR@printpendingfootnotes
```

Disable \ref to avoid nested HTML references.

```
11195   \begingroup%
11196   \LetLtxMacro\ref\LWR@print@ref%
11197   \LWR@disablepinyin%
11198   \LWR@origlistoftables%
11199   \endgroup%
11200 }
11201 }
```

78.2 TOC commands

```
\LWR@listof {\langle type\rangle} {\langle title\rangle}
```

Emulate the \listof command from the float package (section 278). Used to create lists of custom float types. Also used to redefine the standard L^AT_EX \listoffigures and \listoftables commands, and in tocloft and memoir.

```
11202 \NewDocumentCommand{\LWR@listof}{m +m}{%
11203   \@ifundefined{l@#1}{%
```

```

11204      \csdef{l@#1}##1##2{\hypertocfloat{1}{#1}{\nameuse{ext@#1}}{##1}{##2}}%
11205      }{}%
11206      \LWR@subtableofcontents{\nameuse{ext@#1}}{#2}%
11207      \expandafter\newwrite\csname tf@\csname ext@#1\endcsname\endcsname%
11208      \immediate\openout \csname tf@\csname ext@#1\endcsname\endcsname%
11209      \jobname.\nameuse{ext@#1}\relax%
11210 }

```

78.3 Side TOC

The “side toc” is a table-of-contents positioned to the side.

It may be renamed by redefining `\sidetocname`, and may contain paragraphs.

Per table 18, css may be used to format the sidetoc.

Table 18: CSS related to the sidetoc

- `div.sidetoccontainer`: The entire sidetoc.
- `div.sidetoctitle`: The title.
- `div.sidetoccontents`: The table of contents.

```
11211 \end{warpHTML}
```

for HTML & PRINT 11212 `\begin{warpall}`

`SideTOCDepth (Ctr)` Controls how deep the side-TOC gets. Use a standard L^AT_EX section level similar to `tocdepth`. Warn if parts of the website may be inaccessible.

```

11213 \newcounter{SideTOCDepth}
11214 \setcounter{SideTOCDepth}{1}
11215
11216 \AtEndDocument{%
11217     \ifnumcomp{\value{SideTOCDepth}}{<}{\value{FileDepth}}{%
11218         \PackageWarningNoLine{lwarp}%
11219         {%
11220             SideTOCDepth is less than FileDepth, \MessageBreak%
11221             so some website pages may be inaccessible%%
11222         }%
11223     }{}%
11224 }

```

`\sidetocname` Holds the default name for the sidetoc.

```

11225 \newcommand{\sidetocname}{Contents}
11226 \end{warpall}

```

for HTML output 11227 `\begin{warpHTML}`

`\LWR@sidetoc` Creates the actual side-TOC.

```
11228 \newcommand*{\LWR@sidetoc}{%
```

```

11229      \LWR@forcenewpage
11230      \LWR@stopars
11231

```

The entire sidetoc is placed into a nav of class sidetoc.

```

11232      \LWR@htmlelementclass{div}{sidetoccontainer}
11233      \LWR@htmlelementclass{nav}{sidetoc}
11234
11235      \setcounter{tocdepth}{\value{SideTOCDepth}}
11236

```

The title is placed into a <div> of class sidetoctitle, and may contain paragraphs.

```

11237      \begin{BlockClass}{sidetoctitle}
11238      \ifcvoid{\thetitle}{}{\InLineClass{sidetocthetitle}{\thetitle}\par}
11239      \sidetocname
11240      \end{BlockClass}

```

The table of contents is placed into a <div> of class sidetoccocontents.

```

11241      \begin{BlockClass}{sidetoccocontents}
11242      \LinkHome
11243
11244      \LWR@myshorttoc{sidetoc}
11245      \end{BlockClass}
11246      \LWR@htmlelementclassend{nav}{sidetoc}
11247      \LWR@htmlelementclassend{div}{sidetoccontainer}
11248 }

```

78.4 Low-level toc line formatting

\numberline {<number>}

(Called from each line in the .aux, .lof files.)

Record this section number for further use:

```

11249 \newcommand*{\LWR@numberline}[1]{%
11250     \LWR@sectionnumber{\#1}\quad%
11251 }
11252
11253 \LetLtxMacro{\numberline}{\LWR@numberline}

```

\LWR@maybetocdata Replaced by tocdata. Adds author name.

```
11254 \newcommand*{\LWR@maybetocdata}{}%
```

\hypertoc {<1: depth>} {<2: type>} {<3: name>} {<4: page>}

Called by \l@section, etc. to create a hyperlink to a section.

The autopage label is always created just after the section opens.

#1 is depth

#2 is section, subsection, etc.

#3 the text of the caption

#4 page number

```
11255 \NewDocumentCommand{\hypertoc}{m m +m m}{%
11256     \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%

```

Respond to tocdepth:

```
11257     \ifnumcomp{#1}{>}{\value{tocdepth}}{%
11258         {}%
11259         {}%
11260         \LWR@startpars%
```

Create an HTML link to <filename>#autosec-(page), with the name, of the given HTML class.

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
11261             \LWR@subhyperrefclass{%
11262                 \LWR@htmlrefsectionfilename{\BaseJobname-autopage-#4}%
11263                     \LWR@origpound\LWR@print@mbox{autosec-#4}%
11264                     }{#3}{toc#2}%
11265             \LWR@maybetocdata%
11266             \LWR@stoppars%
11267             }%
11268             \LWR@traceinfo{hypertoc done}%
11269 }
```

`lofdepth (Ctr)` TOC depth for figures.

```
11270 \IfClassLoadedTF{memoir}{}{%
11271     \newcounter{lofdepth}%
11272     \setcounter{lofdepth}{1}%
11273 }
```

`lotdepth (Ctr)` TOC depth for tables.

```
11274 \IfClassLoadedTF{memoir}{}{%
11275     \newcounter{lotdepth}%
11276     \setcounter{lotdepth}{1}%
11277 }
```

`\hypertocfloat {<1: depth>} {<2: type>} {<3: ext of parent>} {<4: caption>} {<5: page>}`

#1 is depth

#2 is figure, table, etc.

#3 is lof, lot, of the parent.

#4 the text of the caption

#5 page number

```
11278 \newcommand{\hypertocfloat}[5]{%
```

If some float-creation package has not yet defined the float type's `lofdepth` counter, etc, define it here:

```
11279     \@ifundefined{c@#3depth}{%
11280         \newcounter{#3depth}%
11281         \setcounter{#3depth}{1}%
11282     }{}
```

Respond to `lofdepth`, etc.:

```
11283     \LWR@traceinfo{hypertocfloat depth is #1 #3depth is \arabic{#3depth}}%
11284     \ifthenelse{\cnttest{#1}{<=}{\arabic{#3depth}}}{%
11285     }%
11286     \LWR@startpars%
```

Create an HTML link to `filename#autoid-(float number)`, with text of the caption, of the given HTML class.

`\BaseJobname` is added to the label in case `xr` or `xr-hyper` are used.

```
11287     \LWR@subhyperrefclass{%
11288     \LWR@htmlrefsectionfilename{%
11289         \BaseJobname-autopage-\arabic{\LWR@nextautopage}}%
11290     }%
11291     \LWR@origpound\LWR@print@mbox{autoid-\arabic{\LWR@nextautoid}}}}%
11292     {#4}{toc#2}%

11293     \LWR@maybetocdata%

11294     \LWR@stoppars%
11295     }%
11296     {}%
11297 }
```

Automatically called by `\contentsline`:

```
\l@book {\langle name\rangle} {\langle page\rangle}
```

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\book`.

```
11298 \DeclareDocumentCommand{\l@book}{m m}{\hypertoc{-2}{book}{#1}{#2}}
```

```
\l@part {\langle name\rangle} {\langle page\rangle}
```

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\part`.

```
11299 \DeclareDocumentCommand{\l@part}{m m}{\hypertoc{-1}{part}{#1}{#2}}
```

\l@chapter {\langle name\rangle} {\langle page\rangle}

Uses \DeclareDocumentCommand in case the class does not happen to have a \chapter.

```
11300 @ifundefined{chapter}
11301 {}
11302 {
11303 \DeclareDocumentCommand{\l@chapter}{m m}
11304     {\hypertoc{0}{chapter}{#1}{#2}}
11305 }
```

\l@section {\langle name\rangle} {\langle page\rangle}

```
11306 \renewcommand{\l@section}[2]{\hypertoc{1}{section}{#1}{#2}}
```

\l@subsection {\langle name\rangle} {\langle page\rangle}

```
11307 \renewcommand{\l@subsection}[2]{\hypertoc{2}{subsection}{#1}{#2}}
```

\l@subsubsection {\langle name\rangle} {\langle page\rangle}

```
11308 \renewcommand{\l@subsubsection}[2]{\hypertoc{3}{subsubsection}{#1}{#2}}
```

\l@paragraph {\langle name\rangle} {\langle page\rangle}

```
11309 \renewcommand{\l@paragraph}[2]{\hypertoc{4}{paragraph}{#1}{#2}}
```

\l@ subparagraph {\langle name\rangle} {\langle page\rangle}

```
11310 \renewcommand{\l@ subparagraph}[2]{\hypertoc{5}{subparagraph}{#1}{#2}}
```

\l@figure {\langle name\rangle} {\langle page\rangle}

```
11311 \renewcommand{\l@figure}[2]{\hypertocfloat{1}{figure}{lof}{#1}{#2}}
```

\l@table {\langle name\rangle} {\langle page\rangle}

```
11312 \renewcommand{\l@table}[2]{\hypertocfloat{1}{table}{lot}{#1}{#2}}
```

```
11313 \end{warpHTML}
```

79 Index and glossary

See:

[http://tex.stackexchange.com/questions/187038/
how-to-mention-section-number-in-index-created-by-imakeidx](http://tex.stackexchange.com/questions/187038/how-to-mention-section-number-in-index-created-by-imakeidx)

Index links are tracked by the counter LWR@autoindex. This counter is used to create a label for each index entry, and a reference to this label for each entry in

the index listing. This method allows each index entry to link directly to its exact position in the document.

for HTML output¹¹³¹⁴ \begin{warpHTML}

```
11315 \newcounter{LWR@autoindex}
11316 \setcounter{LWR@autoindex}{0}
11317
11318 \newcounter{LWR@autoglossary}
11319 \setcounter{LWR@autoglossary}{0}
```

\IndexPageSeparator User-adjustable delimiters for page and range separators in the *.ind files.
\IndexRangeSeparator

```
11320 \newcommand*\{\IndexPageSeparator\}{, }
11321 \newcommand*\{\IndexRangeSeparator\}{--}
```

theindex (*env.*)

```
11322 \@ifundefined{chapter}
11323     {\newcommand*\{\LWR@indexsection\}[1]{\section*{\#1}}}
11324     {\newcommand*\{\LWR@indexsection\}[1]{\chapter*{\#1}}}
11325
11326
11327 \AtBeginDocument{
11328
11329 \renewenvironment*{theindex}{%
11330     \LWR@indexsection{\indexname}%
11331     \LetLtxMacro{\item}{\LWR@indexitem}%
11332     \LetLtxMacro{\subitem}{\LWR@indexsubitem}%
11333     \LetLtxMacro{\subsubitem}{\LWR@indexsubsubitem}%
11334 }{}%
11335
11336 }% AtBeginDocument
```

\LWR@indexitem [*(index key)*] The optional argument is added to support repeatindex.

```
11337 \newcommand{\LWR@indexitem}[1][\@empty]{%
11338
11339     \InlineClass{indexitem}{\LWR@htmlcomment{}#1}%
11340 }
```

\LWR@indexsubitem

```
11341 \newcommand{\LWR@indexsubitem}{%
11342
11343     \InlineClass{indexsubitem}{\LWR@htmlcomment{}%}%
11344 }
```

\LWR@indexsubsubitem

```
11345 \newcommand{\LWR@indexsubsubitem}{%
11346
11347     \InlineClass{indexsubsubitem}{\LWR@htmlcomment{}%}%
11348 }
```

\LWR@xindex@modifyentry {*(indexing term)*}

If using *xindex*, modifies the pipe character to become \hyperindexformat. The indexing term is split into two argument at the pipe, then fed to \LWR@xindex@modifyentrysub.

```
11349 \NewDocumentCommand{\LWR@xindex@modifyentry}{>{\SplitArgument{1}{|}}m}
11350     {\LWR@xindex@modifyentrysub#1}
```

Handle left and right parenthesis range argument, or add a hyperindexformat clause.

```
11351 \newcommand*{\LWR@xindex@modifyentrysub}[2]{%
11352     \edef\LWR@tempone{\#1}%
11353     \edef\LWR@temptwo{\#2}%
11354     \IfValueTF{\#2}{%
11355         \ifx\#2{%
11356             \appto{\LWR@tempone{|}}{%
11357             \else%
11358                 \ifx\#2{%
11359                     \appto{\LWR@tempone{|}}{%
11360                     \else%
11361                         \appto{\LWR@tempone{%
11362                             |hyperindexformat\WRleftbrace{%
11363                             \WRbackslash\#2%
11364                             \WRrightbrace{%
11365                         }%
11366                         \fi%
11367                     \fi%
11368                 }%
11369             \{}%
11370         }%
```

\LWR@xindex@tricked (*bool*) Used to track *xindex* creation. See next.

```
11371 \newbool{\LWR@xindex@tricked}
11372 \boolfalse{\LWR@xindex@tricked}
```

\@wrindex {*(indexing term)*} Redefined to write the \LWR@autoindex counter instead of page.

If using *xindex*, the first line is a comment including a special phrase which tricks *xindex* into thinking that *hyperref* was used.

```
11373 \def{\LWR@wrindex#1}{%
11374     \ifbool{\LWR@xindex}{%
11375         \ifbool{\LWR@xindex@tricked}{%
11376             \protected@write{\@indexfile}{%
11377                 {%
11378                     \WRpercent\space hyperpage\WRrightbrace{%
11379                         \WRpercent\space trick xindex to assume hyperref%
11380                     }%
11381                     \global\booltrue{\LWR@xindex@tricked}%
11382                 }%
11383             \LWR@xindex@modifyentry{\#1}%
11384         }{%
11385             \def{\LWR@tempone{\#1}}{%
11386             }%
11387             \addtocounter{\LWR@autoindex}{1}%
11388         }%
11389     }%
11390 }
```

```
11388     \protected@write\@indexfile{ }%
11389     {\string\indexentry{\LWR@tempone}{\arabic{\LWR@autoindex}}}%
```

The label is assigned after the file write to avoid conflict with clevereef.

```
11390     \label{\LWRindex-\arabic{\LWR@autoindex}}%
11391     \endgroup%
11392     \@esphack%
11393 }
11394
11395 \AtBeginDocument{
11396 \let\@wrindex\LWR@wrindex
11397 }
```

\@wrglossary {*term*} Redefined to write the LWR@autoglossary counter instead of page.

```
11398 \def\@wrglossary#1{%
11399     \addtocounter{\LWR@autoglossary}{1}%
11400     \LWR@new@label{\LWRglossary-\the\LWR@autoglossary}%
11401     \protected@write\@glossaryfile{ }%
11402     {\string\glossaryentry{\#1}{\the\LWR@autoglossary}}}%
11403     \endgroup%
11404     \@esphack%
11405 }
```

\LWR@indexnameref@anonref {*LWR@autoindex*}

Displays a reference link where there no \ref available.

```
11406 \newcommand*{\LWR@indexnameref@anonref}[1]{%
11407     \LWR@startref{\LWRindex-\#1}%
11408     (*)%
11409     \LWR@htmltag{/a}%
11410 }
```

\LWR@indexnameref@ref {*LWR@autoindex*}

Creates \ref-style index references. To avoid an unwanted space if there is nothing to reference, the reference is checked first.

```
11411 \newcommand*{\LWR@indexnameref@ref}[1]{%
11412     \edef\LWR@thisref{\csuse{r@\LWRindex-\#1}}%
11413     \ifdefvoid{\LWR@thisref}{}{%
11414         \edef\LWR@thisref{\expandafter\@firstoffive\LWR@thisref}%
11415         \ifdefvoid{\LWR@thisref}{%
11416             {\LWR@indexnameref@anonref{\#1}}%
11417             {\ref{\LWRindex-\#1}}%
11418         }%
11419 }
```

\LWR@indexnameref@refnameref {*LWR@autoindex*}

Creates \ref-style index references. To avoid an unwanted space if there is nothing to reference, the reference is checked first. For links to starred or ?? objects, only the name is used.

```
11420 \newcommand*{\LWR@indexnameref@refnameref}[1]{%
```

```

11421   \edef\LWR@thisref{\csuse{r@LWRindex-\#1}}%
11422   \ifdefvoid{\LWR@thisref}{}{%
11423     \edef\LWR@thisref{\expandafter\fiftofive\LWR@thisref}%
11424     \ifdefvoid{\LWR@thisref}{}{%
11425       \ifdefstring{\LWR@thisref}{(*)}{%
11426         {}%
11427         {\ref{LWRindex-\#1}}% space
11428       }%
11429     }%
11430   \nameref{LWRindex-\#1}%
11431 }

```

\LWR@indexnameref@cref {*LWR@autoindex*}

Creates \cref-style index references. If no numbered reference is available, a \nameref is used instead. If the reference is ??, which will be changed by \LWR@indexnameref to become (*), then the link is changed to show (*).

```

11432 \newcommand*{\LWR@indexnameref@cref}[1]{%
11433   \edef\LWR@thisref{\csuse{r@LWRindex-\#1}}%
11434   \ifdefvoid{\LWR@thisref}{}{%
11435     \nameref{LWRindex-\#1}%
11436   }%
11437   \edef\LWR@thisref{\expandafter\fiftofive\LWR@thisref}%
11438   \ifdefvoid{\LWR@thisref}{}{%
11439     \nameref{LWRindex-\#1}%
11440   }%
11441   \ifdefstring{\LWR@thisref}{(*)}{%
11442     \LWR@indexnameref@anonref{\#1}%
11443   }%
11444   \cref{LWRindex-\#1}%
11445 }%
11446 }%
11447 }%
11448 }

```

\LWR@indexnameref@crefnameref {*LWR@autoindex*}

Creates \cref-style index references. If no numbered reference is available, a \nameref is used instead. If the reference is ??, which will be changed by \LWR@indexnameref to become (*), then the link is changed to show only the name.

```

11449 \newcommand*{\LWR@indexnameref@crefnameref}[1]{%
11450   \edef\LWR@thisref{\csuse{r@LWRindex-\#1}}%
11451   \ifdefvoid{\LWR@thisref}{}{%
11452     {}%
11453     {}%
11454     \edef\LWR@thisref{\expandafter\fiftofive\LWR@thisref}%
11455     \ifdefvoid{\LWR@thisref}{}{%
11456       {}%
11457       {}%
11458       \ifdefstring{\LWR@thisref}{(*)}{%
11459         {}%
11460         {\cref{LWRindex-\#1}}% space
11461       }%
11462     }%
11463   \nameref{LWRindex-\#1}%
11464 }

```

```
\LWR@indexnameref {\langle LWR@autoindex\rangle}
```

Creates a hyperlink based on the given entry's autoindex.

```
11465 \newcommand*\LWR@indexnameref}[1]{%
11466     {% group
```

Temporarily redefine `caption`'s `\caption@xref` because it was printing ?? in the indexes, and also causing error on expansion:

```
11467     \ifdef{\caption@xref}{%
11468         \renewcommand*\caption@xref}[2]{(*)}%
11469     }{}%
11470     \ifdefstring{\LWR@IndexRef}{ref}{%
11471         \LWR@indexnameref@ref{\#1}%
11472     }{%
11473     \ifdefstring{\LWR@IndexRef}{nameref}{%
11474         \nameref{LWRindex-\#1}%
11475     }{%
11476     \ifdefstring{\LWR@IndexRef}{refnameref}{%
11477         \LWR@indexnameref@refnameref{\#1}%
11478     }{%
11479     \ifdefstring{\LWR@IndexRef}{cref}{%
11480         \LWR@indexnameref@cref{\#1}%
11481     }{%
11482     \ifdefstring{\LWR@IndexRef}{crefnameref}{%
11483         \LWR@indexnameref@crefnameref{\#1}%
11484     }{%
11485     \ifdefstring{\LWR@IndexRef}{autoref}{%
11486         \LWR@indexnameref@cref{\#1}%
11487     }{%
11488     \ifdefstring{\LWR@startref}{LWRindex-\#1}{%
11489         \LWR@IndexRef%
11490         \LWR@htmltag{/a}%
11491     }{}}}}}}%
11492     }% group
11493 }
```

```
\LWR@doindexentrysubsub {\langle range start: LWR@autoindex, or macros.\rangle} {\langle range end or blank\rangle}
```

Creates a hyperlink, or handles `\see`, `\textbf`, etc.

```
11494 \newrobustcmd*\LWR@doindexentrysubsub}[2]{%
11495     \IfInteger[#1]{%
11496         {\LWR@indexnameref{\#1}}%
11497         {\#1}%
11498     \IfValueT{\#2}{%
11499         \IndexRangeSeparator%
11500         \IfInteger{\#2}{%
11501             {\LWR@indexnameref{\#2}}%
11502             {\#2}%
11503         }%
11504     }}
```

```
\LWR@doindexentrysub {\langle range delimiter\rangle} {\langle LWR@autoindex or macros, possible a range\rangle}
```

```
11505 \NewDocumentCommand*\LWR@doindexentrysub}{m >{\SplitArgument{1}{\#1}}m}
```

```
11506     {\LWR@doindexentrysubsub#2}
```

\LWR@doindexentry {*(LWR@autoindex or macros, possible a range)*}

```
11507 \newcommand*{\LWR@doindexentry}[1]{%
11508     \relax% required
11509     \expandafter\LWR@doindexentrysub\expandafter{\IndexRangeSeparator}{#1}%
11510 }
```

\LWR@hyperindexrefnullified Handles macros commonly seen inside an \index entry. Each macro is redefined to create and format a link to its entry.

 **index formatting** To handle additional macros:

```
\appto{\LWR@hyperindexrefnullified}{...}
```

```
11511 \newcommand{\LWR@hyperindexrefnullified}{%
11512     \renewrobustcmd{\emph}[1]{\LWR@HTML@emph{\LWR@doindexentry{##1}}}%
11513     \renewrobustcmd{\textbf}[1]{\LWR@HTML@textbf{\LWR@doindexentry{##1}}}%
11514     \renewrobustcmd{\texteb}[1]{\LWR@HTML@texteb{\LWR@doindexentry{##1}}}%
11515     \renewrobustcmd{\textlg}[1]{\LWR@HTML@textlg{\LWR@doindexentry{##1}}}%
11516     \renewrobustcmd{\textrm}[1]{\LWR@HTML@textrm{\LWR@doindexentry{##1}}}%
11517     \renewrobustcmd{\textsf}[1]{\LWR@HTML@textsf{\LWR@doindexentry{##1}}}%
11518     \renewrobustcmd{\texttt}[1]{\LWR@HTML@texttt{\LWR@doindexentry{##1}}}%
11519     \renewrobustcmd{\textup}[1]{\LWR@HTML@textup{\LWR@doindexentry{##1}}}%
11520     \renewrobustcmd{\textsc}[1]{\LWR@HTML@textsc{\LWR@doindexentry{##1}}}%
11521     \renewrobustcmd{\textulc}[1]{\LWR@HTML@textulc{\LWR@doindexentry{##1}}}%
11522     \renewrobustcmd{\textssi}[1]{\LWR@HTML@textssi{\LWR@doindexentry{##1}}}%
11523     \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
11524     \renewrobustcmd{\texttsl}[1]{\LWR@HTML@texttsl{\LWR@doindexentry{##1}}}%
11525 }
```

\hyperindexref {*(list of LWR@autoindex, commas, and ranges)*}

\hyperindexref{LWR@autoindex} is inserted into *.ind by the *makeindex* style file lwarp.ist or the *xindy* style file lwarp.xdy. For *xindex*, \hyperpage is inserted, which is \let to \hyperindexref. For *gindex*, \addindexitem and related are inserted, which are defined to use \hyperindexref.

The argument is split at commas, and also for ranges, then passed to \LWR@hyperindexrefsub.

```
11526 \newcommand*{\hyperindexref}[1]{%
11527     \relax% required
11528     \expandafter\LWR@hyperindexref@comma\expandafter{\IndexPageSeparator}{#1}%
11529 }
```

\LWR@hyperindexref@comma {*(separator)*} {*(list of args)*}

The list is split at commas, and passed to \LWR@hyperindexref@@comma.

```
11530 \NewDocumentCommand{\LWR@hyperindexref@comma}{%
11531     m >{\SplitList{#1}} m}
11532     {%
```

Used to place the separator between each entry, but not before the first.

```
11533 \def\LWR@hyperindexref@thiscomma{}%
11534 \def\LWR@hyperindexref@nextcomma{\#1}%
```

Each comma-delimited entry is now passed individually to `\LWR@hyperindexref@@comma`.

```
11535 \ProcessList{\#2}\LWR@hyperindexref@@comma%
11536 }
```

`\LWR@hyperindexref@@comma {<arg, perhaps with a range>}`

A comma separator is placed if not the first item, then the range is parsed.

```
11537 \newcommand*{\LWR@hyperindexref@@comma}[1]{%
11538   \LWR@hyperindexref@thiscomma%
11539   \renewcommand{\LWR@hyperindexref@thiscomma}{\LWR@hyperindexref@nextcomma}%
11540   \expandafter\LWR@hyperindexref@range\expandafter{\IndexRangeSeparator{\#1}}%
11541 }
```

`\LWR@hyperindexref@range {<range delimiter>} {<arg>}`

```
11542 \NewDocumentCommand{\LWR@hyperindexref@range}{%
11543   m >{\SplitArgument{1}{\#1}} m%
11544   {\LWR@hyperindexrefsub\#2}}
```

`\LWR@hyperindexrefsub {<range start: LWR@autoindex>} {<range end, or -NoValue->}`

Handles the start and end of a range, if applicable.

```
11545 \newcommand*{\LWR@hyperindexrefsub}[2]{%
11546   \LWR@hyperindexrefsubtwo{\#1}%
11547   \IfValueT{\#2}{%
11548     \IndexRangeSeparator%
11549     \LWR@hyperindexrefsubtwo{\#2}%
11550   }%
11551 }
```

`\LWR@hyperindexrefsubtwo {<LWR@autoindex>}`

```
11552 \newcommand*{\LWR@hyperindexrefsubtwo}[1]{%
```

In long index lines with numerous entries, `makeindex` can insert a newline before the page number, resulting in an extra space before the first digit. If the first character is a space, remove it first.

```
11553 \edef\tempone{\#1}%
11554 \IfBeginWith{\tempone}{ }{%
11555   \StrGobbleLeft{\tempone}{1}[\tempone]%
11556 }
```

If a numeric entry, create a link. If not numeric, such as `\see`, use the entry as-is. `\emph`, `\textit`, etc. have been redefined above to create and format the entry.

```
11557 \IfInteger{\tempone}{%
11558   {\LWR@indexnameref{\tempone}}%
11559   {%
11560     \begingroup%
```

```

11561          \LWR@hyperindexrefnullified%
11562          #1%
11563          \endgroup%
11564      }%
11565 }

```

\hyperpage Emulate hyperref.

```
11566 \LetLtxMacro\hyperpage\hyperindexref
```

\nohyperpage Emulate hyperref.

```
11567 \def\nohyperpage#1{}
```

\hyperindexformat Emulate hyperref.

```

11568 \def\hyperindexformat#1#2{%
11569     #1{\hyperpage{#2}}%
11570 }%

```

```
11571 \end{warpHTML}
```

for PRINT output: A null command for print mode, in case hyperref was not used:

```

11572 \begin{warpprint}
11573 \newcommand{\hyperindexref}[1]{#1}
11574 \end{warpprint}

```

for HTML & PRINT: For the glossaries package, try to prevent an error where \glo@name was not found:

```

11575 \begin{warpall}
11576 \providecommand{\glo@name}{}%
11577 \end{warpall}

```

80 Bibliography presentation

for HTML output: 11578 \begin{warpHTML}

```
\bibliography {\langle filenames\rangle} At one time this was modified to read \BaseJobname.bbl,
which meant the HTML version could not resolve until the print version was also
present. This also confused multibib. It has been reverted to the original to use
\jobname.bbl.
```

```
\@biblabel {\langle text-refnumber\rangle}
```

```
11579 \renewcommand{\@biblabel}[1]{[#1]\quad}
```

thebibliography (*env*) To emphasize document titles in the bibliography, the following redefines \em inside thebibliography to gather everything until the next closing brace, then display these tokens with \textit.

Adapted from embracedef.sty, which is by TAKAYUKI YATO:

<https://gist.github.com/zr-tex8r/b72555e3e7ad2f0a37f1>

```

11580 \AtBeginDocument{
11581
11582 \AtBeginEnvironment{thebibliography}{

11583
11584 \providecommand*\LWR@newem}[1]{\textit{\#1}}
11585
11586 \renewrobustcmd{\em}{%
11587   \begingroup
11588     \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
11589     \afterassignment\LWR@em@after
11590     \toks@\bgroup
11591 }
11592
11593 \def\LWR@em@finish#1{%
11594   \xdef\LWR@em@after{\noexpand#1{\the\toks@}}%
11595   \endgroup
11596   \LWR@em@after\egroup
11597 }
11598
11599 }% \AtBeginEnvironment{thebibliography}
11600
11601 }% \AtBeginDocument

11602 \end{warpHTML}
```

81 Restoring original formatting

for HTML output:
11603 \begin{warpHTML}

\LWR@restoreMathJaxFormatting A few macros (ref: tcolorbox) must be treated separately while printing the HTML comment for a MATHJAX expression. These are set here, to which other functions may be appended.

```
11604 \newcommand*\LWR@restoreMathJaxFormatting{}{}
```

\LWR@restoreorigFormatting Used to temporarily restore the print-mode meaning of a number of formatting, graphics, and symbols-related macros while generating SVG math or a `lateximage`.

Must be used inside a group.

Sets `\LWR@formatting` to print until the end of the group.

A number of packages will `\appto` additional actions to this macro.

Various packages add to this macro using `\appto`.

```

11605 \newcommand*\LWR@restoreorigFormatting{}%
11606   \LWR@traceinfo{\LWR@restoreorigFormatting}%
```

Numerous macros change their print/HTML meaning depending on `\LWR@formatting`:

```

11607   \renewcommand*\LWR@formatting[1]{\print{#1}%
11608   \linespread{1}%
11609 }
```

```

11609      \setbool{LWR@doingparhooks}{false}%
11610      \def\color@endgroup{\endgraf\endgroup}%
11611      \LetLtxMacro\hfil\LWR@orighfil%
11612      \let\hss\LWR@orighss%
11613      \let\llap\LWR@origllap%
11614      \let\rlap\LWR@origrlap%
11615      \let\hfilneg\LWR@orighfilneg%
11616      \let\,\LWR@origcomma% disable HTML short unbreakable space
11617      \let\textless\LWR@origtextless%
11618      \let\textgreater\LWR@origtextgreater%
11619      \let\&\LWR@origampersand%
11620      \LetLtxMacro\em\LWR@origem%
11621      \LetLtxMacro\normalfont\LWR@orignormalfont%
11622      \let\sp\LWR@origsp%
11623      \let\sb\LWR@origsb%
11624      \LetLtxMacro\underline\LWR@origunderline%
11625      \LetLtxMacro\tilde\LWR@origtilde%
11626      \LetLtxMacro\nobreakspace\LWR@orignobreakspace%

```

`\endtabular` must be restored to its original, instead of relying on `l warp`'s `\LWR@formatted` mechanism:

```

11627      \LetLtxMacro\endtabular\LWR@origendtabular%
11628      \csletcs{endtabular*}{\LWR@origendtabular*}%
11629      \LetLtxMacro\noalign\LWR@orignoalign%
11630      \LetLtxMacro\hline\LWR@orighline%
11631      \let\newline\LWR@orignewline%
11632      \LetLtxMacro\includegraphics\LWR@origincludegraphics%
11633      \LetLtxMacro@\ensuredmath\LWR@origensuredmath%
11634      \let\math\LWR@orig@math%
11635      \let\endmath\LWR@orig@endmath%
11636      \let\displaymath\LWR@orig@displaymath%
11637      \let\enddisplaymath\LWR@orig@enddisplaymath%
11638 %
11639      \LWR@restoreorigaccents%
11640      \LWR@restoreoriglists%
11641      \let\@mpfootnotetext\LWR@orig@mpfootnotetext%
11642      \LWR@hook@processingtags%

```

To enable **MATHJAX**-specific nullification, used for `tcolorbox`:

```

11643      \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
11644          {\LWR@restoreMathJaxformatting}%
11645      {}%
11646 }

```

```
11647 \end{warpHTML}
```

82 Nullifying filename formatting

The following are used to nullify certain macros and environments while converting section names to file names.

for HTML output

Also commonly used are `\@empty`, `\@gobble`, and `\@firstofone`.

```
11649 \newcommand*{\LWR@dash}{-}
```

`\LWR@nullfonts` Removes formatting during filename operations, file references, and HTML comments.



Use only inside a group.

The following are *not* made robust, since they must be expanded to their nullified versions.

```
11650 \catcode`\$=\active% redefining $ below
11651 \catcode`\_=12% redefining \_ below
11652 \newcommand*{\LWR@nullfonts}{%
```

Various built-in symbols.

```
11653   \renewcommand*{\$}{-}%
11654   \renewcommand*{\%}{-}%
11655   \renewcommand*{\_}{-}%
11656   \renewcommand*{\{}{-}%
11657   \renewcommand*{\}}{-}%
11658   \renewcommand*{\&}{-}%
11659   \renewcommand*{\#}{-}%
11660   \renewcommand*{\,}{-}%
11661   \renewcommand*{\~}{-}%
11662 %
11663 % accents:
11664   \renewcommand*{'[1]{##1}%
11665   \renewcommand*{'[1]{##1}%
11666   \renewcommand*{'^}[1]{##1}%
11667   \renewcommand*{'~}[1]{##1}%
11668   \renewcommand*{'=}[1]{##1}%
11669   \renewcommand*{'u}[1]{##1}%
11670   \renewcommand*{'.}[1]{##1}%
11671   \renewcommand*{'"}[1]{##1}%
11672   \renewcommand*{'H}[1]{##1}%
11673   \renewcommand*{'v}[1]{##1}%
11674   \renewcommand*{'d}[1]{##1}%
11675   \renewcommand*{'c}[1]{##1}%
11676   \renewcommand*{'b}[1]{##1}%
11677   \renewcommand*{'t}[1]{##1}%
11678 %
11679   \let\newline\LWR@dash%
11680   \let\textasciicircum\LWR@dash%
```

```
11681  \let\textasciitilde\LWR@dash%
11682  \let\textasteriskcentered\LWR@dash%
11683  \let\textbackslash\LWR@dash%
11684  \let\textbar\LWR@dash%
11685  \let\textbardbl\LWR@dash%
11686  \let\textbigcircle\LWR@dash%
11687  \let\textbraceleft\LWR@dash%
11688  \let\textbraceright\LWR@dash%
11689  \let\textbullet\LWR@dash%
11690  \let\textcopyright\LWR@dash%
11691  \let\textdagger\LWR@dash%
11692  \let\textdaggerdbl\LWR@dash%
11693  \let\textdollar\LWR@dash%
11694  \let\textellipsis\LWR@dash%
11695  \let\textemdash\LWR@dash%
11696  \let\textendash\LWR@dash%
11697  \let\textexcldown\LWR@dash%
11698  \let\textgreater\LWR@dash%
11699  \let\textless\LWR@dash%
11700  \let\textordfeminine\LWR@dash%
11701  \let\textordmasculine\LWR@dash%
11702  \let\textparagraph\LWR@dash%
11703  \let\textperiodcentered\LWR@dash%
11704  \let\textpertenthousand\LWR@dash%
11705  \let\textperthousand\LWR@dash%
11706  \let\textquestiondown\LWR@dash%
11707  \let\textquotedblleft\LWR@dash%
11708  \let\textquotedblright\LWR@dash%
11709  \let\textquotel\WR@dash%
11710  \let\textquoter\WR@dash%
11711  \let\textregistered\LWR@dash%
11712  \let\textsection\LWR@dash%
11713  \let\textsterling\LWR@dash%
11714  \let\texttrademark\LWR@dash%
11715  \let\textunderscore\LWR@dash%
11716  \let\textvisiblespace\LWR@dash%
11717  \let\copyright\LWR@dash%
11718  \let\dag\LWR@dash%
11719  \let\ddag\LWR@dash%
11720  \let\dot\WR@dash%
11721  \let\P\LWR@dash%
11722  \let\pounds\LWR@dash%
11723  \let\S\LWR@dash%
11724 %
11725  \renewcommand*{\aa}{a}%
11726  \renewcommand*{\AA}{A}%
11727  \renewcommand*{\AE}{AE}%
11728  \renewcommand*{\ae}{ae}%
11729  \renewcommand*{\dh}{d}%
11730  \renewcommand*{\DH}{D}%
11731  \renewcommand*{\DJ}{D}%
11732  \renewcommand*{\dj}{d}%
11733  \renewcommand*{\IJ}{IJ}%
11734  \renewcommand*{\ij}{ij}%
11735  \renewcommand*{\L}{L}%
11736  \renewcommand*{\l}{l}%
11737  \renewcommand*{\NG}{NG}%
11738  \renewcommand*{\ng}{ng}%
11739  \renewcommand*{\O}{O}%
11740  \renewcommand*{\o}{o}%
```

```

11741   \renewcommand*\{\oe\}{oe}%
11742   \renewcommand*\{\OE\}{OE}%
11743   \renewcommand*\{\ss\}{ss}%
11744   \renewcommand*\{\SS\}{SS}%
11745   \renewcommand*\{\th\}{th}%
11746   \renewcommand*\{\TH\}{TH}%
11747 %
11748   \let\guillemotleft\empty%
11749   \let\guilsinglleft\empty%
11750   \let\quotedblbase\empty%
11751   \let\textquotedbl\empty%
11752   \let\guillemotright\empty%
11753   \let\guilsinglright\empty%
11754   \let\quotesinglbase\empty%

11755   \renewcommand*\{\HTMLunicode}[1]{}%
11756   \renewcommand*\{\HTMLentity}[1]{}%

11757   \renewcommand{\textsuperscript}[1]{##1}%
11758   \renewcommand{\textsubscript}[1]{##1}%

11759   \renewcommand{\underline}[1]{##1}%

11760   \RenewDocumentCommand{\hspace}{s m}{}%

11761   \RenewDocumentCommand{\LWR@htmlspanclass}{o D(){} m +m}{##4}%
11762   \DeclareExpandableDocumentCommand{\InlineClass}{D(){}{} o m +m}{##4}%

```

Nullify math macros.

```

11763   \def\##1{}%
11764   \def\##1{}%
11765   \RenewDocumentCommand{\LWR@subsingleollar}{s m m m}{}%

```

Nullify logos:

```

11766   \renewcommand*\{\TeX\}{TeX}%
11767   \renewcommand*\{\LaTeX\}{LaTeX}%
11768   \renewcommand*\{\LaTeXe\}{LaTeXe}%
11769   \renewcommand*\{\LuaTeX\}{LuaTeX}%
11770   \renewcommand*\{\LuaLaTeX\}{LuaLaTeX}%
11771   \renewcommand*\{\XeTeX\}{XeTeX}%
11772   \renewcommand*\{\XeLaTeX\}{XeLaTeX}%
11773   \renewcommand*\{\ConTeXt\}{ConTeXt}%
11774   \renewcommand*\{\BibTeX\}{BibTeX}%
11775   \renewcommand*\{\MakeIndex\}{MakeIndex}%
11776   \renewcommand*\{\AmS\}{AmS}%
11777   \renewcommand*\{\MiKTeX\}{MiKTeX}%
11778   \renewcommand*\{\LyX\}{LyX}%

```

Use the simpler form with \texorpdfstring:

```

11779   \def\texorpdfstring{\expandafter\@secondoftwo}%
11780 }%
11781 \catcode`\$=3%
11782 \catcode`\_=8%

```

```
\FilenameNullify {\<redefinitions>}
```

Adds more nullifying definitions for filename generation.

```
11783 \newcommand*\{\FilenameNullify\}[1]{%
11784     \appto{\LWR@nullfonts}{#1}%
11785 }
```

```
11786 \end{warpHTML}
```

83 Math

83.1 Limitations

See [Math](#), section 8.7.

83.2 HTML alt tag names

Redefinable names for the HTML alt tags, for translation according to the reader's native language.

for [HTML & PRINT](#)

```
\AltTextOpen The opening part of HTML alt tag for an image. The default is a left parenthesis.
```

Default: (

```
11788 \newcommand*\{\AltTextOpen\}{{()}}
```

```
\AltTextClose The closing part of HTML alt tag for an image. The default is a right parenthesis.
```

Default: (

```
11789 \newcommand*\{\AltTextClose\}{{}}}
```

```
\ImageAltText The HTML alt tag for an image.
```

Default: image

```
11790 \newcommand*\{\ImageAltText\}{image}
```

```
\MathImageAltText The HTML alt tag for an SVG math image.
```

Default: "math image"

```
11791 \newcommand*\{\MathImageAltText\}{math image}
```

```
\LWR@ThisAltText The HTML alt tag for the next image. Cleared after use, and also after each \lateximage, \LWR@subsingle$ and each use of MATHJAX.
```

```
11792 \newcommand*\{\LWR@ThisAltText\}{}%
```

```
\ThisAltText {\text{}}
```

Assigns the HTML alt tag for the next image generated by `lwarp`, such as a `lateximage`, `picture`, or `SVG` math.

```
11793 \newcommand*\ThisAltText}[1]{%
11794     \renewcommand{\LWR@ThisAltText}{#1}%
11795 }
```

`\PackageDiagramAltText` Appended to the `lateximage` HTML alt tag for the images generated by many `Default: "diagram"` packages.

```
11796 \newcommand*\PackageDiagramAltText}{diagram}
11797 \end{warpall}
```

83.3 Inline and display math

for HTML output¹¹⁷⁹⁸ `\begin{warpHTML}`

`LWR@externalfilecnt (Ctr)` Counter for the external files which are generated and then referenced from the HTML:

```
11799 \newcounter{LWR@externalfilecnt}
```

`LWR@indisplaymathimage (bool)` True if processing display math for SVG output. Inside a `lateximage`, display math is only set to print-mode output if `LWR@indisplaymathimage` is false. Used to avoid nullifying display math before it has been completed.

```
11800 \newbool{LWR@indisplaymathimage}
```

`LWR@insidemathcomment (bool)` True while inside an HTML comment which is displaying a math environment. Used to undo the comment for a moment while creating a `\label`, so that the label's HTML tags will be seen by HTML.

```
11801 \newbool{LWR@insidemathcomment}
11802 \boolfalse{LWR@insidemathcomment}
```

`LWR@xfakebold (bool)` True if `xfakebold` `\setBold` is in use.

```
11803 \newbool{LWR@xfakebold}
11804 \boolfalse{LWR@xfakebold}
```

`\LWR@orig@setBold` Redefined by `lwarp-xfakebold`.

```
11805 \newcommand*\LWR@orig@setBold{}{}
```

`\LWR@orig@unsetBold` Redefined by `lwarp-xfakebold`.

```
11806 \newcommand*\LWR@orig@unsetBold{}{}
```

`\LWR@applyxfakebold` Redefined by `lwarp-xfakebold`.

```
11807 \newcommand*\LWR@applyxfakebold{}{}
```

\LWR@setcurrentfont Sets the actual L^AT_EX font to that which was selected for HTML output. Ex: In HTML mode, \bfseries sets \LWR@f@series to “bf”. This sets the PDF output here for use inside a `lateximage`.

```
11808 \newcommand*\LWR@setcurrentfont{%
11809   \LWR@traceinfo{Using font family \LWR@f@family}%
11810   \nameuse{\LWR@print@\LWR@f@family family}%
11811   \LWR@traceinfo{Using font series \LWR@f@series}%
11812   \nameuse{\LWR@print@\LWR@f@series series}%
11813   \LWR@traceinfo{Using font shape \LWR@f@shape}%
11814   \nameuse{\LWR@print@\LWR@f@shape shape}%
11815   \LWR@traceinfo{Using font caps shape \LWR@f@shapecaps}%
11816   \nameuse{\LWR@print@\LWR@f@shapecaps shape}%
11817 }
```

\\$ Plain dollar signs appearing in the HTML output may be interpreted by MATHJAX to be math shifts. For a plain text dollar \\$, use an HTML entity to avoid it being interpreted by MATHJAX, unless are inside a `lateximage`, in which case it will not be seen by MATHJAX.

```
11818 \let\LWR@origtextdollar\$
11819
11820 \renewcommand*\$\{%
11821   \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}{%
11822     \LWR@origtextdollar}%
11823     {\HTMLunicode{0024}}%
11824 }
```

`lwarp_baseline_marker.png` A marker to be used to help `pdfcrop` identify the inline math baseline and width.
`(file)` If either `graphicx` or `graphics` is loaded, this marker is placed at the lower left and lower right corners of the inline math. `pdfcrop` is then able to identify the width of the image, and also the height of an image such as a horizontal dash which does not otherwise touch the baseline.

A marker with alpha or opacity of 0% is not registered by `pdfcrop`, so the marker is a small square block of 1% alpha, which seems to work while still being effectively invisible in the final SVG image.

If `graphicx` is loaded, this marker is sized as a tiny 1 sp square. If `graphics` is loaded, this marker is used at its default size of around .25 pt. If neither `graphics` package is loaded, the marker is replaced by a 10 sp horizontal space, and there is no assistance for determining baseline or width of the inline math image. The best results are obtained when using `graphicx`.

\LWR@addbaselinemarker Places a small marker in an SVG inline image. If `graphics` or `graphicx` are loaded, the marker is a mostly transparent image. If neither is loaded, no marker is used.

```
11825 \AtBeginDocument{
11826
11827 \ifpdf
11828   \newcommand*\LWR@baselinename{lwarp_baseline_marker.png}
11829 \else
11830   \ifXeTeX
11831     \newcommand*\LWR@baselinename{lwarp_baseline_marker.png}
11832   \else
11833     \newcommand*\LWR@baselinename{lwarp_baseline_marker.eps}
```

```

11834     \fi
11835 \fi
11836
11837 \IfFileExists{\LWR@baselinename}%
11838 {
11839     \IfPackageLoadedTF{graphicx}{%
11840         \newcommand*{\LWR@addbaselinemarker}{%
11841             \LWR@originincludegraphics{\LWR@baselinename}%
11842         }%
11843     }{%
11844         \IfPackageLoadedTF{graphics}{%
11845             \newcommand*{\LWR@addbaselinemarker}{%
11846                 \LWR@originincludegraphics{\LWR@baselinename}%
11847             }%
11848         }{%
11849             \newcommand*{\LWR@addbaselinemarker}{%
11850                 \global\booltrue{\LWR@warnbaselinemarker}%
11851             }%
11852             \AtEndDocument{%
11853                 \ifbool{\LWR@warnbaselinemarker}{%
11854                     \PackageNoteNoLine{l warp}{%
11855                         Load graphicx or graphics for improved\MessageBreak
11856                         SVG math sizing and baselines%
11857                     }%
11858                 }{}%
11859             }%
11860         }%
11861     }%
11862 }% l warp_baseline_marker.png or .eps is not present
11863 \newcommand*{\LWR@addbaselinemarker}{%
11864     \global\booltrue{\LWR@warnbaselinemarker}%
11865 }%
11866 \AtEndDocument{%
11867     \ifbool{\LWR@warnbaselinemarker}{%
11868         \PackageWarningNoLine{l warp}{%
11869             File \LWR@baselinename\space is not installed\MessageBreak
11870             alongside the l warp-*.sty files, so\MessageBreak
11871             SVG math sizing and baselines may not be accurate}%
11872     }{}%
11873 }%
11874 }%
11875
11876 }% AtBeginDocument

```

`LWR@warnbaselinemarker (bool)` True if the math baseline marker was ever called for, but `graphics` or `graphicx` were not loaded.

```

11877 \newbool{\LWR@warnbaselinemarker}
11878 \boolfalse{\LWR@warnbaselinemarker}

```

`LWR@unknownmathsize (bool)` If `TikZ` or other objects are used inside math mode, the resulting image may exceed the `TeX` box, resulting in an incorrect measurement of the size of the resulting image. If this is so, the `HTML` styles for image size and depth will be neutralized.

```

11879 \newbool{\LWR@unknownmathsize}

```

`\LWR@singledollarmeasure {<math expression>}`

Measures the size of the image of the math expression.

(In some circumstances `svg` math is used even if `MATHJAX` is preferred.)

SVG math: `\LWR@origensuredmath` is part of argument #4.

SVG math \ensuremath: `\LWR@origensuredmath` is part of argument #4.

SVG dynamic math: `\LWR@origensuredmath` is part of argument #4.

MATHJAX: Argument #4 is the contents of the math expression without `\LWR@origensuredmath`. This case is handled above.

MATHJAX \ensuremath: `\LWR@origensuredmath` is part of argument #4.

MATHJAX dynamic math: Argument #4 is the contents of the math expression without `\LWR@origensuredmath`, so `\LWR@origensuredmath` is added below.

\ifmmode: Included “just in case”.

Factored from `\LWR@subsingledollarsvg`.

```
11880 \newcommand*{\LWR@singledollarmeasure}[1]{%
11881     \begingroup%
```

Temporarily disable formatting while measuring the image parameters:

```
11882     \LWR@restoreorigformatting%
11883     \RenewDocumentEnvironment{latextimage}{s o s o o d(){}{}% inside group
11884     \LWR@print@normalsize%
```

Temporarily set font for the `HTML PDF` output:

```
11885     \LWR@setcurrentfont%
```

`latextimagedepth` must be nested to avoid generating paragraph tags. `AMS` math modifies the `\text` macro such that `\addtocounter` does not always occur as expected. Lower-level code is used instead.

```
11886     \global\advance\c@LWR@latextimagedepth 1\relax%
```

Typeset the math in a box. While doing so, some macros or environments may set `LWR@unknownmathsize`, in which case this will be used to cancel the `HTML` styles being generated here.

```
11887     \boolfalse{LWR@unknownmathsize}%
11888     \ifmmode%
11889         \global\sbox{\LWR@singledollarbox}{#1}%
11890     \else%
11891         \ifbool{LWR@dynamicmath}{%
11892             \ifbool{mathjax}{%
11893                 \global\sbox{\LWR@singledollarbox}%
11894                 {\LWR@origensuredmath{#1}}%
11895             }{%
11896                 \global\sbox{\LWR@singledollarbox}{#1}%
11897             }%
11898         }{%
11899             \global\sbox{\LWR@singledollarbox}{#1}%
11900         }%
11901     \fi%
```

Add a small and almost transparent marker at the depth of the image.

A math minus sign has the same depth as a plus, even though it does not draw anything below the baseline. This means that *pdftcrop* would crop the image without depth. The marker below the baseline is seen by *pdftcrop* and preserves the depth.

```
11902 \global\sbox{\LWR@singledollarbox}{%
11903   \usebox{\LWR@singledollarbox}%
11904   \raisebox{-\dp\LWR@singledollarbox}{%
11905     \LWR@addbaselinemarker%
11906   }%
11907 }
```

More low-level code to undo the counter change.

```
11908 \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.
```

Measure the depth:

```
11909 \setlength{\LWR@singledollardepth}{%
11910   \LateximageFontSize\dp\LWR@singledollarbox%
11911 }
```

Make the length a global change:

```
11912 \global\LWR@singledollardepth=\LWR@singledollardepth%
```

Likewise for width:

```
11913 \setlength{\LWR@singledollarwidth}{%
11914   \LateximageFontSize\wd\LWR@singledollarbox%
11915 }%
11916 \global\LWR@singledollarwidth=\LWR@singledollarwidth%
```

Likewise for total height:

```
11917 \setlength{\LWR@singledollarheight}{%
11918   \LateximageFontSize\ht\LWR@singledollarbox%
11919 }%
11920 \addtolength{\LWR@singledollarheight}{%
11921   \LateximageFontSize\dp\LWR@singledollarbox%
11922 }%
11923 \global\LWR@singledollarheight=\LWR@singledollarheight%
```



```
11924 \endgroup%
11925 }
```

\LWR@subsingledollarsvg * {*(2: alt text)*} {*(3: add'l hashing)*} {*(4: math expression)*}

For inline math. Uses SVG math. The image is measured and adjusted to the baseline of the HTML output, and placed inside a *Lateximage*.

(In some circumstances SVG math is used even if MATHJAX is preferred.)

Factored from \LWR@subsingledollar.

```

11926 \newcommand*{\LWR@subsingledollarsvg}[4]{%
11927     \LWR@traceinfo{\LWR@subsingledollartsvg}%

```

Measure the depth, width, and height of the math image:

```

11928     \LWR@singledollarmeasure{#4}%

```

Set a style for the the height or width. The em unit is used so that the math scales according to the user's selected font size.

Start with the greater of the width or the height, biased towards the width:

```

11929     \ifdimgreater{\LWR@singledollarwidth}{.7\LWR@singledollarheight}{%
11930         \def\LWR@singledollarstyle{%
11931             width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
11932         }%
11933     }{%
11934         \def\LWR@singledollarstyle{%
11935             height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
11936         }%
11937     }%

```

If a very narrow width, use the height.

```

11938     \ifdimless{\LWR@singledollarwidth}{.2em}{%
11939     }{%
11940         \def\LWR@singledollarstyle{%
11941             height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
11942         }%
11943     }%
11944     }%

```

If very wide and short, use the width:

```

11945     \ifdimless{\LWR@singledollarheight}{.2em}{%
11946     }{%
11947         \def\LWR@singledollarstyle{%
11948             width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
11949         }%
11950     }%
11951     }%

```

If there is significant text depth, add the depth to the style.

```

11952     \ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
11953         \def\LWR@singledollardepthstyle{%
11954             \ ; % extra space
11955             \LWR@print@mbox{%
11956                 vertical-align:-\LWR@convertto{em}{\the\LWR@singledollardepth} em%
11957                 } % extra space
11958             }%
11959     }{%
11960         \def\LWR@singledollardepthstyle{}%
11961     }%

```

If using certain TikZ actions inside math, the resulting image may exceed the TeX boundaries, so the HTML size styles may be incorrect, and must be neutralized.

```

11962   \ifbool{LWR@unknownmathsize}{%
11963     \def\lwr@singledollarstyle{}%
11964     \def\lwr@singledollardepthstyle{}%
11965   }{}%

```

Create the `\textrimage` using the alternate tag and the computed size and depth. The star causes `\textrimage` to use an MD5 hash as the filename. When hashing, also include the current font and color in the hash.

```

11966   \ifbool{LWR@dynamicmath}{%
11967     \lwr@traceinfo{subsingledollarsvg: dynamic}%
11968     \begin{textrimage} no hashing
11969       [\MathImageAltText] alt tag
11970       [] no add'l hashing
11971       [\lwr@singledollarstyle \lwr@singledollardepthstyle] CSS
11972       (math) ARIA
11973   }% not dynamic math
11974     \lwr@traceinfo{subsingledollarsvg: static}%
11975     \IfValueTF{\#1}{% #1 True
11976       \lwr@findcurrenttextcolor% sets \lwr@tempcolor

```

Support for `xfakebold`:

```

11977   \ifbool{LWR@xfakebold}{%
11978     {\def\lwr@tempone{Y}}%
11979     {\def\lwr@tempone{N}}%
11980     \lwr@traceinfo{subsingledollarsvg about to textrimage}%
11981     \begin{textrimage}*% use hashing
11982       [#2] alt
11983       *% do not add open/closing braces
11984       [% add'l hashing
11985         #3%
11986         FM\lwr@f@family%
11987         SR\lwr@f@series%
11988         SH\lwr@f@shape%
11989         SHC\lwr@f@shapecaps%
11990         CL\lwr@tempcolor%
11991         FB\lwr@tempone% xfakebold
11992       ]%
11993       [\lwr@singledollarstyle \lwr@singledollardepthstyle] CSS
11994       (math) ARIA
11995       \lwr@traceinfo{subsingledollar did textrimage}%
11996   }% #1 False
11997     \begin{textrimage} no hashing
11998       [#2] alt
11999       [] no add'l hashing
12000       [\lwr@singledollarstyle \lwr@singledollardepthstyle] CSS
12001       (math) ARIA
12002     }%
12003   }% not dynamic math

```

Place small and almost transparent markers on the baseline at the left and right edges of the image. These markers are seen by `pdfcrop`, and force vertically-centered objects such as a dash to be raised off the baseline in the cropped image, and also force the total width and left/right margins to be correct. (Except that in some fonts a character may exceed the bounding box, and thus may appear wider than expected when converted to an image.)

12004 \LWR@addbaselinemarker%

Support for `xfakebold`:

12005 \LWR@applyxfakebold%

Typeset the contents:

12006 \usebox{\LWR@singledollarbox}%

The closing baseline marker:

12007 \LWR@addbaselinemarker%

12008 \end{lateximage}%
12009 %
12010 }

\LWR@subsingledollar * {\langle 2: alt text \rangle} {\langle 3: add'l hashing \rangle} {\langle 4: math expression \rangle}

For inline math. Uses MATHJAX, or for SVG math the image is measured and adjusted to the baseline of the HTML output, and placed inside a `lateximage`.

SVG math: \LWR@origensuredmath is part of argument #4.

SVG math \ensuremath: \LWR@origensuredmath is part of argument #4.

SVG dynamic math: \LWR@origensuredmath is part of argument #4.

MATHJAX: Argument #4 is the contents of the math expression without \LWR@origensuredmath.
This case is handled above.

MATHJAX \ensuremath: \LWR@origensuredmath is part of argument #4.

MATHJAX dynamic math: Argument #4 is the contents of the math expression without \LWR@origensuredmath, so \LWR@origensuredmath is added below.

image filename hashing If starred, a hashed filename is used. If so, the hash is based on the `alt` tag and also the additional hashing argument.

This may be used to provide an expression with a simple `alt` tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated TeX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is used in the additional hashing argument to ensure a unique image.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple `alt` tag is still the same.

```
12011 \newlength{\LWR@singledollarwidth}
12012 \newlength{\LWR@singledollarheight}
12013 \newlength{\LWR@singledollardepth}
12014
12015 \newsavebox{\LWR@singledollarbox}
```

```

12016
12017 \NewDocumentCommand{\LWR@subsingle$}{s m m m}{%
12018     \LWR@traceinfo{\LWR@subsingle$ !#2!}%
12019     \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
12020     {%
12021         \LWR@traceinfo{\LWR@subsingle$: already in a lateximage}%
12022         #4% contents
12023     }%
12024     {%
12025         \begingroup%

```

Support for `xfakebold`:

```
12026     \LWR@applyxfakebold%
```

MATHJAX cannot parse the often complicated T_EX expressions which appear in the various uses of `\ensuredmath`. `\ensuremath` forces the alt tag to “(math image)”, as translated according to `\MathImageAltText`. If this is the case, force the use of a `lateximage` even if MATHJAX. Likewise for `siunitx` if `parse-numbers=false`.

If MATHJAX, or if formatting math for a word processor, and not `\ensuredmath`, and not a dynamic math expression, print the math expression:

```

12027     \ifboolexpr{%
12028         (
12029             bool{mathjax} or
12030             ( bool{FormatWP} and bool{WPMarkMath} )
12031         ) and
12032         ( not test {
12033             \ifstreq{\#2}{ from \ensuredmath
12034                 \AltTextOpen\MathImageAltText\AltTextClose}
12035             }
12036         ) and
12037         ( not bool{\LWR@dynamicmath} )
12038     }%

```

For MATHJAX, print the math between `\(` and `\)`:

```

12039     {%
12040         \LWR@traceinfo{\LWR@subsingle$: Mathjax}%
12041         {%
12042             \boolfalse{\LWR@HTMLsanitize@tmpb@removebackslash}%
12043             \textbackslash(%
12044             {%
12045                 \ifmmode\else\LWR@print@ttfamily\fi%
12046                 \LWR@HTMLsanitizedetokenized{\detokenize{\#4}}%
12047             }%
12048             \textbackslash)%
12049         }%
12050     }% mathjax

```

For SVG, print the math inside a `\teximage`, with an `<alt>` tag of the L^AT_EX code, and a css style to control the baseline adjustment.

```
12051      {%
12052          not mathjax
12053          \LWR@traceinfo{%
12054              \LWR@subsingle$ NOT mathjax, or is ensuremath, or is dynamic%
12055              }%
12056              \LWR@subsingle$svg{#1}{#2}{#3}{#4}%
12057          }%
12058      }% not in a \teximage
```

Clear the single-use alt text:

```
12059      \gdef\LWR@ThisAltText{}%
12060      \LWR@traceinfo{\LWR@subsingle$ done}%
12061 }

12062 \LetLtxMacro{\LWR@origsingle$}
12063 \LetLtxMacro{\LWR@secondsingle$}{% balance for editor syntax highlighting

12064 \LetLtxMacro{\LWR@origopenparen}{%
12065 \LetLtxMacro{\LWR@origcloseparen}{%
12066 \LetLtxMacro{\LWR@origopenbracket}{%
12067 \LetLtxMacro{\LWR@origclosebracket}{%
```

\$ Redefine the dollar sign to place math inside a `\teximage`, or use MATHJAX:
\$ \$
12068 \begingroup
12069 \catcode`\\$=\active%
12070 \protected\gdef\${@ifnextchar\$\LWR@doubledollar\LWR@singledollar}%

Used by `chemformula` to escape single-dollar math:

```
12071 \protected\gdef\LWR@newsingledollar{@ifnextchar$\LWR@doubledollar\LWR@singledollar}%

```

`\LWR@doubledollar` Redefine the double dollar sign to place math inside a `\teximage`, or use MATHJAX:

```
12072 \protected\gdef\LWR@doubledollar${#1$$}{%
```

If MATHJAX or formatting for a word processor, print the L^AT_EX expression:

```
12073 \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }{%
```

For MATHJAX, print the math between `\[` and `\]`. If there is a footnote, endnote, or other kind of note ('note' is present), sync the note numbers.

```
12074      {%
12075          intentional blank line:
12076          \begingroup%
12077          \IfSubStr{\detokenize\expandafter{#1}}{\detokenize{note}}{%
```

The equation is printed to the PDF output inside HTML comment tags. This allows labels and footnotes to be accepted and processed. The `math` environment

is selected here, and `\LWR@hidelatexequation` will use the original print-mode meaning of `math`.

```

12078          \LWR@hidelatexequation{math}{#1}%
12079          \InLineClass{hidden}{\LWR@syncnotenumbers}%
12080          \boolfalse{\LWR@HTMLsanitize@tmpb@removebackslash}%
12081          \textbackslash[%
12082          {%
12083              \LWR@print@ttfamily%
12084              \LWR@HTMLsanitizeddetokenized{\detokenize{#1}}%
12085          }%
12086          \textbackslash]%
12087          \InLineClass{hidden}{\LWR@syncnotinames}%
12088      }% yes note
12089      {%
12090          \boolfalse{\LWR@HTMLsanitize@tmpb@removebackslash}%
12091          \textbackslash[%
12092          {%
12093              \LWR@print@ttfamily%
12094              \LWR@HTMLsanitizeddetokenized{\detokenize{#1}}%
12095          }%
12096          \textbackslash]%
12097      }% no note
12098      \endgroup%
12099
12100  }% mathjax

```

For `svg`, print the math inside a `lateximage`, with an `<alt>` tag of the L^AT_EX code:

```

12101  {%
12102      not mathjax
12103      \begin{BlockClass}{displaymath}%
12104      \LWR@newautoidanchor%
12105      \booltrue{\LWR@indisplaymathimage}%
12106      [\%
12107          \textbackslash{}[] % extra space
12108          \LWR@HTMLsanitizeddetokenized{\detokenize{#1}} % extra space
12109          \textbackslash{}[]]%
12110      ]%
12111      *% do not add open/closing braces
12112      (math)% ARIA

```

Support for `xfakebold`:

```

12113          \LWR@applyxfakebold%
12114          \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
12115          \end{lateximage}%
12116          \end{BlockClass}%
12117      }% not mathjax

```

Clear the single-use alt text:

```

12118      \gdef\LWR@ThisAltText{}%
12119  }%

```

```
\LWR@singledollar {\langle math expression\rangle}

12120 \protected\gdef\LWR@singledollar#1{%
12121     \LWR@traceinfo{\LWR@singledollar}%
12122     \ifbool{mathjax}{%
12123         \begingroup%
12124         \boolfalse{\LWR@HTMLsanitize@tmpb@removebackslash}%
12125         \LWR@subsingledollar*%
12126         {% alt tag
12127             \textbackslash( %
12128             \LWR@HTMLsanitizeddetokenized{\detokenize{\#1}} % extra space
12129             \textbackslash)%
12130         }%
12131         {\singledollar}% add'l hashing
12132         {\#1}% contents
12133         \endgroup%
12134     }% not mathjax
12135     \LWR@subsingledollar*%
12136     {% alt tag
12137         \textbackslash( %
12138         \LWR@HTMLsanitizeddetokenized{\detokenize{\#1}} % extra space
12139         \textbackslash)%
12140     }%
12141     {\singledollar}% add'l hashing
12142     {\LWR@origensuredmath{\#1}}% contents
12143 }% not mathjax
```

Clear the single-use alt text:

```
12144     \gdef\LWR@ThisAltText{}%
12145 }
```

```
\(\ Redefine to the above dollar macros.
\[
12146 \AtBeginDocument{
12147     \protected\gdef\(#1\){\$#1\$}
12148     \protected\gdef\[#1]{\$\$#1\$\$}
12149 }
12150
12151 \endgroup% active $
```



```
12152 \AtBeginDocument{
12153 \LetLtxMacro{\LWR@openbracketnormal}{[}
12154 \LetLtxMacro{\LWR@closebracketnormal}{]}
12155 }
```

\@ensuredmath {\langle expression\rangle}

If MATHJAX, a `\lateximage` is used, since `\ensuremath` is often used for complex TEX expressions which MATHJAX may not render. If SVG math, a hashed file is used with a simple alt tag, but additional hashing provided by the contents.

```
12156 \LetLtxMacro{\LWR@origensuredmath}{\@ensuredmath}
12157
12158 \renewcommand{\@ensuredmath}[1]{%
12159     \ifbool{mathjax}{%
12160         \begingroup%
```

```

12161      \boolfalse{LWR@HTMLsanitize@tmpb@removebackslash}%
12162      \LWR@subsingle dollar*\{\AltTextOpen\MathImageAltText\AltTextClose}%
12163      {%
12164          \protect\LWR@HTMLsanitizedetokenized{\detokenize\expandafter{\#1}}%
12165      }%
12166      {%
12167          \relax%
12168          \LWR@origensuredmath{\#1}%
12169      }%
12170      \endgroup%
12171  }% SVG math

```

If already inside a `\textrimage` in math mode, continue as-is.

```

12172      \ifmmode%
12173          \LWR@origensuredmath{\#1}%
12174      \else%

```

Create an inline math `\textrimage` with a simple `alt` tag and additional hashing according to the contents.

```

12175      \ifnumcomp{\value{LWR@textrimagedepth}}{>}{0}%
12176          {\LWR@origensuredmath{\#1}}%
12177          {%
12178              \LWR@subsingle dollar*%
12179              {\AltTextOpen\MathImageAltText\AltTextClose}%
12180              {%
12181                  \protect\LWR@HTMLsanitizedetokenized{%
12182                      \detokenize\expandafter{\#1}}%
12183                  }%
12184              }%
12185              {\LWR@origensuredmath{\#1}}%
12186          }%
12187      \fi%
12188  }%

```

Clear the single-use alt text:

```

12189      \gdef\LWR@ThisAltText{}%
12190  }

```

Remember then remove the old `math` and `displaymath` environments:

```

12191 \let\LWR@orig@math\math
12192 \let\LWR@orig@endmath\endmath
12193
12194 \let\LWR@orig@displaymath\displaymath
12195 \let\LWR@orig@enddisplaymath\enddisplaymath
12196
12197 \let\math\relax
12198 \let\endmath\relax
12199
12200 \let\displaymath\relax
12201 \let\enddisplaymath\relax

```

`math (env.)` Set math mode then typeset the body of what was between the begin/end. See the `environ` package for `\BODY`.

```
12202 \NewEnviron{math}{\expandafter{(\BODY)}}
```

`LWR@displaymathnormal` (*env.*) Set math mode then typeset the body of what was between the begin/end. See the `environ` package for `\BODY`.

```
12203 \NewEnviron{LWR@displaymathnormal}{\expandafter{[\BODY]\ignoretrue}}
```

Set the default displaymath to the normal version:

```
12204 \LetLtxMacro{displaymath}{LWR@displaymathnormal%}
12205 \LetLtxMacro{\enddisplaymath}{\endLWR@displaymathnormal%}
```

`LWR@displaymathother` (*env.*) A version of `displaymath` which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```
12206 \newenvironment{LWR@displaymathother}
12207 {%
12208     \begin{BlockClass}{displaymath}%
12209     \LWR@newautoidanchor%
12210     \booltrue{LWR@indisplaymathimage}%
12211     \begin{lateximage}[\MathImageAltText](math)% [alt](ARIA)%
12212     \LWR@origdollar\LWR@origdollar%
12213 }%
12214 {%
12215     \LWR@origdollar\LWR@origdollar%
12216     \end{lateximage}%
12217     \end{BlockClass}%
12218 }
```

`LWR@equationother` (*env.*) A version of `displaymath` which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```
12219 \newenvironment{LWR@equationother}
12220 {%
12221     \begin{BlockClass}{displaymathnumbered}%
12222     \LWR@newautoidanchor%
12223     \booltrue{LWR@indisplaymathimage}%
12224     \begin{lateximage}[\MathImageAltText](math)% [alt](ARIA)%
12225     \LWR@orig@equation%
12226 }%
12227 {%
12228     \LWR@orig@endequation%
12229     \end{lateximage}%
12230     \end{BlockClass}%
12231 }
```

83.4 MATHJAX support

`LWR@nextequation` (*Ctr*) Used to add one to compute the next equation number.

```
12232 \newcounter{LWR@nextequation}
```

Determining how to set MATHJAX section and equation numbers. Adjusts for various kinds of `\theequation` to determine `\theMathJaxsection` and `\theMathJaxequation`.

```

12233 \newcommand{\LWR@article@theequation}{\@arabic\c@equation}
12234
12235 \newcommand{\LWR@book@theequation}
12236   {\ifnum \c@chapter>\z@ \thechapter.\fi \@arabic\c@equation}
12237
12238
12239 \newcommand{\LWR@chapter@theequation}{\thechapter.\arabic{equation}}
12240 \newcommand{\LWR@section@theequation}{\thesection.\arabic{equation}}
12241 \newcommand{\LWR@subsection@theequation}{\thesubsection.\arabic{equation}}
12242
12243 \AtBeginDocument{
12244   % default per article class:
12245   \newcommand*{\theMathJaxsubequations}[0]{}
12246   \newcommand*{\theMathJaxsection}(){}
12247   \newcommand*{\theMathJaxequation}{\arabic{equation}}
12248
12249   \ifdef\streq{\theequation}{\LWR@article@theequation}
12250   {}{
12251     \ifdef\streq{\theequation}{\LWR@book@theequation}{
12252       \renewcommand*{\theMathJaxsection}{\ifnum \c@chapter>\z@ \thechapter.\fi}
12253     }{
12254       \ifdef\streq{\theequation}{\LWR@subsection@theequation}{
12255         \renewcommand*{\theMathJaxsection}{\thesubsection{}}
12256       }{
12257         \ifdef\streq{\theequation}{\LWR@section@theequation}{
12258           \renewcommand*{\theMathJaxsection}{\thesection{}}
12259         }{
12260           \ifdef\streq{\theequation}{\LWR@chapter@theequation}{
12261             \renewcommand*{\theMathJaxsection}{\thechapter{}}
12262           }% unknown format
12263           \PackageWarningNoLine{lwarf}
12264           {%
12265             Unknown equation tag format for \protect\theequation.\MessageBreak
12266             Article-style equation numbering will be used%
12267           }
12268         }{}}
12269 }

```

\LWR@syncmathjax Sets the MATHJAX equation format and number for the following equations.

These MATHJAX commands are printed inside “\(`” and “\)`” characters. They are printed to HTML output, not interpreted by L^AT_EX.

```
12270 \newcommand*{\LWR@syncmathjax}{%
```

Tell MATHJAX that the next equation number is the current L^AT_EX equation number.

Before each equation, lwarf inserts into the HTML code:

```
\seteqnumber{subequations?}{section}{number}
```

subequations? is 0 usually, 1 if inside amsmath subequations.

section is a string printed as-is, or empty.

number is auto-incremented by MATHJAX between equations.

Place the MATHJAX command inside “\(`” and “\)`” characters, to be printed to HTML, not interpreted by L^AT_EX.

```

12271      \LWR@stoppars%
12272      \InlineClass{hidden}%
12273          \textbackslash(%
12274          \textbackslash{}seteqnumber%
12275          \{\theMathJaxsubequations\}%
12276          \{\theMathJaxsection\}%
12277          \{\theMathJaxequation\}%
12278          \textbackslash)%
12279      }
12280      \LWR@startpars%
12281 }
```

\LWR@hidelatexequation {*<environment>*} {*<contents>*}

Creates the L^AT_EX version of the equation inside an HTML comment.

```
12282 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
```

Stop HTML paragraph handling and open an HTML comment:

```

12283      \LWR@stoppars
12284      \LWR@htmlopencomment
12285
```

Start the L^AT_EX math environment inside the HTML comment:

```

12286      \begingroup
12287      \nameuse{\LWR@orig@#1}
```

While in the math environment, restore various commands to their L^AT_EX meanings.

```

12288      \LWR@restoreorigformatting
12289      \booltrue{\LWR@insidemathcomment}
```

Temporarily prevent underfull \hbox warnings.

```
12290      \hbadness=1000\relax%
```

See \LWR@htmlmathlabel in section 83.7.1.

Print the contents of the equation:

```
12291      #2
```

End the L^AT_EX math environment inside the HTML comment:

```

12292      \nameuse{\LWR@orig@end#1}
12293      \endgroup
12294
```

Close the HTML comment and resume HTML paragraph handling:

```
12295      \LWR@htmclosecomment
```

```
12296 \boolearn{LWR@insidemathcomment}
12297 \LWR@startpars
12298 }
```

\LWR@addmathjax {*(environment name)*} {{*contents*}}

Given the name of a math environment and its contents, create a MATHJAX instance. The contents are printed to HTML output, not interpreted by L^AT_EX.

```
12299 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%
```

```
12300 \LWR@orignobreakspace\LWR@orignewline
```

Enclose the MATHJAX environment inside printed “\(`” and “\)`” characters. Print the environment name and contents, sanitizing for HTML special characters.

```
12301 {%
12302 \LWR@print@ttfamily%
12303 \textbackslash{}begin\{\#1\}
```

The alignat environment takes a mandatory argument, which must be replicated here.

```
12304 \ifboolexpr{
12305 test {\ifstreq{\#1}{alignat}} or
12306 test {\ifstreq{\#1}{alignat*}} or
12307 test {\ifstreq{\#1}{alignat+}}
12308 }%
12309 {\{\arabic{LWR@maxfields@}\}}%
12310 }
```

The environment contents and \end:

```
12311 \LWR@orignewline%
12312 \boolearn{\LWR@HTMLsanitize@tmpb@removebackslash}%
12313 \LWR@HTMLsanitizeexpanded{\detokenize\expandafter{\#2}}%
12314 \LWR@orignewline%
12315 \textbackslash{}end\{\#1\}
12316 }%
```



```
12317 \LWR@orignewline
12318 }
```

83.5 Equation environment

Remember existing equation environment, after redefined by amsmath, if loaded.

```
12319 \AtBeginDocument{
12320 \let\LWR@orig@equation\equation
12321 \let\LWR@orig@endequation\endequation
12322 \csletcs{\LWR@orig@equation*}{equation*}
12323 \csletcs{\LWR@orig@endequation*}{endequation*}
12324 }
```

\LWR@doequation {{*env contents*}} {{*env name*}}

For SVG math output, the contents are typeset using the original equation inside a `lateximage`, along with an `<alt>` tag containing a detokenized copy of the L^AT_EX source for the math.

For MATHJAX output, the contents are typeset in an original equation environment placed inside a HTML comment, with special processing for `\labels`. The contents are also printed to the HTML output for processing by the MATHJAX script.

```
12325 \newcommand*{\LWR@doequation}[2]{%
12326 }
```

If `mathjax` or `FormatWP`, print the L^AT_EX expression:

```
12327     \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
```

MATHJAX output:

```
12328     {
```

Print commands to synchronize MATHJAX's equation number and format to the current L^AT_EX chapter/section and equation number:

```
12329     \LWR@syncmathjax%
```

Print the L^AT_EX math inside an HTML comment:

```
12330     \LWR@hidelatexequation{#2}{#1}
12331 }
```

SVG output: Create the `lateximage` along with an HTML `<alt>` tag having an equation number, the L^AT_EX equation environment commands, and the contents of the environment's `\BODY`.

```
12332     {%
not mathjax
```

Begin the `lateximage` with an `<alt>` tag containing the math source:

```
12333     \ifstrequal{#2}{equation*}{%
12334         \begin{BlockClass}{displaymath}%
12335     }{%
12336         \begin{BlockClass}{displaymathnumbered}%
12337     }{%
12338         \LWR@newautoidanchor%
12339         \booltrue{\LWR@indisplaymathimage}%
12340         \begin{lateximage}[%%
12341             \ifstrequal{#2}{equation*}{%
12342                 \ifdefequal{\LWR@equationtag}{\theequation}{%
12343                     % no tag was given
12344                 }{%
12345                     (\LWR@equationtag) % tag was given
12346                 }{%
12347                 }{%
12348                     (\LWR@equationtag) % automatic numbering
12349                 }{%
12350                     \textbackslash begin\{#2\}} % extra space
12351                     \LWR@HTMLsanitizeexpanded{\detokenize\expandafter{#1}} % extra space
12352                     \textbackslash end\{#2\}}%
12353                 ]*(math)% alt tag, ARIA
```

Support for `xfakebold`:

```
12354      \LWR@applyxfakebold%
```

Create the actual L^AT_EX-formatted equation inside the `lateximage` using the contents of the environment.

```
12355      \@nameuse{\LWR@orig@#2}%
12356      #1% contents collected by \collect@body
12357      \@nameuse{\LWR@orig@end#2}%
12358      \end{lateximage}%
12359      \end{BlockClass}%
12360  }% not mathjax
```

Clear the single-use alt text:

```
12361      \gdef\LWR@ThisAltText{}%
12362 }
```

After the environment, if MATHJAX, print the math to the HTML output for MATHJAX processing. If a footnote is used, sync the footnote counter before, then unsync after for non-equation environments, as defined next.

```
12363 \newcommand*\LWR@doendequation[1]{%
12364     \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }{%
12365     {%
12366         \IfSubStr{\detokenize\expandafter{\BODY}}{\detokenize{note}}{%
12367             \InLineClass{hidden}{\LWR@syncnotenumbers}%
12368             \LWR@addmathjax{\#1}{\BODY}%
12369             \InLineClass{hidden}{\LWR@syncnotenames}%
12370         }{%
12371             \LWR@addmathjax{\#1}{\BODY}%
12372         }%
12373     }{%
12374 }
```

Clear the single-use alt text:

```
12375      \gdef\LWR@ThisAltText{}%
12376 }
```

The following are used to synchronize footnote marks and related to MATHJAX if `*note*` is used inside the MATHJAX expression. The counter is read from L^AT_EX then defined into MATHJAX for use during the following equation. After the equation, the MATHJAX value is returned to the text from `\footnotename`. Other notes may be added by appending to `\LWR@syncnotenumbers` and `\LWR@syncnotenames`.

`\LWR@synconenotenumer` {*(MathJax variable)*} {*(mark)*}

```
12377 \newcommand*\LWR@synconenotenumer[2]{%
12378     \textbackslash%
12379     \textbackslash\def\textbackslash{\#1\{\#2\}%
12380     \textbackslash%
12381 }
```

`\LWR@syncnotenumbers` Assignments to make.

12382 \newcommand*{\LWR@syncnotenumbers}{\LWR@synconenotenumber{\LWRfootnote}{\thefootnote}}

\LWR@synconenotename {*(MathJax variable)*} {*(text)*}

```
12383 \newcommand*{\LWR@synconenotename}[2]{%
12384     \textbackslash%
12385     \textbackslash{}def\textbackslash{}#1name\{\#2\}%
12386     \textbackslash%
12387 }
```

\LWR@syncnotenames Assignments to make.

12388 \newcommand*{\LWR@syncnotenames}{\LWR@synconenotename{\LWRfootnote}{\footnotename}}

Remove existing equation environment:

```
12389 \AtBeginDocument{%
12390     \let\equation\relax
12391     \let\endequation\relax
12392     \csletcs{equation*}{\relax}
12393     \csletcs{\endequation*}{\relax}
12394 }
```

equation (*env.*) The new equation environment is created with \NewEnviron (from the **environ** package), which stores the contents of its environment in a macro called \BODY.

```
12395 \AtBeginDocument{%
12396     \NewEnviron{equation}%
12397         {\LWR@doequation{\BODY}{equation}}%
12398         [\LWR@doendequation{equation}]
12399
12400     \LetLtxMacro{\LWR@equationnormal}{equation}
12401     \LetLtxMacro{\endLWR@equationnormal}{endequation}
12402 }% AtBeginDocument
```

equation* (*env.*)

```
12403 \AtBeginDocument{%
12404     \NewEnviron{equation*}%
12405         {\LWR@doequation{\BODY}{equation*}}%
12406         [\LWR@doendequation{equation*}]
12407
12408     \csletcs{\LWR@equationnormalstar}{equation*}
12409     \csletcs{\LWR@endequationnormalstar}{endequation*}
12410 }% AtBeginDocument
```

Remember the “less” version of equation, which uses MATHJAX and alt tags, but does not support complicated contents such as some TikZ expressions.

```
12411 \AtBeginDocument{%
12412     \LetLtxMacro{\LWR@equationless}{equation}
12413     \LetLtxMacro{\endLWR@equationless}{endequation}
12414     \csletcs{\LWR@equationlessstar}{equation*}
12415     \csletcs{\LWR@endequationlessstar}{endequation*}
12416 }
```

83.6 \displaymathnormal and \displaymathother

\displaymathnormal By default, or when selecting \displaymathnormal, MATHJAX math display environments print their contents as text into HTML for MATHJAX to interpret, and SVG display math environments render their contents as SVG images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated TikZ pictures, compilation will fail.

\displaymathother When selecting \displaymathother, it is assumed that the contents are more complicated than “pure” math. An example is an elaborate TikZ picture, which will not render in MATHJAX and will not make sense as an HTML alt tag. In this mode, MATHJAX is turned off, math display environments become SVG images, even if MATHJAX is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as TikZ pictures are more likely to compile successfully.

\displaymathnormal Use when display math environments have simple math which is to sent to MATHJAX or included in HTML alt tags.

```

12417 \newcommand*{\displaymathnormal}{%
12418   \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}%
12419   \LetLtxMacro{[}{\LWR@openbracketnormal}%
12420   \LetLtxMacro{]}{\LWR@closebracketnormal}%
12421   \LetLtxMacro{\displaymath}{\LWR@displaymathnormal}%
12422   \LetLtxMacro{\enddisplaymath}{\endLWR@displaymathnormal}%
12423   \LetLtxMacro{\equation}{\LWR@equationnormal}%
12424   \LetLtxMacro{\endequation}{\endLWR@equationnormal}%
12425   \csletcs{equation*}{\LWR@equationnormalstar}%
12426   \csletcs{endequation*}{\LWR@endequationnormalstar}%
12427 }
```

\displaymathother Use when display math environments have complicated objects which will not work with MATHJAX or should not be included in HTML alt tags. Complicated contents are more likely to compile correctly.

```

12428 \newcommand*{\displaymathother}{%
12429   \boolfalse{mathjax}%
12430   \LetLtxMacro{\displaymath}{\LWR@displaymathother}%
12431   \LetLtxMacro{\enddisplaymath}{\endLWR@displaymathother}%
12432   \LetLtxMacro{[}{\LWR@displaymathother}%
12433   \LetLtxMacro{]}{\endLWR@displaymathother}%
12434   \LetLtxMacro{\equation}{\LWR@equationother}%
12435   \LetLtxMacro{\endequation}{\endLWR@equationother}%
12436   \csletcs{equation*}{\displaymath}%
12437   \csletcs{endequation*}{\enddisplaymath}%
12438 }

12439 \end{warpHTML}
```

for PRINT output

Print-mode versions:

```

12441 \newcommand*{\displaymathnormal}{}
12442 \newcommand*{\displaymathother}{}
```

```

12443 \newcommand*{\theMathJaxsubequations}{0}
12444 \newcommand*{\theMathJaxsection}{}
12445 \newcommand*{\theMathJaxequation}{\arabic{equation} }

12446 \end{warpprint}

for HTML output 12447 \begin{warpHTML}
```

83.7 AMS Math environments

83.7.1 Support macros

`LWR@amsmultline (bool)` True if processing a multiline environment.

To compensate for multiline-specific code, `LWR@amsmultline` is used to add extra horizontal space in `\LWR@htmlmathlabel` if it is used in an `amsmath` environment which is not a multiline environment and not an equation.

```

12448 \newbool{LWR@amsmultline}
12449 \boolfalse{LWR@amsmultline}
```

`\LWR@beginhideamsmath` Starts hiding L^AT_EX math inside an HTML comment.

```

12450 \newcommand*{\LWR@beginhideamsmath}{
12451   \LWR@stopars
12452   \LWR@orignobreakspace\LWR@orignewline
12453   \LWR@htmlopencomment
12454
12455   \begingroup
12456   \LWR@restoreorigformatting
```

Temporarily prevent underfull `\hbox` warnings.

```

12457   \hbadness=1000\relax%
12458   \booltrue{LWR@insidemathcomment}
12459 }
```

`\LWR@endhideamsmath` Ends hiding L^AT_EX math inside an HTML comment.

```

12460 \newcommand*{\LWR@endhideamsmath}{
12461   \endgroup
12462
12463   \LWR@htmlclosecomment
12464   \boolfalse{LWR@insidemathcomment}
12465   \LWR@orignewline
12466   \LWR@startpars
12467 }
```

83.7.2 Environment patches

The `amsmath` environments already collect their contents in `\@envbody` for further processing. `eqnarray` is not an \mathcal{AM} S package, and thus requires special handling.

For SVG math: Each environment is encapsulated inside a `\teximage` environment, along with a special optional argument of `\LWR@amsmathbody` or `\LWR@amsmathbodynumbered` telling `\teximage` to use as the `HTML <alt>` tag the environment's contents which were automatically captured by the $\mathcal{AM}S$ environment.

For MATHJAX: Each environment is synched with L^AT_EX's equation numbers, typeset with L^AT_EX inside an `HTML` comment, then printed to `HTML` output for MATHJAX to process.

- `eqnarray (env.)` This environment is not an $\mathcal{AM}S$ environment and thus its body is not automatically captured, so the `environ` package is used to capture the environment into `\BODY`.

```
12468 \let\LWR@origeqnarray\eqnarray
12469 \let\LWR@origendeqnarray\endeqnarray
```

To remember whether the starred environment was used, and thus whether to number the equations:

```
12470 \newbool{\LWR@numbereqnarray}
12471 \booltrue{\LWR@numbereqnarray}
```

Common code used by `eqnarray` and `Beqnarray` (from `fancybox`):

```
12472 \newcommand{\LWR@eqnarrayfactor}{%
```

If `mathjax` or `FormatWP`, print the L^AT_EX expression:

```
12473 \ifboolexpr{\bool{mathjax} \or (\ bool{FormatWP} \and \bool{WPMarkMath}) }%
12474 {%
```

If MATHJAX, the environment contents (the `\BODY`) are executed in a `HTML` comment to trigger the correct equation number increment (if not starred), then are included verbatim in the output for MATHJAX to interpret:

```
12475 \LWR@syncmathjax%
12476 \boolfalse{\LWR@amsmultiline}%
12477 \boolfalse{\LWR@HTMLsanitize@tmpb@removebackslash}%
12478 \ifbool{\LWR@numbereqnarray}%
12479 {%
```

If numbering the equations, execute a copy inside an `HTML` comment block:

```
12480 \LWR@beginhideamsmath%
12481 \LWR@origeqnarray%
12482 \BODY%
12483 \LWR@origendeqnarray%
12484 \LWR@endhideamsmath%
```

Then print the (sanitized) contents to the output for MATHJAX to interpret:

```
12485 \LWR@addmathjax{eqnarray}{\BODY}%
12486 }%
12487 { \% not \LWR@numbereqnarray
```

If not numbering equations, just create the contents for MATHJAX:

```

12488      \LWR@addmathjax{eqnarray*}{\BODY}%
12489      }% LWR@numbereqnarray
12490      }% mathjax
12491      {%- not mathjax
12492      \ifbool{LWR@numbereqnarray}%
12493      {%

```

For numbered SVG equations, first create a `lateximage` with an `alt` attribute containing sanitized copy of the source code:

```

12494      \begin{BlockClass}{displaymathnumbered}%
12495      \LWR@newautoidanchor%
12496      \booltrue{LWR@indisplaymathimage}%
12497      \begin{lateximage}[(\LWR@startingequationtag\textendash\LWR@equationtag)%
12498      \LWR@addmathjax{eqnarray}{\BODY}]*(\math)%

```

Support for `xfakebold`:

```
12499      \LWR@applyxfakebold%
```

Create the image contents using an actual `eqnarray`:

```

12500      \LWR@origeqnarray%
12501      \BODY%
12502      \LWR@origendeqnarray%
12503      \end{lateximage}%
12504      \end{BlockClass}%
12505      }%
12506      {%- not LWR@numbereqnarray

```

If not numbered, do the same, but an extra `\nonumber` seems to be required:

```

12507      \begin{BlockClass}{displaymath}%
12508      \LWR@newautoidanchor%
12509      \booltrue{LWR@indisplaymathimage}%
12510      \begin{lateximage}[\LWR@addmathjax{eqnarray*}{\BODY}]*(\math)%

```

Support for `xfakebold`:

```

12511      \LWR@applyxfakebold%
12512      \def\@eqncr{\nonumber\@seqncr}%
12513      \csuse{LWR@origeqnarray}%
12514      \BODY%
12515      \nonumber\csuse{LWR@origendeqnarray}%
12516      \end{lateximage}%
12517      \end{BlockClass}%
12518      }% LWR@numbereqnarray
12519      }% not mathjax

```

Default to number equations in the future:

```
12520      \booltrue{LWR@numbereqnarray}%

```

Clear the single-use alt text:

```

12521      \gdef\LWR@ThisAltText{}%
12522 }

```

`eqnarray` itself is made with a blank line before and after to force it to be on its own line:

```
12523 \RenewEnviron{eqnarray}{%
12525 \LWR@eqnarrayfactor
12527 } 12528 }
```

The starred version is patched to turn off the numbering:

```
12529 \csgpreto{eqnarray*}{\boolfalse{\LWR@numbereqnarray}}
12530 \end{warpHTML}
```

84 Lateximages

84.1 Description

`lateximage (env)` A `lateximage` is a piece of the document which is typeset in L^AT_EX then included in the HTML output as an image. This is used for math if `svg` math is chosen, and also for the `picture`, `tikzpicture`, and other environments.

Before typesetting the `lateximage` a large number of formatting, graphics, and symbols-related macros are temporarily restored to their print-mode meaning by `\LWR@restoreorigformatting`. (See section 81.)

A `lateximage` is typeset on its own PDF page inside an HTML comment which starts on the preceding page and ends on following page, and instructions are written to `lateximage.txt` for `lwarfmk` to extract the `lateximage` from the page of the PDF file then generate an accompanying `.svg` file image file. Meanwhile, instructions to show this image are placed into the HTML file after the comment.

An HTML `` is created to hold both the HTML comment, which will have the `pdftotext` conversion, and also the link to the final `.svg` image.

A L^AT_EX label is used to remember which PDF page has the image. A label is used because footnotes, endnotes, and pagenotes may cause the image to appear at a later time. The label is declared along with the image, and so it correctly remembers where the image finally ended up.

HTML alt tag The HTML alt tag is set to the L^AT_EX source for SVG math, some chemistry expressions, and perhaps some other expressions which make sense for text copy/paste. In some other cases, the alt tag is set according to the package name.

When creating an SVG math image, its HTML alt tag may be set to the math expression, which may be hashed for image reuse. In the case of `\ensuremath` or after `\inlinemathother`, where the contents require a unique image for each instance of the same expression, the alt tag is set to `\MathImageAltText`, along with `\AltTextOpen` and `\AltTextClose`, and the image is not reused.

This alt expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “math image”, and it may be

changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following SVG math images.

For many packages, the output is placed inside a `\textrimage` with an HTML alt tag set to the package name followed by `\PackageDiagramAltText`. For example:

```
(-xy- diagram)
```

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is "diagram", and may it be changed according to the document's language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following package diagrams.

svg image font size

For the `\textrimage` environment, the size of the math and text used in the SVG image may be adjusted by setting `\LateximageFontSizeName` to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{\normalsize}
```

For inline SVG math, font size is instead controlled by `\LateximageFontSizeScale`, which defaults to:

```
\newcommand*{\LateximageFontSizeScale}{.75}
```

84.2 Support counters and macros

for HTML output 12531 `\begin{warpHTML}`

LWR@`\textrimage`number (Ctr) Sequence the images.

```
12532 \newcounter{LWR@\textrimagenumber}
12533 \setcounter{LWR@\textrimagenumber}{0}
```

LWR@`\textrimage`depth (Ctr) Do not create `\textrimage` inside of `\textrimage`.

```
12534 \newcounter{LWR@\textrimagedepth}
12535 \setcounter{LWR@\textrimagedepth}{0}
```

A few utility macros to write special characters:

```
12536 \edef\LWR@hashmark{\string#} % for use in \write
12537 \edef\LWR@percent{\@percentchar} % for use in \write
```

LWR@LIpage (Ctr) Used to reference the PDF page number of a `\textrimage` to be written into `<project>-images.txt`.

```
12538 \newcounter{LWR@LIpage}
```

```
12539 \end{warpHTML}
```

84.3 Font size

for HTML & PRINT 12540 `\begin{warpall}`

\LateximageFontSizeName Declares how large to write text in \latexitimages. The .svg file text size should blend well with the surrounding HTML text size.

 **no backslash** *Do not include the leading backslash in the name.*

```
12541 \newcommand*{\LateximageFontSizeName}{normalsize}
```

\LateximageFontSizeScale Declares how large to scale inline SVG math images. The .svg file text size should blend well with the surrounding HTML text size. The default is 1, but it may be redefined as needed depending on the HTML font.

```
12542 \newcommand*{\LateximageFontSizeScale}{1}
```

```
12543 \end{warpall}
```

84.4 Equation numbers

for HTML output `12544 \begin{warpHTML}`

LWR@startingequation (*Ctr*) For use with lateximage and multi-line numbered equations. Remembers the next equation number so that it may be printed in the alt tag.

```
12545 \newcounter{LWR@startingequation}
12546
12547 \@ifundefined{chapter}
12548 {
12549 \renewcommand{\theLWR@startingequation}{%
12550 \arabic{LWR@startingequation}%
12551 }
12552 }
12553 {%
12554 \chapter{%
12555 \renewcommand{\theLWR@startingequation}{%
12556 \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}{}%
12557 \arabic{LWR@startingequation}%
12558 }}
```

LWR@isstartingequation (*bool*) True for the first equation tag, false for later tags in the same environment.

```
12559 \newbool{LWR@isstartingequation}
```

\LWR@startingequationtag Prints the starting equation number or tag.

```
12560 \let\LWR@startingequationtag\theLWR@startingequation
```

\LWR@equationtag Prints the ending equation number or tag.

This is reset by lateximage, may be temporarily overwritten by \tag calling \LWR@remembertag.

```
12561 \newcommand*{\LWR@equationtag}{}  
12562 \newcommand*{\LWR@remembertag}{}  
12563 \newcommand*{\LWR@startequation}{%
```

Only if SVG math, patch \tag after packages have loaded, in case someone else modified \tag.

```
12562 \AtBeginDocument{  
12563  
12564 \ifbool{mathjax}{}{\% not mathjax}
```

\LWR@remembertag {\langle tag\rangle}

For use inside the math environments while using SVG math. Sets \theLWR@startingequation and \theequation to the given tag.

```
12565 \NewDocumentCommand{\LWR@remembertag}{m}{%  
12566     \ifbool{\LWR@isstartingequation}{%  
12567         {  
12568             \global\boolearn{\LWR@isstartingequation}{%  
12569                 \xdef\LWR@startingequationtag{\#1}{%  
12570             }{}}%  
12571             \xdef\LWR@equationtag{\#1}{%  
12572         }%  
12573     }% not mathjax  
12574 }% AtBeginDocument
```

84.5 HTML alt tags

\LWR@amsmathbody {\langle envname\rangle} For use inside the optional argument to a \teximage to add the contents of a AMS math environment to the <alt> tag.

```
12575 \newcommand*{\LWR@amsmathbody}[1]  
12576 {  
12577     \textbackslash\begin\{}\#1\% extra space  
12578     \LWR@HTMLsanitizeexpanded{\detokenize\expandafter{\the\@envbody}}%  
12579     \textbackslash\end\{}\#1\%  
12580 }
```

\LWR@amsmathbodynumbered {\langle envname\rangle} For use inside the optional argument to a \teximage to add the contents of a AMS math environment to the alt tag, prefixed by the equation numbers.

```
12581 \newcommand*{\LWR@amsmathbodynumbered}[1]  
12582 {  
12583     \ifnumcomp{\value{\LWR@startingequation}}{=}{\value{equation}}{  
12584         {(\LWR@equationtag)}%  
12585         {(\LWR@startingequationtag\textendash\LWR@equationtag)}% extra space  
12586         \LWR@amsmathbody{\#1}% extra space  
12587 }
```

84.6 \teximage environment

\LWR@teximage@oneimageb {\langle 1: alt text\rangle} {\langle 2: filename\rangle} {\langle 3: css style\rangle} {\langle 4: aria role\rangle} Creates the image for the \teximage.

```

12588 \newcommand{\LWR@lateximage@oneimageb}[4]{%
12589   \LWR@subinlineimage{#1}{\lateximage}%
12590   {%
12591     \LWR@print@mbox{%
12592       \LWR@ImagesDirectory\OSPathSymbol%
12593       #2%
12594     }%
12595   }{svg}{#3}{#4}%
12596 }

```

\LWR@lateximage@oneimage {<1: alt text>} {<2: filename>} {<3: css style>} {<4: delimit?>} {<5: aria role>}

Creates an image for the `\lateximage`, whose alt text depends on the circumstances.

```

12597 \newcommand{\LWR@lateximage@oneimage}[5]{%
12598   \LWR@traceinfo{\LWR@lateximage@oneimage !#1!#2!#3!#4!#5!}%
12599   \ifdefvoid{\LWR@ThisAltText}{%
12600     \IfBooleanTF{#4}{%
12601       \LWR@lateximage@oneimageb{#1}{#2}{#3}{#5}%
12602     }{%
12603       \LWR@lateximage@oneimageb%
12604         {\AltTextOpen#1\AltTextClose}%
12605         {#2}{#3}{#5}%
12606     }%
12607   }{%
12608     \LWR@lateximage@oneimageb%
12609       {\AltTextOpen\LWR@ThisAltText\AltTextClose}%
12610       {#2}{#3}{#5}%
12611   }%
12612 }

```

`\lateximage (env.) * [<2: <alt> tag>] * [<4: add'l hashing>] [<5: css style>] (<6: aria role>)`

Typesets the contents and then renders the result as an SVG file. Star #1 causes the image to be hashed for reuse. Star #3 causes the alt tag to not include `\AltTextOpen` and `\AltTextClose`, for use with math expressions.

The optional `<alt>` tag is included in the HTML code for use with copy/paste.

image filename hashing If starred, a hashed filename is used. If so, the hash is based on the alt tag and also the additional hashing argument.

This may be used to provide an expression with a simple alt tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated TEX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is used in the additional hashing argument to ensure a unique image.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple alt tag is still the same.

`*_html.aux (file)` A new label is placed into the file `*_html.aux`:

```
\newlabel{\LWR@lateximage-<BaseJobname>-<number>}{{<x>}{<y>}}
```

This is used to find the image in the PDF file, according to its name.

- `*-images.txt (file)` A list of images to generate is created in `<jobname>-images.txt`. Each line has three pipe-delimited fields, containing the PDF page number from `<jobname>.html.pdf`, where the image is located, a boolean indicating whether the image is hashed, and the filename of the image. The last line has “end” in each field, and is used to detect an incomplete compile.

```
12613 \catcode '\$=\active%
12614
12615 \NewDocumentEnvironment{lateximage}{s 0{\ImageAltText} s 0{} 0{} D(){}}
12616 {%
12617 \LWR@traceinfo{lateximage !#1#!#2#!#3#!#4#!#5#!#6!}%
12618 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
12619 \LWR@traceinfo{lateximage: entering depth is \arabic{\LWR@lateximagedepth}}%
```

Nested `lateximages` remain one large `lateximage`:

```
12620 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%

```

If nesting inside an already-existing `lateximage`, simply record one more level. *AMS* packages redefine `\addtocounter` to do nothing if inside a `\text`, so lower-level `TEX` macros are used for tracking nested `lateximages`.

```
12621 {%
12622 %     \addtocounter{\LWR@lateximagedepth}{1}%
12623     \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
12624 }%
```

Otherwise, this is the outer-most `lateximage`:

```
12625 {%
    start of outer-most lateximage
}
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

```
12626 \LWR@traceinfo{lateximage: starting outer-most lateximage}%
12627 \setcounter{\LWR@startingequation}{\value{equation}}%
12628 \addtocounter{\LWR@startingequation}{1}%
12629 \booltrue{\LWR@isstartingequation}%
12630 \let\LWR@startingequationtag\the\LWR@startingequation%
```

The default equation tag, unless overwritten by `\tag`:

```
12631 \let\LWR@equationtag\theequation%
```

Starting a new `lateximage`:

```
12632 \addtocounter{\LWR@lateximagenumber}{1}%
12633 \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{\LWR@lateximagenumber}}%
```

While inside a `lateximage`, locally do not use `mathjax`:

```
12634 \boolfalse{mathjax}%

```

While inside a `lateximage`, do not use `HTML` tags for verbatim content, and do not sanitize `HTML` tags for `<`, `>`, `&`, etc.

```
12635 \boolearn{LWR@verbtags}{}
12636 \boolearn{LWR@HTMLsanitize@tmpb@enable}{}
```

Be sure that are doing a paragraph:

```
12637 \LWR@ensuredoingapar%
```

Inside the `\teximage`, temporarily prevent underfull `\hbox` warnings.

```
12638 \hbadness=10000\relax%
```

Next file:

```
12639 \addtocounter{LWR@externalfilecnt}{1}%
12640 \LWR@traceinfo{\teximage: LWR@externalfilecnt is \arabic{LWR@externalfilecnt}}%
```

Figure out what the next page number will be. `\setcounterpageref` assigns `LWR@LIPage` to the page number for the reference `LWR\teximage-BaseJobname-XXX`:

```
12641 \setcounterpageref{LWR@LIPage}{%
12642     LWR\teximage-\BaseJobname-\arabic{LWR@teximagenumber}}%
12643 }%
12644 \LWR@traceinfo{\teximage: LWR@LIPage is \arabic{LWR@LIPage}}%
```

Create an HTML span which will hold the comment which contains the `pdftotext` translation of the image's page, and also will hold the link to the .svg file:

```
12645 \LWR@htmltag{span\LWR@indentHTML%
12646     id=\textquotedbl{}%
12647         \teximage-\BaseJobname-\arabic{LWR@teximagenumber}%
12648             \textquotedbl\LWR@indentHTML%
12649     class=\textquotedbl{}teximagesource\textquotedbl\LWR@newline
12650 }%
```

Write instructions to the `<ImagesDirectory>.txt` file:

```
12651 \LWR@traceinfo{\teximage: about to write to \BaseJobname-images.txt}%
12652 \IfBooleanTF{#1}{ starred
12653 { hash}
```

Compute and save the hashed file name for later use:

```
12654 \ifdefvoid{\LWR@ThisAltText}{%
12655     \IfBooleanTF{#3}{%
12656         \edef\LWR@hashedname{%
12657             \LWR@mdfive{\detokenize\expandafter{#2}-!-#4}}%
12658     }%
12659 }{%
12660     \edef\LWR@hashedname{%
12661         \LWR@mdfive{\detokenize\expandafter{\AltTextOpen#2\AltTextClose}-!-#4}}%
12662     }%
12663 }{%
12664     \edef\LWR@hashedname{%
12665         \LWR@mdfive{\detokenize\expandafter{\AltTextOpen\LWR@ThisAltText\AltTextClose}-!-#4}}%
12666     }%
12667 }%
12668 }%
12669 \LWR@traceinfo{\teximage: hash is \LWR@hashedname}%

```

Write the page, hashing, and hashed name:

```
12670      \immediate\write\LWR@lateximagesfile{%
12671          |\arabic{LWR@LIpage}|true|\LWR@hashedname|%
12672          }%
12673      }% hash
12674      {%- no hash
```

No hash, so write the page, no hashing, and the image number:

```
12675      \LWR@traceinfo{lateximage: hash false}%
12676      \immediate\write\LWR@lateximagesfile{%
12677          |\arabic{LWR@LIpage}|false|\LWR@ImagesName\arabic{LWR@externalfilecnt}|%
12678          }%
12679      }% no hash
```

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by *pdftotext*.

```
12680      \LWR@traceinfo{lateximage: about to create open comment}%
12681      \LWR@htmlopencomment%
```

One level deeper. At this outer-most lateximage, it is known that this is not being used inside an *AMS* \text, since the outer-most level will never be in math mode.

```
12682      \addtocounter{LWR@lateximagedepth}{1}%
```

Start the new PDF page:

```
12683      \LWR@traceinfo{lateximage: about to create a new page}%
12684      \LWR@maybe@orignewpage%
```

If the current page is larger, typeset the image in a “standard” width page and font size:

```
12685      \LWR@traceinfo{lateximage: about to create minipage}%
12686      \setcounter{LWR@mpfootnote@store}{\value{mpfootnote}}
12687      \ifdimless{\linewidth}{6in}{%
12688          \LWR@print@minipage{\linewidth}%
12689      }{%
12690          \LWR@print@minipage{6in}%
12691      }%
12692      \ifnumgreater{\value{LWR@minipage@depth}}{0}{%
12693          \setcounter{mpfootnote}{\value{LWR@mpfootnote@store}}%
12694      }{%
12695          \nameuse{LWR@print@\LateximageFontSizeName}%
}
```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for \hspace, etc. inside a lateximage.

```
12696      \LWR@traceinfo{lateximage: about to temporarily restore formatting}%
12697      \LWR@restoreorigformatting%
```

If not inside a minipage, use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

```

12698   \ifnumgreater{\value{LWR@minipage@depth}}{0}%
12699     {}%
12700   {}%
12701     \def\@mpfn{footnote}%
12702     \def\thempfn{\thefootnote}%
12703     \LetLtxMacro{\footnotetext}{\LWR@footnotetext}%
12704   }%

```

Create the `LWR@lateximage-jobname-<number>` label:

```

12705   \LWR@traceinfo{lateximage: about to create label
12706           LWR@lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}}%
12707   \LWR@orig@label{LWR@lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}}%
12708   \LWR@traceinfo{lateximage: finished creating the label}%

```

Adjust the rule color to match HTML:

```

12709   \ifdefvoid{\LWR@ruleHTMLcolor}{}{%
12710     \LWR@print@arrayrulecolor[HTML]{\LWR@ruleHTMLcolor}%
12711   }%

```

Enable print-mode math functions:

```

12712   \LetLtxMacro$\LWR@origdollar%
12713   \catcode`\$=3% math shift
12714   \LetLtxMacro\(\LWR@origopenparen%
12715   \LetLtxMacro\)\LWR@origcloseparen%

```

Only enable print-mode display math if are not already inside display math:

```

12716   \ifbool{\LWR@indisplaymathimage}{}{%
12717     \LetLtxMacro\[{\LWR@origopenbracket}%
12718     \LetLtxMacro\]{{\LWR@origclosebracket}}%
12719     \let\equation{\LWR@orig@equation}%
12720     \let\endequation{\LWR@orig@endequation}%
12721     \csletcs{equation*}{\LWR@orig@equation*}%
12722     \csletcs{endequation*}{\LWR@orig@endequation*}%
12723   }%

```

For chemformula:

```

12724   \LetLtxMacro{\LWR@newsingledollar$}%
12725   \LetLtxMacro{\LWR@newsingledollar$}{syntax highlighting}%
12726 }% end of outer-most lateximage
12727 \LWR@traceinfo{lateximage: finished start of environment}%
12728 }% end of \begin{lateximage}

```

`\end{lateximage}` When the `lateximage` environment closes:

```

12729 {%
12730 \LWR@traceinfo{lateximage: starting end of lateximage}%

```

Nested more than one deep?

```

12731 \LWR@traceinfo{lateximage: internal depth was \arabic{LWR@lateximagedepth}}%
12732 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%

```

If nesting inside an already existing `\teximage`, simply record one less level. Uses a lower-level TeX macro due to \mathcal{MS} \text change of `\addtocounter`.

```
12733 {%
12734     \LWR@traceinfo{\teximage: unnesting}%
12735     \global\advance\c@LWR@teximagedepth -1\relax%
12736 }%
```

If this is the outer-most `\teximage`:

```
12737 {% end of outer-most \teximage
```

Finish the `\teximage` `\minipage` and start a new PDF page:

```
12738 \LWR@traceinfo{\teximage: ending outer-most \teximage}%
12739     \endLWR@print@minipage%
12740     \LWR@maybe@orignewpage%
```

Close the HTML comment which encapsulated any traces of the `\teximage` picked up by `pdftotext`:

```
12741     \LWR@print@vspace*{.5\baselineskip}%
12742     \LWR@htmlclosecomment%
12743     \LWR@traceinfo{\teximage: The page after the image is \arabic{page}}%
```

Create a link to the `\teximage`, allowing its natural height:

```
12744     \LWR@traceinfo{about to \LWR@teximage@oneimage !#2!}%
12745     \IfBooleanTF{#1}{ starred}{%
12746         \% hash
12747         \LWR@teximage@oneimage{#2}{\LWR@hashedname}{#5}{#3}{#6}%
12748     \% hash
12749     \% no hash
12750     \LWR@teximage@oneimage{#2}{\LWR@ImagesName\theLWR@externalfilecnt}{#5}{#3}{#6}%
12751     \% no hash}
```

Be sure that are doing a paragraph:

```
12752     \LWR@ensuredoingapar%
```

Close the HTML span which has the `pdftotext` comment and also the link to the .svg image:

```
12753     \LWR@htmlltag{/span}%
12754     \ifbool{HTMLDebugComments}{%
12755         \LWR@htmlcomment{End of \teximage}%
12756     }{}}
```

Undo one `\teximage` level. This is not inside an \mathcal{MS} \text, so regular `\addtocounter` may be used here.

```
12757     \addtocounter{\LWR@teximagedepth}{-1}%
```

Clear the single-use alt text:

```
12758     \gdef\LWR@ThisAltText{}%
12759 }% end of outer-most \teximage
```

```

12760 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
12761 \LWR@traceinfo{lateximage: done}%
12762 }%
12763 \catcode`\$=3% math shift
12764 \end{warpHTML}

for PRINT output 12765 \begin{warpprint}

  lateximage (env.) * [<alt> tag] * [<add'l hashing>] [<css style>]

    Ignored in print mode.

  12766 \NewDocumentEnvironment{lateximage}{s o s o o d()}
  12767     {}{{}

  12768 \end{warpprint}

```

85 center, flushleft, flushright

for HTML output 12769 \begin{warpHTML}

center (*env.*) Replace center functionality with css tags. In a , these macros are nullified, but extra % are used to remove spurious spaces here as well.

```

12770 \newenvironment*{\LWR@HTML@center}
12771 {%
12772     \LWR@forcenewpage%
12773     \ifbool{FormatWP}{%
12774         {\BlockClass[\LWR@print@mbox{text-align:center}]{center}}%
12775         {\BlockClass{center}}%
12776     }%
12777     {\endBlockClass}
12778
12779 \LWR@formattedenv{center}

```

flushright (*env.*)

```

12780 \newenvironment*{\LWR@HTML@flushright}
12781 {%
12782     \LWR@forcenewpage%
12783     \ifbool{FormatWP}{%
12784         {\BlockClass[\LWR@print@mbox{text-align:right}]{flushright}}%
12785         {\BlockClass{flushright}}%
12786     }%
12787     {\endBlockClass}
12788
12789 \LWR@formattedenv{flushright}

```

flushleft (*env.*)

```

12790 \newenvironment*{\LWR@HTML@flushleft}
12791 {%
12792     \LWR@forcenewpage%

```

```
12793     \ifbool{FormatWP}{%
12794         {\BlockClass[\LWR@print@mbox{text-align:left}]{flushleft}}{%
12795             {\BlockClass{flushleft}}{%
12796         }{%
12797     }{\endBlockClass}%
12798 }{\LWR@formattedenv{flushleft}}
```

\centering, \raggedleft, and \raggedright usually have no effect on the HTML output, but they may be used to compare with the next token to identify their use at the start of a float. See \LWR@floatalignment.

\centering

```
12800 \newcommand*{\LWR@HTML@centering}{%
12801     \ifbool{HTMLDebugComments}{%
12802         {\LWR@htmlcomment{centering}}{%
12803     }{%
12804 }{%
12805 \LWR@formatted{centering}}
```

\raggedleft

```
12806 \newcommand*{\LWR@HTML@raggedleft}{%
12807     \ifbool{HTMLDebugComments}{%
12808         {\LWR@htmlcomment{raggedleft}}{%
12809     }{%
12810 }{%
12811 \LWR@formatted{raggedleft}}
```

\raggedright

```
12812 \newcommand*{\LWR@HTML@raggedright}{%
12813     \ifbool{HTMLDebugComments}{%
12814         {\LWR@htmlcomment{raggedright}}{%
12815     }{%
12816 }{%
12817 \LWR@formatted{raggedright}}
```

\leftline {\textit{text}}

```
12818 \renewcommand{\leftline}[1]{\begin{flushleft}\#1\end{flushleft}}
```

\centerline {\textit{text}}

```
12819 \renewcommand{\centerline}[1]{\begin{center}\#1\end{center}}
```

\rightline {\textit{text}}

```
12820 \renewcommand{\rightline}[1]{\begin{flushright}\#1\end{flushright}}
```

```
12821 \end{warpHTML}
```

86 Preloaded packages

for HTML output¹²⁸²² \begin{warpHTML}

If the given package was loaded before or by l warp, load the l warp version as well.

\LWR@PreloadedPackage {⟨packagename⟩}

```
12823 \newcommand*\LWR@PreloadedPackage[1]{%
12824     \IfPackageLoadedTF{#1}%
12825         {%
12826             \AtBeginDocument{%
12827                 \LWR@origRequirePackage{l warp-#1}%
12828             }%
12829         }%
12830     {}%
12831 }
```

Undo `nameref` if already loaded, such as by memoir:

12832 \LWR@PreloadedPackage{nameref}

If `inputrc` was loaded before l warp, as is usually done, explicitly load the l warp patches now:

12833 \LWR@PreloadedPackage{inputrc}

If `textcomp` was loaded before l warp, perhaps as part of the font-related packages, explicitly load the l warp patches now:

12834 \LWR@PreloadedPackage{textcomp}

If `xunicode` was loaded before l warp, perhaps as part of the font-related packages, explicitly load the l warp patches now:

12835 \LWR@PreloadedPackage{xunicode}

If `graphics` or `graphicx` were loaded before l warp, perhaps by `xunicode`, explicitly load the l warp patches now:

12836 \LWR@PreloadedPackage{graphics}
12837 \LWR@PreloadedPackage{graphicx}

`tagpdf-base` may have been preloaded by `pdfmanagement-testphase`

12838 \LWR@PreloadedPackage{tagpdf-base}

`scalefnt` may have been preloaded by `babel`

12839 \LWR@PreloadedPackage{scalefnt}

`fontaxes` must be preloaded so that l warp may patch it for HTML.

12840 \LWR@PreloadedPackage{fontaxes}

Various font packages which may be loaded before l warp:

```
12841 \LWR@PreloadedPackage{cmbright}
12842 \LWR@PreloadedPackage{fourier}
12843 \LWR@PreloadedPackage{kpfonts}
12844 \LWR@PreLoadedPackage{kpfonts-otf}
12845 \LWR@PreloadedPackage{libertinust1math}
12846 \LWR@PreloadedPackage{pxfonts}
12847 \LWR@PreloadedPackage{txfonts}
12848 \LWR@PreloadedPackage{txgreeks}
12849 \LWR@PreloadedPackage{newpxmath}
12850 \LWR@PreloadedPackage{newtxmath}
12851 \LWR@PreloadedPackage{newtxsf}
12852 \LWR@PreloadedPackage{mathalpha}
12853 \LWR@PreloadedPackage{unicode-math}
```

```
12854 \LWR@PreloadedPackage{realscripts}
```

nfssext-cfr may be preloaded by cfm-lm or related font packages.

```
12855 \LWR@PreloadedPackage{nfssext-cfr}
```

ulem may be preloaded by ctex, ctexart, and related classes.

```
12856 \LWR@PreloadedPackage{ulem}
```

```
12857 \LWR@PreloadedPackage{xetexko}
```

geometry is preloaded by l warp, and perhaps by various classes.

```
12858 \LWR@PreloadedPackage{geometry}
```

plext is preloaded by some CJK classes.

```
12859 \LWR@PreloadedPackage{plext}
```

stfloats is preloaded by ltj* classes.

```
12860 \LWR@PreloadedPackage{stfloats}
```

lltjext is preloaded by ltj* classes.

```
12861 \LWR@PreloadedPackage{lltjext}
```

luatexko must be loaded before l warp.

```
12862 \LWR@PreloadedPackage{luatexko}
```

```
12863 \end{warpHTML}
```

87 siunitx

siunitx (*Pkg*)

A few `HTML` unit equivalents are defined here.

`siunitx` is well supported by `l warp`.

Limitations Some general limitations:

fractions Due to `pdftotext` limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

`\cancel` is not currently supported for `siunitx` v3.

Negative values are not automatically colored.

⚠ tabular Tabular S and s columns are rendered as simple c columns, although key settings will be set. If using scientific notation, table-format, table-align-uncertainty, drop-exponent, etc.. use `\tablenum` for each cell. This is especially required for drop-exponent, without which the value will be shown incorrectly.

⚠ table-auto-round `table-auto-round` is ignored.

Math rendering Math may be rendered in several ways in the same document:

For math mode with SVG display: The original `siunitx` code is used while generating the SVG image.

For HTML text mode: `l warp` uses `siunitx` code patched for `HTML`, and simplified units.

For math expressions while using MATHJAX: A limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. The result usually looks fine, and otherwise is enough to get the meaning across.

Custom units `siunitx` allows customized units:

`\DeclareSIUnit` $\{\langle name \rangle\} \{\langle definition \rangle\}$

`\DeclareSIUnit` declares a version of the unit for the print version. This is also used when the unit is printed in SVG math or a `lateximage`. It is also used for `HTML` if an `HTML`-specific version is not defined with `\HTMLDeclareSIUnit`.

`\DeclareSIUnit\myunit{\ensuremath{\text{m}}_y}`

`\HTMLDeclareSIUnit` $\{\langle name \rangle\} \{\langle definition \rangle\}$

⚠ v3 only! Use this after the print unit has been defined. For `siunitx` v3, `\HTMLDeclareSIUnit` declares a simplified version of the unit for `HTML`, for example if the print-mode unit uses `TEX` boxes or `\ensuremath`:

`\HTMLDeclareSIUnit\myunit{\text{m}\text{y}}`

It is also possible to provide a custom unit for `MATHJAX`:

`\CustomizeMathJax{\newcommand{\myunit}{\text{m}_y}}`

Predefined units Most units work as-is with `HTML`. For the following units, `l warp` has already set `\HTMLDeclareSIUnit`: `\celsius`, `\arcminute`, `\arcsecond`, `\elementarycharge`, `\clight`, `\bohr`, `\electronmass`, `\hartree`, `\planckbar`.

⚠ MathJax

Document modifications required for MATHJAX

⚠ \sisetup

- Place `\sisetup` in the preamble before `\begin{document}`. Changes made later may be ignored, especially with MATHJAX. The MATHJAX emulation also ignores most macro options.

⚠ complex numbers

custom units

- Complex numbers are displayed as entered, ignoring `output-complex-root`.

- Custom units may be added with `\CustomizeMathJax`. For example, from `l warp-common-mathjax-siunitx`:

```
\CustomizeMathJax{\newcommand{\hartree}{\mathit{E}_{\mathrm{h}}}}
\CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\AA}}}
```

- Units work better using `~` between units instead of using periods.

- To square or cube compound units, enclose the following compound units in braces:

```
\cubic{\centi\meter}
```

Single units do not require braces.

- For `\numlist`, the argument is printed as text as-is, so use space between semicolons for improved readability.

- If using `parse-numbers = false`, also use `\num` or `\qty`. `siunitx>Missing $ inserted`.

⚠ Missing \$ inserted

Also see [MATHJAX option](#), section 8.7.5.

for HTML output 12864 `\begin{warpHTML}`

Options for `siunitx`:

```
12865 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}C}
12866 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
12867 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLunicode{2032}}
12868 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLunicode{2033}}
12869 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLunicode{210F}}}}
12870
12871 \appto\LWR@restoreorigformatting{%
12872 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}\!C}}%
12873 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}\!C}}%
12874 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^{\prime}}}}%
12875 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{^{\prime\prime}}}}%
12876 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}}%
12877 }

12878 \end{warpHTML}
```

for PRINT output: The print version of `\HTMLDeclareSIUnit`.

```
12879 \begin{warpprint}
12880 \NewDocumentCommand{\HTMLDeclareSIUnit}{o +m m}{}%
12881 \end{warpprint}
```

88 Graphics print-mode modifications

88.1 General limitations

Per table 9, image filenames may be specified either with or without an extension. If an extension is given it will be used as-is, for either print or HTML output. If no extension is given, a list of possible extensions is tried, which depends on whether print or HTML is being generated. This allows a PDF file for print and a SVG file for HTML, for example. If no extension is given, the automatic search will

file extensions

 case sensitive

only return lowercase extensions, even if the filename actually has an uppercase extension, and lwarf cannot get around this problem, so image file extensions must be lowercase to be seen by the HTML browser with lwarf. For example, name the image file image.pdf instead of image.PNG, but refer to it in the source as image, without an extension. For images which may be used as-is with either print or HTML, such as JPG or PNG, you may use a capitalized extension if it is specified in the source, such as image.JPG.

\includegraphics file formats

For \includegraphics with .pdf or .eps files, the user must provide a .pdf or .eps image file for use in print mode, and also a .svg, .png, or .jpg version of the same image for use in HTML.

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, lwarf will automatically choose the .pdf or .eps format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a .pdf or .eps image is referred to with its file extension, the extension will be changed to .svg for HTML:

```
\includegraphics{filename.pdf} % uses .svg in html  
\includegraphics{filename.eps} % uses .svg in html
```

**pdftocairo (Prog)
PDF to SVG**

To convert a PDF image to SVG, use the utility *pdftocairo*:

Enter ⇒ **pdftocairo -svg filename.pdf**

lwarpmk pdftosvg (Prog) For a large number of images, use *lwarpmk*:

Enter ⇒ **lwarpmk pdftosvg *.pdf (or a list of filenames)**

**lwarpmk epstopdf (Prog)
epstopdf (Prog)
epstopdf package**

For EPS images converted to PDF using the package epstopdf, use

Enter ⇒ **lwarpmk pdftosvg *.PDF**

to convert to SVG images.

DVI LATEX

When using DVI *latex*, it is necessary to convert EPS to PDF and then to SVG:

Enter ⇒ **lwarpmk epstopdf *.eps (or a list of filenames)**

Enter ⇒ **lwarpmk pdftosvg *.pdf (or a list of filenames)**

PNG and JPG

For PNG or JPG while using *pdflatex*, *lualatex*, or *xelatex*, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

GIF GIF files may be used for HTML, but another format must also be provided for print output.

file extension priorities If a file extension is not used, for HTML the file extension priorities are: SVG, GIF, PNG, then JPG.

duplicate files A complication occurs if a file of the same name exists elsewhere in the TeX tree, such as a test image from some L^AT_EX package. TeX looks in the local document directory before considering the directories specified by \graphicspath, but the TeX tree is found as “local”, so any file in the tree is found before the directories in \graphicspath. To use such an image, it must be copied to the document’s directory to be used for HTML, and furthermore must be in the document’s base directory instead of an images subdirectory.

⚠️ image not displayed **graphics vs. graphicx** If using the older `graphics` syntax, use both optional arguments for `\includegraphics`. A single optional parameter is interpreted as the newer `graphicx` syntax. Note that viewports are not supported by `l warp`—the entire image will be shown.

units For `\includegraphics`, avoid px and % units for width and height, or enclose them inside `warpHTML` environments. For font-proportional image sizes, use ex or em. For fixed-sized images, use cm, mm, in, pt, or pc. Use the keys `width=.5\linewidth`, or similar for `\textwidth` or `\textheight` to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the `scale` option, since it is not well supported by HTML browsers.

options `\includegraphics` accepts `width` and `height`, `origin`, `rotate` and `scale`, plus new `class` and `alt` keys. (`alt` has recently been incorporated into `graphicx` itself.)

HTML class With HTML output, `\includegraphics` accepts an optional `class=xyz` keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.

HTML alt tags Likewise, the `\includegraphics alt` key adds an HTML alt tag to an image, and is ignored for print output. If not assigned, each image is given an alt tag according to `\ImageAltText`.

⚠️ scale Avoid using the `\includegraphics scale` option. Change:

```
\includegraphics[scale=<xx>]{ . . . }
```

to:

```
\includegraphics[width=<yy>\linewidth]{ . . . }
```

\rotatebox `\rotatebox` accepts the optional `origin` key.

⚠️ browser support `\rotatebox`, `\scalebox`, and `\reflectbox` depend on modern browser support. The css3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike L^AT_EX, so expect some ugly results for scaling and rotating.

88.2 Print-mode modifications

for PRINT output: For print output, accept and then discard the new `class` key:

```
12882 \begin{warpprint}
12883 \define@key{Gin}{class}{}{}
```

Print-mode additions for the `overpic` package. See section 464 for the HTML version.

```
12884 \AtBeginDocument{
12885 \IfPackageLoadedTF{overpic}{
12886 \newcommand*\overpicfontsize}{12}
12887 \newcommand*\overpicfontskip}{14}
12888 }{}
12889 }
12890 \end{warpprint}
```

89 xcolor boxes

`xcolor (Pkg)` A few new definitions are provided for enhanced HTML colored boxes, and `\fcolorbox` is slightly modified. Print-mode version are also provided.

Print-mode versions of new `xcolor` defintions. These are defined inside `warpall` because they are also used for HTML while inside a `lateimage`. They are defined `\AtBeginDocument` so that the `xcolor` originals may first be loaded and saved for reuse.

The framed versions are modified to allow a background color of `none`, in which case only the frame is drawn, allowing the background page color to show.

for HTML & PRINT¹²⁸⁹¹ \begin{warpall}

After `xparse` may have been loaded ...

```
12892 \AtBeginDocument{
... and only if xcolor was loaded:
12893 \IfPackageLoadedTF{xcolor}{

12894 \LWR@traceinfo{patching xcolor}}
```

The print version:

`\colorboxBlock` `\colorboxBlock` is the same as `\colorbox`:

```
12895 \LetLtxMacro\colorboxBlock\colorbox
```

The original definition is reused by the new versions:

```
12896 \LetLtxMacro\LWR@orig@print@fcolorbox\fcolorbox
```

`\fcolorbox` [*framemode*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

In print mode, `\fcolorbox` is modified to accept a background color of `none`.

(`\fcolorbox` is particular about its optional arguments, thus the elaborate combinations of `\ifthenelse`.)

```
12897 \newsavebox{\LWR@colorminipagebox}
12898
12899 \NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%
12900     \LWR@traceinfo{\LWR@print@fcolorbox #2 #4}}%
```

Pre-load the contents into an LR box so that they can be used inside a \fcolorbox:

```
12901 \begin{lrbox}{\LWR@colorminipagebox}%
12902 #5%
12903 \end{lrbox}%
```

Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a \fcolorbox.

The current color is remembered, then set to the frame, then the current color is used for the contents.

```
12904 \ifstreq{\#4}{none}%
12905 {%
12906     \LWR@traceinfo{background is none}%
12907     {% scope the \colorlet
12908         \colorlet{\LWR@currentcolor}{.}%
12909         \color{\#2}%
12910         \fbox{%
12911             \color{\LWR@currentcolor}%
12912             \usebox{\LWR@colorminipagebox}%
12913         }%
12914     }%
12915 }%
12916 {%
12917     \LWR@traceinfo{background not none}%
12918     \IfValueTF{\#1}%
12919     {%
12920         \IfValueTF{\#3}%
12921         {\LWR@orig@print@fcolorbox[\#1]{\#2}{\#3}{\#4}{\usebox{\LWR@colorminipagebox}}}%
12922         {\LWR@orig@print@fcolorbox[\#1]{\#2}{\#4}{\usebox{\LWR@colorminipagebox}}}%
12923     }%
12924     {%
12925         \IfValueTF{\#3}%
12926         {\LWR@orig@print@fcolorbox{\#2}{\#3}{\#4}{\usebox{\LWR@colorminipagebox}}}%
12927         {\LWR@orig@print@fcolorbox{\#2}{\#4}{\usebox{\LWR@colorminipagebox}}}%
12928     }%
12929     {%
12930         \LWR@traceinfo{\LWR@print@fcolorbox done}%
12931     }%
12932 \renewrobustcmd*\fcolorbox{\LWR@print@fcolorbox}%
12933 \newcommand*\fcolorboxBlock{\LWR@print@fcolorbox}%
12934 \newrobustcmd*\fcolorboxBlock{\LWR@print@fcolorboxBlock}%
12935 \NewDocumentEnvironment{fcolorminipage}{o m o m O{c} O{} o m}%
12936 \fcolorminipage[1:framemodel][2:framecolor][3:boxmodel][4:boxcolor][5:align][6:height][7:inner-align][8:width]
```

\fcolorboxBlock [*framemode*] [*framecolor*] [*boxmode*] [*boxcolor*] [*text*]

In print mode, \fcolorboxBlock is the same as \fcolorbox.

```
12933 \newcommand*\fcolorboxBlock{\LWR@print@fcolorbox}%
12934 \newrobustcmd*\fcolorboxBlock{\LWR@print@fcolorboxBlock}%
12935 \NewDocumentEnvironment{fcolorminipage}{o m o m O{c} O{} o m}%
12936 \fcolorminipage[1:framemode][2:framecolor][3:boxmodel][4:boxcolor][5:align][6:height][7:inner-align][8:width]
```

In print mode, becomes a \fcolorbox containing a minipage:

```
12935 \NewDocumentEnvironment{fcolorminipage}{o m o m O{c} O{} o m}%
12936 \fcolorminipage[1:framemode][2:framecolor][3:boxmodel][4:boxcolor][5:align][6:height][7:inner-align][8:width]
```

```

12936 {%
12937     \LWR@traceinfo{*** fcolorminipage: #2 #4 #8}%

```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```

12938     \begin{lrbox}{\LWR@colorminipagebox}%

```

If inner alignment is not given, use the outer alignment instead:

```

12939     \IfValueTF{#7}%
12940     {\begin{minipage}[#5][#6][#7]{#8}%
12941     {\begin{minipage}[#5][#6][#5]{#8}%
12942 }%
12943 {%
12944     \end{minipage}%
12945     \end{lrbox}%
12946     \LWR@traceinfo{*** starting end fcolorminipage #1 #2 #3 #4 #8}%

```

Sort out the various optional arguments and the background color of none. In each case, the LRbox is placed inside a `\fcolorbox`.

The current color is remembered, then set to the frame, then the current color is used for the contents.

```

12947     \ifstrequal{#4}{none}%
12948     {%
12949         % scope the \colorlet
12950         \colorlet{\LWR@currentcolor}{.}%
12951         \color{#2}%
12952         \fbox{%
12953             \color{\LWR@currentcolor}%
12954             \usebox{\LWR@colorminipagebox}%
12955         }%
12956     }%
12957     {%
12958         % #4 none
12959         \IfValueTF{#1}%
12960         {%
12961             \IfValueTF{#3}%
12962                 {\LWR@orig@print@fcolorbox[#1]{#2}{#3}{#4}{\usebox{\LWR@colorminipagebox}}}%
12963                 {\LWR@orig@print@fcolorbox[#1]{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
12964             }%
12965             {%
12966                 \IfValueTF{#3}%
12967                     {\LWR@orig@print@fcolorbox[#2]{#3}{#4}{\usebox{\LWR@colorminipagebox}}}%
12968                     {\LWR@orig@print@fcolorbox[#2]{#4}{\usebox{\LWR@colorminipagebox}}}%
12969             }%
12970             {%
12971                 \IfValueTF{#4}%
12972                     {\LWR@traceinfo{*** finished end fcolorminipage}}%
12973             }%
12974     }%
12975     \LWR@formatted{fcolorbox}%
12976     \LWR@formatted{fcolorboxBlock}%
12977     \LWR@formattedenv{fcolorminipage}%

```

`xcolor` is known to have been loaded, and provided `HTML` versions of the following, and the `print` versions are provide above, so now they may be `\LW@formatted`.

```

12973 \LWR@formatted{colorbox}%
12974 \LWR@formatted{colorboxBlock}%
12975 \LWR@formatted{fcolorbox}%
12976 \LWR@formatted{fcolorboxBlock}%
12977 \LWR@formattedenv{fcolorminipage}%

```

```
12978 \LWR@traceinfo{xcolor patches done}
12979 }{}% xcolor loaded
12980 }% AtBeginDocument

12981 \end{warpall}
```

90 chemmacros environments

\makepolymerdelims and redox reactions must be enclosed in a `lateximage` during HTML output. These environments are provided here in print mode, and in the chemmacros code in HTML mode, as a high-level semantic syntax which automatically embeds the contents in a `lateximage` with an appropriate `alt` tag.

```
for PRINT output12982 \begin{warpprint}

12983 \AtBeginDocument{
12984 \IfPackageLoadedTF{chemmacros}{

Env polymerdelims
12985 \DeclareDocumentEnvironment{polymerdelims}{}{%
12986     {}{}}
```

Env redoxreaction

{*<space above>*} {*<space below>*}

For print output, extra space is include above and below the image, and a `lateximage` is not necessary. This extra space must be enforced, even inside a float, so zero-width rules are used.

For the HTML version, see section 194.5.

```
12987 \DeclareDocumentEnvironment{redoxreaction}{m m}{%
12988     \rule{0pt}{#1}\{\rule[-#2]{0pt}{#2}\}}{%
12989 }{}% chemmacros
12990 }% AtBeginDocument
```

```
12991 \end{warpprint}
```

91 cleveref

loading order cleveref and l warp-cleveref with its associated macro patches are automatically preloaded at the end of the preamble via `\AtEndPreamble` and `\AfterEndPreamble`. This is done because the HTML conversion requires cleveref. The user's document may not require cleveref, thus the user may never explicitly load it, so during HTML output l warp loads it last. If the user's document preamble uses cleveref options, or functions such as `\crefname`, then cleveref may be loaded in the user's preamble near the end, and l warp's additional loading of cleveref will have no effect.

`\AtEndPreable` forces cleveref to be loaded last, if it has not yet been loaded by the user.

```
for HTML output12992 \begin{warpHTML}
```

```

12993
12994 \AtEndPreamble{
12995     \RequirePackage{cleveref}
12996 }
12997
12998 \end{warpHTML}

```

92 Preexisting label and reference definitions

Remember and patch some label-related definitions. These will be further encased and patched by other packages later.

\label and \pageref do NOT change their behavior according to print or HTML output, and thus do not use the \LWR@formatted system.

for HTML output: Not using \VerifyCommand for \label because various packages change \label.

```

12999 \begin{warpHTML}
13000 \LetLtxMacro{\LWR@orig}{\label}
13001 \LetLtxMacro{\label}{\LWR@new}
13002
13003 \AtBeginDocument{%
13004 \LetLtxMacro{\LWR@orig}{\pageref}
13005 \LetLtxMacro{\pageref}{\LWR@new}
13006 }

```

\label Detokenize \@currentlabelname to avoid bug if math is in the name.

```

13007 \xpatchcmd{\LWR@orig}{\label}
13008     {{\@currentlabelname}}
13009     {{\detokenize\expandafter{\@currentlabelname}}}
13010     {}
13011     {
13012         \typeout{***}
13013         \typeout{***}
13014         \typeout{*** Package lwarf warning:}
13015         \typeout{*** Could not patch \string\label.}
13016         \typeout{*** This may cause an error with section names or float captions}
13017         \typeout{*** containing math, for example.}
13018         \typeout{*** (Recent updates in the LaTeX kernel may make things work again.)}
13019         \typeout{***}
13020         \typeout{***}
13021     }
13022
13023 \end{warpHTML}

```

93 picture environment

picture (*env*) The picture environment is enclosed inside a \lateimage.

for HTML output: \begin{warpHTML}

```

picture (env.)
13025 \BeforeBeginEnvironment{picture}{\begin{lateximage}[picture]}
13026
13027 \AfterEndEnvironment{picture}{\end{lateximage}}
13028 \end{warpHTML}

```

94 Minipages and Boxes

A css flexbox is used for minipages and parboxes, allowing external and internal vertical positioning.

⚠ **inline** A line of text with an inline `minipage` or `\parbox` will have the `minipage` or `\parbox` placed onto its own line, because a paragraph is a block element and cannot be made `inline-block`.

placement `minipages` and `\parboxes` will be placed side-by-side in `HTML` unless you place a `\newline` between them.

side-by-side Side-by-side `minipages` may be separated by `\quad`, `\quadquad`, `\enskip`, `\hspace`, `\hfill`, or a `\rule`. When inside a `center` environment, the result is similar in print and `HTML`. Paragraph tags are suppressed between side-by-side `minipages` and these spacing commands, but not at the start or end of the paragraph.

⚠ **minipage in a span** There is limited support for `minipages` inside an `HTML `. An `HTML <div>` cannot appear inside a ``. While in a ``, `minipages`, and `\parboxes`, and any enclosed lists have limited `HTML` tags, resulting in an “`inline`” format, without markup except for `HTML` breaks. Use `\newline` or `\par` for an `HTML` break.

⚠ **minipage size** When using `minipage`, `\parbox`, and `fminipage`, a virtual 6×9 inch text area is used for `\ linewidth`, `\ textwidth`, and `\ textheight`, both for sizing the `minipage`, and also for its contents.

if width is `\ linewidth` If a `minipage` or `\parbox` is assigned a width of exactly `\ linewidth`, in `HTML` it is automatically given no `HTML` width, thus allowed to fill the line as needed, similar to how it appears in print output.

full-width if `HTML` A new macro `\minipagefullwidth` requests that, during `HTML` output, the next single `minipage` or `\parbox` be generated without an `HTML width` attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version’s width makes no sense in `HTML`.

⚠ **tabular, multicols** Inside a `tabular` or `multicols` environment, where the width depends on the browser window, `\minipagefullwidth` is effectively used by default for every `minipage` or `\parbox` inside the environment. `\UseMinipageWidths` may be used to tell `l warp` to honor the specified widths of all following `minipages` and `\parboxes` until the end of the local scope, and `\IgnoreMinipageWidths` may be used to tell `l warp` to ignore the specified widths.

⚠ **multicol** Inside a `multicols`, `\ linewidth` is divided by the specified number of columns.

⚠ **text alignment** Nested `minipages` adopt their parent’s text alignment in `HTML`, whereas in regular `LATeX PDF` output they do not. Use a `flushleft` or similar environment in the child `minipage` to force a text alignment.

for HTML output

```
13029 \begin{warpHTML}
```

94.1 Computed lengths

`\LWR@minipagewidth (Len)` Used to convert the width into printable units.

```
13030 \newlength{\LWR@minipagewidth}
```

`\LWR@minipageheight (Len)` Used to convert the height into printable units.

```
13031 \newlength{\LWR@minipageheight}
```

94.2 Virtual page size

`\LWR@virtualpagedepth (Ctr)` Used to only reset the line width at the outermost minipage.

```
13032 \newcounter{\LWR@virtualpagedepth}
13033 \setcounter{\LWR@virtualpagedepth}{0}
```

`\LWR@setvirtualpage (env) * [<columns>]`

If not nesting a minipage, adjust `\ linewidth`, `\ textwidth`, and `\ textheight` for a virtual 6×9 page, and start on a new PDF page to help prevent page overflows.

If starred, force a new page in the PDF before generating more HTML. This may be done to reduce the chance of page overflow when starting a new minipage.

The optional number of columns defaults to 1.

```
13034 \NewDocumentEnvironment{\LWR@setvirtualpage}{s 0{1}}{%
13035   \ifnumequal{\value{\LWR@virtualpagedepth}}{0}{%
13036     \IfBooleanT{\#1}{\LWR@maybe@orignewpage}%
13037     \setlength{\linewidth}{6in/#2}%
13038     \setlength{\textwidth}{6in}%
13039     \setlength{\textheight}{9in}%
13040   }{%
13041     \addtocounter{\LWR@virtualpagedepth}{1}%
13042 }
13043 {\addtocounter{\LWR@virtualpagedepth}{-1}}
```

94.3 Footnote handling

Also see section 60 for other forms of footnotes. Minipage footnotes are gathered in section 60.5, and then placed into the document in section 94.4.

94.4 Minipage handling

`\LWR@minipagefullwidth (bool)` Should the next minipage have no HTML width?

```
13044 \newbool{\LWR@minipagefullwidth}
13045 \boolfalse{\LWR@minipagefullwidth}
```

`LWR@forceminipagefullwidth (bool)` Should the next minipage have no HTML width? Used to force full width for all minipages in an environment such as `tabular` or `multicols`, where the actual width depends on the browser width. Controlled by `\useminipagewidths` and `\ignoreminipagewidths`.

```
13046 \newbool{LWR@forceminipagefullwidth}
13047 \boolfalse{LWR@forceminipagefullwidth}
```

`\minipagefullwidth` Requests that the next minipage have no width tag in HTML:

for HTML output: 13048 `\newcommand*{\minipagefullwidth}{\global\booltrue{LWR@minipagefullwidth}}`

`\UseMinipageWidths` Locally requests that minipage widths be honored.

```
13049 \newcommand*{\UseMinipageWidths}{\boolfalse{LWR@forceminipagefullwidth}}
```

`\IgnoreMinipageWidths` Locally requests that minipage widths be ignored.

```
13050 \newcommand*{\IgnoreMinipageWidths}{\booltrue{LWR@forceminipagefullwidth}}
13051 \end{warpHTML}
```

for PRINT output: 13052 `\begin{warpprint}`
 13053 `\newcommand*{\minipagefullwidth}{}{}`
 13054 `\newcommand*{\UseMinipageWidths}{}{}`
 13055 `\newcommand*{\IgnoreMinipageWidths}{}{}`
 13056 `\end{warpprint}`

for HTML output: 13057 `\begin{warpHTML}`

`LWR@minipagethispar (bool)` Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

```
13058 \newbool{LWR@minipagethispar}
13059 \boolfalse{LWR@minipagethispar}
```

`LWR@minipage@depth (Ctr)` Used to track whether to change footnote styles in a `lateximage` inside an HTML minipage.

```
13060 \newcounter{LWR@minipage@depth}
13061 \setcounter{LWR@minipage@depth}{0}
```

`LWR@mpfootnote@store (Ctr)` Used to maintain minipage footnote number while nesting inside a `lateximage`.

```
13062 \newcounter{LWR@mpfootnote@store}
```

`minipage (env.) [⟨vert position⟩] [⟨height⟩] [⟨inner vert position⟩] {⟨width⟩}`

The vertical positions may be 'c', 't', or 'b'. The inner position may also be 's'.

When using `\linewidth`, `\textwidth`, or `\textheight`, these are scaled proportionally to a 6×9 inch text area.

```
13063 \NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m m}
13064 {%
13065 \LWR@traceinfo{minipage}%
}
```

Start an environment, in which width and height is computed based on a virtual page size instead of the extra-large PDF page used during HTML tag generation.

```
13066 \begin{LWR@setvirtualpage}*
```

Save the requested width now that `\linewidth`, etc. are adjusted to virtual size.

```
13067 \setlength{\LWR@minipagewidth}{#4}%
13068 \ifnumequal{\value{\LWR@virtualpagedepth}}{1}{%
13069     \addtolength{\LWR@minipagewidth}{3em}% room for frames
13070 }{%
13071 \LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%
```

Compute height:

```
13072 \setlength{\LWR@minipageheight}{\textheight}% default unless specified
13073 \ifblank{#2}{}{\setlength{\LWR@minipageheight}{#2}}%
```

L^AT_EX wants to start a paragraph for the virtual minipage, then start a paragraph again for the contents of the minipage, so cancel the paragraph tag handling until the minipage has begun.

```
13074 \ifbool{FormatWP}{\newline}{}%
13075 \LWR@stopars%
```

If FormatWP, add a text frame:

```
13076 \ifbool{FormatWP}{%
13077
13078 \addtocounter{\LWR@thisautoidWP}{1}%
13079 \LWR@htmlltag{%
13080     div id=\textquotedbl%
13081         \LWR@print@mbox{autoidWP-\arabic{\LWR@thisautoidWP}}%
13082         \textquotedbl\ % space
13083         class=\textquotedbl{}wpminipage\textquotedbl%
13084 }%
13085
13086 }{}}
```

Create the `<div>` tag with optional alignment style:

```
13087 \LWR@traceinfo{minipage: creating div class}%
13088 \LWR@htmlltag{div class=\textquotedbl{}minipage\textquotedbl\ style=\textquotedbl{%
13089 \ifthenelse{\equal{#1}{t}}{\LWR@print@mbox{vertical-align:bottom} ; }{}%
13090 \ifthenelse{\equal{#1}{c}}{\LWR@print@mbox{vertical-align:middle} ; }{}%
13091 \ifthenelse{\equal{#1}{b}}{\LWR@print@mbox{vertical-align:top} ; }{}%
13092 \ifthenelse{\equal{#3}{t}}{\LWR@print@mbox{justify-content:flex-start} ; }{}%
13093 \ifthenelse{\equal{#3}{c}}{\LWR@print@mbox{justify-content:center} ; }{}%
13094 \ifthenelse{\equal{#3}{b}}{\LWR@print@mbox{justify-content:flex-end} ; }{}%
13095 \ifthenelse{\equal{#3}{s}}{\LWR@print@mbox{justify-content:space-between} ; }{}%
```

Print the width and optional height styles:

```
13096 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
13097 \ifbool{\LWR@minipagefullwidth}{%
13098 {\global\boolfalse{\LWR@minipagefullwidth}}%
13099 {%
13100     \ifbool{\LWR@forceminipagefullwidth}{%
```

```

13101      {}%
13102      {%
13103          \ifdimequal{#4}{\linewidth}%
13104              {}%
13105              {width:\LWR@printlength{\LWR@minipagewidth} ; }%
13106          {}%
13107      }%
13108 \LWR@traceinfo{minipage: about to print the height}%
13109 \ifblank{#2}{}{height:\LWR@printlength{\LWR@minipageheight} ; }%
13110 \textquotedbl%
13111 }%

```

Finish with an empty line to start the contents on a new line.

```

13112
13113 % The preceding empty line is required.

```

Set the user-accessible line and text width and height values inside the virtual minipage. These do not affect the actual size of the PDF output, but are used by any reference to `\linewidth`, etc. inside the virtual minipage being created here. `\LWR@minipagewidth` was the original then padded by 3em, which is restored here. This is done instead of settings back to #4, in case #4 was `\linewidth`, which was changed to 6in above.

```

13114 \ifnumequal{\value{\LWR@virtualpagedepth}}{1}{%
13115     \addtolength{\LWR@minipagewidth}{-3em}% undo frame padding
13116 }{%
13117 \setlength{\linewidth}{\LWR@minipagewidth}%

```

`\raggedright` cancels hyphenation, which will be done by `HTML` instead.

```
13118 \LWR@print@raggedright%
```

```
13119 \LWR@newautopagelabel{page}%

```

Set minipage footnotes:

```

13120 \def\@mpfn{mpfootnote}%
13121 \def\thempfn{\thempfootnote}\c@mpfootnote\z@%
13122 \let\@footnotetext\@mpfootnotetext%

```

Track depth for `lateximage` footnote type:

```
13123 \addtocounter{\LWR@minipage@depth}{1}%

```

Resume paragraph tag handling for the contents of the minipage:

```

13124 \LWR@startpars%
13125 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
13126
13127 === begin minipage ===
13128
13129 }{%
13130 \LWR@traceinfo{minipage: finished starting the minipage}%
13131 }% finished \minipage
13132 {%

```

Print pending minipage footnotes:

```
13133 \LWR@printpendingmpfootnotes%
```

End the environment with closing tag:

```
13134 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
13135
13136 === end minipage ===
13137
13138 }{}%
13139 \LWR@stopars%
13140
13141 \ifbool{FormatWP}{%
13142
13143 \LWR@htmlelementend{div}%
13144
13145 }{}%
```

Wrapup:

```
13146 \addtocounter{\LWR@minipage@depth}{-1}%
13147 \LWR@htmldivclassend{minipage}%
13148
13149 \end{\LWR@setvirtualpage}%
13150 \LWR@startpars%
13151 \ifbool{FormatWP}{\newline}{}%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
13152 \global\booltrue{\LWR@minipagethispar}%
13153 \LWR@traceinfo{\LWR@minipage: done}%
13154 }
13155
13156 \NewDocumentEnvironment{\LWR@HTML@minipage}{O{t} O{} O{t} m}
13157     {\LWR@HTML@sub@minipage[#1][#2][#3][#4]}
13158     {\end{\LWR@HTML@sub@minipage}}
13159
13160 \LWR@formattedenv{minipage}
```

94.5 \parbox, \mbox, \makebox, \framebox, \fbox, \raisebox

for HTML output:

```
\parbox [⟨pos⟩] [⟨height⟩] [⟨inner-pos⟩] {⟨width⟩} {⟨text⟩}
```

A parbox uses the minipage code:

```
13161 \NewDocumentCommand{\LWR@HTML@parbox}{O{t} O{} O{t} m +m}
13162 {
13163 \LWR@traceinfo{parbox of width #4}%
13164 \begin{minipage}[#1][#2][#3][#4]%
13165 #5
13166 \end{minipage}%
13167 }
```

```

13168
13169 \LWR@formatted{parbox}

\mbox {\langle text\rangle} Nullified for HTML.

13170 \newcommand*{\LWR@HTML@mbox}[1]{{#1}}
13171
13172 \LWR@formatted{mbox}

```

\LWR@makebox@paren {\langle width\rangle} , {\langle height\rangle}

Adds to the style in \LWR@temptwo.

```

13173 \NewDocumentCommand{\LWR@makebox@paren}{m m}{%
13174 \IfValueTF{#2}{%
13175   \setlength{\LWR@tempwidth}{#1\unitlength}%
13176   \setlength{\LWR@tempheight}{#2\unitlength}%
13177   \appto{\LWR@temptwo}{%
13178     \LWR@print@mbox{width:\LWR@printlength{\LWR@tempwidth}} ; % space
13179     \LWR@print@mbox{height:\LWR@printlength{\LWR@tempheight}} ; % space
13180   }%
13181 }{%
13182   \PackageError{lwarf}{%
13183     {\langle width,height\rangle} is missing a comma ',' character}%
13184   {\protect\makebox\space and \protect\framebox\space accept
13185     a size in the format {\langle width,height\rangle}.}%
13186 }%
13187 }

```

\LWR@makebox@align {\langle alignment character\rangle}

Adds to the style in \LWR@temptwo.

```

13188 \newcommand*{\LWR@makebox@align}[1]{%
13189   \def\LWR@align{center}%
13190   \ifstrequal{#1}{l}{\def\LWR@align{left}}{}%
13191   \ifstrequal{#1}{r}{\def\LWR@align{right}}{}%
13192   \ifstrequal{#1}{s}{\def\LWR@align{justify}}{}%
13193   \appto{\LWR@temptwo}{%
13194     \LWR@print@mbox{text-align:\LWR@align} ; %
13195   }%
13196 }

```

\makebox {\langle width,height\rangle} [{\langle width\rangle}] [{\langle pos\rangle}] {\langle text\rangle}

```
13197 \NewDocumentCommand{\LWR@HTML@makebox}{>{\SplitArgument{1}{,}}d() o o +m}{%
```

Build the style depending on arguments:

```

13198   \begin{\LWR@setvirtualpage}%
13199     \def\LWR@temptwo{}%
13200     \IfValueTF{#1}{%
13201       {(\width,\height) ..%
13202        \LWR@makebox@paren #1%
13203        \IfValueT{#2}{%
13204          {(\width,\height) [posn]%
13205            \LWR@makebox@align{#2}%

```

```

13206      }%
13207      }%
13208      {%
13209      \IfValueT{#2}{%
13210      {%
13211      \setlength{\LWR@tempwidth}{#2}%
13212      \ifdimgreater{\LWR@tempwidth}{0pt}{%
13213      \appto{\LWR@temptwo}{%
13214      width:\LWR@printlength{\LWR@tempwidth} ; % space
13215      }%
13216      }{}}%
13217      }%
13218      }%
13219      \IfValueT{#3}{%
13220      {%
13221      \LWR@makebox@align{#3}%
13222      }%
13223      \InlineClass[%
13224      \LWR@print@mbox{display:inline-block} ; %
13225      \LWR@temptwo%
13226      ]%
13227      \makebox}%
13228      {#4}%
13229      \end{\LWR@setvirtualpage}%
13230 }%
13231 \LWR@formatted{makebox}

```

\framebox ((*width,height*) [*width*] [*pos*] {*text*})

```

13232 \NewDocumentCommand{\LWR@HTML@framebox}{d() o o +m}{%
13233     \fbox{\makebox[#1][#2][#3]{#4}}%
13234 }%
13235
13236 \LWR@formatted{framebox}

```

\LWR@forceminwidth {*length*}

Sets \LWR@atleastonept to be at least 1pt.

```

13237 \newlength{\LWR@atleastonept}
13238
13239 \newcommand*{\LWR@forceminwidth}[1]{%
13240 \setlength{\LWR@atleastonept}{#1}%
13241 \ifthenelse{%
13242     \lengthtest{\LWR@atleastonept>0pt}\AND%
13243     \lengthtest{\LWR@atleastonept<1pt}%
13244 }{%
13245     \setlength{\LWR@atleastonept}{1pt}%
13246     {}%
13247 }

```

\LWR@fboxstyle Prints the HTML attributes for a black border and padding.

\LWR@forceminwidth must be used first in order to set the border width.

```

13248 \newcommand*{\LWR@fboxstyle}{%
13249 \LWR@findcurrenttextcolor%
13250 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@origpound\LWR@tempcolor ; %

```

```
13251 padding:\LWR@printlength{\fboxsep} ; %
13252 color:\LWR@origpound\LWR@tempcolor%
13253 }
```

\fbox {*(text)*}

Creates a framed inline span enclosing the text.

Create a new HTML version, but don't use it until after `xcolor` may have loaded:

```
13254 \newcommand{\LWR@HTML\fbox}[1]{%
13255     \LWR@traceinfo{HTML \fbox}%
13256     \LWR@forceminwidth{\fboxrule}%
13257     \LWR@traceinfo{HTML \fbox B}%
13258     \InlineClass[%
13259         \LWR@print@mbox{display:inline-block} ; %
13260         \LWR@fboxstyle%
13261     ]{\fbox}{#1}%
13262     \LWR@traceinfo{HTML \fbox: done}%
13263 }
```

`xcolor` \lets things to \fbox when it is loaded, and this must remain even for HTML output while in a `lateximage`, so \fbox is not modified until \AtBeginDocument:

```
13264 \AtBeginDocument{\LWR@formatted\fbox}
```

\fboxBlock {*(text)*} Creates a framed HTML <div> of the text.

First, a print-mode version. This is newly defined for print mode, so it is defined inside `warpall`.

for HTML & PRINT: 3265 \end{warpHTML}

```
13266
13267 \begin{warpall}
13268 \let\fboxBlock\fbox
13269 \end{warpall}
13270
13271 \begin{warpHTML}
```

for HTML output: Next, an HTML version:

```
13272 \newcommand{\LWR@HTML\fboxBlock}[1]{%
13273 \LWR@forceminwidth{\fboxrule}%
13274 \LWR@stoppars%
13275 \begin{BlockClass}[\LWR@fboxstyle]{fboxBlock}%
13276 #1%
13277 \end{BlockClass}%
13278 \LWR@startpars%
13279 }%
13280
13281 \LWR@formatted\fboxBlock%
13282
13283 \end{warpHTML}
```

fminipage (*env*) [*(align)*] [*(height)*] [*(align)*] {*(width)*}

Creates a framed HTML <div> around its contents.

for HTML & PRINT: Print version:

```
13284 \begin{warpall}
13285
13286 \newsavebox{\LWR@fminipagebox}
13287
13288 \NewDocumentEnvironment{fminipage}{O{t} o O{t} m}
13289 {%
```

An outer minipage will be used for vertical alignment. An inner minipage will be framed with \fbox.

If the optional inner alignment is not given, use the outer instead:

```
13290 \IfValueTF{#3}%
13291 {\def\LWR@thisalign{#3}}
13292 {\def\LWR@thisalign{#1}}%
```

Form the outer minipage depending on whether a height was given. Make the outer minipage larger to compensate for the frame.

```
13293 \IfValueTF{#2}%
13294 {\minipage[#1][#2+2\fboxsep+2\fboxrule][\LWR@thisalign]{#4+2\fboxsep+2\fboxrule}}%
13295 {\minipage[#1]{#4+2\fboxsep+2\fboxrule}}%
```

Capture the contents of the environment:

```
13296 \begin{lrbox}{\LWR@fminipagebox}%
```

Nest the contents inside an inner minipage of the desired size:

```
13297 \IfValueTF{#2}%
13298 {\minipage[#1][#2][\LWR@thisalign]{#4}}%
13299 {\minipage[#1]{#4}}%
13300 }
13301 {%
```

Close the inner minipage and the LR box with the contents:

```
13302 \endminipage%
13303 \end{lrbox}%
```

Create a frame around the contents of the environment:

```
13304 \fbox{\usebox{\LWR@fminipagebox}}%
```

The entire thing is placed inside the outer minipage:

```
13305 \endminipage%
13306 }
13307 \end{warpall}
```

HTML version:

for HTML output

```
13308 \begin{warpHTML}
13309
13310 \NewDocumentEnvironment{LWR@HTML@fminipage}{O{t} o O{t} m}
13311 {%
13312 \LWR@traceinfo{fminipage #1 #2 #3 #4}%
```

Locally change to the virtual page size before processing the requested sizes:

```
13313 \begin{LWR@setvirtualpage} *%
13314 \setlength{\LWR@tempwidth}{#4}%
13315 \IfValueT{#2}{\setlength{\LWR@tempheight}{#2}}%
```

Use a rule of at least one pixel in width:

```
13316 \LWR@forceminwidth{\fboxrule} %
```

```
13317 \LWR@stopars %
```

```
13318 \begin{BlockClass} [%
```

```
13319 \LWR@fboxstyle ; %
```

```
13320 \IfValueT{#2}{height:\LWR@printlength{\LWR@tempheight} ; }%
```

```
13321 \ifbool{\LWR@minipagefullwidth} %
```

```
13322 {\global\boolfalse{\LWR@minipagefullwidth}} %
```

```
13323 { %
```

```
13324 \ifbool{\LWR@forceminipagefullwidth} %
```

```
13325 {} %
```

```
13326 {} %
```

```
13327 \ifdimequal{\LWR@tempwidth}{\linewidth} %
```

```
13328 {} %
```

```
13329 {width:\LWR@printlength{\LWR@tempwidth} ; } %
```

```
13330 } %
```

```
13331 } %
```

```
13332 ]{\fminipage} %
```

```
13333 }
```

```
13334 { %
```

```
13335 \end{BlockClass} %
```

```
13336 \end{LWR@setvirtualpage} %
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
13337 \global\booltrue{\LWR@minipagethispar} %
13338 \LWR@traceinfo{fminipage done} %
13339 }
13340 \LWR@formattedenv{fminipage}
```

```
\raisebox {\raiseboxlen} [\height] [\depth] {\text}
```

```
13342 \NewDocumentCommand{\LWR@HTML@raisebox}{m o o m}{%
13343 #4%
13344 }%
13345 \LWR@formatted{raisebox}
```

```
13347 \end{warpHTML}
```

95 Direct formatting

⚠ **\bfseries, etc.** `\textbf`, etc. are supported, but `\bfseries`, etc. work only in some situations.

⚠ HTML special chars &, <, and > have special meanings in HTML. If \&, \textless, and \textgreater are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.

program listings For program listings, the `listings` package is supported, and its `literate` option is used to automatically convert &, <, and > to proper HTML entities.

`minted` sanitizes HTML automatically by its colorizing, which splits the special characters from the rest of the tag.

⚠ verbatim The `fancyvrb` and `fverextra` packages automatically sanitize HTML entities, but the core L^AT_EX verbatim-related environments do not, nor does the `verbatim` package, so care must be taken to avoid accidentally including valid HTML code inside these environments. It may be sufficient to add a space on either side of &, <, and >.

⚠ gobble `fancyvrb` does not sanitize HTML when using the `gobble` option.

For high-level block and inline custom CSS classes, see section 52.10.

for HTML & PRINT

`FixSmallCaps (bool)` User may set `FixSmallCaps` to true if small caps are being incorrectly rendered as all caps.

```
13349 \newbool{FixSmallCaps}
13350 \boolfalse{FixSmallCaps}
```

```
13351 \end{warpall}
```

for HTML output

```
13352 \begin{warpHTML}

\emph {\langle text \rangle}

13353 \DeclareRobustCommand{\LWR@HTML@emph}[1]{%
13354   {%
13355     \LWR@HTML@itshape%
13356     \LWR@html\span{em}{#1}%
13357   }%
13358 }
13359
13360 \LWR@formatted{emph}
```

```
\textmd {\langle text \rangle}
```

```
13361 \DeclareRobustCommand{\LWR@HTML@textmd}[1]{%
13362   {%
13363     \LWR@HTML@mdseries%
13364     \InlineClass(font-weight:normal){textmd}{#1}%
13365   }%
13366 }
13367
13368 \LWR@formatted{textmd}
```

```
\textbf {\langle text \rangle}
```

```
13369 \DeclareRobustCommand{\LWR@HTML@textbf}[1]{%
13370   {%
13371     \LWR@HTML@bfseries%
13372     \LWR@htmlspan{b}{#1}%
13373   }%
13374 }
13375
13376 \LWR@formatted{textbf}
```

\texteb {\text} From nfssext-cfr.

```
13377 \IfPackageLoadedTF{nfssext-cfr}{%
13378 \DeclareRobustCommand{\LWR@HTML@texteb}[1]{%
13379   {%
13380     \LWR@HTML@ebweight%
13381     \InlineClass{texteb}{#1}%
13382   }%
13383 }
13384
13385 \LWR@formatted{texteb}
13386 }{%
13387   \providerobustcmd{\texteb}[1]{}%
13388 }
```

\textlg {\text} From nfssext-cfr.

```
13389 \IfPackageLoadedTF{nfssext-cfr}{%
13390 \DeclareRobustCommand{\LWR@HTML@textlg}[1]{%
13391   {%
13392     \LWR@HTML@lgweight%
13393     \InlineClass{textlg}{#1}%
13394   }%
13395 }
13396
13397 \LWR@formatted{textlg}
13398 }{%
13399   \providerobustcmd{\textlg}[1]{}%
13400 }
```

\textrm {\text}

```
13401 \DeclareRobustCommand{\LWR@HTML@textrm}[1]{%
13402   {%
13403     \LWR@HTML@rmfamily%
13404     \InlineClass{font-family:serif}{textrm}{#1}%
13405   }%
13406 }
13407
13408 \LWR@formatted{textrm}
```

\textsf {\text}

```
13409 \DeclareRobustCommand{\LWR@HTML@textsf}[1]{%
13410   {%
13411     \LWR@HTML@sffamily%
13412     \InlineClass{font-family:sans}{textsf}{#1}%
13413   }%
```

```
13414 }
13415
13416 \LWR@formatted{textsf}

\textrtt {\textit{text}}
13417 \DeclareRobustCommand{\LWR@HTML@textrtt}[1]{%
13418   {%
13419     \LWR@HTML@ttfamily%
13420     \LWR@htmlspan{kbd}{#1}%
13421   }%
13422 }
13423
13424 \LWR@formatted{textrtt}

\textup {\textit{text}}
13425 \DeclareRobustCommand{\LWR@HTML@textup}[1]{%
13426   {%
13427     \LWR@HTML@upshape%
13428     \InlineClass{font-style: normal}{textup}{#1}%
13429   }%
13430 }
13431
13432 \LWR@formatted{textup}

\textrit {\textit{text}}
13433 \DeclareRobustCommand{\LWR@HTML@textrit}[1]{%
13434   {%
13435     \LWR@HTML@itshape%
13436     \LWR@htmlspan{i}{#1}%
13437   }%
13438 }
13439
13440 \LWR@formatted{textrit}

\textrsc {\textit{text}}
13441 \DeclareRobustCommand{\LWR@HTML@textrsc}[1]{%
13442   {%
13443     \LWR@HTML@scshape%
13444     \InlineClass{textsc}{#1}%
13445   }%
13446 }
13447
13448 \LWR@formatted{textrsc}

\textrulc {\textit{text}} From fontaxes.
13449 \DeclareRobustCommand{\LWR@HTML@textrulc}[1]{%
13450   {%
13451     \LWR@HTML@ulcshape%
13452     \InlineClass{textulc}{#1}%
13453   }%
13454 }
```

```
13455
13456 \LWR@formatted{textulc}

\textsi {\textit{text}}

13457 \@ifundefined{textsi}{
13458     \LetLtxMacro{\LWR@print@textsi}{\LWR@print@textsc}
13459 }{}
13460
13461 \DeclareRobustCommand{\LWR@HTML@textsi}[1]{%
13462     {%
13463         \LWR@HTML@sishape%
13464         \textsc{\textit{\#1}}%
13465         \InlineClass(
13466             font-style: italic;
13467             font-variant: small-caps ;
13468             font-variant-numeric: oldstyle-nums ;
13469             ){\textsi{\#1}}%
13470     }%
13471 }
13472
13473 \LWR@formatted{textsi}

\textsl {\textit{text}}

13474 \DeclareRobustCommand{\LWR@HTML@textsl}[1]{%
13475     {%
13476         \slshape%
13477         \InlineClass(font-style:oblique){textsl}{\#1}%
13478     }%
13479 }
13480
13481 \LWR@formatted{textsl}

\textssc {\textit{text}}

13482 \newrobustcmd{\LWR@HTML@textssc}[1]{\textsc{\#1}}
13483 \LWR@formatted{textssc}

\textnormal {\textit{text}}

13484 \DeclareRobustCommand{\LWR@HTML@textnormal}[1]{%
13485     \LWR@HTML@mdseries%
13486     \LWR@HTML@rmfamily%
13487     \LWR@HTML@upshape%
13488     \LWR@HTML@ulcshape%
13489     \InlineClass(%
13490         font-weight: normal;
13491         font-family: serif;
13492         font-style: normal;
13493         font-variant: normal;
13494         font-variant-numeric: normal ;
13495         ){\textnormal{\#1}}%
13496 }
13497
13498 \LWR@formatted{textnormal}
```

```

13499 \FilenameNullify{%
13500   \LetLtxMacro{\emph}{\firstofone}%
13501   \LetLtxMacro{\textmd}{\firstofone}%
13502   \LetLtxMacro{\textbf}{\firstofone}%
13503   \LetLtxMacro{\texteb}{\firstofone}%
13504   \LetLtxMacro{\textlg}{\firstofone}%
13505   \LetLtxMacro{\textrm}{\firstofone}%
13506   \LetLtxMacro{\textsf}{\firstofone}%
13507   \LetLtxMacro{\texttt}{\firstofone}%
13508   \LetLtxMacro{\textup}{\firstofone}%
13509   \LetLtxMacro{\textit}{\firstofone}%
13510   \LetLtxMacro{\textsc}{\firstofone}%
13511   \LetLtxMacro{\textulc}{\firstofone}%
13512   \LetLtxMacro{\textsi}{\firstofone}%
13513   \LetLtxMacro{\textsl}{\firstofone}%
13514   \LetLtxMacro{\textssc}{\firstofone}%
13515   \LetLtxMacro{\textnormal}{\firstofone}%
13516 }

```

Remembers the current font family, series, and shape. fontaxes support is integrated here.

```

13517 \newcommand*{\LWR@f@family}{rm}%
13518 \newcommand*{\LWR@f@series}{md}%
13519 \newcommand*{\LWR@f@shape}{up}%
13520 \newcommand*{\LWR@f@shapecaps}{ulc}%

```

\LWR@textcurrentfont {*(text)*}

Prints the text with the current font choices. Avoids nesting repeated font selections.

```

13521 \newcounter{LWR@textcurrentfontdepth}%
13522 \setcounter{LWR@textcurrentfontdepth}{0}%
13523
13524 \newcommand*{\LWR@textcurrentfont}[1]{%
13525   \ifnumcomp{\value{LWR@textcurrentfontdepth}}{>}{0}{%
13526     \%%
13527     \addtocounter{LWR@textcurrentfontdepth}{1}%
13528     #1%
13529     \addtocounter{LWR@textcurrentfontdepth}{-1}%
13530   }%
13531   \%%
13532   \addtocounter{LWR@textcurrentfontdepth}{1}%
13533   \ifboolexpr{%
13534     test {\ifdefstring{\LWR@f@family}{rm}} and%
13535     test {\ifdefstring{\LWR@f@series}{md}} and%
13536     test {\ifdefstring{\LWR@f@shape}{up}} and%
13537     test {\ifdefstring{\LWR@f@shapecaps}{ulc}}%
13538   }%
13539   {\InlineClass{textnormal}{#1}}%
13540   \%%
13541   \InlineClass{%
13542     text\LWR@f@family\LWR@orignobreakspace{}%
13543     text\LWR@f@series\LWR@orignobreakspace{}%
13544     text\LWR@f@shape\LWR@orignobreakspace{}%
13545     text\LWR@f@shapecaps{}%
13546   }%
13547   {#1}%

```

```

13548 }%
13549 \addtocounter{LWR@textcurrentfontdepth}{-1}%
13550 }%
13551 }

```

LWR@blocktextcurrentfont (*env.*) Prints the contents with the current font choices.

```

13552 \newenvironment*{\LWR@blocktextcurrentfont}{%
13553 \LWR@stoppars%
13554 \BlockClass{%
13555   text\LWR@f@family\LWR@orignobreakspace{}%
13556   text\LWR@f@series\LWR@orignobreakspace{}%
13557   text\LWR@f@shape\LWR@orignobreakspace{}%
13558   text\LWR@f@shapemacs%
13559 }%
13560 }{\endBlockClass\LWR@startpars}

```

\mdseries

```

13561 \newrobustcmd*{\LWR@HTML@mdseries}{%
13562   \LWR@print@mdseries%
13563   \renewcommand*{\LWR@f@series}{md}%
13564 }%
13565 \LWR@formatted{mdseries}

```

\bfseries

```

13566 \newrobustcmd*{\LWR@HTML@bfseries}{%
13567   \LWR@print@bfseries%
13568   \renewcommand*{\LWR@f@series}{bf}%
13569 }%
13570 \LWR@formatted{bfseries}

```

\ebweight From nfssext-cfr.

```

13571 \IfPackageLoadedTF{nfssext-cfr}{%
13572 \newrobustcmd*{\LWR@HTML@ebweight}{%
13573   \LWR@print@ebweight%
13574   \renewcommand*{\LWR@f@series}{eb}%
13575 }%
13576 \LWR@formatted{ebweight}%
13577 }{%
}

```

\lgweight From nfssext-cfr.

```

13578 \IfPackageLoadedTF{nfssext-cfr}{%
13579 \newrobustcmd*{\LWR@HTML@lgweight}{%
13580   \LWR@print@lgweight%
13581   \renewcommand*{\LWR@f@series}{lg}%
13582 }%
13583 \LWR@formatted{lgweight}%
13584 }{%
}

```

\rmfamily

```

13585 \newrobustcmd*\{\LWR@HTML@rmfamily\}{%
13586     \LWR@print@rmfamily%
13587     \renewcommand*\{\LWR@f@family\}{rm}%
13588 }
13589 \LWR@formatted{rmfamily}

```

\sffamily

```

13590 \newrobustcmd*\{\LWR@HTML@sffamily\}{%
13591     \LWR@print@sffamily%
13592     \renewcommand*\{\LWR@f@family\}{sf}%
13593 }
13594 \LWR@formatted{sffamily}

```

\ttfamily

```

13595 \newrobustcmd*\{\LWR@HTML@ttfamily\}{%
13596     \LWR@print@ttfamily%
13597     \renewcommand*\{\LWR@f@family\}{tt}%
13598 }
13599 \LWR@formatted{ttfamily}

```

The following use \AtBeginDocument due to the L^AT_EX core \reinstall@nfss@defs, which redefines these \AtBeginDocument. See **texdoc source2e**.

\upshape

```

13600 \newrobustcmd*\{\LWR@HTML@upshape\}{%
13601     \LWR@print@upshape%
13602     \renewcommand*\{\LWR@f@shape\}{up}%
13603 }
13604 \AtBeginDocument{\LWR@formatted{upshape}}

```

\itshape

```

13605 \newrobustcmd*\{\LWR@HTML@itshape\}{%
13606     \LWR@print@itshape%
13607     \renewcommand*\{\LWR@f@shape\}{it}%
13608 }
13609 \AtBeginDocument{\LWR@formatted{itshape}}

```

\scshape Note: \LWR@print@scshape is not used here since some fonts, such as *erewhon*, copy/paste as all-caps.

```

13610 \newrobustcmd*\{\LWR@HTML@scshape\}{%
13611     \ifbool{FixSmallCaps}{}{%
13612         \LWR@print@scshape%
13613     }%
13614     \renewcommand*\{\LWR@f@shapecaps\}{sc}%
13615 }
13616 \AtBeginDocument{\LWR@formatted{scshape}}

```

\ulcshape From fontaxes.

```
13617 \@ifundefined{ulcshape}{
13618     \LetLtxMacro\ulcshape\upshape
13619 }){}
13620 \newrobustcmd*\LWR@HTML@ulcshape}{%
13621     \LWR@print@ulcshape%
13622     \renewcommand*\LWR@f@shapecaps{ulc}%
13623 }
13624 \AtBeginDocument{\LWR@formatted{ulcshape}}


\sishape

13625 \@ifundefined{sishape}{
13626     \LetLtxMacro\sishape\scshape
13627 }){}
13628 \newrobustcmd*\LWR@HTML@sishape}{%
13629     \ifbool{FixSmallCaps}{}{%
13630         \LWR@print@sishape%
13631     }%
13632     \renewcommand*\LWR@f@shape{it}
13633     \renewcommand*\LWR@f@shapecaps{sc}%
13634 }
13635 \AtBeginDocument{\LWR@formatted{sishape}}


\slshape

13636 \newrobustcmd*\LWR@HTML@slshape}{%
13637     \LWR@print@slshape%
13638     \renewcommand*\LWR@f@shape{sl}%
13639 }
13640 \AtBeginDocument{\LWR@formatted{slshape}}


\sscshape

13641 \newrobustcmd*\LWR@HTML@sscshape}{\LWR@HTML@scshape}
13642 \AtBeginDocument{\LWR@formatted{sscshape}}


\normalfont

13643 \newrobustcmd*\LWR@HTML@normalfont}{\rmfamily\mdseries\upshape\ulcshape}
13644 \LWR@formatted{normalfont}

13645 \FilenameNullify{%
13646     \LetLtxMacro\rmfamily\empty%
13647     \LetLtxMacro\sffamily\empty%
13648     \LetLtxMacro\ttfamily\empty%
13649     \LetLtxMacro\bfseries\empty%
13650     \LetLtxMacro\ebweight\empty%
13651     \LetLtxMacro\lgweight\empty%
13652     \LetLtxMacro\mdseries\empty%
13653     \LetLtxMacro\upshape\empty%
13654     \LetLtxMacro\slshape\empty%
13655     \LetLtxMacro\sishape\empty%
13656     \LetLtxMacro\scshape\empty%
13657     \LetLtxMacro\itshape\empty%
13658     \LetLtxMacro\ulcshape\empty%
13659     \LetLtxMacro\sscshape\empty%
13660     \LetLtxMacro\normalfont\empty%
13661 }
```

\sp{<text>}

For `siunitx-v2`. Must work in math mode.

```
13662 \renewcommand{\sp}[1]{\text{#1}}
```

\sb {<text>}

For `siunitx-v2`. Must work in math mode.

13663 \renewcommand{\sb}[1]{\text{_{#1}}}{}}

\textsuperscript {\text{<text>}}

```
13664 \newrobustcmd{\LWR@HTML@textsuperscript}{\LWR@htmlspan{sup}{#1}}
13665 \LWR@formatted{textsuperscript}
```

\@textsuperscript {<text>}

```
13666 \newcommand{\LWR@HTML@@textsuperscript}{[1]{\LWR@htmlspan{sup}{#1}}}
13667 \LWR@formatted{@textsuperscript}
```

\textsubscript {<text>}

```
13668 \newrobustcmd{\LWR@HTML@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
13669 \LWR@formatted{textsubscript}
```

\@textsubscript {*text*}

```
13670 \newcommand{\LWR@HTML@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}  
13671 \LWR@formatted{@textsubscript}
```

\up{<text>} Prints superscript.

This is \let at the beginning of the document in case some other package has changed the definition.

13672 \AtBeginDocument{\let\up\textsuperscript}

\fup {⟨text⟩} Prints superscript.

Supports `fmtcount` package.

This is \let at the beginning of the document in case some other package has changed the definition.

13673 \AtBeginDocument{\let\fup\textsuperscript}

\underline {\langle text \rangle}

```
13674 \renewcommand{\underline}[1]{%
13675     \InlineClass{%
13676         (text-decoration:underline; text-decoration-skip: auto)%
13677         {underline}{#1}%
13678 }
```

```
\LWR@overline {\text{}}  
13679 \newcommand{\LWR@overline}[1]{%  
13680     \InLineClass%  
13681         (text-decoration:overline; text-decoration-skip: auto)%  
13682         {overline}{#1}%  
13683 }
```

\LWR@currenttextcolor The color to use for text and \rule, defaulting to black:

```
13684 \newcommand*\LWR@currenttextcolor{black}
```

\LWR@tempcolor The color converted to HTML colorspace.
\LWR@tempcolortwo
\LWR@tempcolorthree
13685 \newcommand*\LWR@tempcolor{}
13686 \newcommand*\LWR@tempcolortwo{}
13687 \newcommand*\LWR@tempcolorthree{}

\LWR@findcurrenttextcolor Sets \LWR@tempcolor to the current color.

```
13688 \newcommand*\LWR@findcurrenttextcolor{%  
13689     \renewcommand{\LWR@tempcolor}{000000}%  
13690 }
```

\LWR@textcurrentcolor {\text{}} Like \textcolor but uses the current \color instead.

```
13691 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%  
13692     \renewcommand*\LWR@currenttextcolor{black}%  
13693     #1%  
13694 }
```

```
13695 \end{warpHTML}
```

for PRINT output 13696 \begin{warpprint}

\LWR@textcurrentfont {\text{}}

Prints the text with the current font choices.

```
13697 \newcommand*\LWR@textcurrentfont[1]{#1}
```

\LWR@blocktextcurrentfont (*env.*) Prints the contents with the current font choices.

```
13698 \newenvironment*\LWR@blocktextcurrentfont{}{}
```

\FilenameNullify {\text{}}

```
13699 \newcommand*\FilenameNullify[1]{}{}
```

```
13700 \end{warpprint}
```

96 Skips, spaces, font sizes

for HTML output

LWR@HTMLsanitize@nobreakspace Used to disable the nbsp entity inside verbatims <pre> sections, but not inside
(bool) inline verbatims where spacing must be preserved by <nbs‌p>.

(fvextra used ~ which showed as <nbs‌p>.)

```
13702 \newbool{LWR@HTMLsanitize@nobreakspace}
13703 \booltrue{LWR@HTMLsanitize@nobreakspace}
```

\, and \thinspace may be redefined by other packages, so are redefined \AtBeginDocument here.

Direct-formatting space commands become HTML entities:

```
13704 \AtBeginDocument{%
13705 %
13706 \renewrobustcmd*{\,}{\HTMLunicode{202f}}% HTML thin non-breakable space, not using LWR@formatted
13707 %
13708 \newrobustcmd*{\LWR@HTML@thinspace}{\HTMLunicode{202f}}% HTML thin non-breakable space
13709 \LWR@formatted{thinspace}
13710 %
13711 \newrobustcmd*{\LWR@HTML@negthinspace}{\HTMLunicode{202f}}% HTML thin non-breakable space
13712 \LWR@formatted{negthinspace}
```

Cannot use \LWR@formatted for ~ or \nobreakspace.

```
13713 \renewrobustcmd*{~}{%
13714     \ifbool{LWR@HTMLsanitize@nobreakspace}{%
13715         {\leavevmode\nobreak\HTMLentity{nbs‌p}}{%
13716             {\LWR@orignobreakspace}}{%
13717 }%
13718
13719 \LetLtxMacro\nobreakspace~
```

\?-nobreakspace seems to be necessary for packages such as ctexbook, where this is used at the end of the document.

```
13720 \expandafter\LetLtxMacro\csname ?-\string\nobreakspace\endcsname~

13721 \newrobustcmd*{\LWR@HTML@textellipsis}{\HTMLunicode{2026}}
13722 \LWR@formatted{textellipsis}
13723 %
13724 \newrobustcmd*{\LWR@HTML@vdots}{\HTMLunicode{22EE}}
13725 \LWR@formatted{vdots}
13726 %
13727 ]% AtBeginDocument
```

Direct-formatting font sizes are remembered for future use:

```
13728 \newcommand*{\LWR@font@size}{normalsize}
13729
13730 \newrobustcmd*{\LWR@HTML@normalsize}{\renewcommand*{\LWR@font@size}{normalsize}}
13731 \LWR@formatted{normalsize}
13732
```

```
13733 \newrobustcmd*{\LWR@HTML@small}{\renewcommand*{\LWR@font@size}{small}}
13734 \LWR@formatted{small}
13735
13736 \newrobustcmd*{\LWR@HTML@footnotesize}{\renewcommand*{\LWR@font@size}{footnotesize}}
13737 \LWR@formatted{footnotesize}
13738
13739 \newrobustcmd*{\LWR@HTML@scriptsize}{\renewcommand*{\LWR@font@size}{scriptsize}}
13740 \LWR@formatted{scriptsize}
13741
13742 \newrobustcmd*{\LWR@HTML@tiny}{\renewcommand*{\LWR@font@size}{tiny}}
13743 \LWR@formatted{tiny}
13744
13745 \newrobustcmd*{\LWR@HTML@large}{\renewcommand*{\LWR@font@size}{large}}
13746 \LWR@formatted{large}
13747
13748 \newrobustcmd*{\LWR@HTML@Large}{\renewcommand*{\LWR@font@size}{Large}}
13749 \LWR@formatted{Large}
13750
13751 \newrobustcmd*{\LWR@HTML@LARGE}{\renewcommand*{\LWR@font@size}{LARGE}}
13752 \LWR@formatted{LARGE}
13753
13754 \newrobustcmd*{\LWR@HTML@huge}{\renewcommand*{\LWR@font@size}{huge}}
13755 \LWR@formatted{huge}
13756
13757 \newrobustcmd*{\LWR@HTML@Huge}{\renewcommand*{\LWR@font@size}{Huge}}
13758 \LWR@formatted{Huge}

13759 \DeclareDocumentCommand{\onecolumn}{}{}
13760
13761 \DeclareDocumentCommand{\twocolumn}{O{}}
13762
13763 #1
13764
13765 }

\hfill

13766 \newcommand*{\LWR@HTML@hfill}{\qquad}
13767 \LWR@formatted{hfill}

\hrulefill

13768 \newcommand*{\LWR@HTML@hrulefill}{%
13769     \ifbool{\LWR@doingapar}{%
13770         {\rule{1in}{1pt}}%
13771     }{%
13772         \LWR@findcurrenttextcolor%
13773         \ifdefstring{\LWR@tempcolor}{000000}{%
13774             {%
13775                 \begin{BlockClass}{hrule}%
13776                 \end{BlockClass}%
13777             }%
13778         }{%
13779             \begin{BlockClass}[%
13780                 border-top: 1px solid \LWR@origpound\LWR@tempcolor % space
13781             ]{hrule}%
13782             \end{BlockClass}%
13783         }%
13784     }%
13785 }
```

```

13784      }%
13785 }%
13786 \LWR@formatted{hrulefill}

\dotfill

13787 \newcommand*{\LWR@HTML@dotfill}{\dots}
13788 \LWR@formatted{dotfill}

```

\newpage Not \LWR@foramt ted since cannot be used inside a lateximage anyhow.

```

13789 \renewcommand*{\newpage}{%
13790
13791 }

```

\newline Uses the HTML
 element.

```

13792 \newrobustcmd*{\LWR@newlinebr}{\unskip\LWR@htmltag{br /}\LWR@orignewline}%
13793 \LetLtxMacro\newline\LWR@newlinebr

```

\\" Redefined to \LWR@endofline or \LWR@tabularendofline.

```

\LWR@endofline * [<len>]
\\ is assigned to \LWR@endofline at \LWR@LwarpStart.

```

Inside tabular, \\ is temporarily changed to \LWR@tabularendofline.

```

13794 \LetLtxMacro\LWR@origendofline\\
13795 \NewDocumentCommand{\LWR@endofline}{s O{0pt}}%
13796 {%
13797 \newline%
13798 \setlength{\LWR@templengthone}{#2}%
13799 \ifdimgreater{\LWR@templengthone}{0pt}{\newline}{}%
13800 }

```

\LWR@minipagestartpars Minipages are often placed side-by-side inside figures, with a bit of horizontal space to separate them. Since HTML does not allow a <div> to be inside a p, paragraphs must be turned off during the generation of the minipage, then turned on after the minipage is complete. When this occurs between side-by-side minipages, l warp correctly suppresses the paragraph tags between the minipages, unless some other text is between the minipages. Such text forms its own paragraph, resulting in text after a minipage to be on its own line. Since people often place small horizontal space between minipages, it is desirable to maintain this space if possible. l warp tries to do this by remembering that a minipage has been seen, in which case paragraph tags are suppressed around \hspace, \enskip, \quad, and \qquad until the end of the paragraph, when the closing p tag is created.

When a minipage is seen, the boolean LWR@minipagethispar is set, telling the following horizontal whitespace commands to try to suppress their surrounding paragraph tags. LWR@minipagethispar is cleared at the next end of paragraph, when the HTML paragraph closing tag is generated.

Placed just before \hspace, \quad, or \qquad's HTML output.

```
13801 \newcommand*{\LWR@minipagestartpars}{%
13802     \ifbool{\LWR@minipagethispar}{\LWR@startpars}{}%
13803 }
```

\LWR@minipagestopars Placed just after \hspace, \quad, or \qquad's HTML output.

```
13804 \newcommand*{\LWR@minipagestopars}{%
13805     \ifbool{\LWR@minipagethispar}{\LWR@stopars}{}%
13806 }
```

\quad Handles special minipage & horizontal space interactions. Uses 2003 EM SPACE to pass validation.

```
13807 \newrobustcmd*{\LWR@HTML@quad}{%
13808     \LWR@minipagestopars%
13809     \HTMLunicode{2003}%
13810     \LWR@minipagestartpars%
13811 }
13812 \LWR@formatted{quad}
```

\qquad Handles special minipage & horizontal space interactions.

```
13813 \newrobustcmd*{\LWR@HTML@qquad}{\quad\quad}
13814 \LWR@formatted{qquad}
```

\enskip Handles special minipage & horizontal space interactions.

```
13815 \newrobustcmd*{\LWR@HTML@enskip}{%
13816     \LWR@minipagestopars%
13817     \HTMLunicode{2002}%
13818     \LWR@minipagestartpars%
13819 }
13820 \LWR@formatted{enskip}
```

\LWR@tempwidth (*Len*) Used to compute span width, height, raise for \hspace and \rule:

```
\LWR@tempheight (Len)
13821 \newlength{\LWR@tempwidth}
\LWR@tempraise (Len)
13822 \newlength{\LWR@tempheight}
13823 \newlength{\LWR@tempraise}
```

\hspace * {*length*} * {*length*}

Handles special minipage & horizontal space interactions.

Prints a span of a given width. Ignores the optional star.

\hspace{\fill} is converted to \hspace{2em}, equal to \qquad.

```
13824 \NewDocumentCommand{\LWR@HTML@hspace}{s m}{%
13825 \setlength{\LWR@tempwidth}{#2}%
}
```

If \fill, change to \qquad:

```
13826 \ifnum\gluestretchorder\LWR@tempwidth>0%
13827 \setlength{\LWR@tempwidth}{2em}%
13828 \fi%
```

Only if the width is greater than zero:

```
13829 \ifdimcomp{\LWR@tempwidth}{>}{0pt}{%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
13830 \LWR@minipagestoppars%
```

Support the HTML thin wrappable space:

```
13831 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
13832 {%
13833   \HTMLunicode{2009}% thin breakable space
13834 }%
```

Print the span with the converted width. Not rounded.

```
13835 {%
13836   \LWR@htmltagc{%
13837     span style=\textquotedbl{}width:\LWR@printlength{\LWR@tempwidth}; % extra space
13838       display:inline-block\textquotedbl%
13839 }%
```

If formatting for a word processor, approximate with a number of \quads, in case a span of a given width is not supported:

```
13840 \ifbool{FormatWP}{%
13841   \setlength{\LWR@templengthone}{\LWR@tempwidth}%
13842   \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
13843     \quad%
13844     \addtolength{\LWR@templengthone}{-1em}%
13845   }%
13846 }%
```

If NOT formatting for a word processor, include an empty comment to avoid an empty span:

```
13847 {\LWR@htmlcomment{}}%
```

Close the span:

```
13848 \LWR@htmltagc{/span}%
13849 }%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
13850 \LWR@minipagestartpars%
13851 }% width greater than 0
13852 }%
13853 \LWR@formatted{hspace}
```

\LWR@vspace * {*length*} Nullified vspace.

```
13854 \NewDocumentCommand{\LWR@HTML@vspace}{s m}{}  
13855  
13856 \LWR@formatted{vspace}
```

\linebreak [*num*] Inserts an HTML br tag.

```
13857 \renewcommand*{\linebreak}[1][]{\newline}
```

\nolinebreak [*num*]

```
13858 \renewcommand*{\nolinebreak}[1][]{}  
  
\pagebreak [num] Starts a new paragraph.
```

```
13859 \renewcommand*{\pagebreak}[1][]{}  
13860  
13861 }
```

\nopagebreak [*num*]

```
13862 \renewcommand*{\nopagebreak}[1][]{}  
  
\enlargethispage * {len}
```

```
13863 \RenewDocumentCommand{\enlargethispage}{s m}{}  
  
\clearpage  
\cleardoublepage
```

```
13864 \renewcommand*{\clearpage}{}  
13865 \renewcommand*{\cleardoublepage}{}  
  
\rule [raise] {width} {height}
```

Handles special minipage & horizontal space interactions.

Creates a span of a given width and height. Ignores the optional star.

\fill is zero-width, so \hspace{\fill} is ignored.

```
13866 \newcommand*{\LWR@HTML@rule}[3][]{}%
```

The width is copied into a temporary L^AT_EX length, from which comparisons and conversions may be made:

```
13867 \setlength{\LWR@tempwidth}{#2}%
```

If it's zero-width then skip the entire rule:

```
13868 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}{}%  
13869 {}% zero- width  
13870 {}% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```
13871      \ifthenelse{%
13872          \lengthtest{\LWR@tempwidth>0pt}\AND%
13873          \lengthtest{\LWR@tempwidth<1pt}%
13874      }%
13875          {\setlength{\LWR@tempwidth}{1pt}}%
13876      {}%
```

Likewise with height:

```
13877      \setlength{\LWR@tempheight}{#3}%
13878      \ifthenelse{%
13879          \lengthtest{\LWR@tempheight>0pt}\AND%
13880          \lengthtest{\LWR@tempheight<1pt}%
13881      }%
13882          {\setlength{\LWR@tempheight}{1pt}}%
13883      {}%
```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```
13884      \LWR@minipagestoppars%
```

Print the span with the converted width and height. The width and height are NOT rounded, since a height of less than 1pt is quite common in L^AT_EX code.

```
13885      \LWR@findcurrenttextcolor%
13886      \LWR@htmntagc{%
13887          span\LWR@indentHTML%
13888          style=\textquotedbl%
```

The HTML background color is used to draw the filled rule according to the L^AT_EX foreground color set by \textcolor.

```
13889      \ifbool{FormatWP}{}{background:\LWR@currenttextcolor ; }%
```

The width and height are printed, converted to PT:

```
13890      width:\LWR@printlength{\LWR@tempwidth} ; %
13891      height:\LWR@printlength{\LWR@tempheight} ; %
```

The raise height is converted to a css transform. The *2 raise multiplier is to approximately match HTML output's X height. Conversion to a L^AT_EX length allows a typical L^AT_EX expression to be used as an argument for the raise, whereas printing the raise argument directly to HTML output without conversion to a L^AT_EX length limits the allowable syntax. To do: A superior method would compute a ratio of L^AT_EX ex height, then print that to HTML with an ex unit.

```
13892      \ifblank{#1}%
13893      {}%
13894      {%
13895          \setlength{\LWR@tempraise}{0pt-#1}%
13896          \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
13897          \LWR@indentHTML%
13898          -ms-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
13899          \LWR@indentHTML%
```

```

13900      -webkit-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
13901          \LWR@indentHTML%
13902      transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
13903          \LWR@indentHTML%
13904      }%

```

Display inline-block to place the span inline with the text:

```

13905      display:inline-block;\textquotedbl\LWR@orignewline%
13906      }%

```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```

13907      \ifbool{FormatWP}{%
13908          \setlength{\LWR@templengthone}{\LWR@tempwidth}%
13909          \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
13910              \_\_%
13911              \addtolength{\LWR@templengthone}{-1em}%
13912          }%
13913      }%

```

If NOT formatting for a word processor, add a comment to avoid an empty :

```

13914      {\LWR@htmlcomment{}}

```

Close the span:

```

13915      \LWR@htmlltagc{/span}%

```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```

13916      \LWR@minipagestartpars%
13917  }% non-zero width
13918  }
13919
13920 \LWR@formatted{rule}

13921 \end{warpHTML}

```

97 \phantomsection

for HTML output

```

13922 \begin{warpHTML}

\LWR@phantomsection Emulate the hyperref \phantomsection command, often used to insert the bibliography into the table of contents. Ignores \ForceHTMLTOC.

```

```

13923 \newrobustcmd*{\LWR@phantomsection}{%
13924     \begingroup%
13925     \boolfalse{LWR@forcinghtmltoc}%
13926     \section*{}%
13927     \endgroup%
13928 }

```

13929 \end{warpHTML}

98 \LaTeX and other logos

Logos for HTML and print modes:

Some of these logos may be redefined in a later package, so after loading other packages, and at the beginning of the document, their definitions are finally set by \LWR@formatted.

For css conversions, see:

<http://edward.oconnor.cx/2007/08/tex-poshlet>

<http://nitens.org/taraborelli/texlogo>

and the spacing described in the metafont package documentation.

```
for HTML & PRINT 13930 \begin{warpall}
13931 \newbool{LWR@warnXe}
13932 \boolfalse{LWR@warnXe}
13933
13934 \newrobustcmd*{\Xe}
13935   {%
13936     X\hspace{-.1667em}\raisebox{-.5ex}{E}%
13937     \global\booltrue{LWR@warnXe}%
13938   }
13939
13940 \AtBeginDocument{
13941   \IfPackageLoadedTF{graphics}{
13942     \IfPackageLoadedTF{metalogo}{}{
13943       \renewrobustcmd*{\Xe}
13944         {X\hspace{-.1667em}\raisebox{-.5ex}{\reflectbox{E}}}}
13945   }
13946 }()
13947 }
13948
13949 \AtEndDocument{
13950   \ifbool{LWR@warnXe}{
13951     \PackageNoteNoLine{l warp}{Load graphicx or graphics
13952       for improved XeTeX logo}
13953   }()
13954 }
13955
13956 \providerobustcmd*{\XeTeX}{\mbox{\Xe\hspace{-.125em}\TeX}}
13957 \providerobustcmd*{\XeLaTeX}{\mbox{\Xe\hspace{-.125em}\LaTeX}}
13958 \providerobustcmd*{\AmS}{%
13959   \leavevmode\hbox{$\mathcal A\kern-.2em\lower.376ex$}
13960   \hbox{$\mathcal M$}\kern-.2em\mathcal S$}%
13961 }
13962 \newrobustcmd*{\LyX}{\textsf{LyX}}
13963 \providerobustcmd*{\LuaTeX}{\mbox{\Lua\TeX}}
13964 \providerobustcmd*{\LuaLaTeX}{\mbox{\Lua\LaTeX}}
13965 \providerobustcmd*{\BibTeX}{\mbox{B\textit{t}eX}}
13966 \providerobustcmd*{\MakeIndex}{\mbox{\textit{M}akeIndex}}
13967 \providerobustcmd*{\ConTeXt}{\mbox{Con\TeX{}t}}
13968 \providerobustcmd*{\MiKTeX}{\mbox{MiK\TeX{}}}
13969 \end{warpall}

for HTML output 13970 \begin{warpHTML}
```

The print-mode versions of the following may be changed by `metalogo`, so their print formatting is recorded `\AtBeginDocument`.

\TeX\ \TeX

`latexlogo` is a css class used to properly typeset the E and A in `LATEX` and friends.

`latexlogofont` is a css class used to select the font for the rest of the logo in `LATEX`, `LuaTeX`, `ConTeXt`, etc.

```

13971 \newrobustcmd*{\LWR@HTML@TeX}
13972 {%
13973     \InLineClass{latexlogofont}%
13974     {%
13975         \InLineClass{latexlogo}%
13976         {%
13977             T%
13978             \InLineClass{latexlogosub}{e}%
13979             X%
13980         }%
13981     }%
13982 }%
13983 \AtBeginDocument{\LWR@formatted{TeX}}% may have been patched by metalogo

```

\LaTeX\ LATEX, LATEX2 ϵ

\LaTeXe

```

13984 \newrobustcmd*{\LWR@HTML@LaTeX}
13985 {%
13986     \InLineClass{latexlogofont}%
13987     {%
13988         \InLineClass{latexlogo}%
13989         {%
13990             L%
13991             \InLineClass{latexlogosup}{a}%
13992             T%
13993             \InLineClass{latexlogosub}{e}%
13994             X%
13995         }%
13996     }%
13997 }%
13998 \AtBeginDocument{\LWR@formatted{LaTeX}}% may have been patched by metalogo
14000
14001
14002 \newrobustcmd*{\LWR@HTML@LaTeXe}
14003 {%
14004     \LaTeX%
14005     \InLineClass{latexlogofont}{%
14006         \InLineClass{latexlogotwoe}{%
14007             2%
14008             \InLineClass{latexlogotwoesub}{\HTMLunicode{03B5}}%
14009         }%
14010     }%
14011 }%
14012 \AtBeginDocument{\LWR@formatted{LaTeXe}}% may have been patched by metalogo

```

\LuaTeX\ \LuaTeX, \LuaLATEX

```

14013 \newrobustcmd*{\LWR@HTML@LuaTeX}{\InLineClass{latexlogofont}{Lua}\TeX}
14014 \AtBeginDocument{\LWR@formatted{LuaTeX}}% may have been patched by metalogo
14015
14016 \newrobustcmd*{\LWR@HTML@LuaLaTeX}{\InLineClass{latexlogofont}{Lua}\LaTeX}
14017 \AtBeginDocument{\LWR@formatted{LuaLaTeX}}% may have been patched by metalogo

```

\XeTeX X_ETEX, X_ELATEX
 \XeLaTeX
 xetexlogo is a css class which aligns the backwards E in X_ETEX and spaces TEX appropriately.
 xlabelxlogo is a css class which aligns the backwards E in X_ELATEX and spaces LATEX appropriately.

```

14018 \newrobustcmd*{\LWR@HTML@Xe}{%
14019   {%
14020     X%
14021     \InLineClass{xelatexlogosub}{\HTMLunicode{18e}}%
14022   }%
14023 \AtBeginDocument{\LWR@formatted{Xe}}% may have been patched by metalogo
14024
14025 \newrobustcmd*{\LWR@HTML@XeTeX}{\InLineClass{xelatexlogo}{\Xe}\TeX}
14026 \AtBeginDocument{\LWR@formatted{XeTeX}}% may have been patched by metalogo
14027
14028 \newrobustcmd*{\LWR@HTML@XeLaTeX}{\InLineClass{xelatexlogo}{\Xe}\LaTeX}
14029 \AtBeginDocument{\LWR@formatted{XeLaTeX}}% may have been patched by metalogo

```

\ConTeXt ConTeXt

```

14030 \newrobustcmd*{\LWR@HTML@ConTeXt}{%
14031   \InLineClass{latexlogofont}{Con}\TeX{}%
14032   \InLineClass{latexlogofont}{t}%
14033 }%
14034 \LWR@formatted{ConTeXt}

```

\BibTeX BIBT_EX, *MakeIndex*
 \MakeIndex
 14035 \newrobustcmd*{\LWR@HTML@BibTeX}{%
 14036 {\InLineClass{latexlogofont}{B\textsc{ib}}\TeX}%
 14037 \LWR@formatted{BibTeX}
 14038
 14039 \newrobustcmd*{\LWR@HTML@MakeIndex}{%
 14040 {\InLineClass{latexlogofont}{\textit{MakeIndex}}}%
 14041 \LWR@formatted{MakeIndex}
}

\AmS \mathcal{AMS}

amslogo is a css class used for the \mathcal{AMS} logo.

```

14042 \AtBeginDocument{%
14043 \newrobustcmd*{\LWR@HTML@AmS}{%
14044 {%
14045   \InLineClass{amslogo}{%
14046     \textit{%
14047       A%
14048       \InLineClass{latexlogosub}{M}%
14049       S%

```

```

14050      }%
14051      }%
14052 }%
14053 \LWR@formatted{AmS}%
14054 }%

```

\MiKTeX MiKTeX

```

14055 \newrobustcmd*{\LWR@HTML@MiKTeX}{\InLineClass{latexlogofont}{MiK}\TeX}%
14056 \LWR@formatted{MiKTeX}%

```

\LyX LyX

`lyxlogo` is a css class used for the LyX logo.

```

14057 \newrobustcmd*{\LWR@HTML@LyX}{\InLineClass{lyxlogo}{LyX}}%
14058 \LWR@formatted{LyX}%

```

```
14059 \end{warpHTML}
```

99 Starting and stopping lwarp

for HTML output

```
14060 \begin{warpHTML}
```

`\LWR@LwarpStart` Automatically sets up the HTML-related actions for the start and end of the document.
`\LWR@LwarpEnd`

```

14061 \AfterEndPreamble{\LWR@LwarpStart}%
14062 \AtEndDocument{\LWR@LwarpEnd}%
14063 \DeclareHookRule{enddocument}{lwarp}{after}{legacy}%

```

```
14064 \end{warpHTML}
```

100 Loading array

`array` is required for lwarp's column parsing. It and its patches are now loaded.

for HTML output

```
14065 \begin{warpHTML}%
14066 \RequirePackage{array}
```

The following are compared with the tabular preamble > to add css classes to adjust tabular cells. Defined here now that `\arraybackslash` is defined after `array` is loaded.

```

14067 \edef\LWR@detect@centeringarraybackslash{\centering\arraybackslash}%
14068 \edef\LWR@detect@raggedrightarraybackslash{\raggedright\arraybackslash}%
14069 \edef\LWR@detect@raggedleftarraybackslash{\raggedleft\arraybackslash}%
14070 \def\LWR@detect@itshape{\itshape}%
14071 \def\LWR@detect@bfseries{\bfseries}%
14072 \def\LWR@detect@bfseries{\bfseries\itshape}%
14073 \end{warpHTML}

```

101 Loading everyshi patches

`everyshi` is emulated by the L^AT_EX core, so its patches are loaded here. `\AtBeginDocument` is used in case an older verison of L^AT_EX is used.

```
for HTML output 14074 \begin{warpHTML}
               14075 \AtBeginDocument{
               14076   \IfPackageLoadedTF{everyshi} {
               14077     \RequirePackage{lwarp-everyshi}
               14078   }{}}
               14079 }
               14080 \end{warpHTML}
```

102 Loading textcomp patches

`textcomp` has now been integrated into the L^AT_EX core, so its patches are loaded now.

```
for HTML output 14081 \begin{warpHTML}
               14082 \RequirePackage{lwarp-textcomp}
               14083 \end{warpHTML}
```

103 Loading amsmath, amsthm patches, centernot

`amsmath`, `amsthm`, and `centernot` may have been preloaded, such as by `newtx`, so their patches are loaded now.

```
for HTML output 14084 \begin{warpHTML}
               14085 \IfPackageLoadedTF{amsthm} {
               14086   \RequirePackage{lwarp-amsthm}
               14087 }{}}

               14088 \IfPackageLoadedTF{amsmath} {
               14089   \RequirePackage{lwarp-amsmath}
               14090 }{}
```

`amsthm` may load `centernot`, so `centernot` must be checked second.

```
14091 \IfPackageLoadedTF{centernot} {
               14092   \RequirePackage{lwarp-centernot}
               14093 }{}}
               14094 \end{warpHTML}
```

104 Loading KOMA-SCRIPT class patches

Load patches to `koma-script`.

```
for HTML output 14095 \begin{warpHTML}
```

```

14096 \IfClassLoadedTF{scrbook}{\RequirePackage{l warp-patch-komascript}}{}
14097 \IfClassLoadedTF{scrartcl}{\RequirePackage{l warp-patch-komascript}}{}
14098 \IfClassLoadedTF{scrreprt}{\RequirePackage{l warp-patch-komascript}}{}

14099 \end{warpHTML}

```

105 Loading MEMOIR class patches

Load patches to memoir.

```

for PRINT output 14100 \begin{warpprint}
14101 \IfClassLoadedTF{memoir}{\LWR@origRequirePackage{xcolor}}{}
14102 \end{warpprint}

for HTML output 14103 \begin{warpHTML}
14104 \IfClassLoadedTF{memoir}{\RequirePackage{l warp-patch-memoir}}{}
14105 \end{warpHTML}

```

106 ut* class patches

Load patches to uj* and ut* classes, as well as ltj* classes.

```

for HTML output 14106 \begin{warpHTML}

14107 \newcommand*\LWR@patchujtclasses{

    uj/t does not use \partname

14108     \def\@partnameformat{

14109         \def\@partcntformat##1{%
14110             \prepartname%
14111             \csname the##1\endcsname%
14112             \postpartname%
14113             \quad%
14114         }
14115         \@ifundefined{chapter}{}{
14116             \def\@chapcntformat##1{%
14117                 \prechapname%
14118                 \csname the##1\endcsname%
14119                 \postchapname%
14120                 \quad%
14121             }
14122         }
14123     \renewcommand*\LWR@printchapname{}}

```

Use decimal points instead of centered dots:

```

14124     \renewcommand{\thepart}{\@Roman\c@part}
14125     \@ifundefined{chapter}{
14126         \renewcommand{\thesection}{\@arabic\c@section}
14127     }{
14128         \renewcommand{\thechapter}{\@arabic\c@chapter}

```

```

14129      \renewcommand{\thesection}{\thechapter.\@arabic\c@section}
14130  }
14131  \renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}
14132  \renewcommand{\thesubsubsection}{%
14133  \thesubsection.\@arabic\c@subsubsection}
14134  \renewcommand{\theparagraph}{%
14135  \thesubsubsection.\@arabic\c@paragraph}
14136  \renewcommand{\thesubparagraph}{%
14137  \theparagraph.\@arabic\c@subparagraph}
14138  \@ifundefined{chapter}{%
14139      \renewcommand{\thefigure}{\@arabic\c@figure}
14140      \renewcommand{\thetable}{\@arabic\c@table}
14141  }{%
14142      \renewcommand{\thefigure}{%
14143          \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@figure}
14144      \renewcommand{\thetable}{%
14145          \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@table}
14146  }
14147 }
14148
14149 \IfClassLoadedTF{ujarticle}{\LWR@patchujtclasses}{}%
14150 \IfClassLoadedTF{ujbook}{\LWR@patchujtclasses}{}%
14151 \IfClassLoadedTF{ujreport}{\LWR@patchujtclasses}{}%
14152 \IfClassLoadedTF{utarticle}{\LWR@patchujtclasses}{}%
14153 \IfClassLoadedTF{utbook}{\LWR@patchujtclasses}{}%
14154 \IfClassLoadedTF{utreport}{\LWR@patchujtclasses}{}%
14155 \IfClassLoadedTF{ltjarticle}{\LWR@patchujtclasses}{}%
14156 \IfClassLoadedTF{ltjbook}{\LWR@patchujtclasses}{}%
14157 \IfClassLoadedTF{ltjreport}{\LWR@patchujtclasses}{}%
14158 \IfClassLoadedTF{ltjsarticle}{\LWR@patchujtclasses}{}%
14159 \IfClassLoadedTF{ltjsbook}{\LWR@patchujtclasses}{}%
14160 \IfClassLoadedTF{ltjsreport}{\LWR@patchujtclasses}{}%
14161 \IfClassLoadedTF{ltjskiyou}{\LWR@patchujtclasses}{}%
14162 \IfClassLoadedTF{ltjspf}{\LWR@patchujtclasses}{}%
14163 \IfClassLoadedTF{ltjtarticle}{\LWR@patchujtclasses}{}%
14164 \IfClassLoadedTF{ltjtbook}{\LWR@patchujtclasses}{}%
14165 \IfClassLoadedTF{ltjtreport}{\LWR@patchujtclasses}{}%
14166 \end{warpHTML}

```

107 CTEX patches

Patches for ctex and related classes, which are loaded before l warp.

All CTEX classes and the ctex package seem to load ctexpatch, so its presence is used to decide whether to have l warp patch CTEX.

for HTML output 14167 \begin{warpHTML}

\AtBeginDocument in case the user set FileSectionNames in the preamble.

```

14168 \AtBeginDocument{
14169     \IfPackageLoadedTF{ctexpatch}{%
14170         \def\@partcntformat#1{%
14171             \LWR@isolate{\CTEX@partname}~%
14172             \CTEX@part@aftername%
14173         }%

```

```

14174
14175     \def\@partnameformat{}
14176
14177     \def\@chapcntformat#1{%
14178         \LWR@isolate{\CTEX@chaptername}~%
14179         \CTEX@chapter@aftername%
14180     }%
14181
14182     \renewcommand*\LWR@printchaptername{}%
14183 }{}%
14184 }

14185 \end{warpHTML}

```

108 kotexutf patches

Patch for `kotexutf`, which is loaded before `l warp`.

`kotexutf`'s `\@setref` was conflicting with `l warp`'s cross references.

for HTML output

If `kotexutf`'s version of `\@setref` is detected, it is reverted to the original.

```

14187 \AtBeginDocument{
14188 \IfPackageLoadedTF{kotexutf}{%
14189     \def\LWR@kotexutf@setref#1#2#3{%
14190         \@setref@dhucs@orig{#1}{#2}{#3}%
14191         \ifx#1\relax\else
14192             \bgroup
14193             \dhucs@make@cjkchar@null
14194             \edef@\temp{\expandafter#2#1}\global\josatoks\expandafter{\@temp}%
14195             \egroup
14196         \fi%
14197     }%
14198
14199     \ifdef\@setref{\LWR@kotexutf@setref}{%
14200         \let\@setref\@setref@dhucs@orig
14201     }{}%
14202 }{}%
14203 }

14204 \end{warpHTML}

```

109 babel and polyglossia warnings

`l warp` prints a message instructing the user how to avoid the following error.

(These are not `\PackageWarnings` because there may not be a problem.)

`l warp` uses `cleveref`, which has some limitations when using `polyglossia`, possibly resulting in the error

```
! Undefined control sequence. . . . \__hook begindocument
```

To test compatibility, add

```
\usepackage{cleveref}
```

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

```
\setdefaultlanguage{english}
```

or some other language supported by `cleveref`, then select other languages using `\setotherlanguages`.

Once the print version works with `cleveref` and `polyglossia`, the `HTML` version should work as well using `l warp`.

```
for HTML output
14205 \begin{warpHTML}
14206 \AtBeginDocument{
14207
14208 \IfPackageLoadedTF{polyglossia}{

14209   \PackageNoteNoLine{l warp}
14210   {%
14211     Polyglossia has been loaded. L warp also uses cleveref.\MessageBreak
14212     See the cleveref documentation regarding\MessageBreak
14213     polyglossia support. Some languages are not supported.\MessageBreak
14214     --- \MessageBreak
14215     If the error\MessageBreak
14216     \space\space Undefined control sequence ...
14217     \protect\_\_hook begindocument\MessageBreak
14218     occurs here, use the polyglossia macro:\MessageBreak
14219     \space\space\protect\setmainlanguage\protect{...}\protect}
14220   }
14221 }

14222 \IfPackageLoadedTF{babel}{

14223   \PackageNoteNoLine{l warp}
14224   {%
14225     Babel has been loaded. L warp also uses cleveref.\MessageBreak
14226     See the cleveref documentation regarding\MessageBreak
14227     babel support. Some languages are not supported%
14228   }
14229 }

14230
14231
14232
14233 \end{warpHTML}
```

110 MATHJAX warnings

```
\LWR@mathjaxwarn {\langle packagename\rangle} {\langle More text.\rangle}
```

Issue a warning that `MATHJAX` is emulated. To be done `\AtBeginDocument`.

```
14234 \newcommand*{\LWR@mathjaxwarn}[2]{%
14235   \IfPackageLoadedTF{l warp-\#1}{%
14236     \ifblank{\#2}{%
14237       \PackageWarningNoLine{l warp}
14238       {%
14239         L warp provides emulation for MathJax when used\MessageBreak
```

```

14240           with the #1 package%
14241       }
14242   }{%
14243       \PackageWarningNoLine{l warp}
14244       {%
14245           L warp provides emulation for MathJax when used\MessageBreak
14246           with the #1 package.\MessageBreak
14247           #2%
14248       }
14249   }%
14250 }{%
14251 }
14252 %
14253 % \begin{macro}{\LWR@nomathjaxwarn} \marg{packagename} \marg{More text.}
14254 %
14255 % Issue a warning that \MathJax\ is not supported.
14256 % To be done \cs{AtBeginDocument}.
14257 %
14258 % \changes{v0.894}{2020/12/22}{Warn if using packages not supported by \MathJax.}
14259 % \changes{v0.895}{2021/01/08}{Improved \MathJax\ warning.}
14260 % \begin{macrocode}
14261 \newcommand*\LWR@nomathjaxwarn[2]{%
14262     \IfPackageLoadedTF{l warp-#1}{%
14263         \ifblank{#2}{%
14264             \PackageWarningNoLine{l warp}
14265             {%
14266                 L warp does not provide MathJax support for #1.\MessageBreak
14267                 Use SVG math by removing the L warp mathjax option%
14268             }
14269         }{%
14270             \PackageWarningNoLine{l warp}
14271             {%
14272                 L warp does not provide MathJax support for #1.\MessageBreak
14273                 #2%
14274             }
14275         }%
14276     }{%
14277 }
14278 %
14279 \LWR@forceSVGmessage {\langle packagename\rangle}

14278 \newcommand*\LWR@forceSVGmessage[1]{%
14279     SVG math output may be enabled for select math\MessageBreak
14280     expressions to preserve #1 visual\MessageBreak
14281     features for those particular expressions.\MessageBreak
14282     Before the chosen inline math, use \protect\inlinemathother\MessageBreak
14283     to begin using SVG math, and \protect\inlinemathnormal\MessageBreak
14284     afterward to resume using MathJax math.\MessageBreak
14285     Before display math, use \protect\displaymathother\MessageBreak
14286     to begin using SVG math, and use \protect\displaymathnormal\MessageBreak
14287     after to resume using MathJax for the following math.\MessageBreak
14288     Or, use SVG math for all expressions by removing\MessageBreak
14289     the mathjax option for the l warp package%
14290 }

```

If MATHJAX is being used, issue a warning for certain packages.

```

14291 \AtBeginDocument{
14292     \ifbool{mathjax}{%

```

```
14293 \LWR@nomathjaxwarn{aligned-overset}{}  
14294 \LWR@nomathjaxwarn{amscdx}{\LWR@forceSVGmessage{amscdx}}  
14295 \LWR@mathjaxwarn{arydshln}  
14296 {In a math array, do not use the optional argument\MessageBreak  
14297 for \protect\cdashline.\space\space  
14298 Furthermore, \protect\cline\space is not\MessageBreak  
14299 supported by MathJax}  
14300 \LWR@nomathjaxwarn{autoaligne}{}  
14301 \LWR@mathjaxwarn{autonum}  
14302 {MathJax does not support equation+.\MessageBreak  
14303 You may use the warpprint and warpHTML\MessageBreak  
14304 environments to isolate the package load\MessageBreak  
14305 and the equation+ environments}  
14306 \LWR@mathjaxwarn{bigdelim}  
14307 {Delimiters appear only of the first line}  
14308 \LWR@nomathjaxwarn{boldtensors}{}  
14309 \LWR@mathjaxwarn{booktabs}  
14310 {\\protect\\cmidrule\\space is not displayed}  
14311 \LWR@mathjaxwarn{breqn}  
14312 {Each environment becomes an SVG image}  
14313 \LWR@mathjaxwarn{colortbl}  
14314 {Colors are ignored in MathJax.\MessageBreak  
14315 (Text mode tabular does support colortbl.)\MessageBreak  
14316 \\LWR@forceSVGmessage{colortbl}}  
14317 \LWR@mathjaxwarn{delarray}{\LWR@forceSVGmessage{delarray}}  
14318 \LWR@nomathjaxwarn{gauss}{\LWR@forceSVGmessage{gauss}}  
14319 \LWR@mathjaxwarn{hhline}  
14320 {A simple \\protect\\hline\\space is used}  
14321 \LWR@mathjaxwarn{isomath}  
14322 {Some of the symbol font macros such as \\protect\\mathsf{bf}\\MessageBreak  
14323 do not use a sans font because MathJax does not yet\MessageBreak  
14324 have sans Greek. Tensors may look like vectors%  
14325 }  
14326 \LWR@nomathjaxwarn{jkmath}{\LWR@forceSVGmessage{jkmath}}  
14327 \LWR@mathjaxwarn{libertinust1math}  
14328 {Some of the symbol font macros such as \\protect\\mathsf{bf}\\MessageBreak  
14329 do not use a sans font because MathJax does not yet\MessageBreak  
14330 have sans Greek. Tensors may look like vectors%  
14331 }  
14332 \LWR@mathjaxwarn{mathtools}  
14333 {See the Lwarp manual regarding the disallowspaces\MessageBreak  
14334 and showonlyrefs options, the alignat environment,\MessageBreak  
14335 and \\protect\\DeclarePairedDelimiter\\space and related%  
14336 }  
14337 \LWR@mathjaxwarn{mathspec}  
14338 {Double quotes are removed, even inside \\protect\\text}  
14339 \LWR@mathjaxwarn{mismath}  
14340 {MathJax does not support \\cs{number}, \\cs{inumber},\MessageBreak  
14341 \\protect\\jnumber, \\protect\\pinumber, \\protect\\MathUp, \\protect\\MathIt,\\MessageBreak  
14342 \\protect\\MathNumbers, or \\protect\\MathNormal.\MessageBreak  
14343 \\protect\\itpi\\space is made available as a clone of \\protect\\pi.\\MessageBreak  
14344 Tensors are not sans serif%  
14345 }  
14346 \LWR@mathjaxwarn{multirow}  
14347 {Multirow works as expected in text mode, but\MessageBreak  
14348 limited emulation is provided for MathJax math.\MessageBreak  
14349 \\protect\\multirow\\space ignores all arguments except\MessageBreak  
14350 the text}  
14351 \LWR@mathjaxwarn{ninematrix}  
14352 {Keys/values are ignored in MathJax.\MessageBreak
```

```
14353          \protect\cdots, etc. do not span multiple cells.\MessageBreak
14354          AutoNiceMatrix, etc. are not supported for MathJax.\MessageBreak
14355          \protect\CodeBefore, \protect\Body, and \protect\CodeAfter\MessageBreak
14356          \space\space also are not supported for MathJax.\MessageBreak
14357          \LWR@forceSVGmessage{nicematrix}%
14358          }
14359          \LWR@nomathjaxwarn{pb-diagram}{\LWR@forceSVGmessage{pb-diagram}}
14360          \LWR@mathjaxwarn{physics}
14361 % %
14362 %           {The third-party extension is not used.\MessageBreak
14363 %           {The MathJax v3 extension is used.\MessageBreak
14364 %           See the L warp manual for details}
14365          \LWR@mathjaxwarn{siunitx}
14366          {Place \protect\sisetup\space before \protect\begin{document}. \MessageBreak
14367          Many optional arguments are ignored}
14368          \LWR@nomathjaxwarn{tensind}{}%
14369          \LWR@mathjaxwarn{unicode-math}
14370          {Do not use embedded Unicode characters.\MessageBreak
14371          (Not all characters are encoded correctly.)\MessageBreak
14372          Some symbol fonts are not supported by MathJax,\MessageBreak
14373          and are only approximated.\MessageBreak
14374          Greek macros such as \protect\alpha\space respond to the math-style\MessageBreak
14375          option. Latin symbols does not, per MathJax\MessageBreak
14376          limitations, unless placed inside \protect\symbit\space or similar}
14377          \LWR@nomathjaxwarn{unitsdef}{}%
14378          \LWR@mathjaxwarn{witharrows}
14379          {Arrows can only point to the next line.\MessageBreak
14380          Text is only placed on a single line}
14381          \LWR@nomathjaxwarn{xy}
14382          {In text, xy works as-is. SVG images will be generated.\MessageBreak
14383          \LWR@forceSVGmessage{xy}}
14384      }{}%
14385 }
```

File 2 lwarf-2in1.sty**§ 111 Package 2in1**

2in1 (*Pkg*) 2in1 is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{2in1}

File 3 lwarf-2up.sty**§ 112 Package 2up**

2up (*Pkg*) 2up is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{2up}[2010/05/15]

```
2 \def\source#1#2#3{}  
3 \def\target#1#2#3{}  
4 \def\targetlayout#1{}  
5 \newdimen\pageseplength  
6 \newdimen\pagesepwidth  
7 \newdimen\pagesepoffset  
8 \def\twoupemptypage{}  
9 \def\twoupclearpage{}  
10 \def\twoupeject{}  
11 \def\twouparticle{}  
12 \def\twoupplain{}  
13 \def\twouplegaltarget{}  
14 \def\twouplandscape{}  
15 \def\TwoupWrites{}
```

File 4 lwarf-a4.sty**§ 113 Package a4**

a4 (*Pkg*) a4 is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{a4}[2004/04/15]

```
2 \newcommand*\WideMargins{}
```

File 5 lwarf-a4wide.sty**§ 114 Package a4wide**

a4wide (*Pkg*) a4wide is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{a4wide}[1994/08/30]

File 6 l warp-a5comb.sty**§ 115 Package a5comb**

a5comb (*Pkg*) a5comb is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{a5comb}

File 7 l warp-abstract.sty**§ 116 Package abstract**

(*Emulates or patches code by PETER WILSON.*)

abstract (*Pkg*) abstract is supported and patched by l warp.

⚠ missing toc If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

for HTML output: memoir provides an abstract environment even though it is not an article or report class. Meanwhile, l warp loads book to emulate memoir, but book does not have an abstract environment, so when the abstract package is loaded for emulation there is no pre-existing abstract to redefine, which would cause an error. Thus, a null abstract is provide here:

1 \ProvideDocumentEnvironment{abstract}{}{}{}

Accept all options for l warp-abstract:

2 \LWR@ProvidesPackagePass{abstract}[2009/06/08]

3 \AtBeginDocument{
4 \BeforeBeginEnvironment{abstract}{
5 \LWR@forcenewpage
6 \BlockClass{abstract}
7 }
8 \AfterEndEnvironment{abstract}{\endBlockClass}
9 }
10
11 \renewcommand{\@bsrunintitle}{%
12 \hspace*{\abstitleskip}%
13 {\abstractnamefont%
14 \InlineClass{abstractrunintitle}{\abstractname}}%
15 \@bslabeldelim}%
16 }

17 \IfClassLoadedTF{memoir}{
18 {
19 \renewenvironment{abstract}{%

```
20 %      \titlepage
21 %      \null\vfil
22 %      @beginparpenalty@lowpenalty
23 \setup@bstrct
24   \if@bsrunin
25   \else
26     \if@bsstyle
27       \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
28     \else
29       \ifnumber@bs
30         \num@bs
31       \else
32         \begin{\absnamepos}%
33   \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}
34 %           @endparpenalty@M
35   \end\absnamepos%
36   \vspace{\abstitleskip}%
37   \fi
38 %   \fi
39 %   \vspace{\abstitleskip}%
40 \fi
41 \put@bsintoc%
42 \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
43 {\par\end{@bstr@ctlist}}\vfil\null%\endtitlepage
44 }
45 }% not memoir
46 \if@titlepage
47   \renewenvironment{abstract}{%
48     \titlepage
49     \null\vfil
50     @beginparpenalty@lowpenalty
51     \if@bsrunin
52     \else
53       \if@bsstyle
54         \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
55       \else
56         \ifnumber@bs
57           \num@bs
58         \else
59           \begin{\absnamepos}%
60   \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}
61           @endparpenalty@M
62           \end\absnamepos%
63 %%           \vspace{\abstitleskip}%
64         \fi
65         \fi
66         \vspace{\abstitleskip}%
67     \fi
68     \put@bsintoc%
69     \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
70     {\par\end{@bstr@ctlist}}\vfil\null%\endtitlepage
71   }
72 \else
73   \renewenvironment{abstract}{%
74     \if@bsrunin
75     \else
76       \if@bsstyle
77         \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
78       \else
79         \ifnumber@bs
```

```

80          \num@bs
81      \else
82 \begin{\absnamepos}%
83 \abstractnamefont\BlockClassSingle{\abstracttitle}{\abstractname}%
84 \end\absnamepos%
85 %%          \vspace{\abstitleskip}%
86      \fi
87      \fi
88      \vspace{\abstitleskip}%
89      \fi
90      \put@bsintoc%
91      \begin{@bstr@ctlist}\if@bsrunin@\bsrunintitle\fi\abstracttextfont}%
92      {\par\end{@bstr@ctlist}}%
93 \fi
94 }% not memoir

```

File 8 **l warp-academicons.sty**

§ 117 Package **academicons**

(Emulates or patches code by DIOGO A. B. FERNANDES.)

academicons (*Pkg*) **academicons** is patched for use by **l warp**.

If `\aiicon` is used, the name of the icon is used in the `alt` tag. Otherwise, for each of the individual icon macros, a generic `alt` tag is used.

for HTML output: 1 `\LWR@ProvidesPackagePass{academicons}[2018/06/27]`

```

2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \let\LWR@academicons@orig@AI\AI
5
6 \newcommand*\LWR@academicons@symbol[1]{%
7   \begin{lateximage}*[academicon][academicons#1]%
8   \begingroup%
9   \LWR@academicons@orig@AI%
10  \LWR@orig@symbol{#1}%
11  \endgroup%
12  \end{lateximage}%
13 }
14
15 \renewcommand*\AI{%
16   \LetLtxMacro\symbol\LWR@academicons@symbol%
17 }
18
19 \renewcommand*\aiicon[1]
20 {%
21   \begin{lateximage}*[#1 icon][academicons#1]%
22   \AI\csname aiicon@#1\endcsname%
23   \end{lateximage}%
24 }

```

File 9 l warp-accents.sty

§ 118 Package **accents**

(Emulates or patches code by JAVIER BEZOS.)

accents (*Pkg*) accents is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{accents}[2006/05/12]

For MATHJAX:

```

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{accents}
4
5 \CustomizeMathJax{\newcommand{\ring}[1]{\mathring{#1}}}
6 \CustomizeMathJax{\newcommand{\accentset}[2]{\overset{#1}{#2}}}
```

As of this writing, MATHJAX v3 does not yet support groups for macros, so for \underaccent, the originals are remembered here, then they are temporarily redefined and used inside \underaccent, then restored to their originals. \LARGE gives a reasonable size, and \raise is used to adjust vertically without introducing extra line space.

```

7 \CustomizeMathJax{\let\LWRgrave\grave}
8 \CustomizeMathJax{\let\LWRacute\acute}
9 \CustomizeMathJax{\let\LWRcheck\check}
10 \CustomizeMathJax{\let\LWRbreve\breve}
11 \CustomizeMathJax{\let\LWRbar\bar}
12 \CustomizeMathJax{\let\LWRhat\hat}
13 \CustomizeMathJax{\let\LWRdot\dot}
14 \CustomizeMathJax{\let\LWRtilde\tilde}
15 \CustomizeMathJax{\let\LWRddot\ddot}
16 \CustomizeMathJax{\let\LWRvec\vec}
17 \CustomizeMathJax{\let\LWRwidetilde\widetilde}
18
19 \CustomizeMathJax{\newcommand{\underaccent}[2]{%
20   {%
21     \renewcommand{\grave}[1]{\LARGE\grave{#1}}%
22     \renewcommand{\acute}[1]{\LARGE\acute{#1}}%
23     \renewcommand{\check}[1]{\LARGE\check{#1}}%
24     \renewcommand{\breve}[1]{\LARGE\breve{#1}}%
25     \renewcommand{\bar}[1]{\LARGE\bar{#1}}%
26     \renewcommand{\hat}[1]{\LARGE\hat{#1}}%
27     \renewcommand{\dot}[1]{\LARGE\dot{#1}}%
28     \renewcommand{\tilde}[1]{\LARGE\tilde{#1}}%
29     \renewcommand{\ddot}[1]{\LARGE\ddot{#1}}%
30     \renewcommand{\vec}[1]{\LARGE\vec{#1}}%
31     \renewcommand{\widetilde}[1]{\LARGE\widetilde{#1}}%
32     \underset{\raise 2pt {#1}}{\phantom{}^{#2}}%
33     \let\grave\grave%
34     \let\acute\acute%
35     \let\check\check%
36     \let\breve\breve%
37     \let\bar\bar%
```

```

38   \let\hat\LWRhat%
39   \let\dot\LWRdot%
40   \let\tilde\LWRtilde%
41   \let\ddot\LWRddot%
42   \let\vec\LWRvec%
43   \let\widetilde\LWRwidetilde%
44   }%
45 }%
46
47 \CustomizeMathJax{\newcommand{\undertilde}[1]{%
48   \underset{\raise 3pt {\widetilde{\phantom{#1}}}}{\phantom{#1}}%
49 }}%
50 \end{warpMathJax}

```

File 10 **l warp-accessibility.sty**

§ 119 Package **accessibility**

accessibility (*Pkg*) **accessibility** is emulated.

for HTML output: Discard all options for *l warp-accessibility*:

```

1 \LWR@ProvidesPackageDrop{accessibility}[2019/10/14]

2 \newcommand{\alt}[1]{\ThisAltText{#1}}
3 \newcommand{\newhref}[3]{\ThisAltText{#2}\LWR@href{#1}{#3}}%
4 \providecommand{\thead}[1]{\textbf{#1}}

```

For MATHJAX:

```

5 \begin{warpMathJax}
6 \CustomizeMathJax{\newcommand{\alt}[1]{}}
7 \CustomizeMathJax{\newcommand{\thead}[1]{\text{\textbf{#1}}}}}
8 \end{warpMathJax}

```

File 11 **l warp-accsupp.sty**

§ 120 Package **accsupp**

accsupp (*Pkg*) **accsupp** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{accsupp}[2018/03/28]

```

2 \newcommand*{\BeginAccSupp}[1]{}
3 \newcommand*{\EndAccSupp}[1]{}

```

For MATHJAX:

```

4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\BeginAccSupp}[1]{}}
6 \CustomizeMathJax{\newcommand{\EndAccSupp}[1]{}}
7 \end{warpMathJax}

```

File 12 l warp-acro.sty
§ 121 Package acro

(Emulates or patches code by CLEMENS NIEDERBERGER.)

acro (*Pkg*) acro is patched for use by l warp.

△ formats Define acronymn formats using \textbf instead of \bfseries etc.

for HTML output: 1 \LWR@ProvidesPackagePass{acro}[2019/10/12]

\DeclareAcronym is used in the preamble, where l warp has not yet made the dollar active, so temporarily enable l warp math catcode just for this definition:

```

2 \ExplSyntaxOn
3 \NewDocumentCommand \LWR@DeclareAcronym {mm}
4 {
5     \acro_declare_acronym:nn {#1} {#2}
6     \catcode`\$=3% l warp
7 }
8 \ExplSyntaxOff
9
10 \RenewDocumentCommand{\DeclareAcronym}{}{
11     \catcode`\$=\active% l warp
12     \LWR@DeclareAcronym
13 }
```

Replace dot fill with simple dots:

```

14 \ExplSyntaxOn
15 \cs_new_protected:Npn \LWR@HTML@acro_dot_fill: {\dots\space}
16 \LWR@formatted{acro_dot_fill:}
17 \ExplSyntaxOff
```

Modified to activate the current font:

```

18 \ExplSyntaxOn
19 \IfPackageAtLeastTF{acro}{2020/04/29}%
20 {}% v3 or later
21 {}% before v3
22 \IfPackageAtLeastTF{acro}{2019/09/23}%
23 {}% v2.10 or later
24 \cs_gset_protected:Npn \__acro_typeset:nn #1#2
25 {
26     \mode_if_horizontal:F { \leavevmode }
27     \group_begin:
28         \use:x
29         {
30             \bool_if:cTF {l__acro_custom_#1_format_bool}
31             { \exp_not:v {l__acro_custom_#1_format_tl} }
32             { \exp_not:v {l__acro_#1_format_tl} }
33             { \exp_not:N\lWR@textcurrentfont{#2}}% l warp
34         }
35     \group_end:
```

```
36  }
37
38 \cs_gset_protected:Npn \__acro_ending_format:nn #1#2
39  {
40      \bool_if:NTF \l__acro_include_endings_format_bool
41      {
42          \str_case:nn {#1}
43          {
44              {long}
45              {
46                  \bool_if:NTF \l__acro_custom_long_format_bool
47                      { \l__acro_custom_long_format_tl }
48                  {
49                      \bool_if:NTF \l__acro_first_instance_bool
50                          { \l__acro_first_long_format_tl }
51                          { \l__acro_long_format_tl }
52                  }
53              }
54              {short}
55              {
56                  \bool_if:NTF \l__acro_custom_short_format_bool
57                      { \l__acro_custom_short_format_tl }
58                      { \l__acro_short_format_tl }
59              }
60              {alt}
61              {
62                  \bool_if:NTF \l__acro_custom_alt_format_bool
63                      { \l__acro_custom_alt_format_tl }
64                      { \l__acro_alt_format_tl }
65                  }
66              }
67          }
68          { \use:n }
69          {\exp_not:N\LWR@textcurrentfont{#2}}% lwarp
70      }
71 }% v2.10 or later
72 {% before v2.10
73 \cs_gset_protected:Npn \acro_write_short:nn #1#2
74  {
75      \mode_if_horizontal:F { \leavevmode }
76      \group_begin:
77          \bool_if:NTF \l__acro_custom_format_bool
78              { \l__acro_custom_format_tl }
79              { \l__acro_short_format_tl }
80          {\LWR@textcurrentfont{#2}}% lwarp
81      \group_end:
82  }
83
84 \cs_gset_protected:Npn \acro_write_alt:nn #1#2
85  {
86      \mode_if_horizontal:F { \leavevmode }
87      \group_begin:
88          \bool_if:NTF \l__acro_custom_format_bool
89              { \l__acro_custom_format_tl }
90              { \l__acro_alt_format_tl }
91          {\LWR@textcurrentfont{#2}}% lwarp
92      \group_end:
93  }
94
95 \cs_gset_protected:Npn \acro_write_long:nn #1#2
```

```

96  {
97    \mode_if_horizontal:F { \leavevmode }
98    \group_begin:
99      \bool_if:NTF \l__acro_custom_long_format_bool
100     { \l__acro_custom_long_format_tl }
101     { \use:n }
102   {
103     \use:x
104     {
105       \exp_not:n {#1}
106     {
107       \bool_if:NTF \l__acro_first_upper_bool
108         { \exp_not:N \__acro_first_upper_case:n { \exp_not:n {
109           \LWR@textcurrentfont{#2}% l warp
110         } } }
111         { \exp_not:n {\LWR@textcurrentfont{#2}} }% l warp
112     }
113   }
114 }
115 \group_end:
116 }
117 }% before v2.10
118 }% before v3
119 \ExplSyntaxOff

```

File 13 **l warp-acronym.sty**

§ 122 Package **acronym**

(Emulates or patches code by TOBIAS OETIKER.)

acronym (*Pkg*) acronym is patched for use by l warp.

⚠ **multiply-defined labels** \acresetall does not work with cleveref, causing multiply-defined labels. l warp patches acronym for HTML, but not for print mode.

for HTML output: 1 \LWR@ProvidesPackagePass{acronym}[2020/04/17]

Simplifies for HTML. Unable to use \VerifyCommand here due to \csname being used.

```

2 \expandafter\def\csname AC@\AC@prefix{}@acro\endcsname#1[#2]#3{%
3   \ifAC@nolist%
4   \else%
5   \ifnum%
6     \ifAC@printonlyused 1%
7     \else\ifAC@printonlyreused 1%
8     \else 0\fi\fi%
9   =1\relax%
10  \ifnum%
11    \ifAC@printonlyused%
12    \expandafter\ifx\csname acused@#1@once\endcsname\AC@used 1 \else 0 \fi%
13    \else\ifAC@printonlyreused%
14    \expandafter\ifx\csname acused@#1@twice\endcsname\AC@used 1 \else 0 \fi%
15    \else 0 \fi\fi%
16  =1\relax%
17  \item[\protect\AC@hypertarget{#1}{%]

```

```

18      \AC@hyperref[acro:#1]{\aclabelfont{\#2}\hfill}%
19  ]]\AC@hyperref[acro:#1]{\#3}%
20      \ifAC@withpage%
21          \expandafter\ifx\csname r@acro:#1\endcsname\relax%
22              \PackageInfo{acronym}{%
23                  Acronym #1 used in text but not spelled out in
24                  full in text}%
25      \else%
26          \nobreak\leaders\hbox{%
27              $ \m@th \mkern @dotsep \mu \hbox{.} \mkern @dotsep \mu $%
28          } \hfill%
29          \nobreak\hb@xt@ \pnumwidth{%
30              \hfil\normalfont\normalcolor
31              \qquad --- \% lwarf
32              \AC@pageref{acro:#1}%
33          }%
34      \fi%
35  \fi\\%
36  \fi%
37 \else%
38 \item[\protect\AC@hypertarget{\#1}{\AC@hyperref[acro:#1]{\aclabelfont{\#2}\hfill}}]%
39 \AC@hyperref[acro:#1]{\#3}%
40 \fi%
41 \fi%
42 \begingroup
43     \def\acroextra##1{}%
44     \atbsphack
45     \ifAC@printonlyreused%
46         \protected@write\auxout{}{%
47             \string\newacro{\#1}[%%
48                 \expandafter\ifx\csname acused@#1@twice\endcsname\AC@used%
49                 \string\AC@hyperlink{\#1}{\#2}%
50             \else%
51                 \#2}%
52             \fi%
53         ]{\#3}%
54     }%
55     \else%
56         \protected@write\auxout{}{%
57             \string\newacro{\#1}[\string\AC@hyperlink{\#1}{\#2}]{\#3}%
58         }%
59     \fi%
60     \atespshack
61 \endgroup
62 \ignorespaces}

```

Uses \textit instead of \itshape:

```

63 \renewcommand{\acfia}[1]{%
64   {\textit{\AC@acl{\#1}}} (\ifAC@starred\acs*{\#1}\else\acs{\#1}\fi)}

```

Removes the mbox to allow math inside:

```

65 \VerifyCommand[lwarf][acronym]{\AC@acs}{E2119484F7CD2A5D4B064390C6BB806F}
66
67 \renewcommand*\AC@acs[1]{%
68 %     \mbox{%
69     \expandafter\AC@get\csname fn@\#1\endcsname@\firstoftwo{\#1}%
70 % }

```

Fix for acronym labels in the captions of floats.

```
71 \renewcommand{\@starttoc}[1]{%
72     \LWR@htmlelementclass{nav}{#1}
73     \LetLtxMacro{\verridelabel}{\gobble}
74     \LWR@orig@starttoc{#1}
75     \LWR@htmlelementclassend{nav}{#1}
76 }
```

Modified for `cleveref` and `l warp`:

```
77 \VerifyCommand[l warp][acronym]{\AC@und@newl@bel}{661CF70DCB3E1AA8871B26E785BE7C86}
78
79 \renewcommand*\AC@und@newl@bel[3]{%
80     \@ifundefined{#1@#3}{%
81         {%
82             \global\expandafter\let\csname#2@#3\endcsname\@nnil
83             \global\expandafter\let\csname#2@#3@l warp\endcsname\@nnil% l warp
84             \global\expandafter\let\csname#2@#3@cref\endcsname\@nnil% l warp
85         }%
86     {%
87         \global\expandafter\let\csname#1@#3\endcsname\relax
88         \global\expandafter\let\csname#1@#3@l warp\endcsname\relax% l warp
89         \global\expandafter\let\csname#1@#3@cref\endcsname\relax% l warp
90     }%
91 }}
```

Improve paragraph handling:

```
92 \BeforeBeginEnvironment{acronym}{\LWR@stoppars}
93 \AfterEndEnvironment{acronym}{\LWR@startpars}
```

Create hyperlinks, even though `hyperref` is only emulated:

```
94 \AtBeginDocument{
95     \LetLtxMacro{\AC@hyperlink}{\hyperlink}
96     \LetLtxMacro{\AC@hyperref}{\hyperref}
97     \newcommand*\AC@raisedhypertarget[2]{%
98         \Hy@raisedlink{%
99             \hypertarget{#1}{}}%
100    }%
101    {#2}%
102    \LetLtxMacro{\AC@hypertarget}{\AC@raisedhypertarget}
103    \def\AC@phantomsection{%
104        \Hy@GlobalStepCount\Hy@linkcounter
105        \edef\@currentHref{section*\.\the\Hy@linkcounter}%
106        \Hy@raisedlink{%
107            \hyper@anchorstart{\@currentHref}\hyper@anchorend
108        }%
109        \phantomsection%
110    }%
111 }
112
113 \appto{\LWR@restoreorigformatting}{%
114     \LetLtxMacro{\AC@hyperlink}{\secondoftwo}
115     \LetLtxMacro{\AC@hyperref}{\LWR@nullify@hyperref}
116 }
```

File 14 **l warp-adjmulticol.sty**

§ 123 Package **adjmulticol**

(Emulates or patches code by BORIS VEYTSMAN.)

adjmulticol (*Pkg*) adjmulticol is emulated.

Emulation similar to multicols is used, with adjusted margins. If the number of columns is specified as 1, it is set so, but if two or greater are used, l warp allows a variable number of columns up to three.

```
for HTML output: 1 \LWR@ProvidesPackageDrop{adjmulticol}[2012/01/20]

2 \RequirePackage{multicol}

adjmultcols * {\<numcols\>} {\<left marg\>} {\<right margin\>}

3 \NewDocumentEnvironment{adjmultcols}{s m m m}
4 {%
```

Compute the margins, and limit to positive only:

```
5 \setlength{\LWR@templengthone}{#3}%
6 \ifdimcomp{\LWR@templengthone}{<}{0pt}{\setlength{\LWR@templengthone}{0pt}}{}%
7 \setlength{\LWR@templengthtwo}{#4}%
8 \ifdimcomp{\LWR@templengthtwo}{<}{0pt}{\setlength{\LWR@templengthtwo}{0pt}}{}%
```

If one column is specified, use a <div> of class singlecolumn, else use multicols:

```
9 \newcommand*{\LWR@mcolstype}{multicols}%
10 \ifnumcomp{#2}{=}{1}{\renewcommand*{\LWR@mcolstype}{singlecolumn}}{}%
```

Help avoid page overflow:

```
11 \LWR@forcenewpage%
```

Create the <div> with the given margin and class:

```
12 \BlockClass[%
13   \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
14   \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}%
15 ]{\LWR@mcolstype}%
16 }
17 {\endBlockClass}
```

File 15 **l warp-addlines.sty**

§ 124 Package **addlines**

(Emulates or patches code by WILL ROBERTSON.)

`addlines (Pkg)` `addlines` is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{addlines}[2018/12/05]

2 \newcommand\addlines{\@ifstar\addlines@a\addlines@a}
3 \newcommand\addlines@a[1][1]{}
4 \let\addline\addlines
5 \newcommand\removelines{\@ifstar\removelines@a\removelines@a}
6 \newcommand\removelines@a[1][1]{}
7 \let\removeline\removelines
8 \newcommand\squeeze[1][0]{}

```

File 16 **l warp-afterpage.sty**

§ 125 Package **afterpage**

(Emulates or patches code by DAVID CARLISLE.)

`afterpage (Pkg)` `afterpage` is emulated.

for HTML output: Discard all options for `l warp-afterpage`:

```

1 \LWR@ProvidesPackageDrop{afterpage}[2014/10/28]

2 \newcommand{\afterpage}[1]{#1}

```

File 17 **l warp-algorithm2e.sty**

§ 126 Package **algorithm2e**

(Emulates or patches code by CHRISTOPHE FIORIO.)

`algorithm2e (Pkg)` `algorithm2e` is patched for use by `l warp`.

For print output, captions are placed according to package options, but for HTML output captions are placed where used. Therefore, to have captions appear at the top of the algorithms for both print and HTML, place each captions at the top of each algorithm.

for HTML output:

```

1 \LWR@ProvidesPackagePass{algorithm2e}[2017/07/18]

```

For the list-of entries:

```

2 \renewcommand{\l@algocf}[2]{\hypertocfloat{1}{\algocf}{\loa}{#1}{#2}}

```

Select the `l warp` float style according to the `algorithm2e` style:

```

3 \newcommand*\LWR@floatstyle@algocf{ruled}
4
5 \ifdefstring{\algocf@style}{boxed}{%
6 \renewcommand*\LWR@floatstyle@algocf{boxed}
7 }%
8

```

```

9 \ifdefstring{\algocf@style}{boxruled}{%
10 \renewcommand*{\LWR@floatstyle@algocf}{boxruled}
11 }{%
12
13 \ifdefstring{\algocf@style}{plain}{%
14 \renewcommand*{\LWR@floatstyle@algocf}{plain}
15 }{%

```

Paragraph handling to allow line numbers under certain conditions:

```

16 \renewcommand{\algocf@everypar}{%
17   \ifbool{\LWR@algocf@dopars}{%
18     \ifbool{\LWR@doingstartpars}{%
19       \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}{%
20         {}%
21       {}%

```

`algorithm2e` uses `\everypar`, so the open paragraph tag is generated here instead of `\LWR@openparagraph`:

```

22           \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@newline%
23
24           \algocf@everyparnl\algocf@everyparhanging%
25         }{}%
26     }{}%
27 }

```

lwarp caption handling:

```

28 \renewcommand{\algocf@makecaption}[2]{%
29   \LWR@HTML@caption@begin{\algocf}%
30   \LWR@isolate{\algocf@captiontext{\#1}{\#2}}%
31   \LWR@HTML@caption@end%
32 }

```

Print any caption where it is declared:

```

33 \renewcommand{\algocf@makecaption@plain}[2]{%
34   \LWR@HTML@caption@begin{\algocf}%
35   \LWR@isolate{\algocf@captiontext{\#1}{\#2}}%
36   \LWR@HTML@caption@end%
37 }
38
39 \renewcommand{\algocf@makecaption@boxed}[2]{%
40   \LWR@HTML@caption@begin{\algocf}%
41   \LWR@isolate{\algocf@captiontext{\#1}{\#2}}%
42   \LWR@HTML@caption@end%
43 }
44
45 \renewcommand{\algocf@makecaption@ruled}[2]{%
46   \LWR@HTML@caption@begin{\algocf}%
47   \LWR@isolate{\algocf@captiontext{\#1}{\#2}}%
48   \LWR@HTML@caption@end%
49 }

```

Turn off line numbering while making the caption:

```

50 \long\def\algocf@latexcept{\#1[\#2]\#3{%
51   original definition of caption
52   \boolfalse{LWR@algocf@dopars}%
53   \par%
54   \addcontentsline{\csname ext@\#1\endcsname}{#1}%
55   \protect\numberline{\csname the\#1\endcsname}{\ignorespaces \LWR@isolate{\#2}}}}%
56   \begingroup%
57   \parboxrestore%
58   \if@minipage%
59     \setminipage%
60   \fi%
61   \normalsize%
62   \makecaption{\csname fnum@\#1\endcsname}{\ignorespaces #3}\par%
63   \endgroup%
64 \booltrue{LWR@algocf@dopars}%
65 }%

```

Line numbers are printed in a of class alg2elinenumber:

```

65 \renewcommand{\algocf@printnl}[1]{%
66   \InLineClass{alg2elinumber}{\NlSty{\#1}}~%
67 }%

```

While initializing an algorithm environment, locally declare the style of a regular figure to be the same as the algorithm style, in case the figure option was used.

```

68 \preto\algocf@init{%
69   \edef\LWR@floatstyle@figure{\LWR@floatstyle@algocf}%
70 }%

```

For **lwarp**, the algorithm is not assembled inside a box, since *lateximages* would not work, so the captions are printed where declared.

```

71 \renewcommand{@algocf@start}{%
72   \let@mathsemicolon=\; \def\;{\ifmmode@\mathsemicolon\else@\endalgoln\fi}%
73 %   \raggedright%
74   \AlFnt{}%
75   \booltrue{LWR@algocf@dopars}%
76 }%
77 %
78 \renewcommand{@algocf@finish}{%
79   \boolfalse{LWR@algocf@dopars}%
80   \lineskip\normalineskip\setlength{\skiptotal}{\defaultskiptotal}%
81   \let\;=\@mathsemicolon%
82   \let\]=\@emathdisplay%
83 }%

```

Use an HTML break:

```

84 \renewcommand{\BlankLine}{%
85 \LWR@stopars%
86 \LWR@htmlltagc{br /}%
87 \LWR@startpars%
88 }%

```

Simplified for HTML. The paragraph handling must be preserved.

```

89 \renewcommand{\SetKwInOut}[2]{%
90   \algocf@newcommand{\#1}[1]{%
91     \ifthenelse{\boolean{algocf@hanginginout}}{%

```

```

92      {\relax}%
93      {\algocf@seteveryparhanging{\relax}}%
94      \ifthenelse{\boolean{algocf@inoutnumbered}}{%
95          {\relax}%
96          {\algocf@seteveryparnl{\relax}}%
97      }{%
98          \KwSty{\#2\algocf@typo:}%
99          ~##1\par%
100     }%
101     \algocf@linesnumbered% reset the numbering of the lines
102     \ifthenelse{\boolean{algocf@hanginginout}}{%
103         {\relax}%
104         {\algocf@reseteveryparhanging}}%
105     }%
106 }%
107
108 \renewcommand{\ResetInOut}[1]{}

```

Each of the following creates a <div> of a given class, and turns off line numbering while creating the <div> tags:

```

109 \renewcommand{\algocf@Vline}[1]{%
110     \boolfalse{LWR@algocf@dopars}%
111     \begin{BlockClass}{alg2evline}%
112     \booltrue{LWR@algocf@dopars}%
113     #1
114     \boolfalse{LWR@algocf@dopars}%
115     \end{BlockClass}%
116     \booltrue{LWR@algocf@dopars}%
117 }

118 \renewcommand{\algocf@Vsline}[1]{%
119     \boolfalse{LWR@algocf@dopars}%
120     \begin{BlockClass}{alg2evsline}%
121     \booltrue{LWR@algocf@dopars}%
122     #1
123     \boolfalse{LWR@algocf@dopars}%
124     \end{BlockClass}%
125     \booltrue{LWR@algocf@dopars}%
126 }

127 \renewcommand{\algocf@Noline}[1]{%
128     \boolfalse{LWR@algocf@dopars}%
129     \begin{BlockClass}{alg2enoline}%
130     \booltrue{LWR@algocf@dopars}%
131     #1
132     \boolfalse{LWR@algocf@dopars}%
133     \end{BlockClass}%
134     \booltrue{LWR@algocf@dopars}%
135 }

```

The [H] environment is converted to a regular float, which in HTML is placed where declared. Reusing the regular float allows the [H] version to reuse the ruled and boxed options.

```

136 \LetLtxMacro{\algocf@Here}{\algocf
137 \LetLtxMacro{\endalgocf@Here}{\endalgocf}

```

File 18 **l warp-algorithmicx.sty**

§ 127 Package **algorithmicx**

(Emulates or patches code by Szász János.)

algorithmicx (*Pkg*) algorithmicx is supported with minor adjustments.

for HTML output: 1 \LWR@ProvidesPackagePass{algorithmicx}[2005/04/27]

Inside the algorithmic environment, level indenting is converted to a `` of the required length, and comments are placed inside a `` which is floated right.

⚠ **package conflicts** If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section 643.1.

```

2 \AtBeginEnvironment{algorithmic}{%
3 %
4 \let\origALG@doentity\ALG@doentity%
5 %
6 \renewcommand*\ALG@doentity{%
7 \origALG@doentity%
8 \LWR@htmltagc{%
9   span style=\textquotedbl{}%
10    width:\LWR@printlength{\ALG@thistlm}; display:inline-block;%
11    \textquotedbl%
12 }%
13 \ifboolexpr{FormatWP}{%
14 \setlength{\LWR@templengthone}{\the\ALG@thistlm}%
15 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
16 \quad%
17 \addtolength{\LWR@templengthone}{-1em}%
18 }%
19 }{%
20 \LWR@htmltagc{/span}%
21 }%
22 %
23 \let\LWR@origComment\Comment%
24 %
25 \renewcommand{\Comment}[1]{%
26   \InLineClass{floatright}{\LWR@origComment{#1}}%
27 }%
28 %
29 %
30 \renewcommand\algorithmiccomment[1]{%
31 \hfill\HTMLunicode{25B7} #1% white right triangle
32 }%

```

File 19 **l warp-alltt.sty**

§ 128 Package **alltt**

(Emulates or patches code by JOHANNES BRAAMS.)

alltt (*Pkg*) alltt is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{alltt}[1997/06/16]

```

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching alltt.}
4
5 \AtBeginEnvironment{alltt}{%
6   \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}{%
7     {}%
8     {}%
9     \LWR@forcenewpage

```

Vertical spacing changes if inside a list.

```

10          \LWR@atbeginverbatim{alltt}%
11        }%
12 }%
13
14 \AfterEndEnvironment{alltt}{%
15   \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}{%
16     {}%
17     {}%

```

Vertical spacing changes if inside a list.

```

18          \LWR@afterendverbatim%
19        }%
20 }%
21
22 }

```

File 20 l warp-amscdx.sty

§ 129 Package **amscdx**

(Emulates or patches code by MARTIN VERMEER.)

amscdx (*Pkg*) amscdx is used as-is for SVG math.

⚠ **MATHJAX** For MATHJAX, a warning notes that the CD environment must be enclosed between \displaymathother and \displaymathnormal.

for HTML output: 1 \LWR@ProvidesPackagePass{amscdx}[2019/07/02]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{%
4   \renewenvironment{CD}
5     {\text{(Use \unicode{x005C}displaymathother before the CD enviroment.) \quad}}
6     {\quad \text{(Use \unicode{x005C}displaymathnormal after the CD enviroment.)}}
7 }
8
9 \CustomizeMathJax{\newcommand{\CDFattrue}{}}
10 \CustomizeMathJax{\newcommand{\CDFatfalse}{}}
11 \CustomizeMathJax{\newcommand{\CDashtrue}{}}
12 \CustomizeMathJax{\newcommand{\CDashfalse}{}}

```

```
13 \CustomizeMathJax{\newcommand{\CDlor}[1]{}}
14 \end{warpMathJax}
```

File 21 **l warp-amsmath.sty**

§ 130 Package **amsmath**

(Emulates or patches code by AMERICAN MATHEMATICAL SOCIETY, LATEX3 PROJECT.)

amsmath (Pkg) amsmath is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{amsmath}[2017/09/02]

\dotso

An HTML text-mode version.

```
2 \newcommand*{\LWR@HTML@dotso}{\textellipsis\ }
3 \LWR@formatted{dotso}
```

Patches to allow \eqref inside a caption:

```
4 \def\maketag@@@#1{\text{\#1}}
5 \def\tagform@#1{\maketag@@@{(\ignorespaces#1\unskip)}}
```

Patches for AMS math \tag macro to remember the first tag:

```
6 \ifbool{mathjax}{}{\% not mathjax
7
8 \VerifyCommand[l warp][amsmath]{\make@df@tag@@}{A5AA7B9CD20DC2C73B1D19D582C44A8E}
9 \VerifyCommand[l warp][amsmath]{\make@df@tag@@@}{670399C01F88B0E9B0874E9B129FA404}
10
11 \LetLtxMacro{\LWR@origmake@df@tag@@}{\make@df@tag@@}
12 \LetLtxMacro{\LWR@origmake@df@tag@@@}{\make@df@tag@@@}
13
14 \renewcommand*{\make@df@tag@@}[1]{%
15   \LWR@remembertag{\#1}%
16   \LWR@origmake@df@tag@@{\#1}%
17 }
18
19 \renewcommand*{\make@df@tag@@@}[1]{%
20   \LWR@remembertag{\#1}%
21   \LWR@origmake@df@tag@@@{\#1}%
22 }
23
24 }% not mathjax
```

For nesting AMS environments:

```
25 \newcounter{\LWR@amsmathdepth}
26 \setcounter{\LWR@amsmathdepth}{0}
```

The following AMS environments are patched in-place:

LWR@maxfields@ (Ctr) A copy of maxfields@ as it was passed. This is used to generate the mandatory argument for alignat and alignat* when using MATHJAX.

```

27 \newcounter{LWR@maxfields@}
28
29 \VerifyCommand[l warp][amsmath]{\start@align}{D39AF6A45F9E97A21F17EADB4D21D218}
30
31 \xpatchcmd{\start@align}
32   {\maxfields@#3\relax}
33   {%
34     \maxfields@#3\relax%
35     \setcounter{LWR@maxfields@}{#3}%
36   }
37   {}
38   {\LWR@patcherror{amsmath}{start@align}}

```

\LWR@amsmathenv@@before * {*<environment name>*}
 * if the environment was starred.
 Embeds the environment inside a `lateximage`.

```

39 \NewDocumentCommand{\LWR@amsmathenv@@before}{s m}{%
40   \IfBooleanTF{#1}{%
41     \begin{BlockClass}{displaymath}
42   }{%
43     \begin{BlockClass}{displaymathnumbered}
44   }
45   \LWR@newautoidanchor%
46   \booltrue{\LWR@indisplaymathimage}%
47   \begin{lateximage}[\LWR@amsmathbodynumbered{#2}]*
48   \LWR@applyxfakebold%
49 }

```

\LWR@amsmathenv@@before * {*<environment name>*}
 * if the environment was starred.
 Embeds the environment with MATHJAX or a `lateximage`.

```

50 \NewDocumentCommand{\LWR@amsmathenv@@before}{s m}{%
51   \ifnumequal{\value{\LWR@amsmathdepth}}{0}{%
52     \LWR@stoppars%
53     \ifboolexpr{\bool{mathjax} \or (\ bool{FormatWP} \and \bool{WPMarkMath} ) }{%
54       \LWR@syncmathjax
55       \boolfalse{\LWR@amsmultiline}
56       \ifstreq{\#2}{multiline}{\booltrue{\LWR@amsmultiline}{}}
57       \ifstreq{\#2}{multiline*}{\booltrue{\LWR@amsmultiline}{}}

```

⚠ autonum's "+" environments are not supported by MATHJAX.

```

59   \LWR@beginhideamsmath
60   }
61   {
62     \IfBooleanTF{#1}{%
63       \LWR@amsmathenv@@before*{#2}
64     }{%
65       \LWR@amsmathenv@@before{#2}
66     }
67   }
68   }{%
69   \addtocounter{LWR@amsmathdepth}{1}
70 }

```

\LWR@amsmathenv@@after

Embeds the environment inside a `lateximage`.

```
71 \newcommand*\{\LWR@amsmathenv@@after\}{%
72   \end{lateximage}\end{BlockClass}\LWR@startpars%
73 }
```

\LWR@amsmathenv@@after

* {*<environment name>*}

* if the environment was starred. Ignored here, only used for a consistent syntax.

Embeds the environment with MATHJAX or a `lateximage`.

```
74 \NewDocumentCommand{\LWR@amsmathenv@@after}{s m}{%
75   \ifnumequal{\value{\LWR@amsmathdepth}}{1}{%
76     \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }{%
77       {
78         \LWR@endhideamsmath
79         \boolfalse{\LWR@amsmultiline}
80         \LWR@addmathjax{\#2}{\the\@envbody}%
81       }
82     }{\LWR@amsmathenv@@after}
```

Clear the single-use alt text:

```
83   \gdef\LWR@ThisAltText{}%
84   }{%
85   \addtocounter{\LWR@amsmathdepth}{-1}%
86 }
```

`multline` (*env.*)

```
87 \BeforeBeginEnvironment{multline}{\LWR@amsmathenv@before{multline}}
88
89 \AfterEndEnvironment{multline}{\LWR@amsmathenv@after{multline}}
```

`multline*` (*env.*)

```
90 \BeforeBeginEnvironment{multline*}{\LWR@amsmathenv@before*{multline*}}
91
92 \AfterEndEnvironment{multline*}{\LWR@amsmathenv@after*{multline*}}
93
```

`gather` (*env.*)

```
94 \BeforeBeginEnvironment{gather}{\LWR@amsmathenv@before{gather}}
95
96 \AfterEndEnvironment{gather}{\LWR@amsmathenv@after{gather}}
```

`gather*` (*env.*)

```
97 \BeforeBeginEnvironment{gather*}{\LWR@amsmathenv@before*{gather*}}
98
99 \AfterEndEnvironment{gather*}{\LWR@amsmathenv@after*{gather*}}
```

`align` (*env.*)

```

100 \BeforeBeginEnvironment{align}{\LWR@amsmathenv@before{align}}
101
102 \AfterEndEnvironment{align}{\LWR@amsmathenv@after{align}}
```

```

103 \BeforeBeginEnvironment{align*}{\LWR@amsmathenv@before*{align*}}
104
105 \AfterEndEnvironment{align*}{\LWR@amsmathenv@after*{align*}}
```

```

106 \BeforeBeginEnvironment{flalign}{\LWR@amsmathenv@before{flalign}}
107
108 \AfterEndEnvironment{flalign}{\LWR@amsmathenv@after{flalign}}
```

```

109 \BeforeBeginEnvironment{flalign*}{\LWR@amsmathenv@before*{flalign*}}
110
111 \AfterEndEnvironment{flalign*}{\LWR@amsmathenv@after*{flalign*}}
```

```

112 \BeforeBeginEnvironment{alignat}{\LWR@amsmathenv@before{alignat}}
113
114 \AfterEndEnvironment{alignat}{\LWR@amsmathenv@after{alignat}}
```

```

115 \BeforeBeginEnvironment{alignat*}{\LWR@amsmathenv@before*{alignat*}}
116
117 \AfterEndEnvironment{alignat*}{\LWR@amsmathenv@after*{alignat*}}
```

```

118 \AtBeginEnvironment{subequations}{%
119   \renewcommand*{\theMathJaxsubequations}{1}%
120   \renewcommand*{\theMathJaxsection}{\theparentequation}%
121   \renewcommand*{\theMathJaxequation}{\arabic{equation}}%
122 }
```

For MathJAX:

```

123 \begin{warpMathJax}
124 \CustomizeMathJax{\newcommand{\intertext}[1]{\text{\#1}\notag \\}}
125 \CustomizeMathJax{\let\hat\hat}
126 \CustomizeMathJax{\let\check\check}
127 \CustomizeMathJax{\let\tilde\tilde}
128 \CustomizeMathJax{\let\acute\acute}
129 \CustomizeMathJax{\let\grave\grave}
130 \CustomizeMathJax{\let\dot\dot}
131 \CustomizeMathJax{\let\ddot\ddot}
132 \CustomizeMathJax{\let\breve\breve}
133 \CustomizeMathJax{\let\bar\bar}
134 \CustomizeMathJax{\let\vec\vec}
135 \end{warpMathJax}
```

File 22 **l warp-amsthm.sty**

§ 131 Package **amsthm**

(Emulates or patches code by PUBLICATIONS TECHNICAL GROUP—AMERICAN MATHEMATICAL SOCIETY.)

The original source code is located in `amsclass.dtx`, and printed in `amsclass.pdf`.

`amsthm` (*Pkg*) `amsthm` is patched for use by `l warp`.

Table 19: `amsthm` package—css styling of theorems and proofs

Theorem: <div> of class `amsthmbody`<theoremstyle>

Theorem Name: of class `amsthmname`<theoremstyle>

Theorem Number: of class `amsthmnumber`<theoremstyle>

Theorem Note: of class `amsthmnote`<theoremstyle>

Proof: <div> of class `amsthmproof`

Proof Name: of class `amsthmproofname`

where <theoremstyle> is plain, definition, etc.

for HTML output: `amsthm` must be loaded before `mdframed`:

```

1 \IfPackageLoadedTF{mdframed}{
2   \PackageError{l warp}{%
3     Package mdframed must be loaded after package amsthm.\MessageBreak
4     Enter 'H' for solutions%
5   }%
6   Move ``\protect\usepackage{amsthm}'' before
7   ``\protect\usepackage{mdframed}''.\MessageBreak
8   Package amsthm may be loaded by something else,\MessageBreak
9   which must also be moved before mdframed.%
10 }%
11 }%
12 }%
13 }%
14 {\relax}
```

Necessary for `\text`, used by `\openbox`, etc., below:

```

15 \RequirePackage{amsmath}
16 \LWR@ProvidesPackagePass{amsthm}[2017/10/31]
```

Storage for the style being used for new theorems:

```
17 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```

18 \renewcommand{\theoremstyle}[1]{%
19   \@ifundefined{th@#1}{%
20     \PackageWarning{amsthm}{Unknown theoremstyle '#1'}%
21     \thm@style{plain}%
22     \renewcommand{\LWR@newtheoremstyle}{plain}\% l warp
23   }%
24   \thm@style{#1}%
25   \renewcommand{\LWR@newtheoremstyle}{#1}\% l warp
26 }%
27 }

```

Patched to remember the style for this theorem type:

```

28 \VerifyCommand[l warp][amsthm]{\x nthm}{21F7FB3FB6FB0C1A0F2EECD66EE87A60}
29
30 \def\x nthm#1#2{%
31   \csedef{\LWR@thmstyle#2}{\LWR@newtheoremstyle}\% l warp
32   \let\@tempa\relax
33   \@xp\@ifdefinable\csname #2\endcsname{%
34     \global\@xp\let\csname end#2\endcsname\@endtheorem
35     \ifx *#1 unnumbered, need to get one more mandatory arg
36       \edef\@tempa##1{%
37         \gdef\@xp\@nx\csname#2\endcsname{%
38           \@nx\@thm{\@xp\@nx\csname th@\the\thm@style\endcsname}%
39           {}##1}}%
40     \else % numbered theorem, need to check for optional arg
41       \def\@tempa{\@oparg{\@ynthm{#2}}[]}\%
42     \fi
43   \AtBeginEnvironment{#2}\% l warp
44   \edef\LWR@thisthmstyle{\@nameuse{\LWR@thmstyle#2}}\% l warp
45 }%
46 }%
47 \@tempa%
48 }

```

Patched to enclose with css:

```

49 \newcommand{\LWR@haveamsthmname}{%
50   \renewcommand{\thmname}[1]{%
51     \InlineClass{amsthmname}\LWR@thisthmstyle{##1}\%
52   }%
53 }%
54
55 \newcommand{\LWR@haveamsthmnumber}{%
56   \renewcommand{\thmnumber}[1]{%
57     \InlineClass{amsthmnumber}\LWR@thisthmstyle{##1}\%
58   }%
59 }%
60
61 \newcommand{\LWR@haveamsthmnote}{%
62   \renewcommand{\thmnote}[1]{%
63     \InlineClass{amsthmnote}\LWR@thisthmstyle{##1}\%
64   }%
65 }%
66
67 \LWR@haveamsthmname
68 \LWR@haveamsthmnumber
69 \LWR@haveamsthmnote

```

Patched for css. Not using \VerifyCommand because the existing defintion depends on other packages. The following is from `amsthm`'s own definition.

```

70 \def\@begintheorem#1#2[#3]{%
71   \GetTitleString{#3}%
72   \let\@currentlabelname\GetTitleStringResult%           l warp
73   \item[%                                         l warp
74   \LWR@newautopagelabel{page}\LWR@orignewline%
75 %   \deferred@thm@head{%
76 %     \the\thm@headfont \thm@indent
77 %     \@ifempty{#1}{\let\thmname\@gobble}{\LWR@haveamsthmname}%
78 %     \@ifempty{#2}{\let\thmnumber\@gobble}{\LWR@haveamsthmnumber}%
79 %     \@ifempty{#3}{\let\thmnote\@gobble}{\LWR@haveamsthmnote}%
80 %     \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
81 %     \the\thm@headpunct % space
82 %     \thmheadnl % possibly a newline.
83 %     \hskip\thm@headsep
84 %   }%
85 %   ]%
86   \ignorespaces}

```

Patched for css:

```

87 \VerifyCommand[l warp][amsthm]{\@thm}{2624BDB5B96C45756978B3D393430088}
88
89 \def\@thm#1#2#3{%
90   \ifhmode\unskip\unskip\par\fi
91   \normalfont
92   \LWR@forcenewpage%           l warp
93   \LWR@printpendingfootnotes%          l warp
94   \BlockClass{amsthmbody\LWR@thisthmstyle}%
95   \trivlist
96   \let\thmheadnl\relax
97   \let\thm@swap\@gobble
98   \thm@notefont{\fontseries\mddefault\upshape}%
99   \thm@headpunct{.}% add period after heading
100  \thm@headsep 5\p@ plus\p@ minus\p@\relax
101  \thm@space@setup
102  #1% style overrides
103  \@topsep \thm@preskip          % used by thm head
104  \@topsepadd \thm@postskip      % used by \endparenv
105  \def\@tempa{#2}\ifx\@empty\@tempa
106    \def\@tempa{\@oparg{\@begintheorem{#3}{}}[]}%
107  \else
108    \refstepcounter{#2}%
109    \def\@tempa{\@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]}%
110  \fi
111  \@tempa%
112 }

```

`cleveref` patches `\@thm` to do `\cref@thmoptarg` if an optional argument is given.
`l warp` then patches `\cref@thmoptarg` `\AtBeginDocument`.

```

113 \AtBeginDocument{%
114 %
115 \VerifyCommand[l warp][amsthm]{\cref@thmoptarg}{64B912D4D903D245FD05837C5838C9EC}%
116 %
117 \def\cref@thmoptarg[#1]#2#3#4{%
118   \ifhmode\unskip\unskip\par\fi%
119   \normalfont%
120   \LWR@forcenewpage%                                l warp
121   \LWR@printpendingfootnotes%                      l warp
122   \BlockClass{amsthmbody}\LWR@thisthmstyle}%    l warp
123   \trivlist%
124   \let\thmheadnl\relax%
125   \let\thm@swap@gobble%
126   \thm@notefont{\fontseries\mddefault\upshape}%
127   \thm@headpunct{.}% add period after heading
128   \thm@headsep 5\p@ plus\p@ minus\p@\relax%
129   \thm@space@setup%
130   #2% style overrides
131   \@topsep \thm@preskip          % used by thm head
132   \@topsepadd \thm@postskip      % used by \endparenv
133   \def@\tempa{#3}\ifx@\empty@\tempa%
134     \def@\tempa{\@oparg{\@begintheorem{#4}{}}[]}\%
135   \else%
136     \refstepcounter[#1]{#3}%%<< cleveref modification
137     \def@\tempa{\@oparg{\@begintheorem{#4}{\csname the#3\endcsname}}[]}\%
138   \fi%
139   \tempa
140 }%
141 }% AtBeginDocument
142
143 \def@\endtheorem{%
144   \endtrivlist%
145   \LWR@printpendingfootnotes%                      l warp
146   \endBlockClass%
147   \endpefalse%
148 }

```

Proof QED symbol:

```

149 \AtBeginDocument{%
150 \@ifundefined{\LWR@orig@openbox}{%
151 \LetLtxMacro{\LWR@orig@openbox}{\openbox}
152 \LetLtxMacro{\LWR@orig@blacksquare}{\blacksquare}
153 \LetLtxMacro{\LWR@orig@Box}{\Box}
154
155 \def\openbox{\text{\HTMLunicode{25A1}}}UTF-8 white box
156 \def\blacksquare{\text{\HTMLunicode{220E}}}UTF-8 end-of-proof
157 \def\Box{\text{\HTMLunicode{25A1}}}UTF-8 white box
158
159 \appto{\LWR@restoreorigformatting}{%
160   \LetLtxMacro{\openbox}{\LWR@orig@openbox}%
161   \LetLtxMacro{\blacksquare}{\LWR@orig@blacksquare}%
162   \LetLtxMacro{\Box}{\LWR@orig@Box}%
163 }% appto

```

```
164 }{}% @ifundefined
165 }% AtBeginDocument
```

Patched to add a :

```
166 \DeclareRobustCommand{\qed}{%
167   \ifmmode \mathqed
168   \else
169 %     \leavevmode\unskip\penalty9999 \hbox{}\nobreak\hfill
170 %     \quad\hbox{\qedsymbol}%
171     \InlineClass{theoremdmark}{\qedsymbol}%
172   \fi
173 }
```

Patched for css:

```
174 \renewenvironment{proof}[1][\proofname]{\par
175   \LWR@forcenewpage% l warp
176   \LWR@printpendingfootnotes% l warp
177   \BlockClass{amsthmproof}% l warp
178   \LWR@newautopagelabel{page}%
179   \pushQED{\qed}%
180   \normalfont \topsep6\p@\relax
181   \trivlist
182   \item[
183     \InlineClass{amsthmproofname}{\#1\@addpunct{.}}]\ignorespaces% changes
184 }{%
185   \popQED\endtrivlist
186   \LWR@printpendingfootnotes% l warp
187   \endBlockClass% l warp
188   \endpefalse
189 }
```

File 23 l warp-anonchap.sty

§ 132 Package **anonchap**

(Emulates or patches code by PETER WILSON.)

anonchap (Pkg) **anonchap** is emulated.

tocloft (Pkg) If using **tocloft** with **tocbibind**, **anonchap**, **fncychap**, or other packages which change chapter title formatting, load **tocloft** with its **titles** option, which tells **tocloft** to use standard L^AT_EX commands to create the titles, allowing other packages to work with it.

The code is shared by **tocbibind**.

for HTML output: 1 \LWR@ProvidesPackageDrop{anonchap}[2009/08/03]

```

2 \newcommand{\simplechapter}[1][\@empty]{%
3   \def\@chapcntformat##1{%
4     #1\csname the##1\endcsname\simplechapterdelim\quad%
5   }%
6 }
7
8 \newcommand{\restorechapter}{%
9 \let\@chapcntformat\@secCntformat%
10 }

```

File 24 **l warp-any size.sty**

§ 133 Package **any size**

(Emulates or patches code by MICHAEL SALZENBERG, THOMAS ESSER.)

any size (*Pkg*) any size is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{any size}[1994/08/13]

```

2 \def\papersize#1#2{%
3 \def\marginsize#1#2#3#4{%

```

File 25 **l warp-appendix.sty**

§ 134 Package **appendix**

(Emulates or patches code by PETER WILSON.)

appendix (*Pkg*) appendix is patched for use by l warp.

⚠ **incorrect toc link** During HTML conversion, the option toc without the option page results in a toc link to whichever section was before the appendices environment. It is recommended to use both toc and also page at the same time.

for HTML output: 1 \LWR@ProvidesPackagePass{appendix}[2009/09/02]

```

2 \renewcommand*\@chap@ppage{%
3 \part*\{ \appendixpagename\}
4 \if@dotoc@pp
5 \addappheadtotoc
6 \fi
7 }
8
9 \renewcommand*\@sec@pppage{%
10 \part*\{ \appendixpagename\}
11 \if@dotoc@pp
12 \addappheadtotoc
13 \fi
14 }

```

File 26 **l warp-apxproof.sty**

§ 135 Package **apxproof**

(Emulates or patches code by PIERRE SENELLART.)

apxproof (*Pkg*) apxproof is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{apxproof}[2022/10/14]

```

2 \VerifyCommand[l warp][apxproof]{\FVB@axp@VerbatimOut}{ADA4853FD25696EB39CD005CF44C7B5C}
3
4 \xpatchcmd{\FVB@axp@VerbatimOut}
5   {\FV@Scan}
6   {\boolfalse{LWR@HTMLsanitize@tmpb@enable}\FV@Scan}
7   {}
8   {\LWR@patcherror{apxproof}{FVB@axp@VerbatimOut}}
```

File 27 **l warp-ar.sty**

§ 136 Package **ar**

(Emulates or patches code by AGOSTINO DE MARCO.)

ar (*Pkg*) ar is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{ar}[2012/01/23]

Measure and print the width of the supplied glyph.

```

2 \newlength{\LWR@ar@width}
3
4 \newcommand*\LWR@ar@printwidth[1]{%
5   \setlength{\LWR@ar@width}{\widthof{\#1}}%
6   width:%
7   \LWR@convertto{em}{\the\LWR@ar@width}em%
8 }
```

The HTML version of \AR:

```
9 \newrobustcmd*\LWR@HTML@AR}{%
```

Start a hashed `\textrimage`, additionally hashed by the font series, with a width depending on the given glyph:

```
10 \begin{textrimage}*[\AR][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@AR}]%
```

For text mode, set the font series according to the HTML font series:

```
11 \ifmmode\else\csuse{\LWR@orig\LWR@f@series series}\fi%
```

Print the original glyph using the newly set font series:

```
12 \LWR@print@AR%
```

Done.

```
13 \end{lateximage}%
14 }
```

Combine the print and HTML versions:

```
15 \LWR@formatted{AR}

16 \newrobustcmd*{\LWR@HTML@ARb}{%
17   \begin{lateximage}*{[AR][b]}[\LWR@ar@printwidth{\LWR@print@ARb}]%
18   \LWR@print@ARb%
19   \end{lateximage}%
20 }
21 \LWR@formatted{ARb}

22 \newrobustcmd*{\LWR@HTML@ARss}{%
23   \begin{lateximage}*{[ARss][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@ARss}]}%
24   \ifmmode\else\csuse{\LWR@orig\LWR@f@series series}\fi%
25   \LWR@print@ARss%
26   \end{lateximage}%
27 }
28 \LWR@formatted{ARss}

29 \newrobustcmd*{\LWR@HTML@ARssb}{%
30   \begin{lateximage}*{[AR][ssb][\LWR@ar@printwidth{\LWR@print@ARssb}]}%
31   \LWR@print@ARssb%
32   \end{lateximage}%
33 }
34 \LWR@formatted{ARssb}

35 \newrobustcmd*{\LWR@HTML@ARtt}{%
36   \begin{lateximage}*{[AR][tt][\LWR@ar@printwidth{\LWR@print@ARtt}]}%
37   \LWR@print@ARtt%
38   \end{lateximage}%
39 }
40 \LWR@formatted{ARtt}
```

For MATHJAX:

```
41 \begin{warpMathJax}
42 \CustomizeMathJax{\newcommand{\AR}{\mathit{A\!\\!R}}}
43 \CustomizeMathJax{\newcommand{\ARb}{\boldsymbol{A\!\\!R}}}
44 \end{warpMathJax}
```

File 28 lwarf-arabicfront.sty

§ 137 Package **arabicfront**

arabicfront (*Pkg*) arabicfront is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{arabicfront}[2006/09/03]

File 29 **l warp-array.sty**

§ 138 Package **array**

array (*Pkg*) **array** is used as-is for print output, and emulated for **HTML**.

plarray and **plextarray** do not affect **\firsthline** or **\lasthline**, and so are not affected by the following.

for HTML output: If **array** is not yet loaded, remove the default nullfied macros:

```
1 \IfPackageLoadedTF{array}{}{%
2   \let\firsthline\relax
3   \let\lasthline\relax
4 }
5
6 \LWR@ProvidesPackagePass{array}[2018/12/30]
```

Provide simplified column types for **HTML**:

```
7 \HTMLnewcolumntype{w}[2]{#1}
8 \HTMLnewcolumntype{W}[2]{#1}
```

More **HTML** versions:

```
9 \newcommand*{\LWR@HTML@firsthline}{\LWR@HTMLhline}%
10 \LWR@expandableformatted{firsthline}%
11
12 \newcommand*{\LWR@HTML@lasthline}{\LWR@HTMLhline}%
13 \LWR@expandableformatted{lasthline}%
14 \let\tabularnewline\\
15 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularendofline}%
16 \LWR@formatted{tabularnewline}
```

For **MATHJAX**:

```
17 \CustomizeMathJax{%
18   \newcommand{\multicolumn}[3]{#3}% only uses one cell
19 }
```

File 30 **l warp-arydshln.sty**

§ 139 Package **arydshln**

(*Emulates or patches code by HIROSHI NAKASHIMA.*)

arydshln (*Pkg*) **arydshln** heavily patches tabular code, so the actual package is not used. **arydshln** is emulated for **HTML** **tabular**, and reverts to solid rules for **SVG** **math array** and **tabular** in a **lateXimage**.

css is not able to display a double-dashed border, so a single-dashed rule is displayed as a single-dashed border, and a double-dashed rule is displayed as a thicker single-dashed border.

For MATHJAX, limited emulation is provided for math mode.

for HTML output: array is required to allow \newcolumn below.

```
1 \RequirePackage{array}
2 \LWR@ProvidesPackageDrop{arydshln}[2018/09/26]
```

Ignored, but included for source compatibility:

```
3 \newdimen\dashlinedash \dashlinedash4pt %
4 \newdimen\dashlinegap \dashlinegap4pt %
5 \let\hdashlinewidth\dashlinedash
6 \let\hdashlinegap\dashlinegap
7
8 \def\ADLnullwide{}
9 \def\ADLsomewide{}
10 \def\ADLnullwidehline{}
11 \def\ADLsomewidehline{}
12
13 \def\ADLactivate{}
14 \def\ADLinactivate{}
15 \newcommand*\ADLdrawingmode[1] {}
16 \newcommand*\ADLnoshorthanded {}
17 \newcommand*\dashgapcolor[2] []
18 \newcommand*\nodashgapcolor {}
```

In a `lateximage`, revert to solid vertical rules:

```
19 \appto\LWR@restoreorigformatting{%
20 \newcolumntype{:}{|}%
21 \newcolumntype{;}{|}{|}%
22 \LetLtxMacro\hdashline\hline%
23 }
```

Some of these macros are already defined as temporary placeholders in the l warp core, so they must be redefined here.

The emulated defaults also work for an emulated print mode inside a `lateximage`:

```
24 \def\hdashline{
25 %      \adl@hdashline\adl@ihdashline
26 %      \adl@hdashline\adl@inactivehdl
27 %
28 \def\adl@hdashline#1{\noalign{\ifnum0='}\fi
29 %      \ifadl@zwhrule \vskip-\arrayrulewidth
30 %      \else
31 %          \adl@hline\adl@connect\arrayrulewidth
32 %          \hrule \@height \arrayrulewidth% l warp
33 %      \fi
34 %      \@ifnextchar[%]
35 %          {#1}%
36 %          {#1[%}
37 %          \dashlinedash/\dashlinegap
38 %          1pt/1pt}
```

```

39          ]}
40 % \def\adl@ihdashline[#1/#2]{\ifnum0='{\fi}%
41 %           \multispan{\adl@columns}\unskip \adl@hcline\z@\[#1/#2]%
42 %           \noalign{\ifnum0='}\fi
43 %           \futurelet\@tempa\adl@xhline}
44 \def\adl@inactivehdl[#1/#2]{%
45 %           \ifadl@zwhrule \vskip-\arrayrulewidth \fi
46 %           \hrule\@height\arrayrulewidth
47 %           \futurelet\@tempa\adl@xhline}
48 \def\adl@xhline{\ifx\@tempa\hline \adl@ixhline\fi
49 %           \ifx\@tempa\hdashline \adl@ixhline\fi
50 %           \ifnum0='{\fi}%
51 \def\adl@ixhline{\vskip\doublerulesep \adl@hline\relax\doublerulesep}
52 \def\adl@hline#1#2{%
53 %   \atempcnta#2
54 %           \global\advance\adl@totalheight\atempcnta
55 %           \xdef\adl@rowsL{\adl@rowsL
56 %             (#1/\number\atempcnta);}%
57 %           \xdef\adl@rowsR{\adl@rowsR
58 %             (#1/\number\atempcnta);}
59 }
60
61 \def\cdashline#1{\noalign{\ifnum0='}\fi
62 %           \@ifnextchar[%]
63 %             {\adl@cdline[#1]}%
64 %             {\adl@cdline[#1][\dashlinedash/\dashlinegap]}
65 %             {\adl@inactivecdl[#1]}%
66 %             {\adl@inactivecdl[#1][\dashlinedash/\dashlinegap]}}
67 }
68
69 \def\adl@inactivecdl[#1-#2][#3]{\ifnum0='{\fi}\cline{#1-#2}}


70 \begin{warpMathJax}
71 \CustomizeMathJax{\newcommand{\firsthdashline}[1][]{\hdashline}}
72 \CustomizeMathJax{\let\lastdashline\firsthdashline}
73 \CustomizeMathJax{\let\cdashline\cline}
74 \end{warpMathJax}

```

File 31 **l warp-asymptote.sty**

§ 140 Package **asymptote**

(Emulates or patches code by ANDY HAMMERLINDL, JOHN BOWMAN, TOM PRINCE.)

asymptote (*Pkg*) **asymptote** is patched for use by **l warp**.

To compile:

```
pdflatex project.tex
asy project-*.asy
pdflatex project.tex

lwarpmk print
asy project-*.asy
lwarpmk print1
lwarpmk print1

lwarpmk html
asy project_html-*.asy
lwarpmk html1
lwarpmk html1
lwarpmk limages
```

for HTML output:

```
1 \LWR@ProvidesPackagePass{asymptote}[2016/11/26]

2 \BeforeBeginEnvironment{asy}{%
3   \begin{lateximage}[-asymptote-\~\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{asy}{\end{lateximage}}
6
7 \VerifyCommand[lwarp][asymptote]{\asyinclude}{A4F9DF668FC457768E7DFB83FAF7B343}
8
9 \xpatchcmd{\asyinclude}
10  {\begingroup}
11  {\begin{lateximage}[-asymptote-\~\PackageDiagramAltText]}
12  {}
13  {\LWR@patcherror{asymptote}{\asyinclude-begingroup}}
14
15 \xpatchcmd{\asyinclude}
16  {\endgroup}
17  {\end{lateximage}}
18  {}
19  {\LWR@patcherror{asymptote}{\asyinclude-endgroup}}
```

File 32 **l warp-atbegshi.sty**

§ 141 Package **atbegshi**

(Emulates or patches code by HEIKO OBERDIEK.)

atbegshi (*Pkg*) atbegshi is ignored.

for HTML output: Discard all options for l warp-atbegshi:

```
1 \LWR@ProvidesPackageDrop{atbegshi}[2011/10/05]

2 \let\AtBeginShipout\relax
3 \let\AtBeginShipoutNext\relax
4 \let\AtBeginShipoutFirst\relax
5 \let\AtBeginShipoutDiscard\relax
6 \let\AtBeginShipoutInit\relax
7 \let\AtBeginShipoutAddToBox\relax
```

```

8 \let\AtBeginShipoutAddToBoxForeground\relax
9 \let\AtBeginShipoutUpperLeft\relax
10 \let\AtBeginShipoutUpperLeftForeground\relax
11 \let\AtBeginShipoutOriginalShipout\relax
12
13 \newcommand*\AtBeginShipout}[1]{}
14 \newbox\AtBeginShipoutBox
15 \newcommand*\AtBeginShipoutNext}[1]{}
16 \newcommand*\AtBeginShipoutFirst}[1]{}
17 \newcommand*\AtBeginShipoutDiscard(){}
18 \newcommand*\AtBeginShipoutInit(){}
19 \newcommand*\AtBeginShipoutAddToBox}[1]{}
20 \newcommand*\AtBeginShipoutAddToBoxForeground}[1]{}
21 \newcommand*\AtBeginShipoutUpperLeft}[1]{}
22 \newcommand*\AtBeginShipoutUpperLeftForeground}[1]{}
23 \newcommand*\AtBeginShipoutOriginalShipout}[1]{}
24 \def\AtBeginShipoutBoxWidth{0pt}
25 \def\AtBeginShipoutBoxHeight{0pt}
26 \def\AtBeginShipoutBoxDepth{0pt}

```

File 33 **lwarf-attachfile.sty**

§ 142 Package **attachfile**

(Emulates or patches code by SCOTT PAKIN.)

attachfile (*Pkg*) **attachfile** is patched for use by **lwarf**.

 Metadata is ignored for now.

for HTML output: 1 \LWR@ProvidesPackagePass{attachfile}[2016/09/18]

Encloses each icon:

```

2 \newenvironment*\LWR@attachfile@icon}
3 {
4     \begin{lateximage}%
5         [-attachfile-]%
6         [%
7             \detokenize\expandafter{\atfi@icon@icon}-%
8             \detokenize\expandafter{\atfi@color@rgb}%
9         ]%
10 }
11 {
12     \end{lateximage}
13 }

```

Each icon is enclosed inside a **LWR@attachfile@icon** environment:

```

14 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}
15 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
16
17 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
18 \xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
19
20 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
21 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}

```

```

22
23 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
24 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}

```

Disable PDF file embedding:

```
25 \DeclareRobustCommand{\atfi@embedfile}[1]{}{}
```

The displayed output for an \attachfile reference:

```

26 \newcommand*\LWR@attachfile@appearance(){}
27
28 \DeclareRobustCommand{\atfi@set@appearance}[1]{%
29     \def\LWR@attachfile@appearance{\#1}%
30 }

```

A file annotation becomes a reference:

```

31 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
32     \LWR@href@partsanitized{\#1}\LWR@attachfile@appearance}%
33 }

```

File 34 l warp-attachfile2.sty

§ 143 Package attachfile2

(Emulates or patches code by HEIKO OBERDIEK.)

attachfile2 (Pkg) attachfile2 is patched for use by l warp.

 Metadata is ignored for now.

for HTML output: 1 \LWR@ProvidesPackagePass{attachfile2}[2016/05/16]

Adds memory of the selected color:

```

2 \def\LWR@attachfiletwo@color{}%
3
4 \define@key{AtFi}{color}{%
5     \def\LWR@attachfiletwo@color{\#1}%    l warp
6     \HyColor@AttachfileColor{\#1}%
7         \atfi@color@tex\atfi@color@inline\atfi@color@annot
8         {attachfile2}{color}%
9 }

```

Encloses each icon:

```

10 \newenvironment*\LWR@attachfile@icon}
11 {
12     \begin{lateximage}%
13         [-attachfile-]%
14     [%]
15         \detokenize\expandafter{\atfi@icon@icon}-%
16         \detokenize\expandafter{\LWR@attachfiletwo@color}%
17     ]%
18 }

```

```

19 {
20     \end{lateximage}
21 }

```

Each icon is enclosed inside a `\LWR@attachfile@icon` environment:

```

22 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}
23 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
24
25 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
26 \xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
27
28 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
29 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}
30
31 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
32 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}

```

Disable PDF file embedding:

```
33 \DeclareRobustCommand{\atfi@embedfile}[1]{}
```

The displayed output for an `\attachfile` reference:

```

34 \newcommand*{\LWR@attachfile@appearance}{}%
35
36 \def\atfi@set@appearance@icon{%
37     \atfi@set@appearance{\csname atfi@acro\atfi@icon@icon\endcsname}%
38 }
39
40 \DeclareRobustCommand{\atfi@set@appearance}[1]{%
41     \def\LWR@attachfile@appearance{\#1}%
42 }

```

A file annotation becomes a reference:

```

43 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
44     \LWR@href@partsanitized{\#1}{\LWR@attachfile@appearance}%
45 }

```

Modified for text color:

```

46 \VerifyCommand[lwarf][attachfile2]{\notextattachfile}{CE78259EFC576D4A15920EADF824D7EF}
47
48 \DeclareRobustCommand{\notextattachfile}[2][]{%
49     \begingroup
50         \atfi@setup{\#1}%
51         \ifatfi@print
52             \leavevmode
53             \begingroup
54                 \HyColor@UseColor\atfi@color@tex
55                 \LWR@textcurrentcolor{\#2}%
56                 lwarf
56% \strut
57                 \endgroup
58% \else
59%     \sbox{\ltx@zero{\#2\strut}%
60%     \makebox[\wd0]{}}%
61             \fi
62     \endgroup

```

```
63 }
```

Modified to draw the icon:

```
64 \VerifyCommand[l warp][attachfile2]{\noattachfile}{CE78259EFC576D4A15920EADF824D7EF}
65
66 \DeclareRobustCommand{\noattachfile}[1][]{
67   \begingroup
68     \atfi@setup{#1}%
69     \atfi@set@appearance@icon
70     \ifatfi@print
71       \LWR@attachfile@appearance%      l warp
72 %       \expandafter
73 %       \atfi@refxform\csname atfi@appobj@\atfi@icon@icon\endcsname
74 %     \else
75 %       \makebox[\atfi@appearancewidth]{}%
76     \fi
77   \endgroup
78 }
```

File 35 **l warp-authblk.sty**

§ 144 Package **authblk**

(Emulates or patches code by PATRICK W. DALY.)

authblk (*Pkg*) **authblk** is patched for **HTML**.

package support **l warp** supports the native **LATEX** titling commands, and also supports the packages **authblk** and **titling**. If both are used, **authblk** should be loaded before **titling**.

\published and **\subtitle** If using the **titling** package, additional titlepage fields for **\published** and **\subtitle** may be added by using **\AddSubtitlePublished** in the preamble. See section 69.8.

(Emulates or patches code by PATRICK W. DALY.)

for HTML output: Require that **authblk** be loaded before **titling**:

```
1 \IfPackageLoadedTF{titling}{
2   \PackageError{l warp-authblk}
3     {Package authblk must be loaded before titling}
4     {
5       Titling appends authblk's author macro,
6       so authblk must be loaded first.%}
7   }
8 }
9 {\relax}
```

Load **authblk**:

```
10 \LWR@ProvidesPackagePass{authblk}[2001/02/27]
```

Patch to add a class for the affiliation:

```
11 \LetLtxMacro\LWRAB@affil\affil
12
13 \renewcommand{\affil}[2][]{
14 }
```

```
14 \LWR@affil[#1]{\protect\InlineClass{affiliation}{#2}}
15 }
```

Create an HTML break for an \authorcr:

```
16 \renewcommand*\authorcr{\protect\LWR@newlinebr}
```

File 36 **l warp-autobreak.sty**

§ 145 Package **autobreak**

(Emulates or patches code by TAKAHIRO UEDA.)

autobreak (*Pkg*) **autobreak** is used as-is for SVG math, and nullified for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{autobreak}[2017/02/23]

For MATHJAX. The modified `environment is used for SVG math, but is reverted to its original for MATHJAX. (Extraneous commas were appearing in the result.)`

```
2 \begin{warpMathJax}
3 \newenvironment{autobreak}{\newcommand{\MoveEqLeft}[1]{}{}}
4 \let\start@align@autobreak@oldstart@align
5 \let\endalign@autobreak@oldendalign
6 \CustomizeMathJax{\newenvironment{autobreak}{}{}}
7 \CustomizeMathJax{\newcommand{\MoveEqLeft}[1]{}{}}
8 \CustomizeMathJax{\newcommand{\everybeforeautobreak}[1]{}}
9 \CustomizeMathJax{\newcommand{\everyafterautobreak}[1]{}}
10 \end{warpMathJax}
```

File 37 **l warp-autonum.sty**

§ 146 Package **autonum**

autonum (*Pkg*) **autonum** is ignored.

⚠ **numbering, +** All equations are numbered in HTML output. MATHJAX does not support the “+” environments.

for HTML output: 1 \LWR@ProvidesPackageDrop{autonum}[2015/01/18]

```
2 \RequirePackage{amsmath}
3
4
5 \newenvironment{equation+}{\equation}{\endequation}
6
7
8 \newenvironment{gather+}{\gather}{\endgather}
9
10 \BeforeBeginEnvironment{gather+}{\LWR@amsmathenv@@before{gather+}}
11
12 \AfterEndEnvironment{gather+}{\LWR@amsmathenv@@after}
13
```

```

14
15 \newenvironment{multline+}{\multline}{\endmultline}
16
17 \BeforeBeginEnvironment{multline+}{\LWR@amsmathenv@@before{multline+}}
18
19 \AfterEndEnvironment{multline+}{\LWR@amsmathenv@@after}

20 \newenvironment{flalign+}{\flalign}{\endflalign}
21
22 \BeforeBeginEnvironment{flalign+}{\LWR@amsmathenv@@before{flalign+}}
23
24 \AfterEndEnvironment{flalign+}{\LWR@amsmathenv@@after}
25
26
27 \newenvironment{align+}{\align}{\endalign}
28
29 \BeforeBeginEnvironment{align+}{\LWR@amsmathenv@@before{align+}}
30
31 \AfterEndEnvironment{align+}{\LWR@amsmathenv@@after}
32
33
34 \newenvironment{alignat+}{\alignat}{\endalignat}
35
36 \BeforeBeginEnvironment{alignat+}{\LWR@amsmathenv@@before{alignat+}}
37
38 \AfterEndEnvironment{alignat+}{\LWR@amsmathenv@@after}
39
40
41 \newenvironment{split+}{\split}{\endsplit}

```

File 38 **l warp-awesomebox.sty**

§ 147 Package **awesomebox**

(Emulates or patches code by ÉTIENNE DEPARIS.)

awesomebox (Pkg) **awesomebox** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{awesomebox}[2019/07/27]

```

2 \newcommand*{\LWR@awesomebox@boxborders}{}%
3 \newcommand*{\LWR@awesomebox@contentsborders}{}%
4
5 \newcommand*{\LWR@awesomebox@ruleborders}{%
6   border-top: 1px solid black ;
7   border-bottom: 1px solid black%
8 }
9
10 \% awesomebox[1:vrulecolor][2:hrule][3:title][4:vrulewidth][5:icon][6:iconcolor][7:content]
11 \RenewDocumentCommand \awesomebox { O{abvrulecolor} O{} o m m +m }{%
12   \begin{awesomeblock}[#1][#2][#3]{#4}{#5}{#6}
13   #7
14   \end{awesomeblock}
15 }
16
17 \% \begin{awesomeblock}[1:vrulecolor][2:hrule][3:title][4:vrulewidth][5:icon][6:iconcolor]

```

```

18 % <contents>
19 % \end{awesomeblock}
20 \RenewDocumentEnvironment{awesomeblock}{ O{abvrulecolor} 0{} o m m m }
21 {%
22     \LWR@forceminwidth{#4}%
23     \convertcolorspec{named}{#1}{HTML}\LWR@tempcolor%
24     \renewcommand*\{\LWR@awesomebox@boxborders\}{ }%
25     \renewcommand*\{\LWR@awesomebox@contentsborders\}{ }%
26     \ifdef\streq{\abShortLine}{#2}{%
27         \renewcommand*\{\LWR@awesomebox@contentsborders\}{\LWR@awesomebox@ruleborders}%
28     }{ }%
29     \ifdef\streq{\abLongLine}{#2}{%
30         \renewcommand*\{\LWR@awesomebox@boxborders\}{\LWR@awesomebox@ruleborders}%
31     }{ }%
32     \begin{BlockClass}[\LWR@awesomebox@boxborders]{awesomebox}
33     \begin{BlockClass}[%%
34         margin-left: 2\% ;
35         vertical-align: top
36     ]{\minipage}
37         \color{#6}\Huge #5
38     \end{BlockClass}
39     \begin{BlockClass}[%%
40         width:75\% ;
41         vertical-align: top ;
42         padding-left: 1em ;
43         \LWR@awesomebox@contentsborders ;
44         border-left: \LWR@printlength{\LWR@atleastonept} %
45             solid \LWR@origpound\LWR@tempcolor%
46     ]{\minipage}
47         \IfValueTF{#3}{#3\nnewline}{}
48 }
49 {%
50     \end{BlockClass}
51     \end{BlockClass}
52 }

```

File 39 **lwarf-axessibility.sty**

§ 148 Package **axessibility**

axessibility (*Pkg*) **axessibility** is ignored.

for HTML output:

```

1 \PackageInfo{lwarf}{Using the lwarf version of package `axessibility'.}%
2 \ProvidesPackage{lwarf-axessibility}%
3 no date is declared by the original
4 \newif\iftagpdfopt
5
6 \DeclareOption{accsupp}%
7   \tagpdfoptfalse
8
9
10 \DeclareOption>tagpdf{%
11   \tagpdfopttrue
12 }
13
14 \ProcessOptions\relax
15

```

```

16 \iftagpdfopt
17   \RequirePackage{tagpdf}
18 \else
19   \RequirePackage{accsupp}
20 \fi

21 \long\def\wrap#1{}
22 \long\def\wrapml#1{}
23 \long\def\wrapmlstar#1{}
24 \long\def\wrapmlalt#1{}

```

For MATHJAX. These usually will not be needed.

```

25 \begin{warpMathJax}
26 \CustomizeMathJax{\newcommand{\wrap}[1]{}}
27 \CustomizeMathJax{\newcommand{\wrapml}[1]{}}
28 \CustomizeMathJax{\newcommand{\wrapmlstar}[1]{}}
29 \CustomizeMathJax{\newcommand{\wrapmlalt}[1]{}}
30 \end{warpMathJax}

```

File 40 **lwarf-axodraw2.sty**

§ 149 Package **axodraw2**

(Emulates or patches code by JOHN C. COLLINS, J.A.M. VERMASEREN.)

axodraw2 (*Pkg*) **axodraw2** is patched for use by **lwarf**.

for HTML output: 1 \LWR@ProvidesPackagePass{axodraw2}[2018/02/15]

```

2 \BeforeBeginEnvironment{axopicture}{%
3   \begin{lateximage}[-axopicture-\~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{axopicture}{\end{lateximage}}

```

File 41 **lwarf-backnaur.sty**

§ 150 Package **backnaur**

(Emulates or patches code by ADRIAN P. ROBSON.)

backnaur (*Pkg*) **backnaur** is patched for use by **lwarf**, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{backnaur}[2019/06/18]

```

2 \renewenvironment{bnf}{\eqnarray}{\endeqnarray}
3 \renewenvironment{bnf*}{\csuse{eqnarray*}}{\csuse{endeqnarray*}}

```

For MATHJAX:

```

4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\bnfpn}[1]{\langle \text{\textit{\text{#1}}} \rangle}}

```

```

6 \CustomizeMathJax{\newcommand{\bnfor}{\; \mid \;}}
7 \CustomizeMathJax{\newcommand{\bnfsp}{\; ;}}
8 \IfPackageLoadedWithOptionsTF{backnaur}{perp}{
9   \CustomizeMathJax{\newcommand{\bnfes}{\perp}}
10 }{
11   \IfPackageLoadedWithOptionsTF{backnaur}{epsilon}{
12     \CustomizeMathJax{\newcommand{\bnfes}{\epsilon}}
13   }{
14     \CustomizeMathJax{\newcommand{\bnfes}{\lambda}}
15   }
16 }
17 \IfPackageLoadedWithOptionsTF{backnaur}{tsrm}{
18   \CustomizeMathJax{\newcommand{\bnfts}[1]{\text{\#1}}}
19 }{
20   \CustomizeMathJax{\newcommand{\bnfts}[1]{\text{\texttt{\#1}}}}
21 }
22 \CustomizeMathJax{\newcommand{\bnftd}[1]{\text{\textit{\#1}}}}
23 \CustomizeMathJax{\newcommand{\bnfsk}{\dots}}
24 \IfPackageLoadedWithOptionsTF{backnaur}{altpo}{
25   \CustomizeMathJax{\newcommand{\bnfpo}{::=}}
26 }{
27   \CustomizeMathJax{\newcommand{\bnfpo}{\models}}
28 }
29 \CustomizeMathJax{\newcommand{\bnfprod}{\ifstar{\LWRbnfprodnn}{\LWRbnfprodyn}}}
30 \CustomizeMathJax{\newcommand{\LWRbnfprodyn}[2]{\bfnpn{\#1} \& \bfnpo \& \#2}}
31 \CustomizeMathJax{\newcommand{\LWRbnfprodnn}[2]{\nonumber \bfnpn{\#1} \& \bfnpo \& \#2}}
32 \CustomizeMathJax{\newcommand{\bnfmore}{\ifstar{\LWRbnfmorenn}{\LWRbnfmoreyn}}}
33 \CustomizeMathJax{\newcommand{\LWRbnfmoreyn}[1]{\& \#1}}
34 \CustomizeMathJax{\newcommand{\LWRbnfmorenn}[1]{\nonumber \& \#1}}
35 \end{warpMathJax}

```

File 42 lwarf-backref.sty

§ 151 Package **backref**

(Emulates or patches code by DAVID CARLISLE AND SEBASTIAN RAHTZ.)

backref (*Pkg*) **backref** is patched for use by **lwarf**.

⚠ loading Note that **backref** must be explicitly loaded, and is not automatically loaded by **hyperref** when generating HTML output.

for HTML output: 1 \LWR@ProvidesPackagePass{backref}[2016/05/21]

Force the **hyperref** option:

```

2 \def\backref{}
3
4 \long\def\hyper@section@backref#1#2#3{%
5   \LWR@refwithsection{\#3}%
6 }
7
8 \let\backrefxxx\hyper@section@backref

```

File 43 l warp-balance.sty

§ 152 Package **balance**

(Emulates or patches code by PATRICK W. DALY.)

balance (*Pkg*) balance is ignored.

for HTML output: Discard all options for l warp-balance:

```
1 \LWR@ProvidesPackageDrop{balance}[1999/02/23]
2 \newcommand*\{balance\}{}{ }
3 \newcommand*\{nobalance\}{}{ }
```

File 44 l warp-bbd ing.sty

§ 153 Package **bbding**

(Emulates or patches code by KAREL HORAK, PETER MØLLER NEERGAARD.)

bbding (*Pkg*) bbding is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{bbding}[1999/04/15]

```
2 \newcommand*\{\LWR@bbdingsymbol\}[2]{\HTMLunicode{\#2}}
3
4 \newcommand{\LWR@HTML@ScissorRightBrokenBottom}{\LWR@bbdingsymbol{000}} {2701}
5 \newcommand{\LWR@HTML@ScissorRight}{\LWR@bbdingsymbol{001}} {2702}
6 \newcommand{\LWR@HTML@ScissorRightBrokenTop}{\LWR@bbdingsymbol{002}} {2703}
7 \newcommand{\LWR@HTML@ScissorLeftBrokenBottom}{\LWR@bbdingsymbol{003}} {2701}
8 \newcommand{\LWR@HTML@ScissorLeft}{\LWR@bbdingsymbol{004}} {2702}
9 \newcommand{\LWR@HTML@ScissorLeftBrokenTop}{\LWR@bbdingsymbol{005}} {2703}
10 \newcommand{\LWR@HTML@ScissorHollowRight}{\LWR@bbdingsymbol{006}} {2704}
11 \newcommand{\LWR@HTML@ScissorHollowLeft}{\LWR@bbdingsymbol{007}} {2704}
12 \newcommand{\LWR@HTML@Phone}{\LWR@bbdingsymbol{010}} {260E}
13 \newcommand{\LWR@HTML@PhoneHandset}{\LWR@bbdingsymbol{011}} {2706}
14 \newcommand{\LWR@HTML@Tape}{\LWR@bbdingsymbol{012}} {2707}
15 \newcommand{\LWR@HTML@Plane}{\LWR@bbdingsymbol{013}} {2708}
16 \newcommand{\LWR@HTML@Envelope}{\LWR@bbdingsymbol{014}} {2709}
17 \newcommand{\LWR@HTML@HandCuffRight}{\LWR@bbdingsymbol{015}} {261B}
18 \newcommand{\LWR@HTML@HandCuffLeft}{\LWR@bbdingsymbol{016}} {261A}
19 \newcommand{\LWR@HTML@HandCuffRightUp}{\LWR@bbdingsymbol{017}} {261D}
20 \newcommand{\LWR@HTML@HandCuffLeftUp}{\LWR@bbdingsymbol{020}} {261F}
21 \newcommand{\LWR@HTML@HandRight}{\LWR@bbdingsymbol{021}} {261E}
22 \newcommand{\LWR@HTML@HandLeft}{\LWR@bbdingsymbol{022}} {261C}
23 \newcommand{\LWR@HTML@HandRightUp}{\LWR@bbdingsymbol{023}} {261D}
24 \newcommand{\LWR@HTML@HandLeftUp}{\LWR@bbdingsymbol{024}} {261F}
25 \newcommand{\LWR@HTML@Peace}{\LWR@bbdingsymbol{025}} {270C}
26 \newcommand{\LWR@HTML@HandPencilLeft}{\LWR@bbdingsymbol{026}} {270D}
27 \newcommand{\LWR@HTML@PencilRight}{\LWR@bbdingsymbol{027}} {270F}
28 \newcommand{\LWR@HTML@PencilLeft}{\LWR@bbdingsymbol{030}} {270F}
29 \newcommand{\LWR@HTML@PencilRightUp}{\LWR@bbdingsymbol{031}} {2710}
```

```
30 \newcommand{\LWR@HTML@PencilLeftUp}{\LWR@bbdingsymbol{032}} {2710}}
31 \newcommand{\LWR@HTML@PencilRightDown}{\LWR@bbdingsymbol{033}} {270E}}
32 \newcommand{\LWR@HTML@PencilLeftDown}{\LWR@bbdingsymbol{034}} {270E}}
33 \newcommand{\LWR@HTML@NibRight}{\LWR@bbdingsymbol{035}} {2711}}
34 \newcommand{\LWR@HTML@NibLeft}{\LWR@bbdingsymbol{036}} {2711}}
35 \newcommand{\LWR@HTML@NibSolidRight}{\LWR@bbdingsymbol{037}} {2712}}
36 \newcommand{\LWR@HTML@NibSolidLeft}{\LWR@bbdingsymbol{040}} {2712}}
37 \newcommand{\LWR@HTML@Checkmark}{\LWR@bbdingsymbol{041}} {2713}}
38 \newcommand{\LWR@HTML@CheckmarkBold}{\LWR@bbdingsymbol{042}} {2714}}
39 \newcommand{\LWR@HTML@XSolid}{\LWR@bbdingsymbol{043}} {2715}}
40 \newcommand{\LWR@HTML@XSolidBold}{\LWR@bbdingsymbol{044}} {2716}}
41 \newcommand{\LWR@HTML@XSolidBrush}{\LWR@bbdingsymbol{045}} {2717}}
42 \newcommand{\LWR@HTML@PlusOutline}{\LWR@bbdingsymbol{046}} {2719}}
43 \newcommand{\LWR@HTML@Plus}{\LWR@bbdingsymbol{047}} {271A}}
44 \newcommand{\LWR@HTML@PlusCenterOpen}{\LWR@bbdingsymbol{050}} {271C}}
45 \newcommand{\LWR@HTML@PlusThinCenterOpen}{\LWR@bbdingsymbol{051}} {271B}}
46 \newcommand{\LWR@HTML@Cross}{\LWR@bbdingsymbol{052}} {271D}}
47 \newcommand{\LWR@HTML@CrossOpenShadow}{\LWR@bbdingsymbol{053}} {271E}}
48 \newcommand{\LWR@HTML@CrossOutline}{\LWR@bbdingsymbol{054}} {271F}}
49 \newcommand{\LWR@HTML@CrossBoldOutline}{\LWR@bbdingsymbol{055}} {271F}}
50 \newcommand{\LWR@HTML@CrossMaltese}{\LWR@bbdingsymbol{056}} {2720}}
51 \newcommand{\LWR@HTML@DavidStarSolid}{\LWR@bbdingsymbol{057}} {2721}}
52 \newcommand{\LWR@HTML@DavidStar}{\LWR@bbdingsymbol{060}} {2721}}
53 \newcommand{\LWR@HTML@FourAsterisk}{\LWR@bbdingsymbol{061}} {2722}}
54 \newcommand{\LWR@HTML@JackStar}{\LWR@bbdingsymbol{062}} {2723}}
55 \newcommand{\LWR@HTML@JackStarBold}{\LWR@bbdingsymbol{063}} {2724}}
56 \newcommand{\LWR@HTML@CrossClowerTips}{\LWR@bbdingsymbol{064}} {2725}}
57 \newcommand{\LWR@HTML@FourStar}{\LWR@bbdingsymbol{065}} {2726}}
58 \newcommand{\LWR@HTML@FourStarOpen}{\LWR@bbdingsymbol{066}} {2727}}
59 \newcommand{\LWR@HTML@FiveStarLines}{\LWR@bbdingsymbol{067}} {2729}}
60 \newcommand{\LWR@HTML@FiveStar}{\LWR@bbdingsymbol{070}} {2605}}
61 \newcommand{\LWR@HTML@FiveStarOpen}{\LWR@bbdingsymbol{071}} {2729}}
62 \newcommand{\LWR@HTML@FiveStarOpenCircled}{\LWR@bbdingsymbol{072}} {272A}}
63 \newcommand{\LWR@HTML@FiveStarCenterOpen}{\LWR@bbdingsymbol{073}} {272B}}
64 \newcommand{\LWR@HTML@FiveStarOpenDotted}{\LWR@bbdingsymbol{074}} {272C}}
65 \newcommand{\LWR@HTML@FiveStarOutline}{\LWR@bbdingsymbol{075}} {272D}}
66 \newcommand{\LWR@HTML@FiveStarOutlineHeavy}{\LWR@bbdingsymbol{076}} {272E}}
67 \newcommand{\LWR@HTML@FiveStarConvex}{\LWR@bbdingsymbol{077}} {272F}}
68 \newcommand{\LWR@HTML@FiveStarShadow}{\LWR@bbdingsymbol{100}} {2730}}
69 \newcommand{\LWR@HTML@AsteriskBold}{\LWR@bbdingsymbol{101}} {2731}}
70 \newcommand{\LWR@HTML@AsteriskCenterOpen}{\LWR@bbdingsymbol{102}} {2732}}
71 \newcommand{\LWR@HTML@AsteriskThin}{\LWR@bbdingsymbol{103}} {273B}}
72 \newcommand{\LWR@HTML@AsteriskThinCenterOpen}{\LWR@bbdingsymbol{104}} {273C}}
73 \newcommand{\LWR@HTML@EightStarTaper}{\LWR@bbdingsymbol{105}} {2733}}
74 \newcommand{\LWR@HTML@EightStarConvex}{\LWR@bbdingsymbol{106}} {2735}}
75 \newcommand{\LWR@HTML@SixStar}{\LWR@bbdingsymbol{107}} {2736}}
76 \newcommand{\LWR@HTML@EightStar}{\LWR@bbdingsymbol{110}} {2737}}
77 \newcommand{\LWR@HTML@EightStarBold}{\LWR@bbdingsymbol{111}} {2738}}
78 \newcommand{\LWR@HTML@TwelweStar}{\LWR@bbdingsymbol{112}} {2739}}
79 \newcommand{\LWR@HTML@SixteenStarLight}{\LWR@bbdingsymbol{113}} {273A}}
80 \newcommand{\LWR@HTML@SixFlowerPetalRemoved}{\LWR@bbdingsymbol{114}} {273B}}
81 \newcommand{\LWR@HTML@SixFlowerOpenCenter}{\LWR@bbdingsymbol{115}} {273C}}
82 \newcommand{\LWR@HTML@Asterisk}{\LWR@bbdingsymbol{116}} {273D}}
83 \newcommand{\LWR@HTML@SixFlowerAlternate}{\LWR@bbdingsymbol{117}} {273E}}
84 \newcommand{\LWR@HTML@FiveFlowerPetal}{\LWR@bbdingsymbol{120}} {273F}}
85 \newcommand{\LWR@HTML@SixFlowerPetalDotted}{\LWR@bbdingsymbol{121}} {2740}}
86 \newcommand{\LWR@HTML@FiveFlowerOpen}{\LWR@bbdingsymbol{122}} {2740}}
87 \newcommand{\LWR@HTML@EightFlowerPetal}{\LWR@bbdingsymbol{123}} {2741}}
88 \newcommand{\LWR@HTML@SunshineOpenCircled}{\LWR@bbdingsymbol{124}} {2742}}
89 \newcommand{\LWR@HTML@SixFlowerAltPetal}{\LWR@bbdingsymbol{125}} {2743}}
```

```
90 \newcommand{\LWR@HTML@FourClowerOpen}{\LWR@bbdingsymbol{126}} {273F}}
91 \newcommand{\LWR@HTML@FourClowerSolid}{\LWR@bbdingsymbol{127}} {273F}}
92 \newcommand{\LWR@HTML@AsteriskRoundedEnds}{\LWR@bbdingsymbol{130}} {2749}}
93 \newcommand{\LWR@HTML@EightFlowerPetalRemoved}{\LWR@bbdingsymbol{131}} {274A}}
94 \newcommand{\LWR@HTML@EightAsterisk}{\LWR@bbdingsymbol{132}} {274B}}
95 \newcommand{\LWR@HTML@SixFlowerRemovedOpenPetal}{\LWR@bbdingsymbol{133}} {2740}}
96 \newcommand{\LWR@HTML@SparkleBold}{\LWR@bbdingsymbol{134}} {2748}}
97 \newcommand{\LWR@HTML@Sparkle}{\LWR@bbdingsymbol{135}} {2747}}
98 \newcommand{\LWR@HTML@SnowflakeChevron}{\LWR@bbdingsymbol{136}} {2744}}
99 \newcommand{\LWR@HTML@SnowflakeChevronBold}{\LWR@bbdingsymbol{137}} {2746}}
100 \newcommand{\LWR@HTML@Snowflake}{\LWR@bbdingsymbol{140}} {2744}}
101 \newcommand{\LWR@HTML@CircleSolid}{\LWR@bbdingsymbol{141}} {25CF}}
102 \newcommand{\LWR@HTML@Ellipse}{\LWR@bbdingsymbol{142}} {274D}}
103 \newcommand{\LWR@HTML@EllipseSolid}{\LWR@bbdingsymbol{143}} {25CF}}
104 \newcommand{\LWR@HTML@CircleShadow}{\LWR@bbdingsymbol{144}} {274D}}
105 \newcommand{\LWR@HTML@EllipseShadow}{\LWR@bbdingsymbol{145}} {274D}}
106 \newcommand{\LWR@HTML@Square}{\LWR@bbdingsymbol{146}} {25A1}}
107 \newcommand{\LWR@HTML@SquareSolid}{\LWR@bbdingsymbol{147}} {25A0}}
108 \newcommand{\LWR@HTML@SquareShadowBottomRight}{\LWR@bbdingsymbol{150}} {2751}}
109 \newcommand{\LWR@HTML@SquareShadowTopRight}{\LWR@bbdingsymbol{151}} {2752}}
110 \newcommand{\LWR@HTML@SquareShadowTopLeft}{\LWR@bbdingsymbol{152}} {2752}}
111 \newcommand{\LWR@HTML@SquareCastShadowBottomRight}{\LWR@bbdingsymbol{153}} {2751}}
112 \newcommand{\LWR@HTML@SquareCastShadowTopRight}{\LWR@bbdingsymbol{154}} {2752}}
113 \newcommand{\LWR@HTML@SquareCastShadowTopLeft}{\LWR@bbdingsymbol{155}} {2752}}
114 \newcommand{\LWR@HTML@TriangleUp}{\LWR@bbdingsymbol{156}} {25B2}}
115 \newcommand{\LWR@HTML@TriangleDown}{\LWR@bbdingsymbol{157}} {25BC}}
116 \newcommand{\LWR@HTML@DiamondSolid}{\LWR@bbdingsymbol{160}} {25C6}}
117 \newcommand{\LWR@HTML@OrnamentDiamondSolid}{\LWR@bbdingsymbol{161}} {2756}}
118 \newcommand{\LWR@HTML@HalfCircleRight}{\LWR@bbdingsymbol{162}} {25D7}}
119 \newcommand{\LWR@HTML@HalfCircleLeft}{\LWR@bbdingsymbol{163}} {25D6}}
120 \newcommand{\LWR@HTML@RectangleThin}{\LWR@bbdingsymbol{164}} {2758}}
121 \newcommand{\LWR@HTML@Rectangle}{\LWR@bbdingsymbol{165}} {2759}}
122 \newcommand{\LWR@HTML@RectangleBold}{\LWR@bbdingsymbol{166}} {275A}}
123 \newcommand{\LWR@HTML@ArrowBoldRightStrobe}{\LWR@bbdingsymbol{167}} {27A0}}
124 \newcommand{\LWR@HTML@ArrowBoldUpRight}{\LWR@bbdingsymbol{170}} {27A6}}
125 \newcommand{\LWR@HTML@ArrowBoldDownRight}{\LWR@bbdingsymbol{171}} {27A5}}
126 \newcommand{\LWR@HTML@ArrowBoldRightShort}{\LWR@bbdingsymbol{172}} {27A7}}
127 \newcommand{\LWR@HTML@ArrowBoldRightCircled}{\LWR@bbdingsymbol{173}} {27B2}}
128
129
130 \LWR@formatted{ScissorRightBrokenBottom}
131 \LWR@formatted{ScissorRight}
132 \LWR@formatted{ScissorRightBrokenTop}
133 \LWR@formatted{ScissorLeftBrokenBottom}
134 \LWR@formatted{ScissorLeft}
135 \LWR@formatted{ScissorLeftBrokenTop}
136 \LWR@formatted{ScissorHollowRight}
137 \LWR@formatted{ScissorHollowLeft}
138 \LWR@formatted{Phone}
139 \LWR@formatted{PhoneHandset}
140 \LWR@formatted{Tape}
141 \LWR@formatted{Plane}
142 \LWR@formatted{Envelope}
143 \LWR@formatted{HandCuffRight}
144 \LWR@formatted{HandCuffLeft}
145 \LWR@formatted{HandCuffRightUp}
146 \LWR@formatted{HandCuffLeftUp}
147 \LWR@formatted{HandRight}
148 \LWR@formatted{HandLeft}
149 \LWR@formatted{HandRightUp}
```

```
150 \LWR@formatted{HandLeftUp}
151 \LWR@formatted{Peace}
152 \LWR@formatted{HandPencilLeft}
153 \LWR@formatted{PencilRight}
154 \LWR@formatted{PencilLeft}
155 \LWR@formatted{PencilRightUp}
156 \LWR@formatted{PencilLeftUp}
157 \LWR@formatted{PencilRightDown}
158 \LWR@formatted{PencilLeftDown}
159 \LWR@formatted{NibRight}
160 \LWR@formatted{NibLeft}
161 \LWR@formatted{NibSolidRight}
162 \LWR@formatted{NibSolidLeft}
163 \LWR@formatted{Checkmark}
164 \LWR@formatted{CheckmarkBold}
165 \LWR@formatted{XSolid}
166 \LWR@formatted{XSolidBold}
167 \LWR@formatted{XSolidBrush}
168 \LWR@formatted{PlusOutline}
169 \LWR@formatted{Plus}
170 \LWR@formatted{PlusCenterOpen}
171 \LWR@formatted{PlusThinCenterOpen}
172 \LWR@formatted{Cross}
173 \LWR@formatted{CrossOpenShadow}
174 \LWR@formatted{CrossOutline}
175 \LWR@formatted{CrossBoldOutline}
176 \LWR@formatted{CrossMaltese}
177 \LWR@formatted{DavidStarSolid}
178 \LWR@formatted{DavidStar}
179 \LWR@formatted{FourAsterisk}
180 \LWR@formatted{JackStar}
181 \LWR@formatted{JackStarBold}
182 \LWR@formatted{CrossClowerTips}
183 \LWR@formatted{FourStar}
184 \LWR@formatted{FourStarOpen}
185 \LWR@formatted{FiveStarLines}
186 \LWR@formatted{FiveStar}
187 \LWR@formatted{FiveStarOpen}
188 \LWR@formatted{FiveStarOpenCircled}
189 \LWR@formatted{FiveStarCenterOpen}
190 \LWR@formatted{FiveStarOpenDotted}
191 \LWR@formatted{FiveStarOutline}
192 \LWR@formatted{FiveStarOutlineHeavy}
193 \LWR@formatted{FiveStarConvex}
194 \LWR@formatted{FiveStarShadow}
195 \LWR@formatted{AsteriskBold}
196 \LWR@formatted{AsteriskCenterOpen}
197 \LWR@formatted{AsteriskThin}
198 \LWR@formatted{AsteriskThinCenterOpen}
199 \LWR@formatted{EightStarTaper}
200 \LWR@formatted{EightStarConvex}
201 \LWR@formatted{SixStar}
202 \LWR@formatted{EightStar}
203 \LWR@formatted{EightStarBold}
204 \LWR@formatted{TwelweStar}
205 \LWR@formatted{SixteenStarLight}
206 \LWR@formatted{SixFlowerPetalRemoved}
207 \LWR@formatted{SixFlowerOpenCenter}
208 \LWR@formatted{Asterisk}
209 \LWR@formatted{SixFlowerAlternate}
```

```

210 \LWR@formatted{FiveFlowerPetal}
211 \LWR@formatted{SixFlowerPetalDotted}
212 \LWR@formatted{FiveFlowerOpen}
213 \LWR@formatted{EightFlowerPetal}
214 \LWR@formatted{SunshineOpenCircled}
215 \LWR@formatted{SixFlowerAltPetal}
216 \LWR@formatted{FourFlowerOpen}
217 \LWR@formatted{FourFlowerSolid}
218 \LWR@formatted{AsteriskRoundedEnds}
219 \LWR@formatted{EightFlowerPetalRemoved}
220 \LWR@formatted{EightAsterisk}
221 \LWR@formatted{SixFlowerRemovedOpenPetal}
222 \LWR@formatted{SparkleBold}
223 \LWR@formatted{Sparkle}
224 \LWR@formatted{SnowflakeChevron}
225 \LWR@formatted{SnowflakeChevronBold}
226 \LWR@formatted{Snowflake}
227 \LWR@formatted{CircleSolid}
228 \LWR@formatted{Ellipse}
229 \LWR@formatted{EllipseSolid}
230 \LWR@formatted{CircleShadow}
231 \LWR@formatted{EllipseShadow}
232 \LWR@formatted{Square}
233 \LWR@formatted{SquareSolid}
234 \LWR@formatted{SquareShadowBottomRight}
235 \LWR@formatted{SquareShadowTopRight}
236 \LWR@formatted{SquareShadowTopLeft}
237 \LWR@formatted{SquareCastShadowBottomRight}
238 \LWR@formatted{SquareCastShadowTopRight}
239 \LWR@formatted{SquareCastShadowTopLeft}
240 \LWR@formatted{TriangleUp}
241 \LWR@formatted{TriangleDown}
242 \LWR@formatted{DiamondSolid}
243 \LWR@formatted{OrnamentDiamondSolid}
244 \LWR@formatted{HalfCircleRight}
245 \LWR@formatted{HalfCircleLeft}
246 \LWR@formatted{RectangleThin}
247 \LWR@formatted{Rectangle}
248 \LWR@formatted{RectangleBold}
249 \LWR@formatted{ArrowBoldRightStrobe}
250 \LWR@formatted{ArrowBoldUpRight}
251 \LWR@formatted{ArrowBoldDownRight}
252 \LWR@formatted{ArrowBoldRightShort}
253 \LWR@formatted{ArrowBoldRightCircled}

```

File 45 lwarf-beamerarticle.sty

§ 154 Package **beamerarticle**

(Emulates or patches code by TILL TANTAU, VEDRAN MILETIĆ, LOUIS STUART, JOSEPH WRIGHT.)

beamerarticle (*Pkg*) beamerarticle is patched for use by lwarf.

for HTML output: 1 \LWR@ProvidesPackagePass{beamerarticle}[2021/05/26]

```

2 \renewcommand<>{\textcolor}{\only#1{\beameroriginal{\textcolor}}}
3

```

```

4 \AtBeginDocument{
5
6 \renewcommand<>{\LWR@listitem}{%
7   \only#1{%
8     \beameroriginal{\LWR@listitem}%
9   }%
10 }
11
12 \renewcommand<>{\LWR@itemizeitem}{%
13   \only#1{%
14     \beameroriginal{\LWR@itemizeitem}%
15   }%
16 }
17
18 \renewcommand<>{\LWR@descitem}{%
19   \only#1{%
20     \beameroriginal{\LWR@descitem}%
21   }%
22 }
23
24 \renewcommand<>{\abstract}{%
25   \only#1{%
26     \beameroriginal{\abstract}%
27   }%
28 }
29
30 \renewcommand<>{\LWR@includegraphicsb}{%
31   \only#1{%
32     \beameroriginal{\LWR@includegraphicsb}%
33   }%
34 }
35
36 \xpretocmd\frame
37 {
38   \LWR@forcenewpage
39   \BlockClass{beamerframe}%
40 }
41 {}
42 {\LWR@patcherror{beamerarticle}{frame}}
43
44 \xapptocmd\beamer@endframe
45 {\endBlockClass}
46 {}
47 {\LWR@patcherror{beamerarticle}{beamer@endframe}}

```

An example in the beamer docs for \includegraphics shows the use of \llap in a frame.

```

48 \xpretocmd\beamer@article@startframe
49   {\LWR@nulllistfills}
50 {}
51 {\LWR@patcherror{beamerarticle}{beamer@article@startframe}}
52
53 }% AtBeginDocument
54
55 \let\beamer@tmpop@frametitle@default\relax
56 \defbeamertemplate<article>*{frametitle}{default}{%
57   \paragraph*{\insertframetitle}\ \par%
58   \ifdefempty{\insertframesubtitle}{%
59     \noindent\emph{\insertframesubtitle}}\par%

```

```

60      }%
61 }
62
63
64 \NewDocumentCommand{\LWR@beamer@itemize}{o}{%
65     \LWR@itemizestart\LWR@origitemize%
66 }%
67 \NewDocumentCommand{\LWR@beamer@description}{o o}{%
68     \LWR@descriptionstart\LWR@origdescription%
69 }%
70
71 \xapptocmd{\LWR@patchlists}
72     {%
73         \LetLtxMacro\itemize\LWR@beamer@itemize%
74         \LetLtxMacro\description\LWR@beamer@description%
75     }
76     {}
77     {\LWR@patcherror{beamerarticle}{\LWR@patchlists}}
78
79
80 \LetLtxMacro\maketitle\LWR@maketitle
81
82 \renewcommand{\subtitle}[2][]{
83     \gdef\@subtitle{#2}
84     \def\insertsubtitle{#2}
85 }
```

Add subtitle if not already present:

```

86 \AtBeginDocument{
87 \IfPackageLoadedTF{lwarp-scrextend}
88     {}% komascript already has subtitle
89     {% not komascript
90         \xpatchcmd{\@maketitle}
91             {%
92                 \LWR@htmltag{\LWR@tagtitleend}%
93                 \LWR@startpars%
94             }%
95             {%
96                 \LWR@htmltag{\LWR@tagtitleend}%
97                 \ifdefvoid{\@subtitle}{}{%
98                     \begin{BlockClass}{subtitle}%
99                     \@subtitle%
100                     \end{BlockClass}%
101                 }%
102                 \LWR@startpars%
103             }%
104             {}%
105             {\LWR@patcherror{beamerarticle}{\@maketitle}}
106     }% not komascript
107 }
108
109 \RequirePackage{fancyvrb}
110 \DefineVerbatimEnvironment{semiverbatim}{Verbatim}{commandchars=\\\{\}}
```

File 46 **l warp-biblatex.sty**

§ 155 Package **biblatex**

(Emulates or patches code by PHILIPP LEHMAN.)

biblatex (Pkg) When **biblatex** is used, modifications from **newfloat** may have to be undone.

for HTML output:

1. **l warp** uses **newfloat**.
2. For classes with chapters which **newfloat** does not know about, such as CTEX-related classes, **newfloat** may modify **\addtocontents**.
3. **biblatex**, though, wants to patch **\addtocontents**, which causes an error if **\addtocontents** has been changed.
4. Therefore, **\addtocontents** is restored to its original here, since **biblatex** is about to be loaded.
5. This means that the **newfloat**'s **chapterlistsgaps** option may no longer work.

```
1 \ifdef{\newfloat@addtocontents@ORI}{%
2   \let\addtocontents\newfloat@addtocontents@ORI
3 }{}
```

hyperref emulation is loaded **\AtBeginDocument** to avoid an options clash.

```
4 \AtBeginDocument{\RequirePackage{hyperref}}
5
6 \LWR@ProvidesPackagePass{biblatex}[2018/03/04]
```

The following create hyperlinks to the references. The original code to use **hyperref** is recreated here, because **hyperref** is emulated.

```
7 \AfterPreamble{
```

Not using **\VerifyCommand** because this may be defined several ways.

```
8 \let\blx@anchors@\empty
9 \protected\def\blx@anchor{%
10   \xifinlist{\the\c@refsection @\abx@field@entrykey}{\blx@anchors}%
11   {}
12   {\listxadd\blx@anchors{\the\c@refsection @\abx@field@entrykey}%
13   \hypertarget{cite.\the\c@refsection @\abx@field@entrykey}{}}
14
15 \protected\def\blx@imc@bibhyperref{%
16   \@ifnextchar[%]
17   { \blx@bibhyperref}
18   { \blx@bibhyperref[\abx@field@entrykey]}%
19
20 \long\def\blx@bibhyperref[#1]#2{%
21   \blx@sfsave
22   \hyperlink{cite.\the\c@refsection @#1}{%
```

```

23 %           \blx@sfrst
24      #2%
25 %           \blx@sfsave
26      }%
27 % \blx@sfrst%
28 }% \def\blx@nohyperref[#1]{#2}%
29
30 \protected\long\def\blx@imc@bibhyperlink#1#2{%
31 %           \blx@sfsave
32           \hyperlink{cite.\the\c@refsection:#1}{%
33 %           \blx@sfrst
34      #2%
35 %           \blx@sfsave
36      }%
37 %           \blx@sfrst%
38 }%
39
40 \protected\long\def\blx@imc@bibhypertarget#1#2{%
41 %           \blx@sfsave%
42           \hypertarget{cite.\the\c@refsection:#1}{%
43 %           \blx@sfrst
44      #2%
45 %           \blx@sfsave%
46      }%
47 %           \blx@sfrst%
48 }
49
50 \let\blx@imc@ifhyperref@firstoftwo

```

Ensure that an autopage reference is current where each \cite is used, although this is nullified inside footnotes since they now use a L^AT_EX box.

```

51 \xpretocmd{\blx@citecmdinit}
52   {\LWR@newautopagelabel{page}}%
53   {}
54   {\LWR@patcherror{biblatex}{\blx@citecmdinit}}

```

Ensure that an autopage reference is current for each backref. If the citation is in a footnote, the backref will point to whatever preceeded the footnotes.

```

55 \VerifyCommand[lwarp][biblatex]{\blx@addbackref@i}{C820E8B12CF2904906644302E07EBE88}
56
57 \xpatchcmd{\blx@addbackref@i}
58   {\thepage}
59   {\the\LWR@previousautopagelabel}% ref to the most recent object
60   {}
61   {\LWR@patcherror{biblatex}{\blx@addbackref@i A}}
62
63 \xpatchcmd{\blx@addbackref@i}
64   {\c@page}
65   {\c@\LWR@previousautopagelabel}% ref to the most recent object
66   {}
67   {\LWR@patcherror{biblatex}{\blx@addbackref@i B}}

```

The following patches are for back page references.

```

68 \DeclareListFormat{pageref}{%
69   \ifnumless{\abx@pagerefstyle}{0}
70     {\usebibmacro{list:plain}}%

```

```
71      \ifhyperref
72          {%
73 %              \hyperlink{page.\#1}{\#1}%
74              \LWR@refwithsection{\BaseJobname-autopage-\#1}\% l warp
75          }
76          {\#1}%
77          {\ifnumequal{\value{listcount}}{1}%
78              {\usebibmacro{pageref:init}}%
79              {}%
80              \usebibmacro{pageref:comp}\#1\%
81              \ifnumequal{\value{listcount}}{\value{liststop}}%
82                  {\usebibmacro{pageref:dump}}%
83                  {}}}%
84
85 \expandafter\VerifyCommand\expandafter{\csname abx@macro@pageref:comp\endcsname}
86     {019E018D2EBB4F3D02578439F03128D8}
87
88 \renewbibmacro*{pageref:comp}[1]{%
89     \numdef\abx@range@prev{\abx@range@prev+1}%
90     \ifinteger{\#1}%
91         {\def\abx@range@num{\#1}%
92          \def\abx@range@this{1}%
93          \ifnumequal{\abx@range@this}{\abx@range@last}%
94              {}
95              {\def\abx@range@prev{-1}}}%
96     \ifrmnum{\#1}%
97         {\numdef\abx@range@num{\rmn@tonum{\#1}}%
98          \def\abx@range@this{2}%
99          \ifnumequal{\abx@range@this}{\abx@range@last}%
100             {}
101             {\def\abx@range@prev{-1}}}%
102         \undef\abx@range@num%
103         \def\abx@range@this{0}%
104         \def\abx@range@prev{-1}}%
105     \ifdef\abx@range@num%
106         {\ifnumequal{\abx@range@num}{\abx@range@prev}%
107             {\def\abx@range@hold{\#1}%
108              \numdef\abx@range@diff{\abx@range@diff+1}}%
109             \usebibmacro{pageref:dump}\%
110             \ifnumgreater{\abx@range@last}{-1}%
111                 {\printdelim{multilistdelim}}%
112                 {}%
113             \ifhyperref
114 %                 {\hyperlink{page.\#1}{\#1}%
115                 \LWR@refwithsection{\BaseJobname-autopage-\#1}\% l warp
116                 \#1}}%
117             \edef\abx@range@prev{\abx@range@num}%
118             \usebibmacro{pageref:dump}\%
119             \ifnumgreater{\abx@range@last}{-1}%
120                 {\printdelim{multilistdelim}}%
121                 {}%
122             \ifhyperref
123                 {\hyperlink{page.\#1}{\#1}%
124                 \LWR@refwithsection{\BaseJobname-autopage-\#1}\% l warp
125                 \#1}%
126                 \def\abx@range@prev{-1}}%
127             \edef\abx@range@last{\abx@range@this}%
128
129 \expandafter\VerifyCommand\expandafter{\csname abx@macro@pageref:dump\endcsname}
130     {9BD1165E771053A5DA8957BE4E2E7B9E}
```

```
131 \renewbibmacro*{pageref}{%
132   \ifnumgreater{\abx@range@diff}{0}
133     {\ifcase\abx@pagerefstyle\relax % two
134      \bibrangedash
135      \ifhyperref
136        {\hyperlink{page.\abx@range@hold}{\abx@range@hold}}
137        {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% l warp
138        {\abx@range@hold}%
139      \or % three
140        \ifnumless{\abx@range@diff}{2}
141          {\printdelim{multilistdelim}}
142          {\bibrangedash}%
143        \ifhyperref
144          {\hyperlink{page.\abx@range@hold}{\abx@range@hold}}
145          {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% l warp
146          {\abx@range@hold}%
147      \or % two+
148        \ifnumless{\abx@range@diff}{2}
149          {\sqspace
150          \ifhyperref
151            {\hyperlink{page.\abx@range@hold}{\bibstring{sequens}}}
152            {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% l warp
153            {\bibstring{sequens}}%
154          \bibrangedash
155          \ifhyperref
156            {\hyperlink{page.\abx@range@hold}{\abx@range@hold}}
157            {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% l warp
158            {\abx@range@hold}%
159      \or % three+
160        \ifnumless{\abx@range@diff}{2}
161          {\sqspace
162          \ifhyperref
163            {\hyperlink{page.\abx@range@hold}{\bibstring{sequens}}}
164            {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% l warp
165            {\bibstring{sequens}}%
166          \ifnumless{\abx@range@diff}{3}
167            {\sqspace
168            \ifhyperref
169              {\hyperlink{page.\abx@range@hold}{\bibstring{sequentes}}}
170              {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% l warp
171              {\bibstring{sequentes}}%
172            \bibrangedash
173            \ifhyperref
174              {\hyperlink{page.\abx@range@hold}{\abx@range@hold}}
175              {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% l warp
176              {\abx@range@hold}%
177            \else % all+
178              \ifnumless{\abx@range@diff}{2}
179                {\sqspace
180                \ifhyperref
181                  {\hyperlink{page.\abx@range@hold}{\bibstring{sequens}}}
182                  {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% l warp
183                  {\bibstring{sequens}}%
184                \sqspace
185                \ifhyperref
186                  {\hyperlink{page.\abx@range@hold}{\bibstring{sequentes}}}
187                  {\LWR@refwithsection{\BaseJobname-autopage-\abx@range@hold}}% l warp
188                  {\bibstring{sequentes}}%
189                \fi
190              \fi
191            \fi
192          \fi
193        \fi
194      \fi
195    \fi
196  \fi
197}
```

```

191      \def\abx@range@diff{0}}
192      {}
193
194 }% \AfterPreamble

```

File 47 **l warp-bibunits.sty**

§ 156 Package **bibunits**

(Emulates or patches code by THORSTEN HANSEN.)

bibunits (*Pkg*) bibunits is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{bibunits}[2004/05/12]

2 \def\bu@bibdata{\BaseJobname}

File 48 **l warp-bigdelim.sty**

§ 157 Package **bigdelim**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

bigdelim (*Pkg*) bigdelim is used as-is for print or lateximage, and patched for HTML.

The delimiters are displayed in HTML by printing the delimiter, the text, and a thick border across the side of the \multirow which indicates the actual height of the delimiter. The delimiter character is given a class of ldelim or rdelim, and the default css sets this to font-size:200%

⚠ use \mrowcell \ldelim and \rdelim use \multirow, so \mrowcell must be used in the proper number of empty cells in the same column below \ldelim or \rdelim, but not in cells which are above or below the delimiter:

```

\begin{tabular}{lll}
<empty> & a & b \\
\ldelim{\{}{\}{3}{.25in}[left ] & c & d \\
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}

```

<->	a b
left {	c d e f g h
<->	i j

For MATHJAX, limited emulation is provided which merely prints the delimiter and optional text in the first row.

for HTML output: First, remove the temporary definitions of `\ldelim` and `\rdelim`, which were previously defined for tabular scanning in case `bigdelim` was not loaded:

```
1 \let\ldelim\relax
2 \let\rdelim\relax
```

Next, load the package's new definitions:

```
3 \LWR@ProvidesPackagePass{bigdelim}[2021/03/15]

\ldelim {{<1:delimiter>}} {{<2:#rows>}} [<3: vmove>] {{<4:width>}} [<5:text>]
\rdelim
4 \NewDocumentCommand{\LWR@HTML@ldelim}{m m o m O{}}{%
5 \renewcommand{\LWR@multirowborder}{right}%
6 \multirow{#2}{#4}{#5 \InlineClass{\ldelim}{#1}}%
7 }
8
9 \LWR@formatted{\ldelim}
10
11 \NewDocumentCommand{\LWR@HTML@rdelim}{m m o m O{}}{%
12 \renewcommand{\LWR@multirowborder}{left}%
13 \multirow{#2}{#4}{\InlineClass{\rdelim}{#1} #5}%
14 }
15
16 \LWR@formatted{\rdelim}
```

Limited emulation for MATHJAX. The delimiter is printed on the first row, along with any optional text.

```
17 \begin{warpMathJax}
18 % \ldelim ( {n}{width}[text]
19 \CustomizeMathJax{\newcommand{\LWRldelimtwo}[1][]{\text{\#1}\sim\text{\#1}}}
20 \CustomizeMathJax{\newcommand{\LWRldelimone}[2][]{\LWRldelimtwo}}
21 \CustomizeMathJax{\def\ldelim#1#2{\def\LWRbigdelim{\#1}\LWRldelimone}}
22 % \rdelim ) {n}{width}[text]
23 \CustomizeMathJax{\newcommand{\LWRrdelimtwo}[1][]{\text{\#1}\sim\text{\#1}}}
24 \CustomizeMathJax{\newcommand{\LWRrdelimone}[2][]{\LWRrdelimtwo}}
25 \CustomizeMathJax{\def\rdelim#1#2{\def\LWRbigdelim{\#1}\LWRrdelimone}}
26 \end{warpMathJax}
```

File 49 l warp-bigfoot.sty

§ 158 Package **bigfoot**

`bigfoot (Pkg)` `bigfoot` is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{bigfoot}[2015/08/30]

```
2 \RequirePackage{manyfoot}
3 \RequirePackage{perpage}
4
5 \def\RestyleFootnote#1#2{}
6 \def\FootnoteSpecific#1{}
7 \def\DefineFootnoteStack#1{}
8 \def\PushFootnoteMark#1{}
9 \def\PopFootnoteMark#1{}
```

```

10 \def\hfootfraction{0.9}
11 \def\vtypefraction{0.7}
12 \def\FootnoteMinimum{1sp}
13 \def\FootnoteMainMinimum{0pt}
14 \newcount\bigfoottolerance
15 \bigfoottolerance=100
16 \providecommand\footnotecarryratio{2}

```

File 50 **l warp-bigstrut.sty**

§ 159 Package **bigstrut**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

bigstrut (*Pkg*) **bigstrut** is used as-is for print or `\textrimage`, and patched for HTML.

for HTML output: 1 \LWR@ProvidesPackagePass{bigstrut}[2018/08/03]

```

2 \LetLtxMacro{\LWR@origbigstrut}{\bigstrut}
3
4 \renewcommand{\bigstrut}[1][x]{}
5
6 \appto{\LWR@restoreorigformatting}{%
7 \LetLtxMacro{\bigstrut}{\LWR@origbigstrut}%
8 }
9

```

```

10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\bigstrut}[1][]{}}
12 \end{warpMathJax}

```

File 51 **l warp-bitpattern.sty**

§ 160 Package **bitpattern**

(Emulates or patches code by JEAN-MARC BOURGUET.)

bitpattern (*Pkg*) **bitpattern** is patched for use by `l warp`.

for HTML output: 1 \LWR@ProvidesPackagePass{bitpattern}[2015/12/11]

```

2 \VerifyCommand[l warp][bitpattern]{\bitpattern}{379A39416C9C5E48DBCEEF730D51C5BF}
3
4 \xpatchcmd{\bitpattern}
5   {\begingroup}
6   {\begin{latextimage}[-bitpattern-\~\PackageDiagramAltText]}
7   {}
8   {\LWR@patcherror{bitpattern}{bitpattern}}
9
10 \VerifyCommand[l warp][bitpattern]{\bp@Done}{4F2F6DDB41FE31051ACA3CA9F58E3395}
11
12 \xpatchcmd{\bp@Done}
13   {\endgroup}

```

```
14      {\end{lateximage}}
15      {}
16      {\LWR@patcherror{bitpattern}{bp@Done}}
```

File 52 l warp-blowup.sty**§ 161 Package blowup**

blowup (*Pkg*) **blowup** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{blowup}[2018/01/02]
2 \newcommand*\blowUp[1]{}

File 53 l warp-bm.sty**§ 162 Package bm**

(*Emulates or patches code by DAVID CARLISLE, FRANK MITTELBACH.*)

bm (*Pkg*) **bm** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{bm}[2019/07/24]

\DeclareBoldMathCommand must only be used in the preamble, since it adds to the MATHJAX setup code.

```
2 \begin{warpMathJax}
3 \LetLtxMacro{\LWR@orig}{\DeclareBoldMathCommand}\ DeclareBoldMathCommand
4
5 \renewcommand{\DeclareBoldMathCommand}[3][bold]{%
6   \LWR@orig{\DeclareBoldMathCommand[#1]{#2}{#3}}%
7   \CustomizeMathJax{\newcommand{\bm}[1]{\boldsymbol{#1}}}%
8 }
9
10 \onlyinpreamble{\DeclareBoldMathCommand}
11
12 \CustomizeMathJax{\newcommand{\bm}[1]{\boldsymbol{#1}}}
13 \end{warpMathJax}
```

File 54 l warp-booklet.sty**§ 163 Package booklet**

(*Emulates or patches code by PETER WILSON.*)

booklet (*Pkg*) **booklet** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{booklet}[2009/09/02]

```

2 \newdimen\pageseplength
3 \newdimen\pagesepwidth
4 \newdimen\pagesepoffset
5 \newif\ifsidebyside    \sidebysidetrue
6 \newif\ifuselandscape \uselandscapefalse
7 \newif\ifprintoption   \printoptionfalse
8 \newcommand*\{\pagespersignature}[1]{}
9 \def\magstepminus#1{}
10 \newcommand*\{\target}[3]{}
11 \newcommand*\{\source}[3]{}
12 \newcommand*\{\setpdftargetpages}{}
13 \newcommand*\{\setdvipstargetpages}{}
14 \newcommand*\{\targettopbottom}{}
15 \newcommand*\{\twoupemptypage}{}
16 \newcommand*\{\twoupclearpage}{}
17 \newcommand*\{\checkforlandscape}{}

```

File 55 **l warp-bookmark.sty**

§ 164 Package **bookmark**

(Emulates or patches code by HEIKO OBERDIEK.)

bookmark (*Pkg*) **bookmark** is ignored.

for HTML output: Discard all options for **l warp-bookmark**:

```

1 \LWR@ProvidesPackageDrop{bookmark}[2016/05/17]

2 \newcommand*\{\bookmarksetup}[1]{}
3 \newcommand*\{\bookmarksetupnext}[1]{}
4 \newcommand*\{\bookmark}[2][]{}
5 \newcommand*\{\bookmarkdefinestyle}[2]{}
6 \newcommand*\{\bookmarkget}[1]{}
7 \newcommand{\BookmarkAtEnd}[1]{}

```

File 56 **l warp-booktabs.sty**

§ 165 Package **booktabs**

(Emulates or patches code by SIMON FEAR.)

booktabs (*Pkg*) **booktabs** is emulated during **HTML** output, and used as-is during print output and inside an **HTML** **lateximage**.

⚠ \cmidrule For **MATHJAX**, emulation is provided in math mode, but **\cmidrule** trim must not be used.

for HTML output: If **booktabs** has already been loaded before **l warp**, such as by **memoir**, use it as-is. If not, the **l warp** core will have placed some dummy macros which should be removed before loading the actual **booktabs** definitions.

```

1 \IfPackageLoadedTF{booktabs}{}{
2     \LetLtxMacro\toprule\relax
3     \LetLtxMacro\midrule\relax

```

```

4   \LetLtxMacro\cmidrule\cline
5   \LetLtxMacro\bottomrule\relax
6   \LetLtxMacro\addlinespace\relax
7   \LetLtxMacro\morecmidrules\relax
8   \LetLtxMacro\specialrule\relax
9 }

```

Next, load the `booktabs` package:

```
10 \LWR@ProvidesPackagePass{booktabs}[2019/10/08]
```

Adjust to work even if `xltabular` is loaded:

```

11 % \def\LWR@HTML@@BLTrule{\@BTnormal}
12 %
13 % \LWR@formatted{@BLTrule}
14 \LetLtxMacro{@BLTrule}{\@BTnormal}

15 \DeclareDocumentCommand{\LWR@HTML@toprule}{o d()}%
16   {%
17     \IfValueTF{#1}%
18       {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
19       {%
20         \ifbool{FormatWP}%
21           {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
22           {\booltrue{LWR@doingtbrule}}%
23       }%
24     \LWR@getmynexttoken}
25
26 \LWR@expandableformatted{toprule}
27
28 \DeclareDocumentCommand{\LWR@HTML@midrule}{o d()}%
29   {%
30     \IfValueTF{#1}%
31       {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
32       {%
33         \ifbool{FormatWP}%
34           {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
35           {\defaddtocounter{LWR@hlines}{1}}%
36       }%
37     \LWR@getmynexttoken}
38
39 \LWR@expandableformatted{midrule}
40
41 \DeclareDocumentCommand{\LWR@HTML@cmidrule}{O{\LWR@cmidrulewidth} d() m}{%
42   \LWR@docmidrule[#1](#2){#3}%
43   \LWR@getmynexttoken%
44 }%
45
46 \LWR@expandableformatted{cmidrule}
47
48 \DeclareDocumentCommand{\LWR@HTML@bottomrule}{o d()}{%
49   \IfValueTF{#1}%
50     {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
51     {%
52       \ifbool{FormatWP}%
53         {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalLaTeXcols}}}%
54         {\booltrue{LWR@doingtbrule}}%
55     }%

```

```

56     \LWR@getmynexttoken%
57 }%
58
59 \LWR@expandableformatted{bottomrule}
60
61 \DeclareDocumentCommand{\LWR@HTML@addlinespace}{o}{}
62
63 \LWR@expandableformatted{addlinespace}
64
65 \DeclareDocumentCommand{\LWR@HTML@morecmidrules}{}{%
66
67 \LWR@expandableformatted{morecmidrules}
68
69 \DeclareDocumentCommand{\LWR@HTML@specialrule}{m m m d()}{%
70   {\LWR@docmidrule[#1](){1-\arabic{LWR@tabletotalTeXcols}}\LWR@getmynexttoken}%
71
72 \LWR@expandableformatted{specialrule}

```

For MATHJAX:

```

73 \begin{warpMathJax}
74 \CustomizeMathJax{\newcommand{\toprule}[1][]{\hline}}
75 \CustomizeMathJax{\let\midrule\toprule}
76 \CustomizeMathJax{\let\bottomrule\toprule}
77 \CustomizeMathJax{\def\LWRbooktabscmidruleparens#1#2{}}
78 \CustomizeMathJax{\newcommand{\LWRbooktabscmidrulenoparens}[1]{}}
79 \CustomizeMathJax{\newcommand{\cmidrule}[1][]{%
80   \ifnextchar(\LWRbooktabscmidruleparens\LWRbooktabscmidrulenoparens%
81   {}}
82 \CustomizeMathJax{\newcommand{\morecmidrules}{}}
83 \CustomizeMathJax{\newcommand{\specialrule}[3]{\hline}}
84 \CustomizeMathJax{\newcommand{\addlinespace}[1][]{}}
85 \end{warpMathJax}

```

File 57 **l warp-bophook.sty**

§ 166 Package **bophook**

bophook (*Pkg*) bophook is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bophook}[2001/03/29]

```

2 \newcommand*\AtBeginPage[1]{}
3 \newcommand*\PageLayout[1]{}

```

File 58 **l warp-boundddvi.sty**

§ 167 Package **boundddvi**

boundddvi (*Pkg*) boundddvi is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{boundddvi}[2016/12/28]

File 59 l warp-boxedminipage.sty**§ 168 Package boxedminipage**

(Emulates or patches code by SCOTT PAKIN.)

boxedminipage (*Pkg*) boxedminipage is emulated for HTML, and used as-is for lateximages.

for HTML output:

```
1 \LWR@ProvidesPackagePass{boxedminipage}[2020/04/19]

2 \newenvironment{\LWR@HTML@boxedminipage}{%
3   \LWR@stoppars%
4   \begin{BlockClass}{framebox}%
5   \minipage{%
6   }%
7 {%
8   \endminipage%
9   \end{BlockClass}%
10 \LWR@startpars%
11 }%
12 \LWR@formattedenv{boxedminipage}
```

File 60 l warp-boxedminipage2e.sty**§ 169 Package boxedminipage2e**

(Emulates or patches code by SCOTT PAKIN.)

boxedminipage2e (*Pkg*) boxedminipage2e has been renamed boxedminipage by the author.

for HTML output: Automatically loads boxedminipage:

```
1 \LWR@ProvidesPackagePass{boxedminipage2e}
```

File 61 l warp-braket.sty**§ 170 Package braket**

(Emulates or patches code by DONALD ARSENEAU.)

braket (*Pkg*) braket works as-is for HTML with SVG math. For MATHJAX, the MATHJAX extension is used.

for HTML output: 1 \LWR@ProvidesPackagePass{braket}% No date is provided by the file.

```
2 \begin{warpMathJax}
3   \CustomizeMathJax{\require{braket}}
4 \end{warpMathJax}
```

File 62 **l warp-breakurl.sty**

§ 171 Package **breakurl**

(Emulates or patches code by VILAR CAMARA NETO.)

breakurl (*Pkg*) **breakurl** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{breakurl}[2013/04/10]

```

2 \LetLtxMacro\burl\LWR@url
3
4 \NewDocumentCommand{\LWR@burlalb}{O{} +m m}{%
5   \LWR@ensuredoingapar%
6   \LWR@subhyperref{#2}%

```

If use \LWR@subhyperref{text}@sanitized here, some forms of text may not expand correctly, and thus break.

```

7   \LWR@subhyperref{text}@unsanitized{#3}%
8   \endgroup% restore catcodes
9 }
10
11 \newrobustcmd*\burlalt{%
12   \begingroup%
13   \LWR@linkcatcodes%
14   \LWR@burlalb%
15 }
16
17 \LetLtxMacro\urlalt\burlalt

```

File 63 **l warp-breqn.sty**

§ 172 Package **breqn**

(Emulates or patches code by MICHAEL J. DOWNES, MORTEN HØGHOLM.)

breqn (*Pkg*) **breqn** is patched for use by **l warp**.

⚠ **darray** **darray** is not supported, and in fact does not work in the print version either.

While using **MATHJAX**, **breqn** objects are converted to SVG images.

for HTML output: 1 \LWR@ProvidesPackagePass{breqn}[2017/01/27]

```

2 \setkeys{breqn}{spread={5pt}}
3
4 \def\eqnumside{R}
5 % \def\eqnumplace{T}
6
7 \BeforeBeginEnvironment{dmath}{
8   \begin{BlockClass}{displaymathnumbered}

```

```
9      \LWR@newautoidanchor%
10     \booltrue{\LWR@indisplaymathimage}%
11     \begin{lateximage}[-breqn dmath- \MathImageAltText]
12 }
13
14 \AfterEndEnvironment{dmath}{
15     \end{lateximage}\end{BlockClass}
16 }
17
18 \BeforeBeginEnvironment{dmath*}{

19     \begin{BlockClass}{displaymath}
20     \LWR@newautoidanchor%
21     \booltrue{\LWR@indisplaymathimage}%
22     \begin{lateximage}[-breqn dmath*- \MathImageAltText]
23 }
24
25 \AfterEndEnvironment{dmath*}{

26     \end{lateximage}\end{BlockClass}
27 }
28
29 \BeforeBeginEnvironment{dseries}{

30     \begin{BlockClass}{displaymathnumbered}
31     \LWR@newautoidanchor%
32     \booltrue{\LWR@indisplaymathimage}%
33     \begin{lateximage}[-breqn dseries- \MathImageAltText]
34 }
35
36 \AfterEndEnvironment{dseries}{

37     \end{lateximage}\end{BlockClass}
38 }
39
40 \BeforeBeginEnvironment{dseries*}{

41     \begin{BlockClass}{displaymath}
42     \LWR@newautoidanchor%
43     \booltrue{\LWR@indisplaymathimage}%
44     \begin{lateximage}[-breqn dseries*- \MathImageAltText]
45 }
46
47 \AfterEndEnvironment{dseries*}{

48     \end{lateximage}\end{BlockClass}
49 }
50
51 \BeforeBeginEnvironment{dgroup}{

52     \begin{BlockClass}{displaymath}
53     \LWR@newautoidanchor%
54     \booltrue{\LWR@indisplaymathimage}%
55     \begin{lateximage}[-breqn dgroup- \MathImageAltText]
56 }
57
58 \AfterEndEnvironment{dgroup}{

59     \end{lateximage}\end{BlockClass}
60 }
61
62 \BeforeBeginEnvironment{dgroup*}{

63     \begin{BlockClass}{displaymath}
64     \LWR@newautoidanchor%
65     \booltrue{\LWR@indisplaymathimage}%
66     \begin{lateximage}[-breqn dgroup*- \MathImageAltText]
67 }
68
```

```

69 \AfterEndEnvironment{dgroup*}{
70     \end{lateximage}\end{BlockClass}
71 }

```

File 64 **l warp-bsheaders.sty**

§ 173 Package **bsheaders**

bsheaders (*Pkg*) *bsheaders* is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bsheaders}[1997/10/06]

File 65 **l warp-bussproofs.sty**

§ 174 Package **bussproofs**

(*Emulates or patches code by SAMUEL R. BUSS.*)

bussproofs (*Pkg*) *bussproofs* is used as-is for *HTML*, and emulated by *MATHJAX*'s extension.

⚠ **\DisplayProof** If not using *MATHJAX*, inline proofs with *\DisplayMath* must be placed inside a math expression.

If using *MATHJAX*, only the *prooftree* environment may be used, not *\DisplayProof*.

for HTML output: 1 \LWR@ProvidesPackagePass{bussproofs}% no date in file

```

2 \ifbool{mathjax}{
3     \CustomizeMathJax{\require{bussproofs}}
4
5     \NewEnviron{\LWR@HTML@prooftree}{%
6         {%
7             \boolexpr{\LWR@HTMLsanitize@tmpb@removebackslash}%
8             \LWR@doequation{\BODY}{prooftree}%
9         }%
10        [\LWR@doendequation{prooftree}]
11        \LWR@formattedenv{prooftree}
12    }% SVG HTML
13    \BeforeBeginEnvironment{prooftree}{%
14        \begin{lateximage}[-bussproofs-~\PackageDiagramAltText]%
15    }%
16    \AfterEndEnvironment{prooftree}{\end{lateximage}}
17 }

```

File 66 **l warp-bxpapersize.sty**

§ 175 Package **bxpapersize**

bxpapersize (*Pkg*) *bxpapersize* is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bxpapersize}[2017/10/08]

```
2 \providecommand*\papersizesetup{\bxpapersizesetup}
3 \newcommand*\bxpapersizesetup[1]{}
```

File 67 **l warp-bytefield.sty**

§ 176 Package **bytefield**

(Emulates or patches code by SCOTT PAKIN.)

bytefield (*Pkg*) **bytefield** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{bytefield}[2017/09/15]

```
2 \BeforeBeginEnvironment{bytefield}{%
3   \begin{lateximage}[-bytefield-\~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{bytefield}{\end{lateximage}}
```

File 68 **l warp-cancel.sty**

§ 177 Package **cancel**

cancel (*Pkg*) **cancel** is used as-is for SVG math, and emulated for HTML text output.

for HTML output: 1 \LWR@origRequirePackage{l warp-xcolor}% for \convertcolorspec
2 \LWR@ProvidesPackagePass{cancel}[2013/04/12]

\cancelto is math-only, so is used as-is.

\LWR@cancelcolor {⟨text⟩} {⟨color⟩} {⟨class⟩} {⟨colorstyle⟩} {⟨FormatWPstyle⟩}

Add colors if not empty:

```
3 \newcommand{\LWR@cancelcolor}[5]{%
4 \ifcsempty{#2}{%
5 {\InlineClass{#5}{#3}{#1}}{%
6 {\LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}}{%
7 }}
```

\cancel {⟨text⟩}

```
8 \DeclareRobustCommand{\LWR@HTML@cancel}[1]{%
9 \begingroup%
10 \CancelColor%
11 \LWR@findcurrenttextcolor%
12 \color{black}%
13 \LWR@cancelcolor{#1}{\LWR@tempcolor}{\sout}{text-decoration-color}%
14   {text-decoration:line-through}%
15 \endgroup%
16 }
17 \LWR@formatted{cancel}%
18
19 \LetLtxMacro\bcancel\cancel
20 \LetLtxMacro\xcancel\cancel
```

For MATHJAX:

```
21 \begin{warpMathJax}
22 \PackageNoteNoLine{l warp, cancel}{The MathJax v3 extension will be used}
23 \CustomizeMathJax{\require{cancel}}
24 \end{warpMathJax}
```

File 69 **l warp-canoniclayout.sty**

§ 178 Package **canoniclayout**

canoniclayout (*Pkg*) canoniclayout is ignored.

for HTML output: § \LWR@ProvidesPackageDrop{canoniclayout}[2011/11/05]

```
2 \newcommand*{\currentfontletters}{}%
3 \newcommand*{\charactersperpage}{}%
```

File 70 **l warp-caption.sty**

§ 179 Package **caption**

(Emulates or patches code by AXEL SOMMERFELDT.)

caption (*Pkg*) caption is patched for use by l warp.

for HTML output:

```
1 \typeout{---}
2 \typeout{Packages l warp and caption:}
3 \typeout{If a ‘‘Missing \protect\begin\protect{document\protect}’’ error occurs here,}
4 \typeout{try using: \space \protect\usepackage\protect{caption\protect}\space%}
5   \protect\captionsetup{options}}
6 \typeout{instead of: \protect\usepackage[options]\protect{caption\protect}.}
7 \typeout{---}
8
9 \LWR@ProvidesPackagePass{caption}[2023/08/05]

10 \VerifyCommand[l warp][caption]{\caption@iibox@}{AD79C5FACDA9F8F9977188D922E8AC12}
11
12 \long\def\caption@iibox@#1#2#3#4{%
13 %   \setbox\@tempboxa\hbox{#4}%
14   \caption@iibox{#1}{#2}{#3}%
15 %   [\wd\@tempboxa]%
16   []%                                l warp
17   [\captionbox@innerpos@default]%
18 %   {\unhbox\@tempboxa}%
19   {{#4}}%                                l warp
20 }

21 \VerifyCommand[l warp][caption]{\caption@iiibox}{62FC9237FCA80F5A607BF02D88C61601}
22
23 \long\def\caption@iiibox#1#2#3#4#5[#6][#7]#8{%
24   \begingroup
25   #1% set \caption@position
26   \caption@iftop{%
27     \endgroup
```

```

28      \minipage{fullwidth}                                lwarp
29      \parbox[t]{\linewidth}{%
30          #1\relax
31          \caption@setposition t%
32 %         #2%
33          {\caption#4{#5}}%
34 %         \captionbox@hrule
35 %         \csname caption@justification@\#7\endcsname
36          #8%
37      }%
38  }{%
39      \endgroup

40 %         \parbox[b]{#6}{%
41      \minipage{fullwidth}                                lwarp
42      \parbox[b]{\linewidth}{%
43          #1\relax
44          \caption@setposition b%
45 %         \csname caption@justification@\#7\endcsname
46          #8%
47 %         \captionbox@hrule
48 %         #3%
49          {\caption#4{#5}}%
50      }%
51  }%
52 }

```

\caption@makecaption

```

53 \VerifyCommand[lwarp][caption]{\caption@makecaption}{9E0A92DF71E248B2C7A3B4BB5190A2C5}
54
55 \long\def\caption@makecaption#1#2{%
56 %   \caption@make@above
57 %   \caption@make{#1}{#2}%
58 %   \caption@make@below
59 }
60
61 \AtBeginDocument{
62     \let\@makecaption\caption@makecaption
63 }

```

Appended to look ahead to the next token for \centering, etc:

```

64 \AtBeginDocument{
65 \xapptocmd{\@xfloat}
66     {\LWR@futureonospacelet\LWR@mynexttoken\LWR@floatalignment}
67     {}
68     {\LWR@patcherror{caption}{\@xfloat}}
69
70 \xapptocmd{\@dblfloat}
71     {\LWR@futureonospacelet\LWR@mynexttoken\LWR@floatalignment}
72     {}
73     {\LWR@patcherror{caption}{\@dblfloat}}
74 }

75 \VerifyCommand[lwarp][caption]{\caption@@@text}{C7253081E4F8EA695FF193E21855AA0A}
76
77 \long\def\caption@@@text#1#2#3[#4]#5{%
78     \begin{BlockClass}[figurecaption]\l warp

```

```

79  \begingroup
80    #3{\csname c@#1\endcsname #4\relax}%
81    #2{\caption@fnum{#1}{#5}%
82  \endgroup%
83  \end{BlockClass}%
84 }                                l warp

```

Updates for late patches for scrextend:

```

85 \caption@AtBeginDocument{
86 \IfPackageLoadedTF{l warp-scrextend}%
87   \LetLtxMacro\captionbelow\caption
88   \LetLtxMacro\captionabove\caption
89   \LetLtxMacro\captionofbelow\captionof
90   \LetLtxMacro\captionofabove\captionof
91 }{}%
92 }

```

File 71 l warp-caption3.sty

§ 180 Package **caption3**

(Emulates or patches code by AXEL SOMMERFELDT.)

caption3 (Pkg) **caption3** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{caption3}[2023/07/31]

```

\caption@@@make  {\langle caption label\rangle} {\langle caption text\rangle}
2 \IfPackageAtLeastTF{caption3}{2020/08/23}%
3 \VerifyCommand[l warp][caption3]{\caption@@@make}{F09A9BB05CE4EDF5A477D3CC2AE04F81}%
4 %
5 \renewcommand\caption@@@make[2]{%
6 \LWR@traceinfo{caption@@@make}%
7   \LWR@stopars%                                l warp
8 % \ifx\caption@fmt\@undefined\caption@format\fi
9 % \let\caption@lfmt\caption@labelformat
10 % \global\def\caption@tempa{gobbletwo}%
11 % \global\def\caption@tempb{}%
12 % \sbox\@tempboxa{%
13 %   \let\caption@ignorespaces\ignorespaces
14 %   \def\ignorespaces{%
15 %     \global\def\caption@tempb{two} "gobble" -> "gobbletwo"
16 %     % if \ignorespaces is used addtionally
17 %     \caption@ignorespaces}%
18 %   #1%
19 %   {\global\let\caption@tempa\@undefined\aftergroup\@gobble}%
20 %   {\global\def\caption@tempa{gobble\caption@tempb}}}%
21 % \ifdim\wd\@tempboxa=\z@
22 %   \gdef\caption@tempa{none}%
23 % \fi
24 % \ifx\caption@tempa\@undefined \else
25 %   \expandafter\caption@set{\labelseparator}{\caption@tempa}%
26 % \fi

```

```
27  \caption@ifempty{#2}{%
28    \caption@set{labelseparator}{none}%
29    \caption@set{textformat}{simple}%
30  }%
31  \caption@labelseparator % defines \caption@iflabelfont,
32 %           \caption@labelsep and \caption@labelsep@name
33 %           (the latter is needed by \caption@fmt)
34 %
35 %   \setpar{@par\caption@@par}\caption@@par
36  \caption@applyfont

\caption@fmt with plain format is defined as {#1#2#3\par}:

37 %  \caption@fmt
38  {\ifcaption@star\else
39    \begingroup
40      \captionlabelfont
41      \LWR@isolate{#1}%
42    \endgroup
43  \fi}%
44  {\ifcaption@star\else
45    \begingroup
46      \caption@iflabelfont\captionlabelfont
47      \relax\caption@labelsep
48    \endgroup
49  \fi}%
50  {{\captiontextfont
51      \let\\newline%
52  }%
53  \caption@textstart
54 %  \caption@ifstrut
55 %  {\vrule@height\ht\strutbox\@width\z@}%
56 %  {}%
57 %  \nobreak\hskip\z@skip % enable hyphenation
58  \LWR@isolate{\caption@textformat{#2}}% l warp
59 %  \caption@ifstrut
60 %  {\ifhmode\@finalstrut\strutbox\fi}%
61 %  {}%
62  \caption@textend}%
63  \LWR@startpars% l warp
64 \LWR@traceinfo{caption@@@make done}%
65 }
66 }% later than 2020/08/23
67 {% earlier than 2020/08/23
68 \renewcommand\caption@@@make[2]{%
69 \LWR@traceinfo{caption@@@make}%
70  \LWR@stoppars% l warp
71 %  \sbox@\tempboxa{#1}%
72 %  \ifdim\wd\@tempboxa=\z@
73 %    \let\caption@lsep\relax
74 %  \fi
75  \caption@ifempty{#2}{%
76    \let\caption@lsep\empty
77    \let\caption@tfmt\@firstofone
78  }%
79 %  \setpar{@par\caption@@par}\caption@@par
```

```

80 \caption@applyfont
81 %     \caption@fmt
82 { \ifcaption@star \else
83   \begingroup
84   \captionlabelfont
85   \LWR@isolate{\#1}%
86   \endgroup
87   \fi }%
88 { \ifcaption@star \else
89   \begingroup
90   \caption@iflf\captionlabelfont
91   \relax
92   \caption@lsep
93   \endgroup
94   \fi }%
95 { \%
96   \captiontextfont
97   \let\\newline%
98 %   \caption@ifstrut
99 %   {\vrule@height\ht\strutbox\@width\z@}%
100 %   {}%
101 %   \nobreak\hskip\z@skip % enable hyphenation
102   \LWR@isolate{\caption@tfmt{\#2}}%
103 %   \caption@ifstrut
104 %   {\ifhmode\@finalstrut\strutbox\fi}%
105 %   {}%
106   }%
107   \LWR@startpars%
108 \LWR@traceinfo{caption@@@make done}%
109 }
110 }% earlier than 2020/08/23

```

\caption@@make@

```

{ \langle \rangle } { \langle \rangle }

111 \VerifyCommand[lwarp][caption3]{\caption@@make@}{AD348E907B8F8B0BCAE57E72DE4A2035}
112 %
113 \renewcommand{\caption@@make@}[2]{%
114   \caption@stepthecounter%
115   \caption@beginhook%
116 %   \caption@box\hsize{%
117 %   \caption@singlerulecheck{\caption@slc{\#1}{\#2}\caption@singleline\caption@multiline}{\caption@mu
118 %   \caption@calcmargin
119 %   \caption@make@leftmargin
120 %   \caption@make@parbox{%
121 %     \caption@make@indention
122     \caption@@make{\#1}{\#2}%
123 %   }
124 %   \caption@make@rightmargin
125 % }%
126   \caption@endhook%
127 }

128 \DeclareCaptionBox{none}{\#2}
129 \DeclareCaptionBox{parbox}{%
130   \#2%
131 }

```

```

132 \DeclareCaptionBox{colorbox}{%
133     #2%
134 }

```

File 72 **l warp-cases.sty**

§ 181 Package **cases**

(Emulates or patches code by DONALD ARSENEAU.)

cases (*Pkg*) **cases** is patched for use by **l warp**.

While using MATHJAX, **cases** objects are converted to svg math images. The MathJax 3.2 **cases** package does not yet work with **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{cases}[2020/03/29]

```

2 \BeforeBeginEnvironment{numcases}%
3     \begin{BlockClass}{displaymathnumbered}
4     \LWR@newautoidanchor%
5     \booltrue{\LWR@indisplaymathimage}%
6     \begin{lateximage}[-cases- \MathImageAltText]
7 }
8
9 \AfterEndEnvironment{numcases}%
10    \end{lateximage}\end{BlockClass}
11 }
12
13 \BeforeBeginEnvironment{subnumcases}%
14     \begin{BlockClass}{displaymathnumbered}
15     \LWR@newautoidanchor%
16     \booltrue{\LWR@indisplaymathimage}%
17     \begin{lateximage}[-cases- \MathImageAltText]
18 }
19
20 \AfterEndEnvironment{subnumcases}%
21     \end{lateximage}\end{BlockClass}
22 }

```

File 73 **l warp-ccicons.sty**

§ 182 Package **ccicons**

(Emulates or patches code by MICHAEL UMMELS.)

ccicons (*Pkg*) **ccicons** is used as SVG images for HTML.

for HTML output: Discard all options for **l warp-ccicons**:

1 \LWR@ProvidesPackagePass{ccicons}[2017/10/30]

```

2 \newcommand{\LWR@ccicons}[2]{%
3     {\begin{lateximage}*[#1]\ccicons@font\char#2\end{lateximage}}%
4 }

```

```

5 \renewcommand{\ccicons@logo}{\LWR@ccicons{ccLogo}{0}}
6 \renewcommand{\ccicons@by}{\LWR@ccicons{ccAttribution}{1}}
7 \renewcommand{\ccicons@sa}{\LWR@ccicons{ccShareAlike}{2}}
8 \renewcommand{\ccicons@nd}{\LWR@ccicons{ccNoDerivatives}{3}}
9 \renewcommand{\ccicons@nc}{\LWR@ccicons{ccNonCommercial}{4}}
10 \renewcommand{\ccicons@nceu}{\LWR@ccicons{ccNonCommercialEU}{5}}
11 \renewcommand{\ccicons@ncjp}{\LWR@ccicons{ccNonCommercialJP}{6}}
12 \renewcommand{\ccicons@pd}{\LWR@ccicons{ccPublicDomain}{7}}
13 \renewcommand{\ccicons@zero}{\LWR@ccicons{ccZero}{8}}
14 \renewcommand{\ccicons@sampling}{\LWR@ccicons{ccSampling}{9}}
15 \renewcommand{\ccicons@share}{\LWR@ccicons{ccShare}{10}}
16 \renewcommand{\ccicons@remix}{\LWR@ccicons{ccRemix}{11}}
17 \renewcommand{\ccicons@copy}{\LWR@ccicons{ccCopy}{12}}
18 \renewcommand{\ccicons@pdalt}{\LWR@ccicons{ccPublicDomainAlt}{13}}

```

File 74 **l warp-centerlastline.sty**

§ 183 Package **centerlastline**

centerlastline (*Pkg*) **centerlastline** is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{centerlastline}[2020/10/12]

2 \providecommand{\centerlastline}{}
3 \def\endcenterlastline{\par}

```

File 75 **l warp-centernot.sty**

§ 184 Package **centernot**

(Emulates or patches code by HEIKO OBERDIEK.)

centernot (*Pkg*) **centernot** is used as-is for SVG math, and emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{centernot}[2016/05/16]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\require{centernot}}
4 \end{warpMathJax}

```

File 76 **l warp-changebar.sty**

§ 185 Package **changebar**

changebar (*Pkg*) **changebar** is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{changebar}[2018/03/09]

2 \newcommand*\{cbstart}{}
3 \newcommand*\{cbend}{}
4 \newenvironment*\{changebar\}{}{}

```

```

5 \newcommand*\cbdelete(){}
6 \newcommand*\nochnagebars(){}
7 \newcommand*\cbccolor}[1]{}
8 \newlength{\changebarwidth}
9 \newlength{\deletebarwidth}
10 \newlength{\changebarssep}
11 \newcounter{changebargrey}
```

File 77 **l warp-changelayout.sty**

§ 186 Package **changelayout**

(Emulates or patches code by AHMED MUSA.)

changelayout (*Pkg*) **changelayout** is patched for use by **l warp**.

for HTML output:

```

1 \LWR@ProvidesPackagePass{changelayout}[2009/10/07]

2 \renewrobustcmd\cpl@backtodefaults{}
3
4 \renewrobustcmd\cpl@checkifoddpage{%
5   \cpl@oddpagefalse%
6 }
7
8 \renewrobustcmd\changepagelayout[1]{%
9   \setkeys[KV]{changelay}{#1}%
10 }
11
12 \renewrobustcmd{\changetextlayout}[1]{\changepagelayout{#1}}
13
14 \renewrobustcmd\adjustpagelayout[1]{%
15   \setkeys[KV@X]{changelay}{#1}%
16 }
17
18 \renewrobustcmd{\adjusttextlayout}[1]{\adjustpagelayout{#1}}
19
20 \renewrobustcmd\adjusttextwidth[1]{%
21   \setkeys[KV]{changelay}{#1}%
22   \begin{BlockClass}[color:\LWR@colorstyle{named}{\cpl@textcolor}]{changelayout}
23     \color{\cpl@textcolor}%
24     \cpl@content
25   \end{BlockClass}
26 }
```

File 78 **l warp-changepage.sty**

§ 187 Package **changepage**

(Emulates or patches code by PETER WILSON.)

changepage (*Pkg*) **changepage** is ignored.

for HTML output: Discard all options for **l warp-changepage**:

```
1 \LWR@ProvidesPackageDrop{changepage}[2009/10/20]
```

```

2 \newif\ifoddpage
3 \DeclareRobustCommand{\checkoddpage}{\oddpagetrue}
4 \DeclareRobustCommand{\changetext}[5]{}
5 \DeclareRobustCommand{\changepage}[9]{}
6
7 \@ifundefined{adjustwidth}{}
8 \newenvironment{adjustwidth}[2]{}{}
9 \newenvironment{adjustwidth*}[2]{}{}
10 ){
11 \renewenvironment{adjustwidth}[2]{}{}
12 \renewenvironment{adjustwidth*}[2]{}{}
13 }

14 \DeclareDocumentCommand{\strictpagecheck}{}{ }
15 \DeclareDocumentCommand{\easypagecheck}{}{ }

```

File 79 **l warp-changes.sty**

§ 188 Package **changes**

(Emulates or patches code by EKKART KLEINOD.)

changes (*Pkg*) **changes** is patched for use by **l warp**.

⚠ **\comment** Use commandnameprefix=ifneeded to avoid a conflict with the **\comment** command when using **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{changes}[2021/07/15]

\BaseJobname is added to the label in case **xr** or **xr-hyper** are used.

```

2 \renewcommand{\ChangesListline}[4]{%
3   \IfIsInList{#1}{\Changes@loc@show}{%
4     \LWR@startpars%
5     #2: #3 \qquad%
6     \nameref{\BaseJobname-autopage-#4}%
7     \LWR@stoppars%
8   }{}%
9 }
10
11 \VerifyCommand[l warp][changes]{\listofchanges}{CDE77F21854A8C807FDF2CF756286B55}
12
13 \renewcommand{\listofchanges}[1][@\empty]{%
14 \setkeys{Changes@loc}{#1}%
15 \ifbool{Changes@optiondraft}{%
16 {%
17 \IfIsInList{\Changes@loc@style}{list|summary|compactsummary}%
18 {}%
19 {%
20 \PackageWarning{changes}{Wrong style for list of changes:%
21   '\Changes@loc@style', using 'list' instead.}%
22 \def\Changes@loc@style{}%
23 }%
24 \IfIsEmpty{\Changes@loc@style}{%
25 {\def\Changes@loc@style{list}}%
26 {}%

```

```
27 \IfStrEq{\Changes@loc@show}{all}%
28 {\def\Changes@loc@show{added|deleted|replaced|highlight|comment}}%
29 {}%
30 \IfIsInList{\Changes@loc@show}{added|deleted|replaced|highlight|comment}%
31 {}%
32 {%
33 \PackageWarning{changes}{Wrong show-value for list of changes: '\Changes@loc@show', using 'all' instead}
34 \def\Changes@loc@show{}%
35 }%
36 \IfIsEmpty{\Changes@loc@show}%
37 {\def\Changes@loc@show{added|deleted|replaced|highlight|comment}}%
38 {}%
39 \IfIsEmpty{\Changes@loc@title}%
40 {%
41 \IfStrEq{\Changes@loc@style}{list}%
42 {\def\Changes@heading{\listofchangesname}}{}%
43 \IfStrEq{\Changes@loc@style}{summary}%
44 {\def\Changes@heading{\summaryofchangesname}}{}%
45 \IfStrEq{\Changes@loc@style}{compactsummary}%
46 {\def\Changes@heading{\compactsummaryofchangesname}}{}%
47 }%
48 {\def\Changes@heading{\Changes@loc@title}}%
49 \section*\{\Changes@heading}
50 \IfIsInList{\Changes@loc@style}{list}%
51 {}%
52 \IfFileExists{\jobname.\Changes@locextension}%
53 {%
54 \newread\Changes@InFile%
55 \openin\Changes@InFile=\jobname.\Changes@locextension%
56 \loop\unless\ifeof\Changes@InFile%
57 \read\Changes@InFile to \Changes@Line%
58 \ifeof\Changes@InFile\else%
59 \Changes@Line%
60 \fi
61 \repeat
62 \closein\Changes@InFile%
63 }%
64 \emph{\changesnoloc}%
65 \PackageWarning{changes}{LaTeX rerun needed for list of changes}%
66 }%
67 }%
68 \IfIsInList{\Changes@loc@style}{summary|compactsummary}%
69 {}%
70 \IfFileExists{\jobname.\Changes@socextension}%
71 {%
72 \newread\Changes@InFile%
73 \openin\Changes@InFile = \jobname.\Changes@socextension%
74 \loop\unless\ifeof\Changes@InFile%
75 \read\Changes@InFile to \Changes@Line%
76 \ifeof\Changes@InFile\else%
77 \expandafter\changes@chopline\Changes@Line\\%
78 \textbf{%
79 \IfIsColored{%
80 {\color{\Changes@Incolor}}}}%
81 }%
82 \IfIsAnonymous{\Changes@Inid}%
83 {%
84     \LWR@textcurrentcolor{%
85         \changesauthorname: \changesanonymousname%
86     }%
87     l warp
88 }
```

```
87 }%
88 {%
89   \LWR@textcurrentcolor{%
90   \changesauthorname: \Changes@Inid%
91   }% l warp
92 \IfIsEmpty{\Changes@Inname}%
93 {}%
94 { %
95   \LWR@textcurrentcolor{%
96 (\Changes@Inname)%
97   }% l warp
98 }%
99 }%
100 }\%
101 \numdef{\Changes@InSum}{0}%
102 \renewcommand*{\do}[1]{%
103 \numdef{\Changes@InSum}{\Changes@InSum + \csuse{Changes@In#####1}}%
104 }%
105 \expandafter\dopsvlist\expandafter{\Changes@loc@show}%
106 \ifnumcomp{\Changes@InSum}{=}{0}%
107 {%
108 % \parbox{\Changes@summary@width}{%
109   \changesnochanges%
110 }% l warp
111 % \\[1ex] l warp
112   \par% \l warp
113 }%
114 {%
115 \numdef{\Changes@InCount}{0}%
116 \renewcommand*{\do}[1]{%
117 \numdef{\Changes@InCount}{\Changes@InCount + \csuse{Changes@In#####1}}%
118 \ifboolexpr{%
119 not test {\IfStrEq{\Changes@loc@style}{compactsummary}} or%
120 test {\ifnumgreater{\csuse{Changes@In#####1}}{0}}%
121 }%
122 {%
123 % \parbox{\Changes@summary@width}{%
124 \csuse{changes#####1name}~%
125 % \let\cleaders\leaders\dotfill~% l warp
126 \dotfill~% \l warp
127 \csuse{Changes@In#####1}%
128 }% l warp
129 % \ifnumless{\Changes@InCount}{\Changes@InSum}{%
130 {\\}%
131 % \\[1ex] l warp
132 }%
133 {}%
134 }%
135 \expandafter\dopsvlist\expandafter{\Changes@loc@show}%
136   \par% l warp
137 }%
138 \fi%
139 \repeat
140 \closein\Changes@InFile%
141 }{%
142 \emph{\changesnosoc}%
143 \PackageWarning{changes}{LaTeX rerun needed for summary of changes}%
144 }%
145 }{%
146 }{%
```

```
147 }
148
149 \VerifyCommand[lwarf][changes]{\Changes@Markup@comment}{23057A40141C9D1A0A173DCF1BD5DE55}
150
151 \renewcommand{\Changes@Markup@comment}[3]{%
152 \IfStrEq{\Changes@optioncommentmarkup}{todo}%
153 {%
154 \IfIsColored{%
155 {\colorlet{Changes@todocolor}{authorcolor}}%
156 {\colorlet{Changes@todocolor}{black}}%
157 \todo[color=Changes@todocolor!10, bordercolor=Changes@todocolor, linecolor=Changes@todocolor!70, nol%
158 }{}}%
159 \IfStrEq{\Changes@optioncommentmarkup}{margin}%
160 {%
161 \marginpar{%
162 \IfIsColored{%
163 {\leavevmode\color{authorcolor}}%
164 {}{%
165 \LWR@textcurrentcolor{} lwarf
166 \textbf{[\IfIsAnonymous{#2}{}{#3~}\arabic{Changes@commentCount#2}]:} #1%
167 } lwarf
168 }{%
169 }{}}%
170 \IfStrEq{\Changes@optioncommentmarkup}{footnote}%
171 {%
172 \footnote{%
173 \LWR@textcurrentcolor{} lwarf
174 \textbf{[\IfIsAnonymous{#2}{}{#3~}\arabic{Changes@commentCount#2}]:} #1%
175 } lwarf
176 }{%
177 }{}}%
178 \IfStrEq{\Changes@optioncommentmarkup}{uwave}%
179 {%
180 {%
181 \IfIsColored{%
182 {\color{authorcolor}}%
183 {}{%
184 \allowbreak%
185 \uwave{%
186 \textbf{[\IfIsAnonymous{#2}{}{#3~}\arabic{Changes@commentCount#2}]:} #1%
187 }{%
188 }{}}%
189 }{}}%
190 }{%
191
192 \VerifyCommand[lwarf][changes]{\Changes@output}{BD1ACDECB4BBA2D9181885F9EDC87F77}
193
194 \renewrobustcmd{\Changes@output}[7]{%
195 \ifbool{\Changes@optiondraft}{%
196 {%
197 \Changes@check@author{#2}%
198 \Changes@set@color{#2}%
199 {%
200 \IfIsInList{#1}{added|deleted|replaced|highlight}%
201 {%
202 \IfIsEmpty{#5}{%
203 {%
204 \IfIsAuthorEmptyAtPosition{#2}{left}{}}%
205 }{}}%
206 }{}}%
```

```
207 \IfIsColored%
208 {\color{authorcolor}}%
209 {}%
210     \LWR{textcurrentcolor}{%    l warp
211 \Changes@Markup@author{\Changes@output@author@position{#2}{left}}%
212 }% l warp
213 {}%
214 {}%
215 {}%
216 \IfStrEq{#1}{highlight}%
217 {}%
218 \IfIsColored%
219 {\color{authorcolor}}%
220 {}%
221 {}%
222     \LWR{textcurrentcolor}{%    l warp
223 \IfStrEq{#1}{added}{\Changes@Markup@added{#3}}{}%
224 \IfStrEq{#1}{deleted}{\Changes@Markup@deleted{#4}}{}%
225 \IfStrEq{#1}{replaced}{\Changes@Markup@added{#3}\allowbreak\Changes@Markup@deleted{#4}}{}%
226 \IfStrEq{#1}{highlight}{\Changes@Markup@highlight{#3}}{}%
227 }% l warp
228 {}%
229 \IfIsEmpty{#5}%
230 {}%
231 \IfIsEmptyAtPosition{#2}{right}%
232 {}%
233 {}%
234 \IfIsColored%
235 {\color{authorcolor}}%
236 {}%
237     \LWR{textcurrentcolor}{%    l warp
238 \Changes@Markup@author{\Changes@output@author@position{#2}{right}}%
239 }% l warp
240 {}%
241 {}%
242 \stepcounter{Changes@#1Count#2}%
243 {}%
244 \IfIsEmpty{#5}%
245 {}%
246 {}%
247 \stepcounter{Changes@commentCount#2}%
248 \Changes@set@commentcount{#2}%
249 \Changes@Markup@comment%
250 {#5}%
251 {#2}%
252 {\Changes@output@author{#2}}%
253 {}%
254 {}%
255 \IfIsEmpty{#2}%
256 {\def\Changes@locid{}}
257 {\def\Changes@locid{\~{#2}}}
258 \addtocontents{\Changes@locextension}{\protect\ChangesListline{#1}{#6\Changes@locid}{#7}{\thepage}}
259 {}%
260 {}%
261 \IfIsEmpty{#3}%
262 {@bsphack@\esphack}%
263 {#3}%
264 {}%
265 }
```

File 80 l warp-chappg.sty**§ 189 Package chappg**

(Emulates or patches code by ROBIN FAIRBAIRNS.)

chappg (*Pkg*) chappg is ignored.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{chappg}[2006/05/09]

2 \renewcommand{\pagenumbering}{2}[]{}
3 \providecommand{\chappgsep}{--}
```

File 81 l warp-chapterbib.sty**§ 190 Package chapterbib**

(Emulates or patches code by DONALD ARSENEAU.)

chapterbib (*Pkg*) chapterbib is patched for use by l warp.

for HTML output:

```
1 \LWR@ProvidesPackagePass{chapterbib}[2010/09/18]

2 \xdef\@savedjobname{\BaseJobname}
3 \let\@currentipfile\@savedjobname
```

File 82 l warp-chemfig.sty**§ 191 Package chemfig**

(Emulates or patches code by CHRISTIAN TELLECHEA.)

chemfig (*Pkg*) chemfig is patched for use by l warp.

If using \polymerdelim to add delimiters to a \chemfig, wrap both inside a single \teximage:

```
\begin{teximage}[-chemfig-~\PackageDiagramAltText]
\chemfig{...}
\polymerdelim[...]{...}
\end{teximage}
```

The images are not hashed because they depend on external settings which may be changed at any time, and are unlikely to be reused inline anyhow.

for HTML output:

```
1 \LWR@ProvidesPackagePass{chemfig}[2021/02/28]

2 \catcode`\_=11
3
4 \IfPackageAtLeastTF{chemfig}{2020/03/05}
```

```
5 {
6   \xpretocmd\charge{\begin{ lateximage }[-chemfig-~\PackageDiagramAltText]}
7     {}{\LWR@patcherror{chemfig}{charge}}
8   \xpretocmd\Charge{\begin{ lateximage }[-chemfig-~\PackageDiagramAltText]}
9     {}{\LWR@patcherror{chemfig}{Charge}}
10  \xapptocmd\charge_c{\end{ lateximage }}
11    {}{\LWR@patcherror{chemfig}{charge_c}}
12 }{}
13
14 \IfPackageAtLeastTF{chemfig}{2019/04/18}%
15 {%
16   2019/04/18 or newer
17
18   \xpretocmd{\CF_chemfiga}
19     {\begin{ lateximage }[-chemfig-~\PackageDiagramAltText]}
20     {}{\LWR@patcherror{chemfig}{CF_chemfiga}}
21
22   \VerifyCommand[lwarf][chemfig]{\CF_chemfigb}{7B199210755F37B1BCD036567614BA34}
23
24   \xpatchcmd{\CF_chemfigb}
25     {\let\CF_flipstate\CF_zero}
26     {\end{ lateximage }\let\CF_flipstate\CF_zero}
27     {}{\LWR@patcherror{chemfig}{CF_chemfigb}}
28
29   \GlobalLetLtxMacro{\LWR@chemfig@origCF_lewisc}{\CF_lewisc}
30   \gdef\CF_lewisc#1,#2\_\nil{%
31     \begin{ lateximage }[-chemfig-~\PackageDiagramAltText]%
32       \LWR@chemfig@origCF_lewisc#1,#2\_\nil
33     \end{ lateximage }
34   }
35
36   \gpreto{\schemestart}{%
37     \begin{ lateximage }[-chemfig-~\PackageDiagramAltText]%
38   }
39   \gappto{\CF_schemestop}{\end{ lateximage }}
40
41 }%
42 {%
43   2019/04/18 or newer
44   older than 2019/04/18
45
46   \LetLtxMacro{\LWR@chemfig@origchemfig}{\chemfig}
47
48   \DeclareDocumentCommand{\chemfig}{s O{} O{} m}{%
49     \begin{ lateximage }[-chemfig-~\PackageDiagramAltText]%
50       \IfBooleanTF{#1}{%
51         \LWR@chemfig@origchemfig*[#2][#3]{#4}%
52       }{%
53         \LWR@chemfig@origchemfig[#2][#3]{#4}%
54       }
55     \end{ lateximage }
56   }
57
58   \LetLtxMacro{\LWR@chemfig@origCF@lewis@b}{\CF@lewis@b}
59
60   \def\CF@lewis@b#1#2{%
61     \begin{ lateximage }[-chemfig-~\PackageDiagramAltText]%
62       \LWR@chemfig@origCF@lewis@b{#1}{#2}%
63     \end{ lateximage }
64   }
65
66   \preto{\schemestart}{%
67     \begin{ lateximage }[-chemfig-~\PackageDiagramAltText]%
```

```

64      }
65      \appto{\CF@schemestop}{\end{lateximage}}
66
67 }% older than 2019/04/18
68
69 \catcode`\_=8%
70
71
72 \LetLtxMacro{\LWR@chemfig}{\origchemleft\chemleft}
73 \def\chemleft#1#2\chemright#3{%
74 \begin{ lateximage }[-chemfig-~\PackageDiagramAltText]{%
75 \LWR@chemfig{\origchemleft#1#2\chemright#3}%
76 \end{ lateximage }%
77 }
78 \end{ lateximage }%
79 }
80
81 \LetLtxMacro{\LWR@chemfig}{\origchemup\chemup}
82
83 \def\chemup#1#2\chemdown#3{%
84 \begin{ lateximage }[-chemfig-~\PackageDiagramAltText]{%
85 \LWR@chemfig{\origchemup#1#2\chemdown#3}%
86 \end{ lateximage }%
87 }

```

File 83 l warp-chemformula.sty

§ 192 Package **chemformula**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

chemformula (Pkg) **chemformula** is patched for use by **l warp**.

The SVG images are hashed according to contents and local options. Global options are assumed to be constant document-wide.

⚠ chemformula with MATHJAX **chemformula** works best without MATHJAX. If MATHJAX is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The **chemformula** package adapts to `array`, but does not know about MATHJAX, and MATHJAX does not know about **chemformula**.)

While using MATHJAX, `\displaymathother` may also be used for other forms of display and inline math which contain **chemformula** expressions.

for HTML output:

```

1 \LWR@ProvidesPackagePass{chemformula}[2022/01/23]
2 \ExplSyntaxOn

```

\ch Enclose in an inline SVG image or MATHJAX. The alt tag is the contents of the `\ch` expression. The filename is hashed, and also has additional hashing information based on the local options.

```

3 \VerifyCommand[l warp][chemformula]{\ch}{6D4331F95E9FF2E011E310B1F8C5487E}
4
5 \RenewDocumentCommand \ch { O{}m }
6   {%

```

To work inside align with \displaymathother, a simple version must be used to work with chemformula's adaptation to align.

```
7   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8   {
9     \chemformula_ch:nn {#1} {#2}%
10    }%
```

If used as the outer level, must temporarily ensure MATHJAX is disabled:

```
11  {
12    \begingroup%
13    \boolfalse{mathjax}%
```

An inline image is used, adjusted for the baseline:

```
14  \LWR@subsingle$*% l warp
15  \textbackslash{}%
16  ch%
17  \{%
18    \LWR@HTMLsanitizedetokenized{\detokenize{#2}}%
19    \}%
20  \}%
21  \protect\LWR@HTMLsanitizedetokenized{%
22    \detokenize\expandafter{#1}%
23    }%
24  \}%
25  \{%
26    \chemformula_ch:nn {#1} {#2}%
27  \}%
28  \endgroup%
29  }
30 }
```

\chcpd

Similar to \ch.

```
31 \IfPackageAtLeastTF{chemformula}{2019/10/13}%
32
33 \VerifyCommand[l warp][chemformula]{\chemformula_chcpd:nn}
34   {C1E882F2C1137D429AE4F789C84E7428}
35
36 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
37  {
38    \begingroup%
39    \boolfalse{mathjax}%
40    \LWR@subsingle$*% l warp
41    \textbackslash{}%
42    chcpd%
43    \{%
44      \LWR@HTMLsanitizedetokenized{\detokenize{#2}}%
45    \}%
46  \}%
47  \protect\LWR@HTMLsanitizedetokenized{\detokenize\expandafter{#1}}%
48  \}%
49  \group_begin:
50  \tl_if_blank:nF {#2}
51  {
52    \keys_set:nn {chemformula} {#1}
53    \__chemformula_save_catcodes:
54    \__chemformula_sanitize:Nn
55    \l__chemformula_chemformula_tmpa_tl
56    {#2}
```

```

57      \__chemformula_input_compound_no_check:NV
58          \l__chemformula_compound_tl
59          \l__chemformula_chemformula_tmpa_tl
60      \__chemformula_prepare_output:NV
61          \l__chemformula_compound_tl
62          \l__chemformula_catcodes_tl
63      \chemformula_write:V \l__chemformula_compound_tl
64  }
65 \group_end:
66 }
67 \endgroup
68 }
69 }% later than 2019/10/13
70 {%
71 % \changes{v0.903}{2021/12/18}{\pkg{chemformula}}: Improved alt tag sanitization.}
72 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
73 {
74     \begingroup%
75     \boolfalse{mathjax}%
76     \LWR@subsingledollar*{%
77         \l warp
78         \textbackslash{}%
79         chcpd%
80         \{%
81             \LWR@HTMLsanitizeddetokenized{\detokenize{#2}}%
82         \}%
83         \protect\LWR@HTMLsanitizeddetokenized{\detokenize\expandafter{#1}}%
84     }%
85     \original
86     \group_begin:
87         \tl_if_blank:nF {#2}
88         {
89             \keys_set:nn {chemformula} {#1}
90             \__chemformula_save_catcodes:
91             \__chemformula_sanitize:Nn
92                 \l__chemformula_chemformula_tmpa_tl
93                 {#2}
94             \__chemformula_input_compound_no_check:NV
95                 \l__chemformula_compound_tl
96                 \l__chemformula_chemformula_tmpa_tl
97             \__chemformula_prepare_output:N \l__chemformula_compound_tl
98                 \chemformula_write:V \l__chemformula_compound_tl
99         }
100    \group_end:
101 }
102 \endgroup
103 }% earlier than 2019/10/13

```

\charrow

If standalone, appears in a regular `lateximage`.

```

104 \VerifyCommand[l warp][chemformula]{\charrow}
105     {31D2B3405541C0B128504C94C5046713}
106
107 \RenewDocumentCommand \charrow { mO{}O{} }
108 {
109     \begin{lateximage}[-chemformula- charrow]
110     \group_begin:
111         \__chemformula_draw_arrow:nnn {#1} {#2} {#3}
112     \group_end:
113     \end{lateximage}

```

```
114 }
```

\chname If standalone, appears in a regular `lateximage`, hashed according to contents.

```
115 \VerifyCommand[l warp][chemformula]{\chname}
116   {3C697C09415EE601DE035EEDD6D3BA4D}
117
118 \RenewDocumentCommand \chname { R(){}R(){} }
119 {
120   \begin{lateximage}*[%
121     \textbackslash%
122     chname%
123     (\LWR@HTMLsanitizeddetokenized{\detokenize{\#1}})%
124     (\LWR@HTMLsanitizeddetokenized{\detokenize{\#2}})%
125   ]*%
126   \chemformula_chwritebelow:nn {\#1} {\#2}
127   \end{lateximage}
128 }
```

\chlewis Placed inline, hashed according to contents and options.

```
129 \VerifyCommand[l warp][chemformula]{\chlewis}
130   {371F2DD32AA98170F43CFDA71177226B}
131
132 \RenewDocumentCommand \chlewis { O{}mm }
133 {
134   \begingroup%
135   \boolfalse{mathjax}%
136   \LWR@subsingledollar*{\textbackslash chlewis{\#2}\{\#3\}}%
137   {
138     \protect\LWR@HTMLsanitizeddetokenized{\detokenize\expandafter{\#1}}%
139   }%
140   \chemformula_lewis:nnn {\#1} {\#2} {\#3}
141 }
142 \endgroup%
143 }
```

`l warp` redefines the \$ character, so special handling is required to escape math expressions inside `\ch`.

This boolean tracks a new kind of escaped math:

```
144 \bool_new:N      \l__chemformula_first_last_LWRdollar_bool
```

\chemformula_input_escape_math

Adds additional escaping for the new dollar definition:

```
145 \VerifyCommand[l warp][chemformula]{\__chemformula_input_escape_math:n}
146   {5318E84E9168C2F123781D2EA8CFA871}
147
148 \cs_gset_protected:Npn \__chemformula_input_escape_math:n #1
149 {
150   \__chemformula_first_last_math:n {\#1}
151   \bool_if:NT \l__chemformula_first_last_dollar_bool
152   {
153     \bool_set_true:N \l__chemformula_first_last_math_bool
154     \__chemformula_read_escape_dollar:w #1 \q_nil
155   }
```

```

156   \bool_if:NT \l__chemformula_first_last_mathbraces_bool
157   {
158     \bool_set_true:N \l__chemformula_first_last_math_bool
159     \__chemformula_read_escape_mathbraces:w #1 \q_nil
160   }

```

Added by l warp:

```

161   \bool_if:NT \l__chemformula_first_last_LWRdollar_bool%      l warp
162   {
163     \bool_set_true:N \l__chemformula_first_last_math_bool% l warp
164     \__chemformula_read_escape_LWRdollar:w #1 \q_nil%      l warp
165   }
166 }

```

\chemformula_read_escape_LWRdollar

The following parses the contents inside the new dollars.

l warp keeps the dollar as its original math shift until the document starts. While chemmacros is being patched, the dollar must temporarily be set to its new meaning during the following definition.

```

167 \begingroup
168 \catcode`\$=\active
169
170 \cs_new_protected:Npn \__chemformula_read_escape_LWRdollar:w $#1$ \q_nil
171 {
172   \__chemformula_read_escape_math:n {#1}
173 }
174
175 \endgroup

```

\chemformula_bool_set_if_first_last

The following looks at the first and last tokens for delimiters to escape math inside \ch. The original definition is modified to look for the control sequences which are used by the new meaning of \$.

```

176 \cs_new_protected:Npn \__chemformula_bool_cs_set_if_first_last:NnNN #1#2#3#4
177 {
178   \int_zero:N \l__chemformula_tmpa_int
179   \int_zero:N \l__chemformula_tmpb_int
180   \int_set:Nn \l__chemformula_tmpa_int { \tl_count:n {#2} }
181   \tl_map_inline:nn {#2}
182   {
183     \int_incr:N \l__chemformula_tmpb_int
184     \int_compare:nT { \l__chemformula_tmpb_int = 1 }
185   }

```

At the start, the cs_ version compares control sequences:

```

186           \ifdefstreq{##1}{#3}% l warp
187           {
188             \bool_set_true:N #1
189           }% l warp
190           {}
191         }

```

At the end, compare more control sequences:

```

192      \int_compare:nT { \l__chemformula_tmpb_int = \l__chemformula_tmpa_int }
193      {
194          \ifdefstreq{##1}{#4}
195          {}
196          {
197              \bool_set_false:N #1
198          }
199      }
200  }
201 }
```

\chemformula_first_last_math

Modified to check for the new meaning of \$ at first/last:

```

202 \VerifyCommand[l warp][chemformula]{\__chemformula_first_last_math:n}
203 {B464BC6E81CAC84BE00FEE988970CE96}
204
205 \cs_gset_protected:Npn \__chemformula_first_last_math:n #1
206 {
207     \bool_set_false:N \l__chemformula_first_last_math_bool
208     \bool_set_false:N \l__chemformula_first_last_dollar_bool
209     \bool_set_false:N \l__chemformula_first_last_LWRdollar_bool% l warp
210     \bool_set_false:N \l__chemformula_first_last_mathbraces_bool
211     \__chemformula_bool_set_if_first_last:Nnnn
212         \l__chemformula_first_last_dollar_bool
213         {#1}
214         { $ } { $ }
215     \bool_if:NF \l__chemformula_first_last_dollar_bool
216     {
217         \__chemformula_bool_set_if_first_last:Nnnn
218             \l__chemformula_first_last_mathbraces_bool
219             {#1}
220             { \( } { \) }
```

Added by l warp:

```

221     \bool_if:NF \l__chemformula_first_last_mathbraces_bool% l warp
222     {
223         \__chemformula_bool_cs_set_if_first_last:NnNN
224         \l__chemformula_first_last_LWRdollar_bool
225         {#1}
226         { \LWR@newsingledollar } { \LWR@newsingledollar }
227     }% l warp
228 }
229 }
```

230 \ExplSyntaxOff

File 84 **l warp-chemgreek.sty**§ 193 Package **chemgreek**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

chemgreek (*Pkg*) chemgreek is patched for use by l warp.

Greek symbols To use text-mode symbols, use packages **textalpha** or **textgreek**. Using the other

⚠️ **package selection** packages supported by `chemgreek` will result in math-mode greek characters, which will result in SVG images being used. These images will be hashed.

⚠️ **X_EL^AT_EX, L_Ua_L^AT_EX** If using X_EL^AT_EX or L_Ua_L^AT_EX, select the `fontspec` mapping:

```
\selectchemgreekmapping{fontspec}
```

for HTML output: 1 \LWR@ProvidesPackagePass{chemgreek}[2020/01/16]

```
2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemgreek_text:n #1
5   { { \text {#1} } }
6
7 \appto\LWR@restoreorigformatting{%
8 \cs_set_protected:Npn \chemgreek_text:n #1%
9   { \ensuremath { \text {#1} } } }
10 }
11
12 \ExplSyntaxOff
```

File 85 l warp-chemmacros.sty

§ 194 Package **chemmacros**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

chemmacros (Pkg) `chemmacros` is patched for use by `l warp`.

for HTML output: 1 \LWR@ProvidesPackagePass{chemmacros}[2022/02/13]

SVG file hashing assumes that the relevant options are constant for the entire document.

§ 194.1 Changes to the user's document

⚠️ **\makepolymerdelims** When using `\makepolymerdelims`, enclose the entire expression inside a `polymerdelims` environment, such as (from the `chemmacros` manual):

```
\begin{polymerdelims}
\chemfig{-[@{op},.75]CH_2-CH(-[6]Cl)-[@{cl},0.25]}
\makepolymerdelims{5pt}[27pt]{op}{cl}
\end{polymerdelims}
```

⚠️ **redox reactions** Redox reactions must be enclosed inside a `redoxreaction` environment. For print output, extra space must be included above and/or below the result, so they are declared as arguments to the environment, instead of being manually entered as per the `chemmacros` manual. For HTML output, the extra space is ignored and a `lateximage` is used instead.

```
\begin{redoxreaction}{7mm}{7mm}
\OX{a,Na} $ \rightarrow $ \OX{b,Na}\pch\redox(a,b){oxidation}
\end{redoxreaction}
```

§ 194.2 Code

```
2 \ExplSyntaxOn
```

§ 194.3 Loading packages

Also accept the **lwarp** version. `\VerifyCommand` not used here because it doesn't work with the conditional.

```
3 \prg_set_conditional:Npn \chemmacros_if_package_loaded:n #1 {p,T,F,TF}
4  {
5    \cs_if_exist:cTF {ver@#1.sty}
6    { \prg_return_true: }
7    {
8      \cs_if_exist:cTF {ver@lwarp-#1.sty}
9      { \prg_return_true: }
10     { \prg_return_false: }
11   }
12 }
```

Nullify `hyperref` detection:

```
13 \hook_gput_code:nnn {begindocument/end} {chemmacros}
14 {
15   \bool_set_false:N \l__chemmacros_hyperref_bool
16 }
```

§ 194.4 Loading modules

Patching `chemmacros` modules must be done `\AtBeginDocument`, since modules are invoked by the user in the preamble, and each patch is only done if the module is loaded.

§ 194.5 New environments

`\makepolymerdelims` and `redox` reactions must be enclosed in a `lateximage` during `HTML` output. These environments are provided here in `HTML` mode, and in the **lwarp** core in print mode, as a high-level semantic syntax which automatically embeds the contents in a `lateximage` with an appropriate `alt` tag.

Env `polymerdelims`

```
17 \DeclareDocumentEnvironment{polymerdelims}{}{%
18 { \begin{ lateximage }[-chemmacros- polymer] }{%
19 { \end{ lateximage } }}
```

Env `redoxreaction`

{<space above>} {<space below>}

For `HTML` output, the above and below space is ignored, and a `lateximage` is used instead. For the print output version, see section 90.

```
20 \DeclareDocumentEnvironment{redoxreaction}{m m}{%
21 { \begin{ lateximage }[-chemmacros- redoxreaction] }{%
22 { \end{ lateximage } }}
```

§ 194.6 Acid-base

```
23 \AtBeginDocument{  
24 \chemmacros_module_if_loaded:nTF{{acid-base}}{  
25 \PackageInfo{l warp}{Patching~chemmacros~module~acid-base}  
26  
27 \VerifyCommand[l warp][chemmacros]{\chemmacros_p:n}  
28 {D95080E9783CB80E34C51221236CF370}  
29  
30 \cs_gset_protected:Npn \chemmacros_p:n #1  
31 {  
32   \begingroup  
33   \boolfalse{mathjax}  
34   \LWR@subsingledollar*{  
35     \textbackslash{}%  
36     p%  
37     \{ %  
38     \LWR@HTMLsanitizeddetokenized{\detokenize{\#1}}%  
39     \}  
40 }{  
41   \chemmacrosp%  
42   \protect\LWR@HTMLsanitizeddetokenized{\detokenize\expandafter{\#1}}%  
43 }{  
44 \group_begin:  
45   \mbox  
46   {  
47     \chemmacros_p_style:n {p}  
48     \ensuremath {\#1}  
49   }  
50 \group_end:  
51 }  
52 \endgroup  
53 }  
54  
55 \VerifyCommand[l warp][chemmacros]{\pH}  
56 {89B9008750937C7614F2A5204D5DDD16}  
57  
58 \RenewDocumentCommand \pH {} {  
59   \begingroup  
60   \boolfalse{mathjax}  
61   \LWR@subsingledollar*{\textbackslash{}pH}{chemmacros}{  
62     \chemmacros_p:n { \chemmacros_formula:n {H} }  
63   }  
64 \endgroup  
65 }  
66  
67 \VerifyCommand[l warp][chemmacros]{\pOH}  
68 {3193E23422822579C0D2B2C10371BF84}  
69  
70 \RenewDocumentCommand \pOH {} {  
71   \begingroup  
72   \boolfalse{mathjax}  
73   \LWR@subsingledollar*{\textbackslash{}pOH}{chemmacros}{  
74     \chemmacros_p:n { \chemmacros_formula:n {OH} }  
75   }  
76 \endgroup  
77 }  
78  
79 \VerifyCommand[l warp][chemmacros]{\pKa}  
80 {C4141E480C360A8EDAE38B65F71F5B1F}
```

```
81
82 \RenewDocumentCommand \pKa {0{}}
83 {
84   \begingroup
85   \boolfalse{mathjax}
86   \LWR@subsingledollar*\{\textbackslash{}pKa{[]#1{}}\}{chemmacros #1}{
87     \chemmacros_p:n
88     {
89       \Ka \ifblank {#1} {}
90       { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
91     }
92   }
93   \endgroup
94 }
95
96 \VerifyCommand[lwarf][chemmacros]{\pKb}
97 {00A20E25465C2E0D2E3731634F39B0FA}
98
99 \RenewDocumentCommand \pKb {0{}}
100 {
101   \begingroup
102   \boolfalse{mathjax}
103   \LWR@subsingledollar*\{\textbackslash{}pKb{[]#1{}}\}{chemmacros #1}{
104     \chemmacros_p:n
105     {
106       \Kb \ifblank {#1} {}
107       { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
108     }
109   }
110   \endgroup
111 }
112
113 \LetLtxMacro{\LWR@chemmacros@origKa}{\Ka}
114 \renewcommand*{\Ka}{%
115   \begingroup
116   \boolfalse{mathjax}
117   \LWR@subsingledollar*\{\textbackslash{}Ka\}{chemmacros}%
118   \LWR@chemmacros@origKa%
119 }%
120 \endgroup
121 }
122
123 \LetLtxMacro{\LWR@chemmacros@origKb}{\Kb}
124 \renewcommand*{\Kb}{%
125   \begingroup
126   \boolfalse{mathjax}
127   \LWR@subsingledollar*\{\textbackslash{}Kb\}{chemmacros}%
128   \LWR@chemmacros@origKb%
129 }%
130 \endgroup
131 }
132
133 \LetLtxMacro{\LWR@chemmacros@origKw}{\Kw}
134 \renewcommand*{\Kw}{%
135   \begingroup
136   \boolfalse{mathjax}
137   \LWR@subsingledollar*\{\textbackslash{}Kw\}{chemmacros}%
138   \LWR@chemmacros@origKw%
139 }%
140 \endgroup
```

```

141 }
142
143 }{}% module loaded
144 }% AtBeginDocument

```

§ 194.7 Charges

```

145 \AtBeginDocument{
146 \chemmacros_module_if_loaded:nTF{{charges}}{
147 \PackageInfo{l warp}{Patching~chemmacros~module~charges}
148
149 \VerifyCommand[l warp][chemmacros]{\fplus}
150   {F6F7137115BC798D4CA779782DCCEB6D}
151
152 \cs_gset_protected:Npn \fplus {
153   \begingroup
154   \boolfalse{mathjax}
155   \LWR@subsinglebackslash{\fplus}{chemmacros}
156   { \LWR@origensuredmath{\chemformula_fplus:} }
157   \endgroup
158 }
159
160 \VerifyCommand[l warp][chemmacros]{\fminus}
161   {A7ED8520C49A794F33AA6122E2411746}
162
163 \cs_gset_protected:Npn \fminus {
164   \begingroup
165   \boolfalse{mathjax}
166   \LWR@subsinglebackslash{\fminus}{chemmacros}
167   { \LWR@origensuredmath{\chemformula_fminus:} }
168   \endgroup
169 }
170
171 }{}% Module loaded.
172 }% AtBeginDocument

```

§ 194.8 Nomenclature

```

173 \AtBeginDocument{
174 \chemmacros_module_if_loaded:nTF{{nomenclature}}{
175 \PackageInfo{l warp}{Patching~chemmacros~module~nomenclature}
176
177 \VerifyCommand[l warp][chemmacros]{\chemmacros_charge:n}
178   {258D97BF6FF3FA5C995D4FDCC44B0E63}
179
180 \cs_gset_protected:Npn \chemmacros_charge:n #1
181 {
182   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}
183   {\chemmacros_formula:n { {}^{#1} } }
184   {
185     \ifmmode
186       {\chemmacros_formula:n { {}^{#1} } }
187     \else
188       { \textsuperscript{\ensuremath{#1}} }
189     \fi
190   }
191 }

```

192

```
193 \hook_gput_code:nnn {begindocument/end} {chemmacros}
194 {
195 \protected\def\LWR@HTML@chemprime { \HTMLunicode{2032} }
196 \LWR@formatted{chemprime}
197 }

198 \VerifyCommand[l warp][chemmacros]{\chemmacros_cip:n}
199   {EEF7D8AF4D975C2D11D879A77ABDFF88}
200
201 \cs_gset_protected:Npn \__chemmacros_cip:n #1
202 {
203   \tl_set:Nn \l__chemmacros_tmpa_tl {#1}
204   \int_step_inline:nnnn {0} {1} {9}
205   {
206     \tl_replace_all:Nnn \l__chemmacros_tmpa_tl
207       {##1}
208       { \l__chemmacros_cip_number_tl ##1 }
209   }
210   {
211     \l__chemmacros_cip_inner_tl
212     \LWR@textcurrentcolor{\LWR@textcurrentfont \% l warp
213       \l__chemmacros_tmpa_tl
214     }% l warp
215   }
216 }

217 \VerifyCommand[l warp][chemmacros]{\Sconf}
218   {D7A87543D1C944168CBAC59E9F45DF9A}
219
220 \RenewDocumentCommand \Sconf { 0{S} } {
221 \begin{ lateximage }[ \textbackslash textbackslash {} Sconf {[}]{} ]{*}
222   \chemmacros_sconf:n {#1}
223 \end{ lateximage }
224 }
225
226 \VerifyCommand[l warp][chemmacros]{\Rconf}
227   {AB922016338B2F2C2635E6104311DAF2}
228
229 \RenewDocumentCommand \Rconf { 0{R} } {
230 \begin{ lateximage }[ \textbackslash textbackslash {} Rconf {[}]{} ]{*}
231   \chemmacros_rconf:n {#1}
232 \end{ lateximage }
233 }

234 \VerifyCommand[l warp][chemmacros]{\chemmacros_hapto:n}
235   {FCEEDAB3292A95E65B69F4F8C8849B26}
236
237 \cs_gset_protected:Npn \chemmacros_hapto:n #1
238 {
239   \begingroup
240   \boolfalse{mathjax}
241   \LWR@singledollar*{ \textbackslash textbackslash {} hapto \{#1\} }{chemmacros}{%
242     \chemmacros_coordination_symbol:nnnn
243     { \l__chemmacros_coord_use_hyphen_bool }
244     {
245       { \c_true_bool }
246     }
247     { \chemeta }
248     {#1}
249   }

```

```

250     \endgroup
251 }
252
253 \VerifyCommand[lwarf][chemmacros]{\chemmacros_dento:n}
254     {E85BBDEF5A35F37215EBAD87AFCB99E8}
255
256 \cs_gset_protected:Npn \chemmacros_dento:n #1
257 {
258     \begingroup
259     \boolfalse{mathjax}
260     \LWR@subsingledollar*\{\textbackslash{}dento\{\#1\}\}{chemmacros}{
261         \chemmacros_coordination_symbol:nnnn
262         { \l_chemmacros_coord_use_hyphen_bool }
263         {
264             \c_true_bool
265         }
266         { \chemkappa }
267         {\#1}
268     }
269     \endgroup
270 }
271
272 \VerifyCommand[lwarf][chemmacros]{\chemmacros_bridge:n}
273     {5E5D0EA9045A41FF30D4AB315E547B25}
274
275 \cs_gset_protected:Npn \chemmacros_bridge:n #1
276 {
277     \begingroup
278     \boolfalse{mathjax}
279     \LWR@subsingledollar*\{\textbackslash{}bridge\{\#1\}\}{chemmacros}{
280         \chemmacros_coordination_symbol:nnnn
281         { \l_chemmacros_coord_use_hyphen_bool }
282         { \l_chemmacros_bridge_super_bool }
283         { \chemmu }
284         {\#1}
285     }
286     \endgroup
287 }
288 }{}% Module loaded.
289 }% AtBeginDocument

```

§ 194.9 Particles

```

290 \AtBeginDocument{
291 \chemmacros_module_if_loaded:nTF{{particles}}{
292 \PackageInfo{lwarf}{Patching~chemmacros~module~particles}
293
294 \VerifyCommand[lwarf][chemmacros]{\chemmacros_declare_nucleophile:Nn}
295     {ED9AA7471C8638CEF0757A10A2E3935E}
296
297 \cs_gset_protected:Npn \chemmacros_declare_nucleophile:Nn #1#2
298 {
299     \cs_set_protected:cpx {__chemmacros_ \chemmacros_remove_backslash:N #1:}
300     {
301         \bool_if:NTF \l_chemmacros_nucleophile_elpair_bool
302         {
303             \chemmacros_elpair:n { #2 }
304             { \skip_horizontal:N \l_chemmacros_nucleophile_dim }
305             \chemmacros_formula:n { {}^{\{-\}} }
306         }

```

```

307           { \chemmacros_formula:n { #2^{ -} } }
308       }
309   \DeclareDocumentCommand #1 {o}
310   {%
311     \begin{ lateximage }
312     \group_begin: %
313     \IfNoValueF {##1} %
314     { \chemmacros_set_keys:nn { particles } {##1} } %
315     \use:c { __chemmacros_ \chemmacros_remove_backslash:N #1: } %
316     \group_end: %
317     \end{ lateximage }
318   }
319 }
320
321 \RenewChemNucleophile \Nuc { Nu }
322 \RenewChemNucleophile \ba { ba }
323
324 }{}% Module loaded.
325 }% AtBeginDocument

```

§ 194.10 Phases

```

326 \AtBeginDocument{
327 \chemmacros_module_if_loaded:nTF{{phases}}{
328 \PackageInfo{l warp}{Patching~chemmacros~module~phases}
329
330 \VerifyCommand[l warp][chemmacros]{\chemmacros_phase:n}
331     {83788F1FCBEDA21B495E919E36DD90A5}
332
333 \cs_undefine:N \chemmacros_phase:n
334 \cs_new_protected:Npn \chemmacros_phase:n #1
335 {

336     \mode_leave_vertical:
337     \bool_if:NTF \l__chemmacros_phases_sub_bool
338     {
339         \ifnumequal{\value{LWR@lateximagedepth}}{0}
340         {
341             \textsubscript{ (#1) }
342         }
343         {
344             \chemformula_subscript:n { (#1) }
345         }
346     }
347     {
348         \skip_horizontal:N \l__chemmacros_phases_space_dim
349         \chemmacros_text:n { (#1) }
350     }
351 }
352
353 }{}% Module loaded.
354 }% AtBeginDocument

```

§ 194.11 Mechanisms

```

355 \AtBeginDocument{
356 \chemmacros_module_if_loaded:nTF{{mechanisms}}{
357 \PackageInfo{l warp}{Patching~chemmacros~module~mechanisms}
358

```

```
359 \chemmacros_define_keys:nn {textmechanisms}
360  {
361    type      .choice: ,
362    type /   .code:n   =
363    {
364      \__chemmacros_set_mechanisms:nnn { S }
365      {
366        \textsubscript{N}
367      }
368      { }
369    } ,
370    type / 1 .code:n   =
371    {
372      \__chemmacros_set_mechanisms:nnn { S }
373      {
374        \textsubscript{N}
375        1
376      }
377      { }
378    } ,
379    type / 2 .code:n   =
380    {
381      \__chemmacros_set_mechanisms:nnn { S }
382      {
383        \textsubscript{N}
384        2
385      }
386      { }
387    } ,
388    type / se .code:n   =
389    {
390      \__chemmacros_set_mechanisms:nnn { S }
391      {
392        \textsubscript{E}
393      }
394      { }
395    } ,
396    type / 1e .code:n   =
397    {
398      \__chemmacros_set_mechanisms:nnn { S }
399      {
400        \textsubscript{E}
401        1
402      }
403      { }
404    } ,
405    type / 2e .code:n   =
406    {
407      \__chemmacros_set_mechanisms:nnn { S }
408      {
409        \textsubscript{E}
410        2
411      }
412      { }
413    } ,
414    type / ar .code:n   =
415    {
416      \__chemmacros_set_mechanisms:nnn { S }
417      {
418        \textsubscript{E}
```

```

419      }
420      { Ar - }
421    } ,
422    type / e .code:n =
423    { \__chemmacros_set_mechanisms:nnn { E } { } { } } ,
424    type / e1 .code:n =
425    { \__chemmacros_set_mechanisms:nnn { E } { 1 } { } } ,
426    type / e2 .code:n =
427    { \__chemmacros_set_mechanisms:nnn { E } { 2 } { } } ,
428    type / cb .code:n =
429    {
430      \__chemmacros_set_mechanisms:nnn { E }
431      {
432        1
433        \textsubscript{cb}
434      }
435      {
436    } ,
437    type .default:n =
438  }
439
440 \VerifyCommand[lwarf][chemmacros]{\chemmacros_mechanisms:n}
441   {2CF049E0C61235166A36565979D79933}
442
443 \cs_gset_protected:Npn \chemmacros_mechanisms:n #1
444  {
445    \tl_if_blank:nTF {#1}
446    { \chemmacros_set_keys:nn {textmechanisms} { type } }
447    { \chemmacros_set_keys:nn {textmechanisms} { type = #1 } }
448    \mbox
449    {
450      \tl_use:N \l__chemmacros_mechanisms_ar_tl
451      \tl_use:N \l__chemmacros_mechanisms_type_tl
452      \tl_use:N \l__chemmacros_mechanisms_mol_tl
453    }
454  }
455
456 \appto\LWR@restoreorigformatting{%
457 \cs_set_protected:Npn \chemmacros_mechanisms:n #1%
458  {%
459    \tl_if_blank:nTF {#1}%
460    { \chemmacros_set_keys:nn {mechanisms} { type } }%
461    { \chemmacros_set_keys:nn {mechanisms} { type = #1 } }%
462    \mbox%
463    {%
464      \tl_use:N \l__chemmacros_mechanisms_ar_tl%
465      \tl_use:N \l__chemmacros_mechanisms_type_tl%
466      \tl_use:N \l__chemmacros_mechanisms_mol_tl%
467    }%
468  }%
469 }
470
471 }{}% Module loaded.
472 }% AtBeginDocument

```

§ 194.12 Newman

There are so many options that it is hard to hash these images for reuse.

```
473 \AtBeginDocument{
```

```

474 \chemmacros_module_if_loaded:nTF{{newman}}{
475 \PackageInfo{l warp}{Patching~chemmacros~module~newman}
476
477 \VerifyCommand[l warp][chemmacros]{\newman}
478     {45E815D161E8467A51F5B04150DEC20C}
479
480 \RenewDocumentCommand \newman {od()}%
481 {
482     \IfValueTF{#2}
483         {\begin{ lateximage }[\textbackslash newman{#2}\{#3\}]*}
484         {\begin{ lateximage }[\textbackslash newman\{#3\}]*}
485     \group_begin:
486         \IfNoValueF {#1} { \chemmacros_set_keys:nn {newman} {#1} }
487         \IfNoValueTF {#2}
488             { \chemmacros_newman:nn { } {#3} }
489             { \chemmacros_newman:nn {#2} {#3} }
490     \group_end:
491     \end{ lateximage }
492 }
493
494 }{}% Module loaded.
495 }% AtBeginDocument

```

§ 194.13 Orbital

```

496 \AtBeginDocument{
497 \chemmacros_module_if_loaded:nTF{{orbital}}{
498 \PackageInfo{l warp}{Patching~chemmacros~module~orbital}
499
500 \VerifyCommand[l warp][chemmacros]{\orbital}
501     {F8E338F96B2EBF6AFE4A91D37A58CD90}
502
503 \RenewDocumentCommand \orbital {om}
504 {
505     \IfValueTF{#1}
506     {
507         \begin{ lateximage }[%]
508             \textbackslash orbital{[]}%
509             \LWR@HTMLsanitizeddetokenized{\detokenize{#1}}%
510             {[}]\{#2\}%
511             {[}][margin-left: 1em ; margin-right: 1em]
512         ]*[[]][margin-left: 1em ; margin-right: 1em]
513     }
514     {
515         \begin{ lateximage }[%]
516             \textbackslash orbital\{#2\}%
517             ]*[[]][margin-left: 1em ; margin-right: 1em]
518     }
519     \group_begin:
520         \chemmacros_set_keys:nn {orbital/type} {#2}
521         \IfNoValueTF {#1}
522             { \chemmacros_orbital:n { } }
523             { \chemmacros_orbital:n {#1} }
524     \group_end:
525     \end{ lateximage }
526 }
527
528 }{}% Module loaded.
529 }% AtBeginDocument

```

§ 194.14 Reactions

```

\chemmacros_declare_reaction_env {⟨chem⟩} {⟨math⟩} {⟨args number⟩} {⟨argument list ({#2}{#3}...)}}

530 \AtBeginDocument{
531 \chemmacros_module_if_loaded:nTF{{reactions}}{
532 \PackageInfo{l warp}{Patching~chemmacros~module~reactions}
533
534 \VerifyCommand[l warp][chemmacros]{\__chemmacros_declare_reaction_env:nnnn}
535     {E52CE623404E664FD0647E3A874F2702}
536
537 % #1: chem
538 % #2: math
539 % #3: args number
540 % #4: argument list ({#2}{#3}...)
541 \cs_gset_protected:Npn \__chemmacros_declare_reaction_env:nnnn #1#2#3#4
542 {
543     \exp_args:Nnx \DeclareDocumentEnvironment {#1}
544         { \int_compare:nT { #3+0 = 0 } {!} 0{} \prg_replicate:nn {#3+0} {m} }
545     {
546         \boolfalse{mathjax}%
547         \ifdefvoid{\LWR@ThisAltText}{%
548             \ThisAltText{-chemmacros-~reaction}%
549         }%
550         \chemmacros_add_reaction_description:n {##1}
551         \__chemmacros_begin_reaction:
552         \__chemmacros_reaction_read:nw {#2} {#4}
553     }
554     {
555         \__chemmacros_end_reaction:
556         \gdef\LWR@ThisAltText{}%
557         \ignorespacesafterend
558     }
559 }
560
561 \cs_generate_variant:Nn \chemmacros_declare_reaction_env:nnnn {nnnV}
562
563 \RenewChemReaction {reaction} {equation}
564 \RenewChemReaction {reaction*} {equation*}
565 \RenewChemReaction {reactions} {align}
566 \RenewChemReaction {reactions*} {align*}
567
568 }% Module loaded.
569 }% AtBeginDocument

```

§ 194.15 Reactants

Recompiled for tabular ampersand processing, with the only change being `\StartDefiningTabulars`. `\xpatchcmd` does not work here.

```

570 \VerifyCommand[l warp][chemmacros]{\printreactants}
571     {18AD32DCD3F2F49C0369DA9ED9974CD7}
572
573 \StartDefiningTabulars%      l warp
574
575 % #1: star: include ID in table
576 \RenewDocumentCommand \printreactants {s}
577 {
578     \group_begin:
579         \chemmacros_set_keys:nn {reactants} { switch = false }

```

```
580     \int_step_variable:nNn
581     { \seq_count:N \g_chemnum_initiated_compounds_seq }
582     \l__chemmacros_reactants_tmpa_tl
583     {
584         \seq_put_right:Nx
585         \l__chemmacros_reactants_tmpa_seq
586         {
587             \chemnum_cmpd:nnne { \c_false_bool } { \c_true_bool } {}
588             {
589                 \seq_item:NV
590                 \g_chemnum_initiated_compounds_seq
591                 \l__chemmacros_reactants_tmpa_tl
592             }
593             &
594             \bool_if:nT {#1}
595             {
596                 \seq_item:NV
597                 \g_chemnum_initiated_compounds_seq
598                 \l__chemmacros_reactants_tmpa_tl
599             }
600             %
601             % TODO: expl3-command ??
602             \solvent
603             {
604                 \seq_item:NV
605                 \g_chemnum_initiated_compounds_seq
606                 \l__chemmacros_reactants_tmpa_tl
607             }
608             \tabularnewline
609         }
610         \tl_set:Nx
611         \l__chemmacros_reactants_tmpb_tl
612         {
613             \seq_item:NV
614             \g_chemnum_initiated_compounds_seq
615             \l__chemmacros_reactants_tmpa_tl
616         }
617         \chemmacros_reactants_list_subreactant:Vn
618         \l__chemmacros_reactants_tmpb_tl
619         {#1}
620     }
621     % TODO: longtable ?
622     %      table customizable?
623     % first draft of two styles
624     \par
625     \noindent
626     \bool_if:NTF \l__chemmacros_reactants_printreactants_style_bool
627     {
628         \str_case:Vn \l__chemmacros_reactants_printreactants_style_str
629         {
630             {xltabular}
631             {
632                 \chemmacros_if_package_loaded:nTF {xltabular}
633                 {
634                     \bool_if:nTF {#1}
635                     {
636                         \begin {xltabular}
637                         { \textwidth }
638                         { @{}ll>{\raggedright\arraybackslash}X@{} }
639                     }
640                 }
641             }
642         }
643     }
```

```
640          {
641              \begin {xltabular}
642                  { \textwidth }
643                  { @{}l>{\raggedright\arraybackslash}X@{} }
644              }
645              \seq_use:Nn \l__chemmacros_reactants_tmpa_seq { }
646              \end{xltabular}
647          }
648          {
649              \msg_expandable_error:nnnn
650              {chemmacros}
651              {package-not-loaded}
652              { \printreactants }
653              {xltabular}
654          }
655      }
656      {longtable}
657      {
658          \chemmacros_if_package_loaded:nTF {longtable}
659          {
660              \bool_if:nTF {#1}
661              {
662                  \begin {longtable}[l]
663                  { @{}ll>{\raggedright\arraybackslash}p{0.6\textwidth}@{} }
664              }
665              {
666                  \begin {longtable}[l]
667                  { @{}l>{\raggedright\arraybackslash}p{0.9\textwidth}@{} }
668              }
669              \seq_use:Nn \l__chemmacros_reactants_tmpa_seq { }
670              \end{longtable}
671          }
672          {
673              \msg_expandable_error:nnnn
674              {chemmacros}
675              {package-not-loaded}
676              { \printreactants }
677              {longtable}
678          }
679      }
680  }
681  {
682      \msg_warning:nn {chemmacros} {missing-printreactants-style}
683  }
684  \group_end:
685 }
686 }
687
688 \VerifyCommand[lwarp][chemmacros]{\chemmacros_reactants_list_subreactant:nn}
689     {50553A53C2149BD3ADA8AE0FAB0C79C4}
690
691 % #1: full ID
692 % #2: star, include ID in table
693 \cs_gset_protected:Npn \chemmacros_reactants_list_subreactant:nn #1#2
694 {
695     \chemnum_if_subcompounds:nT {#1}
696     {
697         \int_step_variable:nNn
698         { \chemnum_count_subcompounds:n {#1} }
699         \l__chemmacros_reactants_tmpa_tl
```

```

700      {
701          \seq_put_right:Nx
702          \l_chemmacros_reactants_tmpa_seq
703          {
704              \chemnum_cmpd:nne { \c_false_bool } { \c_true_bool } {}
705              {
706                  \exp_not:n {#1}
707                  \exp_not:V \l_chemnum_compound_separator_tl
708                  \chemnum_get_subcompound:nV
709                  {#1}
710                  \l_chemmacros_reactants_tmpa_tl
711              }
712              &
713              \bool_if:nT {#2}
714              {
715                  #1
716                  \l_chemnum_compound_separator_tl
717                  \chemnum_get_subcompound:nV
718                  {#1}
719                  \l_chemmacros_reactants_tmpa_tl
720              }
721          }
722          % TODO: expl3-command ??
723          \solvent
724          {
725              #1
726              \l_chemnum_compound_separator_tl
727              \chemnum_get_subcompound:nV
728              {#1}
729              \l_chemmacros_reactants_tmpa_tl
730          }
731          \tabularnewline
732      }
733  }
734 }
735 }
736 \cs_generate_variant:Nn \chemmacros_reactants_list_subreactant:nn {V}
737
738 \StopDefiningTabulars%      lwarp

```

§ 194.16 Redox

```

739 \AtBeginDocument{
740 \chemmacros_module_if_loaded:nTF{{redox}}{
741 \PackageInfo{lwarp}{Patching~chemmacros~module~redox}
742
743 \NewDocumentCommand \LWR@chemmacros@ox { s m }{\SplitArgument{1}{,}m }
744 {
745     \IfBooleanTF {#1}
746     { \chemmacros_ox:nnnn {#1} {#2} #3 }
747     { \chemmacros_ox:nnn { } {#2} #3 }
748 }
749
750 \VerifyCommand[lwarp][chemmacros]{\ox}
751 {06B84CC6B38302F75169D5B90D8D29AA}
752
753 \RenewDocumentCommand \ox { s O{} m }
754 {
755     \begingroup
756     \boolexpr{mathjax}

```

```

757   \IfBooleanTF {#1}
758   {
759     \LWR@subsingle$*{%
760       \textbackslash{}%
761       ox*%
762       \{%
763         \LWR@HTMLsanitizeddetokenized{\detokenize{#3}}%
764       \}%
765     }%
766     star \protect\LWR@HTMLsanitizeddetokenized{\detokenize\expandafter{#2}}%
767   }%
768     \LWR@chemmacros@ox* {#2} {#3}%
769   }%
770 }
771 {
772   \LWR@subsingle$*{%
773     \textbackslash{}%
774     ox*%
775     \{%
776       \LWR@HTMLsanitizeddetokenized{\detokenize{#3}}%
777     \}%
778   }%
779     \protect\LWR@HTMLsanitizeddetokenized{\detokenize\expandafter{#2}}%
780   }%
781     \LWR@chemmacros@ox {#2} {#3}%
782   }%
783 }
784 \endgroup
785 }
786
787 }% Module loaded.
788 }% AtBeginDocument

```

§ 194.17 Scheme

Fix for chemmacros as of v5.8b, when using newfloat and babel:

```

789 \AtBeginDocument{
790 \chemmacros_module_if_loaded:nTF{{scheme}}{
791 \PackageInfo{l warp}{Patching~chemmacros~module~scheme}}
792
793 \ifdefstring{\schemename}{los}{
794 \SetupFloatingEnvironment{scheme}{%
795 name = \chemmacros_translate:n {scheme-name}}
796 }
797 }%
798
799 }% Module loaded.
800 }% AtBeginDocument

```

§ 194.18 Spectroscopy

```
801 \AtBeginDocument{  
802 \chemmacros_module_if_loaded:nTF{{spectroscopy}}{  
803 \PackageInfo{l warp}{Patching~chemmacros~module~spectroscopy}  
804  
805 \VerifyCommand[l warp][chemmacros]{\__chemmacros_nmr_base:nn}  
806 {EDE669CC90B085080E3F96DB754836D5}  
807  
808 \cs_gset_protected:Npn \__chemmacros_nmr_base:nn #1#2  
809 {  
810     \group_begin:  
811         \tl_use:N \l__chemmacros_nmr_base_format_tl  
812         \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl  
813         {  
814             \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }  
815             \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }  
816         }  
817         \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}  
818 %         \chemmacros_formula:n { ^{#1} }  
819         \textsuperscript{#1}  
820         \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl  
821         {  
822             \bool_if:NTF \l__chemmacros_nmr_parse_bool  
823             { \chemformula_ch:nV {} \g__chemmacros_nmr_element_coupled_tl }  
824             { \chemmacros_formula:V \g__chemmacros_nmr_element_coupled_tl }  
825         }  
826         \tl_use:N \l__chemmacros_nmr_element_method_connector_tl  
827         \tl_use:N \l__chemmacros_nmr_method_tl  
828     \group_end:  
829 }  
830  
831  
832 \VerifyCommand[l warp][chemmacros]{\chemmacros_nmr_position:n}  
833 {637FDE0E801CF4052274FF60A12A38F0}  
834  
835 \cs_gset_protected:Npn \chemmacros_nmr_position:n #1  
836 {  
837     \chemmacros_formula:x  
838     {  
839         \exp_not:V \g__chemmacros_nmr_element_tl  
840         \bool_if:NF \l__chemmacros_nmr_position_side_bool  
841         {  
842             \tl_if_eq:NnTF \l__chemmacros_nmr_position_tl {^}% l warp  
843             { \textsuperscript{\exp_not:n { #1 } } }% l warp  
844             { \textsubscript{\exp_not:n { #1 } } }% l warp  
845 %             \exp_not:V \l__chemmacros_nmr_position_tl  
846 %             \exp_not:n { #1 }  
847         }  
848     }  
849     \bool_if:NT \l__chemmacros_nmr_position_side_bool  
850     {  
851         \tl_use:N \l__chemmacros_nmr_position_tl  
852         \__chemmacros_nmr_position:n {#1}  
853     }  
854 }  
855  
856 \VerifyCommand[l warp][chemmacros]{\__chemmacros_nmr_coupling:w}  
857 {4D1E7321CA2F8C7EA2E4F56FB3A26EED}  
858
```

```
859 \cs_gset_protected:Npn \__chemmacros_nmr_coupling:w (#1;#2)
860  {
861      \tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
862      {
863          \l__chemmacros_nmr_coupling_bonds_pre_tl
864          #1
865          \l__chemmacros_nmr_coupling_bonds_post_tl
866      }
867      \bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
868      {
869          \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
870          {
871              \c_math_subscript_token
872              \textsubscript{ lwarp
873              {
874                  \l__chemmacros_nmr_coupling_nuclei_pre_tl
875                  \chemmacros_formula:n {#2}
876                  \l__chemmacros_nmr_coupling_nuclei_post_tl
877              }
878          }
879      }
880  {
881      \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
882      {
883          \l__chemmacros_nmr_coupling_nuclei_pre_tl
884          \chemmacros_formula:n {#2}
885          \l__chemmacros_nmr_coupling_nuclei_post_tl
886      }
887  }
888  \__chemmacros_nmr_coupling_aux_i:w
889 }
890 \AfterEndPreamble{\% After \AtBeginDocument
891
892 \VerifyCommand[lwarp][chemmacros]{\chemmacros_nmr:nnnn}
893     {FD67505420F044B2CA8E7CBD05B1ECEB}
894
895 % \NMR{<num>,<elem>}(<num>,<unit>)[<solvent>] ALL arguments are optional
896 % \NMR* same but without ": $delta" at end
897 \cs_gset_protected:Npn \chemmacros_nmr:nnnn #1#2#3#4
898  {
899      \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
900      \group_begin:
901
902          \mode_leave_vertical:
903
904          \bool_set_false:N \l__chemmacros_nmr_frequency_bool
905          \bool_set_false:N \l__chemmacros_nmr_solvent_bool
906          \tl_if_empty:nF {#3}
907          { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
908          \tl_if_empty:nF {#4}
909          { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
910          \bool_if:nT
911          {
912              \l__chemmacros_nmr_frequency_bool
913              ||
914              \l__chemmacros_nmr_solvent_bool
915          }
916          { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
917          \bool_if:nT
918          {
```

```
917          \l_chemmacros_nmr_frequency_bool
918          &&
919          \l_chemmacros_nmr_solvent_bool
920      }
921 { \bool_set_true:N \l_chemmacros_nmr_comma_bool }
922 \tl_if_empty:nTF {#2}
923 {
924     \__chemmacros_nmr_nucleus:VV
925     \l_chemmacros_nmr_isotope_default_tl
926     \l_chemmacros_nmr_element_default_tl
927 }
928 { \__chemmacros_nmr_nucleus:w #2 \q_stop }
929 \mode_if_math:TF
930 {
931     \text
932     {
933         \group_begin:
934             \tl_use:N \l_chemmacros_nmr_format_tl
935 \LWR@textcurrentcolor{\LWR@textcurrentfont{%
936             \__chemmacros_nmr_base:VV
937             \g_chemmacros_nmr_isotope_tl
938             \g_chemmacros_nmr_element_tl
939             \bool_if:NT \l_chemmacros_nmr_delimiters_bool
940             { ~ ( } }
941             \bool_if:NT \l_chemmacros_nmr_frequency_bool
942             { \__chemmacros_nmr_frequency:n {#3} }
943             \bool_if:NT \l_chemmacros_nmr_comma_bool
944             { , ~ }
945             \bool_if:NT \l_chemmacros_nmr_solvent_bool
946             { \chemmacros_formula:n {#4} }
947             \bool_if:NT \l_chemmacros_nmr_delimiters_bool
948             { ) }
949             \tl_if_blank:nT {#1} {::~}
950 }}% lwarp
951         \group_end:
952     }
953 \tl_if_blank:nT {#1}
954 {
955     \delta
956     \text { \l_chemmacros_nmr_delta_tl }
957     \bool_if:NT \l_chemmacros_nmr_use_equal_bool {=}
958 }
959 }
960 {
961     \group_begin:
962         \tl_use:N \l_chemmacros_nmr_format_tl
963 \LWR@textcurrentcolor{\LWR@textcurrentfont{%
964             \__chemmacros_nmr_base:VV
965             \g_chemmacros_nmr_isotope_tl
966             \g_chemmacros_nmr_element_tl
967             \bool_if:NT \l_chemmacros_nmr_delimiters_bool
968             {~{}}
969             \bool_if:NT \l_chemmacros_nmr_frequency_bool
970             { \__chemmacros_nmr_frequency:n {#3} }
971             \bool_if:NT \l_chemmacros_nmr_comma_bool
972             {,~}
973             \bool_if:NT \l_chemmacros_nmr_solvent_bool
974             {
975                 \bool_if:NTF \l_chemmacros_nmr_parse_bool
```

```

976 %           { \chemformula_ch:nn { } {#4} }% original
977             {\ch{#4}}% l warp
978             {#4}
979             }
980             \bool_if:NT \l__chemmacros_nmr_delimiters_bool
981             {})
982 }% l warp
983             \tl_if_blank:nT {#1} {:}
984             \group_end:
985             \tl_if_blank:nT {#1}
986             {
987                 \tl_use:N \c_space_tl
988                 \c_math_toggle_token
989                 \delta
990                 \c_math_toggle_token
991                 \l__chemmacros_nmr_delta_tl
992                 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {~=}
993             }
994         }
995     \group_end:
996 }
997 }% AfterEndPreamble
998
999
1000 \VerifyCommand[l warp][chemmacros]{\chemmacros_data:w}
1001 {30A6134DE00E9850E074854B48644833}
1002
1003 \RenewDocumentCommand \chemmacros_data:w { smo }
1004 {
1005     \bool_if:NT \l__chemmacros_nmr_list_bool { \item }
1006     {
1007 %         \tl_use:N \l__chemmacros_nmr_format_tl #2
1008         \tl_use:N \l__chemmacros_nmr_format_tl
1009         \LWR@textcurrentcolor{\LWR@textcurrentfont% l warp
1010             #2
1011             \IfNoValueF {#3} { ~ ( #3 ) }
1012             \IfBooleanT {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { : } }
1013         }% l warp
1014     }
1015     \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
1016 }
1017
1018 }% Module loaded.
1019 }% AtBeginDocument

```

§ 194.19 Thermodynamics

```

1020 \AtBeginDocument{
1021 \chemmacros_module_if_loaded:nTF{{thermodynamics}}{
1022 \PackageInfo{l warp}{Patching~chemmacros~module~thermodynamics}
1023
1024 \VerifyCommand[l warp][chemmacros]{\chemmacros_state:nnnnnn}
1025 {C5B35D9405E380ABE9A9CE849F46EE6D}
1026
1027 \cs_gset_protected:Npn \chemmacros_state:nnnnnn #1#2#3#4#5#6
1028 {
1029     \group_begin:
1030         \chemmacros_set_keys:ne {thermodynamics}
1031         {
1032             \exp_not:n {#1} ,

```

```

1033          \tl_if_novalue:nF {#2} { subscript-left = \exp_not:n {#2} , }
1034          \tl_if_novalue:nF {#3} { superscript-left = \exp_not:n {#3} , }
1035          \tl_if_novalue:nF {#5} { subscript-right = \exp_not:n {#5} , }
1036          \tl_if_novalue:nF {#6} { superscript-right = \exp_not:n {#6} }
1037      }
1038      \LWR@subsingle dollar*{%
1039          \textbackslash{}state%
1040          \{\LWR@HTMLsanitizeddetokenized{\detokenize{#4}}\}%
1041      }{%
1042          chemmacros_state% add'l hashing
1043          #1% options
1044          LSP \tl_use:N \l_chemmacros_state_sp_left_tl% super/subscripts
1045          LSB \tl_use:N \l_chemmacros_state_sb_left_tl
1046          RSP \tl_use:N \l_chemmacros_state_sp_right_tl
1047          RSB \tl_use:N \l_chemmacros_state_sb_right_tl
1048      }
1049      {
1050          \LWR@origensuredmath
1051          {
1052              \chemmacros_text:V \l_chemmacros_state_pre_tl
1053              \c_math_superscript_token
1054                  { \chemmacros_text:V \l_chemmacros_state_sp_left_tl }

```

Only add the subscripts if they are being used. This avoids causing an incorrect depth, as the empty subscript will be measured by TeX but cropped out by *pdfcrop*.

```

1055          \tl_if_empty:NTF \l_chemmacros_state_sb_left_tl
1056          {}
1057          {
1058              \c_math_subscript_token
1059                  { \chemmacros_text:V \l_chemmacros_state_sb_left_tl }
1060          }
1061          #4
1062          \c_math_superscript_token
1063              { \chemmacros_text:V \l_chemmacros_state_sp_right_tl }
1064          \tl_if_empty:NTF \l_chemmacros_state_sb_right_tl
1065          {}
1066          {
1067              \c_math_subscript_token
1068                  { \chemmacros_text:V \l_chemmacros_state_sb_right_tl }
1069          }
1070          \chemmacros_text:V \l_chemmacros_state_post_tl
1071      }
1072  }
1073 \group_end:
1074 }
1075 \cs_generate_variant:Nn \chemmacros_state:nnnnnn { nVVVVV }
1076
1077 \VerifyCommand[lwarp][chemmacros]{\chemmacros_declare_state:Nn}
1078     {3C1386935B85ED732A283627DA403FBE}
1079
1080 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
1081  {
1082      \chemmacros_define_keys:xn
1083          {thermodynamics/\chemmacros_remove_backslash:N #1}
1084      {
1085          pre .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
1086          post .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
1087          superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
1088          superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,

```

```

1089      superscript      .meta:n = { superscript-right = ##1 } ,
1090      subscript-left   .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
1091      subscript-right   .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
1092      subscript        .meta:n     = { subscript-left = ##1 } ,
1093      subscript-pos    .choices:nn =
1094          { left , right }
1095          { \tl_set_eq:NN \l_chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
1096          symbol         .tl_set:N = \l_chemmacros_state_symbol_tl ,
1097          unit           .tl_set:N = \l_chemmacros_state_unit_tl
1098      }
1099 \DeclareDocumentCommand #1 { sO{}D(){}m }
1100 {
1101     \group_begin:
1102     \chemmacros_set_keys:en
1103         {thermodynamics/\chemmacros_remove_backslash:N #1}
1104         {#2}
1105     \tl_if_blank:nF {##3}
1106     {
1107         \chemmacros_set_keys:ne {thermodynamics}
1108         { subscript-\l_chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
1109     }
1110 % \LWR@origensuredmath
1111 %
1112     {
1113         \chemmacros_state:nVVVV
1114         {##2}
1115         \c_novalue_tl
1116         \c_novalue_tl
1117         \l_chemmacros_state_symbol_tl
1118         \c_novalue_tl
1119         \c_novalue_tl
1120         \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
1121         \IfBooleanF {##1} { = \qty {##4} { \l_chemmacros_state_unit_tl } }
1122     }
1123     \group_end:
1124 }

```

The pre-existing macros are redefined with the new definition:

```

1125 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
1126 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
1127 \RenewChemState \gibbs   { symbol = G , unit = \kilo\joule\per\mole }
1128
1129 }% Module loaded.
1130 % AtBeginDocument
1131 \ExplSyntaxOff

```

File 86 lwarf-chemnum.sty

§ 195 Package **chemnum**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

chemnum (*Pkg*) **chemnum** is patched for use by **lwarf**.

for HTML output: 1 \LWR@ProvidesPackagePass{chemnum}[2016/04/14]

```

2 \ExplSyntaxOn
3
4 \VerifyCommand[lwarf][chemnum]{\chemnum_compound_write:n}
5     {E47ACDCCC4D90FAC40B75B53721EC218}
6
7 \cs_gset_protected:Npn \chemnum_compound_write:n #1
8 {
9     \chemnum_get_compound_property:nn {#1} {pre-main-label-code}
10    \group_begin:
11        \bool_if:NTF \l__chemnum_compound_local_bool
12            { \l__chemnum_local_label_format_tl }
13            { \chemnum_get_compound_property:nn {#1} {label-format} }
14    {
15        \LWR@textcurrentfont{
16            \chemnum_get_compound_property:nn {#1} {counter-representation}
17        }
18    }
19    \group_end:
20    \chemnum_get_compound_property:nn {#1} {post-main-label-code}
21 }
22
23 \VerifyCommand[lwarf][chemnum]{\chemnum_subcompound_write:nn}
24     {F6BB883B91A1FA330EF3B89924BF3679}
25
26 \cs_gset_protected:Npn \chemnum_subcompound_write:nn #1#2
27 {
28     \group_begin:
29         \bool_if:NTF \l__chemnum_compound_local_bool
30             { \l__chemnum_local_label_format_tl }
31             { \chemnum_get_compound_property:nn {#1} {label-format} }
32     {
33         \LWR@textcurrentfont{
34             \chemnum_get_subcompound_property:nnn {#1} {#2}
35             {counter-representation}
36         }
37     }
38     \group_end:
39 }
40
41 \ExplSyntaxOff

```

File 87 **lwarf-chkfloat.sty**

§ 196 Package **chkfloat**

chkfloat (*Pkg*) **chkfloat** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]

File 88 **lwarf-chngpage.sty**

§ 197 Package **chngpage**

(*Emulates or patches code by PETER WILSON.*)

chngpage (*Pkg*) chngpage is ignored.

for HTML output: Discard all options for l warp-chngpage:

```
1 \LWR@ProvidesPackageDrop{chngpage}[2009/10/20]
2 \LWR@origRequirePackage{l warp-changepage}
```

File 89 l warp-cite.sty

§ 198 Package **cite**

(Emulates or patches code by DONALD ARSENEAU.)

cite (*Pkg*) cite is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{cite}[2015/02/27]

For the [super] option, the \kern must be removed:

```
2 \def\LWRCT@biblabel#1{\@citess{#1}\kern-\labelsep\,}
3
4 \ifdef\streq{\@biblabel}{\LWRCT@biblabel}
5 {
6   \def\@biblabel#1{\@citess{#1}}
7 }{}
```

For the [super] option, \textsuperscript is used instead of math superscript:

```
8 \def\@citess#1{\textsuperscript{#1}}
9
10 \DeclareDocumentCommand\citeref{}{\relax}
```

File 90 l warp-citeref.sty

§ 199 Package **citeref**

(Emulates or patches code by BJÖRN BRIEL.)

citeref (*Pkg*) citeref is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{citeref}[1999/27/05]

```
2 \def\@cprwrite#1=%
3   \write\@auxout{\string\citeref{#1}{\theLWR@previousautopagelabel}}%
4 }
5
6 \VerifyCommand[l warp][citeref]{\citeref}
7   {F5E07AE6603C65E9398417D6D392825D}
8
9 \def\citeref#1#2{%
10   \xdef\cpr@testa{\@nameuse{cpr@last@#1}}% letzte Zitatstelle
11   \xdef\cpr@testb{#2}% Seite dieser Zitatstelle
12   \ifx\cpr@testa\cpr@testb%
13     \relax% Konsekutive identische Seitenangaben weglassen
```

```

14     \else%
15         \@namexdef{cpr@last@#1}{#2}%
16         \@ifundefined{cpr@#1}%
17             {\@namexdef{cpr@#1}{\LWR@refwithsection{\BaseJobname-autopage-#2}}}% l warp
18             {%
19                 \LWR@refwithsection{\BaseJobname-autopage-#2}}%
20             % space
21             }%
22     \fi
23 }

```

File 91 **l warp-CJK.sty**

§ 200 Package **CJK**

CJK (*Pkg*) CJK does not work with **l warp** unless called from **ctex**.

for HTML output:

```

1 \IfPackageLoadedTF{xeCJK}{}{%
2     \LWR@loadnever{CJK}{ctex, xecjk}
3 }
4
5 \LWR@ProvidesPackagePass{CJK}[2015/04/18]

```

File 92 **l warp-CJKutf8.sty**

§ 201 Package **CJKutf8**

CJKutf8 (*Pkg*) CJKutf8 does not work with **l warp** unless called from **ctex**.

for HTML output:

```

1 \IfPackageLoadedTF{xeCJK}{}{%
2     \LWR@loadnever{CJKutf8}{ctex, xecjk}
3 }
4
5 \LWR@ProvidesPackagePass{CJKutf8}[2015/04/18]

```

File 93 **l warp-classicthesis.sty**

§ 202 Package **classicthesis**

(*Emulates or patches code by ANDRÉ MIEDE AND IVO PLETIKOSIĆ.*)

classicthesis (*Pkg*) **classicthesis** is emulated.

for HTML output: Discard all options for **l warp-classicthesis**:

```

1 \LWR@ProvidesPackageDrop{classicthesis}[2018/06/03]

2 \RequirePackage{scrlayer-scrpage} % provides headers and footers (KOMA Script)
3 \RequirePackage{scrttime} % time access
4 \PassOptionsToPackage{titles}{tocloft}
5 \RequirePackage{textcase} % for \MakeTextUppercase
6 \RequirePackage[newparttoc]{titlesec} % newparttoc to write \part to .toc with \numberline

```

```

7 \RequirePackage{tocloft}
8 \PassOptionsToPackage{headinclude,footinclude}{typearea} % for classes other than KOMA
9 \RequirePackage{typearea}
10 \PassOptionsToPackage{marginal}{footmisc}% marginal flushmargin
11 \RequirePackage{footmisc}%
12 \RequirePackage{prelim2e}
13 \RequirePackage{remreset}%
14
15 \DeclareRobustCommand{\spacedallcaps}[1]{\textsc{\MakeTextUppercase{#1}}}
16 \DeclareRobustCommand{\spacedlowsmallcaps}[1]{\textsc{\MakeTextLowercase{#1}}}
17 \newcommand{\ctparttext}[1]{}
18 \newcommand{\tocEntry}[1]{}
19 \DeclareRobustCommand*\deactivateaddvspace{}%
20 \newlength{\beforebibskip}

```

File 94 **lwarf-cleveref.sty**

§ 203 Package **cleveref**

(Emulates or patches code by TOBY CUBITT.)

cleveref (*Pkg*) **cleveref** is patched for HTML, and limited MATHJAX emulation is added.

⚠ cleveref page numbers **cleveref** and **variorref** are supported, but printed page numbers do not map to HTML, so a section name or a text phrase are used for `\cpageref` and `\cpagerefrange`. This phrase includes `\cpagerefFor`, which defaults to “for”.

Ex:

```

\cpageref{tab:first,tab:second}
in html becomes:
“pages for table 4.1 and for table 4.2”

```

See `\cpagerefFor` at page 744 to redefine the message which is printed for page number references.

Table 16 on page 498 shows the data structure of the label/reference system as revised by **lwarf** and **cleveref**.

For MATHJAX, each references is printed as an `\eqref`, without **cleveref**'s description text. Page references are also printed as simple `\eqrefs`. Multiple labels in a single `\cref` will print as `(???)` in MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{cleveref}[2018/03/27]

The following patches are applied. Print-mode versions are not required since they all come down to `\ref` eventually, and `\ref` has a print-mode version.

```

\@@@setcref {\<kindofref>} {\<label>}
\@templabel becomes the section number.

2 \def\LWR@orig@@@setcref#1#2{\cref@getlabel{#2}{\@templabel}#1{\@templabel}{}{}}
3
4 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% before v0.21
5     \renewcommand*\@@@setcref[2]{#1{\ref{#2}}{}{}}

```

```

6 }{
7   \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
8     \renewcommand*\@@@setcref[2]{%
9       #1{\ref{#2}}{}{}}
10    }{
11      \PackageWarningNoLine{l warp-cleveref}%
12      Unknown version of cleveref.
13      \protect\cref\space will fail.
14    }%
15  }
16 }
```

\@@@setcrefrange {*text*} {*label*} {*label*}

```

17 \def\LWR@orig@@@setcrefrange#1#2#3{%
18   \cref@getlabel{#2}{\@labela}%
19   \cref@getlabel{#3}{\@labelb}%
20   #1{\@labela}{\@labelb}{}{}{}{}%
21 }
22 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{%
23   \renewcommand{\@@@setcrefrange}[3]{%
24     #1{\ref{#2}}{\ref{#3}}{}{}{}{}%
25   }%
26 }{
27   \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{%
28     \renewcommand{\@@@setcrefrange}[3]{%
29       #1{\ref{#2}}{\ref{#3}}{}{}{}{}%
30     }%
31   }{
32     \PackageWarningNoLine{l warp-cleveref}%
33     Unknown version of cleveref.
34     \protect\crefrange\space will fail.
35   }%
36 }
37 }
```

\cpagerefFor Redefinable word between “page(s)” and the page numbers.

```
38 \newcommand*\cpagerefFor{for}
```

\@@@setcpageref {*typeofref*} {*label*}, where *typeofref* is “page” or “pages”

```

39 \def\LWR@orig@@@setcpageref#1#2{% before v0.21
40   \cref@getpageref{#2}{\@temppage}#1{\@temppage}{}{}%
41 }
42 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
43   \cpageref@getlabel{#2}{\@temppage}#1{\@temppage}{}{}%
44 }
45 \ifdefequal{\@@@setcpageref}{\LWR@orig@@@setcpageref}{%
46   \renewcommand*\@@@setcpageref[2]{%
47     #1{\cpagerefFor\ \cref{#2}}{}{}%
48   }%
49 }{
50   \ifdefequal{\@@@setcpageref}{\LWR@orig@@@setcpageref}{%
51     \renewcommand*\@@@setcpageref[2]{%
52       #1{\cpagerefFor\ \cref{#2}}{}{}%
53     }%
54 }
```

```

54     }
55     {
56         \PackageWarningNoLine{l warp-cleveref}%
57             Unknown version of cleveref.
58             \protect\cpageref\space will fail.
59     }
60 }
61 }

62 \def\LWR@orig@@setcpagerefrange#1#2#3{%
63     \cref@getpageref{#2}{\@pagea}%
64     \cref@getpageref{#3}{\@pageb}%
65     #1{\@pagea}{\@pageb}{\{}{\}}{\}}%
66
67 \def\LWR@orig@@setcpagerefrange#1#2#3{%
68     \cpageref@getlabel{#2}{\@pagea}%
69     \cpageref@getlabel{#3}{\@pageb}%
70     #1{\@pagea}{\@pageb}{\{}{\}}{\}}%
71
72 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{%
73     \renewcommand*{\@@setcpagerefrange}[3]{%
74         #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{\{}{\}}{\}}%
75     }
76 }{%
77     \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{%
78         \renewcommand*{\@@setcpagerefrange}[3]{%
79             #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{\{}{\}}{\}}%
80         }
81     }
82     {
83         \PackageWarningNoLine{l warp-cleveref}%
84             Unknown version of cleveref.
85             \protect\cpagerefrange\space will fail.
86     }
87 }
88 }
```

If `hyperref` is loaded, `cleveref` defines starred versions of the following, but since `hyperref` is only emulated, starred versions are defined here:

```

89 \LWR@absorbstar{cref}
90 \LWR@absorbstar{Cref}
91 \LWR@absorbstar{crefrange}
92 \LWR@absorbstar{Crefrange}
93 \LWR@absorbstar{cpageref}
94 \LWR@absorbstar{Cpageref}
95 \LWR@absorbstar{cpagerefrange}
96 \LWR@absorbstar{Cpagerefrange}
97 \LWR@absorbstar{labelcref}
98 \LWR@absorbstar{labelcpageref}
```

If `hyperref` is loaded, `cleveref` also defines starred versions of `variorref` macros, so they are defined here.

```

99 \IfPackageLoadedTF{variorref}{%
100     \LWR@absorbstar{vref}
101     \LWR@absorbstar{Vref}
102     \LWR@absorbstar{vrefrange}
103     \LWR@absorbstar{Vrefrange}}
```

```

104      \LWR@absorbstar{fullref}
105      \LWR@absorbstar{Fullref}
106 }{}% varioref

107 \IfClassLoadedTF{memoir}{
108 \AtBeginDocument{
109 \def\sf@memsub@label(#1)#2{%
110   \protected@edef\mem@currentlabelname{#1}%
111   \sf@@memsub@label{#2}%
112 }
113 }{}}

114 \IfPackageLoadedTF{subfig}{
115 \def\sf@sub@label(#1)#2{%
116   \ifhyperrefloaded
117     \protected@edef\@currentlabelname{%
118       \expandafter\strip@period #1\relax.\relax\@@@}%
119   \fi
120   \sf@sub@label{#2}%
121 }{}}

```

File 95 **l warp-clrdblpg.sty**

§ 204 Package **clrdblpg**

clrdblpg (Pkg) **clrdblpg** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{clrdblpg}[2018/04/21]

File 96 **l warp-cmbright.sty**

§ 205 Package **cmbright**

(Emulates or patches code by WALTER SCHMIDT.)

cmbright (Pkg) **cmbright** is used as-is for SVG math, and is emulated for MATHJAX.

⚠ **limitations** The MATHJAX emulation ignores all package options, except `slantedGreek` is honored, and `\mathbold` is available.

The dedicated macros for upright Greek letters do work correctly.

SVG math should appear the same as the printed output.

for HTML output:

```

1 \LWR@ProvidesPackagePass{cmbright}[2005/04/13]
2
3 \LWR@infoprocessingmathjax{cmbright}

4 \LWR@origRequirePackage{l warp-common-mathjax-letters}
5
6 \begin{warpMathJax}
7
8 \IfPackageLoadedWithOptionsTF{cmbright}{slantedGreek}

```

```

9 {
10   \LWR@mathjax@addgreek@u@it*{}{}}
11 }
12 {}
13
14 \LWR@mathjax@addgreek@u@up*{up}{}
15
16 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{#1}}}
17
18 \end{warpMathJax}
```

File 97 **l warp-cmdtrack.sty**§ 206 Package **cmdtrack**

cmdtrack (*Pkg*) cmdtrack is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]

2 \newcommand{\untrack}[1]{}
```

File 98 **l warp-colonequals.sty**§ 207 Package **colonequals**

(Emulates or patches code by HEIKO OBERDIEK.)

colonequals (*Pkg*) colonequals is used as-is for SVG math, and is emulated for MATHJAX.

Since UNICODE symbols are not available for each of the following, only two are used for the single and double colons, and the other symbols are derived in a consistent manner. Occasional negative space is added as well. This may need to be undone for some fonts.

for HTML output:

```

1 \LWR@ProvidesPackagePass{colonequals}[2016/05/16]

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{colonequals}
4
5 \CustomizeMathJax{\newcommand{\ratio}{\mathrel{\!unicode{x2236}\!}}}
6 \CustomizeMathJax{\newcommand{\coloncolon}{\mathrel{\!unicode{x2237}\!}}}
7 \CustomizeMathJax{\newcommand{\colonequals}{\mathrel{\!unicode{x2236}\!\!=\!}}}
8 \CustomizeMathJax{\newcommand{\coloncoloncolonequals}{\mathrel{\!unicode{x2237}\!\!=\!}}}
9 \CustomizeMathJax{\newcommand{\equalscolon}{\mathrel{=\!unicode{x2236}}}}
10 \CustomizeMathJax{\newcommand{\equalscoloncolon}{\mathrel{=\!unicode{x2237}}}}
11 \CustomizeMathJax{\newcommand{\colonminus}{\mathrel{\!unicode{x2236}\!-\!}}}
12 \CustomizeMathJax{\newcommand{\coloncolonminus}{\mathrel{\!unicode{x2237}\!-\!}}}
13 \CustomizeMathJax{\newcommand{\minuscolon}{\mathrel{-\!unicode{x2236}}}}
14 \CustomizeMathJax{\newcommand{\minuscoloncolon}{\mathrel{-\!unicode{x2237}}}}
15 \CustomizeMathJax{\newcommand{\colonapprox}{\mathrel{\!unicode{x2236}\!\!approx}}}
16 \CustomizeMathJax{\newcommand{\coloncolonapprox}{\mathrel{\!unicode{x2237}\!\!approx}}}
17 \CustomizeMathJax{\newcommand{\approxcolon}{\mathrel{\approx\!unicode{x2236}}}}
18 \CustomizeMathJax{\newcommand{\approxcoloncolon}{\mathrel{\approx\!unicode{x2237}}}}
19 \CustomizeMathJax{\newcommand{\colonsim}{\mathrel{\!unicode{x2236}\!\sim}}}
```

```

20 \CustomizeMathJax{\newcommand{\coloncolon}{\mathrel{\!unicode{x2237}\!\sim}}}
21 \CustomizeMathJax{\newcommand{\simcolon}{\mathrel{\sim\!unicode{x2236}}}}
22 \CustomizeMathJax{\newcommand{\simcoloncolon}{\mathrel{\sim\!unicode{x2237}}}}
23 \end{warpMathJax}
```

File 99 **l warp-color.sty**

§ 208 Package **color**

color (*Pkg*) Allowed but ignored. **xcolor** is then required as well.

color is superceded by **xcolor**, and **l warp** requires several of the features of **xcolor**. When **color** is requested, **xcolor** is loaded as well.

for HTML output: 1 \LWR@ProvidesPackageDrop{color}[2016/07/10]
2 \RequirePackage{xcolor}

\color@endgroup's \endgraf was conflicting with **l warp**'s paragraph handling.
3 \let\color@endgroup\endgroup

File 100 **l warp-colortbl.sty**

§ 209 Package **colortbl**

colortbl (*Pkg*) **colortbl** is used as-is for print output, and emulated for HTML.

⚠ **row/cell color** Only use \rowcolor and \cellcolor at the start of a row, in that order.

colortbl ignores the overhang arguments.

colored tables \rowcolors is supported, except that the optional argument is ignored so far.

for HTML output: A placeholder definition is forgotten first:

```

1 \let\rowcolor\relax
2
3 \LWR@ProvidesPackagePass{colortbl}[2022/06/20]
```

The following \LWR@HTML versions are used inside an **HTML tabular**.

\columncolor
 $\langle model \rangle \{ \langle color \rangle \} [\langle left overhang \rangle] [\langle right overhang \rangle]$
 \LWR@getmynexttoken is not used here because \columncolor is not used inside the data area of the tabular.
 \columncolor is provided here to satisfy \LWR@formatted's test for the existence of the print-mode macro.

```

4 \ProvideDocumentCommand{\columncolor}{O{named} m o o}{%
5
6 \NewDocumentCommand{\LWR@HTML@columncolor}{O{named} m o o}{%
7   \convertcolorspec{#1}{#2}{HTML}\LWR@columnHTMLcolor%
8   \LWR@addtabularcellcolor%
9 }
```

```
10
11 \AtBeginDocument{\LWR@ reformatted{columncolor}}
```

\LWR@getmynexttoken is used for \rowcolor because it is used inside the data area of the tabular.

\rowcolor [*(model)*] {*(color)*} [*(left overhang)*] [*(right overhang)*]

```
12 \NewDocumentCommand{\LWR@HTML@rowcolor}{O{named} m o o}{%
13   \convertcolorspec{#1}{#2}{HTML}\LWR@rowHTMLcolor%
14   \LWR@getmynexttoken%
15 }
16
17 \AtBeginDocument{\LWR@expandableformatted{rowcolor}}
```

\cellcolor [*(model)*] {*(color)*} [*(left overhang)*] [*(right overhang)*]

```
18 \NewDocumentCommand{\LWR@HTML@cellcolor}{O{named} m o o}{%
19   \convertcolorspec{#1}{#2}{HTML}\LWR@cellHTMLcolor%
20   \LWR@addtabularcellcolor%
21 }
22
23 \AtBeginDocument{\LWR@formatted{cellcolor}}
```

\arrayrulecolor [*(model)*] {*(color)*}

The HTML version for use outside a tabular. Inside a tabular, \LWR@HTML@arrayrulecolornexttoken is used instead.

```
24 \newcommand{\LWR@HTML@arrayrulecolor}[2][named]{%
25   \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
26 }
27
28 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolor}}
```

\LWR@arrayrulecolornexttoken [*(model)*] {*(color)*}
The HTML version for use inside a tabular.

```
29 \newcommand{\LWR@HTML@arrayrulecolornexttoken}[2][named]{%
30   \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
31   \LWR@getmynexttoken%
32 }
33
34 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolornexttoken}}
```

\doublerulesepcolor [*(model)*] {*(color)*}

The version for use outside a tabular.

```
35 \newcommand{\LWR@HTML@doublerulesepcolor}[2][named]{}%
36
37 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolor}}
```

\LWR@doublerulesepcolornexttoken [*(model)*] {*(color)*}
The version for use inside a tabular.

```
38 \newcommand{\LWR@HTML@doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}%
39
```

```
40 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolornexttoken}}
```

```
\rowc@l@rs [⟨cmds⟩] {⟨startrow⟩} {⟨odd color⟩} {⟨even color⟩}
```

```
41 \newcommand*{\LWR@xcolortempcolor}{}  
42  
43 \VerifyCommand[l warp][colortbl]{\rowc@l@rs}{A66C3974E0C5BD5C3DDE033367D197A4}  
44  
45 \def\rowc@l@rs[#1]#2#3#4%  
46 {%
```

The `l warp` emulation starts at row 1 instead of 0.

```
47 % \global\rownum=\z@  
48 \global\rownum=1% l warp  
  
49 \global@rowcolorstrue%  
50 \@ifxempty{#3}{%  
51 {\def@oddrowcolor{@norowcolor}}%  
52 {  
53 \convertcolorspec{named}{#3}{HTML}\LWR@xcolortempcolor% l warp  
54 \edef@oddrowcolor{  
55 \csdef{\LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}}% l warp  
56 }%  
57 }%  
58 \@ifxempty{#4}{%  
59 {\def@evenrowcolor{@norowcolor}}%  
60 {  
61 \convertcolorspec{named}{#4}{HTML}\LWR@xcolortempcolor% l warp  
62 \edef@evenrowcolor{  
63 \csdef{\LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}}% l warp  
64 }%  
65 }%  
66 \if@rowcmd  
67 \def@rowcolors  
68 {  
69 % #1%  
70 \if@rowcolors  
71 % \noalign{  
72 \relax\ifnum\rownum<#2@norowcolor\else  
73 \ifodd\rownum@oddrowcolor\else@evenrowcolor\fi\fi%  
74 % }%  
75 \fi%  
76 }%  
77 \else  
78 \def@rowcolors  
79 {  
80 \if@rowcolors  
81 \ifnum\rownum<#2%  
82 % \noalign{  
83 @norowcolor  
84 % }  
85 \else  
86 % #1%  
87 % \noalign{  
88 \ifodd\rownum@oddrowcolor\else@evenrowcolor\fi%  
89 % }%  
90 \fi  
91 \fi%  
92 }%  
93 \fi
```

```
94     \ignorespaces%
95 }
```

\@norowcolor Turns off color for this row.

```
96 \def\@norowcolor{%
97     \renewcommand{\LWR@xcolor@rowHTMLcolor}{}%
98 }
```

\@rowc@lors Executed at the end of each row.

```
99 \def\@rowc@lors{%
100 %    \noalign{%
101     \advance\rownum\@ne%
102 %    }%
103     \@rowcolors%
104 }
```

For MATHJAX, use the MATHJAX package. The unused macro options are ignored.

```
105 \begin{warpMathJax}
106
107 \CustomizeMathJax{\require{colortbl}}
108 \CustomizeMathJax{\let\LWRorigcolumncolor\columncolor}
109 \CustomizeMathJax{\renewcommand{\columncolor}[2][named]{%
110     \LWRorigcolumncolor[#1]{#2}%
111     \LWRabsorbtwooptions%
112 }}%
113
114 \CustomizeMathJax{\let\LWRorigrowcolor\rowcolor}
115 \CustomizeMathJax{\renewcommand{\rowcolor}[2][named]{%
116     \LWRorigrowcolor[#1]{#2}%
117     \LWRabsorbtwooptions%
118 }}%
119
120 \CustomizeMathJax{\let\LWRorigcellcolor\cellcolor}
121 \CustomizeMathJax{\renewcommand{\cellcolor}[2][named]{%
122     \LWRorigcellcolor[#1]{#2}%
123     \LWRabsorbtwooptions%
124 }}%
125
126 \end{warpMathJax}
```

File 101 **l warp-continue.sty**

§ 210 Package **continue**

continue (*Pkg*) **continue** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{continue}][2018/12/09]

```
2 \newcommand*\{\\flagcont}{}
3 \newcommand*\{\\flagend}{}
4 \newcommand*\{\\flagword}{}
5 \newcommand*\{\\preflagword}{}
6 \newcommand*\{\\postflagword}{}
7 \newlength\contsep
```

```
8 \newlength\contdrop
```

File 102 **l warp-copyrightbox.sty**

§ 211 Package **copyrightbox**

(Emulates or patches code by THOMAS FISCHER, IVES VAN DER FLAAS.)

copyrightbox (*Pkg*) **copyrightbox** is emulated for use by **l warp**.

The entire copyright box is placed inside a <div> of class **copyrightbox**.

The contents are placed inside a <div> of class **copyrightboxcontents**.

The copyright notice is placed inside a <div> of class **copyrightboxnote**.

for HTML output: 1 \LWR@ProvidesPackageDrop{copyrightbox}[2011/11/27]

```
2 \newcommand{\copyrightbox}[3][r]{%
3 \begin{BlockClass}[
4   display: inline-flex;
5   flex-direction: column ;
6 ]{\copyrightbox}
7 \begin{BlockClass}{copyrightboxcontents}
8 #2
9 \end{BlockClass}
10 \begin{BlockClass}{copyrightboxnote}
11 #3
12 \end{BlockClass}
13 \end{BlockClass}
14 }
15
16 \newcommand{\CRB@setcopyrightfont}{}%
17 \newcommand{\CRB@setcopyrightparagraphstyle}{}%
```

File 103 **l warp-crop.sty**

§ 212 Package **crop**

(Emulates or patches code by MELCHIOR FRANZ.)

crop (*Pkg*) **crop** is ignored.

for HTML output: Discard all options for **l warp-crop**:

```
1 \LWR@ProvidesPackageDrop{crop}[2003/05/20]
2 \newcommand*{\crop}[1][]{}
3 \newcommand*{\cropdef}[6][]{}
```

File 104 **l warp-ctable.sty**

§ 213 Package **ctable**

(Emulates or patches code by WYBO DEKKER.)

ctable (*Pkg*) **ctable** is patched for use by **l warp**.

⚠ **Misplaced alignment tab character &** Use `\StartDefiningTabulars` before one or more `\ctables`, and `\StopDefiningTabulars` after. These change the meaning of the ampersand & character.

for HTML output: 1 \LWR@ProvidesPackagePass{ctable}[2015/10/17]

The following is in the original:

```

2 \newcommand{\LWR@HTML@ctable}[4][]{%
3   \let\@CTtaborfig \odfltcTtaborfig
4   \let\@CTalign \odfltcTalign
5   \let\@CTsideways \odfltcTsidenways
6   \let\@CTcontinued \empty
7   \let\@CTpos \odfltcTpos
8   \let\@CTcaption \empty
9   \let\@CTcap \undefined
10  \let\@CTlabel \empty
11  \let\@CTbotcap \odfltcTbotcap
12  \let\@CTstarred \odfltcTstarred
13  \let\@CTsuper \odfltcTsuper
14  \let\@CTnotespar \odfltcTnotespar
15  \let\@CTdoinside \odfltcTdoinside
16  \let\@CTbgopacity \odfltcTbgopacity
17  \let\@CTframerule \odfltcTframerule
18  \let\@CTcaptionskip \odfltcTcaptionskip
19  \let\@CTframesep \odfltcTframesep
20  \let\@CTwidth \odfltcTwidth
21  \let\@CTmaxwidth \odfltcTmaxwidth
22  \let\@CTmincapwidth \odfltcTmincapwidth
23  \let\@CTfooterwidth \odfltcTfooterwidth
24  \def\@CTfactual {\odfltcTframefg}%
25  \def\@CTbactual {\odfltcTframebg}%
26  \def\@CTbeg {\begin{\@CTsideways\@CTtaborfig\@CTstarred}}%
27  \def\@CTbegin {\@CTbeg}%
28  \def\@CTend {\end{\@CTsideways\@CTtaborfig\@CTstarred}}%
29  \setkeys{CT}{#1}%
30  \ifx\@CTcap\undefined\let\@CTcap\@CTcaption\fi
31  \ifx\@CTcap\empty
32    \if@CTcaptionloaded\else
33      \PackageWarningNoLine{l warp-ctable}{\MessageBreak
34        An empty cap= option prevents lot/loc entry only\MessageBreak
35        if the caption package is loaded!}
36    \fi
37  \fi
38  \if@CTinmemoir\else
39    \ifx\@CTbotcap\undefined
40      \PackageError{l warp-ctable}{\MessageBreak
41        You can, currently, use the sidecap option only with\MessageBreak
42        memoir documents. Use topcap or botcap only}

```

```

43          {}
44      \fi
45  \fi
46  \ifdim@\CTwidth=0pt\else
47      \ifdim@\CTmaxwidth=0pt\else
48          \PackageError{l warp-ctable}{\MessageBreak
49              You may not use the width and maxwidth options together\MessageBreak
50                  Use either width or maxwidth}
51          {}
52      \fi
53  \fi
54  \ifx\@CTpos\empty
55      \ifx\@CTsideways\empty\else
56          \PackageError{l warp-ctable}{\MessageBreak
57              You may not use the pos and sideways options together\MessageBreak
58                  Rotated tables and figures are always typeset on a separate page}
59          {}
60      \fi
61  \fi
62  \ifx\@CTcaption\empty
63      \ifx\@CTlabel\empty\else
64          \PackageError{l warp-ctable}{\MessageBreak
65              You may not label a captionless table\MessageBreak
66                  Such a label can't be referenced}
67          {}
68      \fi
69  \fi

```

Some of the original, regarding computing the width of \CT@t, is removed here.

```

70  \begin{CT}
71      \ifx\@CTcontinued\empty\else\addtocounter{\@CTtaborfig}{-1}\fi
72  \end{CT}

```

l warp's patches begin here:

```

73  \begin{center}
74      \setlength{\fboxrule}{\@CTframerule}
75      \setlength{\fboxsep}{\@CTframesep}
76      \LWR@forceminwidth{\fboxrule}%
77      \convertcolorspec{named}{\@CTbgactual}{HTML}\LWR@tempcolor%
78      \begin{BlockClass}[% l warp
79          border:
80              \LWR@printlength{\LWR@atleastonept}
81              solid
82              \LWR@colorstyle{named}{\@CTfgactual} ; %
83          padding:\LWR@printlength{\fboxsep} ; %
84          \ifdefstring{\LWR@tempcolor}{FFFFFF}{}{%
85              background: \LWR@colorstyle{named}{\@CTbgactual} ; %
86          }%
87      ]{\fminipage}%
88          \ifx\@CTbotcap\@CTfalse\@CTCaption\vskip\@CTcaptionskip\fi
89          \ifx\@CTbotcap\undefined%
90              \begin{sidecaption}[\@CTcap]{\@CTcaption}[\@CTlabel]
91          \fi
92          \@CTdoinside
93          \begin{tabularx}{\linewidth}{#2}%
94              #4%
95          \end{tabularx}%

```

```

96      \def\@CTfootnotes{\#3}%
97      \ifx#3\empty\else{%
98          \begin{BlockClass}{tnotes}%
99              \l warp
100         \end{BlockClass}%
101     }%
102   \fi
103   \ifx\@CTbotcap\undefined\end{sidecaption}\fi
104   \ifx\@CTbotcap\@CTtrue\vskip\@CTcaptionskip\@CTCaption\fi
105   \end{BlockClass}%
106 \end{center}%
107 \end{table}%
108 }
109 \LWR@formatted{ctable}

```

Required to properly detect the toprule:

```
110 \LetLtxMacro\FL\toprule
```

Table notes are redefined for HTML:

```

111 \newcommand{\LWR@HTML@tmark}[1][a]{%
112   \textsuperscript{\textrm{\textit{#1}}}}
113 }
114 \LWR@formatted{tmark}
115
116 \newcommand{\LWR@HTML@tnote}[2][a]{%
117   \tmark[#1]\,,#2\par
118 }
119 \LWR@formatted{tnote}

```

File 105 **l warp-cuted.sty**

§214 Package **cuted**

(Emulates or patches code by SIGITAS TOLUŠIS.)

cuted (*Pkg*) cuted is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{cuted}[2021/10/04]

```

2 \newenvironment{strip}{}{}
3 \newskip\stripsep
4 \newtoks\preCutedStrip \preCutedStrip{}
5 \newtoks\postCutedStrip \postCutedStrip{}
6 \def\oldcolsbreak#1{}

```

File 106 **l warp-cutwin.sty**

§215 Package **cutwin**

(Emulates or patches code by PETER WILSON AND ALAN HOENIG.)

cutwin (*Pkg*) cutwin is emulated.

for HTML output: Discard all options for `l warp-cutwin`:

```

1 \LWR@ProvidesPackageDrop{cutwin}[2010/09/29]

2 \newcommand*\opencutleft(){}
3 \newcommand*\opencutright(){}
4 \newcommand*\opencutcenter(){}
5 \newcommand*\cutfuzz(){}
6
7 \newenvironment{cutout}[4]
8 {\marginpar{\windowpagestuff}}
9 {}
10
11 \newcommand*\windowpagestuff(){}
12
13 \newcommand*\pageinwindow(){}
14 % \begin{minipage}{.3\linewidth}
15 \windowpagestuff
16 % \end{minipage}
17 }
18
19 \newenvironment{shapedcutout}[3]
20 {\marginpar{\picinwindow}}
21 {}
22
23 \newcommand*\putstuffinpic(){}
24
25 \newcommand*\picinwindow(){}
26 \begin{picture}(0,0)
27 \putstuffinpic
28 \end{picture}

```

File 107 **l warp-dblfloatfix.sty**

§ 216 Package **dblfloatfix**

`dblfloatfix (Pkg)` `dblfloatfix` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dblfloatfix}[2012/12/31]

File 108 **l warp-dblfnote.sty**

§ 217 Package **dblfnote**

(Emulates or patches code by HIROSHI NAKASHIMA.)

`dblfnote (Pkg)` `dblfnote` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dblfnote}[1999/07/14]

```

2 \newcounter{DFNsloppiness}
3 \newdimen\DFNcolumnsep
4 \newdimen\DFNcolumnwidth
5 \def\DFNallowcbreak{}

```

```

6 \def\DFNinhibitcbreak{}
7 \def\DFNtrysingle{}
8 \def\DFNalwaysdouble{}
9 \def\DFNruleboth{}
10 \def\DFNruleleft{}
```

File 109 **l warp-dcolumn.sty**

§ 218 Package **dcolumn**

dcolumn (*Pkg*) **dcolumn** is used as-is in a `\teximage`, and is emulated by the `l warp` core.

dcolumn used to be `\LWR@ProvidesPackageDrop` in prior versions of `l warp`, but is now supported for print mode.

1 `\LWR@ProvidesPackagePass{dcolumn}[2014/10/28]`

Due to how the `D` column is created, cannot use `\HTMLnewcolumntype` here. An `HTML` version neutralizes the lower-level macros, leaving a `c` column type.

```

2 \newcommand*\LWR@HTML@DC@[3]{}%
3 \LWR@formatted{DC@}%
4 %
5 \providecommand*\DC@end{}%
6 %
7 \newcommand*\LWR@HTML@DC@end{}%
8 \LWR@formatted{DC@end}
```

File 110 **l warp-decimal.sty**

§ 219 Package **decimal**

(Emulates or patches code by A. SYROPOULOS AND R. W. D. NICKALLS.)

decimal (*Pkg*) **decimal** works as-is for `SVG` math, and is emulated for `MATHJAX`.

for HTML output: 1 `\LWR@ProvidesPackagePass{decimal}[2011/06/03]`

```

2 \begin{warpMathJax}%
3 \CustomizeMathJax{\def\.{\mbox{.}}}%
4 \end{warpMathJax}
```

File 111 **l warp-decorule.sty**

§ 220 Package **decorule**

(Emulates or patches code by PETER FLYNN.)

decorule (*Pkg*) **decorule** is patched for use by `l warp`.

for HTML output: 1 `\LWR@ProvidesPackagePass{decorule}[2020/04/01]`

```

2 \xpretocmd{\decorule}
3   {\begin{ lateximage }*[decorule]}
4   {}
5   {\LWR@patcherror{decorule}{decorule A}}
6
7 \xapptocmd{\decorule}
8   {\end{ lateximage}}
9   {}
10 {\LWR@patcherror{decorule}{decorule B}}

```

File 112 **l warp-diagbox.sty**

§ 221 Package **diagbox**

(Emulates or patches code by LEO Liu.)

diagbox (*Pkg*) **diagbox** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{diagbox}[2016/12/28]

To restore print-mode inside a **lateximage**:

```

2 \LetLtxMacro{\LWR@origdiagbox@double}{\diagbox@double}
3 \LetLtxMacro{\LWR@origdiagbox@triple}{\diagbox@triple}
4
5 \appto{\LWR@restoreorigformatting}{%
6 \LetLtxMacro{\diagbox@double}{\LWR@origdiagbox@double}%
7 \LetLtxMacro{\diagbox@triple}{\LWR@origdiagbox@triple}%
8 }

```

\LWR@diagbox@AB { E/W } { A } { E/W } { B }
9 \newcommand{\LWR@diagbox@AB}[4]{
10 \begingroup%
11 \LetLtxMacro{\newline}{
12 \BlockClassSingle{\diagbox#1}{#2}}%
13 \BlockClassSingle{\diagbox#3}{#4}}%
14 \endgroup%
15 \LWR@stopars%
16 }

\LWR@diagboxNW { A } { B }
17 \newcommand{\LWR@diagboxNW}[2]{%
18 \LWR@diagbox@AB{E}{#2}{W}{#1}}%
19 }

Likewise for NE, SW, SE:

```

20 \newcommand{\LWR@diagboxNE}[2]{%
21 \LWR@diagbox@AB{W}{#1}{E}{#2}}%
22 %
23
24 \let\LWR@diagboxSW\LWR@diagboxNE
25 \let\LWR@diagboxSE\LWR@diagboxNW

```

```
\diagbox@double {⟨keys⟩} {⟨A⟩} {⟨B⟩}
26 \def\diagbox@double#1#2#3{%
27 \setkeys{diagbox}{dir=NW,#1}%
28 @nameuse{LWR@diagbox\diagbox@dir}{#2}{#3}%
29 }
```

```
\LWR@diagboxTNW {⟨title⟩} {⟨A⟩} {⟨B⟩}
30 \newcommand{\LWR@diagboxTNW}[3]{%
31 \BlockClassSingle{diagbotitleN}{#1}%
32 \LWR@diagboxNW{#2}{#3}%
33 }
```

Likewise for NE, SW, SE:

```
34 \newcommand{\LWR@diagboxTNE}[3]{%
35 \BlockClassSingle{diagbotitleN}{#1}%
36 \LWR@diagboxNE{#2}{#3}%
37 }%
38
39 \newcommand{\LWR@diagboxTSW}[3]{%
40 \LWR@diagboxSW{#2}{#3}%
41 \BlockClassSingle{diagbotitleS}{#1}%
42 \LWR@stopars%
43 }%
44
45 \newcommand{\LWR@diagboxTSE}[3]{%
46 \LWR@diagboxSE{#2}{#3}%
47 \BlockClassSingle{diagbotitleS}{#1}%
48 \LWR@stopars%
49 }
```

```
\diagbox@triple {⟨keys⟩} {⟨A⟩} {⟨T⟩} {⟨B⟩}
50 \def\diagbox@triple#1#2#3#4{%
51 \setkeys{diagbox}{dir=NW,#1}%
52 @nameuse{LWR@diagboxT\diagbox@dir}{#3}{#2}{#4}%
53 }
```

File 113 **l warp-dingbat.sty**

§ 222 Package **dingbat**

(Emulates or patches code by SCOTT PAKIN.)

dingbat (*Pkg*) **dingbat** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{dingbat}[2001/04/27]

```
2 \newcommand*\LWR@dingbatsymbol[1]{\HTMLunicode{#1}}
3
4 \newcommand{\LWR@HTML@rightpointright}{\LWR@dingbatsymbol{261E}}
5 \newcommand{\LWR@HTML@leftpointright}{\LWR@dingbatsymbol{261E}}
6 \newcommand{\LWR@HTML@leftthumbsdown}{\LWR@dingbatsymbol{1F44E}}
7 \newcommand{\LWR@HTML@leftthumbsup}{\LWR@dingbatsymbol{1F44D}}
```

```

8 \newcommand{\LWR@HTML@rightpointleft}{\LWR@dingbatsymbol{261C}}
9 \newcommand{\LWR@HTML@rightthumbsdown}{\LWR@dingbatsymbol{1F44E}}
10 \newcommand{\LWR@HTML@rightthumbsup}{\LWR@dingbatsymbol{1F44D}}
11 \newcommand{\LWR@HTML@squarewithdots}{\LWR@dingbatsymbol{25C7}}
12 \newcommand{\LWR@HTML@filledsquarewithdots}{\LWR@dingbatsymbol{25C6}}
13 \newcommand{\LWR@HTML@sborder}{\LWR@dingbatsymbol{271A}}
14 \newcommand{\LWR@HTML@Zborder}{\LWR@dingbatsymbol{274B}}
15 \newcommand{\LWR@HTML@largepencil}{\LWR@dingbatsymbol{270E}}
16 \newcommand{\LWR@HTML@anchor}{\LWR@dingbatsymbol{2693}}
17 \newcommand{\LWR@HTML@carriagereturn}{\LWR@dingbatsymbol{23CE}}
18 \newcommand{\LWR@HTML@checkmark}{\LWR@dingbatsymbol{2713}}
19 \newcommand{\LWR@HTML@eye}{\LWR@dingbatsymbol{1F441}}
20 \newcommand{\LWR@HTML@satellitedish}{\LWR@dingbatsymbol{1F4E1}}
21 \newcommand{\LWR@HTML@smallpencil}{\LWR@dingbatsymbol{270E}}
22
23 \LWR@formatted{rightpointright}
24 \LWR@formatted{leftpointright}
25 \LWR@formatted{leftthumbsdown}
26 \LWR@formatted{leftthumbsup}
27 \LWR@formatted{rightpointleft}
28 \LWR@formatted{rightthumbsdown}
29 \LWR@formatted{rightthumbsup}
30 \LWR@formatted{squarewithdots}
31 \LWR@formatted{filledsquarewithdots}
32 \LWR@formatted{Sborder}
33 \LWR@formatted{Zborder}
34 \LWR@formatted{largepencil}
35 \LWR@formatted{anchor}
36 \LWR@formatted{carriagereturn}
37 \LWR@formatted{checkmark}
38 \LWR@formatted{eye}
39 \LWR@formatted{satellitedish}
40 \LWR@formatted{smallpencil}

```

File 114 lwarf-doipubmed.sty

§ 223 Package doipubmed

(Emulates or patches code by NICOLA TALBOT.)

doipubmed (*Pkg*) doipubmed is patched for use by lwarf.

for HTML output: 1 \LWR@ProvidesPackagePass{doipubmed}[2007/08/20]

```

2 \VerifyCommand[lwarf][doipubmed]{\doi}{13FFCB4F414B838B6C3AD344117A8}
3
4 \renewcommand*\doi[1]{%
5 \def\@doi@code{}%
6 \@doi@linksubs#1\#\@@\@doi@code%
7 \@onelvel@sanitize{\@doi@code}%
8 \def\@doi@text{}%
9 \@doi@textsubs#1@nil\@@\@doi@text%
10 \xpretocmd{\@doi@code}{http://dx.doi.org/}{}{%
11 \expandafter\href\expandafter{\@doi@code}{\doitext{\@doi@text}}}}

```

Must not modify catcodes before using \url:

```

12 \DeclareDocumentCommand{\LWR@citeurlb}{m}{%
13   \LWR@ensuredoingapar%
14   \textless%
15   \LWR@href@sanitized{#1}{#1}%
16   \textgreater%
17   \endgroup%
18 }
19
20 \renewrobustcmd*\citetitle{%
21   \begingroup%
22   \LWR@linkcatcodes%
23   \LWR@citeurlb%
24 }

```

File 115 **l warp-DotArrow.sty**

§ 224 Package **DotArrow**

(Emulates or patches code by SVEN SCHNEIDER.)

DotArrow (*Pkg*) **DotArrow** is patched for use by **l warp**, and emulated for **MATHJAX**.

for HTML output: 1 \LWR@ProvidesPackagePass{DotArrow}[2007/02/12]

The width must be recomputed each time, depending on print or **HTML** output.

```

2 \xpretocmd{\dotarrow}{\settowidth{\oneWidth}{\onePartX}}{}{}
3
4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\dotarrow}[1]{\stackrel{#1}{\text{\scriptsize{\texttt{\{\\unicode{x21E2}\\}}}}}}}
6 \end{warpMathJax}

```

File 116 **l warp-dotlessi.sty**

§ 225 Package **dotlessi**

(Emulates or patches code by JAVIER BEZOS.)

dotlessi (*Pkg*) **dotlessi** is used as-is for **SVG** math, and is emulated for **MATHJAX**.

⚠ **HTML \dotlessj** Use **\usepackage{cmap}** if **\dotlessj** does not appear in **HTML** in text mode. See section [7.4](#).

⚠ **not bold** For **MATHJAX**, use **\boldsymbol** instead of **\mathbf**.

for HTML output: 1 \LWR@ProvidesPackagePass{dotlessi}[1999/10/12]

For **MATHJAX**:

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\let\dotlessi\imath}
4 \CustomizeMathJax{\let\dotlessj\jmath}
5 \end{warpMathJax}

```

File 117 **l warp-dprogress.sty**

§ 226 Package **dprogress**

dprogress (*Pkg*) dprogress is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]

File 118 **l warp-draftcopy.sty**

§ 227 Package **draftcopy**

draftcopy (*Pkg*) draftcopy is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftcopy}[2002/02/25]

```
2 \newcommand{\draftcopyVersion}[1]{}
3 \newcommand{\draftcopySetGrey}[1]{}
4 \newcommand{\draftcopysetScale}[1]{}
5 \newcommand{\draftcopySetScaleFactor}[1]{}
6 \newcommand{\draftcopyFirstPage}[1]{}
7 \newcommand{\draftcopyLastPage}[1]{}
8 \newcommand{\draftcopyName}[2]{}
9 \newcommand{\draftcopyPageTransform}[1]{}
10 \newcommand{\draftcopyBottomTransform}[1]{}
11 \newcommand{\draftcopyPageX}[1]{}
12 \newcommand{\draftcopyPageY}[1]{}
13 \newcommand{\draftcopyBottomX}[1]{}
14 \newcommand{\draftcopyBottomY}[1]{}
```

File 119 **l warp-draftfigure.sty**

§ 228 Package **draftfigure**

draftfigure (*Pkg*) draftfigure is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftfigure}[2017/07/19]
2 \RequirePackage{xkeyval}

```
3 \define@key{draftfigure}{code}{}%
4 \define@key{draftfigure}{noframe}[true]{}%
5 \define@key{draftfigure}{filename}[true]{}%
6 \define@key{draftfigure}{content}{}[]{}%
7 \define@key{draftfigure}{style}[normal]{}%
8 \define@key{draftfigure}{position}[left]{}%
9 \define@key{draftfigure}{size}[normal]{}%
10 \newcommand\setdf[1]{\setkeys{draftfigure}{#1}}%
```

File 120 l warp-draftwatermark.sty

§ 229 Package **draftwatermark**

(Emulates or patches code by SERGIO CALLEGARI.)

draftwatermark (*Pkg*) **draftwatermark** is ignored.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{draftwatermark}[2020/03/14]

2 \newcommand{\DraftwatermarkOptions}[1]{}
3 \newcommand{\DraftwatermarkStdMark}{}
4 \newcommand{\SetWatermarkAngle}[1]{}
5 \newcommand{\SetWatermarkColor}[1]{}
6 \newcommand{\SetWatermarkLightness}[1]{}
7 \newcommand{\SetWatermarkFontSize}[1]{}
8 \newcommand{\SetWatermarkScale}[1]{}
9 \newcommand{\SetWatermarkHorCenter}[1]{}
10 \newcommand{\SetWatermarkVertCenter}[1]{}
11 \newcommand{\SetWatermarkText}[1]{}
```

File 121 l warp-drftcite.sty

§ 230 Package **drftcite**

(Emulates or patches code by DONALD ARSENEAU.)

drftcite (*Pkg*) **drftcite** is patched for use by **l warp**.

for HTML output:

```
1 \LWR@ProvidesPackagePass{drftcite}[1995/01/23]

2 \VerifyCommand[l warp][drftcite]{\@lbibitem}{43265BD7F1B9C9818D873D651C19485C}
3
4 \def@\lbibitem[#1]{\global@\HighCite\z@
5   \item[
6     \textsuperscript{\nameuse{DCN@#2@\extra@b@citeb}}~%      l warp
7     \biblabel{\ifundefined{DCN@#2@\extra@b@citeb}{\@warning
8       {Reference '#2' on page \thepage\space was never cited}}{}%
9     \DC@llap{$^{\nameuse{DCN@#2@\extra@b@citeb}}$} \ }%
10    \citeverb{#2}\hfil]\if@filesw{\def\protect##1{\string ##1\space}%
11      \immediate\write\auxout{\string\bibcite{#2}{#1}}}\fi\ignorespaces}
```

File 122 l warp-easy-todo.sty

§ 231 Package **easy-todo**

(Emulates or patches code by JUAN RADA-VILELA.)

easy-todo (*Pkg*) **easy-todo** is patched for use by **l warp**.

To remove the “P.” heading for HTML:

```
\warpHTMLonly{\renewcommand{\todoindexpagetitle}{}}
```

for HTML output: 1 \LWR@ProvidesPackagePass{easy-todo}[2014/01/01]

\listoftodos Modified to correct buggy use of \flushright.

```
2 \let\LWR@easytodo@origlistoftodos\listoftodos
3
4 \renewcommand{\listoftodos}{%
5 \begin{group}
6 \renewcommand{\flushright}{}
7 \LWR@easytodo@origlistoftodos
8 \end{group}
9 }
```

\todoii Modified to use \textcolor instead of \color.

```
10 \VerifyCommand[l warp][easy-todo]{\todoii}{04C63A894C30C706AC60DD6B58FDEDA2}
11
12 \renewcommand{\todoii}[2]{%
13 \ifthenelse{\equal{\@todoobeyfinal}{true}}{%
14   {%
15     \ifoptionfinal{\todoenable{false}}{\todoenable{true}}{%
16       {}%
17     {}%
18   \ifthenelse{\equal{\@todoenable}{true}}{%
19     {%
20       \refstepcounter{todos}%
21       \noindent{%
22         \todocolor{%
23           \LWR@textcurrentcolor{%
24             \normalfont\scriptsize{\bfseries{\thetodos.\#1}}%
25           }%
26         }%
27       \addcontentsline{l od}{todos}{\protect{\thetodos. }\LWR@isolate{\#2}}%
28     }%
29     {}%
30   }}
```

File 123 **l warp-ebook.sty**

§ 232 Package **ebook**

(Emulates or patches code by JØRGEN STEENSGAARD.)

ebook (*Pkg*) ebook is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ebook}

```
2 \setcounter{secnumdepth}{0}
3 \setcounter{tocdepth}{2}
4
5 \providecommand{\pagefill}[1][0.001mm]{\noindent}
6
7 \providecommand{\ebook}{%
8 \setcounter{secnumdepth}{0}}
```

```
9 \setcounter{tocdepth}{2}
10 }
```

File 124 **l warp-econometrics.sty**

§ 233 Package **econometrics**

(Emulates or patches code by ERIK KOLE.)

econometrics (*Pkg*) **econometrics** is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{econometrics}% no date specified in the original

```
2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{econometrics}
6
7 \CustomizeMathJax{\newcommand{\SC}{\mathbb{C}}}
8 \CustomizeMathJax{\newcommand{\SN}{\mathbb{N}}}
9 \CustomizeMathJax{\newcommand{\SQ}{\mathbb{Q}}}
10 \CustomizeMathJax{\newcommand{\SR}{\mathbb{R}}}
11 \CustomizeMathJax{\newcommand{\SZ}{\mathbb{Z}}}
12
13 \CustomizeMathJax{\newcommand{\calA}{\mathcal{A}}}
14 \CustomizeMathJax{\newcommand{\calB}{\mathcal{B}}}
15 \CustomizeMathJax{\newcommand{\calC}{\mathcal{C}}}
16 \CustomizeMathJax{\newcommand{\calD}{\mathcal{D}}}
17 \CustomizeMathJax{\newcommand{\calE}{\mathcal{E}}}
18 \CustomizeMathJax{\newcommand{\calF}{\mathcal{F}}}
19 \CustomizeMathJax{\newcommand{\calG}{\mathcal{G}}}
20 \CustomizeMathJax{\newcommand{\calH}{\mathcal{H}}}
21 \CustomizeMathJax{\newcommand{\calI}{\mathcal{I}}}
22 \CustomizeMathJax{\newcommand{\calJ}{\mathcal{J}}}
23 \CustomizeMathJax{\newcommand{\calK}{\mathcal{K}}}
24 \CustomizeMathJax{\newcommand{\call}{\mathcal{L}}}
25 \CustomizeMathJax{\newcommand{\calM}{\mathcal{M}}}
26 \CustomizeMathJax{\newcommand{\calN}{\mathcal{N}}}
27 \CustomizeMathJax{\newcommand{\calO}{\mathcal{O}}}
28 \CustomizeMathJax{\newcommand{\calP}{\mathcal{P}}}
29 \CustomizeMathJax{\newcommand{\calQ}{\mathcal{Q}}}
30 \CustomizeMathJax{\newcommand{\calR}{\mathcal{R}}}
31 \CustomizeMathJax{\newcommand{\calS}{\mathcal{S}}}
32 \CustomizeMathJax{\newcommand{\calT}{\mathcal{T}}}
33 \CustomizeMathJax{\newcommand{\calU}{\mathcal{U}}}
34 \CustomizeMathJax{\newcommand{\calV}{\mathcal{V}}}
35 \CustomizeMathJax{\newcommand{\calW}{\mathcal{W}}}
36 \CustomizeMathJax{\newcommand{\calX}{\mathcal{X}}}
37 \CustomizeMathJax{\newcommand{\calY}{\mathcal{Y}}}
38 \CustomizeMathJax{\newcommand{\calZ}{\mathcal{Z}}}
39
40 \LWR@mathjax@addlatin@u@bfit{m}% uppercase Latin, bold italic
41 \LWR@mathjax@addlatin@l@bfit{v}% lowercase Latin, bold italic
42
43 \LWR@mathjax@addgreek@l@bfit{v}{}% lowercase Greek bold italic
44 \LWR@mathjax@addgreek@u@bfit*{m}{}% uppercase Greek bold italic, capitalized macro names
45
```

```
46 \CustomizeMathJax{\newcommand{\rb}{\mathrm{b}}}
47 \CustomizeMathJax{\newcommand{\rB}{\mathrm{B}}}
48 \CustomizeMathJax{\newcommand{\rc}{\mathrm{C}}}
49 \CustomizeMathJax{\newcommand{\rD}{\mathrm{D}}}
50 \CustomizeMathJax{\newcommand{\rf}{\mathrm{f}}}
51 \CustomizeMathJax{\newcommand{\rF}{\mathrm{F}}}
52 \CustomizeMathJax{\newcommand{\rH}{\mathrm{H}}}
53 \CustomizeMathJax{\newcommand{\rL}{\mathrm{L}}}
54 \CustomizeMathJax{\newcommand{\rN}{\mathrm{N}}}
55 \CustomizeMathJax{\newcommand{\rt}{\mathrm{t}}}
56 \CustomizeMathJax{\newcommand{\rU}{\mathrm{U}}}
57 \CustomizeMathJax{\newcommand{\rGam}{\mathrm{Gam}}}
58 \CustomizeMathJax{\newcommand{\rBeta}{\mathrm{Beta}}}
59
60 \CustomizeMathJax{\newcommand{\Bin}{\mathrm{Bin}}}
61 \CustomizeMathJax{\newcommand{\eu}{\mathrm{e}}}
62 \CustomizeMathJax{\newcommand{\iu}{\mathrm{i}}}
63 \CustomizeMathJax{\newcommand{\LN}{\mathrm{LN}}}
64 \CustomizeMathJax{\newcommand{\IN}{\mathrm{IN}}}
65
66 \CustomizeMathJax{\newcommand{\Poi}{\mathrm{Poi}}}
67
68 \CustomizeMathJax{\newcommand{\ped}[1]{\mathrm{_}{#1}}}
69 \CustomizeMathJax{\newcommand{\ap}[1]{^{\mathrm{#1}}}}
70 \CustomizeMathJax{\renewcommand{\Re}{\mathrm{Re}}{\mathrm{\nolimits}}}
71 \CustomizeMathJax{\renewcommand{\Im}{\mathrm{Im}}{\mathrm{\nolimits}}}
72
73 \CustomizeMathJax{\newcommand{\deriv}[3]{%
74   \frac{\mathrm{d}^{#1}\#2}{\mathrm{d}^{#1}}%
75 } }
76 \CustomizeMathJax{\newcommand{\pderiv}[3]{%
77   \frac{\partial^{#1}\#2}{\partial^{#1}}%
78 } }
79
80 \CustomizeMathJax{\newcommand{\bias}{\operatorname{bias}}}
81 \CustomizeMathJax{\newcommand{\col}{\operatorname{col}}}
82 \CustomizeMathJax{\newcommand{\corr}{\operatorname{corr}}}
83 \CustomizeMathJax{\newcommand{\cov}{\operatorname{cov}}}
84 \CustomizeMathJax{\newcommand{\dg}{\operatorname{dg}}}
85 \CustomizeMathJax{\newcommand{\diag}{\operatorname{diag}}}
86 \CustomizeMathJax{\newcommand{\E}{\operatorname{E}}}
87 \CustomizeMathJax{\newcommand{\etr}{\operatorname{etr}}}
88 \CustomizeMathJax{\newcommand{\ip}{\mathrm{int}}{\mathrm{\nolimits}}}
89 \CustomizeMathJax{\newcommand{\kur}{\operatorname{kur}}}
90 \CustomizeMathJax{\newcommand{\MSE}{\operatorname{MSE}}}
91 \CustomizeMathJax{\newcommand{\MSFE}{\operatorname{MSFE}}}
92 \CustomizeMathJax{\newcommand{\OLS}{\operatorname{OLS}}}
93 \CustomizeMathJax{\newcommand{\plim}{\operatorname{plim}}}
94 \CustomizeMathJax{\newcommand{\resid}{\operatorname{resid}}}
95 \CustomizeMathJax{\newcommand{\rk}{\operatorname{rk}}}
96 \CustomizeMathJax{\newcommand{\SE}{\operatorname{SE}}}
97 \CustomizeMathJax{\newcommand{\sgn}{\operatorname{sgn}}}
98 \CustomizeMathJax{\newcommand{\tr}{\operatorname{tr}}}
99 \CustomizeMathJax{\newcommand{\var}{\operatorname{var}}}
100 \CustomizeMathJax{\renewcommand{\vec}{\operatorname{vec}}}
101 \CustomizeMathJax{\newcommand{\vech}{\operatorname{vech}}}
102
103 \CustomizeMathJax{\newcommand{\distr}{\mathrm{\sim}}}
104 \CustomizeMathJax{\newcommand{\adistr}{\mathrm{\stackrel{a}{\Delta}}{\mathrm{\distr}}}}
105 \CustomizeMathJax{\newcommand{\diff}{\mathrm{\Delta}}}
```

```

106 \CustomizeMathJax{\newcommand{\fdiff}{\diff_{\rf}}}
107 \CustomizeMathJax{\newcommand{\bdfdiff}{\diff_{\rb}}}
108
109 \CustomizeMathJax{\newcommand{\eps}{\epsilon}}
110 \CustomizeMathJax{\newcommand{\epsi}{\varepsilon}}
111
112 \CustomizeMathJax{\newcommand{\longto}{\longrightarrow}}
113 \CustomizeMathJax{\newcommand{\pto}{\stackrel{p}{\longrightarrow}}}
114 \CustomizeMathJax{\newcommand{\dto}{\stackrel{d}{\longrightarrow}}}
115 \CustomizeMathJax{\newcommand{\wto}{\stackrel{w}{\longrightarrow}}}
116
117 \CustomizeMathJax{\newcommand{\Infmat}{\bm{\mathcal{I}}}}
118 \CustomizeMathJax{\newcommand{\Hesmat}{\bm{\mathcal{H}}}}
119 \CustomizeMathJax{\newcommand{\bcdot}{\bullet}}
120
121 \CustomizeMathJax{\newcommand{\vones}{\bm{\mathbf{i}}}}
122 \CustomizeMathJax{\newcommand{\vzeros}{\boldsymbol{0}}}
123 \CustomizeMathJax{\newcommand{\mZeros}{\mathbf{0}}}
124
125 \CustomizeMathJax{\newcommand{\e}{\eu}}
126 \CustomizeMathJax{\newcommand{\mply}{\cdot}}
127 \CustomizeMathJax{\newcommand{\rW}{\mathrm{W}}}
128 \end{warpMathJax}

```

File 125 lwarf-ed.sty

§ 234 Package **ed**

(Emulates or patches code by MICHAEL KOHLHASE.)

ed (*Pkg*) **ed** is patched for use by **lwarf**.

for HTML output: 1 \LWR@ProvidesPackagePass{ed}[2012/01/29]

Bugs:

1. `tolist` fails with the `hide` option, as does `\edexplanation`.
2. `\edstubURI` is actually `\edstuURI`.

```

2 \RequirePackage{xcolor}
3
4 \renewenvironment{edstub}[2]{The following blue text}
5 {%
6   \def\@test{\#1}%
7   \begin{center}%
8     \huge%
9     \textcolor{red}{%
10       \#1 is only a provisional stub\\Large
11       the Office document
12       \ifx\ed@stubURI\empty\else\ href{\ed@stubURI}{\#2}\fi\
13       contains more text\which will be merged for the final document%
14     }%
15   \end{center}%
16   \BlockClass{color:blue}{edstub}%
17 }
18 {\endBlockClass}

```

File 126 l warp-ellipsis.sty**§ 235 Package ellipsis**

(Emulates or patches code by PETER J. HESLIN.)

ellipsis (*Pkg*) ellipsis is emulated.

```
1 \LWR@ProvidesPackageDrop{ellipsis}[2004/09/28]
2
3 \newcommand{\ellipsisgap}{0.1em}
4
5 \newcommand*{\midwordellipsis}{\textellipsis}
```

File 127 l warp-embrac.sty**§ 236 Package embrac**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

embrac (*Pkg*) embrac is patched for HTML and used as-is for print.

for HTML output: 1 \LWR@ProvidesPackagePass{embrac}[2017/07/04]

```
2 \ExplSyntaxOn
3 \RenewDocumentCommand{\embrac_kern:n}{m}{}%
4 \ExplSyntaxOff

5 \LetLtxMacro{\LWR@orig@HTML@emph}{\LWR@HTML@emph}
6 \RenewDocumentCommand{\LWR@HTML@emph}{s m}{\LWR@orig@HTML@emph{#2}}
7
8 \LetLtxMacro{\LWR@orig@HTML@textit}{\LWR@HTML@textit}
9 \RenewDocumentCommand{\LWR@HTML@textit}{s m}{\LWR@orig@HTML@textit{#2}}
10
11 \LetLtxMacro{\LWR@orig@HTML@textsl}{\LWR@HTML@textsl}
12 \RenewDocumentCommand{\LWR@HTML@textsl}{s m}{\LWR@orig@HTML@textsl{#2}}
13
14 \ifxetexorluatex
15   \LetLtxMacro{\LWR@orig@HTML@textsi}{\LWR@HTML@textsi}
16   \RenewDocumentCommand{\LWR@HTML@textsi}{s m}{%
17     \LWR@orig@HTML@textsi{#2}}
18 \fi
19
20 \AtBeginDocument{
21   \LWR@formatted{emph}
22   \LWR@formatted{textit}
23   \LWR@formatted{textsl}
24   \ifxetexorluatex
25     \LWR@formatted{textsi}
26   \fi
27 }
28
```

```

29 \newcommand{\LWR@HTML@EmbracOff}{}
30 \LWR@formatted{EmbracOff}
31
32 \newcommand{\LWR@HTML@EmbracOn}{}
33 \LWR@formatted{EmbracOn}

```

File 128 **l warp-emptypage.sty**

§ 237 Package **emptypage**

emptypage (*Pkg*) **emptypage** is ignored.

for HTML output: Discard all options for **l warp-emptypage**:

```
1 \LWR@ProvidesPackageDrop{emptypage}[2010/05/30]
```

File 129 **l warp-endfloat.sty**

§ 238 Package **endfloat**

endfloat (*Pkg*) **endfloat** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{endfloat}[2019/04/15]

```

2 \newcommand\figureplace{}
3 \newcommand\tableplace{}
4 \newcommand\floatplace[1]{}
5 \newcounter{posttable}
6 \newcounter{postfigure}
7 \newcommand*\theposttbl(){}
8 \newcommand*\thepostfig(){}
9 \newcommand{\AtBeginFigures}[1]({})
10 \newcommand{\AtBeginTables}[1]({})
11 \newcommand{\AtBeginDelayedFloats}[1]({})
12 \newcommand*\processdelayedfloats(){}
13 \newcommand*\efloatseparator(){}
14 \def\efloatattype{}
15 \providecommand\efloatatheading[1]({})
16 \providecommand\efloatpreamble={}
17 \providecommand\efloatpostamble={}
18 \NewDocumentCommand{\addtodelayedfloat}{s m m} {}
19 \providecommand\efloatbegin(){}
20 \providecommand\efloatend(){}
21 \providecommand\efloatbeginlist(){}
22 \providecommand\efloatendlist(){}

```

File 130 **l warp-endheads.sty**

§ 239 Package **endheads**

endheads (*Pkg*) **endheads** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{endheads}[2017/04/06]

```

2 \newcommand{\changesinglepageabbrev}[1]{}
3 \newcommand{\changemultiplepageabbrev}[1]{}
4 \newcommand{\changenotesname}[1]{}
5 \newcommand{\changenotesheader}[1]{}
6 \newcommand{\changenotescontentsname}[1]{}
7 \newcommand{\changechapternotesline}[1]{}
8 \newcommand{\checknoteheaders}{}
9 \newif\ifnotesincontents \notesincontentsfalse
10 \newcommand{\notesincontents}{\notesincontentstrue}
11 \newif\ifendnoteheaders \endnoteheadersfalse
12 \newcommand{\setupendnoteheaders}{%
13   \endnoteheaderstrue%
14 }
15 \newif\iftitleinnotes \titleinnotestrue
16 \newcommand{\styleforchapternotebegin}{}
17 \newcommand{\styleforchapternoteend}{}
18 \newcommand{\setstyleforchapternotebegin}[1]{%
19   \renewcommand{\styleforchapternotebegin}{#1}%
20 }
21 \newcommand{\setstyleforchapternoteend}[1]{%
22   \renewcommand{\styleforchapternoteend}{#1}%
23 }
24 \newcommand{\resetendnotes}{}
25 \newif\ifnotesbychapteron \notesbychapteronfalse
26 \newcommand{\notesbychapter}{\notesbychaptertrue}

```

File 131 **l warp-endnotes.sty**

§ 240 Package **endnotes**

(Emulates or patches code by JOHN LAVAGNINO.)

endnotes (Pkg) Patched for HTML.

table of contents To place the endnotes in the TOC, use:

```
\usepackage{endnotes}
\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*{\notesname}{Endnotes} % optional
```

HTML page To additionally have the endnotes on their own HTML page, if `FileDepth` allows:

```
\ForceHTMLPage
\theendnotes
```

⚠ \endnotemark If using MATHJAX, see section 8.5.4 regarding the use of `\endnotemark` and `\endnotetext`.

for HTML output: 1 \LWR@ProvidesPackagePass{endnotes}

```

2 \def\enoteformat{%
3   \rightskip\z@ \leftskip\z@ \parindent=1.8em
4 \leavevmode
5 \llap{
6 \makeenmark
7 }
8 }
```

```

9 \def\LWR@HTML@@makeenmark{\hbox{\LWR@htmlspan{sup}{\normalfont\theenmark}}}
10 \LWR@formatted{@makeenmark}
11
12 \def\makeenmark{\@makeenmark}
```

To nullify the endnotes:

```

13 \apptocmd{\LWR@nullifyfootnotes}{%
14   \renewcommand{\endnote}[2][]{\%}
15   \renewcommand{\endnotemark}[1]{\%}
16 }{}{}
```

For MATHJAX:

```

17 \begin{warpMathJax}
18 \def\endnotename{\endnote}
19 \appto\LWR@syncnotenumbers{\LWR@synconenotenumeration{\LWRendnote}{\theendnote}}
20 \appto\LWR@syncnotenames{\LWR@synconenotename{\LWRendnote}{\endnotename}}
21 \CustomizeMathJax{\def\LWRendnote{1}}
22 \CustomizeMathJax{\newcommand{\endnote}[2][\LWRendnote]{\{}^{\mathrm{\#1}}\}}
23 \CustomizeMathJax{\newcommand{\endnotemark}[1][\LWRendnote]{\{}^{\mathrm{\#1}}\}}
24 \end{warpMathJax}
```

File 132 **lwarf-engtlc.sty**

§ 241 Package **engtlc**

(Emulates or patches code by CLAUDIO FIANDRINO.)

engtlc (Pkg) **engtlc** is patched for use by **lwarf**. MATHJAX is emulated.

 For MATHJAX, `\signt`, `\signf`, `\signn`, and `\signz` do not force letter case as they do in SVG math.

for HTML output: 1 \LWR@ProvidesPackagePass{engtlc}[2012/12/18]

```

2 \newcommand{\LWR@HTML@finees}{%
3   \begin{BlockClass}[text-align:right]{exerend}%
4     \HTMLUnicode{220E}%
5   \end{BlockClass}%
6 }
7 \LWR@formatted{finees}
8
9 \newcommand{\LWR@HTML@exerend}{\finees}
10 \LWR@formatted{exerend}
11
12 \begin{warpMathJax}
13 \LWR@infoprocessingmathjax{engtlc}
14
15 \CustomizeMathJax{\newcommand{\unit}[1]{\mathrm{\#1}}}
16 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
17 %
18 \CustomizeMathJax{\newcommand{\ho}{\unit{h}}}
19 \CustomizeMathJax{\newcommand{\s}{\unit{s}}}
20 \CustomizeMathJax{\newcommand{\ms}{\unit{ms}}}
21 \CustomizeMathJax{\newcommand{\us}{\unit{\micro s}}}
22 \CustomizeMathJax{\newcommand{\ns}{\unit{ns}}}
```

```
23 \CustomizeMathJax{\newcommand{\ps}{\unit{ps}}}
24 %
25 \CustomizeMathJax{\newcommand{\um}{\unit{\micro m}}}
26 \CustomizeMathJax{\newcommand{\mm}{\unit{mm}}}
27 \CustomizeMathJax{\newcommand{\cm}{\unit{cm}}}
28 \CustomizeMathJax{\newcommand{\dm}{\unit{dm}}}
29 \CustomizeMathJax{\newcommand{\m}{\unit{m}}}
30 \CustomizeMathJax{\newcommand{\km}{\unit{km}}}
31 %
32 \CustomizeMathJax{\newcommand{\MA}{\unit{MA}}}
33 \CustomizeMathJax{\newcommand{\kA}{\unit{kA}}}
34 \CustomizeMathJax{\newcommand{\A}{\unit{A}}}
35 \CustomizeMathJax{\newcommand{\mA}{\unit{mA}}}
36 \CustomizeMathJax{\newcommand{\uA}{\unit{\micro A}}}
37 \CustomizeMathJax{\newcommand{\nA}{\unit{nA}}}
38 %
39 \CustomizeMathJax{\newcommand{\MV}{\unit{MV}}}
40 \CustomizeMathJax{\newcommand{\kV}{\unit{kV}}}
41 \CustomizeMathJax{\newcommand{\V}{\unit{V}}}
42 \CustomizeMathJax{\newcommand{\mV}{\unit{mV}}}
43 \CustomizeMathJax{\newcommand{\uV}{\unit{\micro V}}}
44 %
45 \CustomizeMathJax{\newcommand{\mohm}{\unit{m\Omega}}}
46 \CustomizeMathJax{\newcommand{\ohm}{\unit{\Omega}}}
47 \CustomizeMathJax{\newcommand{\kohm}{\unit{k\Omega}}}
48 \CustomizeMathJax{\newcommand{\Mohm}{\unit{M\Omega}}}
49 %
50 \CustomizeMathJax{\newcommand{\pSi}{\unit{pS}}}
51 \CustomizeMathJax{\newcommand{\nSi}{\unit{nS}}}
52 \CustomizeMathJax{\newcommand{\uSi}{\unit{\micro S}}}
53 \CustomizeMathJax{\newcommand{\mSi}{\unit{mS}}}
54 \CustomizeMathJax{\newcommand{\Si}{\unit{S}}}
55 \CustomizeMathJax{\newcommand{\kSi}{\unit{kS}}}
56 \CustomizeMathJax{\newcommand{\MSi}{\unit{MS}}}
57 %
58 \CustomizeMathJax{\newcommand{\fFa}{\unit{fF}}}
59 \CustomizeMathJax{\newcommand{\pFa}{\unit{pF}}}
60 \CustomizeMathJax{\newcommand{\nFa}{\unit{nF}}}
61 \CustomizeMathJax{\newcommand{\uFa}{\unit{\micro F}}}
62 \CustomizeMathJax{\newcommand{\mFa}{\unit{mF}}}
63 \CustomizeMathJax{\newcommand{\Fa}{\unit{F}}}
64 %
65 \CustomizeMathJax{\newcommand{\fHe}{\unit{fH}}}
66 \CustomizeMathJax{\newcommand{\pHe}{\unit{pH}}}
67 \CustomizeMathJax{\newcommand{\nHe}{\unit{nH}}}
68 \CustomizeMathJax{\newcommand{\uHe}{\unit{\micro H}}}
69 \CustomizeMathJax{\newcommand{\mHe}{\unit{mH}}}
70 \CustomizeMathJax{\newcommand{\He}{\unit{H}}}
71 %
72 \CustomizeMathJax{\newcommand{\dB}{\unit{dB}}}
73 \CustomizeMathJax{\newcommand{\dBm}{\unit{dBm}}}
74 %
75 \CustomizeMathJax{\newcommand{\uW}{\unit{\micro W}}}
76 \CustomizeMathJax{\newcommand{\mW}{\unit{mW}}}
77 \CustomizeMathJax{\newcommand{\W}{\unit{W}}}
78 \CustomizeMathJax{\newcommand{\kW}{\unit{kW}}}
79 \CustomizeMathJax{\newcommand{\MW}{\unit{MW}}}
80 %
81 \CustomizeMathJax{\newcommand{\Hz}{\unit{Hz}}}
82 \CustomizeMathJax{\newcommand{\kHz}{\unit{kHz}}}
```

```
83 \CustomizeMathJax{\newcommand{\MHz}{\unit{MHz}}}
84 \CustomizeMathJax{\newcommand{\GHz}{\unit{GHz}}}
85 \CustomizeMathJax{\newcommand{\THz}{\unit{THz}}}
86 %
87 \CustomizeMathJax{\newcommand{\bit}{\unit{bit}}}
88 \CustomizeMathJax{\newcommand{\kbit}{\unit{Kib}}}
89 \CustomizeMathJax{\newcommand{\Mbit}{\unit{Mib}}}
90 \CustomizeMathJax{\newcommand{\Byte}{\unit{B}}}
91 \CustomizeMathJax{\newcommand{\kByte}{\unit{KiB}}}
92 \CustomizeMathJax{\newcommand{\MByte}{\unit{MiB}}}
93 \CustomizeMathJax{\newcommand{\GByte}{\unit{GiB}}}
94 \CustomizeMathJax{\newcommand{\TByte}{\unit{TiB}}}
95 \CustomizeMathJax{\newcommand{\bits}{\unit{bit/s}}}
96 \CustomizeMathJax{\newcommand{\kbits}{\unit{Kib/s}}}
97 \CustomizeMathJax{\newcommand{\Mbits}{\unit{Mib/s}}}
98 \CustomizeMathJax{\newcommand{\Bytes}{\unit{B/s}}}
99 \CustomizeMathJax{\newcommand{\kBytes}{\unit{KiB/s}}}
100 \CustomizeMathJax{\newcommand{\MBytes}{\unit{MiB/s}}}
101 \CustomizeMathJax{\newcommand{\GBytes}{\unit{GiB/s}}}
102 \CustomizeMathJax{\newcommand{\TBytes}{\unit{TiB/s}}}
103 \CustomizeMathJax{\newcommand{\chips}{\unit{chip/s}}}
104 \CustomizeMathJax{\newcommand{\kchips}{\unit{Ki\mkern2mu chip/s}}}
105 \CustomizeMathJax{\newcommand{\Mchips}{\unit{Mi\mkern2mu chip/s}}}
106 \CustomizeMathJax{\newcommand{\chipsubit}{\unit{chip/bit}}}
107 %
108 \CustomizeMathJax{\newcommand{\frecciadex}[1][0.5]{%
109   \hspace{.25cm}\Longrightarrow\hspace{.25cm}}}
110 }
111 \CustomizeMathJax{\newcommand{\varianzarumore}{\frac{N_0}{2}}}
112 %
113 \CustomizeMathJax{\newcommand{\etsymbolbracearg}[2]{%
114   #1\mathopen{}\left\lceil\right.\rbrace\mathclose{}}
115 }
116 \CustomizeMathJax{\newcommand{\fourier}[1]{\etsymbolbracearg{\mathcal{F}}{#1}}}
117 \CustomizeMathJax{\newcommand{\invfourier}[1]{\etsymbolbracearg{\mathcal{F}^{-1}}{#1}}}
118 \CustomizeMathJax{\newcommand{\partereale}[1]{\etsymbolbracearg{\textbf{Re}}{#1}}}
119 \CustomizeMathJax{\newcommand{\parteimm}[1]{\etsymbolbracearg{\textbf{Im}}{#1}}}
120 \CustomizeMathJax{\newcommand{\Info}[1]{\left.\right|^{#1}}}
121 \CustomizeMathJax{\newcommand{\versore}{\hat{#1}}}
122 \CustomizeMathJax{\newcommand{\vettore}{\overrightarrow{#1}}}
123 \CustomizeMathJax{\newcommand{\coseno}{\cos\left(2\pi#1t\right)}}
124 \CustomizeMathJax{\newcommand{\seno}{\sin\left(2\pi#1t\right)}}
125 \CustomizeMathJax{\newcommand{\energia}{\mathcal{E}_{#1}}}
126 \CustomizeMathJax{\newcommand{\moduloexp}[2]{\left.\right|^{\#2}}}
127 \CustomizeMathJax{\newcommand{\modulo}[1]{\left.\right|^{#1}}}
128 \CustomizeMathJax{\newcommand{\indB}[1]{%
129   \mathopen{}\left.\right.^{\mathcal{B}}\mathclose{}}
130 \CustomizeMathJax{\newcommand{\for}[2]{\left.\right.^{#2}}}
131 \CustomizeMathJax{\newcommand{\massimo}{\max{#1}}}
132 \CustomizeMathJax{\newcommand{\minimo}{\min{#1}}}
133 \CustomizeMathJax{\newcommand{\valc}{3\cdot 10^8}}
134 \CustomizeMathJax{\newcommand{\loga}[2]{\log_{#1}^{#2}}}
135 \CustomizeMathJax{\newcommand{\analitic}[1]{\mathring{#1}}}
136 \CustomizeMathJax{\newcommand{\diff}{\mathop{}\mathopen{}\mathop{}\mathclose{}^{#1}}}
137 \CustomizeMathJax{\newcommand{\intinf}[1]{\int_{-\infty}^{+\infty}{#1}}}
138 \CustomizeMathJax{\newcommand{\deltain}[1]{\delta\left.#1\right.^{+}}}
139 \CustomizeMathJax{\newcommand{\iu}{\mathfrak{j}}}
140 \CustomizeMathJax{\newcommand{\ex}[1]{\mathfrak{e}^{#1}}}
141 %
142 \CustomizeMathJax{\newcommand{\gammatens}{\mathcal{V}^{#1}}}
```

```
143 \CustomizeMathJax{\newcommand{\gammacorr}{{}^{\mathrm{I}}\Gamma}}
144 \CustomizeMathJax{\newcommand{\gammatensin}{1}{{}^{\mathrm{V}}\Gamma}\Gamma_{\mathrm{#1}}}
145 \CustomizeMathJax{\newcommand{\gammacorrin}{1}{{}^{\mathrm{I}}\Gamma}\Gamma_{\mathrm{#1}}}
146 \CustomizeMathJax{\newcommand{\gammain}{1}\Gamma_{\mathrm{#1}}}
147 \CustomizeMathJax{\newcommand{\gammak}{{}^{\mathrm{k}}\Gamma}}
148 %
149 \CustomizeMathJax{\newcommand{\lbvt}{\lambda_0}}
150 \CustomizeMathJax{\newcommand{\lbg}{\lambda_g}}
151 \CustomizeMathJax{\newcommand{\lbgvt}{\lambda_{g_0}}}
152 %
153 \CustomizeMathJax{\newcommand{\potin}{P_{\mathrm{#1}}}}
154 \CustomizeMathJax{\newcommand{\potdisp}{P_{\mathrm{disp}}^{#1}}}
155 \CustomizeMathJax{\newcommand{\potDC}{P_{\mathrm{DC}}^{#1}}}
156 \CustomizeMathJax{\newcommand{\potCC}{P_{\mathrm{CC}}^{#1}}}
157 \CustomizeMathJax{\newcommand{\potirr}{P_{\mathrm{irr}}^{#1}}}
158 \CustomizeMathJax{\newcommand{\potdiss}{P_{\mathrm{diss}}^{#1}}}
159 \CustomizeMathJax{\newcommand{\potinc}{P_{\mathrm{inc}}^{#1}}}
160 %
161 \CustomizeMathJax{\newcommand{\z}{Z_{\mathrm{#1}}}}
162 \CustomizeMathJax{\newcommand{\znorm}{z_{\mathrm{#1}}}}
163 \CustomizeMathJax{\newcommand{\y}{Y_{\mathrm{#1}}}}
164 \CustomizeMathJax{\newcommand{\ynorm}{y_{\mathrm{#1}}}}
165 \CustomizeMathJax{\newcommand{\zinf}{Z_{\mathit{infty}#1}}}
166 \CustomizeMathJax{\newcommand{\zinfn}{z_{\mathit{infty}#1}}}
167 \CustomizeMathJax{\newcommand{\yinf}{Y_{\mathit{infty}#1}}}
168 \CustomizeMathJax{\newcommand{\yinfn}{y_{\mathit{infty}#1}}}
169 \CustomizeMathJax{\newcommand{\zvt}{Z_0}}
170 \CustomizeMathJax{\newcommand{\yvt}{Y_0}}
171 %
172 \CustomizeMathJax{\newcommand{\campoe}{\underline{\mathcal{E}}(\underline{r},t)}}
173 \CustomizeMathJax{\newcommand{\campofas}{\underline{E}(\underline{r})}}
174 \CustomizeMathJax{\newcommand{\campoh}{\underline{\mathcal{H}}(\underline{r},t)}}
175 \CustomizeMathJax{\newcommand{\campohfas}{\underline{H}(\underline{r})}}
176 %
177 \CustomizeMathJax{\newcommand{\signt}{\#1(t)}}
178 \CustomizeMathJax{\newcommand{\signf}{\#1(f)}}
179 \CustomizeMathJax{\newcommand{\signn}{\#1(n)}}
180 \CustomizeMathJax{\newcommand{\signz}{\#1(z)}}
181 %
182 \CustomizeMathJax{\newcommand{\prob}{\mathcal{P}\left.\right|^{#1}}}
183 \CustomizeMathJax{\newcommand{\valatt}{\mathbb{E}\left.\right|^{#1}}}
184 \CustomizeMathJax{\newcommand{\var}{\mathsf{Var}\left.\right|^{#1}}}
185 \CustomizeMathJax{\newcommand{\comma}{\text{, }}}
186 \CustomizeMathJax{\newcommand{\dato}{\text{, }|\text{, }}}
187 %
188 \CustomizeMathJax{\let\bfRe\partereale}
189 \CustomizeMathJax{\let\bfIm\parteimm}
190 \CustomizeMathJax{\let\noisevar\varianzarmore}
191 % \CustomizeMathJax{\let\exerend\finees}
192 \CustomizeMathJax{\let\Spimplies\frecciadex}
193 \CustomizeMathJax{\let\Downimplies\frecciadown}
194 \CustomizeMathJax{\let\unitvec\versore}
195 \CustomizeMathJax{\let\vector\vettore}
196 \CustomizeMathJax{\let\cosine\coseno}
197 \CustomizeMathJax{\let\sine\seno}
198 \CustomizeMathJax{\let\energy\energia}
199 \CustomizeMathJax{\let\Abs\modulo}
200 \CustomizeMathJax{\let\AbsPow\moduloexp}
201 \CustomizeMathJax{\let\Max\massimo}
202 \CustomizeMathJax{\let\Min\minimo}
```

```

203 \CustomizeMathJax{\let\clight\valc}
204 \CustomizeMathJax{\let\Log\loga}
205 \CustomizeMathJax{\let\analytic\analitic}
206 \CustomizeMathJax{\let\infint\intinf}
207 \CustomizeMathJax{\let\deltaimp\deltain}
208 \CustomizeMathJax{\let\Vgamma\gammatens}
209 \CustomizeMathJax{\let\CGamma\gammacorr}
210 \CustomizeMathJax{\let\Vgammain\gammatensin}
211 \CustomizeMathJax{\let\CGammmain\gammacorrin}
212 \CustomizeMathJax{\let\Kgamma\gammak}
213 \CustomizeMathJax{\let\powerin\potin}
214 \CustomizeMathJax{\let\availpow\potdisp}
215 \CustomizeMathJax{\let\irrpow\potirr}
216 \CustomizeMathJax{\let\disspow\potdiss}
217 \CustomizeMathJax{\let\incpow\potinc}
218 \CustomizeMathJax{\let\potalim\potCC}
219 \CustomizeMathJax{\let\potDC\potCC}
220 \CustomizeMathJax{\let\Efield\campoe}
221 \CustomizeMathJax{\let\Hfield\campoh}
222 \CustomizeMathJax{\let\phasorEfield\campoefas}
223 \CustomizeMathJax{\let\phasorHfiled\campohfas}
224 \CustomizeMathJax{\let\given\dato}
225 \CustomizeMathJax{\let\expval\valatt}
226 \CustomizeMathJax{\let\rmexp\ex}
227 \end{warpMathJax}
```

File 133 **lwarf-enotez.sty**

§ 242 Package **enotez**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

enotez (Pkg) enotez is patched for use by lwarf.

for HTML output: 1 \LWR@ProvidesPackagePass{enotez}[2020/12/13]

Hyperref is emulated by lwarf, so it is forced on for enotez:

```

2 \ExplSyntaxOn
3 \AtBeginDocument{
4     \bool_set_true:N \l__enotez_hyperref_bool
5     \bool_set_true:N \l__enotez_hyperfootnotes_bool
6 }
```

Do not move or \hbox the \hypertarget:

```

7% typeset the actual mark:
8% #1: id
9% #2: mark
10 \VerifyCommand[lwarf][enotez]{\enotez_write_mark:nn}{61DA2A7B03A7D9F55E3E2E2D2498FB32}
11
12 \cs_gset_protected:Npn \enotez_write_mark:nn #1#2
13 {
14     \bool_if:NTF \l__enotez_hyperfootnotes_bool
15     {
16         \enotezwritemark { \hyperlink {enz.#1} { \enmarkstyle #2 } }
17         \bool_if:NT \l__enotez_hyperbackref_bool
```

```

18          {
19 %           \box_move_up:nn {1em} {
20 %             \hbox:n {
21               \hypertarget {enz.#1.backref} { }
22 %
23             }
24           }
25         }
26       { \enotezritemark { \enmarkstyle #2 } }
27     }
28 \cs_generate_variant:Nn \enotez_write_mark:nn {x}

```

Do not move or \hbox the \hypertarget:

```

29 \VerifyCommand[l warp][enotez]{\enotez_write_list_number:n}{9793BEC2766E17864C6391209599DD84}
30
31 \cs_gset_protected:Npn \enotez_write_list_number:n #1
32 {
33   \bool_if:NT \l_enotez_hyperfootnotes_bool
34   {
35 %     \box_move_up:nn {1em} { \hbox:n {
36       \hypertarget {enz.#1} { }
37 %     } }
38   }
39   \tl_use:N \l_enotez_list_number_format_tl
40   \tl_if_eq:nxTF {a} { \prop_item:Nn \g_enotez_endnote_man_prop {#1} }
41   {
42     \bool_if:nTF
43     { \l_enotez_hyperfootnotes_bool && \l_enotez_hyperbackref_bool }
44     {
45       \exp_args:Nnx
46       \hyperlink {enz.#1.backref}
47       { \exp_not:V \l_enotez_endnote_mark_tl }
48     }
49     { \prop_item:Nn \g_enotez_endnote_mark_prop {#1} }
50   }
51   {
52     \bool_if:nTF
53     { \l_enotez_hyperfootnotes_bool && \l_enotez_hyperbackref_bool }
54     {
55       \exp_args:Nnx
56       \hyperlink {enz.#1.backref}
57       { \exp_not:V \l_enotez_endnote_mark_tl }
58     }
59     { \tl_use:N \l_enotez_endnote_mark_tl }
60   }
61 }

```

Do not move the label to the left:

```

62 \DeclareTemplateCode {enotez-list} {paragraph} {1}
63 {
64   heading      = \enotez_list_heading:n      ,
65   format       = \l_enotez_list_format_tl    ,
66   number       = \enotez_list_number:n      ,
67   number-format= \l_enotez_list_number_format_tl ,
68   notes-sep    = \l_enotez_list_notes_sep_dim
69 }
70 {
71   \AssignTemplateKeys

```

```

72  \enotez_set_totoc:
73  \enotez_list_heading:n { \l_enotez_list_name_tl }
74  \enotez_list_preamble:
75  \enotez_build_print_list:nnnn {#1}
76  {}
77  {
78  \par\noindent
79  \group_begin:
80  \tl_use:N \l_enotez_list_format_tl
81 %   \hbox_overlap_left:n
82 %
83  \enotez_list_number:n
84  { \enotez_write_list_number:n {##1} }
85  \tl_use:N \c_space_tl
86 %
87  % \cs_set:cpn {@currentlabel}
88  % { \p@endnote \l_enotez_endnote_mark_tl }
89  \tl_use:N \g_enotez_endnote_text_tl
90  \par
91  \dim_compare:nT { \l_enotez_list_notes_sep_dim != 0pt }
92  { \addvspace { \l_enotez_list_notes_sep_dim } }
93  \group_end:
94  {}
95  {}
96  \enotez_list_postamble:
97  }
98
99 \ExplSyntaxOff

```

For MATHJAX:

```

100 \begin{warpMathJax}
101 \def\endnotename{\endnote}
102 \appto\LWR@syncnotenumbers{\LWR@synconenotenumber{\LWRendnote}{\theendnote}}
103 \appto\LWR@syncnotenames{\LWR@synconenotename{\LWRendnote}{\endnotename}}
104 \CustomizeMathJax{\def\LWRendnote{1}}
105 \CustomizeMathJax{\newcommand{\endnote}[2][\LWRendnote]{{}^{\mathrm{#1}}}}
106 \CustomizeMathJax{\newcommand{\endnotemark}[1][\LWRendnote]{{}^{\mathrm{#1}}}}
107 \end{warpMathJax}

```

File 134 **lwarf-enumerate.sty**

§ 243 Package **enumerate**

enumerate (*Pkg*) **enumerate** is supported with no changes.

This package is only required because it was used in the past to drop and then emulate the package. It cannot be removed because an older version which dropped the package may still remain, for example in a local vs. distribution directory, but it is now supported directly by **lwarf** and thus must no longer be dropped.

for HTML output: 1 \LWR@ProvidesPackagePass{enumerate}[2015/07/23]

File 135 l warp-enumitem.sty**§ 244 Package enumitem**

(Emulates or patches code by JAVIER BEZOS.)

enumitem (*Pkg*) enumitem is supported with minor adjustments.

for HTML output: 1 \LWR@ProvidesPackagePass{enumitem}[2018/11/30]

```
\newlist {\name} {\type} {\maxdepth}
\renewlist {\name} {\type} {\maxdepth}
```

For enumitem lists, new lists must have the start and end actions assigned to the new environment. Renewed lists already have their actions assigned, and thus need no changes.

```
2 \let\LWR@enumitem@orignewlist\newlist
3
4 \renewcommand*\newlist[3]{%
5 \LWR@enumitem@orignewlist[#1]{#2}{#3}%
6 \AtBeginEnvironment{#1}{\@nameuse{\LWR@#2start}}%
7 \AtEndEnvironment{#1}{\@nameuse{\LWR@#2end}}%
8 }
9
10 \def\DrawEnumitemLabel{}
```

File 136 l warp-epigraph.sty**§ 245 Package epigraph**

(Emulates or patches code by PETER WILSON.)

epigraph (*Pkg*) epigraph is emulated for HTML, and used as-is for print output.

Use css to format epigraphs.

for HTML output: 1 \LWR@ProvidesPackagePass{epigraph}[2020/01/02]

```
2 \DeclareDocumentCommand{\LWR@HTML@qitem}{m m}
3 {%
4   \begin{BlockClass}{qitem}%
5   #1%
6   \LWR@stopars%
7   \ifbool{FormatWP}%
8     {\begin{BlockClass}[border-top:1px solid gray]{epigraphsource}}%
9     {\begin{BlockClass}{epigraphsource}}%
10    #2%
11    \end{BlockClass}%
12    \end{BlockClass}%
13  }%
14 \LWR@formatted{qitem}
```

epigraph: Added ARIA role.

```

15 \DeclareDocumentCommand{\LWR@HTML@epigraph}{m m}
16 {%
17   \begin{LWR@BlockClassWP}{\LWR@print@mbox{text-align:right}}{}(note){epigraph}%
18   \qitem[#1]{#2}%
19   \end{LWR@BlockClassWP}%
20 }
21 \LWR@formatted{epigraph}
22
23 \DeclareDocumentEnvironment{\LWR@HTML@epigraphs}{}
24   {\LWR@BlockClassWP{\LWR@print@mbox{text-align:right}}{}(note){epigraph}%
25   \end{LWR@BlockClassWP}%
26 \LWR@formattedenv{epigraphs}
```

The following cannot be used in print mode while generating HTML:

```

27 \renewcommand{\epigraphhead}[2][0]{#2}
28 \renewcommand{\dropchapter}[1]{}
29 \renewcommand*{\undodrop}{}
```

File 137 **l warp-epsf.sty**

§ 246 Package **epsf**

(Emulates or patches code by TOM ROKICKI.)

epsf (*Pkg*) **epsf** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{epsf}% not date given

```

2 \xpretocmd{\epsfsetgraph}
3   {\begin{lateximage}}
4   {}
5   {\LWR@patcherror{l warp-epsf}{epsfsetgraph-begin}}
6
7 \xapptocmd{\epsfsetgraph}
8   {\end{lateximage}}
9   {}
10 {\LWR@patcherror{l warp-epsf}{epsfsetgraph-end}}
```

File 138 **l warp-epsfig.sty**

§ 247 Package **epsfig**

epsfig (*Pkg*) **epsfig** is emulated for use by **l warp**.

 Only the L^AT_EX2e syntax is emulated.

for HTML output: 1 \LWR@ProvidesPackagePass{epsfig}[2017/06/25]

A few additional keys to capture the filename:

```

2 \RequirePackage{graphics}
3
4 \define@key{igraph}{file}{%
5   \xdef\LWR@epsfig@filename{\#1}%
6 }
7
8 \define@key{igraph}{figure}{%
9   \xdef\LWR@epsfig@filename{\#1}%
10 }
11
12 \define@key{igraph}{prolog}{}
13
14 \define@key{igraph}{silent}{}{}{}
```

The captured filename is used as the argument to `\includegraphics`:

```

15 \newcommand{\LWR@HTML@epsfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}
16 \LWR@formatted{epsfig}
17
18 \newcommand{\LWR@HTML@psfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}
19 \LWR@formatted{psfig}
```

File 139 **l warp-epstopdf.sty**

§ 248 Package **epstopdf**

epstopdf (Pkg) Previous versions of **l warp** had a nullfied version, but now **epstopdf-base** is supported. **l warp-epstopdf** becomes a placeholder to overwrite previous versions.

See package **epstopdf-base** for details.

for HTML output: 1 \LWR@ProvidesPackagePass{epstopdf}[2020-01-24]

File 140 **l warp-epstopdf-base.sty**

§ 249 Package **epstopdf-base**

epstopdf-base (Pkg)

⚠ **convert to .svg** Images with an .eps extension will be converted to .pdf. The **HTML** output uses the .svg version, so use

Enter ⇒ **l warpmk pdftosvg <listofPDFfiles>**

to generate .svg versions.

for HTML output: 1 \LWR@ProvidesPackagePass{epstopdf-base}[2020-01-24]

Redefine to remember the image filename, replacing .pdf with .svg. Use the **epstopdf** print version inside a **lateximage**.

```

2 \newcommand*{\LWR@HTML@ETE@OrgGin@setfile}[3]{%
3   \edef\LWR@tempone{\#3}%
4   \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
```

```

5   \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
6   \xdef\LWR@parsedfilename{\LWR@tempone}%
7 }
8
9 \LWR@formatted{ETE@OrgGin@setfile}

```

\includegraphics in HTML mode redefines \Gin@setfile to be \LWR@HTML@Gin@setfile, which is now redirected to epstopdf's version:

```

10 \renewcommand*{\LWR@HTML@Gin@setfile}[3]{%
11   \ETE@Gin@setfile[#1]{#2}{#3}%
12 }

```

Allow .eps images to be found if a suffix is not provided:

```

13 \AtBeginDocument{
14 \DeclareGraphicsExtensions{%
15   .eps,.EPS,.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
16 }
17 \DeclareGraphicsRule{.svg}{svg}{.svg}{}
18 \DeclareGraphicsRule{.SVG}{svg}{.SVG}{}
19 }

```

Likewise when inside a lateximage:

```

20 \appto{\LWR@restoreorigformatting}{%
21 \DeclareGraphicsExtensions{%
22   .eps,.EPS,.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
23 }%
24 }

```

File 141 lwarf-eqlist.sty

§ 250 Package **eqlist**

eqlist (*Pkg*) **eqlist** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{eqlist}[2002/08/15]

```

2 \newenvironment{eqlist}[1][] {\description}{\enddescription}
3 \newenvironment{eqlist*}[1][] {\description}{\enddescription}
4 \newenvironment{Eqlist}[2][] {\description}{\enddescription}
5 \newenvironment{Eqlist*}[2][] {\description}{\enddescription}
6 \newcommand*{\longitem}[1][] {\item[#1]}
7 \newcommand*{\eqlistinit} {}
8 \newcommand*{\eqliststarinit} {}
9 \newcommand*{\eqlistinitpar} {}
10 \def{\eqlistlabel}#1{#1}
11 \newcommand{\eqlistauto}[1]{}
12 \newcommand{\eqlistnoauto} {}

```

File 142 **l warp-eqparbox.sty**

§ 251 Package **eqparbox**

(Emulates or patches code by SCOTT PAKIN.)

eqparbox (*Pkg*) eqparbox is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{eqparbox}[2017/09/03]

```
2 \NewDocumentCommand{\LWR@HTML@eqparbox}{O{t} O{} O{t} m +m}{%
3   {%
4     \minipagefullwidth%
5     \parbox[#1][#2][#3]{\linewidth}{#5}%
6   }%
7 }%
8 \LWR@formatted{eqparbox}%
9 %
10 \NewDocumentCommand{\LWR@HTML@eqmakebox}{o o m}{%
11   \makebox[#2]{#3}%
12 }%
13 \LWR@formatted{eqmakebox}%
14 %
15 \NewDocumentCommand{\LWR@HTML@eqframebox}{o o m}{%
16   \framebox[#2]{#3}%
17 }%
18 \LWR@formatted{eqframebox}%
19 %
20 \NewDocumentEnvironment{\LWR@HTML@eqminipage}{O{t} O{} O{t} m}%
21 {%
22   \begingroup%
23   \minipagefullwidth%
24   \minipage[#1][#2][#3]{\linewidth}%
25 }%
26 {%
27   \endminipage%
28   \endgroup%
29 }%
30 %
31 \newcommand*{\LWR@HTML@eqboxwidth}[1]{.25\linewidth}%
32 \LWR@formatted{eqboxwidth}%
33 %
34 \newcommand*{\LWR@HTML@eqsetminwidth}[2]{}%
35 \newcommand*{\LWR@HTML@eqsetmaxwidth}[2]{}%
36 %
37 \newcommand*{\LWR@HTML@eqsetminwidthto}[2]{}%
38 \newcommand*{\LWR@HTML@eqsetmaxwidthto}[2]{}%
```

File 143 **l warp-errata.sty**

§ 252 Package **errata**

(Emulates or patches code by MICHAEL KOHLHASE.)

errata (Pkg) errata is patched for use by lwarf.

This is for v0.3 of errata. A newer version of errata with more features is under development, at which time the lwarf version will have to be updated.

for HTML output: Macros are being defined with the math dollar, so enable the HTML version during package loading:

```
1 \StartDefiningMath
```

Now load the package:

```
2 \LWR@ProvidesPackagePass{errata}[2006/11/12]
```

Patches for dynamic inline math:

```
3 \VerifyCommand[lwarf][errata]{\erratumAdd}{777B919444DA9C70140B71E0C9EDEEBF}
4
5 \xpatchcmd{\erratumAdd}
6   {$_a^{\arabic{erratum}}$}
7 %   {\inlinemathother{$_a^{\arabic{erratum}}$}\inlinemathnormal}
8   {\textsubscript{a}\textsuperscript{\arabic{erratum}}}
9 {}
10 {\LWR@patcherror{erratum}{erratumAdd}}
11
12 \VerifyCommand[lwarf][errata]{\erratumDelete}{057CF8E4B6A0DBECF95C009E9DC44FBA}
13
14 \xpatchcmd{\erratumDelete}
15   {$_d^{\arabic{erratum}}$}
16 %   {\inlinemathother{$_d^{\arabic{erratum}}$}\inlinemathnormal}
17   {\textsubscript{d}\textsuperscript{\arabic{erratum}}}
18 {}
19 {\LWR@patcherror{erratum}{erratumDelete}}
20
21 \VerifyCommand[lwarf][errata]{\erratumReplace}{0E24E5FE5415E6038089ABF21C6933D7}
22
23 \xpatchcmd{\erratumReplace}
24   {$_r^{\arabic{erratum}}$}
25 %   {\inlinemathother{$_r^{\arabic{erratum}}$}\inlinemathnormal}
26   {\textsubscript{r}\textsuperscript{\arabic{erratum}}}
27 {}
28 {\LWR@patcherror{erratum}{erratumReplace}}
29
30 \VerifyCommand[lwarf][errata]{\erratum}{A430F080689BC6FF47E7C905800D2028}
31
32 \xpatchcmd{\erratum}
33   {$_a$}
34 %   {\inlinemathother{$_a$\inlinemathnormal}}
35   {\textsubscript{a}}
36 {}
37 {\LWR@patcherror{erratum}{erratumDelete}}
38 \xpatchcmd{\erratum}
39   {$_d^{\@thefnmark}$}
40 %   {\inlinemathother{$_d^{\@thefnmark}$}\inlinemathnormal}
41   {\textsubscript{d}\textsuperscript{\@thefnmark}}
42 {}
43 {\LWR@patcherror{erratum}{eDelete}}
44 \xpatchcmd{\erratum}
45   {$_r^{\@thefnmark}$}
46 %   {\inlinemathother{$_r^{\@thefnmark}$}\inlinemathnormal}
```

```

47      {\textsubscript{r}\textsuperscript{@thefnmark}}
48      {}
49      {\LWR@patcherror{erratum}{eReplace}}

```

Finish the current page's errata before closing and reloading the list:

```
50 \preto\PrintErrata{\LWR@maybe@orignewpage}
```

No longer defining math macros with the HTML \$:

```
51 \StopDefiningMath
```

File 144 **l warp-eso-pic.sty**

§ 253 Package **eso-pic**

(Emulates or patches code by ROLF NIEPRASCHK.)

eso-pic (Pkg) **eso-pic** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{eso-pic}[2018/04/12]

```

2 \newcommand*\LenToUnit(){}
3 \newcommand{\AtPageUpperLeft}[1]{}
4 \newcommand{\AtPageLowerLeft}[1]{}
5 \newcommand{\AtPageCenter}[1]{}
6 \newcommand{\AtStockLowerLeft}[1]{}
7 \newcommand{\AtStockUpperLeft}[1]{}
8 \newcommand{\AtStockCenter}[1]{}
9 \newcommand{\AtTextUpperLeft}[1]{}
10 \newcommand{\AtTextLowerLeft}[1]{}
11 \newcommand{\AtTextCenter}[1]{}
12 \NewDocumentCommand{\AddToShipoutPictureBG}{s +m} {}

13 \newcommand{\AddToShipoutPicture}{\AddToShipoutPictureBG}
14 \NewDocumentCommand{\AddToShipoutPictureFG}{s +m} {}
15 \newcommand*\ClearShipoutPictureBG(){}
16 \newcommand*\ClearShipoutPicture(){}
17 \newcommand*\ClearShipoutPictureFG(){}
18 \newcommand{\gridSetup}[6][]{}

```

File 145 **l warp-esvect.sty**

§ 254 Package **esvect**

(Emulates or patches code by EDDIE SAUDRAIS.)

esvect (Pkg) **esvect** is used as-is for SVG math, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{esvect}% no date given

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\LWResvectvv}[1]{\overrightarrow{#1}}}

```

```

4 \CustomizeMathJax{\newcommand{\LWResvectvstar}[2]{\overrightarrow{\#1}\!_{-\#2}}}
5 \CustomizeMathJax{\newcommand{\vv}{\ifstar\LWResvectvstar\LWResvectvv}}
6 \end{warpMathJax}
```

File 146 **lwarp-etoc.sty**

§ 255 Package **etoc**

etoc (*Pkg*) **etoc** is ignored. All commands are nullified.

⚠ **\tableofcontents with \ref** The **etoc** package uses a non-standard syntax which looks ahead after a `\tableofcontents` for a following `\ref`. These `\refs` appear in the HTML result unless they are removed. Where a `\tableofcontents` is followed by `\ref`, and perhaps also `\label` as well, enclose all of them inside `\warpprintonly`:

```

\warpprintonly{\tableofcontents
  \label{toc:def}}
```

or place all code related to a local `\tableofcontents` inside a `warpprint` environment.

⚠ **home page** Be sure to keep the initial `\tableofcontents` on the home page, perhaps in its own `\warpHTMLonly` macro or `warpHTML` environment.

for HTML output: 1 \LWR@ProvidesPackageDrop{etoc}[2019/11/17]

```

2 \def\etocsetlevel#1#2{}
3 \def\etocskipfirstprefix{}
4 \let\etocthename \empty
5 \let\etocthenumber \empty
6 \let\etocthepage \empty
7 \let\etocthelinkname \empty
8 \let\etocthelinknumber \empty
9 \let\etocthelinkpage \empty
10 \let\etocthelink \empty % prior to 1.08j its was \let to \empty
11 \DeclareRobustCommand*\{\etocname\} {}
12 \DeclareRobustCommand*\{\etocnumber\} {}
13 \DeclareRobustCommand*\{\etocpage\} {}
14 \DeclareRobustCommand*\{\etoclink\} {\empty}
15 \DeclareRobustCommand*\{\etocifnumbered\}{\empty}
16 \DeclareRobustCommand*\{\etociffirst\}{\empty}
17 \DeclareRobustCommand*\{\etocifwasempty\}{\empty}
18 \let\etocaftertitlehook \empty
19 \let\etocaftercontentshook \empty
20 \def\etocableofcontents{}
21 \newcommand*\localtableofcontents(){}
22 \newcommand*\localtableofcontentswithrelativedepth[1]({})
23 \newcommand\etocsettocstyle[2]({})
24 \long\def\etocsetstyle#1#2#3#4#5{}
25 \def\etocfontminustwo {\normalsize \LARGE \bfseries}
26 \def\etocfontminusone {\normalsize \large \bfseries}
27 \def\etocfontzero {\normalsize \large \bfseries}
28 \def\etocfontone {\normalsize \normalsize \bfseries}
29 \def\etocfonttwo {\normalsize \normalsize}
30 \def\etocfontthree {\normalsize \footnotesize}
31 \def\etocsepminustwo {4ex \plus .5ex \minus .5ex}
32 \def\etocsepminusone {4ex \plus .5ex \minus .5ex}
```

```
33 \def\etocsepzero      {2.5ex \@plus .4ex \@minus .4ex}
34 \def\etocsepone       {1.5ex \@plus .3ex \@minus .3ex}
35 \def\etocseptwo       {.5ex \@plus .1ex \@minus .1ex}
36 \def\etocsepthree     {.25ex \@plus .05ex \@minus .05ex}
37 \def\etocbaselinespreadminustwo {1}
38 \def\etocbaselinespreadminusone {1}
39 \def\etocbaselinespreadzero   {1}
40 \def\etocbaselinespreadone  {1}
41 \def\etocbaselinespreadtwo  {1}
42 \def\etocbaselinespreadthree {.9}
43 \def\etocminustwoleftmargin {1.5em plus 0.5fil}
44 \def\etocminustworightmargin {1.5em plus -0.5fil}
45 \def\etocminusoneleftmargin {1em}
46 \def\etocminusonerightmargin {1em}
47 \def\etococlineleaders
48     {\hbox{\normalfont\normalsize\hb@xt@2ex {\hss.\hss}}}
49 \def\etocabbrevpagename {p.~}
50 \def\etocpartname      {Part}% modified 1.08b
51 \def\etocbookname      {Book}
52 \def\etocdefaultlines{}
53 \def\etocabovetocskip{3.5ex \@plus 1ex \@minus .2ex}
54 \def\etocbelowtocskip{3.5ex \@plus 1ex \@minus .2ex}
55 \def\etoccolumnsep{2em}
56 \def\etocmulticolsep{0ex}
57 \def\etocmulticolpretolerance{-1}
58 \def\etocmulticoltolerance{200}
59 \def\etocdefaultnbcoll{2}
60 \def\etocinnertopsep{2ex}
61 \newcommand\etocmulticollstyle[2][]{}
62 \def\etocinnerbottomsep{3.5ex}
63 \def\etocinnerleftsep{2em}
64 \def\etocinnersrightsep{2em}
65 \def\etocoprule{\hrule}
66 \def\etocleftrule{\vrule}
67 \def\etocrightrule{\vrule}
68 \def\etocbottomrule{\hrule}
69 \def\etocoprulecolor{\relax}
70 \def\etocbottomrulecolor{\relax}
71 \def\etocleftrulecolor{\relax}
72 \def\etocrightrulecolor{\relax}
73 \newcommand*\etocruledstyle[2][]{}
74 \def\etocframedmphook{\relax}
75 \long\def\etocbkcolor{\relax}
76 \newcommand*\etocframedstyle[2][]{}
77 \def\etocmulticol{}
78 \def\etocruled{}
79 \def\etocframed{}
80 \def\etoclocalmulticol{}
81 \def\etoclocalruled{}
82 \def\etoclocalframed{}
83 \def\etocarticlestyle{}
84 \def\etocarticlestylenomarks{}
85 \def\etocbookstyle{}
86 \def\etocbookstylenomarks{}
87 \let\etocreportstyle\etocbookstyle
88 \let\etocreportstylenomarks\etocbookstylenomarks
89 \def\etocmemoirtoctotocfmt #1#2{}
90 \def\etocmemoirstyle{}
91 \def\etocscrartclstyle{}
92 \let\etocscrbookstyle\etocscrartclstyle
```

```

93 \let\etocscrreprtstyle\etocscrartclstyle
94 \def\etocstandarddisplaystyle{\etocarticlestyle}
95 \newcommand*\etocmarkboth[1]{}
96 \newcommand*\etocmarkbothonuc[1]{}
97 \newcommand\etoc toc style[3][section]{}
98 \newcommand\etoc toc style with marks[4][section]{}
99 \newcommand\etoc toc style with marks nouc[4][section]{}
100 \def\etocignoretoctocdepth{}
101 \def\etocsettocdepth[1]{}
102 \def\etocdepthtag #1{\Etoc@depthtag }
103 \def\Etoc@depthtag #1{}
104 \def\etocignoredepthtags {}
105 \def\etoc obey depthtags {}
106 \def\etocsettagdepth #1#2{}
107 \def\invisible table of contents {}
108 \def\invisible local table of contents {}
109 \def\etocsetnexttocdepth #1{}
110 \def\etocsetlocaltop #1{\Etoc@set@localtop}
111 \def\Etoc@set@localtop #1{}
112 \def\etocstandardlines {}
113 \def\etoc oclines {}
114 \let\etoc after tochook \@empty
115 \let\etoc before titlehook \@empty
116 \appto\tableofcontents{\def\tableofcontents{}}

```

File 147 **l warp-eurosym.sty**

§ 256 Package **eurosym**

(Emulates or patches code by HENRIK THEILING.)

eurosym (*Pkg*) eurosym is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{eurosym}[1998/08/06]

```

2 \renewrobustcmd\officialemuro{\HTMLentity{euro}}
3 \let\geneuro\officialemuro
4 \let\geneurownarrow\officialemuro
5 \let\geneurowide\officialemuro
6 \let\euromuro\officialemuro
7 \renewrobustcmd\europbars{}
8 \renewrobustcmd\europbarsnarrow{}
9 \renewrobustcmd\europbarswide{}

```

File 148 **l warp-everypage.sty**

§ 257 Package **everypage**

(Emulates or patches code by SERGIO CALLEGARI.)

everypage (*Pkg*) everypage is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{everypage}[2007/06/20]

```
2 \newcommand*{\AddEverypageHook}[1]{}
3 \newcommand*{\AddThispageHook}[1]{}
```

File 149 **l warp-everyshi.sty**

§ 258 Package **everyshi**

(Emulates or patches code by MARTIN SCHRÖDER.)

everyshi (*Pkg*) ignored.

for HTML output: Discard all options for l warp-everyshi:

```
1 \LWR@ProvidesPackageDrop{everyshi}[2001/05/15]

2 \let\EveryShipout\relax
3 \newcommand*{\EveryShipout}[1]{}
4
5 \let\AtNextShipout\relax
6 \newcommand*{\AtNextShipout}[1]{}
```

File 150 **l warp-extarrows.sty**

§ 259 Package **extarrows**

(Emulates or patches code by HUYNH KY ANH.)

extarrows (*Pkg*) extarrows is used as-is for SVG math, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{extarrows}[2008/05/15]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\Newextarrow\xLongleftarrow[10,10]{0x21D0}}
4 \CustomizeMathJax{\Newextarrow\xLongrightarrow[10,10]{0x21D2}}
5 \CustomizeMathJax{\Newextarrow\xLongleftrightarrow[10,10]{0x21D4}}
6 \CustomizeMathJax{\Newextarrow\xLeftrightarrow[10,10]{0x21D4}}
7 \CustomizeMathJax{\Newextarrow\xlongleftrightarrow[10,10]{0x2194}}
8 \CustomizeMathJax{\Newextarrow\xleftrightarrow[10,10]{0x2194}}
9 \CustomizeMathJax{\let\xlongleftarrow\xleftarrow}
10 \CustomizeMathJax{\let\xlongrightarrow\xrightarrow}
11 \end{warpMathJax}
```

File 151 **l warp-extramarks.sty**

§ 260 Package **extramarks**

(Emulates or patches code by PIET VAN OOSTRUM.)

extramarks (*Pkg*) extramarks is ignored.

for HTML output: Discard all options for l warp-extramarks:

```
1 \LWR@ProvidesPackageDrop{extramarks}[2019/01/31]
```

```

2 \newcommand*{\extramarks}[2]{}
3 \newcommand*{\firstleftxmark}{}
4 \newcommand*{\lastleftxmark}{}
5 \newcommand*{\firstrightxmark}{}
6 \newcommand*{\lastrightxmark}{}
7 \newcommand*{\firstxmark}{}
8 \newcommand*{\lastxmark}{}
9 \newcommand*{\topxmark}{}
10 \newcommand*{\topleftxmark}{}
11 \newcommand*{\toprightxmark}{}
12 \newcommand*{\firstleftmark}{}
13 \newcommand*{\lastrightmark}{}
14 \newcommand*{\firstrightmark}{}
15 \newcommand*{\lastleftmark}{}

```

File 152 **l warp-fancybox.sty**

§ 261 Package **fancybox**

(Emulates or patches code by TIMOTHY VAN ZANDT.)

fancybox (*Pkg*) fancybox is supported with some patches.

framed equation example

fancybox's documentation has an example `FramedEqn` environment which combines math, `\Sbox`, a `minipage`, and an `\fbox`. This combination requires that the entire environment be enclosed inside a `\latextimage`, which is done by adding `\latextimage` at the very start of `FramedEqn`'s beginning code, and `\endlatextimage` at the very end of the ending code. Unfortunately, the `HTML alt` attribute is not used here.

```

\newenvironment{FramedEqn}
{
  \latextimage% NEW
  \setlength{\fboxsep}{15pt}
  . . .
  [\fbox{\TheSbox}]
  \endlatextimage% NEW
}

```

framing alternatives `\fbox` works with **fancybox**. Also see **l warp**'s `\fboxBlock` macro and `fminipage` environment for alternatives to `\fbox` for framing environments.

framed table example

The **fancybox** documentation's example of a framed table using an `\fbox` containing a `tabular` does not work with **l warp**, but the `FramedTable` environment does work if `\fbox` is replaced by `\fboxBlock`. This method does lose some `HTML` formatting. A better method is to enclose the table's contents inside a `fminipage` environment. The caption may be placed either inside or outside the `fminipage`:

```

\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{lr}
. .
\end{tabular}
\end{fminipage}
\end{table}

```

⚠️ framed verbatim

`\warp` does not support the `verbatim` environment inside a span, box, or `fancybox`'s `\Sbox`, but a `verbatim` may be placed inside a `fminipage`. The `fancybox` documentation's example `FramedVerb` may be defined as:

```
\newenvironment{FramedVerb}[1] % width
{
    \VerbatimEnvironment
    \fminipage{#1}
    \begin{Verbatim}
}
    \end{Verbatim}
    \endfminipage
}
```

`framed \VerbBox` `fancybox`'s `\VerbBox` may be used inside `\fbox`.

indented alignment

`\LVerbatim`, `\LVerbatimInput`, and `\LUseVerbatim` indent with horizontal space which may not line up exactly with what `pdftotext` detects. Some lines may be off slightly in their left edge.

`\warp` sanitizes HTML for `fancybox` verbatims, except for the contents of `\VerbBox` and any `\verb` inside.

fancybox, fancyvrb**⚠️ \VerbatimFootnotes****⚠️ sectioning or displaymath**

If using `fancybox` or `fancyvrb` with `\VerbatimFootnotes`, and using footnotes in a sectioning command or display math, use `\footnotemark` and `\footnotetext`:

```
\subsection[Subsection Name]
    {Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbtim+.}
```

and likewise for equations or display math.

1 `\LWR@ProvidesPackagePass{fancybox}[2010/05/15]`

After the preamble is loaded, after any patches to `Verbatim`:

2 `\AfterEndPreamble{`
3 `\LWR@traceinfo{Patching fancybox. }`

\VerbatimFootnotes

Patched to use the new version.

4 `\def\VerbatimFootnotes{%`
5 `\let@\footnotetext\@footnotetext%`
6 `\let\LWR@footnotetext\@footnotetext% l warp`
7 `}`

\V@footnotetext

Patches in a subset of `\warp`'s `\LWR@footnotetext` to the `fancyvrb` version of `\V@footnotetext`.

8 `\def\V@footnotetext{%`
9 `\LWR@traceinfo{\V@footnotetext}%`

Place an autopage marker so that back references to citations inside a footnote will link closer to the footnote text, if possible.

10 `\LWR@newautopagelabel{page}%`

Take the current footnote box, then append:


```

48      {\InlineClass{Ovalbox}{#2}}%
49 }%
50 }

```

Convert minipages, parboxes, and lists into linear text using the `LWR@nestspan` environment:

```

51 \let\LWR@origSbox\Sbox
52
53 \def\Sbox{\LWR@origSbox\LWR@nestspan}
54
55
56 \let\origendSbox\endSbox
57
58 \def\endSbox{\endLWR@nestspan\LWR@origendSbox}

```

`Beqnarray` is adapted for `MATHJAX` or enclosed inside a `lateximage`:

```

59 \RenewEnviron{Beqnarray}{%
60 { \LWR@eqnarrayfactor }%
61
62 \csgpreto{Beqnarray*}{\boolfalse{LWR@numbereqnarray}}}

```

`\GenericCaption` is enclosed in an `HTML` block:

```

63 \renewcommand{\GenericCaption}[1]{%
64   \LWR@figcaption%
65   \LWR@isolate{#1}%
66   \endLWR@figcaption%
67 }

```

`Btrivlist` is enclosed in an `HTML` block. This is a tabular, and does not use `\item`.

```

\ttrivlist
{<l/c/r>} [<t/c/b>]
68 \RenewDocumentEnvironment{Btrivlist}{m o}
69 {%
70   \LWR@stopars%
71   \begin{BlockClass}{Btrivlist}%
72   \tabular{#1}%
73 }
74 {%
75   \endtabular%
76   \end{BlockClass}%
77   \LWR@startpars%
78 }

```

`Btrivlist` is also neutralized when used inside a span:

```

79 \AtBeginEnvironment{LWR@nestspan}{%
80   \RenewDocumentEnvironment{Btrivlist}{m o}{}{}%
81 }

```

`lwarf's handling of \item is patched to accept fancybox's optional arguments:`

```

82 \let\LWRFB@origitemizeitem\LWR@itemizeitem
83 \let\LWRFB@origdescitem\LWR@descitem

```

```

84 \RenewDocumentCommand{\LWR@itemizeitem}{d()o}{%
85   \IfValueTF{#2}{%
86     \LWRFB@origitemizeitem[#2]%
87   }{%
88     \LWRFB@origitemizeitem%
89   }%
90 }%
91 }%
92 \RenewDocumentCommand{\LWR@descitem}{d()o}{%
93   \IfValueTF{#2}{%
94     \LWRFB@origdescitem[#2]~%
95   }{%
96     \LWRFB@origdescitem%
97   }%
98 }%
99 }%
100 \RenewDocumentCommand{\LWR@nestspanitem}{d()}{%
101   \if@newlist\else{%
102     \LWR@htmltagc{br /}%
103     \LWR@orignewline%
104   }\fi%
105   \LWR@origitem%
106 }

```

The various boxed lists become regular lists:

```

107 \renewenvironment{Bitemize}[1][]
108   {%
109     \LWR@spanwarnformat{Bitemize}%
110     \booltrue{\LWR@starting@fancybox}%
111     \begin{itemize}%
112       \boolfalse{\LWR@starting@fancybox}%
113     }%
114   \end{itemize}%
115 
116 \renewenvironment{Benumerate}[1][]
117   {%
118     \LWR@spanwarnformat{Benumerate}%
119     \booltrue{\LWR@starting@fancybox}%
120     \begin{enumerate}%
121       \boolfalse{\LWR@starting@fancybox}%
122     }%
123   \end{enumerate}%
124 
125 \renewenvironment{Bdescription}[1][]
126   {%
127     \LWR@spanwarnformat{Bdescription}%
128     \booltrue{\LWR@starting@fancybox}%
129     \begin{description}%
130       \boolfalse{\LWR@starting@fancybox}%
131     }%
132   \end{description}%

```

\boxput simply prints one then the other argument, side-by-side instead of above and behind:

```
133 \RenewDocumentCommand{\boxput}{s d() m m}{%
```

```
134     \IfBooleanTF{#1}{#3\quad#4}{#4\quad#3}%
135 }
```

Neutralized commands:

```
136 \RenewDocumentCommand{\fancyput}{s d() m}{}
137 \RenewDocumentCommand{\thisfancyput}{s d() m}{}
138
139 \RenewDocumentCommand{\fancypage}{m m}{}
140 \RenewDocumentCommand{\thisfancypage}{m m}{}
141
142 \def\LandScape#1{}
143 \def\endLandScape{}
144 \def\@Landscape#1#2#3{}
145 \def\endLandscape{}
```

Low-level patches for `UseVerbatim` and friends:

```
146 \VerifyCommand[l warp][fancybox]{\Verbatim@List}{A85522266594F8C0D846AEB1F72232FF}
147
148 \def\Verbatim@List#1{%
149   \if@minipage\else\vskip\parskip\fi
150   \leftskip\@totalleftmargin
151   \rightskip\@flushglue \rightskip\@rightskip
152   \parindent\z@
153   \parskip\z@
154   \parfillskip\@flushglue
155   \hfuzz\VerbatimFuzz\relax
156   \@@par
157   \global\@inlabelfalse %Prevents vspace from being inserted when
158   \Verbatim@Prep           %first line exceeds \hsize.
159 % #1%
160   \expandafter\def\expandafter\tmpb\expandafter{\#1}% l warp
161   \LWR@HTMLsanitize@tmpb% l warp
162   \tmpb% l warp
163   \Verbatim@Par}%
164
165 \VerifyCommand[l warp][fancybox]{\Verbatim@Input}{3DCC957D04BC5060FF70DD0FF2928D55}
166
167 \def\Verbatim@Input{%
168   \let\protect\noexpand
169   \LetLtxMacro\tmpb\The@Verbatim% l warp
170   \LWR@HTMLsanitize@tmpb% l warp
171   \edef\The@Verbatim{%
172     \noexpand\Every@VerbatimLine
173 %   \The@Verbatim
174     \tmpb% l warp
175     \ifeof\Verbatim@Infile\else\noexpand\Verbatim@Par\fi}%
176   \let\protect\relax
177   \The@Verbatim
178   \ifeof\Verbatim@Infile\else
179     \let\The@Verbatim\The@GVerbatim
180     \def\The@GVerbatim{} \Verbatim@NextLine
181     \expandafter\Verbatim@Input
182     \fi}%
183
184
185
186 \let\LWRFB@UseVerbatim\UseVerbatim
```

```

187 \renewcommand*\{\\UseVerbatim}[1]{%
188     \\LWR@atbeginverbatim{Verbatim}%
189     \\LWRFB@UseVerbatim{#1}%
190     \\LWR@afterendverbatim%
191 }
192
193 \\let\\LWRFB@LUseVerbatim\\LUseVerbatim
194
195 \renewcommand*\{\\LUseVerbatim}[1]{%
196     \\LWR@atbeginverbatim{\\Verbatim}%
197     \\noindent%
198     \\LWRFB@LUseVerbatim{#1}%
199     \\LWR@afterendverbatim%
200 }
201
202 \\def\\@BUseVerbatim[#1]{%
203     \\LWR@atbeginverbatim{\\BVerbatim}%
204     \\LWRFB@UseVerbatim{#2}%
205     \\LWR@afterendverbatim%
206 }

```

File 153 **l warp-fancyhdr.sty**

§ 262 Package **fancyhdr**

(Emulates or patches code by PIET VAN OOSTRUM.)

fancyhdr (Pkg) **fancyhdr** is ignored.

for HTML output: Discard all options for **l warp-fancyhdr**:

```

1 \\LWR@ProvidesPackageDrop{fancyhdr}[2021/01/04]

2 \\newcommand*{\\fancyhead}[2][]{}
3 \\newcommand*{\\fancyfoot}[2][]{}
4 \\newcommand*{\\fancyhf}[2][]{}
5
6 \\newcommand*{\\lhead}[2][]{}
7 \\newcommand*{\\chead}[2][]{}
8 \\newcommand*{\\rhead}[2][]{}
9 \\newcommand*{\\lfoot}[2][]{}
10 \\newcommand*{\\cfoot}[2][]{}
11 \\newcommand*{\\rfoot}[2][]{}
12 \\newcommand*{\\headrulewidth}{}
13 \\newcommand*{\\footrulewidth}{}
14 \\providecommand{\\headruleskip}{0pt}
15 \\providecommand{\\footruleskip}{0pt}
16 \\newcommand{\\plainheadrulewidth}{0pt}
17 \\newcommand{\\plainfootrulewidth}{0pt}
18 \\def\\fancyplain#1#2{#1}
19 \\newcommand*{\\headrule}{}
20 \\newcommand*{\\footrule}{}
21 \\newlength{\\headwidth}
22 \\newcommand*{\\fancycenter}[1][1em]{}
23 \\newcommand*{\\fancyheadoffset}[2][]{}
24 \\newcommand*{\\fancyfootoffset}[2][]{}
25 \\newcommand*{\\fancyhfoffset}[2][]{}

```

```

26 \newcommand{\fancyheadinit}[1]{}
27 \newcommand{\fancyfootinit}[1]{}
28 \newcommand{\fancyhinit}[1]{}
29 \newcommand*\iffloatpage[2]{#2}
30 \newcommand*\ifftopfloat[2]{#2}
31 \newcommand*\iffbotfloat[2]{#2}
32 \newcommand*\ifffootnote[2]{#2}
33
34 \newcommand{\fancypagestyle}[1]{%
35   \@ifnextchar[\f@nch@pagestyle{#1}]{\f@nch@pagestyle{#1}[]}{%
36 }
37 \long\def\f@nch@pagestyle#1[#2]#3{}}

```

File 154 **l warp-fancypar.sty**

§ 263 Package **fancypar**

(Emulates or patches code by GONZALO MEDINA.)

fancypar (*Pkg*) **fancypar** is used as-is for print output, and emulated for **HTML**.

⚠ **css classes** `\NotebookPar` and related are used as-is inside a `\textrimage`, but for **HTML** these are emulated as a `<div>` of class `NotebookPar`, etc. For **HTML**, the package options and the macro optional arguments are ignored. The user must provide custom `css` for each if visual effects are required. See section 7.7.

⚠ **custom styles** If using a custom paragraph style, such as `\MyStylePar` from the documentation, use the following to generate an **HTML** `<div>` of class `MyStylePar`:

```

... (existing definiton of \MyStylePar, print version) ...
\begin{warpHTML}
\AddFancyparClass{MyStyle}
\end{warpHTML}

```

`\MyStylePar` is then modified to emulate **HTML**. An optional argument is allowed, which is ignored.

for HTML output: 1 `\LWR@ProvidesPackagePass{fancypar}[2019/01/18]`

```

2 \begin{warpHTML}
3 \makeatletter
4
5 \newcommand{\LWR@fancypar}[2]{%
6   \begin{BlockClass}{#1Par}
7     #2
8   \end{BlockClass}
9 }
10
11 \newcommand{\LWR@HTML@NotebookPar}[2][]{{\LWR@fancypar{Notebook}{#2}}}
12 \LWR@formatted{NotebookPar}
13
14 \newcommand{\LWR@HTML@ZebraPar}[2][]{{\LWR@fancypar{Zebra}{#2}}}
15 \LWR@formatted{ZebraPar}
16
17 \newcommand{\LWR@HTML@DashedPar}[2][]{{\LWR@fancypar{Dashed}{#2}}}
18 \LWR@formatted{DashedPar}

```

```

19
20 \newcommand{\LWR@HTML@MarkedPar}[2][]{\LWR@fancypar{Marked}{#2}}
21 \LWR@formatted{MarkedPar}
22
23 \newcommand{\LWR@HTML@UnderlinedPar}[2][]{\LWR@fancypar{Underlined}{#2}}
24 \LWR@formatted{UnderlinedPar}
25
26
27 \newcommand{\LWR@HTML@add@fancy@format}{}%
28 \LWR@formatted{add@fancy@format}
29
30
31 \newcommand{\AddFancyparClass}[1]{%
32     \expandafter\newcommand\csname LWR@HTML@#1Par\endcsname[2][]{%
33         \LWR@fancypar{#1}{##2}%
34     }%
35     \LWR@formatted{#1Par}
36 }
37
38 \makeatother
39 \end{warpHTML}

```

File 155 **l warp-fancyref.sty**

§ 264 Package **fancyref**

(Emulates or patches code by AXEL REICHERT.)

fancyref (Pkg) fancyref is modified for HTML output.

for HTML output: 1 \LWR@ProvidesPackagePass{fancyref}[1999/02/03]

\fancyrefhook (*Hook*) [fancyref] To remove the margin option, if \fancyrefhook is anything other than the paren option, then force it to the default instead. (Comparing to the margin option was not possible since l warp has revised the meaning of \mbox so the comparison failed.)

```

2 \newcommand*{\LWRfref@parenfancyrefhook}[1]{(#1)}
3
4 \ifdefstequal{\fancyrefhook}{\LWRfref@parenfancyrefhook}
5 {}{
6     \renewcommand*{\fancyrefhook}[1]{#1}%
7 }

```

File 156 **l warp-fancytabs.sty**

§ 265 Package **fancytabs**

fancytabs (Pkg) fancytabs is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fancytabs}[2016/03/29]

```

2 \newcommand{\fancytab}[3][RIGHT]{}
3 \newcommand{\fancytabsStyle}[1]{}

```

```

4 \newcommand{\fancytabsHeight}[1]{}
5 \newcommand{\fancytabsWidth}[1]{}
6 \newcommand{\fancytabsCount}[1]{}
7 \newcommand{\fancytabsLeftColor}[1]{}
8 \newcommand{\fancytabsRightColor}[1]{}
9 \newcommand{\fancytabsTop}[1]{}
10 \newcommand{\fancytabsTextVPos}[1]{}
11 \newcommand{\fancytabsTextHPos}[1]{}
12 \newcommand{\fancytabsGap}[1]{}
13 \newcommand{\fancytabsFloor}[1]{}
14 \newcommand{\fancytabsRotate}[1]{}

```

File 157 **lwarf-fancyvrb.sty**

§ 266 Package **fancyvrb**

(Emulates or patches code by TIMOTHY VAN ZANDT.)

fancyvrb (*Pkg*) fancyvrb is supported with some patches.

HTML classes The fancy verbatim environment is placed inside a `<div>` of class `fancyvrb`. The label is placed inside a `<div>` of class `fancyvrblabel`. The verbatim text itself is placed inside a `<div>` of class `verbatim`.

For an inline `\Verb`, the verbatim is placee inside a `` of class `fancyvrb`.

If using `fancybox` or `fancyvrb` with `\VerbatimFootnotes`, and using footnotes in a sectioning command or display math, use `\footnotemark` and `\footnotetext`:

```

\subsection[Subsection Name]
    {Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbtim+.}

```

and likewise for equations or display math.

```

1 \AtBeginDocument{\RequirePackage{xcolor}}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{fancyvrb}[2023/11/06]

```

Initial default patch for `fancyvrb`:

```
4 \fvset{frame=none}%
```

Gobble does not work with HTML sanitization, so if gobbling is non-zero then turn off HTML sanitization.

```

5 \define@key{FV}{gobble}{%
6   \tempcnta=#1\relax
7   \ifnum\tempcnta<\ne
8     \let\FV@Gobble\relax
9   \else
10    \ifnum\tempcnta>9
11      \FV@Error{gobble parameter must be less than 10}\FV@eha
12    \else
13      \renewcommand{\FV@@@Gobble}{\tempcnta}%
14      \let\FV@Gobble\FV@@Gobble%

```

```

15      \boolfalse{LWR@HTMLsanitize@tmpb@enable}%
16      \fi
17  \fi}

```

\FancyVerbSpace

Force the use of a visible space instead of an empty box.

```

18 \ifxetexorluatex
19 \def\LWR@HTML@FancyVerbSpace{\textvisiblespace}
20 \else
21 \@ifundefined{verbvisiblespace}%
22 {%
23   \@ifundefined{textvisiblespace}%
24   {\begingroup\catcode`\\=12 \gdef\LWR@HTML@FancyVerbSpace{\tt }\endgroup}
25   {\def\LWR@HTML@FancyVerbSpace{\textvisiblespace}}
26 }%
27 {\def\LWR@HTML@FancyVerbSpace{\verbvisiblespace}}
28 \fi
29 \LWR@formatted{FancyVerbSpace}

```

\FancyVerbTab

Set the visible tab. Unicode 240B (SYMBOL FOR HORIZONTAL TABULATION) and 21E5 (RIGHTWARDS ARROW TO BAR) both gave unintended new lines at each tab, so a simple pipe character is used instead.

For the print mode, the `fancyvrb` definition does not copy, so a simplified version is used.

```

30 \def\LWR@print@FancyVerbTab{|
31 \def\LWR@HTML@FancyVerbTab{|}%
32 \LWR@formatted{FancyVerbTab}

33 \fvset{tabsize=8, showtabs=false}

```

\FV@CatCodes

```

34 \VerifyCommand[l warp][fancyvrb]{\FV@CatCodes}{BF2C1F38D5FEF0658C18B636ACBDA40E}
35
36 \def\FV@CatCodes{%
37   \let\do\@makeother\dospecials % The usual stuff.
38   \FV@ActiveWhiteSpace % See below.
39   \FV@FontScanPrep % See below.
40   \FV@CatCodesHook % A style hook.
41   \FancyVerbCodes % A user-defined hook.
42   \catcode`\\=12% % l warp
43   \catcode`\\<=12% % l warp
44 }

```

\FV@GetLine

Added the catcode changes for < and > to avoid the effect of `\@noligs` for these characters. They were being made active and thus would not be sensed by the search/replace to sanitize.

 This code is sensitive to the use of %, and for some reason does not work if `\expandafter` immediately follows the < catcode change.

```

45 \VerifyCommand[l warp][fancyvrb]{\FV@GetLine}{9B86134119C575F099B5B567A9B65A9F}
46
47 \def\FV@GetLine{%
48   \@noligs%
49   \catcode`\\=12% l warp, and the next line as well
50 % for some reason, there must not be a % after the following 12:

```

```

51     \catcode`\<=12
52 %
53     \expandafter\FV@CheckScan\FancyVerbGetLine%
54 }

```

Modified to sanitize HTML. \LWR@HTMLsanitize@tmpb is included in \FV@Line, so it will adjust if used inside an `lateximage`.

```

55 \VerifyCommand[lwarp][fancyvrb]{\FancyVerbGetLine}{498B88BACBD0811BAC0791BDF4F3B335}
56
57 \begingroup
58 \catcode`^^M=\active%
59 \gdef\FancyVerbGetLine#1^^M{%
60   @nil%
61   \FV@CheckEnd{#1}%
62   \ifx\tempa\FV@EnvironName%           % True if end is found
63   \ifx\tempb\FV@@@CheckEnd\else\FV@BadEndError\fi%
64   \let\next\FV@EndScanning%
65 \else%
66   \ifbool{\LWR@HTMLsanitize@tmpb@enable}{%
67     {\def\FV@Line{\LWR@HTMLsanitize@use@\tmpb{#1}}}\%
68     {\def\FV@Line{#1}}\%
69   \def\next{\FV@PreProcessLine\FV@GetLine}%
70   \fi%
71 \next}%
72 \endgroup

```

\FV@List {*(R/L margin 0/1)*}

Modified to always allow line wrapping because added HTML tags may make run off the end of the line in the PDF output file before conversion to HTML.

```

73 \VerifyCommand[lwarp][fancyvrb]{\FV@List}{8FB649FAF7C9487B257B76AF4FFB27D1}
74
75 \def\FV@List#1{%
76   \begingroup
77   \FV@UseKeyValues
78   \FV@LeaveVMode
79   \if@inlabel\else\setbox@labels=\box\voidb@x\fi
80   \FV@ListNesting{#1}%
81   \FV@ListParameterHook
82   \FV@ListVSpace
83   \FV@SetLineWidth
84   \FV@InterLinePenalty
85 % \let\FV@ProcessLine\FV@ListProcessLine@i
86 \let\FV@ProcessLine\FV@ListProcessLine%           lwarp
87 \FV@CatCodes
88 \FV@FormattingPrep
89 \FV@ObeyTabsInit
90 \FV@BeginListFrame}

```

\FV@ListProcessLine {*(text)*}

Processes each line, adding optional line numbers. Modified to always allow line wrapping because added HTML tags may make run off the end of the line in the PDF output file before conversion to HTML.

```

91 \VerifyCommand[lwarp][fancyvrb]{\FV@ListProcessLine}{660F9938234FC1043ACF7B02B3F37372}
92
93 \def\FV@ListProcessLine#1{%
94   \hbox to \hsize{%

```

```

95 %      \kern\leftmargin
96      \hbox to \VerbatimHTMLWidth {%
97          \ifcsvoid{FV@LeftListNumber}{}{\kern 2.5em}%
98          \FV@LeftListNumber%
99 %
100         \FV@LeftListFrame
101         \hss%
102 %
103         \FV@RightListFrame
104         \FV@RightListNumber%
105     }%
106     \hss% required to avoid underfull hboxes
107 }

```

\FVC@SaveVerb {*name*} {*character*}

Modified to sanitize HTML when stored. Sanitizing on use would be too late to adjust catcodes. \LWR@HTMLsanitize@tmpb is included in the saved macro, so if inside a *lateximage*, \LWR@HTMLsanitize@tmp does nothing.

```

108 \VerifyCommand[lwarp][fancyvrb]{\FVC@SaveVerb}{68373ED055890622906844A5611810C8}
109
110 \begingroup
111 \catcode`^\^M=\active%
112 \gdef\FVC@SaveVerb#1#2{%
113     @namedef{FV@SV@#1}{%
114     \begingroup%
115         \FV@UseKeyValues%
116         \FV@CatCodes%
117         \outer\def^\^M{\FV@EOL}%
118         \global\let\@tempg\FancyVerbAfterSave%
119         \catcode`#2=12%
120         \def\@tempa{\def\FancyVerbGetVerb####1####2}%
121     \% \expandafter\@tempa\string#2{\endgroup\@namedef{FV@SV@#1}{##2}\@tempg}%
122     \expandafter\@tempa\string#2{%
123         \endgroup%
124         @namedef{FV@SV@#1}{%
125             ##2%
126             \LWR@HTMLsanitize@use@tmpb{##2}% lwarp
127         }\@tempg%
128     }%
129     \FancyVerbGetVerb\FV@EOL}%
130 \endgroup

```

\FV@UseVerb {*macro*}

Adds a .

```

131 \VerifyCommand[lwarp][fancyvrb]{\FV@UseVerb}{A3A9D802CCDBEC8D2FDAB626346B5EDD}
132
133 \def\FV@UseVerb#1{%
134     \ifbool{LWR@verbtags}{% lwarp
135         {\LWR@htmltag{span class=\textquotedbl{}fancyvrb\textquotedbl{}}}% lwarp
136     }% lwarp
137     \mbox{\FV@UseKeyValues\FV@FormattingPrep#1}%
138     \ifbool{LWR@verbtags}{% lwarp
139         {\LWR@htmltag{/span}}% lwarp
140     }% lwarp
141 }

```

\FVC@Verb

{*<character>*}

Modified to sanitize HTML.

```

142 \VerifyCommand[l warp][fancyvrb]{\FVC@Verb}{806B03D5A78CAB39E0514667991695C9}
143
144 \begingroup
145 \catcode`^\^M=\active%
146 \gdef\FVC@Verb#1{%
147   \begingroup%
148     \FV@UseKeyValues%
149     \FV@FormattingPrep%
150     \FV@CatCodes%
151     \outer\def^\^M{}%
152     \catcode`#1=12%
153     \def\@tempa{\def\fancyVerbGetVerb####1####2}%
154     \expandafter\@tempa\string#1{%
155       \ifbool{LWR@verbtags}{%
156         \l warp
157         \LWR@htmltag{span class=\textquotedbl{}fancyvrb\textquotedbl%} \l warp
158         \def\tmpb{##2}{%
159           \LWR@HTMLsanitize@\tmpb%
160           \mbox{\tmpb}%
161           \LWR@htmltag{/span}{%
162             }% \l warp
163             {\mbox{##2}}%
164           \endgroup%
165         }%
166         \fancyVerbGetVerb\FV@EOL%
167     }%
168   \endgroup

```

\FV@ReadLine

Modified to sanitize HTML.

```

169 \VerifyCommand[l warp][fancyvrb]{\FV@ReadLine}{3C3481D735295DAEB5B30DDE9152287D}
170
171 \begingroup
172 \catcode`^\^M=\active%
173 \gdef\FV@ReadLine{%
174   \ifeof\FV@InFile\else
175     \immediate\read\FV@InFile to\@tempa%
176     \expandafter\FV@@ReadLine\@tempa^\^M\relax^\^M\@nil%
177     \immediate\read\FV@InFile to\tmpb%
178     \LWR@HTMLsanitize@\tmpb%
179     \expandafter\FV@@ReadLine\tmpb^\^M\relax^\^M\@nil%
180   \fi%
181 \endgroup

```

\LWR@FVstyle

Holds the style of the verbatim.

```
182 \newcommand*\LWR@FVstyle{}
```

After the preamble is loaded, after any patches to Verbatim, such as by fextra:

```

183 \AfterEndPreamble{
184
185 \LWR@traceinfo{Patching fancyvrb.}

```

\VerbatimFootnotes

Patched to use the new version.

```

186 \VerifyCommand[l warp][fancyvrb]{\VerbatimFootnotes}{931C9BE6284EB9D8B1516D566C997A87}
187
188 \def\VerbatimFootnotes{%
189   \let\@footnotetext\@footnotetext%
190   \let\footnote\@footnote%
191   \let\LWR@footnotetext\@footnotetext% l warp
192 }

```

\V@@footnotetext Patches in a subset of l warp's \LWR@footnotetext to the fancyvrb version of \V@@footnotetext.

```

193 \VerifyCommand[l warp][fancyvrb]{\V@@footnotetext}{89E1586855997F951F57C3936CBDF87E}
194
195 \def\V@@footnotetext{%
196 \LWR@traceinfo{\V@@footnotetext}%

```

Place an autopage marker so that back references to citations inside a footnote will link closer to the footnote text, if possible.

```
197 \LWR@newautpagelabel{page}%

```

Take the current footnote box, then append:

```
198 \global\setbox\LWR@footnotebox=\vbox\bgroup%
```

Add to any current footnotes:

```
199 \unvbox\LWR@footnotebox%
```

Remember the footnote number for \ref:

```

200 \protected@edef@\currentlabel{%
201   \csname p@footnote\endcsname\@thefnmark%
202 }% @currentlabel

```

Use HTML superscripts in the footnote even inside a lateximage:

```
203 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Verbatim tags and HTML sanitization will have been turned off inside a lateximage, such as in SVG math, so turn them on here so they will be active in the HTML footnotes.

```

204 \booltrue{\LWR@verbtags}%
205 \booltrue{\LWR@HTMLsanitize@tmpb@enable}%

```

Use paragraph tags if in a tabular data cell or a lateximage:

```
206 \LWR@htmllagc{\LWR@tagregularparagraph}\LWR@orignewline%
```

Append the footnote mark to the list:

```
207 \makefntext{}%
```

The footnote text will follow after \V@@@footnotetext has completed.

```

208 \bgroup%
209 \aftergroup\V@@@footnotetext%

```

Do not generate autopages inside the footnotes, since they are accumulated at the moment before finally being used perhaps on a later page.

```

210 \let\LWR@newautpagelabel\LWR@null@newautpagelabel%
211 \ignorespaces%
212 }%

```

\V@@@footnotetext

Improves <par>.

```

213 \def\V@@@footnotetext{%
214   \LWR@orignobreakspace\LWR@orignewline%
215   \LWR@htmltagc{/ \LWR@tagregularparagraph}\LWR@orignewline%
216   \strut\egroup%
217 }

```

\FVB@Verbatim

\FVB@LVerbatim

Prevents unexpected page break in the PDF output before HTML conversion.

```

218 \preto\FVB@Verbatim{\LWR@forcenewpage}
219 \preto\FVB@LVerbatim{\LWR@forcenewpage}
220 % \preto\FVB@BVerbatim{\LWR@forcenewpage}% Fails, so done below.

```

Simplified to remove PDF formatting:

```

221 \def\LWR@HTML@FV@BeginListFrame@Single{%
222   \FV@SingleFrameLine{\z@}%
223 }
224 \LWR@formatted{FV@BeginListFrame@Single}
225
226 \def\LWR@HTML@FV@EndListFrame@Single{%
227   \FV@SingleFrameLine{\@ne}%
228 }
229 \LWR@formatted{FV@EndListFrame@Single}
230
231 \def\LWR@HTML@FV@BeginListFrame@Lines{%
232   \FV@SingleFrameLine{\z@}%
233 }
234 \LWR@formatted{FV@BeginListFrame@Lines}
235
236 \def\LWR@HTML@FV@EndListFrame@Lines{%
237   \FV@SingleFrameLine{\@ne}%
238 }
239 \LWR@formatted{FV@EndListFrame@Lines}
240
241 \newcommand*\LWR@HTML@FV@SingleFrameSep{}%
242 \LWR@formatted{FV@SingleFrameSep}

```

The following patches to Verbatim are executed at the start and end of the environment, depending on the choice of frame.

\LWR@fvstartnone

Wraps label in a <div> of class fancyvrblabel.

```

243 \newcommand*\LWR@fvstartnone{%
244 \LWR@traceinfo{fvstartnone}%
245 % \hbox to\z@{

```

If the current text style is empty, do not print an HTML style.

```

246   \ifdefstring{\LWR@FVstyle}{\LWR@currenttextcolorstyle}%
247     {%
248       \LWR@findcurrenttextcolor%
249       \ifdefstring{\LWR@tempcolor}{000000}%
250         {\BlockClass{fancyvrb}}%
251         {\BlockClass[\LWR@FVstyle]{fancyvrb}}%
252     }%
253   {%

```

```

254           \BlockClass[\LWR@FVstyle]{fancyvrb}%
255       }%
256 %   \BlockClass[\LWR@FVstyle]{fancyvrb}%

257 \LWR@stopars
258 \ifx\FV@LabelPositionTopLine\relax\else
259     \ifx\FV@LabelBegin\relax\else
260         \FancyVerbRuleColor{\LWR@FVfindbordercolor}
261         \ifbool{\LWR@verbtags}{%      lwrap
262             {%
263                 \LWR@findcurrenttextcolor%
264                 \LWR@htmllagc{%
265                     div class=\textquotedbl{}fancyvrblabel\textquotedbl\ % space
266                         style=\textquotedbl{}%
267                             color: \LWR@origpound\LWR@tempcolor%
268                         \textquotedbl%
269             }%
270             \LWR@orignewline%    lwrap
271         }%
272     {%
273         \LWR@print@textrm{\FV@LabelBegin}%
274         \LWR@orignewline%    lwrap
275         \ifbool{\LWR@verbtags}{%
276             {%
277                 \LWR@htmllagc{/div}%
278                 \LWR@orignewline%
279             }%
280         {%
281             \fi
282         }%
283         \LWR@atbeginverbatim{verbatim}%
284     }% hbox
285 }

```

\LWR@fvendnone

Wraps label in a <div> of class fancyvrblabel.

```

286 \newcommand*{\LWR@fvendnone}{%
287 \LWR@traceinfo{fvendnone}%
288 % \hbox to\z@{%
289 \LWR@afterendverbatim%
290 \LWR@stopars%
291 \ifx\FV@LabelPositionBottomLine\relax\else
292     \ifx\FV@LabelEnd\relax\else
293         \FancyVerbRuleColor{\LWR@FVfindbordercolor}%    lwrap
294         \ifbool{\LWR@verbtags}{%
295             {%
296                 \LWR@findcurrenttextcolor%
297                 \LWR@htmllagc{%
298                     div class=\textquotedbl{}fancyvrblabel\textquotedbl\ % space
299                         style=\textquotedbl{}%
300                             color: \LWR@origpound\LWR@tempcolor%
301                         \textquotedbl%
302             }%
303             \LWR@orignewline%    lwrap
304         }%
305     {%
306         \LWR@print@textrm{\FV@LabelEnd}%
307         \LWR@orignewline%    lwrap
308         \ifbool{\LWR@verbtags}{%
309             {%

```

```

310           \LWR@htmlltagc{/div}%
311           \LWR@orignewline%
312       }%
313   {}%
314   \fi
315 \fi
316 \endBlockClass%     l warp
317 % }% hbox
318 }

319 \newcommand*{\LWR@fvstartsingle}{%
320 \LWR@traceinfo{fvstartsingle}%
321 \LWR@fvstartnone%
322 \FV@BeginListFrame@Single%
323 }
324
325 \newcommand*{\LWR@fvendsingle}{%
326 \LWR@traceinfo{fvendsingle}%
327 \FV@EndListFrame@Single%
328 \LWR@fvendnone%
329 }
330
331 \newcommand*{\LWR@fvstartline}{%
332 \LWR@traceinfo{fvstartline}%
333 \LWR@fvstartnone%
334 % \setlength{\LWR@templengthone}{\baselineskip}%
335 \FV@BeginListFrame@Lines%
336 % \setlength{\baselineskip}{\LWR@templengthone}%
337 % \setlength{\baselineskip}{5pt}%
338 }
339
340 \newcommand*{\LWR@fvendline}{%
341 \LWR@traceinfo{fvendline}%
342 \FV@EndListFrame@Lines%
343 \LWR@fvendnone%
344 }

```

The following patches select the start/left/right/end behaviors depending on frame.

```

345 \newcommand*{\LWR@FVfindbordercolor}{%
346 \FancyVerbRuleColor%
347 \LWR@findcurrenttextcolor%
348 \color{black}%
349 }
350
351 % border width of \FV@FrameRule
352 \newcommand*{\LWR@FVborderstyle}[1]{%
353 padding#1: \strip@pt\dimexpr \FV@FrameSep\relax\relax pt ; % space
354 \LWR@FVfindbordercolor\LWR@indentHTMLtwo%
355 border#1: \strip@pt\dimexpr \FV@FrameRule\relax\relax pt % space
356 solid {\FancyVerbRuleColor{\LWR@origpound\LWR@tempcolor}} ; % space
357 }
358
359 \VerifyCommand[l warp][fancyvrb]{\FV@Frame@none}{C60E1656944AB4C4D2B74410E88FE7C0}
360
361 \def\LWR@HTML@FV@Frame@none{%
362 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle}%
363 \let\FV@BeginListFrame\LWR@fvstartnone%
364 \let\FV@LeftListFrame\relax%

```

```
365 \let\FV@RightListFrame\relax%
366 \let\FV@EndListFrame\LWR@fvendnone}
367 \LWR@formatted{FV@Frame@none}
368
369 \FV@Frame@none% default values
370
371 \VerifyCommand[lwarf][fancyvrb]{\FV@Frame@single}{CDF78DB9C6408F48D05302D07091C629}
372
373 \def\LWR@HTML@FV@Frame@singl{%
374 \renewcommand*{\LWR@FVstyle}{%
375   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
376   \LWR@FVborderstyle{}%
377 }%
378 \let\FV@BeginListFrame\LWR@fvstartsingl%
379 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
380 \let\FV@RightListFrame\FV@RightListFrame@Single%
381 \let\FV@EndListFrame\LWR@fvendsingle}
382 \LWR@formatted{FV@Frame@single}
383
384 \VerifyCommand[lwarf][fancyvrb]{\FV@Frame@lines}{1AADD6691DA93C9A66227F5C5B34EAE4}
385
386 \def\LWR@HTML@FV@Frame@lines{%
387 \renewcommand*{\LWR@FVstyle}{%
388   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
389   \LWR@FVborderstyle{-top}%
390   \LWR@indentHTMLtwo%
391   \LWR@FVborderstyle{-bottom}%
392 }%
393 \let\FV@BeginListFrame\LWR@fvstartline%
394 \let\FV@LeftListFrame\relax%
395 \let\FV@RightListFrame\relax%
396 \let\FV@EndListFrame\LWR@fvendline}
397 \LWR@formatted{FV@Frame@lines}
398
399 \VerifyCommand[lwarf][fancyvrb]{\FV@Frame@topline}{7E102D81F4FD367B398B8E85F48A7754}
400
401 \def\LWR@HTML@FV@Frame@topline{%
402 \renewcommand*{\LWR@FVstyle}{%
403   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
404   \LWR@FVborderstyle{-top}%
405 }%
406 \let\FV@BeginListFrame\LWR@fvstartline%
407 \let\FV@LeftListFrame\relax%
408 \let\FV@RightListFrame\relax%
409 \let\FV@EndListFrame\LWR@fvendnone}
410 \LWR@formatted{FV@Frame@topline}
411
412 \VerifyCommand[lwarf][fancyvrb]{\FV@Frame@bottomline}{A51600F812F57F4211EF9E34F261564A}
413
414 \def\LWR@HTML@FV@Frame@bottomline{%
415 \renewcommand*{\LWR@FVstyle}{%
416   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
417   \LWR@FVborderstyle{-bottom}%
418 }%
419 \let\FV@BeginListFrame\LWR@fvstartnone%
420 \let\FV@LeftListFrame\relax%
421 \let\FV@RightListFrame\relax%
422 \let\FV@EndListFrame\LWR@fvendline}
423 \LWR@formatted{FV@Frame@bottomline}
```

Seems to be required in some situations. Is not \LWR@formatted because it is defined as needed.

```
424 \def\FV@FrameFillLine{}

425 \VerifyCommand[l warp][fancyvrb]{\FV@Frame@leftline}{2A77982C6520FD64F6DBFA1C03B670BA}
426
427 \def\LWR@HTML@FV@Frame@leftline{%
428 \renewcommand*\LWR@FVstyle{%
429   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
430   \LWR@FVborderstyle{-left}%
431 }%
```

To define the \FV@FrameFillLine macro (from \FV@BeginListFrame)

```
432 \ifx\FancyVerbFillColor\relax%
433 \let\FV@FrameFillLine\relax%
434 \else%
435 @tempdima\FV@FrameRule\relax%
436 \multiply@tempdima-\tw@%
437 \edef\FV@FrameFillLine{%
438 {\noexpand\FancyVerbFillColor{\vrule\@width\number\@tempdima sp}%
439 \kern-\number\@tempdima sp}}%
440 \fi%
441 \let\FV@BeginListFrame\LWR@fvstartnone%
442 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
443 \let\FV@RightListFrame\relax%
444 \let\FV@EndListFrame\LWR@fvendnone}%
445 \LWR@formatted{FV@Frame@leftline}
```

\FV@SingleFrameLine

Adds the optional label to the top and bottom edges.

```
446 \VerifyCommand[l warp][fancyvrb]{\FV@SingleFrameLine}{2D8B1DAED851500F255E357437FF065C}
447
448 \def\LWR@HTML@FV@SingleFrameLine#1{%
449 %  \hbox to\z@{%
450 %    \kern\leftmargin
451 %    \ifnum#1=\z@\relax
452 %      \let\FV@Label\FV@LabelBegin
453 %    \else
454 %      \let\FV@Label\FV@LabelEnd
455 %    \fi
456 %    \ifx\FV@Label\relax
457 %      \FancyVerbRuleColor{\vrule \@width\ linewidth \@height\ FV@FrameRule}%
458 %    \else
459 %      \ifnum#1=\z@
460 %        \setbox\z@\hbox{\strut\enspace\FV@LabelBegin\enspace\strut}%
461 %        \ifx\FV@LabelPositionTopLine\relax
462 %        \else
463 %          \fi
464 %        \else
465 %          \setbox\z@\hbox{\strut\enspace\FV@LabelEnd\enspace\strut}%
466 %          \ifx\FV@LabelPositionBottomLine\relax
467 %          \else
468 %            \fi
469 %          \fi
470 %        \fi
471 %        \hss
472 %      }
```

```
473 }
474 \LWR@formatted{FV@SingleFrameLine}
```

Env BVerbatim

Adds l warp verbatim patches.

```
475 \xpretocmd{\FV@BeginVBox}
476   {%
477     \LWR@forcenewpage%
478     \LWR@atbeginverbatim{bverbatim}%
479   }
480   {}
481   {\LWR@patcherror{fancyvrb}{FV@BeginVBox}}%
482
483 \xapptocmd{\FV@EndVBox}
484   {%
485     \LWR@afterendverbatim%
486   }
487   {}
488   {\LWR@patcherror{fancyvrb}{FV@EndVBox}}%
```

End of the modifications to make at the end of the preamble:

```
489 } % \AfterEndPreamble

490 \VerifyCommand[l warp][fancyvrb]{\FVB@VerbatimOut}{A0AC591D2DB283DCEBCCC75968FF88CF}
491
492 \def\FVB@VerbatimOut#1{%
493   \@bsphack
494   \begingroup
495   \FV@UseKeyValues
496   \FV@DefineWhiteSpace
497   \def\FV@Space{\space}%
498   \FV@DefineTabOut
499   \def\FV@ProcessLine{\immediate\write\OutFile}%
500   \immediate\openout\OutFile #1\relax
501   \let\FV@FontScanPrep\relax
502 %% DG/SR modification begin - May. 18, 1998 (to avoid problems with ligatures)
503   \let\noligs\relax
504 %% DG/SR modification end
505   \boolfalse{\LWR@HTMLsanitize@tmpb@enable}%
506   \FV@Scan}
```

File 158 **l warp-fbox.sty**

§ 267 Package **fbox**

(Emulates or patches code by HERBERT VOSS.)

fbox (*Pkg*) **fbox** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{fbox}[2022/02/20]

This will be \LWR@formatted when \AtBeginDocument:

```
2 \LetLtxMacro{\LWR@HTML@fbox}{\fbox}
```

Instead of using the original, the new version is used with all borders:

```
3 \renewcommand*{\orig@fbox}{\FBox@i[tblr]}
```

\WR@fboxpkg@border

```
{⟨1: top/bottom/left/right⟩} {⟨2: t/b/l/r⟩} {⟨3: padding, or empty⟩}
```

Accumulates **HTML** styles for border, and padding if given:

```
4 \newcommand*{\LWR@fboxpkg@border}[3]{%
5   \colorlet{\LWR@border@color}{\csuse{fbox@#2color}}%
6   \protect\convertcolorspec{named}{\LWR@border@color}{HTML}\LWR@tempbordercolor\relax%
7   \appto{\LWR@tempone}{%
8     border-#1: % space
9     \LWR@printlength{\LWR@atleastonept} % space
10    solid \LWR@origpound%
11  }%
12  \expandafter\appto\expandafter{\LWR@tempone\expandafter{\LWR@tempbordercolor}}%
13  \appto{\LWR@tempone}{ ;\LWR@indentHTML}%
14  \ifblank{#3}{ }{%
15    \appto{\LWR@tempone}{%
16      padding-#1: \LWR@printlength{#3} ;\LWR@indentHTML
17    }%
18  }%
19 }
```

A hack to reuse the same code for inline and blocks:

```
20 \newbool{\LWR@fboxpkg@ispar}
21 \boolfalse{\LWR@fboxpkg@ispar}
```

Accumulate **HTML** styles for left and right padding, depending on \if@fbox@space@left, \if@fbox@space@right:

```
22 \newcommand{\LWR@fboxpkg@lrpadding}[1]{%
23   \csuse{if@fbox@space@#1}%
24   \appto{\LWR@tempone}{%
25     padding-#1: \LWR@printlength{\fbox@@sep};\LWR@indentHTML
26   }%
27 \else%
28   \appto{\LWR@tempone}{%
29     padding-#1: 0pt;\LWR@indentHTML
30   }%
31 \fi%
32 }
```

The **HTML** version, modified to use **HTML** styles and either an **InlineClass** or **BlockClass**:

```
33 \newcommand{\LWR@HTML@FBox@iii}[1]{%
```

Find and set the text color, rule width, margin:

```
34   \LWR@forceminwidth{\fbox@@rule}%
35   \LWR@findcurrenttextcolor%
36   \def{\LWR@tempone}{%
37     color: \LWR@origpound\LWR@tempcolor ; \LWR@indentHTML
38     margin: 1ex ; \LWR@indentHTML
39   }%
```

Add left/right padding:

```
40     \LWR@fboxpkg@lrpadding{left}%
41     \LWR@fboxpkg@lrpadding{right}%
```

Per the original to decode the borders, in a new way:

```
42     \ifnum\the\@tempcntb>8\relax
43         \advance\@tempcntb by -8\relax
44         \LWR@fboxpkg@border{top}{t}{\fbox@@sep}%
45     \fi
46     \ifnum\@tempcntb>3
47         \advance\@tempcntb by -4\relax
48         \LWR@fboxpkg@border{left}{l}{}
49     \fi
50     \ifnum\@tempcntb>1\relax
51         \LWR@fboxpkg@border{right}{r}{}
52     \fi
53     \ifodd\@tempcntb
54         \LWR@fboxpkg@border{bottom}{b}{\fbox@@sep}%
55     \fi
```

Generate a `BlockClass` or `InlineClass` with the contents:

```
56     \color@begingroup
57     \ifbool{\LWR@fboxpkg@ispar}%
58     {%
59         \begin{BlockClass}[\LWR@tempone]{fboxpkg}%
60             #1%
61         \end{BlockClass}%
62     }%
63     {%
64         \begin{InlineClass}[\LWR@tempone]{fboxpkg}%
65             #1%
66         \end{InlineClass}%
67     }%
68     \color@endgroup
69     \boolfalse{\LWR@fboxpkg@ispar}%
70 }%
71 \LWR@formatted{FBox@iii}
```

For `\fparbox`, set the use of `BlockClass`, then reuse the above:

```
72 \long\def\LWR@HTML@FParBox@i[#1]#2{%
73     \booltrue{\LWR@fboxpkg@ispar}%
74     \FBox@i[#1]{#2}%
75 }
76 \LWR@formatted{FParBox@i}
77
78 \long\def\LWR@HTML@FParBox@ii#1{%
79     \booltrue{\LWR@fboxpkg@ispar}%
80     \FBox@i[tblr]{#1}%
81 }
82 \LWR@formatted{FParBox@ii}
```

For `MATHJAX`, absorb and ignore star and optional arguments:

```
83 \CustomizeMathJax{\let\LWRorigfbox\fbox}
84 \CustomizeMathJax{\newcommand{\LWRfboxpkgtwo}[2][]{\LWRorigfbox{#2}}}
```

```
85 \CustomizeMathJax{\renewcommand{\fbox}{\ifstar{\LWRfboxpkgtwo}{\LWRfboxpkgtwo}}}
86 \CustomizeMathJax{\newcommand{\fparbox}{\fbox}}
```

File 159 **l warp-fewerfloatpages.sty**

§ 268 Package **fewerfloatpages**

fewerfloatpages (*Pkg*) **fewerfloatpages** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fewerfloatpages}[2020/02/14]

```
2 \newcommand{\floatpagekeepfraction}{\textfraction}
3 \newcounter{floatpagedeferrlimit}
4 \newcounter{floatpagekeeplimit}
```

File 160 **l warp-figcaps.sty**

§ 269 Package **figcaps**

(Emulates or patches code by PATRICK W. DALY.)

figcaps (*Pkg*) **figcaps** is ignored.

for HTML output: Discard all options for l warp-figcaps:

```
1 \LWR@ProvidesPackageDrop{figcaps}[1999/02/23]
```

```
2 \newcommand*{\figcapson}{}%
3 \newcommand*{\figcapsoff}{}%
4 \newcommand*{\printfigures}{}%
5 \newcommand*{\figmarkon}{}%
6 \newcommand*{\figmarkoff}{}%
7 \def\figurecapname{Figure Captions}%
8 \def\tablepagename{Tables}%
9 \def\figurepagename{Figures}
```

File 161 **l warp-figsize.sty**

§ 270 Package **figsize**

(Emulates or patches code by ANTHONY A. TANBAKUCHI.)

figsize (*Pkg*) **figsize** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{figsize}[2002/03/18]

Emulates a virtual 6×9 inch textsize.

```
2 \newlength{\figwidth}%
3 \newlength{\figheight}%
4
```

```

5 \newcommand{\SetFigLayout}[3][0]{%
6 \setlength{\figheight}{8in}%
7 \setlength{\figheight}{\figheight / #2}%
8 %
9 \setlength{\figwidth}{5.5in}%
10 \setlength{\figwidth}{\figwidth / #3}%
11 }

```

File 162 **l warp-fitbox.sty**§ 271 Package **fitbox**fitbox (*Pkg*) fitbox is ignored.**for HTML output:** 1 \LWR@ProvidesPackageDrop{fitbox}[2019/02/20]

```

2 \NewDocumentCommand{\fitbox}{s o m}{%
3   \begin{BlockClass}{fitbox}
4     #3
5   \end{BlockClass}
6 }
7
8 \newcommand*\fitboxset[1]{}%
9
10 \newdimen\fitboxnatheight
11 \newdimen\fitboxnatwidth
12
13 \newcommand\SetFitboxLayout[3][]{}

```

File 163 **l warp-fix2col.sty**§ 272 Package **fix2col**fix2col (*Pkg*) fix2col is ignored.**for HTML output:** 1 \LWR@ProvidesPackageDrop{fix2col}[2015/11/13]File 164 **l warp-fixmath.sty**§ 273 Package **fixmath**

(Emulates or patches code by WALTER SCHMIDT.)

fixmath (*Pkg*) fixmath is used as-is for SVG math, and emulated for MATHJAX.⚠ **limitations** MATHJAX does not have full font support for bold italic Greek.**for HTML output:** 1 \LWR@ProvidesPackagePass{fixmath}[2000/04/11]

```

2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3

```

```

4 \begin{warpMathJax}
5 \LWR@mathjax@addgreek@u@it*{}{}
6 \LWR@mathjax@addletter{\BooleanTrue}{up}{}{\delta}{0394}
7 \LWR@mathjax@addletter{\BooleanTrue}{up}{}{\omega}{03A9}
8 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{#1}}}
9 \end{warpMathJax}

```

File 165 **l warp-fixme.sty**

§ 274 Package **fixme**

(Emulates or patches code by DIDIER Verna.)

fixme (*Pkg*) **fixme** is patched for use by **l warp**.

⚠ **external layouts** External layouts (\fxloadlayouts) are not supported.

Customized layouts are overwritten by **l warp**'s versions \AtBeginDocument in order to provide the **HTML** conversion. If creating a new layout, see **l warp**'s changes to provide similar for the new layout, inside a **warpHTML** environment.

User control is provided for setting the **HTML** styling of the “faces”. The defaults are as follows, and may be changed in the preamble after **fixme** is loaded:

```

\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}

```

for HTML output: 1 \LWR@ProvidesPackagePass{fixme}[2019/01/03]

Restore **l warp**'s version of \wrindex, ignoring the **fixme** package's target option:

2 \let\wrindex\LWR@wrindex

Float-related macros required by **l warp**:

```

3 \newcommand{\ext@fixme}{lox}
4
5 \renewcommand{\l@fixme}[2]{%
6   \hypertocfloat{1}{fixme}{lox}%
7   {\LWR@nameref{\BaseJobname-autopage-\arabic{LWR@nextautopage}} --- #1}%
8   {#2}%
9 }

```

Other modifications. Done \AtBeginDocument to hopefully work if the user customizes the layouts.

```

10 \AtBeginDocument{
11
12 \def\FXFaceInlineHTMLStyle{font-weight:bold}
13
14 \renewcommand*\FXLayoutInline[3]{ % space
15   \InlineClass[\FXFaceInlineHTMLStyle]{fixmeinline}%
16   {\@fxtextrstd{#1}{#2}{#3}}%
17 }

```

```

18
19 \def\FXFaceEnvHTMLStyle{font-weight:bold}
20
21 \renewcommand*\FXEnvLayoutPlainBegin[2]{%
22     \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
23     \ignorespaces#2 \fxnotename{\#1}: \ignorespaces%
24 }
25
26 \renewcommand*\FXEnvLayoutPlainEnd[2]{\endBlockClass}
27
28 \renewcommand*\FXEnvLayoutSignatureBegin[2]{%
29     \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
30     \fxnotename{\#1}: \ignorespaces%
31 }
32
33 \renewcommand*\FXEnvLayoutSignatureEnd[2]{\@fxsignature{\#2}\endBlockClass}
34
35 \def\FXFaceSignatureHTMLStyle{font-style:italic}
36
37 \DeclareRobustCommand*\@fxsignature[1]{%
38     \ifthenelse{\equal{\#1}{}}{%
39         {}%
40         \ -- {\InlineClass[\FXFaceSignatureHTMLStyle]{fixmesignature}{\#1}}%
41     }%
42
43
44 \def\FXFaceTargetHTMLStyle{font-style:italic}
45
46 \renewcommand*\FXTargetLayoutPlain[2]{%
47     \InlineClass[\FXFaceTargetHTMLStyle]{fixmetarget}{\#2}%
48 }
49
50 }% \AtBeginDocument

```

File 166 l warp-fixmetodonotes.sty

§ 275 Package fixmetodonotes

(Emulates or patches code by GIOELE BARABUCCI.)

fixmetodonotes (Pkg) fixmetodonotes is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{fixmetodonotes}[2013/04/28]

```

2 \VerifyCommand[l warp][fixmetodonotes]{\NOTES@addtolist}{C8CA636EF295D370F26A278FFAE28B2F}
3
4 \renewcommand{\NOTES@addtolist}[2]{%
5     \refstepcounter{NOTES@note}%
6     \phantomsection% REMOVED
7     \addcontentsline{notes}{NOTES@note}{%
8         \protect\numberline{\theNOTES@note}{\#1}: \#2}%
9     }%
10
11 \VerifyCommand[l warp][fixmetodonotes]{\NOTES@marker}{B5B482E83AB149A1B7F0CCFB4099C61E}
13
14 \renewcommand{\NOTES@marker}[2]{\fbox{%

```

```

15      \textcolor{#2}{% WAS \color
16          \textbf{#1}}%
17      }%
18
19 \VerifyCommand[l warp][fixmetodonotes]{\NOTES@colorline}{816FF1D31286EA48258FE3F2BA58E99C}
20
21 \renewcommand{\NOTES@colorline}[2]{%
22   \bgroup%
23     \ULon{\LWR@backgroundcolor{#1}{#2}}%
24 }

```

File 167 **l warp-flafter.sty**§ 276 Package **flafter**

flafter (*Pkg*) **flafter** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{flafter}[2018/01/08]
2 \providecommand\fl@trace[1]{}

File 168 **l warp-flippdf.sty**§ 277 Package **flippdf**

flippdf (*Pkg*) **flippdf** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]

 2 \newcommand\FlipPDF{}
 3 \newcommand\UnFlipPDF{}

File 169 **l warp-float.sty**§ 278 Package **float**

(Emulates or patches code by ANSELM LINGNAU.)

float (*Pkg*) **float** is emulated.

Float styles boxed and ruled are emulated by css and a float class according to style.

The HTML <figure> class is set to the float type, so css may also be used to format the float and its caption, according to float type. Furthermore, an additional class is set to the float style: plain, plaintop, boxed, or ruled, so css may be used to format by float style as well. Default formatting by css is provided for ruled and boxed styles.

⚠ not seem to be a floating environment
for HTML output:

Always declare a \newfloat before modifying it with \floatname, etc.

1 \LWR@ProvidesPackageDrop{float}[2001/11/08]

\LWR@floatstyle The default float style.

```
2 \newcommand*\LWR@floatstyle[plain]
```

\newfloat {<1: type>} {<2: placement>} {<3: ext>} [<4: within>]

Emulates the \newfloat command from the float package.
“placement” is ignored.

```
3 \NewDocumentCommand{\newfloat}{m m m o}{%
4     \IfValueTF{#4}{%
5         {\DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}}{%
6             {\DeclareFloatingEnvironment[fileext=#3]{#1}}{}}
```

Remember the float style:

```
7 \csedef{\LWR@floatstyle@#1}{\LWR@floatstyle}%
```

newfloat package automatically creates the \listof command for new floats, but float does not, so remove \listof here in case it is manually created later.

```
8 \cslet{\listof#1s}\relax%
9 \cslet{\listof#1es}\relax%
```

Likesize, newfloat also creates \l@<type>, but float does not, so remove it here:

```
10 \cslet{\l@#1}\relax%
11 }
```

\floatname {<type>} {<name>}

Sets the text name of the float, such as “Figure”. Avoids trying to set a recursive name, from trivfloat.

```
12 \NewDocumentCommand{\floatname}{m +m}{%
13     \def\LWR@tempone{#2}%
14     \def\LWR@temptwo{\@nameuse{#1name}}%
15     \ifdefequal{\LWR@tempone}{\LWR@temptwo}{%
16         \SetupFloatingEnvironment{#1}{name=#2}%
17     }%
18 }
```

\floatplacement {<type>} {<placement>}

Float placement is ignored.

```
19 \newcommand*\floatplacement[2]{%
20     \SetupFloatingEnvironment{#1}{placement=#2}%
21 }
```

\floatstyle {<style>}

Remember the style for future floats:

```
22 \newcommand{\floatstyle}[1]{%
23     \def\LWR@floatstyle{#1}%
24 }
```

* {<type>}

Remember the style for this float:

```

25 \NewDocumentCommand{\restylefloat}{s m}{%
26     \csedef{LWR@floatstyle@#2}{\LWR@floatstyle}%
27 }

```

\listof

See section 78.2 for the \LWR@listof command in the l warp core.

```
28 \newcommand{\listof}{\LWR@listof}
```

File 170 l warp-floatflt.sty

§ 279 Package **floatflt**

(Emulates or patches code by MATS DAHLGREN.)

floatflt (*Pkg*) floatflt is emulated.

for HTML output: Discard all options for l warp-floatflt:

```
1 \LWR@ProvidesPackageDrop{floatflt}[1997/07/16]
```

Env [⟨⟩]

offset {⟨type⟩} {⟨width⟩} Borrowed from the l warp version of keyfloat:

```

2 \NewDocumentEnvironment{KFLTfloatflt@marginfloat}{O{-1.2ex} m m}%
3 {%
4     \begin{LWR@setvirtualpage}%
5     \ifblank{#3}{%
6         \LWR@BlockClassWP{%
7             float:right; %
8             width: 1.5in; % reasonable dummy width for word processor
9             margin:10pt%
10        }{}%
11        (note)%
12        {marginblock}%
13    }{%
14        \setlength{\LWR@templengthone}{#3}%
15        \LWR@BlockClassWP{%
16            float:right; %
17            width:\LWR@printlength{\LWR@templengthone}; % extra space
18            margin:10pt%
19        }{%
20            width:\LWR@printlength{\LWR@templengthone}%
21        }%
22        (note)%
23        {marginblock}%
24    }%
25    \renewcommand*\{@capttype}{#2}%
26 }%
27 {%
28     \endLWR@BlockClassWP%
29     \end{LWR@setvirtualpage}%
30 }

```

Env floatingfigure

[⟨placement⟩] {⟨width⟩}

```

31 \DeclareDocumentEnvironment{floatingfigure}{o m}%
32 { \begin{KFLTfloatflt@marginfloat}{figure}{#2} }%
33 { \end{KFLTfloatflt@marginfloat} }

```

Env floatingtable

```
[⟨placement⟩]
34 \DeclareDocumentEnvironment{floatingtable}{o}
35  { \begin{KFLTFloatfltno@marginfloat}{table}{}{} }
36  { \end{KFLTFloatfltno@marginfloat} }
```

File 171 l warp-floatpag.sty

§ 280 Package **floatpag**

(Emulates or patches code by VYTAΣ STATULEVIČIUS AND SIGITAS TOLUŠIS.)

floatpag (Pkg) floatpag is ignored.

for HTML output: Discard all options for l warp-floatpag:

```
1 \LWR@ProvidesPackageDrop{floatpag}[2012/05/29]
2 \newcommand*{\floatpagestyle}[1]{}
3 \newcommand*{\rotfloatpagestyle}[1]{}
4 \newcommand*{\thisfloatpagestyle}[1]{}
```

File 172 l warp-floatrow.sty

§ 281 Package **floatrow**

(Emulates or patches code by OLGA LAPKO.)

floatrow (Pkg) floatrow is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{floatrow}[2008/08/02]

⚠ Misplaced alignment tab character & Use \StartDefiningTabulars and \StopDefiningTabulars before and after defining macros using \ttabbox with a tabular inside. See section 8.10.1.

⚠ subfig package When combined with the subfig package, while inside a subfloatrow \ffigbox and \ttabbox must have the caption in the first of the two of the mandatory arguments.

⚠ \FBwidth, \FBheight The emulation of floatrow does not support \FBwidth or \FBheight. These values are pre-set to .3\linewidth and 2in. Possible solutions include:

- Use fixed lengths. l warp will scale the HTML lengths appropriately.
- Use warpprint and warpHTML environments to select appropriate values for each case.
- Inside a warpHTML environment, manually change \FBwidth or \FBheight before the \ffigbox or \ttabbox. Use \FBwidth or \FBheight normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

After everything has loaded, remember whether `subcaption` was loaded. If not, it is assumed that `subfig` is used instead:

```
2 \newbool{LWR@subcaptionloaded}
3
4 \AtBeginDocument{
5 \IfPackageLoadedTF{subcaption}
6   {\booltrue{LWR@subcaptionloaded}}
7   {\boolfalse{LWR@subcaptionloaded}}
8 }
```

\floatbox
[*1 preamble*] {[*2 captype*] [*3 width*] [*4 height*] [*5 vert pos*] {[*6 caption*] {[*7 object*]}}

Only parameters for `captype`, `width`, `caption`, and `object` are used.

`LWR@insubfloatrow` is true if inside a `subfloatrow` environment.

There are two actions, depending on the use of `subcaption` or `subfig`.

```
9 \NewDocumentCommand{\floatbox}{o m o o o +m +m}{%
10 \ifbool{LWR@subcaptionloaded}%
11 {%
  subcaption
```

For `subcaption`:

```
12   \ifbool{LWR@insubfloatrow}%
13   {%
    subcaption in a subfloatrow
```

`subfigure` and `subtable` environments take `width` as an argument.

```
14   \IfValueTF{#3}%
15   {%
     \nameuse{sub#2}{#3}%
     \nameuse{sub#2}{\linewidth}%
   }%
   subcaption in a subfloatrow
18   {%
     subcaption not in subfloatrow
```

`figure` and `table` environments do not take a `width` argument.

```
19   \nameuse{#2}%
20   }%
21   subcaption not in subfloatrow
22
23   #7
```

End the environments:

```
24   \ifbool{LWR@insubfloatrow}%
25   {%
     \nameuse{endsub#2}%
     \nameuse{end#2}%
   }%
27 }%
28 {%
  assume subfig
```

For `subfig`:

```
29 \ifbool{LWR@insubfloatrow}%
30 {%
  subfig in a subfloatrow
```

\subfloat is a macro, not an environment.

Package `subfig`'s `\subfloat` command takes an optional argument which is the `caption`, but `\floatbox` argument #6 contains commands to create the `caption` and `label`, not the `caption` itself. Thus, `\caption` is temporarily disabled to return its own argument without braces.

```
31   \begingroup
```

```

32     \let\caption@firstofone
33     \subfloat[#6]{#7}
34     \endgroup
35 }% subfig in a subfloatrow
36 {%
37   subfig package, but not a subfig
38   figure and table are environments:
39
40   \nameuse{#2}
41   #6
42   #7
43   \nameuse{end#2}
44 }% assume subfig
45

```

Not used:

```

45 \newcommand*{\nocapbeside}{}%
46 \newcommand*{\capbeside}{}%
47 \newcommand*{\capttop}{}%
48 \newlength{\FBwidth}%
49 \setlength{\FBwidth}{.3\linewidth}%
50 \newlength{\FBheight}%
51 \setlength{\FBheight}{2in}%
52 \newcommand*{\useFCwidth}{}%
53 \newcommand{\floatsetup}[2][]{}
54 \newcommand{\thisfloatsetup}[1]{}%
55 \newcommand{\clearfloatsetup}[1]{}%
56 \newcommand*{\killfloatstyle}{}%

```

\newfloatcommand

{*1 command*} {*2 captype*} [*3 preamble*] [*4 default width*]

Preamble and default width are ignored.

```

57 \NewDocumentCommand{\newfloatcommand}{m m o o}{%
58   @namedef{#1}{%
59     \floatbox{#2}{%
60   }%
61 }%

```

\renewfloatcommand

{*1 command*} {*2 captype*} [*3 preamble*] [*4 default width*]

Preamble and default width are ignored.

```

62 \NewDocumentCommand{\renewfloatcommand}{m m o o}{%
63   @namedef{#1}{%
64     \floatbox{#2}{%
65   }%
66 }%

```

\ffigbox

[*width*] [*height*] [*vposn*] {*caption commands*} {*contents*}

```

67 \newfloatcommand{ffigbox}{figure}[\nocapbeside][]

```

\ttabbox

[*width*] [*height*] [*vposn*] {*caption commands*} {*contents*}

```

68 \newfloatcommand{ttabbox}{table}[\capttop][\FBwidth]

```

```
\fcapside [⟨width⟩] [⟨height⟩] [⟨vposn⟩] {⟨caption commands⟩} {⟨contents⟩}
69 \newfloatcommand{fcapside}{figure}{\capbeside}[]
```

Env floatrow [⟨numfloats⟩]

The row of floats is placed into a <div> of class floatrow.

```
70 \newenvironment*{floatrow}[1][2]
71 {%
72     \begin{LWR@setvirtualpage}*%
73     \BlockClass{floatrow}%
74 }
75 {
76     \endBlockClass%
77     \end{LWR@setvirtualpage}%
78 }
```

Keys for \DeclareNewFloatType:

```
79 \newcommand*{\LWR@frowkeyplacement}{}%
80 \newcommand*{\LWR@frowkeyname}{}%
81 \newcommand*{\LWR@frowkeyfileext}{}%
82 \newcommand*{\LWR@frowkeywithin}{}%
83 \newcommand*{\LWR@frowkeycapstyle}{}%
84
85 \define@key{frowkeys}{placement}{}%
86 \define@key{frowkeys}{name}{\renewcommand{\LWR@frowkeyname}{#1}}%
87 \define@key{frowkeys}{fileext}{\renewcommand{\LWR@frowkeyfileext}{#1}}%
88 \define@key{frowkeys}{within}{\renewcommand{\LWR@frowkeywithin}{#1}}%
89 \define@key{frowkeys}{relatedcapstyle}{}%
```

\DeclareNewFloatType {⟨type⟩} {⟨options⟩}

Use \listof{type}{Title} to print a list of the floats.

```
90 \newcommand*{\DeclareNewFloatType}[2]{%
```

Reset key values:

```
91 \renewcommand*{\LWR@frowkeyplacement}{}%
92 \renewcommand*{\LWR@frowkeyname}{}%
93 \renewcommand*{\LWR@frowkeyfileext}{}%
94 \renewcommand*{\LWR@frowkeywithin}{}%
95 \renewcommand*{\LWR@frowkeycapstyle}{}%
```

Read new key values:

```
96 \LWR@traceinfo{about to setkeys frowkeys}%
97 \setkeys{frowkeys}{#2}%
98 \LWR@traceinfo{finished setkeys frowkeys}%
```

Create a new float with optional [within]:

```
99 \ifthenelse{\equal{\LWR@frowkeywithin}{}}
100 {%
101     \DeclareFloatingEnvironment[
102         placement=\LWR@frowkeyplacement,
103         fileext=\LWR@frowkeyfileext
104     ]{#1}%
105 }%
106 {%
107     \DeclareFloatingEnvironment[
```

```

108      placement=\LWR@frowkeyplacement,
109      fileext=\LWR@frowkeyfileext,
110      within=\LWR@frowkeywithin
111      ]{#1}%
112 %     \LWR@traceinfo{finished newfloat #1}%
113 }%

```

Rename the float if a name was given:

```

114 \ifthenelse{\equal{\LWR@frowkeyname}{}}{%
115   {}%
116   {%
117     \SetupFloatingEnvironment{#1}{name={\LWR@frowkeyname}}%
118   }%
119 }%

```

Not used:

```

120 \newcommand{\buildFBBOX}[2]{}
121 \newcommand*{\CenterFloatBoxes}{}%
122 \newcommand*{\TopFloatBoxes}{}%
123 \newcommand*{\BottomFloatBoxes}{}%
124 \newcommand*{\PlainFloatBoxes}{}%
125
126 \newcommand{\capsubrowsettings}{}%
127
128 \NewDocumentCommand{\RawFloats}{o o}{}%

```

\RawCaption

{*<text>*}

To be used inside a minipage or parbox.

```
129 \newcommand{\RawCaption}[1]{#1}
```

\floatfoot

{*<text>*}

Places additional text inside a float, inside a css <div> of class floatfoot.

```

130 \NewDocumentCommand{\floatfoot}{s +m}{%
131   \begin{BlockClass}{floatfoot}%
132   #2%
133   \end{BlockClass}%
134 }%

```

Used to compute \linewidth.

```

135 \newbool{\LWR@insubfloatrow}%
136 \boolfalse{\LWR@insubfloatrow}%

```

Env subfloatrow

[*<num_floats>*]

```

137 \newenvironment*{subfloatrow}[1][2]
138 {%

```

The row of floats is placed into a <div> of class floatrow:

```

139   \LWR@forcenewpage
140   \BlockClass{floatrow}%

```

While inside the floatrow, LWR@insubfloatrow is set true, which tells \floatbox to use \subfigure or \subtable.

```

141      \begingroup%
142      \booltrue{LWR@insubfloatrow}%
143 }
144 {%
145      \endgroup%
146      \endBlockClass%
147      \boolfalse{LWR@insubfloatrow}%
148 }

```

File 173 **l warp-fltrace.sty**

§ 282 Package **fltrace**

fltrace (*Pkg*) **fltrace** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fltrace}[2018/01/08]

```

2 \def\tracefloats{}
3 \def\tracefloatoff{}
4 \def\tracefloatvals{}

```

File 174 **l warp-flushend.sty**

§ 283 Package **flushend**

(*Emulates or patches code by SIGITAS TOLUŠIS.*)

flushend (*Pkg*) **flushend** is ignored.

for HTML output: Discard all options for **l warp-flushend**:

```

1 \LWR@ProvidesPackageDrop{flushend}[2021/10/04]

2 \newcommand*\flushend(){}
3 \newcommand*\raggedend(){}
4 \newcommand*\flushclosend(){}
5 \newcommand*\raggedclosend(){}
6 \newtoks\atClosBreak \atClosBreak={}
7 \newtoks\atClosEnd \atClosEnd={}
8 \newcommand*\showclosendrule(){}

```

File 175 **l warp-fnbreak.sty**

§ 284 Package **fnbreak**

fnbreak (*Pkg*) **fnbreak** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnbreak}[2012/01/01]

```

2 \newcommand*\fnbreakverbose){}
3 \newcommand*\fnbreaknonverbose){}
4 \newcommand*\fnbreaklabel){}
5 \newcommand*\fnbreaknolabel){}

```

File 176 **l warp-fncychap.sty**

§ 285 Package **fncychap**

(Emulates or patches code by ULF A. LINDGREN.)

fncychap (*Pkg*) fncychap is ignored.

for HTML output: Discard all options for l warp-fncychap:

```
1 \LWR@ProvidesPackageDrop{fncychap}[2007/07/30]

2 \def\mghrulefill#1{}
3 \def\ChNameLowerCase{}
4 \def\ChNameUpperCase{}
5 \def\ChNameAsIs{}
6 \def\ChTitleLowerCase{}
7 \def\ChTitleUpperCase{}
8 \def\ChTitleAsIs{}
9 \newcommand{\ChRuleWidth}[1]{}
10 \newcommand{\ChNameVar}[1]{}
11 \newcommand{\ChNumVar}[1]{}
12 \newcommand{\ChTitleVar}[1]{}
13 \newcommand{\TheAlphaChapter}{}
14 \newcommand{\DOCH}{}
15 \newcommand{\DOTI}[1]{}
16 \newcommand{\DOTIS}[1]{}
17 \newlength{\mylen}
18 \newlength{\myhi}
19 \newlength{\px}
20 \newlength{\py}
21 \newlength{\ppy}
22 \newlength{\pxx}
23 \newlength{\RW}
24 \newcommand{\FmN}[1]{#1}
25 \newcommand{\FmTi}[1]{#1}
```

File 177 **l warp-fnlineno.sty**

§ 286 Package **fnlineno**

fnlineno (*Pkg*) fnlineno is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnlineno}[2011/01/07]

File 178 **l warp-fnpara.sty**

§ 287 Package **fnpara**

fnpara (*Pkg*) fnpara is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnpara}

File 179 **l warp-fnpos.sty**

§ 288 Package **fnpos**

(Emulates or patches code by HIROSHI NAKASHIMA.)

fnpos (Pkg) fnpos is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnpos}[1999/07/14]

```
2 \newcommand*{\makeFNbottom}{}  
3 \newcommand*{\makeFNmid}{}  
4 \newcommand*{\makeFNbelow}{}  
5 \newcommand*{\makeFNabove}{}  
6
```

File 180 **l warp-fontawesome.sty**

§ 289 Package **fontawesome**

(Emulates or patches code by XAVIER DANAUX.)

fontawesome (Pkg) fontawesome is patched for use by l warp.

Hashed inline images are used, as there may not be Unicode support for all icons.

⚠ **poppler syntax warning** If using PDF LATEX, *poppler* may issue a syntax warning regarding parsing a ligature component. XELATEX or LuaLATEX may be used to avoid this warning.

In the following, the general strategy is to intercept \symbol and embed it inside a lateximage. These changes are done inside a local group.

For PDF LATEX, the alt tag includes the icon (symbol) number. For XELATEX and LuaLATEX, the alt tag is generic.

for HTML output: 1 \LWR@ProvidesPackagePass{fontawesome}[2016/05/15]

```
2 \LetLtxMacro{\LWR@orig@symbol}{\symbol}  
3  
4 \ifxetexorluatex  
5  
6 \newfontfamily{\LWR@orig@FA}{FontAwesome}  
7  
8 \newcommand*{\LWR@fontawesome@xelatex@symbol}[1]{%  
9   \LWR@findcurrenttextcolor%  
10  \begin{lateximage}*[icon][fontawesomexetex#1SZ\LWR@font@size{}CL\LWR@tempcolor]%11  \csuse{\LWR@font@size}%  
12  \LWR@orig@FA%  
13  \LWR@orig@symbol{#1}%  
14  \end{lateximage}%  
15 }  
16  
17 \RenewDocumentCommand{\FA}{}{%
```

```
18     \LetLtxMacro\symbol{\LWR@fontawesome@xelatex@symbol%  
19 }  
20  
21 \else  
22  
23 \newcommand*{\LWR@fontawesome@symbolX}[2]{%  
24     \LWR@findcurrenttextcolor%  
25     \begin{lateximage}*[icon #1][fontawesome#2#1SZ\LWR@font@size{}CL\LWR@tempcolor]%
```

26 \csuse{\LWR@font@size}{%
27 \fontencoding{U}\fontfamily{fontawesome#2}\selectfont%
28 \LWR@orig@symbol{#1}%
29 \end{lateximage}%
30 }
31
32 \newcommand*{\LWR@fontawesome@symbolone}[1]{%
33 \LWR@fontawesome@symbolX{#1}{one}%
34 }
35
36 \newcommand*{\LWR@fontawesome@symboltwo}[1]{%
37 \LWR@fontawesome@symbolX{#1}{two}%
38 }
39
40 \newcommand*{\LWR@fontawesome@symbolthree}[1]{%
41 \LWR@fontawesome@symbolX{#1}{three}%
42 }
43
44 \renewrobustcmd\FAone{
45 \LetLtxMacro\symbol{\LWR@fontawesome@symbolone%
46 }
47
48 \renewrobustcmd\FAtwo{
49 \LetLtxMacro\symbol{\LWR@fontawesome@symboltwo%
50 }
51
52 \renewrobustcmd\FAthree{
53 \LetLtxMacro\symbol{\LWR@fontawesome@symbolthree%
54 }
55 \fi

File 181 **l warp-fontawesome5.sty**

§ 290 Package **fontawesome5**

(Emulates or patches code by MARCEL KRÜGER.)

fontawesome5 (*Pkg*) **fontawesome5** is patched for use by **l warp**.

Hashed inline images are used, as there may not be Unicode support for all icons.

The alt tag has the name of the icon.

for HTML output: 1 \LWR@ProvidesPackagePass{fontawesome5}[2022/05/02]

This used to contain code, but now it is split into the related two packages.

File 182 **l warp–fontawesome5–generic–helper.sty**

§ 291 Package **fontawesome5–generic–helper**

(Emulates or patches code by MARCEL KRÜGER.)

fontawesome5–generic–helper
(*Pkg*)

fontawesome5–generic–helper is patched for use by **l warp**.

Hashed inline images are used, as there may not be Unicode support for all icons.

The `alt` tag has the name of the icon.

for HTML output:

```

1 \LWR@ProvidesPackagePass{fontawesome5–generic–helper}[2022/05/02]

2 \ExplSyntaxOn
3
4 \VerifyCommand[l warp][fontawesome5–generic–helper]{\fontawesome_use_icon:nn}
5   {0260A9C94303C43957AAEBA2B4D3DB1}
6
7 \cs_set:Nn\fontawesome_use_icon:nn{
8   \LWR@findcurrenttextcolor
9   \cs_if_exist:cTF{c__fontawesome_slot_#2_tl} {
10    \begin{lateximage}*[#2][fontawesome5#1SZ\LWR@font@size{}CL\LWR@tempcolor]%
11      \csuse{\LWR@font@size}% l warp
12      \bool_if:NTF{c__fontawesome_fixed_bool} {
13        \makebox[1.5em]{c}
14      }{
15        \use:n
16      }
17    {
18      \exp_last_unbraced:Nv
19        \_\fontawesome_icon_at:nnnn
20        {c__fontawesome_slot_#2_tl}
21        {#1}{#2}
22    }
23    \end{lateximage}% l warp
24  }{
25    \msg_error:nnxx{fontawesome5}{icon-not-found}{#2}{#1}
26  }
27 }
28 \ExplSyntaxOff

```

File 183 **l warp–fontawesome5–utex–helper.sty**

§ 292 Package **fontawesome5–utex–helper**

(Emulates or patches code by MARCEL KRÜGER.)

fontawesome5–utex–helper
(*Pkg*)

fontawesome5–utex–helper is patched for use by **l warp**.

Hashed inline images are used, as there may not be Unicode support for all icons.

The `alt` tag has the name of the icon.

for HTML output:

```
1 \LWR@ProvidesPackagePass{fontawesome5-utex-helper}[2022/05/02]

2 \ExplSyntaxOn
3
4 \VerifyCommand[lwarp][fontawesome5-utex-helper]{\fontawesome_use_icon:n}
5   {8452FF2BF0A317552B0920628ADD8C18}
6
7 \cs_set:Nn\fontawesome_use_icon:n{
8   \group_begin:
9     \LWR@findcurrenttextcolor
10    \usefont
11      {TU}
12      {fontawesome\c__fontawesome_kind_tl}
13      {#1}
14      {n}
15    \bool_set:Nn \l__fontawesome_duotone_bool {
16      \str_if_eq_p:ee {#1} {duotone}
17    }
18    \int_set:Nn\l_tmpa_int{
19      \__fontawesome_glyphindex:n{
20        #2
21        \bool_if:NT \l__fontawesome_duotone_bool { -primary }
22      }
23    }
24    \int_compare:nNnT{\l_tmpa_int}={0}{
25      \fontseries{solid}
26      \selectfont
27      \bool_set_false:N \l__fontawesome_duotone_bool
28      \int_set:Nn\l_tmpa_int{\__fontawesome_glyphindex:n{#2}}
29      \int_compare:nNnT{\l_tmpa_int}={0}{
30        \fontfamily{fontawesomelogo}
31        \fontseries{regular}
32        \selectfont
33        \int_set:Nn\l_tmpa_int{\__fontawesome_glyphindex:n{#2}}
34        \int_compare:nNnT{\l_tmpa_int}={0}{
35          \msg_error:nnxx{fontawesome5}{icon-not-found}{#2}{#1}
36        }
37      }
38      \msg_warning:nnxx{fontawesome5}{style-substitution}{#2}{#1}
39    }
40  }
41 \begin{lateximage}*[#2][fontawesome5#1SZ\LWR@font@size{}CL\LWR@tempcolor]\% lwarp
42   \csuse{\LWR@font@size}\% lwarp
43   \bool_if:NTF\c__fontawesome_fixed_bool{
44     \makebox[1.5em][c]
45   }{
46     \use:n
47   }
48   {
49     \bool_if:NTF \l__fontawesome_duotone_bool {
50       \__fontawesome_glyph:w \l_tmpa_int
51       \int_set:Nn\l_tmpa_int{ \__fontawesome_glyphindex:n{ #2-secondary } }
52       \int_compare:nNnF { \l_tmpa_int } = { 0 } {
53         \llap {
54           \l__fontawesome_duotone_secondary_style_tl
55           { \__fontawesome_glyph:w \l_tmpa_int }
56         }
57       }
58       \%oalign {
59         \hss \__fontawesome_glyph:w \l_tmpa_int \hss \cr

```

```

60      % \hss
61      % \int_set:Nn\l_tmpa_int{ \__fontawesome_glyphindex:n{ #2-secondary } }
62      % \int_compare:nNnF { \l_tmpa_int } = { 0 } {
63      %   \color{gray}\__fontawesome_glyph:w \l_tmpa_int
64      % }
65      % \hss \cr
66      % }
67  } {
68      \__fontawesome_glyph:w \l_tmpa_int
69  }
70  }
71  \end{lateximage}%
72 \group_end:
73 }
74 \ExplSyntaxOff

```

File 184 **l warp–fontaxes.sty**

§ 293 Package **fontaxes**

(Emulates or patches code by ANDREAS BÜHMANN, MICHAEL UMMELS.)

fontaxes (*Pkg*) **fontaxes** is emulated for HTML, and used as-is for print output.

Functionality for small caps is in the **l warp** core. Swashes and figure styles are ignored for HTML.

for HTML output: 1 \LWR@ProvidesPackagePass{fontaxes}[2014/03/23]

```

2 \ifdef{\LWR@HTML@swshape}{}{%
3   \newcommand{\LWR@HTML@swshape}{}%
4   \LWR@formatted{swshape}%
5   \newrobustcmd{\LWR@HTML@textsw}[1]{#1}%
6   \LWR@formatted{textsw}%
7   \newrobustcmd{\LWR@HTML@textsw}{%
8     \filenameNullify{%
9       \LetLtxMacro{\swshape}{\emptyset}%
10      \LetLtxMacro{\textsw}{\firstofone}%
11    }%
12  }%
13 }

```

File 185 **l warp–fontenc.sty**

§ 294 Package **fontenc**

fontenc (*Pkg*) If using PDF LATEX, **l warp** used to require **fontenc** be loaded before **l warp**, but now **l warp** itself loads \fontenc with T1 encoding, which **l warp** requires. **fontenc** is now allowed to be loaded with another encoding after **l warp**.

l warp–fontenc is no longer necessary, but is still provided to overwrite older versions.

for HTML output: 1 \LWR@ProvidesPackagePass{fontenc}[2017/04/05]

File 186 **l warp-footmisc.sty**

§ 295 Package **footmisc**

(Emulates or patches code by ROBIN FAIRBAIRNS.)

footmisc (*Pkg*) footmisc is emulated.

l warp incidentally happens to emulate the stable option.

```
1 \LWR@ProvidesPackageDrop{footmisc}[2011/06/06]
```

Some nullified commands:

```
2 \newcommand{\footnotelayout}{}  
3 \newcommand{\setfnsymbol}[1]{}  
4 \NewDocumentCommand{\DefineFNsymbols}{s m o m}{}  
5  
6 \newdimen\footnotemargin  
7 \footnotemargin1.8em\relax  
8  
9 \newcommand*\hangfootparskip{0.5\baselineskip}  
10 \newcommand*\hangfootparindent{0em}%  
11  
12 \let\pagefootnoterule\footnoterule  
13 \let\mpfootnoterule\footnoterule  
14 \def\splitfootnoterule{\kern-3\p@\hspace{0pt}\kern2.6\p@}  
15  
16 \providecommand*\multiplefootnotemarker{3sp}  
17 \providecommand*\multfootsep{,}
```

Using `\cleveref`. `\labelcref` only prints the number of the object, not its type.

```
18 \providecommand*\footref[1]{\labelcref{\#1}}
```

The following work as-is:

```
19 \newcommand\mpfootnotemark{  
20   \@ifnextchar[%  
21     \@xmpfootnotemark%  
22   {  
23     \stepcounter\@mpfn%  
24     \protected@xdef\@thefnmark{\thempfn}%  
25     \@footnotemark%  
26   }%  
27 }%  
28 \def\@xmpfootnotemark[#1]{%  
29   \begingroup%  
30   \csname c@\@mpfn\endcsname #1\relax%  
31   \unrestored\protected@xdef\@thefnmark{\thempfn}%  
32   \endgroup%  
33   \@footnotemark%  
34 }
```

File 187 **l warp-footnote.sty**

§ 296 Package **footnote**

(Emulates or patches code by MARK WOODING.)

footnote (*Pkg*) footnote is used with minor patches.

for HTML output: footnote patches \makefntext in a strange way. It must be restored to the expected definition before loading footnote, then replaced again after.

```
1 \long\def\@makefntext#1{\textsuperscript{\@thefnmark}{#1}}
2
3 \LWR@ProvidesPackagePass{footnote}[1997/01/28]
4
5 \long\def\@makefntext#1{\textsuperscript{\@thefnmark}{#1}}


6 \VerifyCommand[l warp][footnote]{\spewnotes}{BCC4919F5404BADA8F1CF486E5709072}
7
8 \def\spewnotes{%
9   \endgroup%
10  \if@savingnotes\else\ifvoid\fn@notes\else\begingroup%
11    \let\@makefntext\empty%
12    \let\@finalstrut\gobble%
13    \let\rule\gobbletwo%
14    \booltrue{\LWR@spewnotes}          l warp
15    \@footnotetext{\unvbox\fn@notes}%
16  \endgroup\fi\fi%
17 }
18 \let\endsavenotes\spewnotes
19
20 \VerifyCommand[l warp][footnote]{\fn@fntext}{4C750987515F28FE665A08AB710193BA}
21
22 \def\fn@fntext#1{%
23   \ifx\ifmeasuring@\@undefined%
24     \expandafter\secondoftwo\else\expandafter\@iden%
25   \fi%
26   {\ifmeasuring@\expandafter\gobble\else\expandafter\@iden\fi}%
27   {%
28     \global\setbox\fn@notes\vbox{%
29       \unvbox\fn@notes%
30       \LWR@htmllagc{\LWR@tagregularparagraph}          l warp
31       \LWR@orignewline%                                l warp
32       \fn@startnote%
33       \makefntext{%
34         \rule{z}{\footnotesep}%
35         \ignorespaces%
36         #1%
37         \finalstrut\strutbox%
38       }%
39       \fn@endnote%
40     }%
41   }%
42 }
```

Removed print-version formatting:

```
43 \VerifyCommand[l warp][footnote]{\fn@startnote}{D101A3D1B9653A6FDD7E9CF37BD5A4DD}
44
45 \def\fn@startnote{%
46 %   \@parboxrestore%
47   \protected@edef@\currentlabel{\csname p@\@mpfn\endcsname\@thefnmark}%
48 %   \color@begingroup% *** conflicts with l warp
49 }
50
51 % \let\fn@endnote\color@endgroup% *** conflicts with l warp
52 \def\fn@endnote{%
53   \LWR@orignobreakspace\LWR@orignewline%
54   \LWR@htmllagc{/ \LWR@tagregularparagraph}\LWR@orignewline%
55   \LWR@orignobreakspace\LWR@orignewline%
56 }
```

Removed print-version formatting:

```
57 \VerifyCommand[l warp][footnote]{\fn@startfntext}{7270AD27C28391C41DA1FE47C49B5E7A}
58
59 \def\fn@startfntext{%
60   \setbox\z@\vbox\bgroup%
61   \LWR@htmllagc{\LWR@tagregularparagraph}% l warp
62   \LWR@orignewline% l warp
63   \fn@startnote%
64   \fn@prefntext% Req'd for numbering.
65 %   \rule\z@\footnotespsep%
66   \ignorespaces%
67 }
68
```

Removed print-version formatting, added closing paragraph tag:

```
69 \VerifyCommand[l warp][footnote]{\fn@endfntext}{17BC1D2CD9A84BAFFBE765CC1618C36D}
70
71 \def\fn@endfntext{%
72   \fn@postfntext%
73   \LWR@orignobreakspace\LWR@orignewline%
74   \LWR@htmllagc{/ \LWR@tagregularparagraph}% l warp
75   \LWR@orignewline%
76   \egroup%
77   \begingroup%
78   \let\@makefntext@\empty%
79   \let\@finalstrut\gobble%
```



```
80   \LetLtxMacro\rule@gobbletwo%
81   \booltrue{\LWR@spewinnotes}% l warp
82   \@footnotetext{\unvbox\z@}%
83   \endgroup%
84 }
```

These have been redefined, so re-\let them again:

```
85 \let\endfootnote\fn@endfntext
86 \let\endfootnotetext\endfootnote
```

File 188 **l warp-footnotebackref.sty**

§ 297 Package **footnotebackref**

footnotebackref (*Pkg*) footnotebackref is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{footnotebackref}[2012/07/01]

File 189 **l warp-footnotehyper.sty**

§ 298 Package **footnotehyper**

footnotehyper (*Pkg*) footnotehyper is a hyperref-safe version of footnote. For l warp, footnotehyper is emulated.

for HTML output: Discard all options for l warp-footnotehyper:

1 \RequirePackage{footnote}
2
3 \LWR@ProvidesPackageDrop{footnotehyper}[2018/01/23]

File 190 **l warp-footnoterange.sty**

§ 299 Package **footnoterange**

(Emulates or patches code by H.-MARTIN MÜNCH.)

footnoterange (*Pkg*) footnoterange is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{footnoterange}[2012/02/17]
2 \csletcs{footnoterange}{footnoterange*}
3 \csletcs{endfootnoterange}{endfootnoterange*}

File 191 **l warp-footnpag.sty**

§ 300 Package **footnpag**

footnpag (*Pkg*) footnpag is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{footnpag}

File 192 **l warp-foreign.sty**

§ 301 Package **foreign**

(Emulates or patches code by PHILIP G. RATCLIFFE.)

`foreign (Pkg)` `foreign` is patched for use by `l warp`.

for HTML output: 1 \LWR@ProvidesPackagePass{foreign}[2012/09/25]

2 \renewcommand\foreignabbrfont{\emph}

File 193 **l warp-forest.sty**

§ 302 Package **forest**

(Emulates or patches code by SAŠO ŽIVANOVIC.)

`forest (Pkg)` `forest` is patched for use by `l warp`.

⚠ \Forest* The starred version of the macro `\Forest*` is not supported. `l warp` encases each `lateximage` in an environment, so the global results of the starred `\Forest*` are lost.

for HTML output: 1 \LWR@ProvidesPackagePass{forest}[2017/07/14]

2 \BeforeBeginEnvironment{forest}{%

3 \begin{lateximage}[-forest-\~\PackageDiagramAltText]%

4 }

5

6 \AfterEndEnvironment{forest}{\end{lateximage}}

7

8 \VerifyCommand[l warp][forest]{\Forest}{D44A6D1EAFFC86653905CC666F563E6D}

9

10 \RenewDocumentCommand{\Forest}{s D(){} m}{%

11 \forest@config{#2} %

12 \IfBooleanTF{#1}{%

13 \PackageError{l warp-forest} %

14 {\protect\Forest* is not supported} %

15 {L warp uses an environment for images, \MessageBreak

16 but \protect\Forest* cannot work in an environment.} %

17 \let\forest@next\forest@env %

18 }{\let\forest@next\forest@group@env} %

19 \begin{lateximage}[-forest-\~\PackageDiagramAltText]%

20 \forest@next{#3} %

21 \end{lateximage} %

22 }

File 194 **l warp-fouridx.sty**

§ 303 Package **fouridx**

(Emulates or patches code by STEFAN KARRMANN.)

`fouridx (Pkg)` `fouridx` works as-is with `SVG` math, and is emulated for `MATHJAX`.

for HTML output: 1 \LWR@ProvidesPackagePass{fouridx}[2013/11/21]

2 \begin{warpMathJax}

3 \CustomizeMathJax{%

```

4     \newcommand{\fourIdx}[5]{%
5         \vphantom{\#5}^{\vphantom{\#2}\#1}_{\vphantom{\#1}\#2}{\vphantom{\#3}\#5}^{%
6             \#3}_{\#4}%
7 }%
8 \end{warpMathJax}

```

File 195 **l warp-fourier.sty**

§ 304 Package **fourier**

(Emulates or patches code by MICHEL BOVANI.)

fourier (*Pkg*) **fourier** is used as-is for SVG math, and is emulated for MATHJAX.

 **limitations** The MATHJAX emulation ignores all package options, except `sloped` and `upright` are honored for Greek characters, but MATHJAX cannot yet honor these for Latin characters.

The dedicated macros for `upright` and `italic` Greek letters do work correctly.

SVG math should appear the same as the printed output.

for HTML output:

```

1 \LWR@ProvidesPackagePass{fourier}[2020/03/03]
2
3 \LWR@infoprocessingmathjax{fourier}

4 \LWR@origRequirePackage{l warp-common-mathjax-letters}
5
6 \LWR@origRequirePackage{l warp-common-mathjax-overlaysymbols}
7
8 \begin{warpMathJax}
9
10 \IfPackageLoadedWithOptionsTF{fourier}{sloped}
11 {
12     \LWR@mathjax@addgreek@l@up{other}{}%
13     \LWR@mathjax@addgreek@u@it*{other}{}%
14 }% sloped
15 {%
16     \IfPackageLoadedWithOptionsTF{fourier}{upright}
17     {%
18         \LWR@mathjax@addgreek@l@up{}{}%
19         \LWR@mathjax@addgreek@u@up*{}{}%
20         \LWR@mathjax@addgreek@l@it{other}{}%
21         \LWR@mathjax@addgreek@u@it*{other}{}%
22     }%
23     {%
24         \LWR@mathjax@addgreek@l@up{other}{}%
25         \LWR@mathjax@addgreek@u@it*{other}{}%
26     }%
27 }%
28
29 \CustomizeMathJax{\newcommand{\othergreek}[1]{#1}}
30 \CustomizeMathJax{\let\varvarrho\varrho}
31 \CustomizeMathJax{\let\varvarpi\varpi}
32 \CustomizeMathJax{\let\othervarvarpi\othervarpi}
33 \CustomizeMathJax{\let\othervarvarrho\othervarrho}
34 \CustomizeMathJax{\let\varpartialdiff\partial}

```

`l warp_mathjax.txt` adds `\left/ \right` support for delimiters.

```

35 \CustomizeMathJax{\let\llbracket\lBrack}
36 \CustomizeMathJax{\let\rrbracket\lBrack}
37 \CustomizeMathJax{\let\dblbrackleft\lBrack}
38 \CustomizeMathJax{\let\dblbrackright\rBrack}
39
40 \CustomizeMathJax{\let\VERT|}
41
42 \CustomizeMathJax{\newcommand{\parallelslant}{\mathrel{\unicodex{02AFD}}}}
43 \CustomizeMathJax{\newcommand{\thething}{\mathord{\unicodex{1F60E}}}}
44 \CustomizeMathJax{\newcommand{\nparallelslant}{%
45   \mathrel{\LWRoverlaysymbols{-}\unicodex{02AFD}}}}
46 }
47 \CustomizeMathJax{\newcommand{\xswordsup}{\mathord{\unicodex{2694}}}}
48 \CustomizeMathJax{\newcommand{\xswordsdown}{\mathord{\unicodex{2694}}}}% up
49 \CustomizeMathJax{\newcommand{\notowns}{\mathrel{\unicodex{220C}}}}
50
51 \CustomizeMathJax{\newcommand{\iintop}{\mathop{\unicodex{222C}}\limits}}
52 \CustomizeMathJax{\newcommand{\iiintop}{\mathop{\unicodex{222D}}\limits}}
53 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\unicodex{222F}}\limits}}
54 \CustomizeMathJax{\let\oiintop\oiint}
55 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\unicodex{2230}}\limits}}
56 \CustomizeMathJax{\let\oiintop\oiint}
57 \CustomizeMathJax{\newcommand{\slashint}{\mathop{\unicodex{2A0D}}\limits}}
58 \CustomizeMathJax{\let\slashintop\slashint}
59
60 \CustomizeMathJax{\let\overgroup\overparen}
61 \CustomizeMathJax{\let\wideparen\overparen}
62 \CustomizeMathJax{\let\widearc\overparen}
63 \CustomizeMathJax{\let\wideOarc\overrightarrow}
64 \CustomizeMathJax{\newcommand{\widering}[1]{\stackrel{\unicodex{2218}}{\overgroup{#1}}}}
65
66 \end{warpMathJax}
```

File 196 **l warp-framed.sty**

§ 305 Package **framed**

(Emulates or patches code by DONALD ARSENEAU.)

framed (Pkg) `framed` is supported and patched by `l warp`.

for HTML output: Accept all options for `l warp-framed`:

```

1 \LWR@ProvidesPackagePass{framed}[2011/10/22]
2
3 \AtBeginDocument{\RequirePackage{xcolor}}% for \convertcolorspec

4 \renewenvironment{framed}
5 {%
6   \LWR@forcenewpage
7   \BlockClass{framed}%
8 }
9 {\endBlockClass}
10
11 \renewenvironment{oframed}
12 {%
```

```
13      \LWR@forcenewpage
14      \BlockClass{framed}%
15 }
16 {\endBlockClass}
17
18
19 \renewenvironment{shaded}
20 {%
21     \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
22     \LWR@forcenewpage
23     \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
24 }
25 {\endBlockClass}
26
27 \renewenvironment{shaded*}
28 {%
29     \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
30     \LWR@forcenewpage
31     \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
32 }
33 {\endBlockClass}
34
35
36 \renewenvironment{leftbar}{%
37     \LWR@forcenewpage
38     \BlockClass{framedleftbar}
39     \def\FrameCommand{}%
40     \MakeFramed {}
41 }%
42 {\endMakeFramed\endBlockClass}
43
44
45 \renewenvironment{snugshade}
46 {%
47     \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
48     \LWR@forcenewpage
49     \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
50 }
51 {\endBlockClass}
52
53 \renewenvironment{snugshade*}
54 {%
55     \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
56     \LWR@forcenewpage
57     \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
58 }
59 {\endBlockClass}
60
61 \let\oframed\framed
62 \let\endoframed\endframed
63
64
65 \RenewEnviron{titled-frame}[1]{%
66     \CustomFBox{\#1}{}{0pt}{0pt}{0pt}{0pt}{\BODY}%
67 }
```

\CustomFBox
 {{*toptitle*} } {{*bottitle*} } {{*thicknessstop*} } {{*bottom*} } {{*left*} } {{*right*} } {{*text contents*} } }

```

68 \renewcommand{\CustomFBox}[7]{%
69   \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
70   \LWR@forcenewpage
71   \begin{BlockClass}[border: 3px solid \LWR@origpound\LWR@tempcolor]{framed}%
72   \ifthenelse{\isempty{\#1}}{}{%
73     \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
74       \textcolor{TFTitleColor}{\textbf{\#1}}%
75     \end{BlockClass}%
76   }%
77   }%
78   #7
79
80 \ifthenelse{\isempty{\#2}}{}{%
81   \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
82   \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
83     \textcolor{TFTitleColor}{\textbf{\#2}}%
84   \end{BlockClass}%
85 }%
86 \end{BlockClass}%
87 }

\TitleBarFrame
  [marker] {title} {contents}
88 \renewcommand{\TitleBarFrame}[3][]{%
89   \CustomFBox{%
90     \#2}%
91   \fboxrule\fboxrule\fboxrule\fboxrule{%
92     \#3}%
93 }

94 \renewcommand{\TF@Title}[1]{#1}

Env MakeFramed
  {settings}
95 \let\MakeFramed\relax
96 \let\endMakeFramed\relax
97
98 \NewEnviron{MakeFramed}[1]{%
99   \FrameCommand{\begin{minipage}{\ linewidth}\BODY\end{minipage}}%
100 }

\fb@put@frame
  {frame cmd no split} {frame cmd split}
101 \renewcommand*{\fb@put@frame}[2]{%
102   \relax%
103   \tempboxa{%
104 }

```

File 197 **l warp-froufrou.sty**

§ 306 Package **froufrou**

(Emulates or patches code by NELSON LAGO.)

froufrou (*Pkg*) **froufrou** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{froufrou}[2020/12/22]

```

2 \ExplSyntaxOn
3 \xpretocmd{\setfroufrou}
4   {\edef\LWR@latestfroufrou{\detokenize{#1}}}
5   {}
6   {\LWR@patcherror{froufrou}{setfroufrou}}
7 \ExplSyntaxOff
8
9 \VerifyCommand[l warp][froufrou]{\froufrou}{E60D7F93008BB892149BBC2E09983D6}
10
11 \RenewDocumentCommand{\froufrou}{s O{}}
12   \nopagebreak[4]\par
13
14 \IfBooleanTF{#1}{\@afterindenttrue}{\@afterindentfalse}
15
16 \nopagebreak[4]\@froufrouspacebefore\nopagebreak[4]
17
18 \bgroup
19   \setfroufrou{\#2}%
20   \normalsize
21   \ifvoid{\setstretch}{}{\setstretch{\setspace@singlespace}}% normally 1
22   \setlength{\parskip}{0pt}
23   \noindent\centering\bgroup%
24     \begin{center}%
25       \begin{ lateximage }*[froufrou][\LWR@latestfroufrou]%
26         \froufrouOrnament%
27       \end{ lateximage }%
28     \end{center}%
29   \egroup\par
30 \egroup
31
32 \nopagebreak[4]\@froufrouspaceafter\nopagebreak[4]
33
34 \@froufrouFixSpacingAfter
35
36 \nopagebreak[3]
37
38 \@afterheading
39 }

```

File 198 **l warp-ftcap.sty**

§ 307 Package **ftcap**

ftcap (*Pkg*) *ftcap* is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ftcap}

File 199 **l warp-ftnright.sty**

§ 308 Package **ftnright**

ftnright (*Pkg*) *ftnright* is ignored.

for HTML output:

Discard all options for `l warp-ftnright`:

1 \LWR@ProvidesPackageDrop{ftnright}[2014/10/28]

File 200 **l warp-fullminipage.sty**

§ 309 Package **fullminipage**

`fullminipage` (*Pkg*) `fullminipage` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]

2 \newenvironment{fullminipage}[1][]{\{}{\}}

File 201 **l warp-fullpage.sty**

§ 310 Package **fullpage**

`fullpage` (*Pkg*) `fullpage` is ignored.

for HTML output: Discard all options for `l warp-fullpage`:

1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]

File 202 **l warp-fullwidth.sty**

§ 311 Package **fullwidth**

(*Emulates or patches code by MARCO DANIEL.*)

`fullwidth` (*Pkg*) `fullwidth` is emulated.

A `minipage` is used, of no `HTML` width.

for HTML output: 1 \LWR@ProvidesPackageDrop{fullwidth}[2011/11/18]

2 \newenvironment*{fullwidth}[1][]{\%
3 \minipage{fullwidth}\%
4 \minipage{\linewidth}\%
5 }
6 {\%
7 \endminipage
8 }

File 203 **l warp-fvextra.sty**

§ 312 Package **fvextra**

(*Emulates or patches code by GEOFFREY M. POORE.*)

fvextra (Pkg) **fvextra** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{fvextra}[2023/11/28]

If line numbers on the right side are used along with **breaklines**, the line numbers will not be aligned.

```
2 \define@booleankey{FV}{obeytabs}%
3 { \let\fv@ObeyTabsInit\fv@@ObeyTabsInit}%
4 { \let\fv@ObeyTabsInit\relax}      l warp
5 { \let\fv@ObeyTabsInit\relax}

tabcolor causes extra HTML tags, destroying the verbatim text alignment, so tabcolor is ignored.

6 \define@key{FV}{tabcolor}{}%

7 \define@booleankey{FV}{showtabs}%
8 { \def\fv@TabChar{\fv@TabColor{\fancyVerbTab}}}%
9 { \let\fv@TabChar\relax}
10
11 \newbool{\LWR@FV@breaklines}
12
13 \define@booleankey{FV}{breaklines}%
14 { \boolfalse{FV@breaklines}%
15   \booltrue{\LWR@FV@breaklines}          l warp
16 % \let\fv@ListProcessLine\fv@ListProcessLine@Break}%
17   \let\fv@ListProcessLine\fv@ListProcessLine@NoBreak}% l warp
18 { \boolfalse{FV@breaklines}%
19   \boolfalse{\LWR@FV@breaklines}          l warp
20   \let\fv@ListProcessLine\fv@ListProcessLine@NoBreak}
21 % \fvset{breaklines}
22
23 \define@key{FV}{breakanywheresymbolpre}{\def\fancyVerbBreakAnywhereSymbolPre{}}
24 \fvset{breakanywheresymbolpre={}}
25
26 \define@key{FV}{breakanywheresymbolpost}{\def\fancyVerbBreakAnywhereSymbolPost{}}
27 \fvset{breakanywheresymbolpost={}}
28
29 \define@key{FV}{breakbeforesymbolpre}{\def\fancyVerbBreakBeforeSymbolPre{}}
30 \fvset{breakbeforesymbolpre={}}
31
32 \define@key{FV}{breakbeforesymbolpost}{\def\fancyVerbBreakBeforeSymbolPost{}}
33 \fvset{breakbeforesymbolpost={}}
34
35 \define@key{FV}{breakaftersymbolpre}{\def\fancyVerbBreakAfterSymbolPre{}}
36 \fvset{breakaftersymbolpre={}}
37
38 \define@key{FV}{breakaftersymbolpost}{\def\fancyVerbBreakAfterSymbolPost{}}
39 \fvset{breakaftersymbolpost={}}
40
41 \define@key{FV}{breaksymbolleft}{\def\fancyVerbBreakSymbolLeft{}}
42
43 \define@key{FV}{breaksymbol}{\fvset{breaksymbolleft={}}}
44
45 \fvset{breaksymbolleft={}}
46
47 \define@key{FV}{breaksymbolright}{\def\fancyVerbBreakSymbolRight{}}
48 \fvset{breaksymbolright={}}
```

Modified to insert a fixed-width space (\nobreakspace) to indent the left margin on indented code, but also allow a line break if needed (\allowbreak), to allow for break lines.

```

49 \def\FV@DefFVSpace{%
50   \ifbool{FV@showspaces}{%
51     {%
52       \def\FV@Space{%
53         \FV@SpaceColor{\FancyVerbSpace}%
54         \allowbreak%
55       }%
56     }%
57     {\def\FV@Space{\nobreakspace\allowbreak}}%
58   }

```

\FancyVerbSpace

Force the use of a visible space instead of an empty box. From `fancyvrb`.

```

59 \ifxetexorluatex
60 \def\FancyVerbSpace{\textvisiblespace}
61 \else
62 \@ifundefined{verbvisible}{%
63   {%
64     \@ifundefined{textvisible}{%
65       {\begingroup\catcode`\_=12 \gdef\FancyVerbSpace{\tt }\endgroup}%
66       {\def\FancyVerbSpace{\textvisiblespace}}%
67     }%
68     {\def\FancyVerbSpace{\verbvisible}}%
69 \fi

```

{*(text)*}

Modified to always allow line wrapping because added HTML tags may make run off the end of the line in the PDF output file before conversion to HTML.

```

70 \VerifyCommand[lwarp][fvextra]{\FV@ListProcessLine@NoBreak}{935C1C5101F15E02B916295A66862714}
71
72 \def\FV@ListProcessLine@NoBreak#1{%
73 %   \hbox to \hsize{%
74 %     \kern\leftmargin
75 %     \hbox to \linewidth{%
76 %       \FV@LeftListNumber%
77 %       \FV@LeftListFrame%
78 %       \FancyVerbFormatLine{%
79 %         \FancyVerbHighlightLine{%
80 %           \FV@ObeyTabs{\FancyVerbFormatText{#1}}}}}\hss%
81 %     \FV@RightListFrame%
82 %     \FV@RightListNumber%
83 %   }%
84 %   \hss}%
85 \null\par%                      lwarp
86 }

87 \newcommand*\LWR@FV@linethensep{%
88   \ifbool{LWR@FV@breaklines}{%
89     {\theFancyVerbLine\kern\FV@NumberSep}%
90     {\hbox to\z@\{\hss\theFancyVerbLine\kern\FV@NumberSep\}}%
91   }%
92
93 \newcommand*\LWR@FV@sephenline{%

```

```
94     \ifbool{LWR@FV@breaklines}%
95         {\kern\!FV@NumberSep\theFancyVerbLine}%
96         {\hbox to\z@\{\kern\!FV@NumberSep\theFancyVerbLine\hss\}}%
97 }
98
99 \VerifyCommand[lwarf][fvextra]{\FV@Numbers@left}{57A16473A8AA4214529F6BABEC435311}
100
101 \xpatchcmd{\FV@Numbers@left}%
102     {\hbox to\z@\{\hss\theFancyVerbLine\kern\!FV@NumberSep\}}%
103     {\LWR@FV@linethensep}%
104     {}
105     {\LWR@patcherror{fvextra}{FV@Numbers@left A}}
106
107 \xpatchcmd{\FV@Numbers@left}%
108     {\hbox to\z@\{\hss\theFancyVerbLine\kern\!FV@NumberSep\}}%
109     {\LWR@FV@linethensep}%
110     {}
111     {\LWR@patcherror{fvextra}{FV@Numbers@left B}}
112
113 \xpatchcmd{\FV@Numbers@left}%
114     {\hbox to\z@\{\hss\theFancyVerbLine\kern\!FV@NumberSep\}}%
115     {\LWR@FV@linethensep}%
116     {}
117     {\LWR@patcherror{fvextra}{FV@Numbers@left C}}
118
119 \VerifyCommand[lwarf][fvextra]{\FV@Numbers@right}{6D0F98326BCB22695874D94BEC12E32F}
120
121 \xpatchcmd{\FV@Numbers@right}%
122     {\hbox to\z@\{\kern\!FV@NumberSep\theFancyVerbLine\hss\}}%
123     {\LWR@FV@septhenline}%
124     {}
125     {\LWR@patcherror{fvextra}{FV@Numbers@right A}}
126
127 \xpatchcmd{\FV@Numbers@right}%
128     {\hbox to\z@\{\kern\!FV@NumberSep\theFancyVerbLine\hss\}}%
129     {\LWR@FV@septhenline}%
130     {}
131     {\LWR@patcherror{fvextra}{FV@Numbers@right B}}
132
133 \xpatchcmd{\FV@Numbers@right}%
134     {\hbox to\z@\{\hss\theFancyVerbLine\kern\!FV@NumberSep\}}%
135     {\LWR@FV@linethensep}%
136     {}
137     {\LWR@patcherror{fvextra}{FV@Numbers@right C}}
138
139 \VerifyCommand[lwarf][fvextra]{\FV@Numbers@both}{C349DC2B800D5DD085FFB7620A6289EA}
140
141 \xpatchcmd{\FV@Numbers@both}%
142     {\hbox to\z@\{\hss\theFancyVerbLine\kern\!FV@NumberSep\}}%
143     {\LWR@FV@linethensep}%
144     {}
145     {\LWR@patcherror{fvextra}{FV@Numbers@both A}}
146
147 \xpatchcmd{\FV@Numbers@both}%
148     {\hbox to\z@\{\hss\theFancyVerbLine\kern\!FV@NumberSep\}}%
149     {\LWR@FV@linethensep}%
150     {}
151     {\LWR@patcherror{fvextra}{FV@Numbers@both B}}
152
153 \xpatchcmd{\FV@Numbers@both}%
```

```

154      {\hbox to\z@\{\hss\theFancyVerbLine\kern\FV@NumberSep\}}
155      {\LWR@FV@linethensep}
156      {}
157      {\LWR@patcherror{fvextra}{FV@Numbers@both C}}
158
159 \xpatchcmd{\FV@Numbers@both}%
160   {\hbox to\z@\{\kern\FV@NumberSep\theFancyVerbLine\hss\}}
161   {\LWR@FV@sephenline}
162   {}
163   {\LWR@patcherror{fvextra}{FV@Numbers@both D}}
164
165 \xpatchcmd{\FV@Numbers@both}%
166   {\hbox to\z@\{\kern\FV@NumberSep\theFancyVerbLine\hss\}}
167   {\LWR@FV@sephenline}
168   {}
169   {\LWR@patcherror{fvextra}{FV@Numbers@both E}}
170
171 \xpatchcmd{\FV@Numbers@both}%
172   {\hbox to\z@\{\hss\theFancyVerbLine\kern\FV@NumberSep\}}
173   {\LWR@FV@linethensep}
174   {}
175   {\LWR@patcherror{fvextra}{FV@Numbers@both F}}

```

\FVC@SaveVerb@Extra@ii {⟨name⟩} {⟨raw text⟩} {⟨text⟩}

Modified to add \LWR@HTMLsanitize@use@tmb to the stored macro. This is used on recall to sanitize for HTML unless in a lateximage.

```

176 \VerifyCommand[lwarf][fvextra]{\FVC@SaveVerb@Extra@ii}{BCE88217BA577F70BAC8158E110E404C}
177
178 \def\FVC@SaveVerb@Extra@ii#1#2#3{%
179   \global\let\FV@AfterSave\FancyVerbAfterSave
180   \endgroup
181 %  \namedef{FV@SV@#1}{#3}%
182 %  \namedef{FV@SV@#1}{\LWR@HTMLsanitize@use@tmpb{#3}}% lwarf
183 %  \namedef{FV@SVRaw@#1}{#2}%
184  \namedef{FV@SVRaw@#1}{\LWR@HTMLsanitize@use@tmpb{#2}}% lwarf
185  \FV@AfterSave}%

```

\FV@UseVerb@Extra {⟨text⟩}

Adds the opening and closing tags.

```

186 \VerifyCommand[lwarf][fvextra]{\FV@UseVerb@Extra}{8B4DAB7A789CAB11394A35D2BA864FE4}
187
188 \def\FV@UseVerb@Extra#1{%
189   \ifbool{LWR@verbtags}{%                                lwarf
190     {\LWR@htmltag{span class=\textquotedbl{}fancyvrb\textquotedbl{}}}% lwarf
191   }%                                              lwarf
192   \ifFV@breaklines
193     \expandafter\@firstoftwo
194   \else
195     \expandafter\@secondoftwo
196   \fi
197   {\FV@InsertBreaks{\FancyVerbFormatInline}{#1}}%
198   {\mbox{#1}}%
199   \ifbool{LWR@verbtags}{%                                lwarf
200     {\LWR@htmltag{/span}}%                            lwarf
201   }%                                              lwarf
202 }%                                            lwarf

```

\FVC@Verb@Extra@ii

{*text*}

Sanitize HTML.

```

203 \VerifyCommand[lwarp][fvextra]{\FVC@Verb@Extra@ii}{8B4DAB7A789CAB11394A35D2BA864FE4}
204
205 \def\FVC@Verb@Extra@ii#1{%
206   \def\tmpb{\#1}%
207   \ifbool{LWR@verbtags}{%           lwarp
208     {\LWR@htmltag{span class=\textquotedbl{}fancyvrb\textquotedbl{}}}% lwarp
209     {}%                                lwarp
210   \LWR@HTMLsanitize@\tmpb%           lwarp
211 }%                                lwarp
212 \iffV@breaklines
213   \expandafter@\firstoftwo
214 \else
215   \expandafter@\secondoftwo
216 \fi
217 {\FV@InsertBreaks{\FancyVerbFormatInline}{\tmpb}}%    lwarp
218 {\mbox{\tmpb}}%                                lwarp
219 \ifbool{LWR@verbtags}{%           lwarp
220   {\LWR@htmltag{/span}}%      lwarp
221   {}%                                lwarp
222 }\endgroup}
```

\FVC@EscVerb@ii

{*text*}

Santize HTML.

```

222 \VerifyCommand[lwarp][fvextra]{\FVC@EscVerb@ii}{8B4DAB7A789CAB11394A35D2BA864FE4}
223
224 \def\FVC@EscVerb@ii#1{%
225   \def\tmpb{\#1}%
226   \ifbool{LWR@verbtags}{%           lwarp
227     {\LWR@htmltag{span class=\textquotedbl{}fancyvrb\textquotedbl{}}}% lwarp
228     {}%                                lwarp
229   \LWR@HTMLsanitize@\tmpb%           lwarp
230 }%                                lwarp
231 \iffV@breaklines
232   \expandafter@\firstoftwo
233 \else
234   \expandafter@\secondoftwo
235 % {\FV@InsertBreaks{\FancyVerbFormatInline}{\#1}}%
236 % {\mbox{\#1}}%
237 {\FV@InsertBreaks{\FancyVerbFormatInline}{\tmpb}}%    lwarp
238 {\mbox{\tmpb}}%                                lwarp
239 \ifbool{LWR@verbtags}{%           lwarp
240   {\LWR@htmltag{/span}}%      lwarp
241   {}%                                lwarp
242 }\endgroup}
```

\FVB@VerbatimWrite

Disable sanitizing HTML while writing the file. HTML will be sanitized on \VerbatimInput.

```

243 \VerifyCommand[lwarp][fvextra]{\FVB@VerbatimWrite}{B092E8AB57DB2ABBA815BC39DB5256DC}
244
245 \xpatchcmd{\FVB@VerbatimWrite}
246   {\FV@Scan}
247   {\boolfalse{LWR@HTMLsanitize@\tmpb@enable}\FV@Scan}
248   {}
249 {\LWR@patcherror{fvextra}{\FVB@VerbatimWrite}}
```

```
\FVB@VerbatimBuffer      Disable sanitizing HTML while writing the buffer. HTML will be sanitized on
                           \VerbatimInsertBuffer.

250 \VerifyCommand[l warp][fvextra]{\FVB@VerbatimBuffer}{048525348EC4D60E258FD5DD74434BB1}
251
252 \xpatchcmd{\FVB@VerbatimBuffer}
253   {\FV@Scan}
254   {\boolfalse{LWR@HTMLsanitize@tmpb@enable}\FV@Scan}
255   {}
256   {\LWR@patcherror{fvextra}{FVB@VerbatimBuffer}}


\VerbatimInsertBuffer
257 \VerifyCommand[l warp][fvextra]{\VerbatimInsertBuffer}{4582BD54720B56AD050042DD9FC0E289}
258
259 \renewcommand{\VerbatimInsertBuffer}[1][]{
260   \begingroup
261   \def\FV@KeyValues{#1}%
262   \def\FV@Scan{%
263     \FV@CatCodes
264     \xdef\FV@EnvironName{Verbatim}%
265     \ifnum\expandafter\value\expandafter{\FV@bufferlengthname}=z@\relax
266       \PackageError{fvextra}%
267       {Buffer length counter \FV@bufferlengthname\space is invalid or zero}%
268     {}%
269     \let\FV@GetLine\relax
270   \fi
271   \FV@GetLine}%
272   \let\FV@CheckScan\relax
273   \setcounter{FancyVerbBufferIndex}{1}%
274   \def\VerbatimInsertBuffer@def@FV@Line##1{%
275     \FVEExtraRetokenizeVArg{\def\FV@Line}{}{##1}%
276     \LetLtxMacro{\tmpb}{\FV@Line} l warp
277     \LWR@HTMLsanitize@tmpb% l warp
278     \LetLtxMacro{\FV@Line}{\tmpb} l warp
279   }%
280   \def\FancyVerbGetLine{%
281     \ifnum\value{FancyVerbBufferIndex}>%
282       \expandafter\value\expandafter{\FV@bufferlengthname}\relax
283       \global\let\FV@EnvironName\relax
284       \let\next\relax
285     \else
286       \ifcsname{FancyVerbBufferLineName}{arabic{FancyVerbBufferIndex}}\endcsname
287         \expandafter\let\expandafter{\FV@Line}{\FV@Line@Buffer}
288         \csname{FancyVerbBufferLineName}{arabic{FancyVerbBufferIndex}}\endcsname
289         \expandafter\VerbatimInsertBuffer@def@FV@Line\expandafter{\FV@Line@Buffer}%
290         \def\next{\FV@PreProcessLine\FV@GetLine}%
291         \stepcounter{FancyVerbBufferIndex}%
292     \else
293       \def\next{%
294         \PackageError{fvextra}%
295         {Buffer with line macro named
296           "\FancyVerbBufferLineName{arabic{FancyVerbBufferIndex}}" does not exist}%
297         {Check bufferlinename, bufferlengthname, and globalbuffer settings}%
298       }%
299     \fi
300   \fi
301   \next}%
302 \FVB@Verbatim
```

```
303  \FVE@Verbatim
304  \setcounter{FancyVerbBufferIndex}{0}%
305  \endgroup}
```

File 204 **l warp-fwlw.sty**

§ 313 Package **fwlw**

fwlw (*Pkg*) *fwlw* is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fwlw}

```
2 \newbox\FirstWordBox    \global\setbox\FirstWordBox\hbox{ }
3 \newbox\NextWordBox     \global\setbox\NextWordBox\hbox{ }
4 \newbox\LastWordBox     \global\setbox\LastWordBox\hbox{ }
5 \def\ps@fwlwhead{}      \def\ps@NextWordFoot{}
```

File 205 **l warp-gensymb.sty**

§ 314 Package **gensymb**

(Emulates or patches code by WALTER SCHMIDT.)

gensymb (*Pkg*) *gensymb* works as-is for SVG math, and uses the MATHJAX package.

for HTML output: 1 \LWR@ProvidesPackagePass{gensymb}[2003/07/02]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\require{gensymb}}
4 \end{warpMathJax}
```

File 206 **l warp-gentombow.sty**

§ 315 Package **gentombow**

gentombow (*Pkg*) *gentombow* is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{gentombow}[2018/05/17]

```
2 \newcommand{\settombowbanner}[1]{}
3 \newcommand{\settombowbannerfont}[1]{}
4 \newcommand{\settombowwidth}[1]{}
5 \newcommand{\settombowbleed}[1]{}
6 \newcommand{\settombowcolor}[1]{}
```

File 207 **l warp-geometry.sty**

§ 316 Package **geometry**

(Emulates or patches code by HIDEO UMEKI.)

geometry (Pkg) **geometry** is preloaded by l warp, but must be nullified as seen by the user's source code.

for HTML output: Discard all options for l warp-geometry:

```
1 \LWR@ProvidesPackageDropA{geometry}{2018/04/16}
```

If **geometry** is never loaded by the user, it will be loaded by l warp \AtBeginDocument. If this is the case, the page layout should not be changed but the user macros should still be nullified.

```
2 \ifbool{\LWR@allowanothergeometry}{%
```

Assign and set the selected geometry with **reset** prepended. \AtEndPreamble l warp will save this, then set its own geometry.

```
3   \edef\tempone{\reset,\@optionlist{\@currname.\@currext}}%
4   \expandafter\expandafter\expandafter{\tempone}%
5 }% \LWR@allowanothergeometry
```

The user-level commands are nullified:

```
6 \renewcommand*{\geometry}[1]{}
7 \renewcommand*{\newgeometry}[1]{}
8 \renewcommand*{\restoregeometry}{}%
9 \renewcommand*{\savegeometry}[1]{}%
10 \renewcommand*{\loadgeometry}[1]{}%
```

File 208 **l warp-ghsystem.sty**

§ 317 Package **ghsystem**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

ghsystem (Pkg) **ghsystem** is patched for use by l warp.

⚠ \ghspic images Images must be provided in SVG format, unless JPG is specified. It is recommended to create a local **images** directory, copy into it the relevant PDF **ghsystem** images, and then convert them with

```
Enter ⇒ l warpmk pdftosvg images/*.pdf
```

for HTML output: 1 \LWR@ProvidesPackagePass{ghsystem}[2020/02/17]

```
2 \ExplSyntaxOn
3
4 \VerifyCommand[l warp][ghsystem]{\ghsystem_filler:n}{2B8CCE2EC0EC4AB8FA4C4E4A68FFCE70}
5
6 \cs_set_protected:Npn \ghsystem_filler:n #1
7   { \emph { \textless#1 \textgreater } }
8
9 \VerifyCommand[l warp][ghsystem]{\ghsystem_pic:n}{950F001D9FCDAFF7A9154739DC8025BB}
10
11 \cs_set_protected:Npn \ghsystem_pic:n #1
12   {
13     \__ghsystem_includegraphics:xn
```

```

14      {
15 %         scale = \fp_to_tl:N \l__ghsystem_picture_scale_fp
16         width = 1.25cm
17         \exp_not:V \l__ghsystem_picture_includographics_tl
18     }
19     { ghsystem_ #1 . \l__ghsystem_picture_type_tl }
20 }
21
22 \ExplSyntaxOff

```

File 209 **l warp-gindex.sty**§ 318 Package **gindex**

(Emulates or patches code by JAVIER BEZOS.)

gindex (Pkg) **gindex** is patched for use by **l warp**.

See section [8.6.16](#).

for HTML output: 1 \LWR@ProvidesPackagePass{gindex}[2019/10/07]

Set the index page and range separators. These are set \AtBeginDocument to allow the user to change them. They are then protected so that the **l warp** core looks for the tokens instead of their expanded contents, since the *.ind files will contain \indexpagessep and \indexrangesep instead of their literal contents. Finally, **l warp** is told of the **gindex** macros.

```

2 \AtBeginDocument{
3   \robustify{\indexpagessep}
4   \robustify{\indexrangesep}
5   \renewcommand*\{\IndexPageSeparator}{\indexpagessep}
6   \renewcommand*\{\IndexRangeSeparator}{\indexrangesep}
7 }

```

\hyperindexref is added:

```

8 \def\addindexitem#1#2{%
9   \indexflushitem
10  \gix@getspecial#1\indexspecial\indexspecial@@\indexitem{\hyperindexref{#2}}}
11
12 \def\addindexsubitem#1#2{%
13   \stepcounter{indexsubitems}%
14   \gix@getspecial#1\indexspecial\indexspecial@@\indexsubitem{\hyperindexref{#2}}}
15
16 \def\addindexsubsubitem#1#2{%
17   \gix@getspecial#1\indexspecial\indexspecial@@\indexsubsubitem{\hyperindexref{#2}}}

```

Uses a <div> of class **indexheading**:

```

18 \renewcommand\indexheading[1]{%
19   \begin{BlockClass}{indexheading}
20   \MakeUppercase{#1}%
21   \end{BlockClass}
22 }

```

File 210 **l warp-gloss.sty**

§ 319 Package **gloss**

(Emulates or patches code by JOSE LUIS DÍAZ, JAVIER BEZOS.)

gloss (*Pkg*) **gloss** is patched for use by **l warp**.

To process the **HTML** glossary:

```
bibtex <projectname>_html.gls
```

for HTML output: 1 \LWR@ProvidesPackagePass{gloss}[2002/07/26]

\BaseJobname is added to the label in case **xr** or **xr-hyper** are used.

```
2 \VerifyCommand[l warp][gloss]{\gls@gloss@iii}{96590CC8FAE12295596B9F664BE4AF8C}
3
4 \xpatchcmd{\gls@gloss@iii}
5   {\thepage}
6   {\theLWR@previousautopagelabel}
7   {}
8   {\LWR@patcherror{gloss}{gls@gloss@iii}}
9
10 \VerifyCommand[l warp][gloss]{\gls@page@i}{C05FCEACF0A1F96FC09A218684543574}
11
12 \def\gls@page@i#1#2{%
13   \endgroup%
14   \global\@namedef{glsp@#1}{\nameref{\BaseJobname-autopage-#2}}}%
```

File 211 **l warp-glossaries.sty**

§ 320 Package **glossaries**

(Emulates or patches code by NICOLA L.C. TALBOT.)

glossaries (*Pkg*) **l warp mk** has the commands **l warp mk printglossary** and **l warp mk htmlglossary**,

processing glossaries which process the glossaries created by the **glossaries** package using that package's **makeglossaries** program.

GlossaryCmd (*Opt*) **Default:** **makeglossaries** The shell command to execute is set by the **l warp** option **GlossaryCmd**, which defaults to **makeglossaries**. The print or HTML glossary filename is appended to this command.

⚠ makeglossaries not found In some situations it may be required to modify the default command, such as to add the **perl** command in front:

```
\usepackage[
  GlossaryCmd={perl makeglossaries},
] {l warp}
```

xindy language To set the language to use for processing glossaries with **xindy**:

```
\usepackage[
    GlossaryCmd={makeglossaries -L english},
] {lwarp}
```

Other options for *makeglossaries* may be set as well.

placement and toc options

The glossaries may be placed in a numbered or unnumbered section, given a TOC entry, and placed inline or on their own HTML page:

Numbered section, on its own HTML page:

```
\usepackage[xindy,toc,numberedsection=nolabel]{glossaries}
...
\printglossaries
```

Unnumbered section, inline with the current HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\printglossaries
```

Unnumbered section, on its own HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\ForceHTMLPage
\printglossaries
```

⚠ **glossary style** The default `style=item` option for `glossaries` conflicts with `lwarp`, so the style is forced to `index` instead.

⚠ **number list** The page number list in the printed form would become `\namerefs` in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

print/HTML versions

The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

for HTML output:

```
1 \PassOptionsToPackage{xindy}{glossaries}
2
3 \LWR@ProvidesPackagePass{glossaries}[2018/07/23]
4
5 \setupglossaries{nonumberlist}
6 \setglossarystyle{index}
```

Patched to fix TOC pointing to the previous page:

```
7 \VerifyCommand[lwarp][glossaries]{\@p@glossarysection}{129DC9CFB9484FC34C7B81E32BBB0452}
8
9 \renewcommand*{\@p@glossarysection}[2]{%
10   \glsclearpage
11   \LWR@phantomsection
12   \ifdefempty\@@glossarysecstar
13   {%
14     \csname\@@glossarysec\endcsname{#2}%
15   }%
16   {%
```

In the original, the TOC entry was made before the section, thus linking to the `phantomsection` in the printed version, but for HTML, this caused the link to point

to the page before the glossaries, which could be a different HTML file. Here, the TOC entry is made after the section is created:

```

17      \csname@@glossarysec\endcsname*{#2}%
18      \@gls@toc{#1}{\@@glossarysec}% Moved after the previous line.
19  }%
20  \@@glossaryseclabel
21 }
```

`lwarf`'s sectioning commands cannot handle robust macros when splitting HTML into named filenames. `glossaries` uses `\translate` in sectioning names, and `\translate` is robust and cannot be expanded. The following pre-expands the translations at this moment, making use of `\translatelet`.

```

22 \newcommand*\LWR@comp@glossaryname{\translate{Glossary}}
23
24 \ifdefstreq{\glossaryname}{\LWR@comp@glossaryname}{
25     \translatelet{\LWR@translatetemp}{\glossaryname}
26     \edef\glossaryname{\LWR@translatetemp}
27 }{}%
28
29 \newcommand*\LWR@comp@acronymname{\translate{Acronym}}
30
31 \ifdefstreq{\acronymname}{\LWR@comp@acronymname}{
32     \translatelet{\LWR@translatetemp}{\acronymname}
33     \edef\acronymname{\LWR@translatetemp}
34 }{}%
35
36 \newcommand*\LWR@comp@glssymbolsgroupname{\translate{Symbols (glossaries)}}
37
38 \ifdefstreq{\glssymbolsgroupname}{\LWR@comp@glssymbolsgroupname}{
39     \translatelet{\LWR@translatetemp}{\glssymbolsgroupname}
40     \edef\glssymbolsgroupname{\LWR@translatetemp}
41 }{}%
42
43 \newcommand*\LWR@comp@glsnumbersgroupname{\translate{Numbers (glossaries)}}
44
45 \ifdefstreq{\glsnumbersgroupname}{\LWR@comp@glsnumbersgroupname}{
46     \translatelet{\LWR@translatetemp}{\glsnumbersgroupname}
47     \edef\glsnumbersgroupname{\LWR@translatetemp}
48 }{}%
```

File 212 `lwarf-gmeometric.sty`

§ 321 Package **gmeometric**

`gmeometric` (*Pkg*) `gmeometric` is ignored.

for HTML output: 1 `\LWR@ProvidesPackageDrop{gmeometric}[2008/11/22]`
2 `\RequirePackageWithOptions{geometry}`

File 213 **l warp-graphics.sty**

§ 322 Package **graphics**

(Emulates or patches code by D. P. CARLISLE.)

graphics (Pkg) **graphics** is emulated.

for HTML output: 1 \LWR@ProvidesPackagePass{graphics}[2020/08/30]

§ 322.1 Graphics extensions

\DeclareGraphicsExtensions {⟨list⟩}

\AtBeginDocument allow SVG files instead of PDF:

```
2 \AtBeginDocument{
3 \DeclareGraphicsExtensions{.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}
4 \DeclareGraphicsRule{.svg}{svg}{.svg}{}
5 \DeclareGraphicsRule{.SVG}{svg}{.SVG}{}
6 }
```

Inside a `lateximage`, allow PDF instead of SVG:

```
7 \ifpdf
8 \appto\LWR@restoreorigformatting{%
9 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
10 }
11 \else% \ifpdf
12     \ifXeTeX
13 \appto\LWR@restoreorigformatting{%
14 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
15 }
16     \else
17 \appto\LWR@restoreorigformatting{%
18 \DeclareGraphicsExtensions{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
19 }
20     \fi
21 \fi
```

§ 322.2 Length conversions and graphics options

⚠ whitespace A scaled image in L^AT_EX by default takes only as much space on the page as it requires, but HTML browsers use as much space as the original unscaled image would have taken, with the scaled image over- or under-flowing the area.

Used to store the user's selected dimensions and HTML class.

The class defaults to "inlineimage" unless changed by a `class=xyx` option.

```
22 \newlength{\LWR@igwidth}
23 \newlength{\LWR@igheight}
24 \newcommand*{\LWR@igwidthstyle}{}%
25 \newcommand*{\LWR@igheightstyle}{}%
26 \newcommand*{\LWR@igorigin}{}%
```

```

27 \newcommand*\{LWR@igangle}{}%
28 \newcommand*\{LWR@igxscale}{1}%
29 \newcommand*\{LWR@igyscale}{1}%
30
31 \newbool{LWR@igkeepaspectratio}
32 \boolfalse{LWR@igkeepaspectratio}
33
34 \newcommand*\{LWR@igclass}{inlineimage}

35 \newcommand*\{LWR@igalt}{\ImageAltText}

```

Set the actions of each of the key/value combinations for `\includegraphics`. Many are ignored.

If an optional width was given, set an HTML style:

```

36 \define@key{igraph}{width}{%
37 \setlength{\LWR@igwidth}{#1}%
38 \ifthenelse{\lengthtest{\LWR@igwidth > 0pt}}{%
39 {%

```

Default to use the converted fixed length given:

```
40     \renewcommand*\{LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%
```

If ex or em dimensions were given, use those instead:

```

41     \IfEndWith{#1}{ex}{%
42         \renewcommand*\{LWR@igwidthstyle}{width:#1}%
43     }%
44     \IfEndWith{#1}{em}{%
45         \renewcommand*\{LWR@igwidthstyle}{width:#1}%
46     }%
47     \IfEndWith{#1}{\%}{%
48         \renewcommand*\{LWR@igwidthstyle}{width:#1}%
49     }%
50     \IfEndWith{#1}{px}{%
51         \renewcommand*\{LWR@igwidthstyle}{width:#1}%
52     }%
53 }%
54 }%
55 }%
56 }%
57 }%
58 }%

```

If an optional height was given, set an HTML style:

```

55 \define@key{igraph}{height}{%
56 \setlength{\LWR@igheight}{#1}%
57 \ifthenelse{\lengthtest{\LWR@igheight > 0pt}}{%
58 {%

```

Default to use the converted fixed length given:

```

59     \renewcommand*\{LWR@igheightstyle}{%
60         height:\LWR@printlength{\LWR@igheight} % extra space
61     }%

```

If ex or em dimensions were given, use those instead:

```
62     \IfEndWith{#1}{ex}{%
```

```

63   {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes ex
64   {}% not ex
65   \IfEndWith{#1}{em}%
66   {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes em
67   {}% not em
68   \IfEndWith{#1}{\%}%
69   {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes percent
70   {}% not percent
71   \IfEndWith{#1}{px}%
72   {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes px
73   {}% not px
74 }{}% end of length > 0pt
75 }

```

Handle `keepaspectratio` key:

```

76 \define@key{igraph}{keepaspectratio}[false]{%
77   \booltrue{\LWR@igkeepaspectratio}%
78 }

```

Handle `origin` key:

```

79 \define@key{igraph}{origin}[c]{%
80   \renewcommand*{\LWR@igorigin}{#1}%
81 }

```

Handle `angle` key:

```
82 \define@key{igraph}{angle}{\renewcommand*{\LWR@igangle}{#1}}
```

Handle `class` key:

```
83 \define@key{igraph}{class}{\renewcommand*{\LWR@igclass}{#1}}
```

Handle `alt` key:

```
84 \define@key{igraph}{alt}{\renewcommand*{\LWR@igalt}{#1}}
```

It appears that `graphicx` does not have separate keys for `xscale` and `yscale`. `scale` adjusts both at the same time.

```

85 \define@key{igraph}{scale}{%
86   \ifthenelse{\equal{#1}{1}}{}{%
87     \PackageNote{l warp}{%
88       It is recommended to use ‘[width=xx\protect\linewidth]’\MessageBreak
89       instead of ‘[scale=yy]’,%
90     }%
91   }%
92   \renewcommand*{\LWR@igxscale}{#1}%
93   \renewcommand*{\LWR@igyscale}{#1}%
94 }

```

Numerous ignored keys:

```

95 \define@key{igraph}{bb}{}%
96 \define@key{igraph}{bblly}{}%
97 \define@key{igraph}{bbllx}{}%
98 \define@key{igraph}{bburx}{}%

```

```

99 \define@key{igraph}{bbury}{}
100 \define@key{igraph}{natwidth}{}
101 \define@key{igraph}{natheight}{}
102 \define@key{igraph}{hiresbb}[true]{}
103 \define@key{igraph}{viewport}{}
104 \define@key{igraph}{trim}{}
105 \define@key{igraph}{totalheight}{}
106 \define@key{igraph}{clip}[true]{}
107 \define@key{igraph}{draft}[true]{}
108 \define@key{igraph}{type}{}
109 \define@key{igraph}{ext}{}
110 \define@key{igraph}{read}{}
111 \define@key{igraph}{command}{}

```

New in v1.1a:

```

112 \define@key{igraph}{quite}{}
113 \define@key{igraph}{page}{}
114 \define@key{igraph}{pagebox}{}
115 \define@key{igraph}{interpolate}[true]{}

```

New in v1.1b:

```

116 \define@key{igraph}{decodearray}{}

```

§ 322.3 Printing HTML styles

\LWR@rotstyle

{*<prefix>*} {*<degrees>*}

Prints the rotate style with the given prefix.

prefix is -ms- or -webkit- or nothing, and is used to generate three versions of the transform:rotate style.

```

117 \newcommand*{\LWR@rotstyle}[2]{%
118     \edef\LWR@tempone{\#2}%
119     \setcounter{\LWR@tempcountone}{-1*\real{\LWR@tempone}} % space
120     #1transform:rotate(\arabic{\LWR@tempcountone}deg); % space
121 }

```

\LWR@scalestyle

{*<prefix>*} {*<xscale>*} {*<yscale>*}

Prints the scale style with the given prefix.

prefix is -ms- or -webkit- or nothing, and is used to generate three versions of the transform:scale style.

```

122 \newcommand*{\LWR@scalestyle}[3]{%
123     #1transform:scale(#2,#3);
124 }

```

§ 322.4 \includegraphics

\LWR@opacity

For HTML, used only for \includegraphics.

\LWR@opacity may be set by the transparent package.

125 \def\LWR@opacity{1}

\LWR@imagesizebox

Used to determine the actual image size if needed.

126 \newsavebox{\LWR@imagesizebox}

\LWR@HTML@Gin@setfile

{⟨w⟩} {⟨h⟩} {⟨filename⟩} Sets the parsed filename for HTML output.

127 \newcommand*{\LWR@HTML@Gin@setfile}[3]{%
128 \edef\LWR@parsedfilename{\#3}%
129 }

class (Key) [Gin] css class for the image.

Define the new class key for the print-mode version of \includegraphics, which is enabled inside a *lateximage*.

130 \AtBeginDocument{
131 \define@key{Gin}{class}{}
132 }

\LWR@replaceEPSSVG

Usually, references to EPS files become SVG files, but if the *epstopdf* package is being used, it automatically converts EPS to PDF, and the following must NOT be done.

133 \AtBeginDocument{
134 \IfPackageLoadedTF{epstopdf}{
135 {
136 \newcommand*{\LWR@replaceEPSSVG}{}
137 }{
138 \newcommand*{\LWR@replaceEPSSVG}{%
139 \StrSubstitute{\LWR@tempone}{.eps}{.svg}[\LWR@tempone]{%
140 \StrSubstitute{\LWR@tempone}{.EPS}{.SVG}[\LWR@tempone]{%
141 }
142 }{
143 }}

* [⟨2: options⟩] [⟨3: options⟩] {⟨4: filename⟩}

If formatting for a word processor, find and set the actual image size, without rotation, using PDF instead of SVG to find the original bounding box:

144 \newcommand*{\LWR@ig@useactualimagesize}[4]{%
145 \begingroup%
146 \LWR@restoreorigformatting%
147 \ifpdf%
148 \appto\LWR@restoreorigformatting{
149 \DeclareGraphicsExtensions{
150 .pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
151 }}%
152 \else% \ifpdf
153 \ifXeTeX%

```

155   \appto\LWR@restoreorigformatting{%
156     \DeclareGraphicsExtensions{%
157       .pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
158     }%
159   }%
160   \else%
161   \appto\LWR@restoreorigformatting{%
162     \DeclareGraphicsExtensions{%
163       .eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG%
164     }%
165   }%
166   \fi%
167 \fi% \ifpdf

```

For a word processor, do not use rotation:

```

168   \ifbool{FormatWP}{\define@key{Gin}{angle}{}{}}{%
169     \IfBooleanTF{#1}{%
170       {%
171         \IfValueTF{#3}{%
172           {%
173             \global\sbox{\LWR@imagesizebox}{%
174               \LWR@originincludegraphics*[#2][#3]{#4}%
175             }%
176           }%
177         }%
178         \IfValueTF{#2}{%
179           {%
180             \global\sbox{\LWR@imagesizebox}{%
181               \LWR@originincludegraphics*[#2]{#4}%
182             }%
183           }{%
184             \global\sbox{\LWR@imagesizebox}{%
185               \LWR@originincludegraphics{#4}%
186             }%
187           }%
188         }%
189       }%
190       {%
191         \IfValueTF{#3}{%
192           {%
193             \global\sbox{\LWR@imagesizebox}{%
194               \LWR@originincludegraphics[#2][#3]{#4}%
195             }%
196           }%
197         }%
198         \IfValueTF{#2}{%
199           {%
200             \global\sbox{\LWR@imagesizebox}{%
201               \LWR@originincludegraphics[#2]{#4}%
202             }%
203           }{%
204             \global\sbox{\LWR@imagesizebox}{%
205               \LWR@originincludegraphics{#4}%
206             }%
207           }%
208         }%
209       }%
210     \endgroup%
211     \settowidth{\LWR@igwidth}{\usebox{\LWR@imagesizebox}}%

```

```

212   \global\renewcommand*\{\LWR@igwidthstyle}{%
213     width:\LWR@printlength{\LWR@igwidth}%
214   }%
215   \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
216   \global\renewcommand*\{\LWR@igheightstyle}{%
217     height:\LWR@printlength{\LWR@igheight}%
218   }%
219 }

```

\LWR@ig@htmltag

For the HTML reference, add the graphicspath, filename, extension, alt tag, style, and class.

```

220 \newcommand*\{\LWR@ig@htmltag}{%
221   img\LWR@indentHTML%
222   src=\textquotedbl%
223   \detokenize\expandafter{\LWR@parsedfilename}%
224   \textquotedbl\LWR@indentHTML%

```

Only include a style tag if a width, height, angle, or scale was given:

```

225   \ifthenelse{%
226     \NOT\equal{\LWR@igwidthstyle}{} \OR
227     \NOT\equal{\LWR@igheightstyle}{} \OR
228     \NOT\equal{\LWR@igorigin}{} \OR
229     \NOT\equal{\LWR@igangle}{} \OR
230     \NOT\equal{\LWR@igxscale}{1} \OR
231     \NOT\equal{\LWR@igyscale}{1}%
232   }%
233   {%
234     style=\textquotedbl\LWR@indentHTML
235     \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{}{%
236       {\LWR@igwidthstyle;\LWR@indentHTML}%
237     }%
238     \ifthenelse{\NOT\equal{\LWR@igheightstyle}{}{%
239       {\LWR@igheightstyle;\LWR@indentHTML}%
240     }%
241     \ifthenelse{\NOT\equal{\LWR@igorigin}{}{%
242       {%
243         transform-origin: \LWR@originnames{\LWR@igorigin};%
244         \LWR@indentHTML%
245       }%
246     }%
247     \ifthenelse{\NOT\equal{\LWR@igangle}{}{%
248       {%
249         \LWR@rotstyle{-ms-}{\LWR@igangle}\LWR@indentHTML
250         \LWR@rotstyle{-webkit-}{\LWR@igangle}\LWR@indentHTML
251         \LWR@rotstyle{}{\LWR@igangle }\LWR@indentHTML%
252       }%
253     }%
254     \ifthenelse{%
255       \NOT\equal{\LWR@igxscale}{1}\OR%
256       \NOT\equal{\LWR@igyscale}{1}%
257     }%
258     {%
259       \LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyscale}%
260       \LWR@indentHTML
261       \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyscale}%
262       \LWR@indentHTML
263       \LWR@scalestyle{}{\LWR@igxscale}{\LWR@igyscale}%
264       \LWR@indentHTML%
265     }%
266   }%
267   \ifthenelse{\NOT\equal{\LWR@opacity}{1}}{%

```

```

264           {opacity:\LWR@opacity;\LWR@indentHTML}{})%
265           %
266           \textquotedbl\LWR@indentHTML%
267   }{}%

```

Set the class and alt tag:

```

268   class=\textquotedbl\LWR@igclass\textquotedbl\LWR@indentHTML%
269   alt=\textquotedbl\AltTextOpen\LWR@igalt\AltTextClose\textquotedbl\ \LWR@orignewline%
270 }% end of image tags

```

\LWR@includegraphicsb

```

* [<2: options>] [<3: options>] [<4: filename}]
graphics syntax is \includegraphics * [<llx, lly>] [<urx, ury>] {<filename>}
graphicx syntax is \includegraphics [<key values>] {<filename>}

```

If #3 is empty, only one optional argument was given, thus graphicx syntax.

If using \epsfig or \psfig from the epsfig package, #4 will be \LWR@epsfig@filename, which will have been set by the file or figure keys. Therefore, #4 must not be used until after the keys have been processed.

```

271 \NewDocumentCommand{\LWR@includegraphicsb}{s o o m}
272 {%

```

Start the image tag on a new line, allow PDF output word wrap:

```
273   \LWR@orignobreakspace \LWR@orignewline%
```

Temporarily compute \linewidth, \textwidth, \textheight arguments with a 6x9 inch size until the next \endgroup.

```
274   \begin{\LWR@setvirtualpage}%

```

For correct em sizing during the width and height conversions:

```
275   \large%
```

Temporarily prevent underfull \hbox warnings.

```
276   \hbadness=10000\relax%
```

Reset some defaults, possibly will be changed below if options were given:

```

277   \setlength{\LWR@igwidth}{0pt}%
278   \setlength{\LWR@igheight}{0pt}%
279   \renewcommand*\{\LWR@igwidthstyle}{}%
280   \renewcommand*\{\LWR@igheightstyle}{}%
281   \renewcommand*\{\LWR@igorigin}{}%
282   \renewcommand*\{\LWR@igangle}{}%
283   \renewcommand*\{\LWR@igxscale}{1}%
284   \renewcommand*\{\LWR@igyscale}{1}%
285   \renewcommand*\{\LWR@igclass}{inlineimage}%
286   \boolfalse{\LWR@igkeepaspectratio}%

287   \ifdefvoid{\LWR@ThisAltText}%
288     \edef\LWR@igalt{\ImageAltText}%
289   }{%
290     \edef\LWR@igalt{\LWR@ThisAltText}%
291   }%

```

If #3 is empty, only one optional argument was given, thus graphicx syntax:

```

292   \IfValueF{#3}%
293     \IfValueTF{#2}%
294       {\setkeys{igraph}{#2}}%

```

```
295          {\setkeys{igraph}{}}
296      }%
```

Fully expand and detokenize the filename, changing the file extension to .svg if necessary.

Note that uppercase file extensions are detected and reported as lowercase, so l warp can only report to the browser lowercase extensions, so all images must have lowercase file extensions.

```
297  \begingroup%
298  \LetLtxMacro{\Gin@setfile}{\LWR@HTML@Gin@setfile}
299  \edef{\LWR@tempone}{#4}%
```

PDF extensions are removed to allow a search for another graphics format such as SVG or PNG.

```
300  \StrSubstitute{\LWR@tempone}{.pdf}{}[\LWR@tempone]%
301  \StrSubstitute{\LWR@tempone}{.PDF}{}[\LWR@tempone]%
302  \LWR@replaceEPSSVG%
303  \xdef{\LWR@parsedfilename}{\LWR@tempone}%
304  \Ginclusion@graphics{\detokenize{\expandafter{\LWR@parsedfilename}}}%
305  \endgroup%
306  \filename@parse{\LWR@parsedfilename}%
```

Remove doubled // in the directory path, from the 2020/10/01 L^AT_EX kernel change.

```
307  \StrSubstitute{\LWR@parsedfilename}{//}{/}[\LWR@parsedfilename]%
308  \LWR@traceinfo{\LWR@parsedfilename is \LWR@parsedfilename}%
```

If formatting for a word processor, or if using keepaspectratio, find and set the actual image size, without rotation, using PDF instead of SVG to find the original bounding box:

```
309  \ifboolexpr{
310      \bool{FormatWP} or
311      \bool{\LWR@igkeepaspectratio}
312  }{\LWR@iguseactualimagesize{#1}{#2}{#3}{#4}}{}%
```

Create the HTML reference with the graphicspath, filename, extension, alt tag, style, and class:

```
313  \LWR@traceinfo{\LWR@includegraphicsb: about to create href}%
314  \boolfalse{\LWR@HTMLsanitize@tmpb@removebackslash}%
315  \LWR@href@partsanitized{\LWR@parsedfilename}%
316  {%
317      \LWR@traceinfo{\LWR@includegraphicsb: about to \LWR@htmltag}%
318      \LWR@htmltag{\LWR@ig@htmltag}%
319  }%
}
```

Return to original page size and font size:

```
320  \end{\LWR@setvirtualpage}%
```

Clear the single-use alt text:

```
321  \gdef{\LWR@ThisAltText}{}%
322  \LWR@traceinfo{\LWR@includegraphicsb done}%
323 }
```

\includegraphics [*key=val*] {*filename*}

Handles width and height, converted to fixed width and heights.

The user should always use no file suffix in the document source.

```
324 \AtBeginDocument{
325
326 \LWR@traceinfo{Patching includegraphics.}
327
328 \LetLtxMacro{\LWR@origincludegraphics}{\includegraphics}

329 \renewrobustcmd*{\includegraphics}
330 {%
```

This graphic should trigger an **HTML** paragraph even if alone, so ensure that are doing paragraph handling:

```
331 \LWR@traceinfo{includegraphics}%
332 \LWR@ensuredoingapar%
333 \LWR@includegraphicsb%
334 }% includegraphics
335 }% AtBeginDocument
```

§ 322.5 Boxes

\LWR@rotboxorigin

Holds the origin key letters.

```
336 \newcommand*{\LWR@rotboxorigin}{}%
```

\LWR@originname

{⟨letter⟩}

Given one **LATEX** origin key value, translate into an **HTML** origin word:

```
337 \newcommand*{\LWR@originname}[1]{%
338   \ifthenelse{\equal{#1}{t}}{top}{%
339   \ifthenelse{\equal{#1}{b}}{bottom}{%
340   \ifthenelse{\equal{#1}{c}}{center}{%
341   \ifthenelse{\equal{#1}{l}}{left}{%
342   \ifthenelse{\equal{#1}{r}}{right}{%
343 }}
```

\LWR@originnames

{⟨letters⟩}

Given one- or two-letter **LATEX** origin key values, translate into **HTML** origin words:

```
344 \newcommand*{\LWR@originnames}[1]{%
345 \StrChar{#1}{1}[\LWR@strresult]%
346 \LWR@originname{\LWR@strresult}%
347 \StrChar{#1}{2}[\LWR@strresult]%
348 \LWR@originname{\LWR@strresult}%
349 }
```

Handle the origin key for \rotatebox:

```
350 \define@key{krotbox}{origin}{%
351 \renewcommand*{\LWR@rotboxorigin}{#1}%
352 }
```

These keys are ignored:

```
353 \define@key{krotbox}{x}{}
354 \define@key{krotbox}{y}{}
355 \define@key{krotbox}{units}{}
```

```
\rotatebox [⟨keyval list⟩] {⟨angle⟩} {⟨text⟩}
```

```
356 \AtBeginDocument{
```

The HTML version:

```
357 \NewDocumentCommand{\LWR@HTML@rotatebox}{O{} m +m}{%
```

Reset the origin to “none-given”:

```
358 \renewcommand*\LWR@rotboxorigin{}%
```

Process the optional keys, which may set \LWR@rotateboxorigin:

```
359 \setkeys{krotbox}{#1}%
```

Select inline-block so that HTML will transform this span:

```
360 \LWR@htmllagc{%
361   span\LWR@indentHTML
362   style=\textquotedbl\LWR@indentHTML
363   display: inline-block;\LWR@indentHTML
```

If an origin was given, translate and print the origin information:

```
364 \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{}}%
365   {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@indentHTML}%
366   {}%
```

Print the rotation information:

```
367 \LWR@rotstyle{-ms-}{}#2\LWR@indentHTML
368 \LWR@rotstyle{-webkit-}{}#2\LWR@indentHTML
369 \LWR@rotstyle{}{}#2\textquotedbl\LWR@orignewline%
370 }\LWR@orignewline%
```

Print the text to be rotated:

```
371 \begin{\LWR@nestspan}%
372 #3%
```

Close the span:

```
373 \LWR@htmllagc{/span}%
374 \end{\LWR@nestspan}%
375 }
```

The high-level interface:

```
376 \LWR@formatted{rotatebox}
377
378 }% AtBeginDocument
```

```
\scalebox {⟨h-scale⟩} [⟨v-scale⟩] {⟨text⟩}
```

```
379 \AtBeginDocument{
```

The HTML version:

```
380 \NewDocumentCommand{\LWR@HTML@scalebox}{m o m}{%
```

Select inline-block so that HTML will transform this span:

```
381 \LWR@htmltagc{%
382     span\LWR@indentHTML
383     style=\textquotedbl\LWR@indentHTML
384     display: inline-block;\LWR@indentHTML
```

Print the scaling information:

```
385     \LWR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
386     \LWR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
387     \LWR@scalestyle{}{#1}{\IfNoValueTF{#2}{#1}{#2}}
388     \textquotedbl\LWR@orignewline
389 }\LWR@orignewline%
```

Print the text to be scaled:

```
390 \begin{LWR@nestspan}%
391 #3%
```

Close the span:

```
392 \LWR@htmltagc{/span}%
393 \end{LWR@nestspan}%
394 }
```

The high-level interface:

```
395 \LWR@formatted{scalebox}
396
397 }% AtBeginDocument
```

\reflectbox {\langle text\rangle}

```
398 \AtBeginDocument{
399
400 \newcommand{\LWR@HTML@reflectbox}[1]{%
401     \scalebox{-1}[1]{#1}%
402 }% \reflectbox
403
404 \LWR@formatted{reflectbox}
405
406 }% AtBeginDocument
```

\resizebox {\langle h-length\rangle} {\langle v-length\rangle} {\langle text\rangle}

Simply prints its text argument.

```
407 \AtBeginDocument{
408
409 \NewDocumentCommand{\LWR@HTML@resizebox}{s m m m}{%
410     #4%
411 }
```

```
412
413 \LWR@formatted{resizebox}
414
415 }% AtBeginDocument
```

File 214 **l warp-graphicx.sty**

§ 323 Package **graphicx**

graphicx (*Pkg*) graphicx is emulated.

graphicx loads graphics, which also loads l warp-graphics, which remembers the original graphics definitions for use inside a `\textrimage`, and then patches them `\AtBeginDocument` for HTML output.

l warp-graphics handles the syntax of either `graphics` or `graphicx`.

for HTML output: 1 \LWR@ProvidesPackagePass{graphicx}[2020/09/09]

File 215 **l warp-grffile.sty**

§ 324 Package **grffile**

grffile (*Pkg*) grffile is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

l warp-grffile now exists as a placeholder since grffile used to be emulated by l warp, and thus older versions of l warp-grffile may exist and should be overwritten by this newer version.

for HTML output: 1 \LWR@ProvidesPackagePass{grffile}[2017/06/30]

File 216 **l warp-grid.sty**

§ 325 Package **grid**

grid (*Pkg*) grid is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{grid}[2009/06/16]

2 \newenvironment*{gridenv}{}{}

File 217 **l warp-grid-system.sty**

§ 326 Package **grid-system**

(Emulates or patches code by MARCUS BITZL.)

grid-system (*Pkg*) grid-system is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{grid-system}[2014/02/16]

(\ifdef is in case the older syntax is removed.)

```
2 \AtBeginEnvironment{Row}{\setlength{\ linewidth}{6in}}
3
4 \ifdef{\endrow}{%
5   \AtBeginEnvironment{row}{\setlength{\ linewidth}{6in}}%
6 }{}%
7
8 \renewcommand{\gridsystem@finishcell}{\hspace{\gridsystem@cellsep}}
```

File 218 **l warp-gridset.sty**

§ 327 Package **gridset**

gridset (*Pkg*) gridset is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{gridset}[2020-02-12]

```
2 \newcommand*\gridbase{}
3 \newcommand*\gridinterval{}
4 \newcommand*\SavePos[1]{}%
5 \ifLuaTeX
6 \else
7 \let\savepos\SavePos
8 \fi
9 \newcommand*\vskipnextgrid(){}
10 \newcommand*\thegridinfo[1]{\thegridinfo}%
11 \newcommand*\theposinfo[1]{\theposinfo}%
12 \newcommand*\theypos[1]{\theypos}
```

File 219 **l warp-hang.sty**

§ 328 Package **hang**

(Emulates or patches code by ANDREAS NOLDA.)

hang (*Pkg*) hang is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{hang}[2017/02/18]

```
2 \newlength{\hangingindent}
3 \setlength{\hangingindent}{1em}
4 \newlength{\hangingleftmargin}
5 \setlength{\hangingleftmargin}{0em}
6
7 \newcommand*\LWR@findhangingleftmargin{}%
8 \setlength{\LWR@templengthone}{\hangingleftmargin}%
9 \addtolength{\LWR@templengthone}{\hangingindent}%
10 }
```

```
11
12 \newenvironment{hangingpar}
13 {
14     \LWR@findhangingleftmargin%
15     \BlockClass[%
16         \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
17         \LWR@print@mbox{text-indent:-\LWR@printlength{\hangingindent}}%
18     ]%
19     {hangingpar}%
20 }
21 {\endBlockClass}
22
23 \newenvironment{hanginglist}
24 {%
25     \renewcommand*\{\LWR@printcloselist}{\LWR@printcloseitemize}%
26     \renewcommand*\{\LWR@printopenlist}{%
27         \LWR@findhangingleftmargin%
28         ul style=\textquotedbl%
29             \LWR@print@mbox{list-style-type:none;} % extra space
30             \LWR@print@mbox{%
31                 margin-left:\LWR@printlength{\LWR@templengthone}%
32             } ; % extra space
33             \LWR@print@mbox{%
34                 text-indent:-\LWR@printlength{\hangingindent}%
35             }%
36             \textquotedbl%
37     }%
38     \LetLtxMacro\item\LWR@itemizeitem%
39     \list{}{}}%
40 }
41 {\endlist}
42
43 \newenvironment{compacthang}
44 {\hanginglist}
45 {\endhanginglist}
46
47 \newlength{\labeledleftmargin}
48 \setlength{\labeledleftmargin}{0em}
49
50 \newenvironment{labeledpar}[2]
51 {%
52     \BlockClass[%
53         \LWR@findhangingleftmargin%
54         \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
55         \LWR@print@mbox{text-indent:-\LWR@printlength{\hangingindent}}%
56     ]{\labeledpar}#2%
57 }
58 {\endBlockClass}
59
60 \newenvironment{labeledlist}[1]
61 {\hanginglist}
62 {\endhanginglist}
63
64 \newenvironment{compactlabel}[1]
65 {\hanginglist}
66 {\endhanginglist}
```

File 220 **l warp-hanging.sty**

§ 329 Package **hanging**

hanging (*Pkg*) hanging is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{hanging}[2009/09/02]

```
2 \IfClassLoadedTF{memoir}{
3 \let\hangpara\relax
4 \let\hangparas\relax
5 \let\endhangparas\relax
6 \let\hangpunct\relax
7 \let\endhangpunct\relax
8 }{}
```

\hangpara {⟨*indent*⟩} {⟨*afternum*⟩}

Use **hangparas** instead.

```
9 \newcommand*{\hangpara}[2]{}{}
```

Env hangparas {⟨*indent*⟩} {⟨*afternum*⟩}

```
10 \newenvironment*{\hangparas}[2]
11 {%
12   \BlockClass[%
13     \LWR@print@mbox{margin-left:\LWR@printlength{\#1}} ; %
14     \LWR@print@mbox{text-indent:-\LWR@printlength{\#1}}%
15   ]%
16   {hangingpar}%
17 }
18 {\endBlockClass}
```

Env hangpunct

```
19 \newenvironment*{\hangpunct}{%
20   {\BlockClass{\hangpunct}%
21   {\endBlockClass}%
22 \newcommand{\nhpt}{.}%
23 \newcommand{\nqlq}{'}%
24 \newcommand{\nhrq}{'}}}
```

File 221 **l warp-hepunits.sty**

§ 330 Package **hepunits**

(Emulates or patches code by ANDY BUCKLEY.)

hepunits (*Pkg*) hepunits is used as-is, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{hepunits}[2020/04/10]

```
2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{hepunits}
4
5 \ifx\@HEPopt@siccmds\@yes
6 \CustomizeMathJax{\newcommand{\micron}{\micro\metre}}
7 \CustomizeMathJax{\newcommand{\mrad}{\milli\radian}}
8 \fi
9
10 \CustomizeMathJax{\newcommand{\gauss}{\mathrm{G}}}
11
12 \CustomizeMathJax{\newcommand{\invcmsq}{\centi\metre\tothe{-2}}}
13 \CustomizeMathJax{\newcommand{\invcmsqpersecond}{\invcmsq\second\tothe{-1}}}
14 \CustomizeMathJax{\newcommand{\invcmsqpersec}{\invcmsqpersecond}}
15
16 % (Inverse) cross-sections
17 \CustomizeMathJax{\newcommand{\invbarn}{\barn\tothe{-1}}}
18
19 \ifx\@HEPopt@noprefixcmds\@empty
20 \CustomizeMathJax{\newcommand{\millibarn}{\milli\barn}}
21 \CustomizeMathJax{\newcommand{\microbarn}{\micro\barn}}
22 \CustomizeMathJax{\newcommand{\nanobarn}{\nano\barn}}
23 \CustomizeMathJax{\newcommand{\picobarn}{\pico\barn}}
24 \CustomizeMathJax{\newcommand{\femtobarn}{\femto\barn}}
25 \CustomizeMathJax{\newcommand{\attobarn}{\atto\barn}}
26 \CustomizeMathJax{\newcommand{\zeptobarn}{\zepto\barn}}
27 \CustomizeMathJax{\newcommand{\yoctobarn}{\yocto\barn}}
28 \CustomizeMathJax{\newcommand{\invnanobarn}{\nano\invbarn}}
29 \CustomizeMathJax{\newcommand{\invcobarn}{\pico\invbarn}}
30 \CustomizeMathJax{\newcommand{\invfemtobarn}{\femto\invbarn}}
31 \CustomizeMathJax{\newcommand{\invattobarn}{\atto\invbarn}}
32 \CustomizeMathJax{\newcommand{\invzeptobarn}{\zepto\invbarn}}
33 \CustomizeMathJax{\newcommand{\invyoctobarn}{\yocto\invbarn}}
34 \CustomizeMathJax{\newcommand{\invnb}{\invnanobarn}}
35 \CustomizeMathJax{\newcommand{\invpb}{\invcobarn}}
36 \CustomizeMathJax{\newcommand{\invfb}{\invfemtobarn}}
37 \CustomizeMathJax{\newcommand{\invab}{\invattobarn}}
38 \CustomizeMathJax{\newcommand{\invzb}{\invzeptobarn}}
39 \CustomizeMathJax{\newcommand{\invyb}{\invyoctobarn}}
40 \fi
41
42 \CustomizeMathJax{\newcommand{\electronvoltc}{\electronvolt\per\mathit{c}}}
43 \CustomizeMathJax{\newcommand{\electronvoltcsq}{\electronvolt\per\mathit{c}\squared}}
44 \CustomizeMathJax{\let\evc\electronvoltc}
45 \CustomizeMathJax{\let\evcsq\electronvoltcsq}
46
47 \ifx\@HEPopt@noprefixcmds\@empty
48 \CustomizeMathJax{\newcommand{\meV}{\milli\ev}}
49 \CustomizeMathJax{\newcommand{\keV}{\kilo\ev}}
50 \CustomizeMathJax{\newcommand{\MeV}{\mega\ev}}
51 \CustomizeMathJax{\newcommand{\GeV}{\giga\ev}}
52 \CustomizeMathJax{\newcommand{\TeV}{\tera\ev}}
53 \CustomizeMathJax{\newcommand{\meVc}{\milli\evc}}
54 \CustomizeMathJax{\newcommand{\keVc}{\kilo\evc}}
55 \CustomizeMathJax{\newcommand{\MeVc}{\mega\evc}}
56 \CustomizeMathJax{\newcommand{\GeVc}{\giga\evc}}
57 \CustomizeMathJax{\newcommand{\TeVc}{\tera\evc}}
58 \CustomizeMathJax{\newcommand{\meVcsq}{\milli\evcsq}}
59 \CustomizeMathJax{\newcommand{\keVcsq}{\kilo\evcsq}}
60 \CustomizeMathJax{\newcommand{\MeVcsq}{\mega\evcsq}}
61 \CustomizeMathJax{\newcommand{\GeVcsq}{\giga\evcsq}}
```

```

62 \CustomizeMathJax{\newcommand{\TeVcsq}{\text{\eVcsq}}}
63 \fi
64 \end{warpMathJax}
```

File 222 **l warp-hhline.sty**

§ 331 Package **hhline**

(Emulates or patches code by DAVID CARLISLE.)

hhline (*Pkg*) **hhline** is patched for use by **l warp**.

Only a rudimentary emulation is provided so far. If the argument contains any = characters, the result is a double \hline. If none, the result is a single \hline.

for HTML output: 1 \LWR@ProvidesPackagePass{hhline}[2014/10/28]

```

2 \newrobustcmd*\LWR@HTML@hhline}[1]{%
3   \edef\LWR@tempone{\detokenize\expandafter{\#1}}%
4   \IfSubStr[1]{\LWR@tempone}{=}{\hline\hline}{\hline}%
5 }
6 % ^^A or:
7 % ^^A \newrobustcmd*\LWR@HTML@hhline}[1]{\LWR@getmynexttoken}%
8
9 \AtBeginDocument{\LWR@expandableformatted{hhline}}
```

For MATHJAX. A simple \hline is used.

```

10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\hhline}[1]{\hline}}
12 \end{warpMathJax}
```

File 223 **l warp-hhtensor.sty**

§ 332 Package **hhtensor**

(Emulates or patches code by HARALD HARDERS.)

hhtensor (*Pkg*) **hhtensor** is used as-is, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{hhtensor}[2011/12/29]

```

2 \begin{warpMathJax}
3 \iftensor@bold
4   \CustomizeMathJax{\newcommand{\vec}[1]{\boldsymbol{\#1}}}
5   \CustomizeMathJax{\newcommand{\matr}[1]{\boldsymbol{\#1}}}
6   \CustomizeMathJax{\newcommand{\tens}[2]{\boldsymbol{\#1}}}
7 \else
8   \iftensor@underline
9     \CustomizeMathJax{\newcommand{\vec}[1]{\text{\ushort{\#1}}}}
10    \CustomizeMathJax{\newcommand{\matr}[1]{\text{\ushortd{\#1}}}}
11    \CustomizeMathJax{\newcommand{\tens}[2]{\text{\raise{.5ex}{\underset{\#2}{\sim}}}}}
12      \underset{\#2}{\sim}
13      \raise{.5ex}{\underset{\#2}{\sim}}
```

```

14      }{#1}
15  }}
16 \else
17   \CustomizeMathJax{\newcommand{\matr}[1]{\vec{\vec{#1}}}}
18   \CustomizeMathJax{\newcommand{\tens}[2]{
19     \underset{
20       \raise{.5ex}{\underset{#2}{\sim}}}{#1}
21   }{#1}
22  }}
23 \fi
24 \fi
25 \CustomizeMathJax{\newcommand{\dcdot}{\mathrel{\cdot\mkern 0.0mu \cdot}}}
26 \CustomizeMathJax{\newcommand{\trans}{{}^{\mathrm{T}}}}
27 \end{warpMathJax}

```

File 224 **l warp-hypbmsec.sty**§ 333 Package **hypbmsec**

hypbmsec (*Pkg*) hypbmsec is emulated by the l warp core.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypbmsec}[2016/05/16]

File 225 **l warp-hypcap.sty**§ 334 Package **hypcap**

hypcap (*Pkg*) hypcap is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypcap}[2016/05/16]

```

2 \newcommand*\capstart(){}
3 \newcommand*\hypcapspace(){}
4 \newcommand*\hypcaprefdef[1]{}
5 \newcommand*\capstartfalse(){}
6 \newcommand*\capstarttrue(){}

```

File 226 **l warp-hypdestopt.sty**§ 335 Package **hypdestopt**

hypdestopt (*Pkg*) hypdestopt is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypdestopt}[2016/05/21]

File 227 **l warp-hypernat.sty**§ 336 Package **hypernat**

hypernat (*Pkg*) hypernat is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypernat}[2001/07/09]

File 228 **l warp-hyperref.sty**

§ 337 Package **hyperref**

(Emulates or patches code by SEBASTIAN RAHTZ, HEIKO OBERDIEK, THE LATEX3 PROJECT.)

hyperref (*Pkg*) hyperref is emulated.

for HTML output:

```

1% \LWR@ProvidesPackageDrop{hyperref}% not allowed
2% \ProvidesPackage{l warp-#1-#2}% not allowed
3\PackageInfo{l warp}{%
4Using the l warp HTML version of package 'hyperref', \MessageBreak
5and discarding options except backref, pagebackref.\MessageBreak
6(Not using \protect\ProvidesPackage, so that other packages\MessageBreak
7do not attempt to patch l warp's version of 'hyperref'.)\MessageBreak}

8\SetupKeyvalOptions{family=LWR@hyperref,prefix=LWR@hyperref@}
9
10\newcommand{\hypersetup}[1]{\setkeys{LWR@hyperref}{#1}}
11
12\define@key{LWR@hyperref}{a4paper}{}{}{a4paper}
13\define@key{LWR@hyperref}{a5paper}{}{}{a5paper}
14\define@key{LWR@hyperref}{b5paper}{}{}{b5paper}
15\define@key{LWR@hyperref}{letterpaper}{}{}{letterpaper}
16\define@key{LWR@hyperref}{legalpaper}{}{}{legalpaper}
17\define@key{LWR@hyperref}{executivepaper}{}{}{executivepaper}
18\define@key{LWR@hyperref}{implicit}{}{}{implicit}
19\define@key{LWR@hyperref}{draft}{}{}{draft}
20\define@key{LWR@hyperref}{final}{}{}{final}
21\define@key{LWR@hyperref}{setpagesize}{}{}{setpagesize}
22\define@key{LWR@hyperref}{debug}{}{}{debug}
23\define@key{LWR@hyperref}{linktocpage}{}{}{linktocpage}
24\define@key{LWR@hyperref}{linktoc}{}{}{linktoc}
25\define@key{LWR@hyperref}{extension}{}{}{extension}
26\define@key{LWR@hyperref}{verbose}{}{}{verbose}
27\define@key{LWR@hyperref}{typexml}{}{}{typexml}
28\define@key{LWR@hyperref}{raiselinks}{}{}{raiselinks}
29\define@key{LWR@hyperref}{breaklinks}{}{}{breaklinks}
30\define@key{LWR@hyperref}{localanchorname}{}{}{localanchorname}
31\define@key{LWR@hyperref}{pageanchor}{}{}{pageanchor}
32\define@key{LWR@hyperref}{plainpages}{}{}{plainpages}
33\define@key{LWR@hyperref}{naturalnames}{}{}{naturalnames}
34\define@key{LWR@hyperref}{hypertexnames}{}{}{hypertexnames}
35\define@key{LWR@hyperref}{nesting}{}{}{nesting}
36\define@key{LWR@hyperref}{destlabel}{}{}{destlabel}
37\define@key{LWR@hyperref}{unicode}{}{}{unicode}
38\define@key{LWR@hyperref}{pdfencoding}{}{}{pdfencoding}
39\define@key{LWR@hyperref}{psdextra}{}{}{psdextra}
40\define@key{LWR@hyperref}{pdfversion}{}{}{pdfversion}
41\define@key{LWR@hyperref}{dvipdfmx-outline-open}{}{}{dvipdfmx-outline-open}
42\define@key{LWR@hyperref}{driverfallback}{}{}{driverfallback}
43\define@key{LWR@hyperref}{customdriver}{}{}{customdriver}
44\define@key{LWR@hyperref}{hyperfigures}{}{}{hyperfigures}
45\define@key{LWR@hyperref}{hyperfootnotes}{}{}{hyperfootnotes}
46\define@key{LWR@hyperref}{hyperindex}{}{}{hyperindex}
```

```
47 \define@key{LWR@hyperref}{encap}{}{}  
48 \define@key{LWR@hyperref}{colorlinks}{}{}  
49 \define@key{LWR@hyperref}{ocgcolorlinks}{}{}  
50 \define@key{LWR@hyperref}{frenchlinks}{}{}  
51 \define@key{LWR@hyperref}{bookmarks}{}{}  
52 \define@key{LWR@hyperref}{bookmarksopen}{}{}  
53 \define@key{LWR@hyperref}{bookmarksdepth}{}{}  
54 \define@key{LWR@hyperref}{bookmarksopenlevel}{}{}  
55 \define@key{LWR@hyperref}{bookmarkstype}{}{}  
56 \define@key{LWR@hyperref}{bookmarksnumbered}{}{}  
57 \define@key{LWR@hyperref}{CJKbookmarks}{}{}  
58 \define@key{LWR@hyperref}{link}{}{}  
59 \define@key{LWR@hyperref}{anchor}{}{}  
60 \define@key{LWR@hyperref}{cite}{}{}  
61 \define@key{LWR@hyperref}{file}{}{}  
62 \define@key{LWR@hyperref}{url}{}{}  
63 \define@key{LWR@hyperref}{menu}{}{}  
64 \define@key{LWR@hyperref}{run}{}{}  
65 \define@key{LWR@hyperref}{linkbordercolor}{}{}  
66 \define@key{LWR@hyperref}{anchorbordercolor}{}{}  
67 \define@key{LWR@hyperref}{citebordercolor}{}{}  
68 \define@key{LWR@hyperref}{filebordercolor}{}{}  
69 \define@key{LWR@hyperref}{urlbordercolor}{}{}  
70 \define@key{LWR@hyperref}{menubordercolor}{}{}  
71 \define@key{LWR@hyperref}{runbordercolor}{}{}  
72 \define@key{LWR@hyperref}{pagecolor}{}{}  
73 \define@key{LWR@hyperref}{baseurl}{}{}  
74 \define@key{LWR@hyperref}{linkfileprefix}{}{}  
75 \define@key{LWR@hyperref}{pdfpagetransition}{}{}  
76 \define@key{LWR@hyperref}{pdfpageduration}{}{}  
77 \define@key{LWR@hyperref}{pdfpagehidden}{}{}  
78 \define@key{LWR@hyperref}{pagebordercolor}{}{}  
79 \define@key{LWR@hyperref}{allbordercolors}{}{}  
80 \define@key{LWR@hyperref}{pdfhighlight}{}{}  
81 \define@key{LWR@hyperref}{pdfborder}{}{}  
82 \define@key{LWR@hyperref}{pdfborderstyle}{}{}  
83 \define@key{LWR@hyperref}{pdfprintpagerange}{}{}  
84 \define@key{LWR@hyperref}{pdfusetitle}{}{}  
85 \define@key{LWR@hyperref}{pdftitle}{}{}  
86 \define@key{LWR@hyperref}{pdfauthor}{}{}  
87 \define@key{LWR@hyperref}{pdfproducer}{}{}  
88 \define@key{LWR@hyperref}{pdfcreator}{}{}  
89 \define@key{LWR@hyperref}{addtopdfcreator}{}{}  
90 \define@key{LWR@hyperref}{pdfcreationdate}{}{}  
91 \define@key{LWR@hyperref}{pdfmoddate}{}{}  
92 \define@key{LWR@hyperref}{pdfsubject}{}{}  
93 \define@key{LWR@hyperref}{pdfkeywords}{}{}  
94 \define@key{LWR@hyperref}{pdftrapped}{}{}  
95 \define@key{LWR@hyperref}{pdfinfo}{}{}  
96 \define@key{LWR@hyperref}{pdfview}{}{}  
97 \define@key{LWR@hyperref}{pdflinkmargin}{}{}  
98 \define@key{LWR@hyperref}{pdfstartpage}{}{}  
99 \define@key{LWR@hyperref}{pdfstartview}{}{}  
100 \define@key{LWR@hyperref}{pdfremotestartview}{}{}  
101 \define@key{LWR@hyperref}{pdfpagescrop}{}{}  
102 \define@key{LWR@hyperref}{pdftoolbar}{}{}  
103 \define@key{LWR@hyperref}{pdfmenubar}{}{}  
104 \define@key{LWR@hyperref}{pdfwindowui}{}{}  
105 \define@key{LWR@hyperref}{pdffitwindow}{}{}  
106 \define@key{LWR@hyperref}{pdfcenterwindow}{}{}
```

```
107 \define@key{LWR@hyperref}{pdfdisplaydoctitle}{}{}  
108 \define@key{LWR@hyperref}{pdfa}{}{}  
109 \define@key{LWR@hyperref}{pdfnewwindow}{}{}  
110 \define@key{LWR@hyperref}{pdfLang}{}{}  
111 \define@key{LWR@hyperref}{pdfpagelabels}{}{}  
112 \define@key{LWR@hyperref}{pdfescapeform}{}{}  
113 \define@key{LWR@hyperref}{english}{}{}  
114 \define@key{LWR@hyperref}{UKenglish}{}{}  
115 \define@key{LWR@hyperref}{british}{}{}  
116 \define@key{LWR@hyperref}{USenglish}{}{}  
117 \define@key{LWR@hyperref}{american}{}{}  
118 \define@key{LWR@hyperref}{german}{}{}  
119 \define@key{LWR@hyperref}{austrian}{}{}  
120 \define@key{LWR@hyperref}{ngerman}{}{}  
121 \define@key{LWR@hyperref}{naustrian}{}{}  
122 \define@key{LWR@hyperref}{russian}{}{}  
123 \define@key{LWR@hyperref}{brazil}{}{}  
124 \define@key{LWR@hyperref}{brazilian}{}{}  
125 \define@key{LWR@hyperref}{portuguese}{}{}  
126 \define@key{LWR@hyperref}{spanish}{}{}  
127 \define@key{LWR@hyperref}{catalan}{}{}  
128 \define@key{LWR@hyperref}{afrikaans}{}{}  
129 \define@key{LWR@hyperref}{french}{}{}  
130 \define@key{LWR@hyperref}{frenchb}{}{}  
131 \define@key{LWR@hyperref}{francais}{}{}  
132 \define@key{LWR@hyperref}{acadian}{}{}  
133 \define@key{LWR@hyperref}{canadien}{}{}  
134 \define@key{LWR@hyperref}{italian}{}{}  
135 \define@key{LWR@hyperref}{magyar}{}{}  
136 \define@key{LWR@hyperref}{hungarian}{}{}  
137 \define@key{LWR@hyperref}{greek}{}{}  
138 \define@key{LWR@hyperref}{dutch}{}{}  
139 \define@key{LWR@hyperref}{tex4ht}{}{}  
140 \define@key{LWR@hyperref}{pdftex}{}{}  
141 \define@key{LWR@hyperref}{luatex}{}{}  
142 \define@key{LWR@hyperref}{nativepdf}{}{}  
143 \define@key{LWR@hyperref}{dvipdfm}{}{}  
144 \define@key{LWR@hyperref}{dvipdfmx}{}{}  
145 \define@key{LWR@hyperref}{xetex}{}{}  
146 \define@key{LWR@hyperref}{pdfmark}{}{}  
147 \define@key{LWR@hyperref}{dvips}{}{}  
148 \define@key{LWR@hyperref}{hypertex}{}{}  
149 \define@key{LWR@hyperref}{vtxe}{}{}  
150 \define@key{LWR@hyperref}{vtexpdfmark}{}{}  
151 \define@key{LWR@hyperref}{dviwindo}{}{}  
152 \define@key{LWR@hyperref}{dvipsone}{}{}  
153 \define@key{LWR@hyperref}{textures}{}{}  
154 \define@key{LWR@hyperref}{latex2html}{}{}  
155 \define@key{LWR@hyperref}{ps2pdf}{}{}  
156 \define@key{LWR@hyperref}{vietnamese}{}{}  
157 \define@key{LWR@hyperref}{vietnam}{}{}  
158 \define@key{LWR@hyperref}{arabic}{}{}  
159 \define@key{LWR@hyperref}{hidelinks}{}{}  
160 \define@key{LWR@hyperref}{draft}{}{}  
161 \define@key{LWR@hyperref}{nolinks}{}{}  
162 \define@key{LWR@hyperref}{final}{}{}  
163 \define@key{LWR@hyperref}{pdfa}{}{}  
164 \define@key{LWR@hyperref}{pdfversion}{}{}  
165 \define@key{LWR@hyperref}{typexml}{}{}  
166 \define@key{LWR@hyperref}{tex4ht}{}{}
```

```
167 \define@key{LWR@hyperref}{pdftex}{}{}  
168 \define@key{LWR@hyperref}{nativepdf}{}{}  
169 \define@key{LWR@hyperref}{dvipdfm}{}{}  
170 \define@key{LWR@hyperref}{dvipdfmx}{}{}  
171 \define@key{LWR@hyperref}{dvipdfmx-outline-open}{}{}  
172 \define@key{LWR@hyperref}{pdfmark}{}{}  
173 \define@key{LWR@hyperref}{dvips}{}{}  
174 \define@key{LWR@hyperref}{hypertex}{}{}  
175 \define@key{LWR@hyperref}{vtxe}{}{}  
176 \define@key{LWR@hyperref}{vtexpdfmark}{}{}  
177 \define@key{LWR@hyperref}{dviwindo}{}{}  
178 \define@key{LWR@hyperref}{dvipsone}{}{}  
179 \define@key{LWR@hyperref}{textures}{}{}  
180 \define@key{LWR@hyperref}{latex2html}{}{}  
181 \define@key{LWR@hyperref}{ps2pdf}{}{}  
182 \define@key{LWR@hyperref}{xetex}{}{}  
183 \define@key{LWR@hyperref}{driverfallback}{}{}  
184 \define@key{LWR@hyperref}{customdriver}{}{}  
185 \define@key{LWR@hyperref}{pdfversion}{}{}  
186 \define@key{LWR@hyperref}{bookmarks}{}{}  
187 \define@key{LWR@hyperref}{ocgcolorlinks}{}{}  
188 \define@key{LWR@hyperref}{colorlinks}{}{}  
189 \define@key{LWR@hyperref}{frenchlinks}{}{}  
190 \define@key{LWR@hyperref}{backref}{}{}  
191 \define@key{LWR@hyperref}{pagebackref}{}{}  
192 \define@key{LWR@hyperref}{destlabel}{}{}  
193 \define@key{LWR@hyperref}{pdfpagescrop}{}{}  
194 \define@key{LWR@hyperref}{pdfpagemode}{}{}  
195 \define@key{LWR@hyperref}{pdfnonfullscreenpagemode}{}{}  
196 \define@key{LWR@hyperref}{pdfdirection}{}{}  
197 \define@key{LWR@hyperref}{pdfviewarea}{}{}  
198 \define@key{LWR@hyperref}{pdfviewclip}{}{}  
199 \define@key{LWR@hyperref}{pdfprintarea}{}{}  
200 \define@key{LWR@hyperref}{pdfprintclip}{}{}  
201 \define@key{LWR@hyperref}{pdfprintscaling}{}{}  
202 \define@key{LWR@hyperref}{pdfduplex}{}{}  
203 \define@key{LWR@hyperref}{pdfpicktraybypdfsize}{}{}  
204 \define@key{LWR@hyperref}{pdfprintpagerange}{}{}  
205 \define@key{LWR@hyperref}{pdfnumcopies}{}{}  
206 \define@key{LWR@hyperref}{pdfstartview}{}{}  
207 \define@key{LWR@hyperref}{pdfstartpage}{}{}  
208 \define@key{LWR@hyperref}{pdftoolbar}{}{}  
209 \define@key{LWR@hyperref}{pdfmenubar}{}{}  
210 \define@key{LWR@hyperref}{pdfwindowui}{}{}  
211 \define@key{LWR@hyperref}{pdffitwindow}{}{}  
212 \define@key{LWR@hyperref}{pdfcenterwindow}{}{}  
213 \define@key{LWR@hyperref}{pdfdisplaydoctitle}{}{}  
214 \define@key{LWR@hyperref}{pdfpagelayout}{}{}  
215 \define@key{LWR@hyperref}{pdflang}{}{}  
216 \define@key{LWR@hyperref}{baseurl}{}{}  
217 \define@key{LWR@hyperref}{pdfusetitle}{}{}  
218 \define@key{LWR@hyperref}{pdfpagelabels}{}{}  
219 \define@key{LWR@hyperref}{hyperfootnotes}{}{}  
220 \define@key{LWR@hyperref}{hyperfigures}{}{}  
221 \define@key{LWR@hyperref}{hyperindex}{}{}  
222 \define@key{LWR@hyperref}{encap}{}{}  
223 \define@key{LWR@hyperref}{linkcolor}{}{}  
224 \define@key{LWR@hyperref}{anchorcolor}{}{}  
225 \define@key{LWR@hyperref}{citecolor}{}{}  
226 \define@key{LWR@hyperref}{filecolor}{}{}
```

```

227 \define@key{LWR@hyperref}{urlcolor}{}{}{}
228 \define@key{LWR@hyperref}{menucolor}{}{}{}
229 \define@key{LWR@hyperref}{runcolor}{}{}{}
230 \define@key{LWR@hyperref}{allcolors}{}{}{}
231
232 \DeclareStringOption[false]{backref}[section]
233
234 \DeclareBoolOption{pagebackref}
235
236 \DeclareDefaultOption{}
237
238 \ProcessKeyvalOptions*\relax

```

Maybe load `backref`:

```

239 \ifdefstring{\LWR@hyperref@backref}{section}
240   {\RequirePackage{backref}}
241   {}
242
243 \ifdefstring{\LWR@hyperref@backref}{slide}
244   {\RequirePackage{backref}}
245   {}
246
247 \ifdefstring{\LWR@hyperref@backref}{page}
248   {\RequirePackage{backref}}
249   {}
250
251 \ifLWR@hyperref@pagebackref
252   \RequirePackage{backref}
253 \fi

254 \LetLtxMacro\href\LWR@href
255 \LetLtxMacro\nolinkurl\LWR@nolinkurl
256 \LetLtxMacro\url\LWR@url
257 \LetLtxMacro\phantomsection\LWR@phantomsection

258 \newcommand*{\hyperbaseurl}[1]{}

```

No application for `lwarf`:

```

259 \newcommand*{\HyperDestNameFilter}[1]{#1}
260 \newcommand*{\HyperDestLabelReplace}[1]{#1}
261 \newcommand*{\HyperDestRename}[2]{}

```

No application for `lwarf`:

```

262 \newcommand*{\hyperget}[2]{}

```

`\hyperimage`

Insert an image with alt text:

```

263 \NewDocumentCommand{\HyperImageB}{m +m}{%
264   \LWR@ensuredoingapar%
265   \edef\tmpb{#1}%
266   \LWR@HTMLsanitize@\tmpb%
267   \LWR@htmltag{%
268     img src=\textquotedbl\tmpb\textquotedbl\ %

```

```
269      alt=\textquotedbl#2\textquotedbl\ %
270      class=\textquotedbl{}hyperimage\textquotedbl%
271      }%
272      \LWR@ensuredoingapar%
273      \endgroup%
274 }
275
276 \newrobustcmd*\{hyperimage}{%
277     \begingroup%
278     \LWR@linkcatcodes%
279     \LWR@hyperimageb%
280 }
281
```

\hyperdef {<1: category>} {<2: name>} {<3: text>}

Creates an **HTML anchor** to category.name with the given text.

```
282 \NewDocumentCommand{\LWR@hyperdefb}{m m +m}{%
283     \LWR@ensuredoingapar%
284     \LWR@label@createtag{#1.#2}%
285     #3%
286     \endgroup%
287 }
288
289 \newcommand*\{hyperdef}{%
290     \begingroup%
291     \LWR@linkcatcodes%
292     \LWR@hyperdefb%
293 }
294
```

\LWR@hyperrefb {<1: URL>} {<2: category>} {<3: name>} {<4: text>}

Creates an **HTML link** to URL#category.name with the given text.

```
295 \newcommand{\LWR@hyperreffinish}[1]{%
296     \begingroup%
297     \RenewDocumentCommand{\ref}{s m}{\LWR@print@ref{##2}}%
298     #1%
299     \endgroup%
300     \LWR@htmltag{/a}%
301 }
302
303 \newcommand*\{LWR@hyperrefbb}[3]{%
304     \LWR@htmltag{%
305         a href=\textquotedbl%
306             \detokenize\expandafter{#1}\LWR@hashmark%
307             \detokenize\expandafter{#2}. \detokenize\expandafter{#3}%
308         \textquotedbl%
309         \LWR@addlinktitle%
310     }%
311     \endgroup%
312     \LWR@hyperreffinish%
313 }
314
315 \newrobustcmd*\{LWR@hyperrefb}{%
316     \begingroup%
317     \LWR@linkcatcodes%
318     \LWR@hyperrefbb%
319 }
```

\LWR@hyperrefc

{*label*} {*text*}

Creates text as an HTML link to the LATEX label.

```

320 \NewDocumentCommand{\LWR@hyperrefcb}{O{label}}{%
321     \LWR@startref{#1}%
322     \endgroup%
323     \LWR@hyperreffinish%
324 }%
325
326 \newcommand*{\LWR@hyperrefc}{%
327     \begingroup%
328     \LWR@linkcatcodes%
329     \LWR@hyperrefcb%
330 }

```

\hyperref

{*1: URL*} {*2: category*} {*3: name*} {*4: text*} — or —
 [*1: label*] {*2: text*}

```

331 \DeclareRobustCommand*{\hyperref}{%
332     \LWR@ensuredoingapar%
333     \@ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
334 }

```

\hypertarget

{*name*} {*text*}

Creates an anchor to name with the given text.

```

335 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%
336     \label{LWR-ht-#1}%
337     #2%
338     \endgroup%
339 }%
340
341 \newcommand*{\hypertarget}{%
342     \LWR@ensuredoingapar%
343     \begingroup%
344     \LWR@linkcatcodes%
345     \LWR@hypertargetb%
346 }

```

\hyperlink

{*name*} {*text*}

Creates a link to the anchor created by hypertarget, with the given link text.

Declared because also defined by memoir.

```

347 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%
348     \ifbool{\LWR@insidemathcomment}{%
349         \endgroup%
350         {\LWR@hyperrefcb[LWR-ht-#1]}%
351     }%
352
353 \DeclareDocumentCommand{\hyperlink}{()}{%
354     \LWR@ensuredoingapar%
355     \begingroup%
356     \LWR@linkcatcodes%
357     \LWR@hyperlinkb%
358 }

```

\LWR@nullify@hyperref {*1: URL*} {*2: category*} {*3: name*} {*4: text*} — or — [*1: label*] {*2: text*}

```
359 \newcommand{\LWR@nullify@hyperrefb}[2][]{}
360
361 \newcommand*{\LWR@nullify@hyperref}{%
362     \@ifnextchar[\LWR@nullify@hyperrefb\@fourthoffour%
363 }
```

To nullify in a *lateximage* or *SVG* math. *\hypertarget* must be left active for references to work, and does not harm.

```
364 \appto\LWR@restoreorigformatting{%
365     \LetLtxMacro{\hyperdef}{\thirdofthree}
366     \LetLtxMacro{\hyperlink}{\secondoftwo}
367     \LetLtxMacro{\hyperref}{\LWR@nullify@hyperref}%
368 }
```

* {*label*}

For *HTML*, *\cleveref* is used instead.

```
369 \NewDocumentCommand{\autoref}{s m}{%
370     \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%
371 }
```

{*label*}

For *HTML*, *\cleveref* is used instead.

```
372 \NewDocumentCommand{\autopageref}{s m}{%
373     \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}%
374 }
```

Default names:

```
375 \def\equationautorefname{Equation}%
376 \def\footnoteautorefname{footnote}%
377 \def\itemautorefname{item}%
378 \def\figureautorefname{Figure}%
379 \def\tableautorefname{Table}%
380 \def\partautorefname{Part}%
381 \def\appendixautorefname{Appendix}%
382 \def\chapterautorefname{chapter}%
383 \def\sectionautorefname{section}%
384 \def\subsectionautorefname{subsection}%
385 \def\subsubsectionautorefname{subsubsection}%
386 \def\paragraphautorefname{paragraph}%
387 \def\ subparagraphautorefname{subparagraph}%
388 \def\ FancyVerbLineautorefname{line}%
389 \def\ theoremautorefname{Theorem}%
390 \def\ pageautorefname{page}%
```

{*macroname*} {*TEXstring*}

```
391 \newcommand{\pdfstringdef}[2]{}
```

[*level*] {*text*} {*name*}

```
392 \newcommand{\pdfbookmark}[3]{}%
```

```
\currentpdfbookmark           {⟨text⟩} {⟨name⟩}
393 \newcommand{\currentpdfbookmark}[2]{}

\subpdfbookmark              {⟨text⟩} {⟨name⟩}
394 \newcommand{\subpdfbookmark}[2]{}

\belowpdfbookmark            {⟨text⟩} {⟨name⟩}
395 \newcommand{\belowpdfbookmark}[2]{}

\texorpdfstring              {⟨TEXstring⟩} {⟨PDFstring⟩}
396 \let\texorpdfstring\relax
397 \newcommand{\texorpdfstring}[2]{#1}

\pdfstringdefDisableCommands {⟨commands⟩}
398 \newcommand{\pdfstringdefDisableCommands}[1]{}

\hypercalcbp                {⟨dimen⟩} From hyperref.
399 \def\hypercalcbp#1{%
400   \strip@pt\dimexpr 0.99626401\dimexpr#1\relax\relax
401 }%

\Acrobatmenu                 {⟨menuoption⟩} {⟨text⟩}
402 \newcommand{\Acrobatmenu}[2]{}

\TextField                   [⟨parameters⟩] {⟨label⟩}
403 \DeclareRobustCommand{\TextField}[2][]{}

\CheckBox                    [⟨parameters⟩] {⟨label⟩}
404 \DeclareRobustCommand{\CheckBox}[2][]{}

\ChoiceMenu                  [⟨parameters⟩] {⟨label⟩} {⟨choices⟩}
405 \DeclareRobustCommand{\ChoiceMenu}[3][]{}

\PushButton                   [⟨parameters⟩] {⟨label⟩}
406 \DeclareRobustCommand{\PushButton}[2][]{}

\Submit                      [⟨parameters⟩] {⟨label⟩}
407 \DeclareRobustCommand{\Submit}[2][]{}

\Reset                       [⟨parameters⟩] {⟨label⟩}
408 \DeclareRobustCommand{\Reset}[2][]{}
```

```
\Gauge [⟨parameters⟩] {⟨label⟩}
409 \DeclareRobustCommand{\Gauge}[2][]{}

\LayoutTextField {⟨label⟩} {⟨field⟩}
410 \newcommand*{\LayoutTextField}[2]{}{}

\LayoutChoiceField {⟨label⟩} {⟨field⟩}
411 \newcommand*{\LayoutChoiceField}[2]{}{}

\LayoutCheckField {⟨label⟩} {⟨field⟩}
412 \newcommand*{\LayoutCheckField}[2]{}{}

\MakeRadioField {⟨width⟩} {⟨height⟩}
413 \newcommand*{\MakeRadioField}[2]{}{}

\MakeCheckField {⟨width⟩} {⟨height⟩}
414 \newcommand*{\MakeCheckField}[2]{}{}

\MakeTextField {⟨width⟩} {⟨height⟩}
415 \newcommand*{\MakeTextField}[2]{}{}

\MakeChoiceField {⟨width⟩} {⟨height⟩}
416 \newcommand*{\MakeChoiceField}[2]{}{}

\MakeFieldButton {⟨text⟩}
417 \newcommand{\MakeFieldButton}[1]{}{}
```

File 229 l warp-hyperxmp.sty

§ 338 Package **hyperxmp**

hyperxmp (*Pkg*) hyperxmp is ignored.

for HTML output: Discard all options for l warp-hyperxmp:

```
1 \LWR@ProvidesPackageDrop{hyperxmp}[2018/11/27]
2
3 \define@key{LWR@hyperref}{pdfdate}[]{}
4 \define@key{LWR@hyperref}{pdfmetadata}[]{}
5 \define@key{LWR@hyperref}{pdfcopyright}[]{}
6 \define@key{LWR@hyperref}{pdftype}[]{}
7 \define@key{LWR@hyperref}{pdflicenseurl}[]{}
8 \define@key{LWR@hyperref}{pdfauthortitle}[]{}
9 \define@key{LWR@hyperref}{pdfcaptionwriter}[]{}{}
```

```

10 \define@key{LWR@hyperref}{pdfmetalang}{}{}{}
11 \define@key{LWR@hyperref}{pdfapart}{}{}{}
12 \define@key{LWR@hyperref}{pdfaconformance}{}{}{}
13 \define@key{LWR@hyperref}{pdfuapart}{}{}{}
14 \define@key{LWR@hyperref}{pdfxstandard}{}{}{}
15 \define@key{LWR@hyperref}{pdfsource}{}{}{}
16 \define@key{LWR@hyperref}{pdfdocumentid}{}{}{}
17 \define@key{LWR@hyperref}{pdfinstanceid}{}{}{}
18 \define@key{LWR@hyperref}{pdfversionid}{}{}{}
19 \define@key{LWR@hyperref}{pdfrendition}{}{}{}
20 \define@key{LWR@hyperref}{pdfpublication}{}{}{}
21 \define@key{LWR@hyperref}{pdfpubtype}{}{}{}
22 \define@key{LWR@hyperref}{pdfbytes}{}{}{}
23 \define@key{LWR@hyperref}{pdfnumpages}{}{}{}
24 \define@key{LWR@hyperref}{pdfissn}{}{}{}
25 \define@key{LWR@hyperref}{pdfeissn}{}{}{}
26 \define@key{LWR@hyperref}{pdfisbn}{}{}{}
27 \define@key{LWR@hyperref}{pdfbookedition}{}{}{}
28 \define@key{LWR@hyperref}{pdfpublisher}{}{}{}
29 \define@key{LWR@hyperref}{pdfvolumenum}{}{}{}
30 \define@key{LWR@hyperref}{pdfissuenum}{}{}{}
31 \define@key{LWR@hyperref}{pdfpagerange}{}{}{}
32 \define@key{LWR@hyperref}{pdfdoi}{}{}{}
33 \define@key{LWR@hyperref}{pdfurl}{}{}{}
34 \define@key{LWR@hyperref}{pdfidentifier}{}{}{}
35 \define@key{LWR@hyperref}{pdfsubtitle}{}{}{}
36 \define@key{LWR@hyperref}{pdfpubstatus}{}{}{}
37 \define@key{LWR@hyperref}{pdfcontactaddress}{}{}{}
38 \define@key{LWR@hyperref}{pdfcontactcity}{}{}{}
39 \define@key{LWR@hyperref}{pdfcontactregion}{}{}{}
40 \define@key{LWR@hyperref}{pdfcontactpostcode}{}{}{}
41 \define@key{LWR@hyperref}{pdfcontactcountry}{}{}{}
42 \define@key{LWR@hyperref}{pdfcontactphone}{}{}{}
43 \define@key{LWR@hyperref}{pdfcontactemail}{}{}{}
44 \define@key{LWR@hyperref}{pdfcontacturl}{}{}{}
45 \define@key{LWR@hyperref}{keeppdfinfo}{}{}{}
46 \define@key{LWR@hyperref}{pdfauthor}{}{}{}
47 \define@key{LWR@hyperref}{pdfkeywords}{}{}{}
```

File 230 **l warp-hyphenat.sty**

§ 339 Package **hyphenat**

hyphenat (*Pkg*) hyphenat is emulated during HTML output, while the print-mode version is used inside a *lateximage*.

for HTML output: 1 \LWR@ProvidesPackagePass{hyphenat}[2009/09/02]

```

2 \LetLtxMacro{\LWRHYNAT}{\origtextnhtt\textnhtt}
3 \LetLtxMacro{\LWRHYNAT}{\orignhttfamily\nhttfamily}
4 \LetLtxMacro{\LWRHYNAT}{\orignohyphens\nohyphens}
5 \LetLtxMacro{\LWRHYNAT}{\origbshyp\bshyp}
6 \LetLtxMacro{\LWRHYNAT}{\origfshyp\fshyp}
7 \LetLtxMacro{\LWRHYNAT}{\origdothyp\dothyp}
8 \LetLtxMacro{\LWRHYNAT}{\origcolonhyp\colonhyp}
9 \LetLtxMacro{\LWRHYNAT}{\orighyp\hyp}
```

```

11 \LetLtxMacro{textnhtt}{texttt}
12 \LetLtxMacro{nhttfamily}{ttfamily}
13
14 \renewcommand{\nohyphens}[1]{#1}
15 \renewrobustcmd{\bshyp}{%
16   \ifmmode\backslash else\textbackslash fi%
17 }
18 \renewrobustcmd{\fshyp}{/}
19 \renewrobustcmd{\dothyp}{.}
20 \renewrobustcmd{\colonhyp}{:}
21 \renewrobustcmd{\hyp}{-}
22
23 \appto{\LWR@restoreorigformatting}{%
24 \LetLtxMacro{textnhtt}{\LWRHYNAT@origtextnhtt}%
25 \LetLtxMacro{nhttfamily}{\LWRHYNAT@orignhttfamily}%
26 \LetLtxMacro{\nohyphens}{\LWRHYNAT@orignohyphens}%
27 \LetLtxMacro{\bshyp}{\LWRHYNAT@origbshyp}%
28 \LetLtxMacro{\fshyp}{\LWRHYNAT@origfshyp}%
29 \LetLtxMacro{\dothyp}{\LWRHYNAT@origdothyp}%
30 \LetLtxMacro{\colonhyp}{\LWRHYNAT@origcolonhyp}%
31 \LetLtxMacro{\hyp}{\LWRHYNAT@orighyp}%
32 }

```

File 231 **l warp-idxlayout.sty**

§ 340 Package **idxlayout**

(Emulates or patches code by THOMAS TRITZ.)

idxlayout (Pkg) idxlayout is emulated.

for HTML output: Discard all options for l warp-idxlayout:

```
1 \LWR@ProvidesPackageDrop{idxlayout}[2012/03/30]
```

```
2 \newcommand{\LWR@indexprenote}{}
```

\AtBeginDocument to help with package load order.

```

3 \AtBeginDocument{
4   \preto{\printindex}{}
5
6   \LWR@maybe@orignewpage
7   \LWR@startpars
8
9   \LWR@indexprenote
10
11 }
12 }

13 \newcommand{\setindexprenote}[1]{\renewcommand{\LWR@indexprenote}{#1}}
14 \newcommand*\noindexprenote{\renewcommand{\LWR@indexprenote}{}}
15
16 \newcommand{\idxlayout}[1]{}
17 \newcommand*\indexfont[1]{}
18 \newcommand*\indexjustific[1]{}
19 \newcommand*\indexsubsdelim[1]{}

```

```
20 \newcommand*{\indexstheadcase}{}{}
```

File 232 l warp-ifoddpage.sty**§ 341 Package ifoddpage**

(Emulates or patches code by MARTIN SCHARRER.)

ifoddpage (Pkg) ifoddpage is emulated.

for HTML output: Discard all options for l warp-ifoddpage:

```
1 \LWR@ProvidesPackageDrop{ifoddpage}[2016/04/23]

2 \newif\ifoddpage
3
4 \newif\ifoddpageoroneside
5
6 \DeclareRobustCommand{\checkoddpage}{\oddpage=true\oddpageoroneside=false}
7
8 \def\oddpage@page{1}
9
10 \def\@ifoddpage{%
11     \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpageoroneside{%
15     \expandafter\@firstoftwo
16 }
```

File 233 l warp-imakeidx.sty**§ 342 Package imakeidx**

(Emulates or patches code by ENRICO GREGORIO.)

imakeidx (Pkg) imakeidx is patched for use by l warp.

letter headings When using *makeindex*, to match the print and HTML output's display of index letter headings, specify the l warp.ist style:

```
\makeindex[options={-s l warp.ist}]
```

(For HTML the l warp.ist style is used automatically, which displays letter headings. When using *xindy* the default style also displays letter headings.)

index setup See section 8.6.19 for how to setup l warpmk to process the indexes with imakeidx, both with and without shell escape.

for HTML output: 1 \LWR@ProvidesPackagePass{imakeidx}[2016/10/15]

Use the new HTML suffix:

```
2 \catcode`\_=12%
```

```

3 \define@key{imki}{name}{\def\imki@name{\#1_html}}
4 \catcode`\_=8%

```

\printindex

The HTML version of \printindex:

```

5 \catcode`\_=12%
6
7 \renewcommand*{\printindex}[1][\imki@jobname]{%
8 \LWR@maybe@orignewpage%
9 \LWR@startpars%
10 \ifstreq{\#1}{\imki@jobname}{%
11   \@ifundefined{\#1@idxfile}{%
12     \imki@error{\#1}%
13   }{%
14     \imki@putindex{\#1}%
15   }%
16 }{%
17   \@ifundefined{\#1_html@idxfile}{\imki@error{\#1_html}}{\imki@putindex{\#1_html}}%
18 }%
19 }%
20
21 \catcode`\_=8%

```

\@index

The HTML version of \@index:

```

22 \VerifyCommand[lwarf][imakeidx]{\@index}{443B697F3326243540BE3FB7665606F6}
23
24 \catcode`\_=12%
25
26 \def\@index[#1]{%
27   \ifstreq{\#1}{\imki@jobname}{%
28     \%%
29       \@ifundefined{\#1@idxfile}{%
30         \PackageWarning{lwarf-imakeidx}{Undefined index file '#1'}%
31         \begingroup
32           \@sanitize
33             \imki@nowrindex%
34         }%
35     }%
36     \%%
37     \edef\@idxfile{\#1}%
38     \begingroup
39       \@sanitize
40         \@wrindex\@idxfile%
41     }%
42   }%
43   \%%
44   \@ifundefined{\#1_html@idxfile}{%
45     \%%
46       \PackageWarning{lwarf-imakeidx}{Undefined index file '#1_html'}%
47       \begingroup
48         \@sanitize
49           \imki@nowrindex%
50       }%
51     }%
52     \%%
53     \edef\@idxfile{\#1_html}%
54     \begingroup
55       \@sanitize
56         \@wrindex\@idxfile%

```

```

56      }%
57      }%
58 }
59
60 \catcode`\_=8%

```

\item
\subitem
\subsubitem

HTML versions of \item, etc.:

```

61 \appto\theindex{%
62   \LetLtxMacro\item\LWR@indexitem%
63   \LetLtxMacro\subitem\LWR@indexsubitem%
64   \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
65 }

```

\imki@wrindexentrysplit
\imki@wrindexentryunique

{<file>} {<entry>} {<page>}
{<file>} {<entry>} {<page>}

While writing index entries, adds an HTML label, and writes the label's index instead of the page number:

```

66 \VerifyCommand[lwarp][imakeidx]{\imki@wrindexentrysplit}{D8ABE70A4355F52E36723AFAB74F71E7}
67
68 \renewcommand\imki@wrindexentrysplit[3]{%
69   \addtocounter{\LWR@autoindex}{1}%
70   \expandafter\protected@write\csname#1@idxfile\endcsname{ }%
71     {\string\indexentry{\#2}{\arabic{\LWR@autoindex}}}}%

```

The label is assigned after the file write to avoid conflict with cleveref.

```

72   \label{\LWRindex-\arabic{\LWR@autoindex}}%
73 }
74
75 \VerifyCommand[lwarp][imakeidx]{\imki@wrindexentryunique}{9131E144394D273F316D03FA91BA0E2B}
76
77 \renewcommand\imki@wrindexentryunique[3]{%
78   \addtocounter{\LWR@autoindex}{1}%
79   \protected@write\@indexfile{ }%
80     {\string\indexentry{\#1}{\#2}{\arabic{\LWR@autoindex}}}}%

```

The label is assigned after the file write to avoid conflict with cleveref.

```

81   \label{\LWRindex-\arabic{\LWR@autoindex}}%
82 }

```

\LWR@imki@setxdydefopts

Sets the *xindy* HTML options, ignoring the user's settings.

```

83 \newcommand*\LWR@imki@setxdydefopts{%
84   \edef\imki@options{ \space %
85     -M \space \LWR@xindyStyle\space %
86     -L \space \LWR@xindyLanguage\space %
87     -C \space \LWR@xindyCodepage\space %
88   }%
89 }

```

\LWR@imki@setdefopts

{<user options>}

Sets the `HTML` options, added to the user's settings, depending on whether `makeindex` or `xindy` are used.

For `makeindex`, the user's choice is ignored, and only the `l warp` version is used.
(Only one style at a time is possible.)

For `xindy`, multiple modules may be specified, and the `l warp` version is appended.

```
90 \newcommand*\LWR@imki@setdefopts[1]{%
91 \ifblank{#1}{%
92   \edef\imki@options{\space -s \space \LWR@makeindexStyle \space}%
93   \ifdefstring{\imki@progdefault}{xindy}{\LWR@imki@setxdydefopts}{}%
94   \ifdefstring{\imki@progdefault}{texindy}{\LWR@imki@setxdydefopts}{}%
95   \ifdefstring{\imki@progdefault}{truexindy}{\LWR@imki@setxdydefopts}{}%
96 }{%
97   \edef\imki@options{\space #1 \space}%
98 }%
99 }
```

\imki@makeindex

Use the new `HTML` options:

```
100 \VerifyCommand[l warp][imakeidx]{\imki@makeindex}{83AEF6DF7A13F7D0565457DFB83D42B5}
101
102 \xpatchcmd{\imki@makeindex}
103   {\let\imki@options\space}
104   {\LWR@imki@setdefopts{}}
105   {}
106   {\LWR@patcherror{imakeidx}{makeindex}}
```

Use the new `HTML` options.

```
107 \define@key{imki}{options}{\LWR@imki@setdefopts{#1}}
```

\imki@resetdefaults

Use the new `HTML` options:

```
108 \VerifyCommand[l warp][imakeidx]{\imki@resetdefaults}{3D417615569AC35F199A3FBD03B640E3}
109
110 \xpatchcmd{\imki@resetdefaults}
111   {\def\imki@options{}}
112   {\LWR@imki@setdefopts{}}
113   {}
114   {\LWR@patcherror{imakeidx}{resetdefaults}}
```

`theindex` was already defined `\AtBeginDocument` by the `l warp` core, so it must be redefined here similarly, but patched for `imakeidx`:

Env `theindex`

```
115 \AtBeginDocument{
116 \renewenvironment*{theindex}{%
117   \imki@maybeaddtotoc
118   \imki@indexlevel{\indexname}
119   \LetLtxMacro\item\LWR@indexitem%
120   \LetLtxMacro\subitem\LWR@indexsubitem%
121   \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
122 }{}%
123 }% AtBeginDocument
```

Update to the new defaults:

```
124 \imki@resetdefaults
```

Update to the new patches:

\AtBeginDocument is because \@wrindex is previously defined as \AtBeginDocument in the l warp core.

```

125 \ifimki@splitindex
126   \let\imki@startidx\imki@startidxunique
127   \AtBeginDocument{\let@\wrindex\imki@wrindexunique}
128   \let\imki@putindex\imki@putindexunique
129   \let\imki@wrindexentry\imki@wrindexentryunique
130   \let\imki@startidxsplit@\undefined
131   \let\imki@wrindexsplit@\undefined
132   \let\imki@putindexsplit@\undefined
133 \else
134   \let\imki@startidx\imki@startidxsplit
135   \AtBeginDocument{\let@\wrindex\imki@wrindexsplit}
136   \let\imki@putindex\imki@putindexsplit
137   \let\imki@wrindexentry\imki@wrindexentrysplit
138   \let\imki@startidxunique@\undefined
139   \let\imki@wrindexunique@\undefined
140   \let\imki@putindexunique@\undefined
141 \fi

```

File 234 l warp-impnattypo.sty

§ 343 Package **impnattypo**

impnattypo (*Pkg*) impnattypo is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{impnattypo}[2019/03/04]

File 235 l warp-index.sty

§ 344 Package **index**

(Emulates or patches code by DAVID M. JONES.)

index (*Pkg*) index is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{index}[2004/01/20]

Use \theLWR@autoindex instead of \thepage. \@tempswattrue is used to force an immediate write to the index file instead of waiting until the end of the page.

```

2 \VerifyCommand[l warp][index]{\newindex}{F714216FA78BCC8DB70B7BB92BE05F3C}
3
4 \xpatchcmd{\newindex}
5   {\x@newindex[\thepage]}
6   {%
7     \@tempswattrue%
8     \x@newindex[\theLWR@autoindex]%
9   }
10  {}%
11  {\LWR@patcherror{index}{newindex}}

```

```

12
13 \VerifyCommand[l warp][index]{\renewindex}{B81B08BFE7A2F5CA7D84D4A5A40E7A44}
14
15 \xpatchcmd{\renewindex}
16   {\x@renewindex[thepage]}
17   {%
18     \@tempswatru e%
19     \x@renewindex[theLWR@autoindex]%
20   }
21   {}
22   {\LWR@patcherror{index}{renewindex}}

```

Patched to set a new autoindex:

```

23 \VerifyCommand[l warp][index]{\@wrindex}{C58C10ACFC42D711D0DA8F4759BA951D}
24
25 \xpatchcmd{\@wrindex}
26   {\begingroup}
27   {%
28     \addtocounter{LWR@autoindex}{1}%          l warp
29     \label{LWRindex-\arabic{LWR@autoindex}}%    l warp
30     \begingroup%
31   }
32   {}
33   {\LWR@patcherror{index}{@wrindex}}

```

\AtBeginDocument l warp core \lets \@wrindex to \LWR@wrindex. Since the index package has been loaded, \let to its version instead:

```

34 \let\LWR@index@\wrindex@\wrindex
35
36 \AtBeginDocument{
37 \let@\wrindex\LWR@index@\wrindex
38 }

```

Modified to add \index@prologue:

```

39 \AtBeginDocument{
40 \renewenvironment*{\theindex}{%
41   \LWR@indexsection{\indexname}%
42   \ifx\index@prologue\empty\else
43     \index@prologue
44     \bigskip
45   \fi
46   \LetLtxMacro\item{\LWR@indexitem}%
47   \LetLtxMacro\subitem{\LWR@indexsubitem}%
48   \LetLtxMacro\subsubitem{\LWR@indexsubsubitem}%
49 }{}%
50 }% AtBeginDocument

```

Disabled:

```

51 \def\@showidx#1{}
52 \let\@texttop\relax
53 \renewcommand*{\raggedbottom}={}
54 \renewcommand*{\flushbottom}={}
55 \renewcommand*{\markboth}[2]{}
56 \renewcommand*{\markright}[1]{}

```

File 236 l warp-inputtrc.sty**§ 345 Package **inputtrc****

(Emulates or patches code by UWE LÜCK.)

inputtrc (Pkg) **inputtrc** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{inputtrc}[2012/10/10]

Patched to remove extraneous spaces, which sometimes showed up in logos inside a `\teximage`.

```
2 \VerifyCommand[l warp][inputtrc]{\IT@prim@input}{03F74081468CFB6308896BDEB61D1E23}
3
4 \renewcommand*{\IT@prim@input}[1]{%
5   \typeout{\IT@indent\IT@currfile INPUTTING #1}%
6 %% ... TODO: option to write to '.log' only.
7   \xdef\IT@filestack{\{\IT@currfile\}\IT@filestack}%
8   \xdef\IT@currfile{#1}%
9   \expandafter \gdef\expandafter \IT@indent\expandafter{%
10     \IT@indent \IT@indent@unit}%
11   %@input#1%                                l warp
12   \expandafter\IT@pop@indent\IT@indent    @nil% l warp
13   \expandafter\IT@pop@file   \IT@filestack@nil% l warp
14   \IT@maybe@returnmessage% v0.2            l warp
15 }
```

File 237 l warp-intopdf.sty**§ 346 Package **intopdf****

intopdf (Pkg) **intopdf** is emulated.

The filespec, MIME type, and description are ignored for now.

for HTML output: 1 \LWR@ProvidesPackageDrop{intopdf}[2019/05/28]

```
2 \NewDocumentCommand{\attachandlink}{o m o m}{%
3   \LWR@href{#2}{#5}%
4 }
```

File 238 l warp-isomath.sty**§ 347 Package **isomath****

(Emulates or patches code by GÜNTER MILDE.)

isomath (Pkg) **isomath** is used as-is for SVG math, and emulated for MATHJAX.

 **MATHJAX sans** MATHJAX does not provide a sans math font, so sans is typeset as roman.

for HTML output: 1 \LWR@ProvidesPackagePass{isomath}[2012/09/04]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\let\mathbf{\boldsymbol}}
4 \CustomizeMathJax{\let\mathsf{\mathbf{not\;sans}}}
5 \CustomizeMathJax{\let\mathsf{\mathbf{not\;sans}}}
6 \CustomizeMathJax{\let\mathit{\mathbf{not\;sans}}}
7 \CustomizeMathJax{\let\mathbf{\mathbf{not\;sans}}}
8 \CustomizeMathJax{\let\mathbf{\mathbf{not\;sans}}}
9 \CustomizeMathJax{\let\mathbf{\mathbf{not\;sans}}}
10 \CustomizeMathJax{\let\mathbf{\mathbf{not\;sans}}}
11 \CustomizeMathJax{\let\mathbf{\mathbf{not\;sans}}}
12 \end{warpMathJax}
```

File 239 **l warp-isotope.sty**

§ 348 Package **isotope**

(Emulates or patches code by HEIKO BAUKE.)

isotope (Pkg) **isotope** is patched for use by **l warp** with **svg** math, and emulated for **MATHJAX**.

for HTML output: 1 \LWR@ProvidesPackagePass{isotope}[2011/08/26]

```

2 \newcommand{\LWR@HTML@isotope@two}[2][]{%
3   \renewcommand{\isotope@atomicnumber}{\#1}%
4   \edef\LWR@isotope@alttag{%
5     \textbackslash%
6     \textbackslash{}isotope%
7     [\isotope@nucleonnumber]\%
8     [\isotope@atomicnumber]\%
9     \{\#2\}%
10    \textbackslash{}%
11  }%
12  \ifbool{mathjax}{%
13    {\LWR@isotope@alttag}%
14    \% SVG%
15    \m@th%
16    \LWR@subsingle dollar*%
17    \% alt tag%
18    \LWR@isotope@alttag%
19  }%
20  \isotope\% add'l hashing%
21  \% contents%
22  \settowidth@\tempdimb\%
23  \ensuremath{\scriptstyle\isotope@nucleonnumber}\%
24 }%
25  \settowidth@\tempdimc\%
26  \ensuremath{\scriptstyle\isotope@atomicnumber}\%
27 }%
28 \ifdim\@tempdimb<\@tempdimc\@tempdimb=\@tempdimc\fi%
29 \ensuremath{%
30   \{}%
31   ^{\{\makebox[\@tempdimb][r]{%
32     \ensuremath{\%
```

```

33           \scriptstyle\isotope@nucleonnumber%
34           }% ensuremath
35       }%
36       _{\makebox[\tempdimb][r]{%
37           \ensuremath{%
38               \scriptstyle\isotope@atomicnumber%
39           }% ensuremath
40       }%
41           \isotopestyle{#2}%
42           }% ensuremath
43           }% contents
44           }% SVG
45   \endgroup%
46 }%
47 \LWR@formatted{\isotope@two}
48
49 \begin{warpMathJax}
50 \CustomizeMathJax{%
51     \newcommand{\LWRisotopetwo}[2][]{%
52         {%
53             \vphantom{\mathrm{#2}}%
54             {}^{\LWRisopenucleonnumber}_{\mathrm{#1}}%
55             \mathrm{#2}%
56         }%
57     }%
58 }
59
60 \CustomizeMathJax{%
61     \newcommand{\isotope}[1][]{%
62         \def\LWRisopenucleonnumber{\#1}%
63         \LWRisotopetwo%
64     }%
65 }
66 \end{warpMathJax}

```

File 240 **lwarf-jurabib.sty**

§349 Package **jurabib**

(Emulates or patches code by JENS BERGER.)

jurabib (*Pkg*) jurabib is patched for use by lwarf.

for **HTML output**: 1 \LWR@ProvidesPackagePass{jurabib}{2004/01/25}

```

2 \renewrobustcmd{\jblangle}{\textless}
3
4 \renewrobustcmd{\jbrangle}{\textgreater}
5
6 \VerifyCommand[lwarf][jurabib]{\jb@biblaw@item}{F93545B67E684787264DA900F185A25A}
7
8 \ renewcommand*\jb@biblaw@item{%
9     \hspace{0.5em}%
10    \$\triangleright\$%
11    \HTMLunicode{25B7}      lwarf%
12    \hspace{0.5em}%
13 }

```

```
14
15 \VerifyCommand[lwarf][jurabib]{\jbarchsig}{8D821FA370CBD0A61325D5A278E0A369}
16
17 \renewrobustcmd{\jbarchsig}[2]{%
18     \ifjbweareinbib
19         \settowidth{\jb@subarchitemwidth}{\jbsamesubarchindent+\#1}%
20         \setlength{\jb@subarchentrywidth}{\textwidth-\jb@subarchitemwidth-4em}%
21 %        \begin{tabular}{@{}p{\jb@subarchitemwidth}@{}j{\jb@subarchentrywidth}@{}}%
22 %            #1\ifjb@dot\nskip\nskip\nskip.\fi
23 %            &
24 %            \quad\lwarf
25 %            \ifthenelse{\equal{\#2}{}}{\jbarchnamformat{\#2}}{%
26 %                \end{tabular}
27 %            \fi
28 }%
29
30
31 \VerifyCommand[lwarf][jurabib]{\jb@do@post@item}{4FD79AF40E8460C52306C33CF825B63F}
32
33 \xpatchcmd{\jb@do@post@item}
34     {\begin{tabular}{p{\jb@biblaw@item@width}j{\jb@biblaw@entry@width}}}
35     {}
36     {}
37     {\LWR@patcherror{jurabib}{jb@do@post@item 1}}
38
39 \xpatchcmd{\jb@do@post@item}
40     {\multicolumn{2}{p{\columnwidth}}{\jb@name}}
41     {\jb@name}
42     {}
43     {\LWR@patcherror{jurabib}{jb@do@post@item 2}}
44
45 \xpatchcmd{\jb@do@post@item}
46     {\jb@biblaw@item & \jb@@fulltitle}
47     {\jb@biblaw@item \quad \jb@@fulltitle}
48     {}
49     {\LWR@patcherror{jurabib}{jb@do@post@item 3}}
50
51 \xpatchcmd{\jb@do@post@item}
52     {\end{tabular}}
53     {}
54     {}
55     {\LWR@patcherror{jurabib}{jb@do@post@item 4}}
56
57 \xpatchcmd{\jb@do@post@item}
58     {\begin{minipage}[t]{\bibnumberwidth}}
59     {}
60     {}
61     {\LWR@patcherror{jurabib}{jb@do@post@item 5}}
62
63 \xpatchcmd{\jb@do@post@item}
64     {\end{minipage}}
65     {\quad}
66     {}
67     {\LWR@patcherror{jurabib}{jb@do@post@item 6}}
```

File 241 **l warp-karnaugh-map.sty**

§ 350 Package **karnaugh-map**

(Emulates or patches code by MATTIAS JACOBSSON.)

karnaugh-map (*Pkg*) karnaugh-map is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{karnaugh-map}[2017/02/20]

This patch is needed only because l warp changes the definition of \&, and the original uses \ifnum to compare 0 with \&. It is hard to patch this environment, so the entire thing is redefined here, with the l warp modifications identified in comments.

```

2 \VerifyEnvironment[l warp][karnaugh-map]{karnaugh-map}
3   {FFA0270032620E79C8344E63AEDBF925}{08A76B622DBB34F033284513743C5F8C}
4
5 \RenewDocumentEnvironment{karnaugh-map}{s 0{4} 0{4} 0{1} 0{$X_1X_0$} 0{$X_3X_2$} 0{$X_5X_4$}} {%
6   \begingroup
7     % store map size {[START]
8     \renewcommand{\@karnaughmap@var@mapsizex@}{#2}%
9     \renewcommand{\@karnaughmap@var@mapsizey@}{#3}%
10    \renewcommand{\@karnaughmap@var@mapsizez@}{#4}%
11    % [END]}
12    % determinate if markings should be color or black and white
13    \IfBooleanTF{#1}{%
14      % should be black and white
15      \renewcommand{\@karnaughmap@var@bw@}{1}%
16    }{%
17      % should be color
18      \renewcommand{\@karnaughmap@var@bw@}{0}%
19    }%
20    %
21    % find matching matrix template and alignment parameters {[START]
22    \newcommand{\@karnaughmap@local@matrixtemplate@}{0}' is considered as missing matrix template
23    \newcommand{\@karnaughmap@local@maprealignmentx@}{0}%
24    \newcommand{\@karnaughmap@local@maprealignmenty@}{0}%
25    \ifnum\@karnaughmap@var@mapsizex@=\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsizez@=221
26      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
27        \&          0 \&          1 \& \phantom{0} \\
28        0 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \&          \\
29        1 \& |(000010)| \phantom{0} \& |(000011)| \phantom{0} \&          \\
30        \phantom{0} \&          \&          \&          \\
31      }%
32    \fi
33    \ifnum\@karnaughmap@var@mapsizex@=\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsizez@=241
34      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
35        \&          0 \&          1 \& \phantom{00} \\
36        00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \&          \\
37        01 \& |(000010)| \phantom{0} \& |(000011)| \phantom{0} \&          \\
38        11 \& |(000110)| \phantom{0} \& |(000111)| \phantom{0} \&          \\
39        10 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \&          \\
40        \phantom{00} \&          \&          \&          \\
41      }%

```

```

42      \fi
43  \ifnum`@karnaughmap@var@mapsizex@`@karnaughmap@var@mapsizey@`@karnaughmap@var@mapsizex@=421
44      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
45          \&          00 \&          01 \&          11 \&          10 \& \phantom{0}
46          0 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(000010)|
47          1 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(000110)|
48          \phantom{00} \&          \&          \&          \&          \&
49      }%
50  \fi
51  \ifnum`@karnaughmap@var@mapsizex@`@karnaughmap@var@mapsizey@`@karnaughmap@var@mapsizex@=441
52      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
53          \&          00 \&          01 \&          11 \&          10 \& \phantom{0}
54          00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(000010)|
55          01 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(000110)|
56          11 \& |(001100)| \phantom{0} \& |(001101)| \phantom{0} \& |(001111)| \phantom{0} \& |(001110)|
57          10 \& |(001000)| \phantom{0} \& |(001001)| \phantom{0} \& |(001011)| \phantom{0} \& |(001010)|
58          \phantom{00} \&          \&          \&          \&          \&
59      }%
60  \fi
61  \ifnum`@karnaughmap@var@mapsizex@`@karnaughmap@var@mapsizey@`@karnaughmap@var@mapsizex@=442
62      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
63          \&          00 \&          01 \&          11 \&          10 \& \phantom{0}
64          00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(000010)|
65          01 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(000110)|
66          11 \& |(001100)| \phantom{0} \& |(001101)| \phantom{0} \& |(001111)| \phantom{0} \& |(001110)|
67          10 \& |(001000)| \phantom{0} \& |(001001)| \phantom{0} \& |(001011)| \phantom{0} \& |(001010)|
68          \phantom{00} \&          \&          \&          \&          \&
69      }%
70      \renewcommand{\@karnaughmap@local@maprealignmentx@}{2.5}%
71  \fi
72  \ifnum`@karnaughmap@var@mapsizex@`@karnaughmap@var@mapsizey@`@karnaughmap@var@mapsizex@=444
73      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
74          \&          00 \&          01 \&          11 \&          10 \& \phantom{0}
75          00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(000010)|
76          01 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(000110)|
77          11 \& |(001100)| \phantom{0} \& |(001101)| \phantom{0} \& |(001111)| \phantom{0} \& |(001110)|
78          10 \& |(001000)| \phantom{0} \& |(001001)| \phantom{0} \& |(001011)| \phantom{0} \& |(001010)|
79          \phantom{00} \&          \&          \&          \&          \&
80          00 \& |(100000)| \phantom{0} \& |(100001)| \phantom{0} \& |(100011)| \phantom{0} \& |(100010)|
81          01 \& |(100100)| \phantom{0} \& |(100101)| \phantom{0} \& |(100111)| \phantom{0} \& |(100110)|
82          11 \& |(101100)| \phantom{0} \& |(101101)| \phantom{0} \& |(101111)| \phantom{0} \& |(101110)|
83          10 \& |(101000)| \phantom{0} \& |(101001)| \phantom{0} \& |(101011)| \phantom{0} \& |(101010)|
84          \phantom{00} \&          \&          \&          \&          \&
85      }%
86      \renewcommand{\@karnaughmap@local@maprealignmentx@}{2.5}%
87      \renewcommand{\@karnaughmap@local@maprealignmenty@}{-2.5}%
88  \fi
89  % [END]
90  % test if a matrix template is found or not(aka "\@karnaughmap@local@matrixtemplate@" equals to '0')
91  \ifdefstring{\@karnaughmap@local@matrixtemplate@}{0}{% lwarp
92 %   \ifnum0=\@karnaughmap@local@matrixtemplate@% original
93 %     print error if no template could be found
94 %     \PackageError{lwarp-karnaugh-map}{%
95 %       Can not find a template fitting your specification
96 %       (\@karnaughmap@var@mapsizex@`@space x \@karnaughmap@var@mapsizex@`@space x
97 %       \@karnaughmap@var@mapsizex@)%
98 %     }{%
99 %       Existing templates have the following dimensions:
100 %       2x2x1, 2x4x1, 4x2x1, 4x4x1, 4x4x2, and 4x4x4.
101 %     }%

```

```

102 %      \fi    original
103 }{\relax}%
104 \begin{tikzpicture}
105   % grid
106   % for all dimensions
107 \draw[color=black, ultra thin] (0,0) grid (@karnaughmap@var@mapsizex@, @karnaughmap@var@mapsizey@)
108   % when there are 2 sub maps
109 \ifnum@karnaughmap@var@mapsizex@=2
110   \draw[color=black, ultra thin] (5,0) grid (9,4);
111 \fi
112   % when there are 4 sub maps
113 \ifnum@karnaughmap@var@mapsizex@=4
114   \draw[color=black, ultra thin] (5,0) grid (9,4);
115   \draw[color=black, ultra thin] (0,-5) grid (4,-1);
116   \draw[color=black, ultra thin] (5,-5) grid (9,-1);
117 \fi
118   % labels
119   % for all dimensions
120 \node[above] at (@karnaughmap@var@mapsizex@*0.5, @karnaughmap@var@mapsizey@+0.9) {\small{#5}};
121 \node[left] at (-0.9, @karnaughmap@var@mapsizey@*0.5) {\small{#6}};
122   % when there are 2 sub maps
123 \ifnum@karnaughmap@var@mapsizex@=2
124   \node[above] at (7,4.9) {\small{#5}};
125   % extra sub maps labels
126   \node[below] at (2,-0.1) {\small{#7$=0$}};
127   \node[below] at (7,-0.1) {\small{#7$=1$}};
128 \fi
129   % when there are 4 sub maps
130 \ifnum@karnaughmap@var@mapsizex@=4
131   \node[above] at (7,4.9) {\small{#5}};
132   \node[left] at (-0.9,-3) {\small{#6}};
133   % extra sub maps labels
134   \node[below] at (2,-0.1) {\small{#7$=00$}};
135   \node[below] at (7,-0.1) {\small{#7$=01$}};
136   \node[below] at (2,-5.1) {\small{#7$=10$}};
137   \node[below] at (7,-5.1) {\small{#7$=11$}};
138 \fi
139   % data
140 \matrix[
141   matrix of nodes,
142   ampersand replacement=&,
143   column sep={1cm,between origins},
144   row sep={1cm,between origins},
145 ] at (@karnaughmap@var@mapsizex@*0.5+@karnaughmap@local@maprealignmentx@, @karnaughmap@var@map
146   @karnaughmap@local@matrixtemplate@%
147 };
148 }{
149 \end{tikzpicture}
150 \endgroup
151 }

```

File 242 **lwarf-keyfloat.sty**

§ 351 Package **keyfloat**

(Emulates or patches code by BRIAN DUNN.)

keyfloat (Pkg) **keyfloat** is supported with a considerable amount of hacking. (It's a mashup of

`l warp, keyfloat, and toCDATA.)`

-  **keywrap** If placing a `\keyfig[H]` inside a `keywrap`, use an absolute width for `\keyfig`, instead of `lw`-proportional widths. (The `[H]` option forces the use of a `minipage`, which internally adjusts for a virtual 6-inch wide `minipage`, which then corrupts the `lw` option.)

For wrapped figures, overhang and number of lines are ignored.

```
for HTML output: 1 \LWR@ProvidesPackagePass{keyfloat}[2019/09/23]
2
3 \IfPackageAtLeastTF{keyfloat}{2019/09/23}{\relax}{
4   \PackageError{l warp-keyfloat}
5   {%
6     The keyfloat package is out of date.\MessageBreak
7     Update to keyfloat v2.01 2019/09/23 or later%
8   }
9   {%
10    Please update the keyfloat package. It's worth it!%
11  }
12 }
```

After `keyfloat` has loaded:

```
13 \AtBeginDocument{

\KFLT@LWR@hook@boxouter  Integration for keyfloat.
(Hook) [keyfloat]
14 \providecommand*\KFLT@LWR@hook@boxouter(){}
15
16 \renewcommand*\KFLT@LWR@hook@boxouter{%
17   \ifbool{KFLT@keywrap}{%
18     {%
19       \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{%
20         \setlength{\ linewidth}{6in}%
21         \setlength{\textwidth}{6in}%
22         \setlength{\textheight}{9in}%
23       }{}%
24     }%
25   \normalcolor%
26 }

\KFLT@LWR@hook@keysubfloats  Integration for keyfloat.
(Hook) [keyfloat]
27 \LetLtxMacro\KFLT@LWR@hook@keysubfloats\KFLT@LWR@hook@boxouter

\KFLT@LWR@hook@keyfloatsminipag  Integration for keyfloat.
(Hook) [keyfloat]
28 \let\KFLT@LWR@hook@keyfloatsminipage\relax
29 \let\endKFLT@LWR@hook@keyfloatsminipage\relax
30 \newenvironment*{KFLT@LWR@hook@keyfloatsminipage}[1]{}{}
```

```
\KFLT@LWR@hook@keyfloats  Integration for keyfloat.
(Hook) [keyfloat]
31 \LetLtxMacro\KFLT@LWR@hook@keyfloats\KFLT@LWR@hook@boxouter
32
33 \VerifyCommand[l warp][keyfloat]{\KFLT@maybeendfloatrow}{ABD652AC104E3CF79D66B92BC7E4E2D7}
34
```

```

35 \renewcommand*\{KFLT@maybeendfloatrow}{%
36     \ifnumless{\value{KFLT@thiscol}}{\value{KFLT@numcols}}{%
37         {}% thiscol < numcols
38         {}% >=
39         \defcounter{KFLT@thiscol}{0}%
40     }%
41 }%
42
43 \VerifyCommand[l warp][keyfloat]{\KFLT@trackrows}{17F751691BBEDD3459F494B072DC2F11}
44
45 \renewcommand{\KFLT@trackrows}{%
46 }%

```

If are nested inside a keyfloats or a subfloat:

```

47     \ifboolexpr{%
48         test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}} or%
49         bool{KFLT@inkeysubfloats}%
50     }%
51     {}% nested

```

Tracks row start and end:

```
52     \KFLT@maybestartfloatrow%
```

Possibly fill space between columns:

```

53     \ifnumgreater{\value{KFLT@thiscol}}{1}{%
54         {}%
55         \hfill%
56     }%
57     {}%
58 }% nested
59 {}% not nested
60 }

61 \VerifyCommand[l warp][keyfloat]{\KFLT@onefigureimage}{C14A907612A43563404BEEC3F9FB10A8}
62
63 \RenewDocumentCommand{\KFLT@onefigureimage}{m}{%
64 }%
65 \LWR@traceinfo{\KFLT@onefigureimage}%
66 % \begin{lrbox}{\KFLT@envbox}%
67 \ifthenelse{\NOT\equal{\KFLT@lw}{}}{%
68 }%

69     \ifdimgreater{\KFLT@h}{0pt}{%
70         {}%
71         \KFLT@frame{%
72             \includegraphics{%
73                 [%
74                     scale=\KFLT@s,%
75                     width=\KFLT@imagedwidth,%
76                     height=\KFLT@h,%
77                     \KFLT@keepaspectratio,%
78                 ]{\#1}%
79             }%
80         }%
81     }%

```

```
82          \KFLT@frame{\includegraphics%
83             [scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}%
84         }%
85     }%
86     {%
87       \ifthenelse{\dimtest{\KFLT@w}{>}{0pt}}{%
88         {%
89           \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}{%
90             {%
91               \KFLT@frame{\includegraphics[%%
92                 scale=\KFLT@s,%%
93                 width=\KFLT@imagewidth,%%
94                 height=\KFLT@h,%%
95                 \KFLT@keepaspectratio,%%
96               ]{#1}}%
97             }%
98             {%
99               \KFLT@frame{\includegraphics[%%
100                scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}%
101             }%
102             {%
103               \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}{%
104                 {%
105                   \KFLT@frame{\includegraphics[%%
106                     scale=\KFLT@s,height=\KFLT@h]{#1}}%
107                   }%
108                 }%
109                 {%
110                   \KFLT@frame{\includegraphics[%%
111                     scale=\KFLT@s]{#1}}%
112                   }%
113                 }%
114               }%
115 % \end{lrbox}%
116 % \unskip%
117 % \KFLT@findenvboxwidth%
118 % \begin{turn}{\KFLT@r}%
119 % \KFLT@frame{\usebox{\KFLT@envbox}}%
120 % \unskip%
121 % \end{turn}%
122 \LWR@traceinfo{KFLT@onefigureimage: done}%
123 }

124 \VerifyEnvironment[lwarp][keyfloat][KFLT@boxinner]%
125   {44BA9E3F4EA1B3E533F47377BA47F145}{590DE3AADA8DF85EF6E1589B41F0D4F6}%
126
127 \RenewDocumentEnvironment{KFLT@boxinner}{}%
128 {%
129   \LWR@traceinfo{KFLT@boxinner}%
130   \LWR@stopars%
131   \minipagefullwidth%
132   \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
133     \fminipage{\KFLT@imagewidth}%
134   }%
135   \minipage{\KFLT@imagewidth}%
136 }%
137 }
138 {%
139   \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
140     \endfminipage%
```

```

141      }{%
142          \endminipage%
143      }%
144      \LWR@startpars%
145      \LWR@traceinfo{KFLT@boxinner: done}%
146 }

147 \newcommand*{\LWR@KFLT@settextalign}[1]{%
148     \def\LWR@KFLT@textalign{justify}%
149     \ifcsstring{KFLT@#1textalign}{\centering}%
150         {\def\LWR@KFLT@textalign{center}}%
151     {}%
152     \ifcsstring{KFLT@#1textalign}{\raggedleft}%
153         {\def\LWR@KFLT@textalign{right}}%
154     {}%
155     \ifcsstring{KFLT@#1textalign}{\raggedright}%
156         {\def\LWR@KFLT@textalign{left}}%
157     {}%
158 }
159
160 \VerifyCommand[lwarf][keyfloat]{\KFLT@addtext}{C086CC818525A9B03EDEACC02609A3BE}
161
162 \renewcommand{\KFLT@addtext}[1]
163 {%

```

Is there text to add?

```

164     \ifcsempty{KFLT@#1t}%
165     {}% no text
166     {% text to add
167         % local

```

Add some space, then create a <div> to contain the text:

```

168     \addvspace{\smallskipamount}%
169     \LWR@KFLT@settextalign{#1}%
170     \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%

```

Set the alignment and some text parameters:

```

171 %         \csuse{KFLT@#1textalign}%
172 %         \footnotesize%
173 %         \setlength{\parskip}{1.5ex}%
174 %         \setlength{\parindent}{0em}%

```

Typeset the actual text:

```

175     \csuse{KFLT@#1t}%

```

Close it all out with a little more space:

```

176         \end{BlockClass}%
177         \par\addvspace{2ex}%
178     }% local
179     }% text to add
180 }
181
182 \IfPackageLoadedTF{tocdata}

```

```

183 {}
184 {%
185   tocdata not loaded
186   \newcommand*{\LWR@KFLT@setnamealign}[1]{%
187     \def\LWR@KFLT@textalign{justify}%
188     \ifstrequal{#1}{\centering}%
189       {\def\LWR@KFLT@textalign{center}}%
190       {}%
191     \ifstrequal{#1}{\raggedleft}%
192       {\def\LWR@KFLT@textalign{right}}%
193       {}%
194     \ifstrequal{#1}{\raggedright}%
195       {\def\LWR@KFLT@textalign{left}}%
196       {}%
197   }
198
199 \VerifyCommand[lwarf][keyfloat]{\KFLT@@addartisttext}{35968ED08D9BE09FF1B45E1E40AFE9A7}
200
201 \renewcommand*{\KFLT@@addartisttext}[3]{%

```

Add space and create the name inside a <div>:

```

202 %      \addvspace{\medskipamount}%
203 %      \begin{minipage}{\linewidth}%
204 %        \LWR@KFLT@setnamealign{#3}%
205 %        \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%

```

Text alignment is #3, and depends on artist or author:

```
206 %      #3%
```

#1 is empty or 'subgrp'
#2 is empty for artist, 'u' for author:

```

207      \footnotesize\textsc{%
208        \KFLT@optionalname{\csuse{\KFLT@#1a#2p}}%
209        \KFLT@optionalname{\csuse{\KFLT@#1a#2f}}%
210        \csuse{\KFLT@#1a#2l}%
211        \csuse{\KFLT@#1a#2s}%
212      }%
213 %      \end{minipage}%
214      \end{BlockClass}%
215 %      \par\addvspace{2ex}%
216    }
217
218 }% tocdata not loaded

```

Env KFLT@marginfloat

```

[<offset>] {<type>}
219 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}
220 {%
221   \uselengthunit{PT}%
222   \LWR@BlockClassWP%
223   {float:right; width:2in; margin:10pt}%
224   {}%
225   (note)%
226   {margininblock}%
227   \renewcommand*{@capttype}{#2}%
228   \minipage{1.2\LWR@usersmarginparwidth}%

```

```

229     \setlength{\marginparwidth}{.95\LWR@usersmarginparwidth}%
230 }
231 {%
232     \endminipage%
233     \endLWR@BlockClassWP%
234 }

235 \DeclareDocumentEnvironment{marginfigure}{o}
236     {\begin{KFLT@marginfloat}{figure}}
237     {\end{KFLT@marginfloat}}
238
239 \DeclareDocumentEnvironment{marginable}{o}
240     {\begin{KFLT@marginfloat}{table}}
241     {\end{KFLT@marginfloat}}


Env keywrap
    {< width >} {< keyfloat >}
242 \DeclareDocumentEnvironment{keywrap}{m +m}
243 {%
244     \begin{LWR@setvirtualpage}*
245     \setlength{\LWR@templengthone}{#1}%
246     \begin{LWR@BlockClassWP}%
247         {%
248             float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
249             margin:10pt%
250         }%
251         {}%
252         (note)%
253         {marginblock}%
254         \setlength{\linewidth}{.95\LWR@templengthone}%
255         \booltrue{KFLT@keywrap}%
256         #2%
257         \end{LWR@BlockClassWP}%
258         \end{LWR@setvirtualpage}%
259     }%
260 }

261 }% AtBeginDocument

```

File 243 l warp-keystroke.sty

§ 352 Package **keystroke**

(Emulates or patches code by WERNER FINK.)

keystroke (*Pkg*) **keystroke** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{keystroke}[2010/04/23]

```

2 \newcommand*{\LWR@HTML@keystroke}[1]{%
3     \InlineClass{keystroke}{#1}%
4 }%
5 \LWR@formatted{keystroke}%
6
7
8 \newcommand*{\LWR@HTML@Return}{\keystroke{\HTMLUnicode{021A9}}}

```

```
9 \LWR@formatted{Return}
10
11 \newcommand*{\LWR@HTML@BSpace}{\keystroke{\HTMLunicode{027FB}}}
12 \LWR@formatted{BSpace}
13
14 \newcommand*{\LWR@HTML@Tab}{\keystroke{| \HTMLunicode{021C6}|}}
15 \LWR@formatted{Tab}
16
17 \newcommand*{\LWR@HTML@UArrow}{\keystroke{\HTMLunicode{02191}}}
18 \LWR@formatted{UArrow}
19
20 \newcommand*{\LWR@HTML@DArrow}{\keystroke{\HTMLunicode{02193}}}
21 \LWR@formatted{DArrow}
22
23 \newcommand*{\LWR@HTML@LArrow}{\keystroke{\HTMLunicode{02190}}}
24 \LWR@formatted{LArrow}
25
26 \newcommand*{\LWR@HTML@RArrow}{\keystroke{\HTMLunicode{02192}}}
27 \LWR@formatted{RArrow}
28
29 % Preserves the language options:
30 \VerifyCommand[l warp][keystroke]{\Shift}{F86359C350A5BC1D264A4997F86C2DC2}
31
32 \LetLtxMacro{\LWR@HTML@Shift}{\Shift}
33 \xpatchcmd{\LWR@HTML@Shift}
34   {$\Uparrow$}
35   {\HTMLunicode{21D1}}
36   {}
37   {}
38 \LWR@formatted{Shift}
39
40 \VerifyCommand[l warp][keystroke]{\PgUp}{CBB81948EFB5940DAD2B51644BB4B2BF}
41
42 \LetLtxMacro{\LWR@HTML@PgUp}{\PgUp}
43 \xpatchcmd{\LWR@HTML@PgUp}
44   {$\uparrow$}
45   {\HTMLunicode{2191}}
46   {}
47   {}
48 \LWR@formatted{PgUp}
49
50 \VerifyCommand[l warp][keystroke]{\PgDown}{B55C849642BE07904975EC7E4D649CAD}
51
52 \LetLtxMacro{\LWR@HTML@PgDown}{\PgDown}
53 \xpatchcmd{\LWR@HTML@PgDown}
54   {$\downarrow$}
55   {\HTMLunicode{2193}}
56   {}
57   {}
58 \LWR@formatted{PgDown}
```

File 244 l warp-kpfonts.sty

§ 353 Package **kpfonts**

(Emulates or patches code by CHRISTOPHE CAIGNAERT.)

kpfonts (*Pkg*) kpfonts is used as-is for SVG math, and is emulated for MATHJAX.

 **limitations** The MATHJAX emulation honors the options `uprightRoman` for `\D` only, `classicReIm`, `frenchstyle` for Greek only, `upright` for Greek only, `uprightgreeks`, `slantedGreeks`, and `mathcalallasscript`.

The dedicated macros for Greek work correctly.

svg math should appear the same as the printed output.

```

for HTML output: 1 \LWR@ProvidesPackage{kpfonts}[2010/08/20]
2
3 \LWR@infoprocessingmathjax{kpfonts}
4
5 \LWR@origRequirePackage{l warp-common-mathjax-newpxtxmath}
6
7 \LWR@origRequirePackage{l warp-common-mathjax-letters}
8
9 \begin{warpMathJax}
10
11 \ifkp@calasscr
12   \CustomizeMathJax{\let\LRorigmathscr\mathscr}
13   \CustomizeMathJax{\let\LRorigmathcal\mathcal}
14   \CustomizeMathJax{\let\mathscr\LRorigmathcal}
15   \CustomizeMathJax{\let\mathcal\LRorigmathscr}
16 \fi
17
18 \ifkp@upgrk % lowercase
19   \LWR@mathjax@addgreek@l@up{}{}
20   \LWR@mathjax@addgreek@l@it{other}{}%
21 \else
22   \LWR@mathjax@addgreek@l@up{other}{}%
23 \fi
24
25 \ifkp@slGrk
26   \LWR@mathjax@addgreek@u@it*{}{}
27   \LWR@mathjax@addgreek@u@up*{other}{}%
28   \LWR@mathjax@addgreek@u@up*{var}{}%
29 \else
30   \LWR@mathjax@addgreek@u@it*{other}{}%
31   \LWR@mathjax@addgreek@u@it*{var}{}%
32 \fi
33
34 \LWR@mathjax@addgreek@u@up*{}{up}
35 \LWR@mathjax@addgreek@l@up{}{up}
36
37 \LWR@mathjax@addgreek@u@it*{}{sl}
38 \LWR@mathjax@addgreek@l@it{}{sl}
39
40 \CustomizeMathJax{\newcommand{\partialisl}{\mathord{\text{\scriptsize\texttt{\&#x1D715}}}}}
41 \CustomizeMathJax{\let\partialup\uppartial}% not upright
42
43 \ifkp@oldReIm
44 \else
45   \CustomizeMathJax{\renewcommand{\Re}{\mathfrak{Re}}}
46   \CustomizeMathJax{\renewcommand{\Im}{\mathfrak{Im}}}
47 \fi
48
49 \ifkp@Dcommand
50   \ifkp@upRm%
51     \CustomizeMathJax{
52       \def\mathclose{\mathclose{}}\mathrm{d}\#1\}

```

```

53      }
54      \else
55          \CustomizeMathJax{
56              \def\mathclose{\,\mathit{d}\}#1}
57      }
58  \fi
59 \fi
60
61 \CustomizeMathJax{\let\pounds\mathsterling}
62 \CustomizeMathJax{\let\kppounds\mathsterling}
63
64 \CustomizeMathJax{\newcommand{\mathup}[1]{\mathrm{#1}}}% never sans
65 \CustomizeMathJax{\let\mathupright\mathup}
66
67 \end{warpMathJax}
```

File 245 **lwarf-kpfonts-otf.sty**

§ 354 Package **kpfonts-otf**

(Emulates or patches code by DANIEL FLIPO.)

kpfonts-otf (*Pkg*) **kpfonts-otf** is used as-is for SVG math, and is emulated for MATHJAX.

⚠ **limitations** The MATHJAX emulation honors the options `fancyReIm`, `mathcal`, `frenchstyle` for Greek only, and `mathcalscript`.

Also see the options for `unicode-math`, which is loaded by **kpfonts-otf**.

The `unicode-math` dedicated macros for Greek work correctly.

⚠ **\mathversion** The MATHJAX emulation does not change with the use of `\mathversion`. Whatever emulation is established at the begin of the document will remain.

SVG math should appear the same as the printed output.

for HTML output:

```

1 \LWR@ProvidesPackagePass{kpfonts-otf}[2020/06/20]
2
3 \LWR@infoprocessingmathjax{kpfonts-otf}
4
5 \LWR@origRequirePackage{lwarf-common-mathjax-nonunicode}
6
7 \LWR@origRequirePackage{lwarf-common-mathjax-letters}
8
9 \begin{warpMathJax}
10
11 \ifkp@calasscr
12     \CustomizeMathJax{\let\mathscr\mathcal}
13 \else
14     \CustomizeMathJax{\let\mathcal\mathscr}
15 \fi
16
17 \ifkp@frenchstyle
18     \LWR@mathjax@addgreek@l@up{}{}
19     \LWR@mathjax@addgreek@u@up*{}{}
20 \fi
21
22 \ifkp@oldReIm
```

```
23     \CustomizeMathJax{\renewcommand{\Re}{\mathfrak{Re}}}
24     \CustomizeMathJax{\renewcommand{\Im}{\mathfrak{Im}}}
25 \else
26 \fi
27
28 \ifkp@Dcommand
29     \CustomizeMathJax{
30         \def\mathclose{\,\mathrm{d}}#1}
31     }
32 \fi
33
34 \CustomizeMathJax{\let\varint\int}
35 \CustomizeMathJax{\let\variint\int}
36 \CustomizeMathJax{\let\variiint\iiint}
37 \CustomizeMathJax{\let\variiiint\iiiiint}
38 \CustomizeMathJax{\let\varidotsint\idotsint}
39
40 \CustomizeMathJax{\newcommand{\varointclockwise}{%
41     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x2939\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x0222E\}}%
42 }%
43
44 \CustomizeMathJax{\newcommand{\ointclockwise}{%
45     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x0222F\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x2938\}}%
46 }%
47
48 \CustomizeMathJax{\newcommand{\oiintclockwise}{%
49     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x2939\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x0222F\}}%
50 }%
51
52 \CustomizeMathJax{\newcommand{\varoiintclockwise}{%
53     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x0222F\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x2938\}}%
54 }%
55
56 \CustomizeMathJax{\newcommand{\varoointclockwise}{%
57     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x2939\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x0222F\}}%
58 }%
59
60 \CustomizeMathJax{\newcommand{\oiintclockwise}{%
61     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x02230\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x2938\}}%
62 }%
63
64 \CustomizeMathJax{\newcommand{\oiictrclockwise}{%
65     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x2939\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x02230\}}%
66 }%
67
68 \CustomizeMathJax{\newcommand{\varoictrclockwise}{%
69     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x02230\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x2938\}}%
70 }%
71
72 \CustomizeMathJax{\newcommand{\varoictrclockwise}{%
73     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x2939\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x02230\}}%
74 }%
75
76 \CustomizeMathJax{\newcommand{\sqint}{%
77     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x2A16\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x2A16\}}%
78 }%
79
80 \CustomizeMathJax{\newcommand{\sqiint}{%
81     \mathop{\text{\!{\scriptsize\texttt{unicode}}}\{x2A16\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x2A16\}}\!\!\text{\!{\scriptsize\texttt{unicode}}}\{x2A16\}}%
82 }}
```

```
83  
84 \CustomizeMathJax{\let\widearc\overparen}  
85 \CustomizeMathJax{\let\widearcarrow\overrightarrowarrow}  
86 \CustomizeMathJax{\let\overrightarc\overrightarrowarrow}  
87  
88 \end{warpMathJax}
```

File 246 l warp-layaureo.sty**§ 355 Package layaureo**

layaureo (*Pkg*) *layaureo* is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{layaureo}[2004/09/16]

File 247 l warp-layout.sty**§ 356 Package layout**

layout (*Pkg*) *layout* is ignored.

for HTML output: Discard all options for *l warp-layout*:

```
1 \LWR@ProvidesPackageDrop{layout}[2014/10/28]
```

```
2 \NewDocumentCommand{\layout}{s}{}{}
```

File 248 l warp-layouts.sty**§ 357 Package layouts**

layouts (*Pkg*) *layouts* is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{layouts}[2009/09/02]

```
2 \newif\ifoddpagelayout  
3   \oddpagelayouttrue  
4 \newif\iftwocolumnlayout  
5   \twocolumnlayoutfalse  
6 \newif\ifdrawmarginpars  
7   \drawmarginparstrue  
8 \newif\ifdrawparameters  
9   \drawparameterstrue  
10 \newif\iflistaspara  
11   \listasparatrue  
12 \newif\ifruninhead  
13   \runinheadfalse  
14 \newif\ifprintparameters  
15   \printparameterstrue  
16 \newif\ifdrawdimensions  
17   \drawdimensionsfalse
```

```
18 \newif\ifprintheadings
19   \printheadingstrue
20 \newcommand{\testdrawdimensions}{}
21 \newcommand{\testprintparameters}{}
22 \newcommand{\setlabelfont}[1]{}
23 \newcommand{\setparameterfont}[1]{}
24 \newcommand{\setvaluetextsize}[1]{}
25 \newcommand{\setLayoutscale}[1]{}
26 \newcommand{\setuplayouts}{}
27 \newcommand{\printinunitsof}[1]{}
28 \newcommand{\prntlen}[1]{}
29 \newcommand{\trypaperwidth}[1]{}
30 \newcommand{\trypaperheight}[1]{}
31 \newcommand{\tryhoffset}[1]{}
32 \newcommand{\tryvoffset}[1]{}
33 \newcommand{\trytopmargin}[1]{}
34 \newcommand{\tryheadheight}[1]{}
35 \newcommand{\tryheadsep}[1]{}
36 \newcommand{\trytextheight}[1]{}
37 \newcommand{\tryfootskip}[1]{}
38 \newcommand{\tryoddsidemargin}[1]{}
39 \newcommand{\tryevensidemargin}[1]{}
40 \newcommand{\trytextwidth}[1]{}
41 \newcommand{\trymarginparsep}[1]{}
42 \newcommand{\trymarginparwidth}[1]{}
43 \newcommand{\trymarginparpush}[1]{}
44 \newcommand{\trycolumnsep}[1]{}
45 \newcommand{\trycolumnseprule}[1]{}
46 \newcommand{\setfootbox}[2]{}
47 \newcommand{\currentpage}{}
48 \newcommand{\drawpage}{(draw page)}
49 \newcommand{\pagediagram}{(page diagram)}
50 \newcommand{\pagedesign}{(page design)}
51 \newcommand{\pagevalues}{(page values)}
52 \newcommand{\trystockwidth}[1]{}
53 \newcommand{\trystockheight}[1]{}
54 \newcommand{\trytrimedge}[1]{}
55 \newcommand{\trytrimtop}[1]{}
56 \newcommand{\tryuppermargin}[1]{}
57 \newcommand{\tryspinemargin}[1]{}
58 \newcommand{\currentstock}{}
59 \newcommand{\drawstock}{(draw stock)}
60 \newcommand{\stockdiagram}{(stock diagram)}
61 \newcommand{\stockdesign}{(stock design)}
62 \newcommand{\stockvalues}{(stock values)}
63 \newcommand{\tryitemindent}[1]{}
64 \newcommand{\trylabelwidth}[1]{}
65 \newcommand{\trylabelsep}[1]{}
66 \newcommand{\tryleftmargin}[1]{}
67 \newcommand{\tryrightmargin}[1]{}
68 \newcommand{\trylistparindent}[1]{}
69 \newcommand{\trytopsep}[1]{}
70 \newcommand{\tryparskip}[1]{}
71 \newcommand{\trypartopsep}[1]{}
72 \newcommand{\tryparsep}[1]{}
73 \newcommand{\tryitemsep}[1]{}
74 \newcommand{\currentlist}{}
75 \newcommand{\drawlist}{(draw list)}
76 \newcommand{\listdiagram}{(list diagram)}
77 \newcommand{\listdesign}{(list design)}
```

```
78 \newcommand{\listvalues}{(list values)}
79 \newcommand{\tryfootins}[1]{}
80 \newcommand{\tryfootnotesep}[1]{}
81 \newcommand{\tryfootnotebaseline}[1]{}
82 \newcommand{\tryfootruleheight}[1]{}
83 \newcommand{\tryfootrulefrac}[1]{}
84 \newcommand{\currentfootnote}{}
85 \newcommand{\drawfootnote}{(draw footnote)}
86 \newcommand{\footnotediagram}{(footnote diagram)}
87 \newcommand{\footnotedesign}{(footnote design)}
88 \newcommand{\footnotevalues}{(footnote values)}
89 \newcommand{\tryparindent}[1]{}
90 \newcommand{\tryparlinewidth}[1]{}
91 \newcommand{\tryparbaselineskip}[1]{}
92 \newcommand{\currentparagraph}{}
93 \newcommand{\drawparagraph}{(draw paragraph)}
94 \newcommand{\paragraphdiagram}{(paragraph diagram)}
95 \newcommand{\paragraphdesign}{(paragraph design)}
96 \newcommand{\paragraphvalues}{(paragraph values)}
97 \newcommand{\trybeforeskip}[1]{}
98 \newcommand{\tryafterskip}[1]{}
99 \newcommand{\tryindent}[1]{}
100 \newcommand{\currentheading}{}
101 \newcommand{\drawheading}[1]{(draw heading)}
102 \newcommand{\headingdiagram}[1]{(heading diagram)}
103 \newcommand{\headingdesign}[1]{(heading design)}
104 \newcommand{\headingvalues}{(heading values)}
105 \newcommand{\trytextfloatsep}[1]{}
106 \newcommand{\tryfloatsep}[1]{}
107 \newcommand{\tryintextsep}[1]{}
108 \newcommand{\trytopfigrule}[1]{}
109 \newcommand{\trybotfigrule}[1]{}
110 \newcommand{\currentfloat}{}
111 \newcommand{\drawfloat}{(draw float)}
112 \newcommand{\floatdiagram}{(float diagram)}
113 \newcommand{\floatdesign}{(float design)}
114 \newcommand{\floatvalues}{(float values)}
115 \newcommand{\trytotalnumber}[1]{}
116 \newcommand{\trytopnumber}[1]{}
117 \newcommand{\trybottomnumber}[1]{}
118 \newcommand{\trytopfraction}[1]{}
119 \newcommand{\trytextfraction}[1]{}
120 \newcommand{\trybottomfraction}[1]{}
121 \newcommand{\currentfloatpage}{}
122 \newcommand{\drawfloatpage}{(draw floatpage)}
123 \newcommand{\floatpagediagram}{(floatpage diagram)}
124 \newcommand{\floatpagedesign}{(floatpage design)}
125 \newcommand{\floatpagevalues}{(floatpage values)}
126 \newcommand{\trytocindent}[1]{}
127 \newcommand{\trytocnumwidth}[1]{}
128 \newcommand{\trytoclinewidth}[1]{}
129 \newcommand{\trytocrmarg}[1]{}
130 \newcommand{\trytocpnumwidth}[1]{}
131 \newcommand{\trytocdotsep}[1]{}
132 \newcommand{\currenttoc}{}
133 \newcommand{\drawtoc}{(draw toc)}
134 \newcommand{\tocdiagram}{(toc diagram)}
135 \newcommand{\tocdesign}{(toc design)}
136 \newcommand{\tocvalues}{(toc values)}
137 \newcommand{\drawaspread}[8][0]{(a spread)}
```

```
138 \newcommand{\drawfontframe}[1]{(font frame)}
139 \newcommand{\drawfontframelabel}[1]{}
```

File 249 **l warp-leading.sty**

§ 358 Package **leading**

leading (*Pkg*) **leading** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{leading}[2008/12/11]
2 \newcommand\leading[1]{}

File 250 **l warp-leftidx.sty**

§ 359 Package **leftidx**

(Emulates or patches code by HARALD HARDERS.)

leftidx (*Pkg*) **leftidx** works as-is with SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{leftidx}[2003/09/24]
2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\leftidx}[3]{\vphantom{#2}\#1#2#3}}
4 \CustomizeMathJax{\newcommand{\ltrans}[1]{\leftidx{\mathrm{t}}{\!#1}{}}}
5 \end{warpMathJax}

File 251 **l warp-letterspace.sty**

§ 360 Package **letterspace**

(Emulates or patches code by R SCHLICHT.)

letterspace (*Pkg*) **letterspace** is a subset of microtype, which is pre-loaded by **l warp**. All user options and macros are ignored and disabled.

for HTML output: Discard all options for **l warp-letterspace**:

```
1 \LWR@ProvidesPackageDrop{letterspace}[2018/01/14]  
2 \newcommand*\lsstyle{}  
3 \newcommand\textls[2][]{  
4 \def\textls#1#{}  
5 \newcommand*\lslig[1]{#1}}

---


```

File 252 **l warp-lettrine.sty**

§ 361 Package **lettrine**

(Emulates or patches code by DANIEL FLIPO.)

lettrine (*Pkg*) **lettrine** is emulated.

for HTML output: Discard all options for l warp–lettrine:

```
1 \LWR@ProvidesPackageDrop{lettrine}[2018-08-28]
```

The initial letter is in a of class **lettrine**, and the following text is in a of class **lettrinetext**. \lettrine [*keys*] {*letter*} {*additional text*}

```
2 \DeclareDocumentCommand{\lettrine}{o m m}{%
3   \InlineClass{lettrine}{#2}\InlineClass{lettrinetext}{#3} % extra space
4 }
5
6 \newcounter{DefaultLines}
7 \setcounter{DefaultLines}{2}
8 \newcounter{DefaultDepth}
9 \newcommand*\DefaultOptionsFile{\relax}
10 \newcommand*\DefaultLoversize{0}
11 \newcommand*\DefaultLraise{0}
12 \newcommand*\DefaultLhang{0}
13 \newdimen\DefaultFindent
14 \setlength{\DefaultFindent}{\z@}
15 \newdimen\DefaultNindent
16 \setlength{\DefaultNindent}{0.5em}
17 \newdimen\DefaultSlope
18 \setlength{\DefaultSlope}{\z@}
19 \newdimen\DiscardVskip
20 \setlength{\DiscardVskip}{0.2\p@}
21 \newif\ifLettrineImage
22 \newif\ifLettrineOnGrid
23 \newif\ifLettrineRealHeight
24
25 \newcommand*\LettrineTextFont{\scshape}
26 \newcommand*\LettrineFontHook{}
27 \newcommand*\LettrineFont[1]{\InlineClass{lettrine}{#1}}
28 \newcommand*\LettrineFontEPS[1]{\includegraphics[height=1.5ex]{#1}}
```

File 253 **l warp–libertinust1math.sty**

§ 362 Package **libertinust1math**

(Emulates or patches code by MICHAEL SHARPE.)

libertinust1math (*Pkg*) **libertinust1math** is used as-is for SVG math, and is emulated for MATHJAX.

The MATHJAX emulation honors `frenchmath` for Greek but not Latin characters, and `slantedGreek`, `uprightGreek`, and `ISO` also adjust Greek characters. MATHJAX cannot yet honor options for adjusting Latin characters.

The dedicated macros for upright and italic Greek letters do work correctly.

Some of the symbol font macros such as `\mathsf{bf}` do not use a sans font because MATHJAX does not yet have sans Greek.

SVG math honors all font choices, and should appear the same as the printed output.

for HTML output:

```
1 \LWR@ProvidesPackagePass{libertinust1math}[2020/06/10]
2
3 \LWR@infoprocessingmathjax{libertinust1math}

4 \LWR@origRequirePackage{lwarf-common-mathjax-letters}
5
6 \begin{warpMathJax}
7
8 \ifibus@slantedG
9     \LWR@mathjax@addgreek@u@it*{}{}
10 \else
11     \LWR@mathjax@addgreek@u@up*{}{}
12 \fi
13
14 \LWR@mathjax@addgreek@u@it*{}{it}
15 \LWR@mathjax@addgreek@u@up*{}{up}
16 \LWR@mathjax@addgreek@u@up*{}{up}
17
18 \ifibus@frenchm
19     \LWR@mathjax@addgreek@l@up{}{}
20 \else
21     \LWR@mathjax@addgreek@l@it{}{}
22 \fi
23
24 \LWR@mathjax@addgreek@l@it{}{it}
25 \LWR@mathjax@addgreek@l@up{}{up}
26 \LWR@mathjax@addgreek@l@up{up}{}{up}
27
28 \CustomizeMathJax{\let\uppartial\partial}% not upright

29 \CustomizeMathJax{\let\mathsfbf\mathbf}% not sans
30 % \CustomizeMathJax{\newcommand{\mathsfbf}[1]{%
31 %     \mmlToken{mi}[mathvariant="bold-sans-serif"]#1}% not greek
32 % }% not sans
33
34 % \CustomizeMathJax{\newcommand{\mathbfit}[1]{\boldsymbol{#1}}}
35 \CustomizeMathJax{\let\mathbfit\boldsymbol}

36 % \CustomizeMathJax{\newcommand{\mathsfbf}[1]{\boldsymbol{#1}}}% not sans
37 \CustomizeMathJax{\let\mathsfbf\mathbf}% not sans
38 % \CustomizeMathJax{\newcommand{\mathsfbf}[1]{%
39 %     \mmlToken{mi}[mathvariant="sans-serif-bold-italic"]#1}% not greek
40 % }% not sans

41 \CustomizeMathJax{\let\mathsfit\mathit}% not sans
42 % \CustomizeMathJax{\newcommand{\mathsfit}[1]{%
43 %     \mmlToken{mi}[mathvariant="sans-serif-italic"]#1}% not greek
44 % }%
45
46 \CustomizeMathJax{\let\vectorssym\mathbf}
47 \CustomizeMathJax{\let\matrixsym\mathbf}
48 \CustomizeMathJax{\let\tensorsym\mathsfbf}
49 \CustomizeMathJax{\let\mathboldsans\mathsfbf}
50 \CustomizeMathJax{\let\mathbold\mathbf}
```

lwarf_mathjax.txt adds \left/\right support for delimiters.

```
51 \CustomizeMathJax{\let\dlb\lBrack}
52 \CustomizeMathJax{\let\drb\rBrack}
53
54 \CustomizeMathJax{\let\sqrtsign\sqrt}
55
56 \CustomizeMathJax{\let\smallintsl\smallint}
57 \CustomizeMathJax{\newcommand{\smallintsl}{\mathop{\text{\scriptsize\texttt{unicode{x222C}}}}\limits}}
58 \CustomizeMathJax{\newcommand{\smalliiintsl}{\mathop{\text{\scriptsize\texttt{unicode{x222D}}}}\limits}}
59 \CustomizeMathJax{\newcommand{\smalliiiintsl}{\mathop{\text{\scriptsize\texttt{unicode{x2A0C}}}}\limits}}
60 \CustomizeMathJax{\newcommand{\smallointsl}{\mathop{\text{\scriptsize\texttt{unicode{x222E}}}}\limits}}
61 \CustomizeMathJax{\newcommand{\smalloointsl}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
62
63 \CustomizeMathJax{\let\smallintup\smallint}
64 \CustomizeMathJax{\newcommand{\smallintup}{\mathop{\text{\scriptsize\texttt{unicode{x222C}}}}\limits}}
65 \CustomizeMathJax{\newcommand{\smalliiintup}{\mathop{\text{\scriptsize\texttt{unicode{x222D}}}}\limits}}
66 \CustomizeMathJax{\newcommand{\smalliiiintup}{\mathop{\text{\scriptsize\texttt{unicode{x2A0C}}}}\limits}}
67 \CustomizeMathJax{\newcommand{\smallointup}{\mathop{\text{\scriptsize\texttt{unicode{x222E}}}}\limits}}
68 \CustomizeMathJax{\newcommand{\smalloointup}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
69
70 \CustomizeMathJax{\let\intslop\int}
71 \CustomizeMathJax{\newcommand{\intslop}{\mathop{\text{\scriptsize\texttt{unicode{x222C}}}}\limits}}
72 \CustomizeMathJax{\newcommand{\iiintslop}{\mathop{\text{\scriptsize\texttt{unicode{x222D}}}}\limits}}
73 \CustomizeMathJax{\newcommand{\iiiintslop}{\mathop{\text{\scriptsize\texttt{unicode{x2A0C}}}}\limits}}
74 \CustomizeMathJax{\let\ointslop\oint}
75 \CustomizeMathJax{\newcommand{\ointslop}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
76 \CustomizeMathJax{\newcommand{\oiintslop}{\mathop{\text{\scriptsize\texttt{unicode{x2230}}}}\limits}}
77
78 \CustomizeMathJax{\let\intupop\int}
79 \CustomizeMathJax{\newcommand{\intupop}{\mathop{\text{\scriptsize\texttt{unicode{x222C}}}}\limits}}
80 \CustomizeMathJax{\newcommand{\iiintupop}{\mathop{\text{\scriptsize\texttt{unicode{x222D}}}}\limits}}
81 \CustomizeMathJax{\newcommand{\iiiintupop}{\mathop{\text{\scriptsize\texttt{unicode{x2A0C}}}}\limits}}
82 \CustomizeMathJax{\let\ointupop\oint}
83 \CustomizeMathJax{\newcommand{\ointupop}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
84 \CustomizeMathJax{\newcommand{\oiintupop}{\mathop{\text{\scriptsize\texttt{unicode{x2230}}}}\limits}}
85
86 \CustomizeMathJax{\newcommand{\smallint}{\mathop{\text{\scriptsize\texttt{unicode{x222C}}}}\limits}}
87 \CustomizeMathJax{\newcommand{\smalliiint}{\mathop{\text{\scriptsize\texttt{unicode{x222D}}}}\limits}}
88 \CustomizeMathJax{\newcommand{\smalliiiint}{\mathop{\text{\scriptsize\texttt{unicode{x2A0C}}}}\limits}}
89 \CustomizeMathJax{\newcommand{\smalloint}{\mathop{\text{\scriptsize\texttt{unicode{x222E}}}}\limits}}
90 \CustomizeMathJax{\newcommand{\smallooint}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
91
92 \CustomizeMathJax{\let\inttop\int}
93 \CustomizeMathJax{\newcommand{\inttop}{\mathop{\text{\scriptsize\texttt{unicode{x222C}}}}\limits}}
94 \CustomizeMathJax{\newcommand{\iiinttop}{\mathop{\text{\scriptsize\texttt{unicode{x222D}}}}\limits}}
95 \CustomizeMathJax{\newcommand{\iiiinttop}{\mathop{\text{\scriptsize\texttt{unicode{x2A0C}}}}\limits}}
96 \CustomizeMathJax{\let\ointtop\oint}
97 \CustomizeMathJax{\newcommand{\ointtop}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
98 \CustomizeMathJax{\newcommand{\oiinttop}{\mathop{\text{\scriptsize\texttt{unicode{x2230}}}}\limits}}
99
100 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
101
102 \CustomizeMathJax{\newcommand{\bigcupdot}{\mathop{\text{\scriptsize\texttt{unicode{x2A03}}}}\limits}}
103 \CustomizeMathJax{\newcommand{\bigsqcap}{\mathop{\text{\scriptsize\texttt{unicode{x2A05}}}}\limits}}
104 \CustomizeMathJax{\newcommand{\xsol}{\mathop{\text{\scriptsize\texttt{unicode{x29F8}}}}\limits}}
105 \CustomizeMathJax{\newcommand{\xbsol}{\mathop{\text{\scriptsize\texttt{unicode{x29F9}}}}\limits}}
106 \CustomizeMathJax{\let\prodop\prod}
107 \CustomizeMathJax{\let\coprodop\coprod}
108 \CustomizeMathJax{\let\sumop\sum}
109 \CustomizeMathJax{\let\bigwedgeop\bigwedge}
110 \CustomizeMathJax{\let\bigveeop\bigvee}
```

```
111 \CustomizeMathJax{\let\bigcapop\bigcap}
112 \CustomizeMathJax{\let\bigcupop\bigcup}
113 \CustomizeMathJax{\let\xsolop\xsol}
114 \CustomizeMathJax{\let\xbsolop\xbsol}
115 \CustomizeMathJax{\let\bigodotop\bigodot}
116 \CustomizeMathJax{\let\bigoplusop\bigoplus}
117 \CustomizeMathJax{\let\bigotimesop\bigotimes}
118 \CustomizeMathJax{\let\bigcupdotop\bigcupdot}
119 \CustomizeMathJax{\let\biguplusop\biguplus}
120 \CustomizeMathJax{\let\bigsqcapop\bigsqcap}
121 \CustomizeMathJax{\let\bigsqcupop\bigsqcup}
122
123 \CustomizeMathJax{\newcommand{\ovhook}[1]{\mathord{\#1\unicode{x00309}}}}
124 \CustomizeMathJax{\newcommand{\candra}[1]{\mathord{\#1\unicode{x00310}}}}
125 \CustomizeMathJax{\newcommand{\oturnedcomma}[1]{\mathord{\#1\unicode{x00312}}}}
126 \CustomizeMathJax{\newcommand{\ocommatopright}[1]{\mathord{\#1\unicode{x00315}}}}
127 \CustomizeMathJax{\newcommand{\droang}[1]{\mathord{\#1\unicode{x0031A}}}}
128 \CustomizeMathJax{\newcommand{\leftharpoonaccent}[1]{\mathord{\#1\unicode{x20D0}}}}
129 \CustomizeMathJax{\newcommand{\rightharpoonaccent}[1]{\mathord{\#1\unicode{x20D1}}}}
130 \CustomizeMathJax{\newcommand{\leftarrowaccent}[1]{\mathord{\#1\unicode{x20D0}}}}
131 \CustomizeMathJax{\let\rightarrowarrowaccent\vec}
132
133 \CustomizeMathJax{\newcommand{\leftrightarrowaccent}[1]{\mathord{\#1\unicode{x20E1}}}}
134 \CustomizeMathJax{\newcommand{\annuity}[1]{\mathord{\#1\unicode{x20E7}}}}
135 \CustomizeMathJax{\newcommand{\widebridgeabove}[1]{\mathord{\#1\unicode{x20E9}}}}
136 \CustomizeMathJax{\newcommand{\asteraccent}[1]{\mathord{\#1\unicode{x20F0}}}}
137
138 % neutralized:
139 \CustomizeMathJax{\newcommand{\braceld}{}}
140 \CustomizeMathJax{\newcommand{\bracerd}{}}
141 \CustomizeMathJax{\newcommand{\bracelu}{}}
142 \CustomizeMathJax{\newcommand{\braceru}{}}
143 \CustomizeMathJax{\newcommand{\braceex}{}}
144 \CustomizeMathJax{\newcommand{\bracemu}{}}
145 \CustomizeMathJax{\newcommand{\bracemd}{}}
146 \CustomizeMathJax{\newcommand{\parenld}{}}
147 \CustomizeMathJax{\newcommand{\parenrd}{}}
148 \CustomizeMathJax{\newcommand{\parenlu}{}}
149 \CustomizeMathJax{\newcommand{\parenru}{}}
150 \CustomizeMathJax{\newcommand{\bracketld}{}}
151 \CustomizeMathJax{\newcommand{\bracketrd}{}}
152 \CustomizeMathJax{\newcommand{\bracketlu}{}}
153 \CustomizeMathJax{\newcommand{\bracketru}{}}
154 \CustomizeMathJax{\newcommand{\bracketex}{}}
155 \CustomizeMathJax{\newcommand{\parenex}{}}
156
157 \CustomizeMathJax{\newcommand{\lhook}{\sim}}
158 \CustomizeMathJax{\newcommand{\rhook}{\sim}}
159 \CustomizeMathJax{\newcommand{\relbar}{\dashv}}
160 \CustomizeMathJax{\newcommand{\Relbar}{\dashv}}
161
162 \CustomizeMathJax{\newcommand{\mapstochar}{\mathrel{\!\!\!}\{\!\!\!\!\! \text{\scriptsize \texttt{unicode{x21A6}}}\!\!\!\!\}}}
163
164 \CustomizeMathJax{\newcommand{\Zbar}{\mathord{\!\!\!}\{\!\!\!\!\! \text{\scriptsize \texttt{unicode{x001B5}}}\!\!\!\!\}}}
165 \CustomizeMathJax{\newcommand{\notchar}{\mathrel{\!\!\!}\{\!\!\!\!\! \text{\scriptsize \texttt{unicode{x000AC}}}\!\!\!\!\}}}
166 \CustomizeMathJax{\newcommand{\upbackepsilon}{\mathord{\!\!\!}\{\!\!\!\!\! \text{\scriptsize \texttt{unicode{x03F6}}}\!\!\!\!\}}}
167 \CustomizeMathJax{\newcommand{\smbblkcircle}{\mathbin{\!\!\!}\{\!\!\!\!\! \text{\scriptsize \texttt{unicode{x02022}}}\!\!\!\!\}}}
168 \CustomizeMathJax{\newcommand{\enleadertwodots}{\mathord{\!\!\!}\{\!\!\!\!\! \text{\scriptsize \texttt{unicode{x02025}}}\!\!\!\!\}}}
169 \CustomizeMathJax{\newcommand{\unicodeellipsis}{\mathord{\!\!\!}\{\!\!\!\!\! \text{\scriptsize \texttt{unicode{x02026}}}\!\!\!\!\}}}
170 \CustomizeMathJax{\newcommand{\mathellipsis}{\mathinner{\!\!\!}\{\!\!\!\!\! \text{\scriptsize \texttt{unicode{x02026}}}\!\!\!\!\}}}
```

```
171 \CustomizeMathJax{\newcommand{\dprime}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02033\}}}
172 \CustomizeMathJax{\newcommand{\trprime}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02034\}}}
173 \CustomizeMathJax{\newcommand{\backdprime}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02036\}}}
174 \CustomizeMathJax{\newcommand{\backtrprime}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02037\}}}
175 \CustomizeMathJax{\newcommand{\caretnormal}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02038\}}}
176 \CustomizeMathJax{\newcommand{\Exclam}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x0203C\}}}
177
178 \CustomizeMathJax{\newcommand{\hyphenbullet}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02043\}}}
179 \CustomizeMathJax{\newcommand{\fracslash}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02044\}}}
180 \CustomizeMathJax{\newcommand{\Question}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02047\}}}
181 \CustomizeMathJax{\newcommand{\closure}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02050\}}}
182 \CustomizeMathJax{\newcommand{\qprime}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02057\}}}
183 \CustomizeMathJax{\newcommand{\vertoverlay}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x020D2\}}}
184 \CustomizeMathJax{\newcommand{\enclosecircle}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x020DD\}}}
185 \CustomizeMathJax{\newcommand{\enclosesquare}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x020DE\}}}
186 \CustomizeMathJax{\newcommand{\enclosetriangle}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x020E4\}}}
187 \CustomizeMathJax{\newcommand{\Eulerconst}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02107\}}}
188 \CustomizeMathJax{\newcommand{\turnediota}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02129\}}}
189 \CustomizeMathJax{\newcommand{\Angstrom}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x0212B\}}}
190
191 \CustomizeMathJax{\newcommand{\sansLturned}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02142\}}}
192 \CustomizeMathJax{\newcommand{\sansLmirrored}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02143\}}}
193 \CustomizeMathJax{\newcommand{\Yup}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02144\}}}
194 \CustomizeMathJax{\newcommand{\upand}{\mathbin{\text{\scriptsize \texttt{unicode}}}\{x0214B\}}}
195 \CustomizeMathJax{\newcommand{\increment}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x02206\}}}
196 \CustomizeMathJax{\newcommand{\smallin}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x0220A\}}}
197 \CustomizeMathJax{\newcommand{\nni}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x0220C\}}}
198
199 \CustomizeMathJax{\newcommand{\smalllni}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x0220D\}}}
200 \CustomizeMathJax{\newcommand{\QED}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x0220E\}}}
201 \CustomizeMathJax{\newcommand{\vysmwhtcircle}{\mathbin{\text{\scriptsize \texttt{unicode}}}\{x02218\}}}
202 \CustomizeMathJax{\newcommand{\vysmblkcircle}{\mathbin{\text{\scriptsize \texttt{unicode}}}\{x02219\}}}
203 \CustomizeMathJax{\newcommand{\rightangle}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x0221F\}}}
204
205 \CustomizeMathJax{\newcommand{\Colon}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02237\}}}
206 \CustomizeMathJax{\newcommand{\dotminus}{\mathbin{\text{\scriptsize \texttt{unicode}}}\{x02238\}}}
207 \CustomizeMathJax{\newcommand{\dashcolon}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02239\}}}
208 \CustomizeMathJax{\newcommand{\dotsminusdots}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x0223A\}}}
209 \CustomizeMathJax{\newcommand{\kernelcontraction}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x0223B\}}}
210 \CustomizeMathJax{\newcommand{\invlazys}{\mathbin{\text{\scriptsize \texttt{unicode}}}\{x0223E\}}}
211
212 \CustomizeMathJax{\newcommand{\sinewave}{\mathord{\text{\scriptsize \texttt{unicode}}}\{x0223F\}}}
213 \CustomizeMathJax{\newcommand{\nsime}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02244\}}}
214 \CustomizeMathJax{\newcommand{\simneqq}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02246\}}}
215 \CustomizeMathJax{\newcommand{\napprox}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02249\}}}
216 \CustomizeMathJax{\newcommand{\approxident}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x0224B\}}}
217 \CustomizeMathJax{\newcommand{\backcong}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x0224C\}}}
218
219 \CustomizeMathJax{\newcommand{\nasympt}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x0226D\}}}
220 \CustomizeMathJax{\newcommand{\lesssim}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02274\}}}
221 \CustomizeMathJax{\newcommand{\ngtrsim}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02275\}}}
222 \CustomizeMathJax{\newcommand{\lessgrtr}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02278\}}}
223 \CustomizeMathJax{\newcommand{\ngtrless}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02279\}}}
224
225 \CustomizeMathJax{\newcommand{\nsubset}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02284\}}}
226 \CustomizeMathJax{\newcommand{\nsupset}{\mathrel{\text{\scriptsize \texttt{unicode}}}\{x02285\}}}
227
228 \CustomizeMathJax{\newcommand{\cupleftarrow}{\mathbin{\text{\scriptsize \texttt{unicode}}}\{x0228C\}}}
229 \CustomizeMathJax{\newcommand{\cupdot}{\mathbin{\text{\scriptsize \texttt{unicode}}}\{x0228D\}}}
230 \CustomizeMathJax{\newcommand{\circledeq}{\mathbin{\text{\scriptsize \texttt{unicode}}}\{x0229C\}}}
```

```
231 \CustomizeMathJax{\newcommand{\assert}{\mathrel{\text{\scriptsize{\texttt{<}}}}}}
232 \CustomizeMathJax{\newcommand{\VDash}{\mathrel{\text{\scriptsize{\texttt{>}}}}}}
233 \CustomizeMathJax{\newcommand{\prurel}{\mathrel{\text{\scriptsize{\texttt{>>}}}}}}
234
235 \CustomizeMathJax{\newcommand{\origof}{\mathrel{\text{\scriptsize{\texttt{>}}}}}}
236 \CustomizeMathJax{\newcommand{\smallprod}{\mathop{\text{\scriptsize{\texttt{<}}}}}}% not small
237 \CustomizeMathJax{\newcommand{\smallcoprod}{\mathop{\text{\scriptsize{\texttt{>}}}}}}% not small
238 \CustomizeMathJax{\newcommand{\smallsum}{\mathop{\text{\scriptsize{\texttt{+}}}}}}% not small
239 \CustomizeMathJax{\newcommand{\Hfraktur}{\mathord{\text{\scriptsize{\texttt{H}}}}}}
240 \CustomizeMathJax{\newcommand{\dsol}{\mathbin{\text{\scriptsize{\texttt{.}}}}}}
241 \CustomizeMathJax{\newcommand{\rsolbar}{\mathbin{\text{\scriptsize{\texttt{|}}}}}}
242
243 \CustomizeMathJax{\newcommand{\eqless}{\mathrel{\text{\scriptsize{\texttt{<}}}}}}
244 \CustomizeMathJax{\newcommand{\eqgtr}{\mathrel{\text{\scriptsize{\texttt{>}}}}}}
245 \CustomizeMathJax{\newcommand{\npreccurlyeq}{\mathrel{\text{\scriptsize{\texttt{<=}}}}}}
246 \CustomizeMathJax{\newcommand{\nsucccurlyeq}{\mathrel{\text{\scriptsize{\texttt{>=}}}}}}
247 \CustomizeMathJax{\newcommand{\nsqsubseteq}{\mathrel{\text{\scriptsize{\texttt{<=}}}}}}
248 \CustomizeMathJax{\newcommand{\nsqsupseteq}{\mathrel{\text{\scriptsize{\texttt{>=}}}}}}
249 \CustomizeMathJax{\newcommand{\sqsubsetneq}{\mathrel{\text{\scriptsize{\texttt{<<}}}}}}
250 \CustomizeMathJax{\newcommand{\sqsupsetneq}{\mathrel{\text{\scriptsize{\texttt{>>}}}}}}
251 \CustomizeMathJax{\newcommand{\sqsupseteq}{\mathrel{\text{\scriptsize{\texttt{>=}}}}}}
252 \CustomizeMathJax{\newcommand{\nvartriangleleft}{\mathrel{\text{\scriptsize{\texttt{<}}}}}}
253 \CustomizeMathJax{\newcommand{\nvartriangleright}{\mathrel{\text{\scriptsize{\texttt{>}}}}}}
254
255 \CustomizeMathJax{\newcommand{\vdotmath}{\mathrel{\text{\scriptsize{\texttt{.}}}}}}
256 \CustomizeMathJax{\newcommand{\unicodedots}{\mathord{\text{\scriptsize{\texttt{.}}}}}}
257 \CustomizeMathJax{\newcommand{\adots}{\mathrel{\text{\scriptsize{\texttt{...}}}}}}
258 \CustomizeMathJax{\newcommand{\succneq}{\mathrel{\text{\scriptsize{\texttt{><}}}}}}
259 \CustomizeMathJax{\newcommand{\preceqq}{\mathrel{\text{\scriptsize{\texttt{<>}}}}}}
260 \CustomizeMathJax{\newcommand{\succceqq}{\mathrel{\text{\scriptsize{\texttt{>>}}}}}}
261 \CustomizeMathJax{\newcommand{\precneq}{\mathrel{\text{\scriptsize{\texttt{<<}}}}}}
262
263 \CustomizeMathJax{\newcommand{\mapsfrom}{\mathrel{\text{\scriptsize{\texttt{<--}}}}}}
264
265 \CustomizeMathJax{\newcommand{\longmapsfrom}{\mathrel{\text{\scriptsize{\texttt{<---->}}}}}}
266
267 \CustomizeMathJax{\newcommand{\diameter}{\mathord{\text{\scriptsize{\texttt{--}}}}}}
268 \CustomizeMathJax{\newcommand{\coloneq}{\mathrel{\text{\scriptsize{\texttt{:=}}}}}}
269 \CustomizeMathJax{\newcommand{\eqcolon}{\mathrel{\text{\scriptsize{\texttt{=:}}}}}}
270 \CustomizeMathJax{\newcommand{\arceq}{\mathrel{\text{\scriptsize{\texttt{~:}}}}}}
271 \CustomizeMathJax{\newcommand{\wedgeq}{\mathrel{\text{\scriptsize{\texttt{&}}}}}}
272 \CustomizeMathJax{\newcommand{\veeeq}{\mathrel{\text{\scriptsize{\texttt{~~}}}}}}
273
274 \CustomizeMathJax{\newcommand{\stareq}{\mathrel{\text{\scriptsize{\texttt{==}}}}}}
275 \CustomizeMathJax{\newcommand{\eqdef}{\mathrel{\text{\scriptsize{\texttt{:=}}}}}}
276 \CustomizeMathJax{\newcommand{\measeq}{\mathrel{\text{\scriptsize{\texttt{~:}}}}}}
277 \CustomizeMathJax{\newcommand{\questeq}{\mathrel{\text{\scriptsize{\texttt{?==}}}}}}
278 \CustomizeMathJax{\newcommand{\nequiv}{\mathrel{\text{\scriptsize{\texttt{!=}}}}}}
279 \CustomizeMathJax{\newcommand{\Equiv}{\mathrel{\text{\scriptsize{\texttt{==}}}}}}
280
281 \CustomizeMathJax{\newcommand{\house}{\mathord{\text{\scriptsize{\texttt{H}}}}}}
282
283 \CustomizeMathJax{\newcommand{\musicalnote}{\mathord{\text{\scriptsize{\texttt{N}}}}}}
284 \CustomizeMathJax{\newcommand{\degree}{\mathord{\text{\scriptsize{\texttt{D}}}}}}
285 \CustomizeMathJax{\newcommand{\mathsection}{\mathord{\text{\scriptsize{\texttt{S}}}}}}
286 \CustomizeMathJax{\newcommand{\mathparagraph}{\mathord{\text{\scriptsize{\texttt{P}}}}}}
287 \CustomizeMathJax{\newcommand{\checkmarkmath}{\mathord{\text{\scriptsize{\texttt{C}}}}}}
288 \CustomizeMathJax{\newcommand{\invnot}{\mathord{\text{\scriptsize{\texttt{I}}}}}}
289
290 \CustomizeMathJax{\newcommand{\mathvisiblespace}{\mathord{\text{\scriptsize{\texttt{V}}}}}}
```

```

291 \CustomizeMathJax{\newcommand{\mdlgbksquare}{\mathord{\unicode{x025A0}}}}
292 \CustomizeMathJax{\newcommand{\mdlghsquare}{\mathord{\unicode{x025A1}}}}
293
294 \CustomizeMathJax{\newcommand{\bigblacktriangleup}{\mathord{\unicode{x025B2}}}}
295 \CustomizeMathJax{\newcommand{\varbigtriangleup}{\mathord{\unicode{x025B3}}}}
296
297 \CustomizeMathJax{\newcommand{\bigblacktriangledown}{\mathord{\unicode{x025BC}}}}
298 \CustomizeMathJax{\newcommand{\varbigtriangledown}{\mathord{\unicode{x025BD}}}}
299 \CustomizeMathJax{\newcommand{\Longmapsfrom}{\mathrel{\unicode{x027FD}}}}
300
301 % bug in print font:
302 \CustomizeMathJax{\newcommand{\mdlgbldiamond}{\mathord{\unicode{x025C6}}}}
303
304 \CustomizeMathJax{\newcommand{\mdlghtdiamond}{\mathord{\unicode{x025C7}}}}
305 \CustomizeMathJax{\newcommand{\Longmapsto}{\mathrel{\unicode{x027FE}}}}
306 \CustomizeMathJax{\newcommand{\fisheye}{\mathord{\unicode{x025C9}}}}
307 \CustomizeMathJax{\newcommand{\mdlghwlozengen}{\mathord{\unicode{x025CA}}}}
308 \CustomizeMathJax{\newcommand{\mdlghwtcircle}{\mathbin{\unicode{x025CB}}}}
309 \CustomizeMathJax{\newcommand{\bullseye}{\mathord{\unicode{x025CE}}}}
310 \CustomizeMathJax{\newcommand{\mdlgbkcircle}{\mathord{\unicode{x025CF}}}}
311
312 \CustomizeMathJax{\newcommand{\Nwarrow}{\mathrel{\unicode{x021D6}}}}
313 \CustomizeMathJax{\newcommand{\Nearrow}{\mathrel{\unicode{x021D7}}}}
314 \CustomizeMathJax{\newcommand{\Searrow}{\mathrel{\unicode{x021D8}}}}
315 \CustomizeMathJax{\newcommand{\Swarrow}{\mathrel{\unicode{x021D9}}}}
316
317 \CustomizeMathJax{\newcommand{\Mapsfrom}{\mathord{\unicode{x02906}}}}
318 \CustomizeMathJax{\newcommand{\smwhtcircle}{\mathord{\unicode{x025E6}}}}
319 \CustomizeMathJax{\newcommand{\smwhtdiamond}{\mathbin{\unicode{x022C4}}}}
320 \CustomizeMathJax{\newcommand{\Mapsto}{\mathord{\unicode{x02907}}}}
321
322 \CustomizeMathJax{\let\ngets\nleftarrow}
323 \CustomizeMathJax{\let\nsimeq\nsime}
324 \CustomizeMathJax{\let\le\nleq}
325 \CustomizeMathJax{\let\ge\ngeq}
326
327 \end{warpMathJax}

```

File 254 lwarf-lineno.sty

§ 363 Package **lineno**

(Emulates or patches code by STEPHAN I. BÖTTCHER.)

lineno (*Pkg*) **lineno** is partly emulated, but mostly ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{lineno}[2005/11/02]

```

2 \newcommand*\resetlinenumber[1][\@ne]{}
3
4 \def\linenumbers{%
5     \@ifnextchar[\{\resetlinenumber\}%
6         {\@ifstar{\resetlinenumber}{}{}\%}
7 }
8
9 \newcommand*\nolinenumbers(){}
10

```

```
11 \@namedef{linenumbers*}{\par\linenumbers*}
12 \@namedef{runninglinenumbers*}{\par\runninglinenumbers*}
13
14 \def\endlinenumbers{\par}
15 \let\endrunninglinenumbers\endlinenumbers
16 \let\endpagewiselinenumbers\endlinenumbers
17 \expandafter\let\csname endlinenumbers*\endcsname\endlinenumbers
18 \expandafter\let\csname endrunninglinenumbers*\endcsname\endlinenumbers
19 \let\endnolinenumbers\endlinenumbers
20
21 \def\pagewiselinenumbers{\linenumbers\setpagewiselinenumbers}
22
23 \def\runninglinenumbers{\setrunninglinenumbers\linenumbers}
24
25 \def\setpagewiselinenumbers{}
26
27 \def\setrunninglinenumbers{}
28
29 \def\linenomath{}%
30 \@namedef{linenomath*}{}%
31 \def\endlinenomath{}
32 \expandafter\let\csname endlinenomath*\endcsname\endlinenomath
33
34 \let\linelabel\label
35
36 \def\switchlinenumbers{@ifstar{}{}}
37 \def\setmakelinenumbers#1{@ifstar{}{}}
38
39 \def\leftlinenumbers{@ifstar{}{}}
40 \def\rightlinenumbers{@ifstar{}{}}
41
42 \newcounter{linenumber}
43 \newcount\c@pagewiselinenumber
44 \let\c@runninglinenumber\c@linenumber
45
46 \def\runningpagewiselinenumbers{}
47 \def\realpagewiselinenumbers{}
48
49
50 \NewDocumentCommand\modulolinenumbers{s o}{}
51
52 \chardef\c@linenumbermodulo=5
53 \modulolinenumbers[1]
54
55 \newcommand*\firstlinenumber[1]{}
56
57 \newcommand\internallinenumbers{}
58 \let\endinternallinenumbers\endlinenumbers
59 \@namedef{internallinenumbers*}{\internallinenumbers}
60 \expandafter\let\csname endinternallinenumbers*\endcsname\endlinenumbers
61
62 \newcommand*\linenoplaceholder[1]{% redefine per language
63     (line number reference for \detokenize\expandafter{\#1})
64 }
65
66 \newcommand*\lineref[2][]{\linenoplaceholder{\#2}}
67 \newcommand*\linerefpl[2][]{\linenoplaceholder{\#2}}
68 \newcommand*\linerefr[2][]{\linenoplaceholder{\#2}}
69
70 \newcommand\quotelinenumbers
```

```

71  {\@ifstar\linenumbers{\@ifnextchar[\linenumbers{\linenumbers*}}}
72
73 \newdimen\linenumbersep
74 \newdimen\linenumberwidth
75 \newdimen\quotelinenumbersep
76
77 \quotelinenumbersep=\linenumbersep
78 \let\quotelinenumberfont\linenumberfont
79
80 \def\linenumberfont{\normalfont\tiny\sffamily}
81
82
83 \linenumberwidth=10pt
84 \linenumbersep=10pt
85
86 \def\thelinenumber{}
87
88 \def\LineNumber{}
89 \def\makeLineNumber{}
90 \def\makeLineNumberLeft{}
91 \def\makeLineNumberRight{}
92 \def\makeLineNumberOdd{}
93 \def\makeLineNumberEven{}
94 \def\makeLineNumberRunning{}
95
96
97 \newenvironment{numquote}    {\quote}{\endquote}
98 \newenvironment{numquotation} {\quotation}{\endquotation}
99 \newenvironment{numquote*}   {\quote}{\endquote}
100 \newenvironment{numquotation*}{\quotation}{\endquotation}
101
102 \newdimen\bframerule
103 \bframerule=\fboxrule
104
105 \newdimen\bframesep
106 \bframesep=\fboxsep
107
108 \newenvironment{bframe}
109 {%
110   \LWR@forceminwidth{\bframerule}%
111   \BlockClass[
112     border:\LWR@printlength{\LWR@atleastonept} solid black ; %
113     padding:\LWR@printlength{\bframesep}%
114   ]{bframe}
115 }
116 {\endBlockClass}

```

File 255 **lwarf-lips.sty**

§ 364 Package **lips**

(Emulates or patches code by MATT SWIFT.)

lips (*Pkg*) **lips** is emulated.

```

1 \% \LWR@ProvidesPackageDrop{lips}
2 \LWR@ProvidesPackageDrop{lips}[2001/08/31]

```

```
3
4 \NewDocumentCommand{\Lips}{}{\textellipsis}
5
6 \NewDocumentCommand{\BracketedLips}{}{[\textellipsis]}
7
8 \let\lips\Lips
9 \let\olips\lips
10
11 \DeclareOption*{}
12 \DeclareOption{mla}{%
13 \let\lips\BracketedLips
14 }
15 \ProcessOptions\relax
16
17 \newcommand \LPNobreakList {}
```

File 256 l warp-lipsum.sty**§ 365 Package *lipsum***

(Emulates or patches code by PATRICK HAPPEL.)

lipsum (*Pkg*) *lipsum* is patched for use by *l warp*.

for HTML output: 1 \LWR@ProvidesPackagePass{lipsum}[2021-03-03]

```
2 \SetLipsumParListItemEnd{%
3   \LWR@closeparagraph%
4   \leavevmode\LWR@orignewline%
5 }
```

File 257 l warp-listings.sty**§ 366 Package *listings***

(Emulates or patches code by CARSTEN HEINZ, BROOKS MOSES, JOBST HOFFMANN.)

listings (*Pkg*) *listings* is supported with some limitations. Text formatting and escape characters are not yet supported.

1 \LWR@ProvidesPackagePass{listings}[2023/02/27]

Force flexible columns. Fixed columns inserts spaces in the PDF output.

2 \lst@column@flexible

Patches to embed listings inside pre tags:

```
3 \let\LWR@origlst@Init\lst@Init
4 \let\LWR@origlst@DeInit\lst@DeInit
```

```

5
6 \let\LWR@origlstkEveryPar\lstk@EveryPar
7
8 \renewcommand{\l@lstlisting}[2]{\hypertocfloat{1}{lstlisting}{\l@lstlisting}{#1}{#2}}

```

\lstset

{*options*}

Use the `listings` literate option to replace HTML entities:

```

9 \def\lstset@#1{\endgroup%
10 \% \ifx\@empty#1%
11 \% \empty%
12 \% \else%
13 \% \setkeys{lst}{%
14 \% #1%
15 \% ,literate=%
16 \% {<}{\HTMLentity{lt}}{4}%
17 \% {>}{\HTMLentity{gt}}{4}%
18 \% {'}{\HTMLentity{apos}}{6}%
19 \% {'}{\HTMLentity{grave}}{7}%

```

The ampersand is not treated here, as the result is inconsistent spacing. It is nevertheless converted to & elsewhere. Sanitizing the double quote interferes with `listings`' conversion of visible spaces inside strings.

```

20 \%%
21 \% \fi%
22 }

```

\lst@Init

{*backslash-processing*} Done at the start of a listing.

```

23 \VerifyCommand[lwarp][listings]{\lst@Init}{A4D103298A6AC8230F525C61F1E1E541}
24
25 \renewcommand{\lst@Init}[1]{%

```

Perform the `listings` initialization:

```
26 \LWR@traceinfo{lst@Init}% lwarp
```

\LWR@forcenewpage is moved to the start to avoid a spurious bug with paragraph handling and conditionals.

```

27 \lst@ifdisplaystyle% lwarp
28 \LWR@forcenewpage% lwarp
29 \fi% lwarp

```

Escapes do not work yet, and are disabled:

```

30 \let\lst@ifmathescape\iffalse% lwarp
31 \let\lst@DefEsc\relax% lwarp
32 \def\lst@escapebegin{}% lwarp
33 \def\lst@escapeend{}% lwarp

34 \renewcommand*{@capttype}{lstlisting}% lwarp
35 \let\lst@aboveskip\z@\let\lst@belowskip\z@% lwarp
36 \gdef\lst@boxpos{t}% lwarp
37 \let\lst@frame\@empty% lwarp
38 \let\lst@frametshape\@empty% lwarp
39 \let\lst@framershape\@empty% lwarp
40 \let\lst@framebshape\@empty% lwarp
41 \let\lst@framelshape\@empty% lwarp
42 \lstframe@\lst@frameround ffff\relax% lwarp
43 \lst@multicols\@empty% lwarp

```

```
44 \begingroup%
```

Inside the listing, temporarily prevent underfull \hbox warnings.

```
45 \hbadness=10000\relax%
46 \ifx\lst@float\relax\else%
47   \edef\@tempa{\noexpand\lst@beginfloat{lstlisting}[\lst@float]}%
48   \expandafter\@tempa%
49 \fi%
50 \ifx\lst@multicols\@empty\else%
51   \edef\lst@next{\noexpand\multicols{\lst@multicols}}%
52   \expandafter\lst@next%
53 \fi%
54 \ifhmode\ifinner \lst@boxtrue \fi\fi%
55 \lst@ifbox%
56   \lsthk@BoxUnsafe%
57   \hbox to\z@\bgroup%
58     $if t\lst@boxpos \vtop%
59     \else \if b\lst@boxpos \vbox%
60     \else \vcenter \fi\fi%
61     \bgroup \par\noindent%
62 \else%
63   \lst@ifdisplaystyle%
64     \lst@EveryDisplay%
65     \par\penalty-50\relax%
66     \vspace\lst@aboveskip%
67   \fi%
68 \fi%
69 \normalbaselines%
70 \abovecaptionskip\lst@abovecaption\relax%
71 \belowcaptionskip\lst@belowcaption\relax%
72 \lst@MakeCaption t%
```

Use the overall listing label instead of the line number label:

```
73 \LWR@traceinfo{\lst@Init: defining current label !@\currentlabel!}%
74   \let\LWR@listings@currentlabel@\currentlabel%           lwarp
75 \LWR@traceinfo{\lst@Init: defining current label !@\cref@currentlabel!}%
76   \let\LWR@listings@cref@currentlabel@\cref@currentlabel%   lwarp
77 \LWR@traceinfo{\lst@Init: preinit and init}%
78   \lsthk@PreInit \lsthk@Init%
79   \let@\currentlabel\LWR@listings@currentlabel%           lwarp
80   \let@\cref@\currentlabel\LWR@listings@cref@currentlabel%   lwarp
81 \LWR@traceinfo{\lst@Init: M}%
82   \lst@ifdisplaystyle
83     \global\let\lst@ltxlabel@\empty
84     \if@inlabel
85       \lst@ifresetmargins
86         \leavevmode
87       \else
88         \xdef\lst@ltxlabel{\the\everypar}%
89         \lst@AddTo\lst@ltxlabel{%
90           \global\let\lst@ltxlabel@\empty
91           \everypar{\lsthk@EveryLine\lsthk@EveryPar}}%
92       \fi
93     \fi
94     \everypar\expandafter{\lst@ltxlabel
95                           \lsthk@EveryLine\lsthk@EveryPar}%
96   \else
```

```

97      \everypar{%
98          \let\lst@NewLine\empty
99      \fi
100 \LWR@traceinfo{\lst@Init: P}%
101     \lst@InitVars \lst@InitVarsBOL
102     \lst@Let{13}\lst@MPProcessListing
103     \let\lst@Backslash#1%
104     \lst@EnterMode{\lst@Pmode}{\lst@SelectCharTable}%
105     \lst@InitFinalize%
106 \LWR@traceinfo{\lst@Init: S}%

```

Avoids extra horizontal space:

```

107 \def\lst@frameLR{}%    l warp
108 \LWR@traceinfo{\lst@Init: finished origlst@Init}%
109 \lst@ifdisplaystyle%    l warp

```

Creating a display.

Disable line numbers, produce the <pre>, then reenable line numbers.

```

110 \LWR@traceinfo{\lst@Init: About to create verbatim.}%
111     \let\lst@EveryPar\relax%    l warp
112     \LWR@atbeginverbatim{programlisting}%
113
114     \let\lst@EveryPar\LWR@origlst@EveryPar%    l warp
115 \else%    l warp

```

Inline, so open a :

```

116     \ifbool{\LWR@verbtags}{\LWR@htmltag{%
117         span class=\textquotedbl{}inlineprogramlisting\textquotedbl%    l warp
118     }}{}%    l warp
119 \fi%    l warp
120 \LWR@traceinfo{\lst@Init: done}%
121 }
122 \def\LWR@listings@synaxdolloar{$}%
123 \l warp editor synax highlighting

```

\lst@DeInit

Done at the end of a listing.

```

123 \%renewcommand*\lst@DeInit{%
124 \xpretocmd{\lst@DeInit}%
125 {%
126 \LWR@traceinfo{\lst@DeInit}%
127 \lst@ifdisplaystyle%

```

Creating a display.

Disable line numbers, produce the </pre>, then reenable line numbers:

```

128     \let\lst@EveryPar\relax%
129     \LWR@afterendverbatim%
130     \let\lst@EveryPar\LWR@origlst@EveryPar%
131 \else%

```

Inline, so create the closing :

```

132     \ifbool{\LWR@verbtags}{\noindent\LWR@htmltag{/span}}{}%
133 \fi%
134 }
135 {%
136 {\LWR@patcherror{listings}{\lst@DeInit}}

```

\lst@MakeCaption

{*t/b*}

This is called BOTH at the top and at the bottom of each listing.

Patched for lwarp.

```

137 \VerifyCommand[lwarp][listings]{\lst@MakeCaption}{58505F418EA5E42B63D92AD0ED0C433C}
138
139 \def\lst@MakeCaption#1{%
140 \LWR@traceinfo{\lst@MakeCaption at #1}%
141   \lst@ifdisplaystyle
142 \LWR@traceinfo{\lst@MakeCaption: making a listings display caption}%
143   \ifx #1t%
144     \ifx\lst@@caption@\empty\expandafter\lst@HRefStepCounter \else
145       \expandafter\refstepcounter
146         \fi {\lstlisting}%
147 % \LWR@traceinfo{About to assign label: !\lst@label!}%
148 %   \ifx\lst@label@\empty\else
149 %     \label{\lst@label}\fi
150 % \LWR@traceinfo{Finished assigning the label.}%
151   \let\lst@arg\lst@intname \lst@ReplaceIn\lst@arg\lst@filenamerpl
152   \global\let\lst@name\lst@arg \global\let\lstname\lst@name
153   \lst@ifnolol\else
154     \ifx\lst@caption@\empty
155       \ifx\lst@caption@\empty
156         \ifx\lst@intname@\empty
157           \else
158             \def\lst@temp{ }%
159             \ifx\lst@intname\lst@temp \else

```

This code places a contents entry for a non-float. This would have to be modified for lwarp:

```

160 \LWR@traceinfo{\lst@MakeCaption: addcontents lst@name: -\lst@name-}%
161 %           \addcontentsline{loll}{\lstlisting}{\lst@name}
162           \fi
163           \fi
164           \fi
165         \else

```

This would have to be modified for lwarp:

```

166 \LWR@traceinfo{\lst@MakeCaption: addcontents lst@@caption: -\lst@@caption-}%
167           \addcontentsline{loll}{\lstlisting}%
168 {\protect\numberline{\thelstlisting}%
169 {\protect\ignorespaces \LWR@isolate{\lst@@caption} \protect\relax}}%
170           \fi
171           \fi
172           \fi
173   \ifx\lst@caption@\empty\else
174 \LWR@traceinfo{\lst@MakeCaption: lst@caption not empty-}%
175   \lst@IfSubstring #1\lst@captionpos
176     {\begingroup
177 \LWR@traceinfo{\lst@MakeCaption: at the selected position}%

```

These space and box commands are not needed for HTML output:

```

178 %           \let@vskip\vskip
179 %           \def\vskip{\afterassignment\lst@vskip \tempskipa}%
180 %           \def\lst@vskip{\nobreak\@vskip\tempskipa\nobreak}%
181 %           \par\parboxrestore\normalsize\normalfont \% \noindent (AS)
182 %           \ifx #1t\allowbreak \fi
183           \ifx\lst@title\empty

```

New `lwarp` code to create a caption:

```
184           \LWR@stopars%      lwarp
185           \lst@makecaption\fnam@lstlisting{\ignorespaces \lst@caption}
186       \else
```

New `lwarp` code to create a title:

```
187 %          \lst@maketitle\lst@title % (AS)
188 \LWR@traceinfo{lst@MakeCaption: Making title: \lst@title}%
189 \begin{BlockClass}{lstlistingtitle}%
190 \lst@maketitle\lst@title%
191 \end{BlockClass}%
192 \fi%
193 \LWR@traceinfo{lst@MakeCaption: About to assign label: !\lst@label!}%
194     \ifx\lst@label\empty\else%
195 \leavevmode% gets rid of bad space factor error
196 \GetTitleStringExpand{\lst@caption}%
197 \edef\LWR@lntemp{\GetTitleStringResult}%
198 \edef\@currentlabelname{\detokenize\expandafter{\LWR@lntemp}}%
199 \label{\lst@label}\fi%
200 \LWR@traceinfo{lst@MakeCaption: Finished assigning the label.}%
```

Not needed for `lwarp`:

```
201 %          \ifx #1b\allowbreak \fi
202         \endgroup}{}%
203     \fi
204 \LWR@traceinfo{lst@MakeCaption: end of making a listings display caption}%
205 \else
206 \LWR@traceinfo{lst@MakeCaption: INLINE}%
207 \fi
208 \LWR@traceinfo{lst@MakeCaption: done at #1}%
209 }
210
211 \renewcommand{\lst@maketitle}[1]{%
212     \LWR@isolate{#1}%
213 }%
214
```

line numbers Patched to keep left line numbers outside of the left margin, and place right line numbers in a field `\VerbatimHTMLWidth` wide.

```
215 \lst@Key{numbers}{none}{%
216     \let\lst@PlaceNumber\empty
217     \lstKV@SwitchCases{#1}{%
218         {none}: \\
219         left:\def\lst@PlaceNumber{%
```

For now, `lwarp` places left line numbers inline. Ideally the entire line would be moved to the right, but conflicts with list indenting occurs.

```
220 %          \LWR@origllap{%
221             \LWR@orignormalfont%
222             \lst@numberstyle{\thelstnumber}\kern\lst@numbersep%
223 %         }
224     }\\%
225     right:\def\lst@PlaceNumber{\LWR@origrlap{\LWR@orignormalfont
226             \kern 6in \kern\lst@numbersep
227             \lst@numberstyle{\thelstnumber}}}%
228 }{\PackageError{lwarp-listings}{Numbers #1 unknown}\@ehc}}
```

File 258 l warp-listliketab.sty**§ 367 Package l listliketab**

listliketab (*Pkg*) listliketab is ignored.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{listliketab}[2005/01/09]

2 \newcommand*{\storestyleof}[1]{}
3 \newcommand*{\storeliststyle}{}
4 \newenvironment{listliketab}{}{}
```

File 259 l warp-lltjext.sty**§ 368 Package l ltjext**

(Emulates or patches code by THE LUATEX-JA PROJECT TEAM.)

lltjext (*Pkg*) lltjext is patched for use by l warp.

for HTML output:

```
1 \LWR@ProvidesPackagePass{lltjext}[2018/10/07]

2 \protected\def\yoko{%
3   \directlua{luatexja.direction.set_list_direction(4, 'yoko')}%
4 }
5 \protected\def\tate{\yoko}
6 \protected\def\dtou{\yoko}
7 \protected\def\utod{\yoko}
8
9 \define@key[ltj]{japaram}{direction}{}
10
11 \yoko
12
13 \DeclareExpandableDocumentCommand{\rensujii}{s o m}{#3}
14
15 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
16
17 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
18
19 \LetLtxMacro\pcaption\caption
20
21 \DeclareDocumentCommand{\layoutcaption}{d<> d() o}{}
22
23 \let\captiondir\relax
24 \RenewDocumentEnvironment{\LWR@HTML@minipage}{d<> O{t} O{} O{t} m}
25   {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
26   {\endLWR@HTML@sub@minipage}
27
28 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{} O{t} m +m}
29 {
30 \LWR@traceinfo{parbox of width #4}%
31 \begin{minipage}{#2}{#3}{#4}{#5}%
32 }
```

```

32 #6
33 \end{minipage}%
34 }
35
36 \RenewDocumentCommand{\pbox}{d<> O{0pt} O{c} m}{%
37 \global\booltrue{LWR@minipagefullwidth}%
38 \parbox{#2}{#4}%
39 }

```

File 260 **lwarp-lltjp-siunitx.sty**

§ 369 Package **lltjp-siunitx**

(Emulates or patches code by THE LUATEX-JA PROJECT TEAM.)

lltjp-siunitx (Pkg) **lltjp-siunitx** is patched for use by **lwarp**.

for HTML output: 1 \LWR@ProvidesPackagePass{lltjp-siunitx}% 2022-12-14, no date assigned in file

This is the **siunitx** v3 file, as patched by **lltjp-siunitx**.

```

2 \ExplSyntaxOn
3
4 \VerifyCommand[lwarp][lltjp-siunitx]{\siunitx_print_text:n}{A248D4314D135CB0AC3E6678F331CFF2}
5
6 \cs_set_protected:Npn \siunitx_print_text:n #1
7 {
8     \text
9     {
10         \ltj@allalchar % <--- LuaTeX-ja
11         \bool_if:NT \l__siunitx_print_text_family_bool
12             { \fontfamily { \familydefault } }
13         \bool_if:NT \l__siunitx_print_text_series_bool
14             { \fontseries { \seriesdefault } }
15         \bool_if:NT \l__siunitx_print_text_shape_bool
16             { \fontshape { \shapedefault } }
17         \bool_lazy_any:nT% lwarp: factors for a single \selectfont
18             {%
19                 \l warp
20                 { \l__siunitx_print_text_family_bool }% lwarp
21                 { \l__siunitx_print_text_series_bool }% lwarp
22                 { \l__siunitx_print_text_shape_bool }% lwarp
23             }%
24             { \selectfont }%
25             \tl_use:N \l__siunitx_print_text_font_tl% lwarp
26             \exp_args:NnV \tl_if_head_eq_meaning:nNTF {#1} \l__siunitx_unit_fraction_tl% lwarp
27                 {%
28                     \l __siunitx_print_text_fraction:Nnn #1% lwarp
29                 }%
30                 {%
31                     \l __siunitx_print_text_replace:n {#1}% ORIGINAL
32                 }%
33             }%
34
35 \ExplSyntaxOff

```

File 261 **l warp-lltjp-tascmac.sty**

§ 370 Package **lltjp-tascmac**

lltjp-tascmac (*Pkg*) **lltjp-tascmac** is a patch for **tascmac**, and is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{lltjp-tascmac}[2020/12/24]

File 262 **l warp-longtable.sty**

§ 371 Package **longtable**

(*Emulates or patches code by DAVID CARLISLE.*)

longtable (*Pkg*) **longtable** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{longtable}[2014/10/28]

Use one of either `\endhead` or `\endfirsthead` for both print and HTML, and use a `\warpprintonly` macro to disable the other head phrase, and also the `\endfoot` and `\endfirstfoot` phrases. (See section 8.10.4 if using `threeparttablex`.)

```
\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead    % or \endhead, for print and HTML
\warpprintonly{           % not used in HTML
[ . . . ] \endhead       % or \endfirsthead
[ . . . ] \endfoot
[ <lastfoot macros> ] \endlastfoot
}
... table contents ...
\warpHTMLonly{
[ <lastfoot macros> ]   % HTML last footer, without \endfoot
                         % or \endlastfoot.
}
\end{longtable}
```

⚠ Misplaced `\noalign` Use the `\warpprintonly` macro instead of the `warpprint` environment. Doing so helps avoid “Misplaced `\noalign`.” when using `\begin{warpprint}`.

⚠ `\kill` `\kill` is ignored, place a `\kill` line inside

```
\begin{warpprint} ... \end{warpprint}
```

or place it inside `\warpprintonly`.

⚠ `lateximage` **longtable** is not supported inside a `lateximage`.

See:

<http://tex.stackexchange.com/questions/43006/why-is-input-not-expandable>

Used to detect more than one of `\endhead` and `\endfirsthead` in use for HTML at the same time.

```
2 \newbool{LWR@longtable@havehead}
3 \boolfalse{LWR@longtable@havehead}
```

`longtable (env.) * [<horizontalignment>] {<colspec>}` Emulates the `longtable` environment.

Per the `caption` package, the starred version steps the counter per caption. The unstarred version steps the counter once at the beginning, but not at each caption.

Options [c], [l], and [r] are ignored.

```
4 \newenvironment{longtable*}[2][]{%
5   \LWR@floatbegin{table}%
6   \ifdef{\setcaptiontype}{% caption package:
7     \setcaptiontype{\LTcaptype}%
8     \caption@setoptions{longtable}%
9     \caption@setoptions{@longtable}%
10    \caption@LT@setup%
11  }{% w/o caption package:
12    \renewcommand*{\@capttype}{\LTcaptype}%
13  }%
14  \booltrue{LWR@starredlongtable}%
15  \boolfalse{LWR@longtable@havehead}%
16  \let\captionlistentry\LWR@LTcaptionlistentry%
17  \tabular{#2}%
18 }
19 {\endtabular\LWR@floatend}
20
21 \newenvironment{longtable}[2][]{%
22   \LWR@floatbegin{table}%
23   \ifdef{\setcaptiontype}{% caption package:
24     \setcaptiontype{\LTcaptype}%
25     \caption@setoptions{longtable}%
26     \caption@setoptions{@longtable}%
27     \caption@LT@setup%
28  }{% w/o caption package:
29    \renewcommand*{\@capttype}{\LTcaptype}%
30  }%
31  \refstepcounter{\LTcaptype}%
32  \boolfalse{LWR@longtable@havehead}%
33  \let\captionlistentry\LWR@LTcaptionlistentry%
34  \tabular{#2}%
35 }
36 {\endtabular\LWR@floatend}
```

Provided for compatibility, but ignored:

```
37 \newcounter{LTchunksize}
```

Error for heads which should have been in `\warpprintonly`:

```
38 \newcommand*{\LWR@longtable@headererror}{%
39   \PackageError{lwarp-longtable}%
40   {For longtable:\MessageBreak%
41    1: Keep either one of an \protect\endhead\space or\MessageBreak%
42      \space\protect\endfirsthead\space phrase as-is,\MessageBreak%
```

```

43      \space to be used by both print and HTML.\MessageBreak
44 2: Place any other \protect\end... phrases inside a\MessageBreak
45      \space\protect\warpprintonly\space macro,
46          to be ignored by HTML.\MessageBreak
47 3: At the end of the table,\MessageBreak
48      \space add a final footer for HTML\MessageBreak
49      \space inside a \protect\warpHTMLonly\space macro.
50          This can be\MessageBreak
51      \space a copy of an \protect\endfoot\space or
52          \protect\endfirstfoot\MessageBreak
53      \space phrase, but without the actual \protect\endfoot\MessageBreak
54      \space or \protect\endfirstfoot\space macros.\MessageBreak
55      \space If using threeparttable, add\MessageBreak
56      \space \protect\insertTableNotes\space here,
57          optionally with\MessageBreak
58      \space \protect\UseMinipageWidths\space in front.\MessageBreak
59 See the Lwarf documentation regarding\MessageBreak
60 longtables and threeparttablex}
61 {See the Lwarf documentation regading longtables and threeparttablex.}
62 }

```

Error if more than one of \endhead or \endfirsthead is outside of warpprintonly.

```

63 \newcommand*\{LWR@longtable@maybeheaderror}{%
64 \ifbool{LWR@longtable@havehead}{%
65     {\LWR@longtable@headerror}%
66     {%
67         \booltrue{LWR@longtable@havehead}%
68         \LWR@tabularendofline% throws away options // [dim] and //*
69     }%
70 }

```

Error if more than one of these is outside of warpprint.

```

71 \def\endhead{\LWR@longtable@maybeheaderror}
72 \def\endfirsthead{\LWR@longtable@maybeheaderror}

```

Error if ANY of these is outside of warpprint.

```

73 \def\endfoot{\LWR@longtable@headerror}
74 \def\endlastfoot{\LWR@longtable@headerror}

75 \let\tabularnewline\
76 \providecommand*\{LWR@HTML@tabularnewline}{\LWR@tabularendofline}
77 \LWR@formatted{tabularnewline}

78 \newcommand{\setlongtables}{}% Obsolete command, does nothing.
79 \newlength{\LTleft}
80 \newlength{\LTright}
81 \newlength{\LTpre}
82 \newlength{\LTpost}
83 \newlength{\LTcapwidth}

```

```

84 \LetLtxMacro{\LWR@origkill\kill
85 \renewcommand*\{kill}{\LWR@tabularendofline}
86 \appto{\LWR@restoreorigformatting}{%
87 \LetLtxMacro{\kill\LWR@origkill\kill}

```

```
88 }
```

File 263 l warp-l pic.sty**§ 372 Package l pic**

(Emulates or patches code by R. MATVEYEV.)

l pic (Pkg) l pic is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{l pic}[2010/12/23]

```
2 \BeforeBeginEnvironment{l pic}{%
3   \begin{lateximage}[-l pic-\~\PackageDiagramAltText]{}
4 }
5
6 \AfterEndEnvironment{l pic}{\end{lateximage}}
```

File 264 l warp-l scape.sty**§ 373 Package l scape**

(Emulates or patches code by D. P. CARLISLE.)

l scape (Pkg) l scape is ignored.

for HTML output: Discard all options for l warp-l scape.

```
1 \LWR@ProvidesPackageDrop{l scape}[2000/10/22]
2 \newenvironment*{landscape}{}{}
```

File 265 l warp-l tablex.sty**§ 374 Package l tablex**

(Emulates or patches code by ANIL K. GOEL.)

l tablex (Pkg) l tablex is emulated by l warp.

for HTML output: Relies on tabularx.

```
1 \RequirePackage{longtable}
2 \RequirePackage{tabularx}
3
4 \LWR@ProvidesPackageDrop{l tablex}[2014/08/13]
5
6 \DeclareDocumentEnvironment{tabularx}{m o m}
7 {\longtable{#3}}
8 {\endlongtable}
9
10 \DeclareDocumentEnvironment{tabularx*}{m o m}
```

```

11 {\longtable{#3}}
12 {\endlongtable}
13
14 \newcommand*{\keepXColumns}={}
15 \newcommand*{\convertXColumns}={}

```

File 266 **l warp-ltcaption.sty**

§375 Package **ltcaption**

(Emulates or patches code by AXEL SOMMERFELDT.)

ltcaption (*Pkg*) **ltcaption** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ltcaption}[2018/08/26]

\LTcaptype is already defined by **l warp**.

\longtable* is already defined by **l warp-longtable**.

```

2 \newlength{\LTcapskip}
3 \newlength{\LTcapleft}
4 \newlength{\LTcapright}
5 \newcommand*{\LTcapmarginsfalse}={}

```

File 267 **l warp-ltxgrid.sty**

§376 Package **ltxgrid**

ltxgrid (*Pkg*) **ltxgrid** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ltxgrid}[2010/07/25]

```

2 \newcommand*{\onecolumngrid}{}
3 \newcommand*{\twocolumngrid}{}
4 \newcommand*{\removestuff}{}
5 \newcommand*{\addstuff}[2]{}
6 \newcommand*{\replacesuff}[2]{}

```

File 268 **l warp-ltxtable.sty**

§377 Package **ltxtable**

ltxtable (*Pkg*) **ltxtable** is emulated.

 **table numbering** The print version does not seem to honor **longtable*** from the **caption** package, while **l warp** does.

for HTML output: 1 \RequirePackage{tabularx, longtable}
 2 \LWR@ProvidesPackageDrop{ltxtable}[1995/12/11]

```
\LTXtable  
    {\langle width\rangle} {\langle file\rangle}  
3 \newcommand*{\LTXtable}[2]{%  
4     \input{#2}%  
5 }
```

File 269 **l warp-lua-check-hyphen.sty**

§ 378 Package **lua-check-hyphen**

lua-check-hyphen (*Pkg*) lua-check-hyphen is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{lua-check-hyphen}[2018/04/19]
2 \newcommand*{\LuaCheckHyphen}[1]{}

File 270 **l warp-lua-visual-debug.sty**

§ 379 Package **lua-visual-debug**

lua-visual-debug (*Pkg*) lua-visual-debug is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{lua-visual-debug}[2016/05/30]

File 271 **l warp-luacolor.sty**

§ 380 Package **luacolor**

luacolor (*Pkg*) luacolor is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{luacolor}[2016/05/16]
2 \newcommand{\luacolorProcessBox}[1]{}

File 272 **l warp-luamplib.sty**

§ 381 Package **luamplib**

(Emulates or patches code by HANS HAGEN, TACO HOEKWATER, ELIE ROUX, PHILIPP GESANG, KIM DO-HYUN.)

luamplib (*Pkg*) luamplib is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{luamplib}[2020/02/24]

```

2 \BeforeBeginEnvironment{mplibcode}{%
3   \begin{lateximage}[-mplibcode-\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{mplibcode}{\end{lateximage}}

```

File 273 **l warp-luatexko.sty**

§ 382 Package **luatexko**

(Emulates or patches code by DOHYUN KIM, SOOJIN NAM.)

luatexko (*Pkg*) luatexko is patched for use by l warp.

Modern HTML is used for \dotemph, \ruby, and offset and thickness control for \uline, etc.

for HTML output: 1 \LWR@ProvidesPackagePass{luatexko}[2021/07/10]

```

2 \protected\def\typesetvertical{}
3 \protected\def\typesethorizontal{}
4
5 \def\verticaltypesetting{\BlockClass{verticalrl}}
6 \def\beginverticaltypesetting{\BlockClass{verticalrl}}
7 \def\endverticaltypesetting{\endBlockClass}
8
9 \protected\def\vertical#1{\BlockClass{verticalrl}}
10 \protected\def\endvertical{\endBlockClass}
11 \protected\def\horizontal#1{\BlockClass{horizontaltb}}
12 \protected\def\endhorizontal{\endBlockClass}
13 \DeclareDocumentCommand{\vertlatin}{m}{#1}

14 \newcommand{\LWR@HTML@dotemph}[1]{%
15 %   \uline{#1}%
16   \InlineClass{text-emphasis-style: dot}{dotemph}{#1}%
17 }
18 \LWR@formatted{dotemph}

19 \newcommand{\LWR@HTML@ruby}[2]{%
20   \LWR@htmltagc{ruby}%
21   #1%
22   \LWR@htmltagc{rp}(\LWR@htmltagc{/rp}%
23   \LWR@htmltagc{rt}#2\LWR@htmltagc{/rt}%
24   \LWR@htmltagc{rp})\LWR@htmltagc{/rp}%
25   \LWR@htmltagc{/ruby}%
26 }
27 \LWR@formatted{ruby}

```

The following is modified from l warp-ulem:

```

28 \NewDocumentCommand{\LWR@HTML@uline}{+m}{%
29   \InlineClass{%
30     (text-decoration:underline; text-decoration-skip: auto)%
31     [%
32       text-underline-offset: \ulinedown ;
33       text-decoration-thickness: \ulinewidth%
34     ]%

```

```
35           {underline}{\LWR@isolate{#1}}%
36 }
37 \LWR@formatted{underline}
38
39 \NewDocumentCommand{\LWR@HTML@uunderline}{+m}{%
40   \InlineClass%
41   (%
42     text-decoration:underline; text-decoration-skip: auto;%
43     text-decoration-style:double%
44   )%
45   [%
46     text-underline-offset: \ulinedown ;
47     text-decoration-thickness: \ulinewidth%
48   ]%
49   {uunderline}{\LWR@isolate{#1}}%
50 }
51 \LWR@formatted{uunderline}
52
53 \NewDocumentCommand{\LWR@HTML@uwave}{+m}{%
54   \InlineClass%
55   (%
56     text-decoration:underline; text-decoration-skip: auto;%
57     text-decoration-style:wavy%
58   )%
59   [%
60     text-underline-offset: \ulinedown ;
61     text-decoration-thickness: \ulinewidth%
62   ]%
63   {uwave}{\LWR@isolate{#1}}%
64 }
65 \LWR@formatted{uwave}
66
67 \NewDocumentCommand{\LWR@HTML@sout}{+m}{%
68   \InlineClass%
69   (text-decoration:line-through)%
70   [text-decoration-thickness: \ulinewidth]%
71   {sout}{\LWR@isolate{#1}}%
72 }
73 \LWR@formatted{sout}
74
75 \NewDocumentCommand{\LWR@HTML@xout}{+m}{%
76   \InlineClass%
77   (text-decoration:line-through)%
78   [text-decoration-thickness: \ulinewidth]%
79   {xout}{\LWR@isolate{#1}}%
80 }
81 \LWR@formatted{xout}
82
83 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
84   \InlineClass%
85   (%
86     text-decoration:underline;%
87     text-decoration-skip: auto;%
88     text-decoration-style:dashed%
89   )%
90   [%
91     text-underline-offset: \ulinedown ;
92     text-decoration-thickness: \ulinewidth%
93   ]%
94   {dashuline}{\LWR@isolate{#1}}%
```

```

95 }
96 \LWR@formatted{dashuline}
97
98 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
99     \InlineClass{%
100         (%
101             text-decoration:underline;%
102             text-decoration-skip: auto;%
103             text-decoration-style: dotted%
104         )%
105         [%
106             text-underline-offset: \ulinedown ;%
107             text-decoration-thickness: \ulinewidth%
108         ]%
109         {dotuline}{\LWR@isolate{#1}}%
110     }%
111 \LWR@formatted{dotuline}

```

File 274 **lwarf-luatodonotes.sty**

§ 383 Package **luatodonotes**

(Emulates or patches code by FABIAN LIPP.)

luatodonotes (*Pkg*) luatodonotes is emulated.

The documentation for todonotes and luatodonotes have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.

for HTML output: 1 \LWR@ProvidesPackagePass{luatodonotes}[2017/09/30]

Nullify options:

```

2 \@todonotes@additionalMarginEnabledfalse

3 \if@todonotes@disabled
4 \else
5
6 \newcommand{\ext@todo}{\textcolor{red}{\textsf{todo}}}
7
8 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{\textcolor{red}{\textsf{todo}}}{\l@do}{#1}{#2}{}}

9 \let\LWRTODONOTES@orig@todototoc\ Todototoc
10
11 \renewcommand*{\todototoc}{%
12 \LWR@phantomsection%
13 \LWRTODONOTES@orig@todototoc%
14 }
15
16
17 \renewcommand{\@todonotes@drawMarginNoteWithLine}{%
18 \fcolorbox{%
19     \color{todonotes@currentbordercolor}%
20     \color{todonotes@currentbackgroundcolor}%
21     \arabic{@todonotes@numberoftodonotes}}}

```

```
22 \marginpar{\@todonotes@drawMarginNote}
23 }
24
25 \renewcommand{\@todonotes@drawInlineNote}{%
26 \fcolorboxBlock%
27 {\@todonotes@currentbordercolor}%
28 {\@todonotes@currentbackgroundcolor}%
29 {%
30     \if@todonotes@authorgiven%
31     {\@todonotes@author:\,}%
32     \fi%
33     \@todonotes@text%
34 }%
35 }
36
37 \newcommand{\@todonotes@drawMarginNote}{%
38     \if@todonotes@authorgiven%
39         \@todonotes@author\par%
40         \fi%
41         \arabic{@todonotes@numberoftodonotes}: %
42         \fcolorbox{%
43             {\@todonotes@currentbordercolor}%
44             {\@todonotes@currentbackgroundcolor}%
45             {%
46                 \@todonotes@sizecommand%
47                 \@todonotes@text %
48             }%
49 }%
50
51 \renewcommand{\missingfigure}[2][]{%
52 \setkeys{todonotes}{#1}%
53 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
54 \fcolorboxBlock%
55 {\@todonotes@currentbordercolor}%
56 {\@todonotes@currentfigcolor}%
57 {%
58     \setlength{\fboxrule}{4pt}%
59     \fcolorbox{red}{white}{Missing figure} \quad #2%
60 }
61 }
62
63 \LetLtxMacro{\LWRTODONOTES@orig}{\@todocommon}\@todocommon
64
65 \RenewDocumentCommand{\@todocommon}{m m}{%
66 \begingroup%
67 \renewcommand*{\phantomsection}{ }%
68 \LWRTODONOTES@orig\@todocommon{#1}{#2}%
69 \endgroup%
70 }
71
72 \VerifyCommand[lwarf][luatodonotes]{\@todoarea}{3D40C9C729633DA7BB80F7A27E7C2694}
73
74 \renewcommand{\@todoarea}[3][]{%
75     \@todonotes@areaselectedtrue%
76     \@todocommon{#1}{#2}%
77     \@todonotes@textmark@highlight{#3}%
78     \zref@label{@todonotes@\arabic{@todonotes@numberoftodonotes}@end}%
79 }%
80
81
```

```

82 \DeclareDocumentCommand{\todonotes@textmark@highlight}{m}{%
83 \InlineClass[background:\LWR@origpound{}B3FFB3]{highlight}{#1}%
84 }%
85
86 \fi% \if@todonotes@disabled

```

File 275 **l warp-luavlna.sty**

§ 384 Package **luavlna**

(Emulates or patches code by MICHAL HOFTICH, MIRO HRONČOK.)

luavlna (*Pkg*) luavlna is patched for use by l warp.

The package is disabled for HTML output, due to incompatibilities with l warp's handling of math SVG images.

for HTML output:

```

1 \LWR@ProvidesPackagePass{luavlna}[2019/10/30]

2 \preventsingleoff
3 \LetLtxMacro\preventsingleon\preventsingleoff

```

File 276 **l warp-lyluatex.sty**

§ 385 Package **lyluatex**

(Emulates or patches code by FR. JACQUES PERON, URS Liska, BR. SAMUEL SPRINGUEL.)

lyluatex (*Pkg*) lyluatex is patched for use by l warp.

For the first compile, to set *l warpmk*'s configuration, use:

```
lualatex --shell-escape <filename>
```

⚠ **images** After compiling the document with **l warpmk html**, use **l warpmk l images** to convert the Lilypond images for HTML.

css The option `insert=systems` results in an image per system. Each music image “system” is placed inside a `` of class `lyluatex`, which defaults to `display: inline-block`.

⚠ **insert=fullpage** css The option `insert=fullpage` results in a single image per page of printed output. Each music “fullpage” image is placed inside a `<div>` of class `lyluatex`. To match the number of measures per line with the printed version, use the `geometry` package to select the page geometry, or use the `lyluatex` options for page and staff sizes.

⚠ **options** To use `\ linewidth` or `\ textwidth` inside the package options for `lyluatex`, use the `kvoptions-patch` package first:

```
\usepackage{kvoptions-patch}
\usepackage[... , line-width=0.8\ linewidth,...]{lyluatex}
```

 **raw-pdf** If using raw-pdf, the resulting PDF images must be converted to SVG:

Enter ⇒ **l warpmk pdftosvg tmp-ly/*.pdf**

for HTML output:

```
1 \LWR@origRequirePackage{luacode}
2
3 \LWR@ProvidesPackagePass{lyluatex}[2023/04/18]
```

User-redefinable ALT tag:

```
4 \newcommand*{\LyluatexImageAltText}{-lilypond-\PackageDiagramAltText}
```

\ly@compilescore

```
{<Lilypond object>}
5 \VerifyCommand[l warp][lyluatex]{\ly@compilescore}{31A1EF1F24F22143AFD302A7C6AD29E6}
6
7 \renewcommand*{\ly@compilescore}[1]{%
```

A local group holds a number of changes:

```
8 \begingroup%
```

The user's original geometry and font size are restored to match the print version. This allows for correct spacing in the musical score.

```
9 \LWR@maybe@orignewpage%
10 \LWR@origloadgeometry{\LWR@usergeometry}%
11 \LWR@print@normalsize%
```

A local group holds a redefined \includegraphics which is used by *lyluatex.lua* to insert the *Lilypond* score if *insert=systems* is used. This is now placed inside a *lateximage*, which itself is placed inside a of class *lyluatex*.

\LWR@addbaselinemarker preserves the left margins.

```
12 \renewcommand{\includegraphics}[2][]{%
13     \InlineClass{lyluatex}{%
14         \begin{lateximage}[\LyluatexImageAltText]%
15         \LWR@addbaselinemarker%
16         \LWR@originincludegraphics{##2}%
17         \end{lateximage}%
18     }%
19 }%
```

From the original:

```
20 \ly@setunits%
21 \setluaoption{ly}{currfiledir}{\currfiledir}
22 \setluaoption{ly}{twoside}{\ly@istwosided}
23 \directlua{
24     #1
25     ly.newpage_if_fullpage()
26 }%
27 \ly@resetunits%
28 \ly@currentfonts%
```

The fullpage version is set inside an HTML <div>:

```
29 \directlua{
30     if (ly.score.insert == 'fullpage') then
31         tex.print{[[\string\begin{BlockClass}{lyluatex}]]}
32     end
33 }%
```

Generate the score:

```
34     \directlua{ly.score:process()}%
```

Close the <div>:

```
35     \directlua{
36         if (ly.score.insert == 'fullpage') then
37             tex.print{[[\string\end{BlockClass}]]}
38         end
39     }%
```

Move to a new page and renew the regular page geometry:

```
40     \LWR@maybe@orignewpage%
41     \LWR@origrestoregeometry%
```

End of the local group.

```
42     \endgroup%
43 }
```

In HTML the following generates an error, so is removed:

```
44 \VerifyCommand[l warp][lyluatex]{\endly@bufferenv}{9B3BA3FC990E03634B57041666E0048D}
45
46 \xpatchcmd{\endly@bufferenv}
47   {\hspace{0pt}\\"}
48   {}
49   {}
50   {\LWR@patcherror{lyluatex}{endly@bufferenv}}
```

File 277 **l warp-magaz.sty**

§ 386 Package **magaz**

magaz (*Pkg*) magaz is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{magaz}[2011/11/24]

```
2 \newcommand\FirstLine[1]{%
3     \begingroup%
4     \FirstLineFont{%
5         \LWR@textcurrentcolor{%
6             \LWR@textcurrentfont{%
7                 #1%
8             }%
9         }%
10    }%
11    \endgroup%
12 }
13
14 \providecommand\FirstLineFont{\scshape}
```

File 278 **l warp-makeidx.sty**

§ 387 Package **makeidx**

(Emulates or patches code by L^AT_EX PROJECT TEAM.)

makeidx (Pkg) makeidx is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{makeidx}[2014/09/29]

\@wrindex is redefined \AtBeginDocument by the l warp core.

```
\printindex

2 \preto\printindex{%
3   \LWR@maybe@orignewpage%
4   \LWR@startpars%
5 }
```

File 279 l warp-manyfoot.sty

§ 388 Package **manyfoot**

manyfoot (Pkg) manyfoot is emulated.

bigfoot, manyfoot Verbatim footnotes are not yet supported.

⚠ **verbatim**

If using the bigfoot package, and possibly also manyfoot, problems may occur with counter allocation because l warp uses many counters, and there is a difference in how counters numbered 256 and up are handled in PDF L^AT_EX. With bigfoot this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining bigfoot or manyfoot footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use X_EL^AT_EX or L_UaL^AT_EX instead of PDF L^AT_EX.

l warp's emulation of bigfoot uses manyfoot, so some of the bigfoot enhancements are included here.

The bigfoot “default” footnote is ignored, using the l warp version instead.

for HTML output: 1 \LWR@ProvidesPackageDrop{manyfoot}[2005/09/11]

```
2 \RequirePackage{nccfoot}
3
4 \newcommand{\extrafootnoterule}{}
5
6 \let\defaultfootnoterule\footnoterule
7
8 \newcommand*{\SelectFootnoteRule}[2][0]{}
9
10 \newcommand{\footnoterulepriority}{1}
11
12 \newcommand{\SetFootnoteHook}[1]{}
13 \onlypreamble\SetFootnoteHook
14
15 \newcommand{\SplitNote}{}
```

```

16
17 \newcommand*\ExtraParaSkip[1]{}
18
19 \newcommand*{\newfootnote}[2][plain]{%
20     \ifstreq{#2}{default}{}{%
21         \expandafter\newbox\csname LWR@footnote#2box\endcsname%
22         \appto{\LWR@printpendingfootnotes}{%
23             \LWR@printpendingfootnotes{footnote#2}%
24         }%
25         \long\csdef{Footnotetext#2}##1##2{%
26             \NCC@makefnmark{##1}%
27             \LWR@footnotetext{##2}{LWR@footnote#2box}%
28         }%
29         \long\csdef{Footnotetext#2+}##1##2{%
30             \NCC@makefnmark{##1}%
31             \LWR@footnotetext{##2}{LWR@footnote#2box}%
32         }%
33     }%
34 }%
35 @onlypreamble\newfootnote
36
37 \newcommand*{\DeclareNewFootnote}[2][plain]{%
38     \@ifnextchar[%
39         {\LWR@manyfoot@declare{#1}{#2}}%
40         {\LWR@manyfoot@declare{#1}{#2}[arabic]}%
41 }%
42
43 \def\LWR@manyfoot@declare#1#2[#3]{%
44 \ifstreq{#2}{default}{}{%
45     \newfootnote[#1]{#2}%
46     \newcounter{footnote#2}%
47     \newcounter{footnote#2Reset}%
48     \setcounter{footnote#2Reset}{0}%
49     \csdef{thefootnote#2}{%
50         \expandafter\noexpand\csname @#3\endcsname%
51         \expandafter\noexpand\csname c@footnote#2\endcsname%
52     }%
}

```

For **bigfoot**, the footnote commands may be appended with one or two plusses or one or two minuses, which are ignored in HTML.

```

53     \expandafter\NewDocumentCommand\csname footnote#2\endcsname{t{+}t{+}t{-}t{-}}{%
54         \stepcounter{footnote#2}%
55         \protected@xdef@\thefnmark{\csname thefootnote#2\endcsname}%
56         \@footnotemark%
57         \csuse{Footnotetext#2}{\thefnmark}%
58     }%
59     \csdef{footnotemark#2}{%
60         \stepcounter{footnote#2}%
61         \protected@xdef@\thefnmark{\csname thefootnote#2\endcsname}%
62         \@footnotemark%
63     }%
64     \expandafter\NewDocumentCommand\csname footnotetext#2\endcsname{t{+}t{+}t{-}t{-}}{%
65         \protected@xdef@\thefnmark{\csname thefootnote#2\endcsname}%
66         \csuse{Footnotetext#2}{\thefnmark}%
67     }%
68     \csdef{Footnotemark#2}{%
69         \Footnotemark%
70     }%
71     \csdef{Footnote#2}##1{%
}

```

```
72      \Footnotemark{##1}%
73      \csuse{Footnotetext#2}{##1}%
74    }%
75 }% not "default"
76 }
77 \only\DeclareNewFootnote
```

File 280 **l warp-marginal.sty**

§ 389 Package **marginal**

`marginal (Pkg)` **marginal** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{marginal}

```
2 \newcommand*\showlostmarginals{}%
3 \newcommand*\enlargefreelist{}%
4 \newcommand*\onesidemarginals{}%
```

File 281 **l warp-marginfit.sty**

§ 390 Package **marginfit**

`marginfit (Pkg)` **marginfit** is ignored.

for HTML output: Discard all options for **l warp-marginfit**:

```
1 \LWR@ProvidesPackageDrop{marginfit}[2018/06/08]
```

File 282 **l warp-marginfix.sty**

§ 391 Package **marginfix**

(Emulates or patches code by STEPHEN HICKS.)

`marginfix (Pkg)` **marginfix** is ignored.

for HTML output: Discard all options for **l warp-marginfix**:

```
1 \LWR@ProvidesPackageDrop{marginfix}[2013/09/08]
```

```
2 \newcommand*\marginskip[1]{}%
3 \newcommand*\clearmargin{}%
4 \newcommand*\softclearmargin{}%
5 \newcommand*\extendmargin[1]{}%
6 \newcommand*\mparshift[1]{}%
7 \newdimen\marginheightadjustment
8 \newdimen\marginposadjustment
9 \newcommand*\blockmargin[1][]{}
10 \newcommand*\unblockmargin[1][]{}
11 \newcommand*\marginphantom[2]{}%
```

File 283 **l warp-marginnote.sty**

§ 392 Package **marginnote**

(Emulates or patches code by MARKUS KOHM.)

marginnote (*Pkg*) **marginnote** is emulated.

for HTML output: Discard all options for **l warp-marginnote**:

```

1 \LWR@ProvidesPackageDrop{marginnote}[2018/08/09]

2 \NewDocumentCommand{\marginnote}{+o +m o}{\marginpar{#2}{}}

3 \newcommand*\marginnoteleftadjust(){}
4 \newcommand*\marginnoterightadjust(){}
5 \newcommand*\marginnotetextwidth(){}
6 \let\marginnotetextwidth\textwidth
7 \newcommand*\marginnotevadjust(){}
8 \newcommand*\marginfont(){}
9 \newcommand*\raggedleftmarginnote(){}
10 \newcommand*\raggedrightmarginnote{}

11 \appto\LWR@restoreorigformatting{%
12   \RenewDocumentCommand{\marginnote}{+o +m o}{}
13 }
```

For MATHJAX:

```

14 \begin{warpMathJax}
15 \CustomizeMathJax{\newcommand{\LWRmarginnote}[1][]{}}
16 \CustomizeMathJax{\newcommand{\marginnote}[2][]{\qqquad{\small\textrm{#2}}}\LWRmarginnote}
17 \end{warpMathJax}
```

File 284 **l warp-marvosym.sty**

§ 393 Package **marvosym**

(Emulates or patches code by THOMAS HENLICH, MOJCA MIKLAVEC.)

marvosym (*Pkg*) **marvosym** is patched for use by **l warp**.

Hashed inline images are used, as there may not be Unicode support for all icons.

for HTML output: 1 \LWR@ProvidesPackagePass{marvosym}[2011/07/20]

```

2 \renewcommand{\mvchr}[1]{%
3   \begin{lateximage}*[symbol #1][marvosym #1]%
4     \mvs\char#1%
5   \end{lateximage}%
6 }
```

```

7
8 \renewcommand{\textmvs}[1]{%
9   \begin{lateximage}%
10  \mvs #1%
11  \end{lateximage}%
12 }

```

File 285 **l warp-mathalpha.sty**

§ 394 Package **mathalpha**

(Emulates or patches code by MICHAEL SHARPE.)

mathalpha (*Pkg*) **mathalpha** is used as-is for SVG math, and is emulated for MATHJAX.

⚠ **limitations** The MATHJAX emulation ignores all package options, and some bold fonts may not be supported by MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{mathalpha}[2021/11/18]
2
3 \begin{warpMathJax}
4 \CustomizeMathJax{\newcommand{\mathbfbb}[1]{\boldsymbol{\mathbb{#1}}}}% not bold
5 \CustomizeMathJax{\newcommand{\mathbfcal}[1]{\boldsymbol{\mathcal{#1}}}}
6 \CustomizeMathJax{\newcommand{\mathbfrak}[1]{\boldsymbol{\mathfrak{#1}}}}
7 \CustomizeMathJax{\newcommand{\mathbfscr}[1]{\boldsymbol{\mathscr{#1}}}}% not bold
8
9 \IfPackageLoadedWithOptionsTF{mathalpha}{oldbold}
10 {
11 \CustomizeMathJax{\newcommand{\mathbbb}[1]{\boldsymbol{\mathbb{#1}}}}% not bold
12 \CustomizeMathJax{\newcommand{\mathbcal}[1]{\boldsymbol{\mathcal{#1}}}}
13 \CustomizeMathJax{\newcommand{\mathbfrak}[1]{\boldsymbol{\mathfrak{#1}}}}
14 \CustomizeMathJax{\newcommand{\mathbscr}[1]{\boldsymbol{\mathscr{#1}}}}% not bold
15 }
16 \end{warpMathJax}

```

File 286 **l warp-mathastext.sty**

§ 395 Package **mathastext**

(Emulates or patches code by JEAN-FRANÇOIS BURNOL.)

mathastext (*Pkg*) **mathastext** is used as-is for SVG math, and emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{mathastext}[2019/11/16]
2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \ifmst@itgreek
6   \LWR@mathjax@addgreek@l@it{}{}
7 \else
8   \ifmst@upgreek
9     \LWR@mathjax@addgreek@l@up{}{}
10 \else

```

```

11      \ifmst@frenchmath
12          \LWR@mathjax@addgreek@l@up{}{}
13      \else
14          \ifmst@italic
15%          \LWR@mathjax@addgreek@l@it{}{}
16          \else
17              \LWR@mathjax@addgreek@l@up{}{}
18          \fi
19      \fi
20 \fi
21 \fi
22
23 \ifcase\mst@greek@select
24     \or{\LWR@mathjax@addgreek@u@it*{}{}}
25%     \or{\LWR@mathjax@addgreek@u@up*{}{}}
26 \fi
27
28 \CustomizeMathJax{\newcommand{\mathnormalbold}[1]{\boldsymbol{#1}}}
29 \CustomizeMathJax{\newcommand{\MathEulerBold}[1]{\boldsymbol{#1}}}
30 \CustomizeMathJax{\newcommand{\MathEuler}[1]{\#1}}
31 \CustomizeMathJax{\newcommand{\MathPSymbol}[1]{\#1}}
32 \CustomizeMathJax{\let\fouriervec\vec}
33 \CustomizeMathJax{\let\pmvec\vec}
34 \CustomizeMathJax{\let\inodot\imath}
35 \CustomizeMathJax{\let\jnodot\jmath}
36 \CustomizeMathJax{\let\shortiff\iff}
37 \CustomizeMathJax{\let\longto\longrightarrow}
38 \CustomizeMathJax{\newcommand{\infty}{\mathord{\text{\scriptsize\texttt{unicode{x221E}}}}}}
39 \CustomizeMathJax{\newcommand{\propto}{\mathrel{\text{\scriptsize\texttt{unicode{x221D}}}}}}
40 \CustomizeMathJax{\let\prodpsy\prod}
41 \CustomizeMathJax{\let\sumpsy\sum}
42 \CustomizeMathJax{\let\MToriginalprod\prod}
43 \CustomizeMathJax{\let\MToriginalsum\sum}
44 \CustomizeMathJax{\newcommand{\DotTriangle}{\mathord{\text{\scriptsize\texttt{unicode{x2234}}}}}}
45 \end{warpMathJax}

```

File 287 **l warp-mathcomp.sty**

§ 396 Package **mathcomp**

(Emulates or patches code by TILMANN Böß.)

mathcomp (Pkg) **mathcomp** is supported as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{mathcomp}[2001/01/07]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\tcohm}{\mathrm{\Omega}}}
4 \CustomizeMathJax{\newcommand{\tccelsius}{\mathrm{\textcelsius}}}
5 \CustomizeMathJax{\newcommand{\tcmu}{\mathrm{\mu B}}}
6 \CustomizeMathJax{\newcommand{\tcpthousand}{\mathrm{\textperthousand}}}
7 \CustomizeMathJax{\newcommand{\tcpthousand}{\mathrm{\textperthousand}}}
8 \CustomizeMathJax{\newcommand{\tcdegree}{\mathrm{\textcircled{C}}}}
9 \CustomizeMathJax{\newcommand{\tcdigitoldstyle}[1]{\mathrm{\textoldstyle{#1}}}}
10 \end{warpMathJax}

```

File 288 **l warp-mathdesign.sty**

§ 397 Package **mathdesign**

(Emulates or patches code by PAUL PICHAREAU.)

mathdesign (*Pkg*) mathdesign is used as-is for SVG math, and is emulated for MATHJAX.

⚠ **limitations** The MATHJAX emulation ignores all package options except greekuppercase and greeklowercase. The dedicated macros for upright and italic greek letters work correctly, although the user may wish to swap the definitions for epsilon and phi.

SVG math should appear the same as the printed output.

for HTML output: 1 \LWR@ProvidesPackagePass{mathdesign}[2013/08/29]

For MATHJAX:

```
2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \LWR@origRequirePackage{l warp-common-mathjax-overlaysymbols}
5
6 \begin{warpMathJax}
7 \LWR@infoprocessingmathjax{mathdesign}
```

Default greek upright or italicized:

```
8 \if@MD@grupright
9 \LWR@mathjax@addgreek@l@up{}{}
10 \fi
11
12 \if@MD@GRupright
13 \else
14 \LWR@mathjax@addgreek@u@it*{}{}
15 \fi
```

Upright:

```
16 \LWR@mathjax@addgreek@l@up{}{up}
17 \LWR@mathjax@addgreek@u@up*{}{up}
```

Italicized:

```
18 \LWR@mathjax@addgreek@l@it{}{it}
19 \LWR@mathjax@addgreek@u@it*{}{it}
```

Adapt to mathdesign inconsistency:

```
20 \CustomizeMathJax{\let\digammaup\Digammaup}
21 \CustomizeMathJax{\renewcommand{\digammait}{\mathit{\digammaup}}}}
```

Extra symbols:

```
22 \CustomizeMathJax{\newcommand{\smallin}{\mathrel{\!\!{\scriptsize \text{\tiny \texttt{\{}}}\!}\text{\tiny \texttt{\{}}}}{\!\!{\scriptsize \text{\tiny \texttt{\}}}\!}\text{\tiny \texttt{\}}}}}}
```

```

23 \CustomizeMathJax{\newcommand{\smallowns}{\mathrel{\text{\small \texttt{LWR}}}}}
24 \CustomizeMathJax{\newcommand{\notsmallin}{\mathrel{\text{\small \texttt{LWR}}\text{\small \texttt{overlaysymbols}}/}\text{\small \texttt{LWR}}\text{\small \texttt{overlaysymbols}}/\text{\small \texttt{unicode}}\{x220A\}}}}
25 \CustomizeMathJax{\newcommand{\notsmallowns}{\mathrel{\text{\small \texttt{LWR}}\text{\small \texttt{overlaysymbols}}/}\text{\small \texttt{LWR}}\text{\small \texttt{overlaysymbols}}/\text{\small \texttt{unicode}}\{x220D\}}}}
26 \CustomizeMathJax{\newcommand{\rightangle}{\mathord{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x221F\}}}}

```

Integrals:

```

27 \CustomizeMathJax{\newcommand{\intclockwise}{\mathop{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x2231\}}\limits}}
28 \CustomizeMathJax{\newcommand{\ointclockwise}{\mathop{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x2232\}}\limits}}
29 \CustomizeMathJax{\newcommand{\ointctrcclockwise}{\mathop{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x2233\}}\limits}}
30 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x22F\}}\limits}}
31 \CustomizeMathJax{\newcommand{\oioint}{\mathop{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x230\}}\limits}}

```

Math and text mode:

```

32 \CustomizeMathJax{\newcommand{\ddag}{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x2021\}}}
33 \CustomizeMathJax{\newcommand{\P}{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x00B6\}}}
34 \CustomizeMathJax{\newcommand{\copyright}{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x00A9\}}}
35 \CustomizeMathJax{\newcommand{\dag}{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x2020\}}}
36 \CustomizeMathJax{\newcommand{\pounds}{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x00A3\}}}

```

Extra symbols:

```

37 \CustomizeMathJax{\newcommand{\iddots}{\mathinner{\text{\small \texttt{LWR}}\text{\small \texttt{unicode}}\{x22F0\}}}}
38 \CustomizeMathJax{\newcommand{\utimes}{\mathbin{\text{\small \texttt{LWR}}\text{\small \texttt{overline}}\{\text{\small \texttt{times}}\}}}}
39 \CustomizeMathJax{\newcommand{\dtimes}{\mathbin{\text{\small \texttt{LWR}}\text{\small \texttt{underline}}\{\text{\small \texttt{times}}\}}}}
40 \CustomizeMathJax{\newcommand{\udtimes}{\mathbin{\text{\small \texttt{LWR}}\text{\small \texttt{overline}}\{\text{\small \texttt{underline}}\{\text{\small \texttt{times}}\}\}}}}
41 \CustomizeMathJax{\newcommand{\leftwave}{\text{\small \texttt{LWR}}\text{\small \texttt{left}}\{\}}}
42 \CustomizeMathJax{\newcommand{\rightwave}{\text{\small \texttt{LWR}}\text{\small \texttt{right}}\{\}}}
43
44 \end{warpMathJax}

```

File 289 lwarf-mathdots.sty

§ 398 Package **mathdots**

(Emulates or patches code by DAN LUECKING.)

mathdots (Pkg) **mathdots** is used as-is for SVG math, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{mathdots}[2014/06/11]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\iddots}{\mathinner{\text{\small \texttt{LWR}}\text{\small \texttt{fixedddots}}\text{\small \texttt{ddots}}}}}
4 \CustomizeMathJax{\let\fixedddots\ddots}
5 \CustomizeMathJax{\let\fixedvdots\vdots}
6 \CustomizeMathJax{\let\fixediddots\iddots}
7 \CustomizeMathJax{\let\originalddots\ddots}
8 \CustomizeMathJax{\let\originalvdots\vdots}
9 \CustomizeMathJax{\let\originaliddots\iddots}
10 \CustomizeMathJax{\let\originalddd\ddd}
11 \CustomizeMathJax{\let\originaldddd\ddd}
12 \end{warpMathJax}

```

File 290 l warp-mathfixs.sty**§ 399 Package mathfixs**

(Emulates or patches code by NIKLAS BEISERT.)

mathfixs (*Pkg*) mathfixs is used as-is for SVG math, and is emulated for MATHJAX.

 Greek letters are unchanged.

for HTML output: 1 \LWR@ProvidesPackagePass{mathfixs}[2018/12/30]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\rfrac}[2]{\tfrac{\#1}{\#2}}}
4 \CustomizeMathJax{\newcommand{\vfrac}[2]{\mathinner{\{}^{\#1}\!/\!\{}_{\#2}\}}}
5 \CustomizeMathJax{\newcommand{\ProvideMathFix}[1]{}}
6 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{\#1}}}
7 \CustomizeMathJax{\newcommand{\. }{\,\,}}
8 \end{warpMathJax}
```

File 291 l warp-mathpazo.sty**§ 400 Package mathpazo**

(Emulates or patches code by WALTER SCHMIDT.)

mathpazo (*Pkg*) mathpazo is used as-is for SVG math, and is emulated for MATHJAX.

 **limitations** The MATHJAX emulation ignores all package options. The dedicated macros for upright greek letters do work correctly.

SVG math should appear the same as the printed output.

for HTML output: 1 \LWR@ProvidesPackagePass{mathpazo}[2020/03/25]

For MATHJAX:

```
2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{mathpazo}
6
7 \ifpazo@slGreek
8 \LWR@mathjax@addgreek@u@it*{}{}
9 \fi
10
11 \LWR@mathjax@addgreek@u@up*{up}{}
12
13 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{\#1}}}
14 \end{warpMathJax}
```

File 292 l warp-mathptmx.sty**§ 401 Package mathptmx**

(Emulates or patches code by WALTER SCHMIDT.)

mathptmx (*Pkg*) mathptmx is used as-is for SVG math, and is emulated for MATHJAX.

 **limitations** The MATHJAX emulation ignores all package options. The dedicated macros for upright greek letters do work correctly.

SVG math should appear the same as the printed output.

for HTML output: 1 \LWR@ProvidesPackagePass{mathptmx}[2020/03/25]

For MATHJAX:

```
2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{mathptmx}
6
7 \IfPackageLoadedWithOptionsTF{mathptmx}{slantedGreek}
8   {\LWR@mathjax@addgreek@u@it*{}{}}
9   {}
10
11 \LWR@mathjax@addgreek@u@up*{up}{}
12 \end{warpMathJax}
```

File 293 l warp-mathspec.sty**§ 402 Package maths我没有找到这个包的源码，但根据描述，它似乎是一个与mathspec相关的宏包。**

(Emulates or patches code by ANDREW GILBERT MOSCHOU.)

mathspec (*Pkg*) maths我没有找到这个包的源码，但根据描述，它似乎是一个与mathspec相关的宏包。

 **quotes** Double quotes (" and the " character) are removed during MATHJAX emulation, but this also includes inside \text.

for HTML output: 1 \LWR@ProvidesPackagePass{mathspec}[2016/12/22]

```
2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \begin{warpMathJax}
```

Neutralize double quotes (" and \"":)

```
5 \booltrue{\LWR@MathJax@silentquotes}
```

Sort options for out Greek emulation:

```

6 \AtBeginDocument{
7 \ifcase\eu@GreekUppercase@value %% If Greek Uppercase Regular
8   \LWR@mathjax@addgreek@u@up*{}{}
9 \or %% If Greek Uppercase Italic
10  \LWR@mathjax@addgreek@u@it*{}{}
11 \or %% If Greek Uppercase Plain
12  \LWR@mathjax@addgreek@u@up*{}{}
13 \fi
14 \ifcase\eu@GreekLowercase@value %% If Greek Lowercase Regular
15  \LWR@mathjax@addgreek@l@up*{}{}
16 \or %% If Greek Lowercase Italic
17  \LWR@mathjax@addgreek@l@it*{}{}
18 \or %% If Greek Lowercase Plain
19  \LWR@mathjax@addgreek@l@it*{}{}
20 \fi
21 }

```

Swap definitions according the `mathspec` conditionals:

```

22 \newcommand*\LWR@mathspec@varforms}{%
23 \eu@ifbooltrue{GreekLowercase} {
24   \eu@ifbooltrue{exchangebetaforms} {
25     \CustomizeMathJax{\let\WRorigbeta\beta}
26     \CustomizeMathJax{\let\beta\varbeta}
27     \CustomizeMathJax{\let\varbeta\WRorigbeta}
28   }
29   \eu@ifbooltrue{exchangepsiforms} {
30     \CustomizeMathJax{\let\WRorigepsilon\epsilon}
31     \CustomizeMathJax{\let\epsilon\varepsilon}
32     \CustomizeMathJax{\let\varepsilon\WRorigepsilon}
33   }
34   \eu@ifbooltrue{exchangethetafoms} {
35     \CustomizeMathJax{\let\WRorigtheta\theta}
36     \CustomizeMathJax{\let\theta\vartheta}
37     \CustomizeMathJax{\let\vartheta\WRorigtheta}
38   }
39   \eu@ifbooltrue{exchangekappaforms} {
40     \CustomizeMathJax{\let\WRorigkappa\kappa}
41     \CustomizeMathJax{\let\kappa\varkappa}
42     \CustomizeMathJax{\let\varkappa\WRorigkappa}
43   }
44   \eu@ifbooltrue{exchangepifoms} {
45     \CustomizeMathJax{\let\WRorigpi\pi}
46     \CustomizeMathJax{\let\pi\varpi}
47     \CustomizeMathJax{\let\varpi\WRorigpi}
48   }
49   \eu@ifbooltrue{exchangerhoforms} {
50     \CustomizeMathJax{\let\WRorigrho\rho}
51     \CustomizeMathJax{\let\rho\varrho}
52     \CustomizeMathJax{\let\varrho\WRorigrho}
53   }
54   \eu@ifbooltrue{exchangephioms} {
55     \CustomizeMathJax{\let\WRorigphi\phi}
56     \CustomizeMathJax{\let\phi\varphi}
57     \CustomizeMathJax{\let\varphi\WRorigphi}
58   }
59 }
60 \eu@ifbooltrue{GreekUppercase} {
61   \eu@ifbooltrue{exchangeThetaforms} {
62     \CustomizeMathJax{\let\WRorigTheta\Theta}

```

```

63      \CustomizeMathJax{\let\Theta\varTheta}
64      \CustomizeMathJax{\let\varTheta\LWRorigTheta}
65  }
66 }
67 }
```

Append new action to `mathspec`'s `\AtBeginDocument` code:

```

68 \xapptocmd{\exchangeforms}
69   {\AtBeginDocument{\LWR@mathspec@varforms}}
70   {}
71   {\LWR@patcherror{mathspec}{exchangeforms}}
72
73 \end{warpMathJax}
```

File 294 **l warp-mathtools.sty**

§ 403 Package **mathtools**

(Emulates or patches code by MORTEN HØGHOLM, LARS MADSEN.)

mathtools (Pkg) mathtools is patched for use by l warp. Emulation macros are provided for MATHJAX.

⚠ equation numbering showonlyrefs is disabled, as it conflicts with cleveref, which is used by l warp. Equation numbers may not match the print version.

⚠ italic correction mathic is not emulated for HTML.

⚠ MATHJAX If using MATHJAX:

- Recent changes may not yet be updated in the MATHJAX extension, which is used by l warp.
- mathtools disallowspaces does not work for MATHJAX. Protect brackets which are not optional arguments, such as:

```
\begin{gathered}{}[p]=1 \dots\end{gathered}
```

- showonlyrefs does not work in MATHJAX, and will result in a difference in equation numbering compared to the print version.
- alignat in MATHJAX requires math mode, but in LATEX it doesn't. It may be required to use warpHTML and warpprint to isolate a version for each mode.
- \DeclarePairedDelimiter and related must be in the preamble before \begin{document}.

for HTML output: 1 \LWR@ProvidesPackagePass{mathtools}[2018/01/08]

2 \RequirePackage{graphicx}

3 \MHInternalSyntaxOn

Forces `showonlyrefs` off because `l warp` uses `cleveref`, which is not compatible with `showonlyrefs`.

```

4 \renewcommand*\MT_showonlyrefs_true:{%
5   \PackageWarningNoLine{l warp}%
6   {%
7     Mathtools \space showonlyrefs \space conflicts \space
8     with \space cleveref, \MessageBreak
9     which \space is \space used \space by \space l warp, \space
10    so \space showonlyrefs \space is\MessageBreak
11    forced \space off. \space\space
12    Equation \space numbers \space may \space not \space match%
13  }%
14  \MT_showonlyrefs_false:%
15 }%
16 \mathtoolsset{showonlyrefs=false}

```

Forces math italic correction off. Not patched for `l warp`.

```

17 \renewcommand*{\MT_mathic_true:}{\MT_mathic_false:}%
18 \mathtoolsset{mathic=false}

19 \MHInternalSyntaxOff

```

For **MATHJAX**.

The **MATHJAX** package is used, and improvements are added.

```

20 \begin{warpMathJax}%
21 \CustomizeMathJax{\require{mathtools}}%
22 %
23 \LWR@infoprocessingmathjax{mathtools}%
24 %
25 \CustomizeMathJax{\newenvironment{crampedsubarray}[1]{}{}}
26 %
27 \CustomizeMathJax{\newcommand{\smashoperator}[2][]{\#2\limits}}%
28 %
29 \CustomizeMathJax{\newcommand{\SwapAboveDisplaySkip}{}}
30 %
31 \CustomizeMathJax{\newcommand{\LaTeXunderbrace}[1]{\underbrace{\#1}}}
32 \CustomizeMathJax{\newcommand{\LaTeXoverbrace}[1]{\overbrace{\#1}}}
33 %
34 %
35 \CustomizeMathJax{\newcommand{\LWRmultlined}[1][]{\begin{multline*}}}
36 \CustomizeMathJax{\newenvironment{multlined}[1][]{\LWRmultlined}{\end{multline*}}}
37 %
38 \CustomizeMathJax{\let\LRorigshoveleft\shoveleft}%
39 \CustomizeMathJax{\renewcommand{\shoveleft}[1][]{\LRorigshoveleft}}%
40 \CustomizeMathJax{\let\LRorigshoveright\shoveright}%
41 \CustomizeMathJax{\renewcommand{\shoveright}[1][]{\LRorigshoveright}}%
42 %
43 \CustomizeMathJax{\newcommand{\shortintertext}[1]{\text{\#1}\notag \\}}
44 %
45 \LetLtxMacro{\LWR@mathtools@orig}{\DeclarePairedDelimiter\DeclarePairedDelimiter}
46 \renewcommand{\DeclarePairedDelimiter}[3]{%
47   \LWR@mathtools@orig{\#1}{\#2}{\#3}%
48 % starred:
49   \appto{\LWR@customizedMathJax}{\LWRbackslash()}%
50   \appto{\LWR@customizedMathJax}{%

```

```

51      \LWRbackslash{}newcommand{\LWRbackslash\macro{#1}\LWRsubstar\}%
52      }%
53      \appto{\LWR@customizedMathJax{[2]}[]}{%
54      \appto{\LWR@customizedMathJax{\{\}}{%
55      \LWR@subcustomizedmathjax{##1\left#2##1\right#3}{%
56      \appto{\LWR@customizedMathJax{\}}}{%
57      \appto{\LWR@customizedMathJax{\LWRbackslash}\par}{%
58 % not starred:%
59      \appto{\LWR@customizedMathJax{\LWRbackslash()}{%
60      \appto{\LWR@customizedMathJax{\%}{%
61      \LWRbackslash{}newcommand{\LWRbackslash\macro{#1}\LWRsubnstar\}%
62      }%
63      \appto{\LWR@customizedMathJax{[2]}[]}{%
64      \appto{\LWR@customizedMathJax{\{\}}{%
65      \LWR@subcustomizedmathjax{##1#2##2##1#3}{%
66      \appto{\LWR@customizedMathJax{\}}}{%
67      \appto{\LWR@customizedMathJax{\LWRbackslash}\par}{%
68 % user macro:%
69      \appto{\LWR@customizedMathJax{\LWRbackslash()}{%
70      \appto{\LWR@customizedMathJax{\%}{%
71      \LWRbackslash{}newcommand{\LWRbackslash\macro{#1}\LWRsubstar\}%
72      \{\LWRbackslash\}ifstar{%
73          \LWRbackslash\macro{#1}\LWRsubstar{%
74          \LWRbackslash\macro{#1}\LWRsubnstar{%
75      }%
76      }%
77      \appto{\LWR@customizedMathJax{\LWRbackslash}\par}{%
78 }%
79 \onlypreamble\DeclarePairedDelimiter
80
81 % (DeclarePairedDelimiterX is already defined to use \DeclarePairedDelimiterXPP.)
82
83 \LetLtxMacro{\LWR@mathtools@orig}{\DeclarePairedDelimiterXPP\DeclarePairedDelimiterXPP}
84 \DeclareDocumentCommand{\DeclarePairedDelimiterXPP}{m O{1} m m m m}{%
85     \LWR@mathtools@orig\DeclarePairedDelimiterXPP{#1}[#2][#3]{#4}{#5}{#6}{#7}
86 % subsubstar, second opt arg
87     \appto{\LWR@customizedMathJax{\LWRbackslash()}{%
88     \appto{\LWR@customizedMathJax{\%}{%
89         \LWRbackslash{}newcommand{\LWRbackslash\macro{#1}\LWRsubsubstar\}%
90     }%
91     \appto{\LWR@customizedMathJax{[#2]}{%
92     \appto{\LWR@customizedMathJax{\{\{\LWRbackslash\}left}{%
93     \LWR@subcustomizedmathjax{#3#4#7}{%
94     \appto{\LWR@customizedMathJax{\LWRbackslash\}right}{%
95     \LWR@subcustomizedmathjax{#5#6}{%
96     \appto{\LWR@customizedMathJax{\}}}{%
97     \appto{\LWR@customizedMathJax{\LWRbackslash}\par}{%
98 % substar, first opt arg
99     \appto{\LWR@customizedMathJax{\LWRbackslash()}{%
100    \appto{\LWR@customizedMathJax{\%}{%
101        \LWRbackslash{}newcommand{\LWRbackslash\macro{#1}\LWRsubstar\}[1][]}{%
102    }%
103    \appto{\LWR@customizedMathJax{\%}{%
104        \{%
105            \LWRbackslash\def{\LWRbackslash\delimsize{\#1}}{%
106            \LWRbackslash\macro{#1}\LWRsubsubstar{%
107        }%
108    }%
109    \appto{\LWR@customizedMathJax{\LWRbackslash}\par}{%
110 % subsubnstar, second opt arg

```

```
111  \appto\LWR@customizedMathJax{\LWRbackslash()%  
112  \appto\LWR@customizedMathJax{%
```

113 \LWRbackslash{}newcommand{\{\LWRbackslash\macro{#1}\LWRsubstar\}}%
114 }%">
115 \appto\LWR@customizedMathJax{[#2]}%
116 \appto\LWR@customizedMathJax{\{\{\LWRbackslash{}delimsize\}%
117 \LWR@subcustomizedmathjax{#3#4#7}}%
118 \appto\LWR@customizedMathJax{\LWRbackslash{}delimsize\}%
119 \LWR@subcustomizedmathjax{#5#6}}%
120 \appto\LWR@customizedMathJax{\{\}\}}%
121 \appto\LWR@customizedMathJax{\LWRbackslash)\par}}%
122 % subnstar, first opt arg
123 \appto\LWR@customizedMathJax{\LWRbackslash()%
124 \appto\LWR@customizedMathJax{%

125 \LWRbackslash{}newcommand{\{\LWRbackslash\macro{#1}\LWRsubstar\}[1][]}}%
126 }%">
127 \appto\LWR@customizedMathJax{%

128 \{
129 \LWRbackslash{}def\LWRbackslash{}delimsize{\#\#1\}
130 \LWRbackslash\macro{#1}\LWRsubstar
131 \}}%
132 }%">
133 \appto\LWR@customizedMathJax{\LWRbackslash)\par}}%
134 % user macro:
135 \appto\LWR@customizedMathJax{\LWRbackslash()}
136 \appto\LWR@customizedMathJax{%

137 \LWRbackslash{}newcommand{\%
138 \LWRbackslash{}\macro{#1}}%
139 \}}%
140 \{\LWRbackslash{}ifstar%
141 \LWRbackslash{}\macro{#1}\LWRsubstar%
142 \LWRbackslash{}\macro{#1}\LWRsubstar%
143 \}}%
144 }%">
145 \appto\LWR@customizedMathJax{\LWRbackslash)\par}}%
146 }
147 \@onlypreamble\DeclareParedDelimiterXPP
148 \@onlypreamble\DeclareParedDelimiterX
149
150 \CustomizeMathJax{\newcommand{\vcntcolon}{\mathrel{\!\!{\scriptsize\texttt{\&}}}}}}
151
152 \LetLtxMacro\LWR@mathtools@orig@newgathered\newgathered
153 \renewcommand{\newgathered}[4]{%
154 \LWR@mathtools@orig@newgathered{#1}{#2}{#3}{#4}}%
155 \appto\LWR@customizedMathJax{\LWRbackslash{}%
156 \LWR@subcustomizedmathjax{
157 \newenvironment{#1}{\begin{gathered}}{\end{gathered}}}}%
158 }%">
159 \appto\LWR@customizedMathJax{\LWRbackslash}}%
160 }
161 \@onlypreamble\newgathered
162
163 \end{warpMathJax}

File 295 l warp-mattens.sty**§ 404 Package mattens***(Emulates or patches code by DANIE ELS.)***mattens (Pkg)** mattens is used as-is for SVG math, and is emulated for MATHJAX.**for HTML output:** 1 \LWR@ProvidesPackagePass{mattens}[2010/03/26]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\LWRmattensnull}{}}
4
5 \CustomizeMathJax{\newcommand{\LWRmattensnostar}[2][]{%
6   {#1{\LWRmattensundercmd{\LWRmattenovercmd{\LWRmattencross{\boldsymbol{#2}}}}}}%
7 }%
8
9 \CustomizeMathJax{\newcommand{\LWRmattensstar}[2][]{%
10  {#1{\LWRmattensundercmd{\LWRmattenovercmd{\LWRmattencross{#2}}}}}}%
11 }%
12
13 \CustomizeMathJax{\newcommand{\LWRmattens}{%
14   \ifstar\LWRmattensstar\LWRmattensnostar%
15 }%
16
17 \CustomizeMathJax{\newcommand{\aS}{%
18   \let\LWRmattencross\LWRmattensnull%
19   \let\LWRmattenovercmd\overrightarrow%
20   \let\LWRmattensundercmd\LWRmattensnull%
21   \LWRmattens%
22 }%
23
24 \CustomizeMathJax{\newcommand{\Sa}{%
25   \let\LWRmattencross\LWRmattensnull%
26   \let\LWRmattenovercmd\underrightarrow%
27   \let\LWRmattensundercmd\LWRmattensnull%
28   \LWRmattens%
29 }%
30
31 \CustomizeMathJax{\newcommand{\bS}{%
32   \let\LWRmattencross\LWRmattensnull%
33   \let\LWRmattenovercmd\overline%
34   \let\LWRmattensundercmd\LWRmattensnull%
35   \LWRmattens%
36 }%
37
38 \CustomizeMathJax{\newcommand{\Sb}{%
39   \let\LWRmattencross\LWRmattensnull%
40   \let\LWRmattenovercmd\underline%
41   \let\LWRmattensundercmd\LWRmattensnull%
42   \LWRmattens%
43 }%
44
45 \CustomizeMathJax{\newcommand{\aSa}{%
46   \let\LWRmattencross\LWRmattensnull%
47   \let\LWRmattenovercmd\overrightarrow%
```

```

48     \let\LWRmattensundercmd\underrightarrow%
49     \LWRmattens%
50 }
51
52 \CustomizeMathJax{\newcommand{\aSb}{%
53     \let\LWRmattencross\LWRmattensnull%
54     \let\LWRmattenovercmd\overrightarrow%
55     \let\LWRmattensundercmd\underline%
56     \LWRmattens%
57 }}
58
59 \CustomizeMathJax{\newcommand{\bSa}{%
60     \let\LWRmattencross\LWRmattensnull%
61     \let\LWRmattenovercmd\overline%
62     \let\LWRmattensundercmd\underrightarrow%
63     \LWRmattens%
64 }}
65
66 \CustomizeMathJax{\newcommand{\bSb}{%
67     \let\LWRmattencross\LWRmattensnull%
68     \let\LWRmattenovercmd\overline%
69     \let\LWRmattensundercmd\underline%
70     \LWRmattens%
71 }}
72
73 \CustomizeMathJax{\newcommand{\aCSa}{%
74     \let\LWRmattencross\tilde%
75     \let\LWRmattenovercmd\overrightarrow%
76     \let\LWRmattensundercmd\underrightarrow%
77     \LWRmattens%
78 }}
79
80 \CustomizeMathJax{\newcommand{\bCSb}{%
81     \let\LWRmattencross\tilde%
82     \let\LWRmattenovercmd\overline%
83     \let\LWRmattensundercmd\underline%
84     \LWRmattens%
85 }}
86 \end{warpMathJax}

```

File 296 lwarf-maybemath.sty

§ 405 Package **maybemath**

(Emulates or patches code by ANDY BUCKLEY.)

maybemath (*Pkg*) **maybemath** is used as-is for SVG math, and is emulated for MATHJAX.

 **no effect** MATHJAX is not able to detect the surrounding text font, so all **maybemath** macros are ignored.

for HTML output: 1 \LWR@ProvidesPackagePass{maybemath}[2005/2/22]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\mayberm}[1]{{#1}}}
4 \CustomizeMathJax{\let\maybebm\mayberm}
5 \CustomizeMathJax{\let\maybeit\mayberm}

```

```

6 \CustomizeMathJax{\let\maybeitrm\mayberm}
7 \CustomizeMathJax{\let\maybeitsubscript\mayberm}
8 \CustomizeMathJax{\let\maybesf\mayberm}
9 \CustomizeMathJax{\let\maybebmsf\mayberm}
10 \end{warpMathJax}
```

File 297 **l warp-mcaption.sty**

§ 406 Package **mcaption**

(Emulates or patches code by STEPHAN HENNIG.)

mcaption (*Pkg*) **mcaption** is ignored.

for HTML output: Discard all options for **l warp-mcaption**:

```

1 \LWR@ProvidesPackageDrop{mcaption}[2009/03/13]
2 \newenvironment{margincap}{}{}
3 \newcommand*\margincapalign{}
4 \newlength{\margincapsep}
```

File 298 **l warp-mdframed.sty**

§ 407 Package **mdframed**

(Emulates or patches code by MARCO DANIEL, ELKE SCHUBERT.)

mdframed (*Pkg*) **mdframed** is loaded with options forced to `framemethod=none`.

§ 407.1 **Limitations**

support Most basic functionality is supported, including frame background colors and single-border colors and thickness, title and subtitle background colors and borders and thickness, border radius, and shadow. CSS classes are created for **mdframed** environments and frame titles.

 **loading** When used, **l warp** loads **mdframed** in **HTML** with `framemethod=none`.

font For title font, use

`frametitlefont=\textbf,`

instead of

`frametitlefont=\bfseries,`

where `\textbf` must appear just before the comma and will receive the following text as its argument (since the text happens to be between braces in the **mdframed** source). Since **l warp** does not support `\bfseries` and friends, only one font selection may be made at a time.

theoremtitlefont **theoremtitlefont** is not supported, since the following text is not in braces in the **mdframed** source.

- ignored options** `userdefinedwidth` and `align` are currently ignored.
- css classes** Environments created or encapsulated by `mdframed` are enclosed in a `<div>` of class `mdframed`, and also class `md<environmentname>` for new environments.
- Frame titles are placed in a `<div>` of class `|mdframedtitle|`. Subtitles are in a `<div>` of class `|mdframedsubtitle|`, and likewise for `subsubtitles`.
- Pre-existing hooks are used to patch extra functions before and after the frames.

§ 407.2 Package loading

for HTML output:

```

1 \RequirePackage{xcolor}%
2   for \convertcolorspec
3 \LWR@ProvidesPackageDrop{mdframed}[2013/07/01]
```

Do not require `TikZ` or `pstricks`:

```
4 \LWR@origRequirePackage[framemethod=none]{mdframed}
```

§ 407.3 Patches

Patch to remove PDF formatting and add HTML tags:

```

5 \AtBeginDocument{
6 \def\mdf@trivlist#1{%
7   \edef\mdf@temp{%
8     \topsep=\the\topsep\relax%
9     \partopsep=\the\partopsep\relax%
10    \parsep=\the\parsep\relax%
11  }%
12  \setlength{\topsep}{#1}%
13  \topskip\z@%
14  \partopsep\z@%
15  \parsep\z@%
16  \@nmbrlistfalse%
17  \@trivlist%
18  \labelwidth\z@%
19  \leftmargin\z@%
20  \itemindent\z@%
21  \let\@itemlabel\@empty%
22  \def\makelabel##1{##1}%
23  \item\relax\mdf@temp\relax%
24 }
25
26 \renewcommand*{\endmdf@trivlist}{%
27 \LWR@traceinfo{endmdf@trivlist}%
28 \endtrivlist%
29 \LWR@listend%
30 }
31 }% AtBeginDocument
```

§ 407.4 Initial setup

To handle css and paragraphs, patch code at start and end of environment and contents. \LWR@print@raggedright helps avoid hyphenation.

```
32 \mdfsetup{  
33 startcode={\LWR@mdframedstart\LWR@print@raggedright},  
34 endcode={\LWR@mdframedend},  
35 startinnercode={\LWR@startpars\LWR@print@raggedright},  
36 endinnercode={\LWR@stoppars},  
37 }
```

§ 407.5 Color and length HTML conversion

\LWR@mdfprintcolor

{*mdfcolorkey*}

Given the `mdframed` key, print the color.

```
38 \newcommand*{\LWR@mdfprintcolor}[1]{%
39 \convertcolorspec{named}{\@nameuse{mdf@#1}}{HTML}\LWR@tempcolor%
40 \LWR@origpound\LWR@tempcolor
41 }
```

\LWR@mdfprintlength

{ $\langle mdflengthkey \rangle$ }

Given the `mdframed` key, print the length.

```

42 \newcommand*{\LWR@mdfprintlength}{\begingroup\def\@nameuse##1##2{%
43   \LWR@forceminwidth{\@nameuse{mdf@##1##2}}%
44 }%
45 }
```

§ 407.6 Environment encapsulation

\LWR@mdframedstart

Actions before an mdframe starts.

Encapsulate a frame inside a <div> of the desired class.

```
46 \newcommand*{\LWR@mdframedstart}{%
47 \LWR@traceinfo{\LWR@mdframedstart start}}%
```

Warn if starting a frame inside a :

48 \LWR@spanwarninvalid{mdframe}%

Turn off paragraph handling during the generation of the encapsulating tags:

49 \LWR@stoppars%

Open a `<div>` and with custom `class` and custom `style`. A `BlockClass` environment is not used because this `<div>` is created by the `mdframed` `startcode` and `endcode` settings, which do not properly nest the `<div>` inside the `mdframed` environment.

```
50 \LWR@htmltagc{div class=\textquotedbl%
51 mdframed%
52 \ifdefstring{\LWR@mdthisenv}{mdframed}{}{\ \LWR@mdthisenv}%
53 \textquotedbl \LWR@orignewline
54 style=\textquotedbl\lwr@orignewline
```

Convert and print the background color:

55 background: \LWR@mdfprintcolor{backgroundcolor} ; \LWR@orignewline

Convert and print the border color and width:

```
56 border: \LWR@mdfprintlength{linewidth} solid
57 \LWR@mdfprintcolor{linecolor} ; \LWR@orignewline
```

Convert and print the border radius:

```
58 border-radius: \LWR@mdfprintlength{roundcorner} ; \LWR@orignewline
```

Convert and print the shadow:

```
59 \ifbooleq{\mdf@shadow}{%
60   box-shadow:
61   \LWR@mdfprintlength{shadowsize}
62   \LWR@mdfprintlength{shadowsize}
63   \LWR@mdfprintlength{shadowsize}
64   \LWR@mdfprintcolor{shadowcolor} ;
65 }
66 {box-shadow: none ;}
67 \LWR@orignewline

68 \textquotedbl}
69 % \LWR@htmldivclass{\LWR@mdthisenv}
```

`mdframed` environment may not work with the HTML versions of the following, so restore them to their originals while inside `mdframed`:

```
70 \let\hspace{\LWR@print@hspace}
71 \renewcommand*{\rule}{\LWR@print@rule}
72 \LetLtxMacro\makebox{\LWR@print@makebox}

73 \LWR@startpars%
74 \LWR@traceinfo{\LWR@mdframedstart done}%
75 }
```

\LWR@mdframedend

Actions after an `mdframe` ends.

After closing the `<div>`, globally restore to the default environment type:

```
76 \newcommand*{\LWR@mdframedend}{%
77 \LWR@traceinfo{\LWR@mdframedend start}}%
```

Close the custom `<div>`:

```
78 \LWR@htmldivclassend{\LWR@mdthisenv}
```

Reset future custom class to the default:

```
79 \gdef\LWR@mdthisenv{\mdframed}
```

Resume paragraph handling:

```
80 \LWR@startpars%
81 \LWR@traceinfo{\LWR@mdframedend done}%
82 }
```

§ 407.7 Mdframed environment

```
83 \renewenvironment{mdframed}[1][]{%
84   \color@begingroup%
85   \mdfsetup{userdefinedwidth=\linewidth,\#1}%
86   \mdf@startcode%
87   \mdf@preenvsetting%
88   \ifempty{\mdf@firstframetitle}{%
89     {\let\mdf@frametitlesave\mdf@frametitle%
90      \let\mdf@frametitle\mdf@firstframetitle%
91    }%
92   \ifvmode\nointerlineskip\fi%
```

```

93      \ifdefempty{\mdf@frametitle}{}
94          {\mdfframedtitleenv{\mdf@frametitle}%
95          \mdf@@frametitle@use%
96          }%
97      \mdf@trivlist{\mdf@skipabove@length}%
98      \mdf@settings%
99 %     \mdf@lrbox{\mdf@splitbox@one}%
100 %    \mdf@startinnercode%
101  }%
102 {%
103 %     \mdf@@ignorelastdescenders%
104     \par%
105 %     \unskip\ifvmode\nointerlineskip\hrule \@height\z@ \@width\hsize\fi%
106     \ifmdf@footnoteinside%
107         \def\mdf@reserved{%
108             \mdf@footnoteoutput%
109 %             \mdf@endinnercode%
110 %             \endmdf@lrbox%
111 %             \ifdefempty{\mdf@frametitle}{}
112 %                 {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
113 %                 \detected@mdf@put@frame
114         }%
115     \else%
116         \def\mdf@reserved{%
117             \mdf@endinnercode%
118             \endmdf@lrbox%
119             \ifdefempty{\mdf@frametitle}{}
120             {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
121             \detected@mdf@put@frame%
122             \mdf@footnoteoutput%
123         }%
124     \fi%
125     \mdf@reserved%
126     \aftergroup\endmdf@trivlist%
127     \color@endgroup%
128     \mdf@endcode%
129 }

\mdf@footnoteoutput
130 \renewrobustcmd*\mdf@footnoteoutput{%
131     \LWR@printpendingmpfootnotes%
132 }

```

§ 407.8 Titles and subtitles

\mdfframedtitleenv {*<title>*}

Place the title inside a <div> of class mdframedtitle:

```

133 \newlength{\LWR@titleroundcorner}
134
135 \renewrobustcmd\mdfframedtitleenv[1]{%
136 \LWR@traceinfo{\LWR@mdframedtitleenv start}%

```

Open a <div> with a custom class and custom style:

```

137 \begin{BlockClass}[%
```

Convert and print the title background color:

```

138 background: %
139 \LWR@mdfprintcolor{frametitlebackgroundcolor}
```

```
140 ; \LWR@orignewline
```

Convert and print the title rule:

```
141 \ifbool{mdf@frametitlerule}{%
142     border-bottom:
143     \LWR@mdfprintlength{frametitlerulewidth}
144     solid
145     \LWR@mdfprintcolor{frametitlerulecolor}
146     ; \LWR@orignewline
147 }{}}
```

Finish the custom style and the opening <div> tag:

```
148 ]{mdframedtitle}{%
```

Print the title inside the <div>:

```
149 \mdf@frametitlefont{\LWR@textcurrentfont{#1}}{%
```

Close the <div>:

```
150 \end{BlockClass}{%
151 \LWR@traceinfo{\LWR@mdframedtitleenv end}{%
152 }}
```

{<sub—or—subsub>} [<options>] {<title>}

Common code for \LWR@mdfsubtitle and \LWR@mdfsubsubtitle.

Encapsulate the subtitle inside a <div> of class mdframedsubtitle:

```
153 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}{%
154 % the following empty line is required
155
156 \LWR@traceinfo{\LWR@mdframedsubtitlecommon start}{%
```

Open a <div> with a custom class and custom style:

```
157 \begin{BlockClass}{%
```

Convert and print the background color:

```
158 background:
159 \LWR@mdfprintcolor{#1titlebackgroundcolor}
160 ; \LWR@orignewline
```

Convert and print the above line:

```
161 \ifbool{mdf@#1titleaboveline}{%
162     border-top:
163     \LWR@mdfprintlength{#1titleabovelinewidth}
164     solid
165     \LWR@mdfprintcolor{#1titleabovelinecolor}
166     ; \LWR@orignewline
167 }{}}
```

Convert and print the below line:

```
168 \ifbool{mdf@#1titlebelowline}{%
169     border-bottom:
170     \LWR@mdfprintlength{#1titlebelowlinewidth}
171     solid
172     \LWR@mdfprintcolor{#1titlebelowlinecolor}
173     ; \LWR@orignewline
174 }{}}
```

Finish the custom style and the opening <div> tag:

175]{\mdframed#1title}%

Perform the original subtitle action:

176 \IfNoValueTF{#2}{%
177 {\@nameuse{LWR@origmdf#1title}{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}}%
178 {\@nameuse{LWR@origmdf#1title}{[#2]}{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}}}%

Close the <div>:

179 \end{BlockClass}%
180 \LWR@traceinfo{LWR@mdframedsubtitlecommon end}%
181 }

\LWR@mdfsubtitle [⟨options⟩] {⟨title⟩}

182 \newcommand*{\LWR@mdfsubtitle}{{%
183 \LWR@mdfsubtitlecommon{sub}%
184 }%
185 \let\mdfsubtitle\LWR@mdfsubtitle}

\LWR@mdfsubsubtitle [⟨options⟩] {⟨title⟩}

186 \newcommand*{\LWR@mdfsubsubtitle}{{%
187 \LWR@mdfsubtitlecommon{subsub}%
188 }%
189 \let\mdfsubsubtitle\LWR@mdfsubsubtitle}

§ 407.9 New environments

\LWR@mdthisenv Stores the environment of the frame about to be created:

190 \newcommand*{\LWR@mdthisenv}{\mdframed}

\newmdenv [⟨options⟩] {⟨env-name⟩}

Modified from the original to remember the environment.

191 \renewrobustcmd*{\newmdenv[2][]{}}{%
192 \newenvironment{#2}{}{%
193 {%
194 \mdfsetup{#1}%
195 \renewcommand*{\LWR@mdthisenv}{md#2}%
196 \begin{mdframed}%
197 }%
198 {\end{mdframed}}%
199 }}

\surroundwithmdframed [⟨options⟩] {⟨environment⟩}

Modified from the original to remember the environment.

200 \renewrobustcmd*{\surroundwithmdframed}[2][]{%
201 \BeforeBeginEnvironment{#2}{%
202 \renewcommand*{\LWR@mdthisenv}{md#2}%
203 \begin{mdframed}[#1]}%
204 \AfterEndEnvironment{#2}{\end{mdframed}}%
205 }}

\mdtheorem [⟨mdframed-options⟩] {⟨envname⟩} [⟨numberedlike⟩] {⟨caption⟩} [⟨within⟩]

Modified from the original to remember the environment.

```
206 \DeclareDocumentCommand{\mdtheorem}{ O{} m o m o }%
207   {\ifcsdef{#2}%
208     {\mdf@PackageWarning{Environment #2 already exists\MessageBreak}}%
209   {%
210     \IfNoValueTF {#3}%
211       {##3 not given -- number relationship
212        \IfNoValueTF {#5}%
213          {##3+##5 not given
214           \edef\thmcounter{#2}%
215           \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
216           \newenvironment{#2}[1][]%
217             \refstepcounter{#2}%
218             \ifstrempty{##1}%
219               {\let\temptitle\relax}%
220             {%
221               \def\temptitle{\mdf@theoremseparator%
222                             \mdf@theoremspace%
223                             \mdf@theoremtitlefont%
224                             \LWR@textcurrentfont{##1}}% lwarp
225               \mdf@thm@caption{#2}{##4}{\csname the#2\endcsname{##1}}%
226             }%
227             \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
228                                         \temptitle}]]%}
229           \end{mdframed}}%
230           \newenvironment{#2*}[1][]{%
231             \ifstrempty{##1}{\let\temptitle\relax}{\def\temptitle{: \ ##1}}%
232             \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%}
233           \end{mdframed}}%
234         }%
235         {##5 given -- reset counter
236         \edef\thmcounter{#2}\newctr{#2}[#5]%
237         \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
238         \expandafter\xdef\csname the#2\endcsname{%
239           \expandafter\noexpand\csname the#5\endcsname \@thmcOUNTERsep%
240           @thmcounter{#2}}%
241         \newenvironment{#2}[1][]%
242           \refstepcounter{#2}%
243           \ifstrempty{##1}%
244             {\let\temptitle\relax}%
245             {%
246               \def\temptitle{\mdf@theoremseparator%
247                             \mdf@theoremspace%
248                             \mdf@theoremtitlefont%
249                             \LWR@textcurrentfont{##1}}% lwarp
250               \mdf@thm@caption{#2}{##4}{\csname the#2\endcsname{##1}}%
251             }%
252             \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
253                                         \temptitle}]]%}
254           \end{mdframed}}%
255           \newenvironment{#2*}[1][]{%
256             \ifstrempty{##1}{\let\temptitle\relax}{\def\temptitle{: \ ##1}}%
257             \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%}
258           \end{mdframed}}%
259         }%
260         \def\temptitle{\mdf@theoremseparator%
261           \mdf@theoremspace%
262           \mdf@theoremtitlefont%
263           \LWR@textcurrentfont{##1}}% lwarp
264         \mdf@thm@caption{#2}{##4}{\csname the#2\endcsname{##1}}%
265         \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
```

```

266      {\end{mdframed}}%
267    }%
268  }%
269 {##3 given -- number relationship
270   \global\@namedef{the#2}{\@nameuse{the#3}}%
271   \newenvironment{#2}[1][]{%
272     \refstepcounter{#3}%
273     \ifstrempy{##1}%
274       {\let\@temptitle\relax}%
275     {%
276       \def\@temptitle{\mdf@theoremseparator}%
277         \mdf@theoremspace%
278         \mdf@theoremtitlefont%
279         \LWR@textcurrentfont{##1}}% lwarf
280       \mdf@thm@caption{#2}{{#4}{\csname the#2\endcsname{##1}}}%
281     }%
282   \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
283                                     \@temptitle}]]}%
284   {\end{mdframed}}%
285   \newenvironment{#2*}[1][]{%
286     \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{:\ ##1}}%
287     \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]}%
288   \end{mdframed}}%
289 }%
290 \BeforeBeginEnvironment{#2}{\renewcommand*{\LWR@mdthisenv}{md#2}}% lwarf
291 \BeforeBeginEnvironment{#2*}{\renewcommand*{\LWR@mdthisenv}{md#2}}% lwarf
292 }%
293 }

```

\newmdtheoremenv

*[<1: mdframed-options>] [<2: envname>] [<3: numberedlike>] [<4: caption>]
[<5: within>]*

Modified from the original to remember the environment.

```

294 \DeclareDocumentCommand\newmdtheoremenv{O{} m o m o }{%
295   \ifboolexpr{ test {\IfNoValueTF {#3}} and test {\IfNoValueTF {#5}} }{%
296     {\newtheorem{#2}{#4}}%
297     {%
298       \IfValueT{#3}{\newtheorem{#2}[#3]{#4}}%
299       \IfValueT{#5}{\newtheorem{#2}{#4}[#5]}%
300     }%
301   \BeforeBeginEnvironment{#2}{%
302     \renewcommand*{\LWR@mdthisenv}{md#2}%
303     \begin{mdframed}[#1]}%
304   \AfterEndEnvironment{#2}{%
305     \end{mdframed}}%
306 }

```

File 299 **lwarf-mdwmath.sty**

§ 408 Package **mdwmath**

(Emulates or patches code by MARK WOODING.)

mdwmath (Pkg) mdwmath is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{mdwmath}[1996/04/11]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\let\LWRmdwmathsqrt\sqrt}
4 \CustomizeMathJax{\renewcommand{\sqrt}{\ifstar{\LWRmdwmathsqrt}{\LWRmdwmathsqrt}}}
5 \CustomizeMathJax{\newcommand{\bitand}{\mathbin{\&}}}
6 \CustomizeMathJax{\def\bitor{\mathbin{\mid\mid}}}
7 \CustomizeMathJax{\def\dblor{\mathbin{\mid\mid\mathrel{\bitand}\mid\mid}}}
8 \CustomizeMathJax{\def\dbland{\mathbin{\mathrel{\bitand}\mathrel{\bitand}}}}
9 \end{warpMathJax}

```

File 300 **l warp-media9.sty**

§ 409 Package **media9**

media9 (*Pkg*) **media9** is emulated.

The packages **multimedia**, **movie15**, and **media9** are supported.

HTML5 `<audio>` and `<video>` objects are created for `.mp3` and `.mp4` files.

HTML5 `<embed>` objects are created for `http` and `ftp` links.

`\href` links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by **HTML5**.)

For **media9**, a multimedia object is inserted for each `addresource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each **HTML** multimedia object includes the poster text, except for `<embed>` objects. For **movie15**, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The **HTML** object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 `\addmediopath` is supported. It is assumed that the same path structure will exist for the **HTML** document.

HTML5 media controls are always specified for each `<audio>` and `<video>` object.

media9 slideshows are not supported.

`\hyperlink{movie}`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a **YOUTUBE™** video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

 & in a URL Many special characters are converted to regular catcode 12 characters for use inside a URL. & is used in the flash variables fields, which are split with `xparse\SplitList`, which does not seem to work with a catcode 12 divider token, so & is

not converted to catcode 12, and will not work in a URL with **media9**. Using & in a URL in a **flashvars** field may also cause parsing problems with print output, as well.

for HTML output: 1 \LWR@ProvidesPackageDrop{media9}[2019/02/21]

```
2 \LWR@origRequirePackage{lwarp-common-multimedia}
3
4 \RequirePackage{xkeyval}
```

\addmediopath {<path>}

Supported.

```
5 \newcommand*{\LWR@medianine@path}{}%
6
7 \newcommand*{\addmediopath}[1]{\appto{\LWR@medianine@path}{#1}}%
```

The options and poster text are reused in several places.

```
8 \newcommand*{\LWR@medianine@postertext}{}%
9 \newcommand*{\LWR@medianine@options}{}%
```

Each addresource can generate a multimedia object.

```
10 \define@key{\LWR@medianine}{addresource}{%
11   \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
12   {\LWR@medianine@postertext}%
13   {#1}%
14 }
```

Each flashvars source can generate a multimedia object.

```
15 \newcommand*{\LWR@medianine@flashvarsb}[1]{%
16   \IfBeginWith{#1}{source=}{%
17     \StrGobbleLeft{#1}{7}[\LWR@tempone]%
18     \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
19     {\LWR@medianine@postertext}%
20     {\LWR@tempone}%
21   }{}%
22   \IfBeginWith{#1}{src=}{%
23     \StrGobbleLeft{#1}{4}[\LWR@tempone]%
24     \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
25     {\LWR@medianine@postertext}%
26     {\LWR@tempone}%
27   }{}%
28 }
29
30 \NewDocumentCommand{\LWR@medianine@flashvars}{>{\SplitList{&}} m }{%
31   \ProcessList {#1}{\LWR@medianine@flashvarsb}%
32 }
33
34 \define@key{\LWR@medianine}{flashvars}{%
35   \LWR@medianine@flashvars{#1}%
36 }
```

\includemedia

[<options>] {<poster text>} {<file or url>}

```

37 \newcommand*{\LWR@includemediab}[3][]{%
38   \let\input@path\LWR@medianine@path%
39   \renewcommand*{\LWR@medianine@options}{#1}%
40   \renewcommand*{\LWR@medianine@postertext}{#2}%
41   \setkeys*{\LWR@medianine}{#1}%
42   \IfBeginWith{#3}{http}{\LWR@multimedia[#1]{#2}{#3}}{%
43     \IfBeginWith{#3}{HTTP}{\LWR@multimedia[#1]{#2}{#3}}{%
44       \IfBeginWith{#3}{ftp}{\LWR@multimedia[#1]{#2}{#3}}{%
45         \IfBeginWith{#3}{FTP}{\LWR@multimedia[#1]{#2}{#3}}{%
46           }}}}%
47   \endgroup%
48 }
49
50 \newrobustcmd*{\includemedia}{%
51   \begingroup%
52   \LWR@linkmediacatcodes%
53   \LWR@includemediab%
54 }

```

\mediabutton [*options*] {*text*}

Ignored.

```
55 \newcommand*{\mediabutton}[2][]{}
```

File 301 **l warp-memhfixc.sty**

§ 410 Package **memhfixc**

memhfixc (*Pkg*) **memhfixc** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{memhfixc}[2013/05/30]

File 302 **l warp-menukeys.sty**

§ 411 Package **menukeys**

(Emulates or patches code by TOBIAS WEH.)

menukeys (*Pkg*) **menukeys** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{menukeys}[2020/12/19]

Patch to use a `lateximage` whose `alt` text is the contents of this use of the macro. A hash on these contents allows the reuse of the image for each instance of the same contents.

```

2 \VerifyCommand[l warp][menukeys]{\tw@define@menu@macro@}{A3C988E47073504556D744EF08443B1D}
3
4 \xpatchcmd{\tw@define@menu@macro@}
5   {\@nameuse{tw@style@#4@pre}}
6   {%
7     \begin{lateximage}*[{\detokenize{##2}}]%
8       \@nameuse{tw@style@#4@pre}%

```

```

9      }
10     {}
11     {\LWR@patcherror{menukeys}{tw@define@menu@macro@}}
12
13 \xpatchcmd{\tw@define@menu@macro@}
14   {\@nameuse{tw@style@#4@post}}
15   {%
16     \@nameuse{tw@style@#4@post}%
17     \end{lateximage}%
18   }
19   {}
20   {\LWR@patcherror{menukeys}{tw@define@menu@macro@ B}}}
```

Patch the existing macros:

```

21 \renewmenumacro{\menu}[>]{menus}
22 \renewmenumacro{\directory}[/]{paths}
23 \renewmenumacro{\keys}[+]{roundedkeys}
```

File 303 **lwarf-metalogo.sty**

§412 Package **metalogo**

(Emulates or patches code by ANDREW GILBERT MOSCHOU.)

metalogo (*Pkg*) **metalogo** is used in print mode, and emulated in **HTML**.

for HTML output: 1 \LWR@ProvidesPackagePass{metalogo}[2010/05/29]

```

2 \newcommand*{\LWR@HTML@setlogokern}[2]{}
3 \newcommand*{\LWR@HTML@setlogodrop}[2][XeTeX]{}
4 \newcommand*{\LWR@HTML@setLaTeXa}[1]{}
5 \newcommand*{\LWR@HTML@setLaTeXee}[1]{}
6 \newcommand*{\LWR@HTML@seteverylogo}[1]{}
7 \newcommand*{\LWR@HTML@everylogo}[1]{}
8
9 \LWR@formatted{setlogokern}
10 \LWR@formatted{setlogodrop}
11 \LWR@formatted{setLaTeXa}
12 \LWR@formatted{setLaTeXee}
13 \LWR@formatted{seteverylogo}
14 \LWR@formatted{everylogo}
```

File 304 **lwarf-metalogox.sty**

§413 Package **metalogox**

(Emulates or patches code by BRIAN DUNN.)

metalogox (*Pkg*) **metalogox** is patched for use by **lwarf**.

for HTML output: 1 \LWR@ProvidesPackagePass{metalogox}[2019/01/20]

\AtBeginDocument, adjust the logo setting according to the font which is active at that moment.

```
2 \AtBeginDocument{
3   \let\LWR@metalogox@currentformatting\LWR@formatting
4   \renewcommand*\LWR@formatting{\print}%
5   \autoadjustlogos*
6   \let\LWR@formatting\LWR@metalogox@currentformatting
7 }
```

File 305 **lwarf-mhchem.sty**

§ 414 Package **mhchem**

(Emulates or patches code by MARTIN HENSEL.)

mhchem (*Pkg*) **mhchem** is patched for use by **lwarf**.

without MATHJAX Without MATHJAX, **mhchem** expressions are converted to SVG math. Inline expressions use hashed filenames to allow reuse, and assume that any **mhchem** options are global.

MATHJAX with mhchem extension For MATHJAX, the **mhchem** extension is used if the **mhchem** expression is used inside a math expression:

$\text{\ce{C6H5-CHO}}$

To force the use of SVG math for an expression which does not work with MATHJAX, place the expression between **\displaymathother** and **\displaymathnormal**:

```
\displaymathother
[ \ce{...} ] . . . $ \ce{...} $
```

not inside math

If *not* used inside a math expression, **lwarf** converts standalone **mhchem** expressions into SVG math images.

⚠ nested math When producing HTML output without the MATHJAX **mhchem** extension, **lwarf** does not support the use of nested dollar signs in **mhchem** expressions.

For some examples from the **mhchem** manual, change as follows:

$\text{\ce{NaOH(aq,$infty)}}$	% old
$\text{\ce{NaOH(aq,\infty)}}$	% new
$\text{\ce{Fe(CN)_{\frac{6}{2}}}}$	% old
$\text{\ce{Fe(CN)_{\frac{6}{2}}}}$	% new
$\text{\ce{NO_{x}}}$	% old
$\text{\ce{NO_x}}$	% new
$\text{\ce{NO_{x}}}$	% old
$\text{\ce{NO_x}}$	% new
$\text{\ce{cis-[PtCl_2(NH_3)_2]}}$	% old
$\text{\ce{\mathit{cis}-[PtCl_2(NH_3)_2]}}$	% new

for HTML output: 1 \LWR@ProvidesPackagePass{mhchem}[2018/06/22]

The original definition of \ce:

2 \LetLtxMacro{\LWR@mhchem@origce}{\ce}

The new definition, called from the new \ce after math shift is set. The starred \teximage uses a hashed filename for the SVG image. The alt tag is set to the mhchem expression.

```

3 \newcommand{\LWR@mhchem@HTML@ce}[1]{%
4   \LWR@findcurrenttextcolor% sets \LWR@tempcolor
5   \ifboolex{\LWR@xfakebold}{%
6     {\def{\LWR@tempone{Y}}{}}%
7     {\def{\LWR@tempone{N}}{}}%
8     \begin{teximage}%
9       *%
10      [%
11        \textbackslash{%
12          ce%
13          \{\LWR@HTMLsanitizedetokenized{\detokenize{\#1}}\}%
14        ]%
15        *%
16        [%
17          FM\LWR@f@family%
18          SR\LWR@f@series%
19          SH\LWR@f@shape%
20          SHC\LWR@f@shapecaps%
21          CL\LWR@tempcolor%
22          FB\LWR@tempone% xfakebold
23        ]%
24        \LWR@setcurrentfont%
25        \LWR@mhchem@origce{\#1}%
26        \end{teximage}%
27        \endgroup%
28        \addtocounter{\LWR@mhchem@cedepth}{-1}%
29  }

```

Only set math shift if outer depth:

```

30 \newcounter{\LWR@mhchem@cedepth}
31 \setcounter{\LWR@mhchem@cedepth}{0}

```

The new \ce. Sets math shift then continues.

```

32 \renewcommand{\ce}{%
33   \begingroup%
34   \ifnumequal{\value{\LWR@mhchem@cedepth}}{0}{%
35     \catcode`\$=3% math shift
36   }{}%
37   \addtocounter{\LWR@mhchem@cedepth}{1}%
38   \LWR@mhchem@HTML@ce%
39 }

```

The original definition of \cesplit:

```
40 \LetLtxMacro{\LWR@mhchem@origcesplit}{\cesplit}
```

The new definition, called from the new \cesplit after math shift is set. The starred `lateximage` uses a hashed filename for the svg image. The `alt` tag is set to the `mhchem` expression.

```

41 \newcommand*{\LWR@mhchem@HTML@cesplit}[2]
42 {%
43     \LWR@findcurrenttextcolor% sets \LWR@tempcolor
44     \ifbool{\LWR@xfakebold}{%
45         {\def\LWR@tempone{Y}}%
46         {\def\LWR@tempone{N}}%
47         \begin{lateximage}%
48             *%
49             [%
50                 \textbackslash{}%
51                 cesplit%
52                 \{\LWR@HTMLsanitizeddetokenized{\detokenize{\#2}}\}%
53             ]%
54             *%
55             [%
56                 FM\LWR@f@family%
57                 SR\LWR@f@series%
58                 SH\LWR@f@shape%
59                 SHC\LWR@f@shapecaps%
60                 CL\LWR@tempcolor%
61                 FB\LWR@tempone% xfakebold
62             ]%
63             \LWR@setcurrentfont%
64             \LWR@mhchem@origcesplit{\#1}{\#2}%
65             \end{lateximage}%
66             \endgroup%
67 }

```

Only set math shift if outer depth:

```

68 \newcounter{\LWR@mhchem@cesplitdepth}
69 \setcounter{\LWR@mhchem@cesplitdepth}{0}

```

The new \cesplit. Sets math shift then continues.

```

70 \renewcommand{\cesplit}{%
71     \begingroup%
72     \ifnumequal{\value{\LWR@mhchem@cesplitdepth}}{0}{%
73         \catcode`\$=3% math shift
74     }{%
75         \addtocounter{\LWR@mhchem@cesplitdepth}{1}%
76         \LWR@mhchem@HTML@cesplit%
77     }

```

Resore originals inside a `lateximage`:

```

78 \appto{\LWR@restoreorigformatting}{%
79 \LetLtxMacro{\ce}{\LWR@mhchem@origce}%
80 \LetLtxMacro{\cesplit}{\LWR@mhchem@origcesplit}%
81 }%
82 \begin{warpMathJax}%
83 \CustomizeMathJax{\require{mhchem}}%
84 \end{warpMathJax}%

```

File 306 l warp-microtype.sty**§ 415 Package** **microtype***(Emulates or patches code by R SCHLICHT.)***microtype (Pkg)** microtype is pre-loaded by l warp. All user options and macros are ignored and disabled.**for HTML output:** Discard all options for l warp-microtype:

```
1 \LWR@ProvidesPackageDrop{microtype}[2018/01/14]

2 \DeclareDocumentCommand{\DeclareMicrotypeSet}{o m m}{}
3 \DeclareDocumentCommand{\UseMicrotypeSet}{o m}{}
4 \DeclareDocumentCommand{\DeclareMicrotypeSetDefault}{o m}{}
5 \DeclareDocumentCommand{\SetProtrusion}{o m m}{}
6 \DeclareDocumentCommand{\SetExpansion}{o m m}{}
7 \DeclareDocumentCommand{\SetTracking}{o m m}{}
8 \DeclareDocumentCommand{\SetExtraKerning}{o m m}{}
9 \DeclareDocumentCommand{\SetExtraSpacing}{o m m}{}
10 \DeclareDocumentCommand{\DisableLigatures}{o m}{}
11 \DeclareDocumentCommand{\DeclareCharacterInheritance}{o m m}{}
12 \DeclareDocumentCommand{\DeclareMicrotypeVariants}{m m}{}
13 \DeclareDocumentCommand{\DeclareMicrotypeAlias}{m m}{}
14 \DeclareDocumentCommand{\LoadMicrotypeFile}{m m}{}
15 \DeclareDocumentCommand{\DeclareMicrotypeBabelHook}{m m}{}
16 \DeclareDocumentCommand{\microtypesetup}{m}{}
17 \DeclareDocumentCommand{\microtypecontext}{m}{}
18 \DeclareDocumentCommand{\textmicrotypecontext}{m m}{#2}
19 \IfPackageLoadedTF{letterspace}{\let\MT@textls\relax}{%
20 \DeclareDocumentCommand{\lsstyle}{}{}}
21 \DeclareDocumentCommand{\textls}{o +m}{}
22 \DeclareDocumentCommand{\lslig}{m}{#1}
23 }
24 \def\DeclareMicrotypeSet#1{\gobbletwo}
25 \def\DeclareMicrotypeVariants#1{\gobble}
26 @onlypreamble\DeclareMicrotypeSet
27 @onlypreamble\UseMicrotypeSet
28 @onlypreamble\DeclareMicrotypeSetDefault
29 @onlypreamble\DisableLigatures
30 @onlypreamble\DeclareMicrotypeVariants
31 @onlypreamble\DeclareMicrotypeBabelHook
```

File 307 l warp-midfloat.sty**§ 416 Package** **midfloat***(Emulates or patches code by SIGITAS TOLUŠIS.)***midfloat (Pkg)** midfloat is emulated.**for HTML output:** 1 \LWR@ProvidesPackageDrop{midfloat}[2012/05/29]

```

2 \newenvironment{strip}[1][]{\{}{\}}
3 \newskip\stripsep

```

File 308 **l warp-midpage.sty**

§ 417 Package **midpage**

`midpage (Pkg)` `midpage` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{midpage}[2009/09/03]

```

2 \newenvironment{midpage}
3 {\begin{BlockClass}[%]
4   \LWR@print@mbox{margin-top:6ex} ; \LWR@print@mbox{margin-bottom:6ex}%
5 ]{midpage}}
6 {\end{BlockClass}}

```

File 309 **l warp-minibox.sty**

§ 418 Package **minibox**

(Emulates or patches code by WILL ROBERTSON.)

`minibox (Pkg)` `minibox` is patched for use by `l warp`.

Due to HTML limitations regarding paragraphs and <div>s, miniboxes inline with other text will appear on their own line.

for HTML output: 1 \LWR@ProvidesPackagePass{minibox}[2013/06/21]

```

2 \ExplSyntaxOn
3 \newcommand\lWR@HTML@minibox[2][]{%
4   \lWR@stoppars%
5   \group_begin:
6   \keys_set:nn {minibox} {#1}
7   \bool_if:NTF \l_minibox_frame_bool
8   {
9     \setlength\fboxrule{\l_minibox_rule_dim}
10    \setlength\fboxsep{\l_minibox_pad_dim}
11    \fboxBlock{%
12      \begin{tabular}[\l_minibox_tabular_valign_tl]%
13        {\l_minibox_tabular_preamble_tl}%
14        {#2}%
15      \end{tabular}%
16    }%
17  }%
18  {%
19    \begin{BlockClass}[display:inline-block]{minibox}%
20    \begin{tabular}[\l_minibox_tabular_valign_tl]%
21      {\l_minibox_tabular_preamble_tl}%
22      {#2}%
23    \end{tabular}%
24  \end{BlockClass}%

```

```

25      }
26      \group_end:
27      \LWR@startpars%
28 }
29 \ExplSyntaxOff
30
31 \LWR@formatted{minibox}

```

File 310 **l warp-minitoc.sty**

§ 419 Package **minitoc**

`minitoc (Pkg)` `minitoc` is ignored.

for HTML output: 1 `\LWR@ProvidesPackageDrop{minitoc}[2018/07/12]`

`mtcoff` disables `minitoc`.

2 `\usepackage{mtcoff}`

File 311 **l warp-minted.sty**

§ 420 Package **minted**

(Emulates or patches code by GEOFFREY M. POORE.)

`minted (Pkg)` `minted` is patched for use by `l warp`.

⚠ **limitations** `mathescape` and `highlightlines` don't work. Line numbers on the right will not be aligned. Due to `pdftotext`, extra spaces may appear in broken lines if other formatting is included.

for HTML output: 1 `\LWR@ProvidesPackagePass{minted}[2023/09/12]`

Several options are forced, since they are unsupported by `l warp`.

```

2 \renewcommand{\setminted}[2][]{
3   \ifthenelse{\equal{#1}{}}{
4     {\setkeys{minted@opt@g}{%
5       #2,
6       mathescape=false,breaklines,texcomments=false,highlightlines={}}% l warp
7     }%
8     {\minted@configlang{#1}%
9      \setkeys{minted@opt@lang}{%
10        #2,
11        mathescape=false,breaklines,texcomments=false,highlightlines={}}% l warp
12     }%
13   }%
14 \renewcommand{\setmintedinline}[2][]{
15   \ifthenelse{\equal{#1}{}}{
16     {\setkeys{minted@opt@g@i}{%
17       #2,
18       mathescape=false,breaklines,texcomments=false,highlightlines={}}% l warp
19     }%

```

```

20   {\minted@configlang{#1}%
21     \setkeys{minted@opt@lang@i}{%
22       #2,
23       mathescape=false,breaklines,texcomments=false,highlightlines={}}% lwarf
24   }}}
```

`LWR@HTMLsanitize@tmpb@enable` is used to turn off HTML sanitization early in the verbatim conversion, otherwise `minted` would then colorize the sanitized results, breaking the HTML entities in `lwarf`'s HTML output.

Not using `\VerifyCommand` here because these are merely adjusting the keys, and other changes in the original definitions probably won't affect these patches.

```

25 \xpatchcmd{\RobustMintInlineProcess}
26   {\setkeys{minted@opt@cmd}{#1}}
27   {%
28     \setkeys{minted@opt@cmd}{%
29       #1,%
30       mathescape=false,breaklines,texcomments=false,highlightlines={}}%
31     }%
32     \ifbool{minted@draft}%
33       {\booltrue{LWR@HTMLsanitize@tmpb@enable}}%
34       {\boolfalse{LWR@HTMLsanitize@tmpb@enable}}%
35   }
36   {}%
37   {\LWR@patcherror{minted}{minted}}
38
39 \xpatchcmd{\RobustMintProcess}
40   {\setkeys{minted@opt@cmd}{#1}}
41   {%
42     \setkeys{minted@opt@cmd}{%
43       #1,%
44       mathescape=false,breaklines,texcomments=false,highlightlines={}}%
45     }%
46     \ifbool{minted@draft}%
47       {\booltrue{LWR@HTMLsanitize@tmpb@enable}}%
48       {\boolfalse{LWR@HTMLsanitize@tmpb@enable}}%
49   }
50   {}%
51   {\LWR@patcherror{minted}{minted}}
52
53 \xpatchcmd{\minted}
54   {\setkeys{minted@opt@cmd}{#1}}
55   {%
56     \setkeys{minted@opt@cmd}{%
57       #1,%
58       mathescape=false,breaklines,texcomments=false,highlightlines={}}%
59     }%
60     \ifbool{minted@draft}%
61       {\booltrue{LWR@HTMLsanitize@tmpb@enable}}%
62       {\boolfalse{LWR@HTMLsanitize@tmpb@enable}}%
63   }
64   {}%
65   {\LWR@patcherror{minted}{minted}}
66
67 \xpatchcmd{\inputminted}
68   {\setkeys{minted@opt@cmd}{#1}}
69   {\setkeys{minted@opt@cmd}{%
70     #1,%
71     mathescape=false,breaklines,texcomments=false,highlightlines={}}%
```

```

72      }%
73      \ifbool{minted@draft}%
74          {\booltrue{LWR@HTMLsanitize@tmpb@enable}}%
75          {\boolfalse{LWR@HTMLsanitize@tmpb@enable}}%
76      }
77      {}
78      {\LWR@patcherror{minted}{inputminted}}}

79 \renewenvironment{minted@snugshade*}[1]%
80 {%
81     \colorlet{shadecolor}{#1}%
82     \begin{snugshade*}%
83 }
84 {%
85     \end{snugshade*}%
86 }

```

To add sanitization during the final output, adjust several characters to use HTML entities when loading the pygmentized results,

Not using `\VerifyCommand` here because this is a simple patch, not likely to be affected by other changes to the original.

```

87 \xpatchcmd{\minted@input}
88     {\input{#1}}
89     {%
90         \LWR@minted@overrides%
91         \input{#1}%
92     }
93     {}
94     {\LWR@patcherror{minted}{minted@input}}}

```

These macros are used inside the *.pygtx files to format several individual characters. These are revised to use HTML entities. The backquote grave is not supported by pygments.

```

95 \newcommand*{\LWR@minted@overrides}{%
96 \def\PYGZam{\char`\&}
97 \def\PYGZlt{\char`\'\<}
98 \def\PYGZgt{\char`\'\>}
99 \def\PYGZsq{\char`\'\&apos;}
100 }

```

File 312 lwarf-mismath.sty

§ 421 Package **mismath**

(Emulates or patches code by ANTOINE MISSIER.)

mismath (Pkg) **mismath** is patched for SVG math, and emulated for MATHJAX.

⚠ MATHJAX `\number`, `\inumber`, `\jnumber`, and `\pinumber` are ignored for MATHJAX, except that `\itpi` is made available as a clone of `\pi`.

`\MathUp`, `\MathIt`, `\MathNumbers`, and `\MathNormal` are ignored in MATHJAX.

For MATHJAX, `\boldvect` and `\arrowvect` are honored if in the preamble.

If `\boldvectcommand` is set to `\mathbf` in the preamble, it will be used for MATHJAX, otherwise it will default to `\mathit`. `\boldvectcommand` may also be set with `\CustomizeMathJax` in the preamble. See section 8.7.7. Note that as of this writing there is not a bold italic font across all MATHJAX fonts.

If `\probastyle` is set to `\mathbb` in the preamble, it will be used for MATHJAX, otherwise it will default to `\mathrm`. `\probastyle` may be set with `\CustomizeMathJax` in the preamble.

If `\mathset` is set to `\mathbb` in the preamble, it will be used for MATHJAX, otherwise it will default to `\mathbf`. `\mathset` may be set with `\CustomizeMathJax` in the preamble.

for HTML output: 1 `\LWR@ProvidesPackagePass{mismath}[2023/02/24]`

For MATHJAX, used in the HTML comment before the environment.

```
2 \ifbool{mathjax}{%
3   \RenewEnviron{mathcols}{%
4     \preto{\BODY}{\begin{aligned}\displaystyle}
5     \appto{\BODY}{\end{aligned}}
6     \expandafter{(\BODY\)}
7   }
8 }% mathjax
```

For SVG math. The `lateximage` restores the original definition of the `math` environment.

```
9 {%
10   \renewenvironment{mathcols}{%
11     \begin{lateximage}
12     \begin{math}
13     \begin{aligned}\displaystyle
14   }{
15     \end{aligned}%
16     \end{math}
17     \end{lateximage}
18   }
19 }% svg
20
21 \renewcommand{\changecol}{%
22   \end{aligned} \qquad
23   \begin{aligned}\displaystyle
24 }
25
26 \begin{warpMathJax}
27 \CustomizeMathJax{\newcommand{\mathup}[1]{\mathrm{#1}}}
28 \CustomizeMathJax{\newcommand{\e}{\mathrm{e}}}
29 \CustomizeMathJax{\newcommand{\i}{\mathrm{i}}}
30 \CustomizeMathJax{\newcommand{\j}{\mathrm{j}}}
31
32 \CustomizeMathJax{\let\mathbfseries\mathbf}% not sans
33 \CustomizeMathJax{\let\tensor\mathbfseries}
34
35 \CustomizeMathJax{\newcommand{\boldvect}{\mathbf}}
36 \CustomizeMathJax{\newcommand{\arrowvect}{\mathbf}}
37 \CustomizeMathJax{\newcommand{\pinumber}{\mathbf{1}}}
38 \CustomizeMathJax{\newcommand{\hvect}{\mathbf{h}}}
39 \CustomizeMathJax{\newcommand{\hvec}{\mathbf{t}}}
```

```
40 \CustomizeMathJax{%
41     \newcommand{\norm}[1]{\left\| #1 \right\|}%
42 }
43 \CustomizeMathJax{\newcommand{\di}{\mathop{\!}\!\mathit{d}}}
44
45 \CustomizeMathJax{\newcommand{\P}{\operatorname{probastyle{P}}}}
46 \CustomizeMathJax{\newcommand{\E}{\operatorname{probastyle{E}}}}
47 \CustomizeMathJax{\newcommand{\V}{\operatorname{probastyle{V}}}}
48 \CustomizeMathJax{\newcommand{\Par}{\text{\scriptsize{\texttt{unicode{x00B6}}}}}}
49
50 \CustomizeMathJax{\DeclareMathOperator{\adj}{adj}}
51 \CustomizeMathJax{\DeclareMathOperator{\Aut}{Aut}}
52 \CustomizeMathJax{\DeclareMathOperator{\codim}{codim}}
53 \CustomizeMathJax{\DeclareMathOperator{\Conv}{Conv}}
54 \CustomizeMathJax{\DeclareMathOperator{\cov}{cov}}
55 \CustomizeMathJax{\DeclareMathOperator{\Cov}{Cov}}
56 \CustomizeMathJax{\newcommand{\curl}{\operatorname{vect{\mathit{curl}}}}}
57 \CustomizeMathJax{\DeclareMathOperator{\divg}{div}}
58 \CustomizeMathJax{\DeclareMathOperator{\End}{End}}
59
60 \CustomizeMathJax{\DeclareMathOperator{\erf}{erf}}
61 \CustomizeMathJax{\newcommand{\grad}{\operatorname{vect{\mathit{grad}}}}}
62 \CustomizeMathJax{\DeclareMathOperator{\id}{id}}
63 \CustomizeMathJax{\DeclareMathOperator{\Id}{Id}}
64 \CustomizeMathJax{\DeclareMathOperator{\im}{im}}
65 \CustomizeMathJax{\let\oldIm\Im}
66 \CustomizeMathJax{\renewcommand{\Im}{\operatorname{Im}}}
67 \CustomizeMathJax{\DeclareMathOperator{\lb}{lb}}
68 \CustomizeMathJax{\DeclareMathOperator{\lcm}{lcm}}
69
70 \CustomizeMathJax{\DeclareMathOperator{\rank}{rank}}
71 \CustomizeMathJax{\let\oldRe\Re}
72 \CustomizeMathJax{\renewcommand{\Re}{\operatorname{Re}}}
73 \CustomizeMathJax{\newcommand{\rot}{\operatorname{vect{\mathit{rot}}}}}
74 \CustomizeMathJax{\DeclareMathOperator{\sgn}{sgn}}
75 \CustomizeMathJax{\DeclareMathOperator{\sinc}{sinc}}
76 \CustomizeMathJax{\DeclareMathOperator{\spa}{span}}
77 \CustomizeMathJax{\DeclareMathOperator{\tr}{tr}}
78 \CustomizeMathJax{\DeclareMathOperator{\var}{var}}
79 \CustomizeMathJax{\DeclareMathOperator{\Var}{Var}}
80 \CustomizeMathJax{\DeclareMathOperator{\Zu}{Z}}
81
82 \CustomizeMathJax{\DeclareMathOperator{\arccot}{arccot}}
83 \CustomizeMathJax{\DeclareMathOperator{\sech}{sech}}
84 \CustomizeMathJax{\DeclareMathOperator{\csch}{csch}}
85 \CustomizeMathJax{\DeclareMathOperator{\arsinh}{arsinh}}
86 \CustomizeMathJax{\DeclareMathOperator{\arcosh}{arcosh}}
87 \CustomizeMathJax{\DeclareMathOperator{\artanh}{artanh}}
88 \CustomizeMathJax{\DeclareMathOperator{\arcoth}{arcoth}}
89 \CustomizeMathJax{\DeclareMathOperator{\arsech}{arsech}}
90 \CustomizeMathJax{\DeclareMathOperator{\arcsch}{arcsch}}
91
92 \CustomizeMathJax{\DeclareMathOperator{\bigO}{\mathcal{O}}}
93 \CustomizeMathJax{\DeclareMathOperator{\bigo}{o}}
94 \CustomizeMathJax{\DeclareMathOperator{\lito}{o}}
95
96 \CustomizeMathJax{\newcommand{\R}{\mathset{R}}}
97 \CustomizeMathJax{\newcommand{\C}{\mathset{C}}}
98 \CustomizeMathJax{\newcommand{\N}{\mathset{N}}}
99 \CustomizeMathJax{\newcommand{\Z}{\mathset{Z}}}
```

```

100 \CustomizeMathJax{\newcommand{\Q}{\mathset{Q}}}
101 \CustomizeMathJax{\newcommand{\F}{\mathset{F}}}
102 \CustomizeMathJax{\newcommand{\K}{\mathset{K}}}
103
104 \CustomizeMathJax{\newcommand{\ds}{\displaystyle}}
105 \CustomizeMathJax{\newcommand{\dlim}{\lim\limits}}
106 \CustomizeMathJax{\newcommand{\dsum}{\sum\limits}}
107 \CustomizeMathJax{\newcommand{\dprod}{\prod\limits}}
108 \CustomizeMathJax{\newcommand{\dcup}{\bigcup\limits}}
109 \CustomizeMathJax{\newcommand{\dcap}{\bigcap\limits}}
110 \CustomizeMathJax{\newcommand{\lbar}{\overline}}
111 \CustomizeMathJax{\newcommand{\hlbar}[1]{\overline{\vphantom{h}\#1}}}
112 \CustomizeMathJax{\newcommand{\LWReqdefstar}{\stackrel{\Delta}{=}}}
113 \CustomizeMathJax{\newcommand{\LWReqdefnostar}{\stackrel{\mathrm{def}}{=}}}
114 \CustomizeMathJax{\newcommand{\eqdef}{\ifstar{\LWReqdefstar}{\LWReqdefnostar}}}
115 \CustomizeMathJax{\newcommand{\unbr}{\underbrace}}
116 \CustomizeMathJax{\newcommand{\iif}{\text{if and only if }}}
117
118 \CustomizeMathJax{\newcommand{\mul}{\mathord{\times}}}
119 \CustomizeMathJax{\newcommand{\then}{\Longrightarrow \mbox{} }\ }
120 \CustomizeMathJax{\newcommand{\txt}[1]{\quad\text{\#1}\quad}}
121 \CustomizeMathJax{\newcommand{\pow}[2]{\left( #1 \right)^{\!#2}}}
122 \CustomizeMathJax{\newcommand{\abs}[1]{\left| \right. \right.\left. \right.^{\!\!\!#1}}}
123 \CustomizeMathJax{\newcommand{\lfrac}[2]{\frac{\!:\!\#1\!:\!}{\!:\!\#2\!:\!}}}
124
125 \CustomizeMathJax{\newenvironment{system}[1][l]{%
126   \left\{ \begin{array}{@{.15em}#1@{}}
127     \end{array}\right.}
128 }
129
130 \CustomizeMathJax{\newenvironment{spmatrix}{%
131   \left( \begin{smallmatrix}
132     \end{smallmatrix}\right)}
133 }
134
135 \CustomizeMathJax{%
136   \newenvironment{mathcols}{%
137     \begin{aligned}\displaystyle}
138     \end{aligned}}
139 }
140 \CustomizeMathJax{\newcommand{\changecl}{\end{aligned}\qquad\begin{aligned}}}
```

User-adjustable settings, detected if in the preamble.

```

141 \AtBeginDocument{
142 \ifdef{\itpi}{%
143   \CustomizeMathJax{\let\itpi\pi}
144 }{%
145 \ifdefstring{\boldvectcommand}{\mathbf}{%
146   \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\mathbf{#1}}}}
147 }{%
148   \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\boldsymbol{#1}}}}
149 }
150 \ifbool{arrowvect}{%
151   \CustomizeMathJax{\newcommand{\vect}[1]{\overrightarrow{#1}}}}
152 }{%
153   \CustomizeMathJax{\newcommand{\vect}[1]{\boldsymbol{\mathrm{#1}}}}}
154 }
155 \ifdefstring{\probastyle}{\mathbb}{%
156   \CustomizeMathJax{\newcommand{\probastyle}[1]{\mathbb{#1}}}}
```

```

157 }{
158     \CustomizeMathJax{\newcommand{\probastyle}[1]{\mathrm{#1}}}
159 }
160 \ifdefstring{\mathset}{\mathbb}{
161     \CustomizeMathJax{\newcommand{\mathset}[1]{\mathbb{#1}}}
162 }{
163     \CustomizeMathJax{\newcommand{\mathset}[1]{\mathbf{#1}}}
164 }
165 }
166 \end{warpMathJax}

```

File 313 **l warp-mleftright.sty**

§ 422 Package **mleftright**

(Emulates or patches code by HEIKO OBERDIEK.)

mleftright (*Pkg*) **mleftright** is used as-is, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{mleftright}[2019/12/03]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\mleft}{\left}}
4 \CustomizeMathJax{\newcommand{\mright}{\right}}
5 \CustomizeMathJax{\newcommand{\mleftright}{\left.\right}}
6 \CustomizeMathJax{\newcommand{\mleftrightrestore}{\left.\right}}
7 \end{warpMathJax}

```

File 314 **l warp-morefloats.sty**

§ 423 Package **morefloats**

morefloats (*Pkg*) **morefloats** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{morefloats}[2015/07/22]

File 315 **l warp-moreverb.sty**

§ 424 Package **moreverb**

(Emulates or patches code by ROBIN FAIRBAIRNS.)

moreverb (*Pkg*) **moreverb** is supported with some patches.

1 \LWR@ProvidesPackagePass{moreverb}[2008/06/03]

```

2 \BeforeBeginEnvironment{verbatimtab}{%
3 \LWR@forcenewpage
4 \LWR@atbeginverbatim{Verbatim}%
5 }
6 \AfterEndEnvironment{verbatimtab}{%

```

```
7 \LWR@afterendverbatim%
8 }
9
10
11 \LetLtxMacro{\LWRMV@orig}{\verbatimtabinput}{\verbatimtabinput}
12
13 \renewcommand{\@verbatimtabinput}[2][]{
14 \LWR@forcenewpage
15 \LWR@atbeginverbatim{Verbatim}%
16 \LWRMV@orig{\verbatimtabinput[#1]{#2}}%
17 \LWR@afterendverbatim%
18 }
19
20 \BeforeBeginEnvironment{listing}{%
21 \LWR@forcenewpage
22 \LWR@atbeginverbatim{programlisting}%
23 }
24
25 \AfterEndEnvironment{listing}{%
26 \LWR@afterendverbatim%
27 }
28
29 \BeforeBeginEnvironment{listingcont}{%
30 \LWR@forcenewpage
31 \LWR@atbeginverbatim{programlisting}%
32 }
33
34 \AfterEndEnvironment{listingcont}{%
35 \LWR@afterendverbatim%
36 }

37 \LetLtxMacro{\LWRMV@listinginput}{\listinginput}{\listinginput}
38
39 \renewcommand{\@listinginput}[3][]{
40 \LWR@forcenewpage
41 \LWR@atbeginverbatim{programlisting}%
42 \LWRMV@listinginput[#1]{#2}{#3}%
43 \LWR@afterendverbatim%
44 }
45
46
47 \renewenvironment*{boxedverbatim}{%
48 {
49 \LWR@forcenewpage
50 \LWR@atbeginverbatim{boxedverbatim}%
51 \verbatim{%
52 }
53 {
54 \endverbatim%
55 \LWR@afterendverbatim%
56 }
```

File 316 **lwarf-movie15.sty**

§ 425 Package **movie15**

movie15 (*Pkg*) movie15 is emualted.

The packages **multimedia**, **movie15**, and **media9** are supported.

HTML5 **<audio>** and **<video>** objects are created for **.mp3** and **.mp4** files.

HTML5 **<embed>** objects are created for **http** and **ftp** links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by **HTML5**.)

For **media9**, a multimedia object is inserted for each **addresource=**, as well as each **flashvars source=** and **src=**. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside **\warpprintonly** or the **warpprint** environment.

Each **HTML** multimedia object includes the poster text, except for **<embed>** objects. For **movie15**, the **text** option is supported to specify the poster text.

The **width**, **height**, and **totalheight** options are supported. The **HTML** object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 \addmediapath is supported. It is assumed that the same path structure will exist for the **HTML** document.

HTML5 media controls are always specified for each **<audio>** and **<video>** object.

media9 slideshows are not supported.

\hyperlinkmovie, **\movieref**, and **\mediabutton** are not supported.

3D objects are not supported.

If using a **YOUTUBE™** video, use an “embedded” URL with **.../embed/...** instead of **.../v/...**

for HTML output:

```
1 \LWR@ProvidesPackageDrop{movie15}[2012/05/16]

2 \LWR@origRequirePackage{lwarp-common-multimedia}
3
4 \RequirePackage{xkeyval}
5
6 \newcommand*\{\LWR@moviefifteen@text}{}%
7
8 \define@key{\LWR@moviefifteen}{text}{\renewcommand{\LWR@moviefifteen@text}{#1}}
9
10 \newcommand*\{\LWR@includemovieb}[4][]{%
11     \renewcommand{\LWR@moviefifteen@text}{(multimedia)}
12     \setkeys*\{\LWR@moviefifteen}{#1}%
13     \LWR@multimediacat[#,width=#2,height=#3]{\LWR@moviefifteen@text}{#4}%
14 }
15
16 \newrobustcmd*\{\includemovie}{%
17     \begingroup%
18     \LWR@linkmediacatcodes%
19     \LWR@includemovieb%
20 }
```

```

21
22
23 \newcommand*\movieref}[3][]{}
24
25 \LetLtxMacro\movie\LWR@multimedia
26 % \LetLtxMacro\sound\LWR@multimedia% not in media15
27
28 \newcommand{\hyperlinkmovie}[3][]{}

```

File 317 **l warp-mparhack.sty**§ 426 Package **mparhack**

mparhack (*Pkg*) **mparhack** is ignored.

for HTML output: Discard all options for **l warp-mparhack**:

```
1 \LWR@ProvidesPackageDrop{mparhack}[2005/04/17]
```

File 318 **l warp-multibib.sty**§ 427 Package **multibib**

(Emulates or patches code by THORSTEN HANSEN.)

multibib (*Pkg*) **multibib** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{multibib}[2008/12/10]

```

2 \VerifyCommand[l warp][multibib]{\newcites}{77893319F9935670F2FF2E524075CB71}
3
4 \xpatchcmd{\newcites}
5   {{\@suffix}}
6   {{\@suffix_html}}
7   {}
8   {\LWR@patcherror{multibib}{newcites}}

```

File 319 **l warp-multicap.sty**§ 428 Package **multicap**

multicap (*Pkg*) **multicap** is emualted.

for HTML output: 1 \LWR@ProvidesPackageDrop{multicap}[2002/05/04]

```

2 \newcommand*\mfcaption{\captionof{figure}}
3 \newcommand*\mtcaption{\captionof{table}}
4 \newcounter{mcapsize}
5 \newcounter{mcapskip}
6 \newlength{\abvmcapskip}
7 \newlength{\blwmcapskip}

```

File 320 **l warp-multicol.sty**

§ 429 Package **multicol**

(Emulates or patches code by FRANK MITTELBACH.)

multicol (*Pkg*) multicol is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{multicol}[2021/10/28]

Multicols are converted into a 1–3 column display, browser-supported.

The optional multicols heading is placed inside a <div> of class `multicolshading`.

The content is placed inside a <div> of class `multicols`.

* {*<numcols>*} [*<heading>*]

2 \NewDocumentEnvironment{multicols}{s m o}

HTML <div> class to contain everything:

3 {

4 \LWR@forcenewpage

5 \BlockClass{multicols}

Optional HTML <div> class for the heading:

6 \IfValueT{#3}{\begin{BlockClass}{multicolshading}#3\end{BlockClass}}%

Change \linewidth to compensate for expected size:

7 \setlength{\linewidth}{\linewidth/#2}

Locally force any minipages to be fullwidth:

8 \booltrue{\LWR@forceminipagefullwidth}

9 }

When done with the environment, close the <div>:

10 {\endBlockClass}

Emulated null functions which are not used in HTML:

11 \newcommand*{\columnbreak}{}
12 \newcommand*{\newcolumn}{}
13 \newcommand*{\RLmulticolcolumns}{}
14 \newcommand*{\LRmulticolcolumns}{}
15
16 \newlength{\premulticols}
17 \newlength{\postmulticols}
18 \newlength{\multicolsep}
19 \newlength{\multicolbaselineskip}
20 \newlength{\multicoltolerance}
21 \newlength{\multicolpretolerance}
22 \newcommand*{\columnseprulecolor}{\normalcolor}
23 \newcounter{columnbadness}
24 \newcounter{finalcolumnbadness}
25 \newcounter{collectmore}

```
26 \newcounter{unbalance}
27 \newlength{\multicolovershoot}
28 \newlength{\multicolundershoot}

29 \NewDocumentCommand{\docolaction}{s o m m}{%
30     \IfValueTF{#2}{#2}{#3}%
31 }
```

File 321 l warp-multicollrule.sty**§ 430 Package multicollrule**

multicollrule (Pkg) multicollrule is ignored.

for HTML output:

```
1 \RequirePackage{multicol}
2
3 \LWR@ProvidesPackageDrop{multicollrule}[2019/01/01]

4 \newcommand*\SetMCRule[1]{}
5 \NewDocumentCommand{\DeclareMCRulePattern}{m m}{}
```

File 322 l warp-multimedia.sty**§ 431 Package multimedia**

multimedia (Pkg) multimedia is emulated.

The packages **multimedia**, **movie15**, and **media9** are supported.

HTML5 `<audio>` and `<video>` objects are created for `.mp3` and `.mp4` files.

HTML5 `<embed>` objects are created for `http` and `ftp` links.

`\href` links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by **HTML5**.)

For **media9**, a multimedia object is inserted for each `addresource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each **HTML** multimedia object includes the poster text, except for `<embed>` objects. For **movie15**, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The **HTML** object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 `\addmediapath` is supported. It is assumed that the same path structure will exist for the **HTML** document.

HTML5 media controls are always specified for each `<audio>` and `<video>` object.

`media9` slideshows are not supported.

`\hyperlink{movie}`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a YouTube™ video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

for HTML output: 1 `\LWR@ProvidesPackageDrop{multimedia}[2012/05/02]`

```

2 \LWR@origRequirePackage{l warp-common-multimedia}
3
4 \LetLtxMacro\movie\LWR@multimedia
5 \LetLtxMacro\sound\LWR@multimedia
6
7 \newcommand{\hyperlink{movie}}[3][]{}
8
9 \newcommand{\hyperlinksound}[3][]{}
10
11 \newcommand{\hyperlink{mute}}
```

File 323 **l warp-multiobjective.sty**

§ 432 Package **multiobjective**

(Emulates or patches code by LUIS MARTÍ.)

`multiobjective (Pkg)` **multiobjective** is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 `\LWR@ProvidesPackagePass{multiobjective}[2008/08/19]`

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\dom}{\mathord{\prec}}}
4 \CustomizeMathJax{\newcommand{\negdom}{\mathord{\not\prec}}}
5 \CustomizeMathJax{\newcommand{\weakdom}{\mathord{\preccurlyeq}}}
6 \CustomizeMathJax{\newcommand{\negweakdom}{\mathord{\not\preccurlyeq}}}

7 \CustomizeMathJax{\newcommand{\strictdom}{\mathord{\mathord{\prec}\!\!\mathord{\prec}}}}
8 \CustomizeMathJax{\newcommand{\negstrictdom}{\mathord{\mathord{\not\prec}\!\!\mathord{\prec}}}}
9 \CustomizeMathJax{\newcommand{\multepsilondom}{\mathord{\preccurlyeq_{\epsilon\cdot}}}}
10 \CustomizeMathJax{\newcommand{\addiepsilondom}{\mathord{\preccurlyeq_{\epsilon+}}}}
11 \CustomizeMathJax{\newcommand{\better}{\triangleleft}}
12 \CustomizeMathJax{\def\vec#1{%
13   \mathchoice%
14     {\displaystyle\boldsymbol{#1}}%
15     {\textstyle\boldsymbol{#1}}%
16     {\scriptstyle\boldsymbol{#1}}%
17     {\scriptscriptstyle\boldsymbol{#1}}%
18 }%
19
20 \CustomizeMathJax{\newcommand{\set}[1]{%
21   \mathchoice%
22     {\displaystyle\mathcal{#1}}%
```

```

23      {{\textstyle\mathcal{#1}}}}%
24      {{\scriptstyle\mathcal{#1}}}}%
25      {{\scriptscriptstyle\mathcal{#1}}}}%
26 }%
27 \CustomizeMathJax{\def\argmax{\mathop{{\mathrm{arg}}}\limits^{\mathrm{max}}}}
28 \CustomizeMathJax{\def\argmin{\mathop{{\mathrm{arg}}}\limits^{\mathrm{min}}}}
29 }%
30 \end{warpMathJax}

```

File 324 **l warp-multirow.sty**

§ 433 Package **multirow**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

multirow (*Pkg*) **multirow** is emulated during `HTML` output, and used as-is while inside a `\teximage`.

- Note that recent versions of `multirow` include a new optional `vposn` argument.

multirow cells • For `multirow`, insert `\mrowcell` into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for `HTML` output. An error is generated if this is missed.

```

. . . & \multirow{2}{.5in}{text} & . . .
. . . & \mrowcell & . . .

```

- colored cells** • The `multirow` documentation regarding colored cells recommends using a negative number of rows. This will not work with `l warp`, so `\warpprintonly` and `\warpHTMLonly` must be used to make versions for print and `HTML`.

- See section 433.2 for `\multicolumnrow`.

⚠ `\multicolumn` & `\multirow` `l warp` does not support directly combining `\multicolumn` and `\multirow`. Use `\multicolumnrow` instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for `\multicolumn` come first, followed by the five arguments for `\multirow`, many of which are optional, followed by the contents.

As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

```

. . . & \multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text} & . . .
. . . & \mcolrowcell & \mcolrowcell & . . .
. . . & \mcolrowcell & \mcolrowcell & . . .

```

- ⚠ `MathJax` • MATHJAX does not support `multirow`, so it is emulated to only print its text on the first row. `\multirow` works as expected in text tabulars or `SVG` math.

In a `\teximage`, the print versions are restored.

See section 75.24 for the print-mode versions.

for HTML output: Remove the placeholder macro which was used if `multirow` was not loaded:

```
1 \LetLtxMacro\multirow\relax
2 \LWR@ProvidesPackagePass{multirow}[2021/03/15]
```

`\LWR@multirowborder` Set to `left` or `right` to create a thick border for the cell, for use by `bigdelim`:

```
3 \newcommand{\LWR@multirowborder}{}%
```

§ 433.1 Multirow

`\LWR@multirow@par`

`\par` inside a `\multirow`.

```
4 \newcommand*\LWR@multirow@par{%
5   \LWR@htmltag{br /}%
6 }%
```

`\multirow` [`<1: vpos>`] [`<2: numrows>`] [`<3:bigstruts>`] [`<4: width>`] [`<5: vmove>`] [`<6: text>`]

```
7 \NewDocumentCommand{\LWR@HTML@multirow}{O{c} m o m o +m}{%
8 {%
9   \LWR@traceinfo{\LWR@HTML@multirow #1 #2 #4}%
}
```

```
10  \booltrue{\LWR@usedmultirow}%

```

```
11  \LWR@maybenewtablerow%
12  \LWR@tabularleftedge%
```

Print the start of a new table data cell:

```
13  \LWR@htmltag{%
14    td rowspan=\textquotedbl#2\textquotedbl\ %
```

A class adds the column spec and the rule:

```
15  class=\textquotedbl{}td%
```

Append this column's spec:

```
16  \LWR@getexpparray{\LWR@tablecolspecc{\arabic{\LWR@tableLaTeXcolindex}}}%
```

If this column has a `cmidrule`, add “rule” to the end of the HTML class tag. Also add the vertical bar class.

```
17  \LWR@addcmidruletrim%
18  \LWR@addleftmostbartag%
19  \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%
20  \textquotedbl%
21  \LWR@tdstartstyles%
```

The vertical alignment, if given:

```
22  \ifstreq{\#1}{c}{\LWR@tdaddstyle\LWR@print@mbox{vertical-align:middle}}{}%
23  \ifstreq{\#1}{b}{\LWR@tdaddstyle\LWR@print@mbox{vertical-align:bottom}}{}%
24  \ifstreq{\#1}{t}{\LWR@tdaddstyle\LWR@print@mbox{vertical-align:top}}{}%
```

The left/right border, if given:

```
25      \ifdefvoid{\LWR@multirowborder}{}{%
26          \LWR@tdaddstyle%
27          \LWR@print@mbox{border-\LWR@multirowborder:} 2px dotted black ; %
28          \LWR@print@mbox{padding-\LWR@multirowborder:} 2px%
29      }%
```

Additional style elements:

```
30      \LWR@addcmidrulewidth%
31      \LWR@addcdashline%
32      \LWR@addtabularrulecolors%
33      \LWR@tdendstyles%
34  }%
```

The column's < spec:

```
35      \LWR@getexparray{\LWR@colbeforespec}{\arabic{\LWR@tableTeXcolindex}}%
```

While printing the text, redefine \\ to generate a new line. If a nested tabular occurs, \\ is redefined to \LWR@tabularendofline at the start of the tabular, then \LWR@endofline before again printing any \multirow contents inside the nested tabular.

\par is redefined to insert an HTML break, and if tabular is nested, it is redefined at the start of tabular.

```
36      \begingroup%
37          \LetLtxMacro{\\\}{\LWR@endofline}%
38          \booltrue{\LWR@in@multirow@par}%
39          #6%
40      \endgroup%
41      \LWR@stoppars%
42      \boolfalse{\LWR@intabularmetadata}%
43      \renewcommand{\LWR@multirowborder}{}%
44      \LWR@traceinfo{\LWR@HTML@multirow done}%
45 }%
46
47 \LWR@formatted{multirow}
```

§ 433.2 Combined multicolumn and multirow

```
\multicolumnrow {\langle 1:cols \rangle} {\langle 2:halign \rangle} [\langle 3:vpos \rangle] {\langle 4:numrows \rangle} [\langle 5:bigstruts \rangle] {\langle 6:width \rangle} [\langle 7:fixup \rangle]
{\langle 8:text \rangle}
```

\IfPackageLoadedTF{multirow} determines if v2.0 or later of multirow was used, which included the \ProvidesPackage macro.

The HTML version follows.

\AtBeginDocument because the print version had to see if multirow was loaded before determining how to define \LWR@print@multicolumnrow.

```
48 \AtBeginDocument{
49
50 \NewExpandableDocumentCommand{\LWR@HTML@multicolumnrow}{m m O{} m O{} m O{} +m}{%
```

```
51 \booltrue{\LWR@usedmultirow}%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
52 \LWR@tabularhtmlcolumns{\arabic{\LWR@tableLaTeXcolindex}}{#1}
```

Create the multicolumn/multirow tag, temporarily redefining the end of line. (Using a group caused problems with a nested tabular.

```
53 \LetLtxMacro{\}{\LWR@endofline}%
54 \LWR@domulticolumn[#3][#4]{#1}{\arabic{\LWR@tabhtmlcoltotal}}{#2}{#8}%
55 \LetLtxMacro{\}{\LWR@tabularendofline}%
```

Move to the next L^AT_EX column:

```
56 \defaddtocounter{\LWR@tableLaTeXcolindex}{#1}%
57 \defaddtocounter{\LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
58 \booltrue{\LWR@skipatbang}%
59 }%
60
61 \LWR@expandableformatted{multicolumnrow}%
62
63 }% \AtBeginDocument
```

For MATHJAX. Only the text is used. All other parameters are ignored.

```
64 \begin{warpMathJax}
65 % \multirow[vpos]{num}[bigstruts][width][vmove][text]
66 \CustomizeMathJax{\newcommand{\LWRsubmultirow}[2][]{\#2}}
67 \CustomizeMathJax{\newcommand{\LWRmultirow}[2][]{\LWRsubmultirow}}
68 \CustomizeMathJax{\newcommand{\multirow}[2][]{\LWRmultirow}}
69 %
70 \CustomizeMathJax{\newcommand{\mrowcell}{}}
71 \CustomizeMathJax{\newcommand{\mcolrowcell}{}}
72 \CustomizeMathJax{\newcommand{\STneed}[1]{}}
73 \end{warpMathJax}
```

File 325 **l warp-multitoc.sty**

§ 434 Package **multitoc**

multitoc (*Pkg*) **multitoc** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{multitoc}[1999/06/08]

```
2 \newcommand{\multicolumntoc}{2}
3 \newcommand{\multicolumnlot}{2}
4 \newcommand{\multicolumnlوف}{2}
5 \newcommand*{\immediateaddtocontents}[2]{}%
```

File 326 **l warp-musicography.sty**

§ 435 Package **musicography**

(Emulates or patches code by ANDREW A. CASHNER.)

musicography (*Pkg*) musicography is patched for use by l warp.

Images are used for the meter symbols and fingered bass, since the HTML fonts tend not to be the correct size and HTML cannot stack items. The HTML alt tag copies C and 3/2, etc. Hashes are used for the meter images, which are then reused as necessary.

 Note that browser support for musical symbols may be buggy. ALT text and copy/paste into a text editor work well.

for HTML output:

```
1 \LWR@ProvidesPackagePass{musicography}[2019/05/28]

2 \NewDocumentCommand{\LWR@HTML@musSymbol}{ O{\musFont} m m m m }{%
3 \begin{lateximage}%
4 {#1\kern#2\raisebox{#3}{#5}\kern#4}%
5 \end{lateximage}%
6 }%
7 %
8 \LWR@formatted{musSymbol}
9 %
10 \NewDocumentCommand{\LWR@HTML@musStemmedNote}{ m }{%
11 \begin{lateximage}%
12 \musSymbol{0.05em}{0.5ex}{0.2em}{#1\musStem}%
13 \end{lateximage}%
14 }%
15 %
16 \LWR@formatted{musStemmedNote}
17 %
18 \NewDocumentCommand{\LWR@HTML@musFlaggedNote}{ m m }{%
19 \begin{lateximage}%
20 \musSymbol{0.05em}{0.5ex}{0pt}{#1\musStem}%
21 \musSymbol{0pt}{0pt}{0.9em}{#2}%
22 \end{lateximage}%
23 }%
24 %
25 \LWR@formatted{musFlaggedNote}
26 %
27 \NewDocumentCommand{\LWR@HTML@musDottedNote}{ m }{%
28 \begin{lateximage}%
29 #1\musDot%
30 \end{lateximage}%
31 }%
32 %
33 \LWR@formatted{musDottedNote}
34 %
35 \NewDocumentCommand{\LWR@HTML@musMeter}{ m m }{%
36 \begin{lateximage}*{#1/#2}*{#1#2}%
37 \musStack{#1 #2}\kern0.05em%
38 \end{lateximage}%
39 }
```

```
40
41 \LWR@formatted{musMeter}
42
43 \NewDocumentCommand{\LWR@HTML@meterCplus}{ m }{%
44 \begin{lateximage}*{[C#1]*%
45     \meterC{} \kern-0.7pt#1%
46 \end{lateximage}%
47 }
48
49 \LWR@formatted{meterCplus}
50
51 \NewDocumentCommand{\LWR@HTML@meterC}{ }{%
52 \begin{lateximage}*{[C]*%
53 \musSymbolMeter{\symbol{83}}%
54 \end{lateximage}%
55 }
56
57 \LWR@formatted{meterC}
58
59 \NewDocumentCommand{\LWR@HTML@meterCutC}{ }{%
60 \begin{lateximage}*{[C|]*%
61 \musSymbolMeter{\symbol{82}}%
62 \end{lateximage}%
63 }
64
65 \LWR@formatted{meterCutC}
66
67 \NewDocumentCommand{\LWR@HTML@meterCThreeTwo}{ }{%
68 \begin{lateximage}*{[C3/2]*%
69 \meterCplus{\musStack{3 2}}%
70 \end{lateximage}%
71 }
72
73 \LWR@formatted{meterCThreeTwo}
74
75 \NewDocumentCommand{\LWR@HTML@meterO}{ }{\HTMLunicode{25EF}}
76
77 \LWR@formatted{meterO}
78
79 \newcommand{\LWR@null@noFig}[1]{[]}{%
80
81 \NewDocumentCommand{\LWR@HTML@musFig}{ m }{%
82 \begin{lateximage}*{%
83     \% ALT text for copy/paste
84     \LetLtxMacro{\noFig}{\LWR@null@noFig}
85     \LetLtxMacro{\musSharp}{\LWR@HTML@musSharp}
86     \LetLtxMacro{\musDoubleSharp}{\LWR@HTML@musDoubleSharp}
87     \LetLtxMacro{\musFlat}{\LWR@HTML@musFlat}
88     \LetLtxMacro{\musDoubleFlat}{\LWR@HTML@musDoubleFlat}
89     \LetLtxMacro{\musNatural}{\LWR@HTML@musNatural}
90     {\#1}\% braces here because \noFig uses []
91     }%
92 }*%
93     \musStack[\musFigFont]{\#1}%
94 \end{lateximage}%
95 }
96
97 \LWR@formatted{musFig}
98
99 \NewDocumentCommand{\LWR@HTML@musFlat}{ }{\HTMLunicode{266D}}
```

```

100 \NewDocumentCommand{\LWR@HTML@musDoubleFlat} {}{\HTMLUnicode{1D12B}}
101 \NewDocumentCommand{\LWR@HTML@musSharp} {}{\HTMLUnicode{266F}}
102 \NewDocumentCommand{\LWR@HTML@musDoubleSharp}{}{\HTMLUnicode{1D12A}}
103 \NewDocumentCommand{\LWR@HTML@musNatural} {}{\HTMLUnicode{266E}}
104
105 \LWR@formatted{musFlat}
106 \LWR@formatted{musDoubleFlat}
107 \LWR@formatted{musSharp}
108 \LWR@formatted{musDoubleSharp}
109 \LWR@formatted{musNatural}
110
111 \NewDocumentCommand{\LWR@HTML@musWhole} {}{\HTMLUnicode{1D15D}}
112 \NewDocumentCommand{\LWR@HTML@musHalf} {}{\HTMLUnicode{1D15E}}
113 \NewDocumentCommand{\LWR@HTML@musQuarter} {}{\HTMLUnicode{1D15F}}
114 \NewDocumentCommand{\LWR@HTML@musEighth} {}{\HTMLUnicode{1D160}}
115 \NewDocumentCommand{\LWR@HTML@musSixteenth} {}{\HTMLUnicode{1D161}}
116 \NewDocumentCommand{\LWR@HTML@musThirtySecond} {}{\HTMLUnicode{1D162}}
117 \NewDocumentCommand{\LWR@HTML@musSixtyFourth} {}{\HTMLUnicode{1D163}}
118
119 \LWR@formatted{musWhole}
120 \LWR@formatted{musHalf}
121 \LWR@formatted{musQuarter}
122 \LWR@formatted{musEighth}
123 \LWR@formatted{musSixteenth}
124 \LWR@formatted{musThirtySecond}
125 \LWR@formatted{musSixtyFourth}
126
127 \NewDocumentCommand{\LWR@HTML@musWholeDotted}{}{\HTMLUnicode{1D15D}\HTMLUnicode{1D16D}}
128 \NewDocumentCommand{\LWR@HTML@musHalfDotted}{}{\HTMLUnicode{1D15E}\HTMLUnicode{1D16D}}
129 \NewDocumentCommand{\LWR@HTML@musQuarterDotted}{}{\HTMLUnicode{1D15F}\HTMLUnicode{1D16D}}
130 \NewDocumentCommand{\LWR@HTML@musEightDotted}{}{\HTMLUnicode{1D160}\HTMLUnicode{1D16D}}
131 \NewDocumentCommand{\LWR@HTML@musSixteenthDotted}{}{\HTMLUnicode{1D161}\HTMLUnicode{1D16D}}
132 \NewDocumentCommand{\LWR@HTML@musThirtySecondDotted}{}{\HTMLUnicode{1D162}\HTMLUnicode{1D16D}}
133 \NewDocumentCommand{\LWR@HTML@musSixtyFourthDotted}{}{\HTMLUnicode{1D163}\HTMLUnicode{1D16D}}
134
135 \NewDocumentCommand{\LWR@HTML@musWholeDotted}{}{\HTMLUnicode{1D15D}\HTMLUnicode{1D16D}}
136 \NewDocumentCommand{\LWR@HTML@musHalfDotted}{}{\HTMLUnicode{1D15E}\HTMLUnicode{1D16D}}
137 \NewDocumentCommand{\LWR@HTML@musQuarterDotted}{}{\HTMLUnicode{1D15F}\HTMLUnicode{1D16D}}
138 \NewDocumentCommand{\LWR@HTML@musEightDotted}{}{\HTMLUnicode{1D160}\HTMLUnicode{1D16D}}
139 \NewDocumentCommand{\LWR@HTML@musSixteenthDotted}{}{\HTMLUnicode{1D161}\HTMLUnicode{1D16D}}
140 \NewDocumentCommand{\LWR@HTML@musThirtySecondDotted}{}{\HTMLUnicode{1D162}\HTMLUnicode{1D16D}}
141 \NewDocumentCommand{\LWR@HTML@musSixtyFourthDotted}{}{\HTMLUnicode{1D163}\HTMLUnicode{1D16D}}
142
143 \LWR@formatted{musWholeDotted}
144 \LWR@formatted{musHalfDotted}
145 \LWR@formatted{musQuarterDotted}
146 \LWR@formatted{musEightDotted}
147 \LWR@formatted{musSixteenthDotted}
148 \LWR@formatted{musThirtySecondDotted}

```

File 327 **l warp-mwe.sty**

§ 436 Package **mwe**

(Emulates or patches code by MARTIN SCHARRER.)

mwe (*Pkg*) **mwe** is used as-is, but a warning is issued to copy the images to the local directory.

for HTML output: 1 \LWR@ProvidesPackagePass{mwe}[2018/03/30]

```

2 \AtEndDocument{%
3   \PackageWarningNoLine{l warp}{%
4     For package mwe, copy any mwe images to be used for\MessageBreak
5     HTML, such as PNG or JPG, to the document's base\MessageBreak
6     directory. Neither a subdirectory nor the mwe\MessageBreak
7     directory will work, due to the TeX file search\MessageBreak
8     algorithm%
9   }%
10 }%

```

File 328 **l warp-nameauth.sty**

§ 437 Package **nameauth**

(Emulates or patches code by CHARLES P. SCHAUM.)

nameauth (Pkg) nameauth is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{nameauth}[2023/02/03]

\@nameauth@Hook (*Hook*) l warp formatting is inserted.

```

[nameauth]
2 \VerifyCommand[l warp][nameauth]{\@nameauth@Hook}{E665BBD1C138AA37AF2AF5E3C3565584}
3
4 \renewcommand*\@nameauth@Hook[1]
5 {%
6   \ifdefined\@nameauth@InParser
7     \@nameauth@InHooktrue%
8     \protected@edef\test{\#1}%
9     \expandafter\@nameauth@TestDot\expandafter{\test}%
10    \if@nameauth@MainFormat
11      \if@nameauth@FirstFormat
12        \bgroup\NamesFormat{%
13          \LWR@textcurrentcolor{\LWR@textcurrentfont{\#1}}% l warp
14        }\egroup%
15      \else
16        \bgroup\MainNameHook{%
17          \LWR@textcurrentcolor{\LWR@textcurrentfont{\#1}}% l warp
18        }\egroup%
19      \fi
20    \else
21      \if@nameauth@FirstFormat
22        \bgroup\FrontNamesFormat{%
23          \LWR@textcurrentcolor{\LWR@textcurrentfont{\#1}}% l warp
24        }\egroup%
25    \else
26      \bgroup\FrontNameHook{%
27          \LWR@textcurrentcolor{\LWR@textcurrentfont{\#1}}% l warp
28        }\egroup%
29      \fi
30    \fi
31  \fi
32 }%

```

File 329 l warp-nameref.sty

§ 438 Package **nameref**

nameref (*Pkg*) nameref is nullified here, then emulated by l warp.

for HTML output: Discard all options for l warp-nameref:

1 \LWR@ProvidesPackageDrop{nameref}[2023-08-07]

File 330 l warp-natbib.sty

§ 439 Package **natbib**

(Emulates or patches code by PATRICK W. DALY.)

natbib (*Pkg*) natbib is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{natbib}[2010/09/13]

Replace math < and > with \textless and \textgreater:

A macro to compare:

2 \newcommand{\LWRNB@NAT@open}{\\$<\\$}

To patch \NAT@open and \NAT@close

3 \newcommand{\LWRNB@patchnatbibopenclose}{}
4 \ifdefstequal{\NAT@open}{\LWRNB@NAT@open}
5 {
6 \renewcommand{\NAT@open}{\textless}
7 \renewcommand{\NAT@close}{\textgreater}
8 }{}
9 }

Do it now in case angle was selected as an option:

10 \LWRNB@patchnatbibopenclose

Also patch \setcitetstyle to patch after settings are made:

11 \let\LWRNB@origsetcitetstyle\setcitetstyle
12
13 \renewcommand{\setcitetstyle}[1]{%
14 \LWRNB@origsetcitetstyle{\#1}%
15 \LWRNB@patchnatbibopenclose%
16 }

Synchronize the autopage labels:

17 \xpretocmd{\NAT@reset@parser}

```

18      {\LWR@newautopagelabel{page}}%
19      {}%
20      {\LWR@patcherror{natbib}{\NAT@reset@parser}}%

```

File 331 **l warp-nccfancyhdr.sty**

§ 440 Package **nccfancyhdr**

(Emulates or patches code by ALEXANDER I. ROZHENKO.)

nccfancyhdr (*Pkg*) nccfancyhdr is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{nccfancyhdr}[2004/12/07]

```

2 \newcommand*\headrulewidth{}%
3 \newcommand*\footrulewidth{}%
4 \newcommand{\headstrutheight}{}%
5 \newcommand{\footstrutheight}{}%
6 \newcommand*\headrule{}%
7 \newcommand*\footrule{}%
8
9 \newdimen\headwidth
10 \newcommand*\extendedheaders{}%
11 \newcommand*\normalheaders{}%
12
13 \newcommand*\fancyhead[2][]{}
14 \newcommand*\fancyfoot[2][]{}
15 \newcommand*\fancyhf[2][]{}
16 \newcommand*\fancypagestyle[2][]{}
17 \newcommand*\lhead[2][]{}
18 \newcommand*\chead[2][]{}
19 \newcommand*\rhead[2][]{}
20 \newcommand*\lfoot[2][]{}
21 \newcommand*\cfoot[2][]{}
22 \newcommand*\rfoot[2][]{}
23
24 \newcommand{\nouppercase}[1]{#1}
25
26 \NewDocumentCommand{\fancycenter}{o o m m m}{}
27
28 \NewDocumentCommand{\newpagestyle}{m o m}{}
29
30 \newcommand*\iffloatpage[2]{#2}
31 \newcommand*\ifftopfloat[2]{#2}
32 \newcommand*\iffbotfloat[2]{#2}

```

File 332 **l warp-nccfoots.sty**

§ 441 Package **nccfoots**

(Emulates or patches code by ALEXANDER I. ROZHENKO.)

nccfoots (*Pkg*) nccfoots is used as-is, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{nccfoots}[2005/02/03]

To nullify the footnotes where necessary:

```
2 \appto{\LWR@nullifyfootnotes}{%
3   \renewcommand*{\Footnote}[1]{}%
4   \renewcommand*{\Footnotemark}[1]{}%
5 }{}}
```

-  For MATHJAX. There is no way to test for an empty argument, so the mark is not automatically duplicated.

```
6 \begin{warpMathJax}
7 \CustomizeMathJax{\newcommand{\Footnotemark}[1]{{}^{\mathrm{\#1}}}}
8 \CustomizeMathJax{\newcommand{\Footnote}[2]{\Footnotemark{\#1}}}
9 \end{warpMathJax}
```

File 333 **l warp-nccmath.sty**

§ 442 Package **nccmath**

(Emulates or patches code by ALEXANDER I. ROZHENKO.)

nccmath (Pkg) nccmath is patched for use by l warp, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{nccmath}[2006/01/20]

```
2 \let{\LWR@origeqnarray}{eqnarray}
3 \let{\LWR@origendeqnarray}{endeqnarray}
4
5 \csletcs{\LWR@origeqnarraystar}{eqnarray*}
6 \csletcs{\LWR@origendeqnarraystar}{endeqnarray*}
7
8 \RenewEnviron{eqnarray}
9 {%
10
11   \LWR@eqnarrayfactor
12
13 }
14
15 \RenewEnviron{eqnarray*}
16 {%
17
18   \begingroup
19   \csletcs{\LWR@origeqnarray}{\LWR@origeqnarraystar}
20   \csletcs{\LWR@origendeqnarray}{\LWR@origendeqnarraystar}
21   \boolfalse{\LWR@numbereqnarray}
22   \LWR@eqnarrayfactor
23   \endgroup
24
25 }
26
27 \def\eqs{%
28   \@ifstar{\LWR@nccmath@eqsstar}{\LWR@nccmath@eqs}
29 }
30 \newcommand*{\LWR@nccmath@eqsstar}[2][]{\begin{eqnarray*}#2\end{eqnarray*}}
31 \newcommand*{\LWR@nccmath@eqs}[2][]{\begin{eqnarray}#2\end{eqnarray}}
32
33 \begin{warpMathJax}
```

```

34 \CustomizeMathJax{\renewcommand{\intertext}[2][]{\text{\#2}\notag \\}}
35 \CustomizeMathJax{\newenvironment{fleqn}[1][]{\begin{array}{l}{}\\{}\\{}\end{array}}}
36 \CustomizeMathJax{\newenvironment{ceqn}{}{}}
37 \CustomizeMathJax{\newenvironment{darray}[2][c]{\begin{array}{#1}{#2}\end{array}}}
38 \CustomizeMathJax{\newcommand{\dmulticolumn}[3]{{#3}}}

```

As of v0.86, MATHJAX v3 does not offer $\backslash\ast$, so the unstarred version is used here.

```

39 \CustomizeMathJax{\newcommand{\LWRnرنostar}[1][0.5ex]{\backslash[#1]}}
40 \CustomizeMathJax{\newcommand{\nr}{\ifstar\LWRnرنostar\LWRnرنostar}}
41
42 \CustomizeMathJax{\newcommand{\mrel}[1]{\begin{aligned}#1\end{aligned}}}
43 \CustomizeMathJax{\newcommand{\underrel}[2]{\underset{#2}{#1}}}
44 \CustomizeMathJax{\newcommand{\medmath}[1]{#1}}
45 \CustomizeMathJax{\newcommand{\medop}[1]{#1}}
46 \CustomizeMathJax{\newcommand{\medint}[1]{#1}}
47 \CustomizeMathJax{\newcommand{\medintcorr}[1]{#1}}
48 \CustomizeMathJax{\newcommand{\mfrac}[2]{\frac{#1}{#2}}}
49 \CustomizeMathJax{\newcommand{\mbinom}[2]{\binom{#1}{#2}}}
50 \CustomizeMathJax{\newenvironment{mmatrix}{\begin{matrix}}{\end{matrix}}}

51 \CustomizeMathJax{\newcommand{\displaybreak}[1]{}}

\eq, \eqs, \eqalign are created by LATEX, not MATHJAX.

52 \end{warpMathJax}

```

File 334 **l warp-needspace.sty**

§ 443 Package **needspace**

(Emulates or patches code by PETER WILSON.)

needspace (*Pkg*) needspace is ignored.

for HTML output: Discard all options for l warp-needspace:

```

1 \LWR@ProvidesPackageDrop{needspace}[2010/09/12]
2
3 \DeclareDocumentCommand{\needspace}{m}{}
4 \DeclareDocumentCommand{\Needspace}{s m}{}

```

File 335 **l warp-newpxmath.sty**

§ 444 Package **newpxmath**

(Emulates or patches code by MICHAEL SHARPE.)

newpxmath (*Pkg*) newpxmath is used as-is for SVG math, and is emulated for MATHJAX.

⚠ **limitations** The MATHJAX emulation ignores all package options, except slantedGreek is honored. The dedicated macros for upright and italic Greek do work correctly.

SVG math should appear the same as the printed output.

for HTML output: The MATHJAX code from newtxmath is used:

```

1 \LWR@ProvidesPackagePass{newpxmath}[2020/01/09]
2
3 \LWR@infoprocessingmathjax{newpxmath}
4
5 \LWR@origRequirePackage{l warp-common-mathjax-newpmtxmath}
6
7 \LWR@origRequirePackage{l warp-common-mathjax-letters}
8
9 \begin{warpMathJax}
10
11 %   * \marg{2: prefix} \marg{3: postfix} \marg{4: i/u: italic/upright}
12 \LWR@mathjax@addgreek@u@up*{}{up}
13 \LWR@mathjax@addgreek@u@up*{}{up}
14 \LWR@mathjax@addgreek@l@up{up}{}
15 \LWR@mathjax@addgreek@l@up{}{up}
16 \LWR@mathjax@addgreek@u@it*{}{it}
17 \LWR@mathjax@addgreek@l@it{}{it}
```

Optional slanted Greek:

```

18 \ifpx@slantedG
19     \LWR@mathjax@addgreek@u@it*{}{}
20 \fi
21
22 \end{warpMathJax}
```

File 336 **l warp-newtxmath.sty**

§ 445 Package **newtxmath**

(Emulates or patches code by MICHAEL SHARPE.)

newtxmath (Pkg) newtxmath is used as-is for SVG math, and is emulated for MATHJAX.

⚠ limitations The MATHJAX emulation ignores all package options, except slantedGreek is honored, and except that bold italic Latin letters are not defined for MATHJAX if the option is not selected.

The dedicated macros for upright and italic Greek and bold italic Latin letters do work correctly.

SVG math should appear the same as the printed output.

for HTML output:

```

1 \LWR@ProvidesPackagePass{newtxmath}[2020/08/04]
2
3 \LWR@infoprocessingmathjax{newtxmath}
4
5 \LWR@origRequirePackage{l warp-common-mathjax-newpmtxmath}
6
7 \LWR@origRequirePackage{l warp-common-mathjax-letters}
8
9 \begin{warpMathJax}
10
11 %   * \marg{2: prefix} \marg{3: postfix} \marg{4: i/u: italic/upright}
12 \LWR@mathjax@addgreek@u@up*{}{up}
```

```

13 \LWR@mathjax@addgreek@u@up*{up}{}
14 \LWR@mathjax@addgreek@l@up{up}{}
15 \LWR@mathjax@addgreek@l@up{}{up}
16 \LWR@mathjax@addgreek@u@it*{}{it}
17 \LWR@mathjax@addgreek@l@it{}{it}
18
19 % only newtxmath, not newpxmath:
20 \LWR@mathjax@addgreek@u@it*{}{it}
21 \LWR@mathjax@addgreek@l@it{}{it}
22
23 % only newtxmath, not newpxmath:
24 \ifdef{\iftx@BI}{%
25   \iftx@BI
26     \LWR@mathjax@addlatin@u@bfit{BI}
27     \LWR@mathjax@addlatin@l@bfit{BI}
28   \fi
29 }{}
```

Optional slanted Greek:

```

30 \iftx@slantedG
31   \LWR@mathjax@addgreek@u@it*{}{it}
32 \fi
33
34 \end{warpMathJax}
```

File 337 **l warp-newtxsf.sty**

§ 446 Package **newtxsf**

(Emulates or patches code by MICHAEL SHARPE.)

newtxsf (Pkg) **newtxsf** is used as-is for SVG math, and is emulated for MATHJAX.

⚠ **limitations** The MATHJAX emulation ignores all package options, except `slantedGreek` is honored. The dedicated macros for upright and italic Greek and bold italic Latin letters do work correctly.

SVG math should appear the same as the printed output.

for HTML output:

```

1 \LWR@ProvidesPackagePass{newtxsf}[2020/05/02]
2
3 \LWR@infoprocessingmathjax{newtxsf}
4
5 \LWR@origRequirePackage{l warp-common-mathjax-newpxmath}
6
7 \LWR@origRequirePackage{l warp-common-mathjax-letters}
8
9 \begin{warpMathJax}
10
11 % * \marg{2: prefix} \marg{3: postfix} \marg{4: i/u: italic/upright}
12 \LWR@mathjax@addgreek@u@up*{}{up}
13 \LWR@mathjax@addgreek@u@up*{up}{}
14 \LWR@mathjax@addgreek@l@up{up}{}
15 \LWR@mathjax@addgreek@l@up{}{up}
16 \LWR@mathjax@addgreek@u@it*{}{it}
17 \LWR@mathjax@addgreek@l@it{}{it}
```

```

18
19 % only newtxmath, not newpxmath:
20 \LWR@mathjax@addgreek@u@it*{it}{}
21 \LWR@mathjax@addgreek@l@it{it}{}
22 %
23 % only newtxmath, not newpxmath:
24 \ifdef{\iftx@BI}{%
25   \iftx@BI
26     \LWR@mathjax@addlatin@u@bfit{BI}
27     \LWR@mathjax@addlatin@l@bfit{BI}
28   \fi
29 }{}
```

Optional slanted Greek:

```

30 \iftx@slantedG
31   \LWR@mathjax@addgreek@u@it*{}{}
32 \fi
33
34 \end{warpMathJax}
```

File 338 **l warp-nextpage.sty**

§ 447 Package **nextpage**

(Emulates or patches code by PETER WILSON.)

nextpage (*Pkg*) **nextpage** is ignored.

for HTML output: Discard all options for **l warp-nextpage**.

```

1 \LWR@ProvidesPackageDrop{nextpage}[2009/09/03]

2 \DeclareDocumentCommand{\cleartoevenpage}{o}{}
3 \DeclareDocumentCommand{\movetoevenpage}{o}{}
4 \DeclareDocumentCommand{\cleartooddpage}{o}{}
5 \DeclareDocumentCommand{\movetooddpage}{o}{}
```

File 339 **l warp-nfssext-cfr.sty**

§ 448 Package **nfssext-cfr**

(Emulates or patches code by CLEA F. REES.)

nfssext-cfr (*Pkg*) **nfssext-cfr** is emulated in HTML, and used as-is in print output.

Results depend on the browser's font.

for HTML output: 1 \LWR@ProvidesPackagePass{nfssext-cfr}[2017/03/28]

Macros which are present in the **l warp** core are commented out here.

```

2 \newrobustcmd{\LWR@HTML@lnstyle}{}
3 \newrobustcmd{\LWR@HTML@osstyle}{\LWR@HTML@scshape}
```

```
4 \newrobustcmd{\LWR@HTML@instyle}{}  
5 \newrobustcmd{\LWR@HTML@sustyle}{}  
6 \newrobustcmd{\LWR@HTML@swstyle}{}  
7 \newrobustcmd{\LWR@HTML@pstyle}{}  
8 \newrobustcmd{\LWR@HTML@tistyle}{}  
9 \newrobustcmd{\LWR@HTML@ostyle}{\LWR@HTML@scshape}  
10 \newrobustcmd{\LWR@HTML@postyle}{\LWR@HTML@scshape}  
11 \newrobustcmd{\LWR@HTML@ltstyle}{}  
12 \newrobustcmd{\LWR@HTML@ofstyle}{}  
13 \newrobustcmd{\LWR@HTML@altstyle}{}  
14 \newrobustcmd{\LWR@HTML@regstyle}{}  
15 \newrobustcmd{\LWR@HTML@embossstyle}{}  
16 \newrobustcmd{\LWR@HTML@ornamentalstyle}{}  
17 \newrobustcmd{\LWR@HTML@qtstyle}{}  
18 \newrobustcmd{\LWR@HTML@shstyle}{}  
19 \newrobustcmd{\LWR@HTML@swashstyle}{}  
20 \newrobustcmd{\LWR@HTML@tmstyle}{\renewcommand*{\LWR@f@family}{tt}}  
21 \newrobustcmd{\LWR@HTML@tvstyle}{\renewcommand*{\LWR@f@family}{tt}}  
22 \newrobustcmd{\LWR@HTML@tstyle}{}  
23 \newrobustcmd{\LWR@HTML@lstyle}{}  
24 \newrobustcmd{\LWR@HTML@tlstyle}{}  
25 \newrobustcmd{\LWR@HTML@plstyle}{}  
26 \newrobustcmd{\LWR@HTML@tostyle}{\LWR@HTML@scshape}  
27 % \newrobustcmd{\LWR@HTML@sishape}{}  
28 \newrobustcmd{\LWR@HTML@olshape}{}  
29 \newrobustcmd{\LWR@HTML@scolshape}{}  
30 \newrobustcmd{\LWR@HTML@ushape}{}  
31 \newrobustcmd{\LWR@HTML@scushape}{}  
32 \newrobustcmd{\LWR@HTML@uishape}{\LWR@HTML@itshape}  
33 \newrobustcmd{\LWR@HTML@rishape}{}  
34 \newrobustcmd{\LWR@HTML@regwidth}{}  
35 \newrobustcmd{\LWR@HTML@newidth}{}  
36 \newrobustcmd{\LWR@HTML@cdwidth}{}  
37 \newrobustcmd{\LWR@HTML@ecwidth}{}  
38 \newrobustcmd{\LWR@HTML@ucwidth}{}  
39 \newrobustcmd{\LWR@HTML@etwidth}{}  
40 \newrobustcmd{\LWR@HTML@epwidth}{}  
41 \newrobustcmd{\LWR@HTML@exwidth}{}  
42 \newrobustcmd{\LWR@HTML@uxwidth}{}  
43 \newrobustcmd{\LWR@HTML@mbweight}{\renewcommand*{\LWR@f@series}{md}}  
44 \newrobustcmd{\LWR@HTML@dbweight}{\renewcommand*{\LWR@f@series}{db}}  
45 \newrobustcmd{\LWR@HTML@sbweight}{\renewcommand*{\LWR@f@series}{sb}}  
46 % \newrobustcmd{\LWR@HTML@ebweight}{\renewcommand*{\LWR@f@series}{eb}}  
47 \newrobustcmd{\LWR@HTML@ubweight}{\renewcommand*{\LWR@f@series}{ub}}  
48 % \newrobustcmd{\LWR@HTML@lgweight}{\renewcommand*{\LWR@f@series}{lg}}  
49 \newrobustcmd{\LWR@HTML@elweight}{\renewcommand*{\LWR@f@series}{el}}  
50 \newrobustcmd{\LWR@HTML@ulweight}{\renewcommand*{\LWR@f@series}{ul}}  
51 % \newrobustcmd{\LWR@HTML@itshape}{}  
52 % \newrobustcmd{\LWR@HTML@scshape}{}  
53 % \newrobustcmd{\LWR@HTML@upshape}{}  
54 \newrobustcmd{\LWR@HTML@dfshape}{}  
55  
56 \ifdef{\LWR@HTML@swshape}{}{% duplicated by fontaxes  
57     \newrobustcmd{\LWR@HTML@swshape}{}  
58 }  
59  
60 \newrobustcmd{\LWR@HTML@ornament}[1]{}  
61  
62 \LWR@formatted{lngstyle}  
63 \LWR@formatted{osstyle}
```

```
64 \LWR@formatted{instyle}
65 \LWR@formatted{sustyle}
66 \LWR@formatted{swstyle}
67 \LWR@formatted{pstyle}
68 \LWR@formatted{tistyle}
69 \LWR@formatted{ostyle}
70 \LWR@formatted{postyle}
71 \LWR@formatted{ltstyle}
72 \LWR@formatted{ofstyle}
73 \LWR@formatted{altstyle}
74 \LWR@formatted{regstyle}
75 \LWR@formatted{embossstyle}
76 \LWR@formatted{ornamentalstyle}
77 \LWR@formatted{qtstyle}
78 \LWR@formatted{shstyle}
79 \LWR@formatted{swashstyle}
80 \LWR@formatted{tmstyle}
81 \LWR@formatted{tvstyle}
82 \LWR@formatted{tstyle}
83 \LWR@formatted{lstyle}
84 \LWR@formatted{tlstyle}
85 \LWR@formatted{plstyle}
86 \LWR@formatted{tostyle}
87 % \LWR@formatted{sishape}
88 \LWR@formatted{olshape}
89 \LWR@formatted{scolshape}
90 \LWR@formatted{ushape}
91 \LWR@formatted{scushape}
92 \LWR@formatted{uishape}
93 \LWR@formatted{rishape}
94 \LWR@formatted{regwidth}
95 \LWR@formatted{newidth}
96 \LWR@formatted{cdwidth}
97 \LWR@formatted{ecwidth}
98 \LWR@formatted{ucwidth}
99 \LWR@formatted{etwidth}
100 \LWR@formatted{epwidth}
101 \LWR@formatted{exwidth}
102 \LWR@formatted{uxwidth}
103 \LWR@formatted{mbweight}
104 \LWR@formatted{dbweight}
105 \LWR@formatted{sbweight}
106 % \LWR@formatted{ebweight}
107 \LWR@formatted{ubweight}
108 % \LWR@formatted{lgweight}
109 \LWR@formatted{elweight}
110 \LWR@formatted{ulweight}
111 \LWR@formatted{itshape}%
112 \LWR@formatted{scshape}%
113 \LWR@formatted{upshape}%
114 \LWR@formatted{dfshape}
115
116 \ifdef{\LWR@HTML@swshape}{}{%
117     \LWR@formatted{swshape}
118 }
119
120 \LWR@formatted{ornament}
121 \FilenameNullify{%
122     \LetLtxMacro{\lnstyle}{\emptyset}%
}
```

```
123  \LetLtxMacro\osstyle{@empty%}
124  \LetLtxMacro\instyle{@empty%}
125  \LetLtxMacro\sustyle{@empty%}
126  \LetLtxMacro\swstyle{@empty%}
127  \LetLtxMacro\pstyle{@empty%}
128  \LetLtxMacro\tistyle{@empty%}
129  \LetLtxMacro\ostyle{@empty%}
130  \LetLtxMacro\postyle{@empty%}
131  \LetLtxMacro\ltstyle{@empty%}
132  \LetLtxMacro\ofstyle{@empty%}
133  \LetLtxMacro\altstyle{@empty%}
134  \LetLtxMacro\regstyle{@empty%}
135  \LetLtxMacro\embossstyle{@empty%}
136  \LetLtxMacro\ornamentalstyle{@empty%}
137  \LetLtxMacro\qtstyle{@empty%}
138  \LetLtxMacro\shstyle{@empty%}
139  \LetLtxMacro\swashstyle{@empty%}
140  \LetLtxMacro\tmstyle{@empty%}
141  \LetLtxMacro\tvstyle{@empty%}
142  \LetLtxMacro\tstyle{@empty%}
143  \LetLtxMacro\lstyle{@empty%}
144  \LetLtxMacro\tlstyle{@empty%}
145  \LetLtxMacro\plstyle{@empty%}
146  \LetLtxMacro\tostyle{@empty%}
147 %
147 % \LetLtxMacro\sishape{@empty%}
148  \LetLtxMacro\olshape{@empty%}
149  \LetLtxMacro\scolshape{@empty%}
150  \LetLtxMacro\ushape{@empty%}
151  \LetLtxMacro\scushape{@empty%}
152  \LetLtxMacro\uishape{@empty%}
153  \LetLtxMacro\rishape{@empty%}
154  \LetLtxMacro\regwidth{@empty%}
155  \LetLtxMacro\newidth{@empty%}
156  \LetLtxMacro\cdwidth{@empty%}
157  \LetLtxMacro\ecwidth{@empty%}
158  \LetLtxMacro\ucwidth{@empty%}
159  \LetLtxMacro\etwidth{@empty%}
160  \LetLtxMacro\epwidth{@empty%}
161  \LetLtxMacro\exwidth{@empty%}
162  \LetLtxMacro\uxwidth{@empty%}
163  \LetLtxMacro\mbweight{@empty%}
164  \LetLtxMacro\dbweight{@empty%}
165  \LetLtxMacro\sbweight{@empty%}
166 %
166 % \LetLtxMacro\ebweight{@empty%}
167  \LetLtxMacro\ubweight{@empty%}
168 %
168 % \LetLtxMacro\lgweight{@empty%}
169  \LetLtxMacro\elweight{@empty%}
170  \LetLtxMacro\ulweight{@empty%}
171 %
171 % \LetLtxMacro\itshape{@empty%}
172 %
172 % \LetLtxMacro\scshape{@empty%}
173 %
173 % \LetLtxMacro\upshape{@empty%}
174  \LetLtxMacro\dfshape{@empty%}
175  \LetLtxMacro\swshape{@empty%}
176  \LetLtxMacro\ornament{@gobble%}
177 }
178
179 \newrobustcmd{\LWR@HTML@textln}[1]{\InLineClass{textln}{#1}}
180 \newrobustcmd{\LWR@HTML@textos}[1]{\textsc{#1}}
181 \newrobustcmd{\LWR@HTML@textin}[1]{#1}
182 \newrobustcmd{\LWR@HTML@texts}{#1}
```

```
183 % \newrobustcmd{\LWR@HTML@textsi}[1]{#1}
184 \newrobustcmd{\LWR@HTML@textdf}[1]{#1}

185 \ifdef{\LWR@HTML@textsw}{}{% duplicated by fontaxes
186     \newrobustcmd{\LWR@HTML@textsw}[1]{#1}
187     \LWR@formatted{textsw}
188 }
189
190 \newrobustcmd{\LWR@HTML@textti}[1]{#1}
191 \newrobustcmd{\LWR@HTML@textlt}[1]{#1}
192 \newrobustcmd{\LWR@HTML@textof}[1]{#1}
193 \newrobustcmd{\LWR@HTML@textalt}[1]{#1}
194 \newrobustcmd{\LWR@HTML@textreg}[1]{#1}
195 \newrobustcmd{\LWR@HTML@emboss}[1]{#1}
196 \newrobustcmd{\LWR@HTML@textorn}[1]{#1}
197 \newrobustcmd{\LWR@HTML@textqt}[1]{#1}
198 \newrobustcmd{\LWR@HTML@textsh}[1]{#1}
199 \newrobustcmd{\LWR@HTML@texttm}[1]{\texttt{#1}}
200 \newrobustcmd{\LWR@HTML@texttv}[1]{\texttt{#1}}
201 \newrobustcmd{\LWR@HTML@textl}[1]{\InlineClass{textln}{#1}}
202 \newrobustcmd{\LWR@HTML@texto}[1]{\textsc{#1}}
203 \newrobustcmd{\LWR@HTML@textp}[1]{\InlineClass{textp}{#1}}
204 \newrobustcmd{\LWR@HTML@textt}[1]{\InlineClass{textt}{#1}}
205 \newrobustcmd{\LWR@HTML@textpl}[1]{#1}
206 \newrobustcmd{\LWR@HTML@textpo}[1]{\textsc{#1}}
207 \newrobustcmd{\LWR@HTML@texttl}[1]{\InlineClass{textln}{#1}}
208 \newrobustcmd{\LWR@HTML@textto}[1]{\textsc{#1}}
209 \newrobustcmd{\LWR@HTML@textol}[1]{#1}
210 \newrobustcmd{\LWR@HTML@textwash}[1]{#1}
211 \newrobustcmd{\LWR@HTML@textu}[1]{#1}
212 \newrobustcmd{\LWR@HTML@textscu}[1]{#1}
213 \newrobustcmd{\LWR@HTML@textui}[1]{\LWR@HTML@textit{#1}}
214 \newrobustcmd{\LWR@HTML@textri}[1]{#1}
215 \newrobustcmd{\LWR@HTML@textnw}[1]{#1}
216 \newrobustcmd{\LWR@HTML@textcd}[1]{#1}
217 \newrobustcmd{\LWR@HTML@textec}[1]{#1}
218 \newrobustcmd{\LWR@HTML@textuc}[1]{#1}
219 \newrobustcmd{\LWR@HTML@textet}[1]{#1}
220 \newrobustcmd{\LWR@HTML@textep}[1]{#1}
221 \newrobustcmd{\LWR@HTML@textex}[1]{#1}
222 \newrobustcmd{\LWR@HTML@textux}[1]{#1}
223 \newrobustcmd{\LWR@HTML@textrw}[1]{#1}
224 \newrobustcmd{\LWR@HTML@textmb}[1]{\LWR@HTML@mbweight\InlineClass{textmb}{#1}}
225 \newrobustcmd{\LWR@HTML@textdb}[1]{\LWR@HTML@dbweight\InlineClass{textdb}{#1}}
226 \newrobustcmd{\LWR@HTML@textsbs}[1]{\LWR@HTML@sbweight\InlineClass{textsb}{#1}}
227 % \newrobustcmd{\LWR@HTML@texteb}[1]{#1}
228 \newrobustcmd{\LWR@HTML@textub}[1]{\LWR@HTML@ubweight\InlineClass{textub}{#1}}
229 % \newrobustcmd{\LWR@HTML@textlg}[1]{#1}
230 \newrobustcmd{\LWR@HTML@textel}[1]{\LWR@HTML@elweight\InlineClass{textel}{#1}}
231 \newrobustcmd{\LWR@HTML@textul}[1]{\LWR@HTML@ulweight\InlineClass{textul}{#1}}
232
233 \LWR@formatted{textln}
234 \LWR@formatted{textos}
235 \LWR@formatted{textin}
236 \LWR@formatted{textsu}
237 % \LWR@formatted{textsi}
238 \LWR@formatted{textdf}
239 \LWR@formatted{textti}
240 \LWR@formatted{textlt}
241 \LWR@formatted{textof}
```

```
242 \LWR@formatted{textalt}
243 \LWR@formatted{textreg}
244 \LWR@formatted{emboss}
245 \LWR@formatted{textorn}
246 \LWR@formatted{textqt}
247 \LWR@formatted{textsh}
248 \LWR@formatted{texttm}
249 \LWR@formatted{texttv}
250 \LWR@formatted{texttl}
251 \LWR@formatted{texto}
252 \LWR@formatted{textp}
253 \LWR@formatted{texttt}
254 \LWR@formatted{textpl}
255 \LWR@formatted{textpo}
256 \LWR@formatted{textttl}
257 \LWR@formatted{textto}
258 \LWR@formatted{textol}
259 \LWR@formatted{textswash}
260 \LWR@formatted{textu}
261 \LWR@formatted{textscu}
262 \LWR@formatted{textui}
263 \LWR@formatted{textri}
264 \LWR@formatted{textnw}
265 \LWR@formatted{textcd}
266 \LWR@formatted{textec}
267 \LWR@formatted{textuc}
268 \LWR@formatted{texttet}
269 \LWR@formatted{texttep}
270 \LWR@formatted{texttex}
271 \LWR@formatted{textux}
272 \LWR@formatted{texttrw}
273 \LWR@formatted{textmb}
274 \LWR@formatted{textdb}
275 \LWR@formatted{textsb}
276 % \LWR@formatted{texteb}
277 \LWR@formatted{textub}
278 % \LWR@formatted{textlg}
279 \LWR@formatted{textel}
280 \LWR@formatted{textul}
281

282 \FilenameNullify{%
283     \LetLtxMacro{textln}{\firstofone}%
284     \LetLtxMacro{textos}{\firstofone}%
285     \LetLtxMacro{textin}{\firstofone}%
286     \LetLtxMacro{textsu}{\firstofone}%
287 %     \LetLtxMacro{textsi}{\firstofone}%
288     \LetLtxMacro{textdf}{\firstofone}%
289     \LetLtxMacro{textsw}{\firstofone}%
290     \LetLtxMacro{textti}{\firstofone}%
291     \LetLtxMacro{textlt}{\firstofone}%
292     \LetLtxMacro{textof}{\firstofone}%
293     \LetLtxMacro{textalt}{\firstofone}%
294     \LetLtxMacro{textreg}{\firstofone}%
295     \LetLtxMacro{emboss}{\firstofone}%
296     \LetLtxMacro{textorn}{\firstofone}%
297     \LetLtxMacro{textqt}{\firstofone}%
298     \LetLtxMacro{textsh}{\firstofone}%
299     \LetLtxMacro{texttm}{\firstofone}%
300     \LetLtxMacro{texttv}{\firstofone}%

```

```

301   \LetLtxMacro\textl{@firstofone%
302   \LetLtxMacro\texto{@firstofone%
303   \LetLtxMacro\textp{@firstofone%
304   \LetLtxMacro\textt{@firstofone%
305   \LetLtxMacro\textpl{@firstofone%
306   \LetLtxMacro\textpo{@firstofone%
307   \LetLtxMacro\texttl{@firstofone%
308   \LetLtxMacro\textto{@firstofone%
309   \LetLtxMacro\textol{@firstofone%
310   \LetLtxMacro\textswash{@firstofone%
311   \LetLtxMacro\textu{@firstofone%
312   \LetLtxMacro\textscu{@firstofone%
313   \LetLtxMacro\textui{@firstofone%
314   \LetLtxMacro\textri{@firstofone%
315   \LetLtxMacro\textnw{@firstofone%
316   \LetLtxMacro\textcd{@firstofone%
317   \LetLtxMacro\textec{@firstofone%
318   \LetLtxMacro\textuc{@firstofone%
319   \LetLtxMacro\textet{@firstofone%
320   \LetLtxMacro\textep{@firstofone%
321   \LetLtxMacro\textex{@firstofone%
322   \LetLtxMacro\textux{@firstofone%
323   \LetLtxMacro\textrw{@firstofone%
324   \LetLtxMacro\textmb{@firstofone%
325   \LetLtxMacro\textdb{@firstofone%
326   \LetLtxMacro\textsb{@firstofone%
327 % \LetLtxMacro\texteb{@firstofone%
328   \LetLtxMacro\textub{@firstofone%
329 % \LetLtxMacro\textlg{@firstofone%
330   \LetLtxMacro\textel{@firstofone%
331   \LetLtxMacro\textul{@firstofone%
332 }
333
334 \providecommand*\{\\zeroslash}{0}
335 \newrobustcmd*\{\LWR@HTML@zeroslash}{0}
336 \LWR@formatted{zeroslash}
```

File 340 l warp-nicefrac.sty

§ 449 Package **nicefrac**

(Emulates or patches code by AXEL REICHERT.)

nicefrac (*Pkg*) nicefrac is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{nicefrac}[1998/08/04]

```

2 \DeclareRobustCommand*\{\LWR@HTML@@UnitsNiceFrac}[3][]{%
3   %% localize font selection
4   #1{%
5     \LWR@textcurrentfont{%
6       \InlineClass{numerator}{#2}%
7       /%
8       \InlineClass{denominator}{#3}%
9     }%
10    }%
11  }%
```

```

12 }
13
14 \LWR@formatted{@UnitsNiceFrac}
15
16 \DeclareRobustCommand*{\LWR@HTML@@UnitsUglyFrac}[3][]{%
17     \% localize font selection
18     #1{\LWR@textcurrentfont{#2/#3}}%
19     }%
20 }
21
22 \LWR@formatted{@UnitsUglyFrac}

```

For MATHJAX:

```

23 \begin{warpMathJax}
24 \CustomizeMathJax{\newcommand{\nicefrac}[3][]{\mathinner{{}^{\#2}\!/\!_{\#3}}}}
25 \end{warpMathJax}

```

File 341 l warp-niceframe.sty

§ 450 Package niceframe

`niceframe (Pkg)` niceframe is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{niceframe}% the original date is in yyyy/dd/mm format

```

2 \newcommand{\LWR@niceframe}[3]{%
3     \begin{\LWR@setvirtualpage}*%
4     \setlength{\LWR@templengthone}{#1}%
5     \begin{BlockClass}[max-width:\LWR@printlength{\LWR@templengthone}]{#3}%
6     #2
7     \end{BlockClass}%
8     \end{\LWR@setvirtualpage}%
9 }
10
11 \newcommand{\niceframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{niceframe}}
12 \newcommand{\curlyframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{curlyframe}}
13 \newcommand{\artdecoframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{artdecoframe}}
14
15 \newcommand{\generalframe}[9]{\LWR@niceframe{\textwidth}{#9}{generalframe}}

```

File 342 l warp-nicematrix.sty

§ 451 Package nicematrix

(Emulates or patches code by F. PANTIGNY.)

`nicematrix (Pkg)` nicematrix is used as-is for SVG math, and is emulated for MATHJAX.

⚠ **MATHJAX** Keys/values are ignored in MATHJAX. \Cdots, etc. do not span multiple cells. AutoNiceMatrix, etc. are not supported for MATHJAX. SVG math output preserves all nicematrix features. To force SVG output for one or more consecutive math expressions, for inline math use \inlinemathother and \inlinemathnormal, or for display math use \displaymathother and \displaymathnormal.

for HTML output: Skip the test for array, which does not work with l warp:

```
1 \PassOptionsToPackage{no-test-for-array}{nicematrix}
```

```
2 \LWR@ProvidesPackagePass{nicematrix}[2022/10/06]
```

NiceTabular must be converted to SVG to support the various nicematrix options:

```
3 \begin{warpHTML}
4 \BeforeBeginEnvironment{NiceTabular}{%
5   \begin{lateximage}[-nicematrix-\~\PackageDiagramAltText]%
6 }
7 \AfterEndEnvironment{NiceTabular}{\end{lateximage}}
8 \BeforeBeginEnvironment{NiceTabular*}{%
9   \begin{lateximage}[-nicematrix-\~\PackageDiagramAltText]%
10 }
11 \AfterEndEnvironment{NiceTabular*}{\end{lateximage}}
12 \end{warpHTML}
```

Special handling for the optional arguments, and the lack of a delimiter:

```
13 \begin{warpMathJax}
14 \CustomizeMathJax{\newcommand{\LWRnicearrayarray}[1]{\begin{array}{#1}}}
15 \CustomizeMathJax{\def\LWRnicearrayarrayopt#1[#2]{\begin{array}{#1}}}
16
17 \CustomizeMathJax{%
18   \newenvironment{NiceArray}[2][]%
19     {\ifnextchar[\{\LWRnicearrayarrayopt{#2}\}{\LWRnicearrayarray{#2}}]%
20     \end{array}}%
21 }
22
23 \CustomizeMathJax{%
24   \newcommand{\LWRnicearraywithdelimtwo}[2][]{%
25     \ifnextchar[\{\LWRnicearrayarrayopt{#2}\}{\LWRnicearrayarray{#2}}]%
26   }%
27 }
```

General case with left / right delimiters:

```
28 \CustomizeMathJax{%
29   \newenvironment{NiceArrayWithDelims}[2]{%
30     {%
31       \def\LWRnicearrayrightdelim{\right#2}%
32       \left#1%
33       \LWRnicearraywithdelimtwo%
34     }%
35     \end{array}\LWRnicearrayrightdelim}%
36 }
```

Instances of specific delimiters:

```
37 \CustomizeMathJax{%
38   \newenvironment{pNiceArray}
39     {\begin{NiceArrayWithDelims}{}{}{}}
40     {\end{NiceArrayWithDelims}}}
41 }
42
43 \CustomizeMathJax{%
44   \newenvironment{bNiceArray}
```

```

45      {\begin{NiceArrayWithDelims}{}{}}
46      {\end{NiceArrayWithDelims}}
47 }
48
49 \CustomizeMathJax{%
50   \newenvironment{BNiceArray}
51     {\begin{NiceArrayWithDelims}{}{}}
52     {\end{NiceArrayWithDelims}}
53 }
54
55 \CustomizeMathJax{%
56   \newenvironment{vNiceArray}
57     {\begin{NiceArrayWithDelims}{\vert}{\vert}}
58     {\end{NiceArrayWithDelims}}
59 }
60
61 \CustomizeMathJax{%
62   \newenvironment{VNiceArray}
63     {\begin{NiceArrayWithDelims}{\Vert}{\Vert}}
64     {\end{NiceArrayWithDelims}}
65 }

```

Ignore optional arg and use standard environments:

```

66 \CustomizeMathJax{\newenvironment{NiceMatrix}[1][]{\begin{matrix}}{\end{matrix}}}
67 \CustomizeMathJax{\newenvironment{pNiceMatrix}[1][]{\begin{pmatrix}}{\end{pmatrix}}}
68 \CustomizeMathJax{\newenvironment{bNiceMatrix}[1][]{\begin{bmatrix}}{\end{bmatrix}}}
69 \CustomizeMathJax{\newenvironment{BNiceMatrix}[1][]{\begin{Bmatrix}}{\end{Bmatrix}}}
70 \CustomizeMathJax{\newenvironment{vNiceMatrix}[1][]{\begin{vmatrix}}{\end{vmatrix}}}
71 \CustomizeMathJax{\newenvironment{VNiceMatrix}[1][]{\begin{Vmatrix}}{\end{Vmatrix}}}

```

Ignore optional argument and size. Print contents.

```

72 \CustomizeMathJax{\newcommand{\LWRnicematrixBlock}[1]{#1}}
73 \CustomizeMathJax{\def\LWRnicematrixBlockopt<#1>#2{#2}}
74
75 \CustomizeMathJax{%
76   \newcommand{\Block}[2][]{\ifnextchar<\LWRnicematrixBlockopt\LWRnicematrixBlock%}
77 }

```

Form an approximation:

```

78 \CustomizeMathJax{%
79   \newcommand{\diagbox}[2]{%
80     \begin{array}{l}\hfill\quad#2\\\hline#1\quad\hfill\end{array}%
81   }%
82 }

```

More approximations:

```

83 \CustomizeMathJax{\let\hdottedline\hdashline}
84 \CustomizeMathJax{\newcommand{\Hline}[1][]{\hline}}
85 \CustomizeMathJax{\newcommand{\CodeBefore}{}}
86 \CustomizeMathJax{\newcommand{\Body}{}}
87 \CustomizeMathJax{\newcommand{\CodeAfter}{}}
88 \CustomizeMathJax{\newcommand{\line}[3]{}}

```

```

89 \CustomizeMathJax{\newcommand{\RowStyle}[2][]{\{}}
90 \CustomizeMathJax{\newcommand{\LWRSubMatrix}[1][]{\{}}
91 \CustomizeMathJax{\newcommand{\SubMatrix}[4]{\LWRSubMatrix}}
92 \CustomizeMathJax{\newcommand{\OverBrace}[4][]{\{}}
93 \CustomizeMathJax{\newcommand{\UnderBrace}[4][]{\{}}
94 \CustomizeMathJax{\newcommand{\ShowCellNames}{\{}}

95 \CustomizeMathJax{\newcommand{\cellcolor}[3][]{\{}}
96 \CustomizeMathJax{\newcommand{\rowcolor}[3][]{\{}}
97 \CustomizeMathJax{\newcommand{\LWRrowcolors}[1][]{\{}}
98 \CustomizeMathJax{\newcommand{\rowcolors}[4][]{\LWRrowcolors}}
99 \CustomizeMathJax{\newcommand{\rowlistcolors}[3][]{\LWRrowcolors}}
100 \CustomizeMathJax{\newcommand{\columncolor}[3][]{\{}}
101 \CustomizeMathJax{\newcommand{\rectanglecolor}[4][]{\{}}
102 \CustomizeMathJax{\newcommand{\arraycolor}[2][]{\{}}
103 \CustomizeMathJax{\newcommand{\chessboardcolors}[3][]{\{}}

104 \CustomizeMathJax{\newcommand{\ldots}[1][]{\dots}}
105 \CustomizeMathJax{\newcommand{\cdots}[1][]{\cdots}}
106 \CustomizeMathJax{\newcommand{\vdots}[1][]{\vdots}}
107 \CustomizeMathJax{\newcommand{\ddots}[1][]{\ddots}}
108 \CustomizeMathJax{\newcommand{\iddots}[1][]{\mathinner{\text{\scriptsize{\texttt{\unichar{x22F0}}}}}}}
109
110 \CustomizeMathJax{\newcommand{\hdotsfor}[1]{\ldots}}
111 \CustomizeMathJax{\newcommand{\vdotsfor}[1]{\vdots}}
```

There is no way to emulate `AutoNiceMatrix` in MATHJAX.

```

112 \CustomizeMathJax{\newcommand{\AutoNiceMatrix}[2]{\text{(\AutoNiceMatrix #1)}}}
113 \CustomizeMathJax{\let\pAutoNiceMatrix\AutoNiceMatrix}
114 \CustomizeMathJax{\let\bAutoNiceMatrix\AutoNiceMatrix}
115 \CustomizeMathJax{\let\BAutoNiceMatrix\AutoNiceMatrix}
116 \CustomizeMathJax{\let\vAutoNiceMatrix\AutoNiceMatrix}
117 \CustomizeMathJax{\let\VAutoNiceMatrix\AutoNiceMatrix}
118 \end{warpMathJax}
```

File 343 **l warp-noitcrl.sty**

§ 452 Package **noitcrl**

(Emulates or patches code by PAUL EBERMANN.)

`noitcrl` (*Pkg*) `noitcrl` is used as-is for SVG and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{noitcrl}[2006/04/11]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\noitUnderline}[1]{\underline{\#1}\!}}
4 \end{warpMathJax}
```

File 344 **l warp-nolbreaks.sty**

§ 453 Package **nolbreaks**

(Emulates or patches code by DONALD ARSENEAU.)

nolbreaks (*Pkg*) **nolbreaks** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{nolbreaks}[2012/05/31]

2 \NewDocumentCommand{\nolbreaks}{s m}{\InlineClass{nolbreaks}{#2}}

File 345 **l warp-nomencl.sty**

§ 454 Package **nomencl**

(Emulates or patches code by BORIS VEYTSMAN, BERND SCHANDL, LEE NETHERTON, CV RADHAKRISHNAN.)

nomencl (*Pkg*) **nomencl** is patched for use by **l warp**.

To process the HTML nomenclature:

```
makeindex      <project>_html.nlo      -s      nomencl.list      -o
<project>_html.nls
```

for HTML output: 1 \LWR@ProvidesPackagePass{nomencl}[2021/11/10]

\BaseJobname is added to the label in case **xr** or **xr-hyper** are used.

```
2 \xpatchcmd{\@@@nomenclature}
3   {\thepage}
4   {\theLWR@previousautopagelabel}
5   {}
6   {\LWR@patcherror{nomencl}{@@@nomenclature}}
7
8 \renewcommand*{\pagedeclaration}[1]{, \nameref{\BaseJobname-autopage-\#1}}%
```

File 346 **l warp-nonfloat.sty**

§ 455 Package **nonfloat**

(Emulates or patches code by KAI RASCHER.)

nonfloat (*Pkg*) **nonfloat** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{nonfloat}[1999/07/05]

```
2 \LetLtxMacro\topcaption\caption
3 \newcommand{\figcaption}{\def\@capttype{figure}\caption}
4 \newcommand{\tabcaption}{\def\@capttype{table}\topcaption}
5 \newenvironment{narrow}[2]{}{}
```

File 347 **l warp-nonumonpart.sty**

§ 456 Package **nonumonpart**

nonumonpart (*Pkg*) **nonumonpart** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{nonumonpart}[2011/04/15]

File 348 **l warp-nopageno.sty**

§ 457 Package **nopageno**

nopageno (*Pkg*) **nopageno** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{nopageno}[1989/01/01]

File 349 **l warp-notes.sty**

§ 458 Package **notes**

notes (*Pkg*) **notes** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{notes}[2002/10/29]

```
2 \newcommand*{\LWR@notes@onenote}[2]{%
3 \newenvironment{#1}{%
4   \BlockClass{notes#1}%
5   \begin{BlockClass}{notesicon}\textcircled{~#2~}\end{BlockClass}%
6   \BlockClass{notescontents}%
7 }%
8 \endBlockClass\endBlockClass}%
9 }%
10 }%
11 \LWR@notes@onenote{importantnote}{!}%
12 \LWR@notes@onenote{warningnote}{--}%
13 \LWR@notes@onenote{informationnote}{i}
```

File 350 **l warp-notespages.sty**

§ 459 Package **notespages**

notespages (*Pkg*) **notespages** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{notespages}[2016/08/21]

```
2 \newcommand*{\npnotesname}{}%
3 \newcommand*{\npnotestext}{}%
4 \newcommand*{\remainingtextheight}{}%
5 \newdimen\remainingtextheight%
6 \newcommand*{\notestitletext}{}%
7 \newcommand*{\notesareatext}{}%
8 \newcommand*{\npnpiinfo}[1]{}%
9 \newcommand*{\tracingnpmarks}{}%
10 \newcommand*{\notespage}[1]{}%
```

```

11 \newcommand*{\notespages}[1][]{}
12 \newcommand*{\notesfill}[1][]{}
13 \newcommand*{\setnotespages}[1]({})
14 \newcommand*{\definenotesoption}[2]({})
15 \newcommand{\definenotesstyle}[2]({})
16 \newcommand{\definetitlestyle}[2]({})
17 \newcommand{\nppatchchapter}[1]({})
18 \newcommand{\npunpatchchapter}({})

```

File 351 **l warp-nowidow.sty**

§ 460 Package **nowidow**

(Emulates or patches code by RAPHAËL PINSON.)

nowidow (*Pkg*) **nowidow** is ignored.

for HTML output: [Discard all lines of Pack for l warp-nowidow \[2011/09/20\]](#)

```

\nowidow                                [⟨lines⟩]
\setnowidow                            [⟨lines⟩]
2 \newcommand*{\nowidow}[1](){}
3 \newcommand*{\setnowidow}[1]({}

\noclub                                 [⟨lines⟩]
\setnoclub                            [⟨lines⟩]
4 \newcommand*{\noclub}[1](){}
5 \newcommand*{\setnoclub}[1]({})

```

File 352 **l warp-ntheorem.sty**

§ 461 Package **ntheorem**

(Emulates or patches code by WOLFGANG MAY, ANDREAS SCHEDLER.)

ntheorem (*Pkg*) **ntheorem** is patched for use by **l warp**.

Table 20: Ntheorem package — css styling of theorems and proofs

Theorem: <div> of class theorembody<theoremstyle>

Theorem Header: of class theoremheader<style>

where <theoremstyle> is plain, break, etc.

§ 461.1 Limitations

- ⚠ **Font control** This conversion is not total. Font control is via css, and the custom L^AT_EX font settings are ignored.
- ⚠ **Equation numbering** ntheorem has a bug with equation numbering in *AMS* environments when the option thref is used. lwarf does not share this bug, so equations with \split, etc, are numbered correctly with lwarf's HTML output, but not with the print output. It is recommended to use cleveref instead of ntheorem's thref option.

§ 461.2 Options

Options amsthm or standard choose which set of theorems and proofs to initialize.

- ⚠ **Disabled options** The options thmmarks and amsmath are disabled, since they heavily modify the underlying math code. Theorem marks are emulated. The AMS-math modifications are not done.

Option thref is disabled because cleveref functions are used instead. \thref is emulated.

Option hyperref is disabled because lwarf emulated hyperref.

for HTML output: Some disabled options:

```

1 \DeclareOption{thref}{
2   \AtEndDocument{
3     \PackageWarningNoLine{lwarf}{%
4       Lwarf uses cleveref, which takes over ntheorem's\MessageBreak
5       referencing, including
6       \protect\label \space and \protect\thref.\MessageBreak
7       Cleveref does not accept ntheorem's optional\MessageBreak
8       argument for \protect\label, so it will appear\MessageBreak
9       in the text. It is recommended to remove the\MessageBreak
10      thref option, \protect\usepackage{cleveref} instead, \MessageBreak
11      and remove any trailing optional arguments for \protect\label%
12    }%
13  }
14 }
15
16
17 \newbool{LWR@ntheoremmarks}
18 \boolfalse{LWR@ntheoremmarks}
19
20 \DeclareOption{thmmarks}{
21 \booltrue{LWR@ntheoremmarks}
22 \newif\ifsetendmark\setendmarktrue
23 }
24
25
26 \newbool{LWR@ntheoremamsthm}
27 \boolfalse{LWR@ntheoremamsthm}
28
29 \DeclareOption{amsthm}{\booltrue{LWR@ntheoremamsthm}}
30
31
32 \DeclareOption{amsmath}{}
33 \DeclareOption{hyperref}{}
34
35 \LWR@ProvidesPackagePass{ntheorem}[2011/08/15]
```

§ 461.3 Remembering the theorem style

Storage for the style being used for new theorems.

```

36 \newcommand{\LWR@newtheoremstyle}[plain]

37 \AtBeginDocument{
38 \IfPackageLoadedTF{cleveref}{
39 \gdef@\thm#1#2#3{%
40   \if@thmmarks
41     \stepcounter{end\InTheoType ctr}%
42   \fi
43   \renewcommand{\InTheoType}{#1}%
44   \if@thmmarks
45     \stepcounter{curr#1ctr}%
46     \setcounter{end#1ctr}{0}%
47   \fi
48   \refstepcounter[#1]{#2}% <<< cleveref modification
49   \theorem@prework
50   \LWR@forcenewpage% l warp

51   \LWR@printpendingfootnotes% l warp

52   \BlockClass{theorembody#1}\LWR@thisthmstyle% l warp
53   \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
54   \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
55     \ifthm@inframe
56       \thm@topsep\theoreminframepreskipamount
57       \thm@topsepadd\theoreminframepostskipamount
58     \else
59       \thm@topsep\theorempreskipamount
60       \thm@topsepadd\theorempostskipamount
61     \fi
62   \else% oldframeskips
63     \thm@topsep\theorempreskipamount
64     \thm@topsepadd\theorempostskipamount
65     \ifvmode\advance\thm@topsepadd\partopsep\fi
66   \fi
67   \@topsep\thm@topsep
68   \@topsepadd\thm@topsepadd
69   \advance\linewidth -\theorem@indent
70   \advance\linewidth -\theorem@rightindent
71   \advance\@totalleftmargin \theorem@indent
72   \parshape \one \@totalleftmargin \linewidth
73   \@ifnextchar[{\@ythm[#1]{#2}{#3}}{\@xthm[#1]{#2}{#3}}
74 }
75 }% not @ifpackageloaded{cleveref}
76 \gdef@\thm#1#2#3{%
77   \if@thmmarks
78     \stepcounter{end\InTheoType ctr}%
79   \fi
80   \renewcommand{\InTheoType}{#1}%
81   \if@thmmarks
82     \stepcounter{curr#1ctr}%
83     \setcounter{end#1ctr}{0}%
84   \fi
85   \refstepcounter[#2]%
86   \theorem@prework
87   \LWR@forcenewpage% l warp

```

```

88     \LWR@printpendingfootnotes%           lwarp
89     \BlockClass{theorembody#1}\LWR@thisthmstyle% lwarp
90     \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
91     \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
92     \ifthm@inframe
93         \thm@topsep\theoreminframepreskipamount
94         \thm@topsepadd\theoreminframepostskipamount
95     \else
96         \thm@topsep\theorempreskipamount
97         \thm@topsepadd\theorempostskipamount
98     \fi
99     \else% oldframeskips
100    \thm@topsep\theorempreskipamount
101    \thm@topsepadd \theorempostskipamount
102    \ifvmode\advance\thm@topsepadd\partopsep\fi
103 \fi
104 \@topsep\thm@topsep
105 \@topsepadd\thm@topsepadd
106 \advance\linewidth -\theorem@indent
107 \advance\linewidth -\theorem@rightindent
108 \advance\@totalleftmargin \theorem@indent
109 \parshape \one \@totalleftmargin \linewidth
110 \@ifnextchar[{\@ythm[#1]{#2}{#3}}{\@xthm[#1]{#2}{#3}}
111 }
112 }
113 }% AtBeginDocument

```

Patched to remember the style being used for new theorems:

```

114 \gdef\theoremstyle#1{%
115     \@ifundefined{th@#1}{\@warning
116         {Unknown theoremstyle '#1'. Using 'plain'}%
117         \theorem@style{plain}
118         \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
119     }%
120     {
121         \theorem@style{#1}
122         \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
123     }
124 }

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

125 \VerifyCommand[lwarp][ntheorem]{\xnthm}{699CB37D7349C4F062B16B9B890FFE90}
126
127 \gdef\xnthm#1#2[#3]{%
128     \ifthm@tempif
129         \csedef{\LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
130         \expandafter\@ifundefined{c@#1}%
131             {\@definecounter{#1}}{}%
132             \@newctr{#1}[#3]%
133         \expandafter\xdef\csname the#1\endcsname{%
134             \expandafter\noexpand\csname the#3\endcsname \thmcntersep
135             \noexpand\csname the\theoremnumbering\endcsname{#1}}%
136         \expandafter\gdef\csname mkheader@#1\endcsname
137             {\csname setparms@#1\endcsname
138             \thm{#1}{#1}{#2}}

```

```

139      }%
140      \global\@namedef{end#1}{\@endtheorem}
141      \AtBeginEnvironment{\#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}\% lwarf
142      \fi
143 }
144
145 \VerifyCommand[lwarf][ntheorem]{\ynthm}{E0E49F4C2FF76BA3024F2413E2E3DA0D}
146
147 \gdef\@ynthm#1#2{%
148   \ifthm@tempif
149     \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}\% lwarf
150     \expandafter\ifundefined{c@#1}%
151       {\@definecounter{#1}}%
152     \expandafter\xdef\csname the#1\endcsname
153       {\noexpand\csname the\theoremnumbering\endcsname{#1}}%
154     \expandafter\gdef\csname mkheader#1\endcsname
155       {\csname setparms#1\endcsname
156         \@thm{#1}{#1}{#2}
157       }%
158     \global\@namedef{end#1}{\@endtheorem}
159     \AtBeginEnvironment{\#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}\% lwarf
160   \fi
161 }
162
163 \VerifyCommand[lwarf][ntheorem]{\othm}{A6D2FCC33AB3F7C7F998399F013FB6A8}
164
165 \gdef\@othm#1[#2]#3{%
166   \ifundefined{c@#2}{\nocounterr{#2}}%
167   \ifthm@tempif
168     \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}\% lwarf
169     \global\@namedef{the#1}{\@nameuse{the#2}}%
170     \expandafter\protected\xdef\csname num@addtheoremline#1\endcsname{%
171       \noexpand\num@addtheoremline{#1}{#3}}%
172     \expandafter\protected\xdef\csname nonum@addtheoremline#1\endcsname{%
173       \noexpand\nonum@addtheoremline{#1}{#3}}%
174     \theoremkeyword{#3}%
175     \expandafter\protected\xdef\csname #1Keyword\endcsname
176       {\the\theoremkeyword}%
177     \expandafter\gdef\csname mkheader#1\endcsname
178       {\csname setparms#1\endcsname
179         \@thm{#1}{#2}{#3}
180       }%
181     \global\@namedef{end#1}{\@endtheorem}
182     \AtBeginEnvironment{\#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}\% lwarf
183   \fi
184 }

```

§ 461.4 HTML cross-referencing

Mimics a float by incrementing the float counter and generating an HTML anchor. These are used for list-of-theorem cross-references.

```

185 \newcommand{\LWR@inctheorem}{%
186 \addtocounter{LWR@thisautoid}{1}%
187 \LWR@stoppars%
188 \LWR@htmlltag{%
189   a id=\textquotedbl\text{\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}}\text{\textquotedbl}%
190 }%
191 \LWR@htmlltag{/a}\LWR@orignewline%
192 \LWR@startpars%

```

193 }

§ 461.5 \newtheoremstyle

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<style>.

Each header is encased in an \InlineClass of class theoremheader<style>.

```

194 \VerifyCommand[l warp][ntheorem]{\newtheoremstyle}{8173F61CEBA45226CD3015E5E258C93D}
195
196 \gdef\newtheoremstyle#1#2#3{%
197   \expandafter\ifundefined{th@#1}%
198   { \expandafter\gdef\csname th@#1\endcsname{%
199     \def@\begin{theorem}####1####2{%
200       \LWR@inctheorem% l warp
201       #2}%
202       \def@\opargbegintheorem####1####2####3{%
203         \LWR@inctheorem% l warp
204         #3}%
205     }%
206   }%
207 {\PackageError{\basename}{Theorem style #1 already defined}@\eha}%
208 }
```

§ 461.6 Standard styles

```

209 \renewtheoremstyle{plain}%
210   {\item[
211     \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]}%
212   {\item[
213     \InlineClass{theoremheaderplain}{##1\ ##2\ (#3)\theorem@separator}]}%
214
215 \renewtheoremstyle{break}%
216   {\item[
217     \InlineClass{theoremheaderbreak}{##1\ ##2\theorem@separator}\newline
218   ]}%
219   {\item[
220     \InlineClass{theoremheaderbreak}%
221     {##1\ ##2\ (#3)\theorem@separator}\newline
222   ]}%
223
224 \renewtheoremstyle{change}%
225   {\item[
226     \InlineClass{theoremheaderchange}{##2\ ##1\theorem@separator}]}%
227   {\item[
228     \InlineClass{theoremheaderchange}{##2\ ##1\ (#3)\theorem@separator}]}%
229
230 \renewtheoremstyle{changebreak}%
231   {\item[
232     \InlineClass{theoremheaderchangebreak}%
233     {##2\ ##1\theorem@separator}\newline
234   ]}%
235   {\item[
236     \InlineClass{theoremheaderchangebreak}%
237     {##2\ ##1\ (#3)\theorem@separator}\newline

```

```

238     ]}
239
240 \renewtheoremstyle{margin}%
241   {\item[
242     \InlineClass{theoremheadermargin}{##2 \qquad ##1\theorem@separator}
243   ]}%
244   {\item[
245     \InlineClass{theoremheadermargin}{##2 \qquad ##1\ (###3)\theorem@separator}
246   ]}
247
248 \renewtheoremstyle{marginbreak}%
249   {\item[
250     \InlineClass{theoremheadermarginbreak}{%
251       {##2 \qquad ##1\theorem@separator}\newline
252     }%
253   {\item[
254     \InlineClass{theoremheadermarginbreak}{%
255       {##2 \qquad ##1\ (###3)\theorem@separator}\newline
256     ]}
257
258 \renewtheoremstyle{nonumberplain}%
259   {\item[
260     \InlineClass{theoremheaderplain}{##1\theorem@separator}]}%
261   {\item[
262     \InlineClass{theoremheaderplain}{##1\ (###3)\theorem@separator}]}
263
264 \renewtheoremstyle{nonumberbreak}%
265   {\item[
266     \InlineClass{theoremheaderbreak}{##1\theorem@separator}\newline
267   ]}%
268   {\item[
269     \InlineClass{theoremheaderbreak}{##1\ (###3)\theorem@separator}\newline
270   ]}
271
272 \renewtheoremstyle{empty}%
273   {\item[]}%
274   {\item[
275     \InlineClass{theoremheaderplain}{##3}]}
276
277 \renewtheoremstyle{emptybreak}%
278   {\item[]}%
279   {\item[
280     \InlineClass{theoremheaderplain}{##3}]\ \newline}

```

§ 461.7 Additional objects

The following manually adjust the css for the standard configuration objects which are not a purely plain style:

```
281 \ifbool{LWR@ntheoremamsthm}{}{%
```

Upright text via CSS:

```

282   \newtheoremstyle{plainupright}%
283   {\item[
284     \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]}%
285   {\item[
286     \InlineClass{theoremheaderplain}{##1\ ##2\ (###3)\theorem@separator}]}

```

Upright text and small caps header via CSS:

```

287     \newtheoremstyle{nonumberplainuprightsc}%
288     {\item[
289         \InlineClass{theoremheadersc}{##1\theorem@separator}]}%
290     {\item[
291         \InlineClass{theoremheadersc}{##1\ (#3)\theorem@separator}]}%
292 }% not amsthm

```

§ 461.8 Renewed standard configuration

The following standard configuration is renewed using the new css:

```

293 \ifbool{LWR@ntheoremamsthm}{}{%
294 \ifx\thm@usestd@\undefined
295 \else
296     \theoremnumbering{arabic}
297     \theoremstyle{plain}
298     \RequirePackage{latextsym}
299     \theoremsymbol{\Box}
300     \theorembodyfont{\itshape}
301     \theoremheaderfont{\normalfont\bfseries}
302     \theoremseparator{ }
303     \renewtheorem{Theorem}{Theorem}
304     \renewtheorem{theorem}{Theorem}
305     \renewtheorem{Satz}{Satz}
306     \renewtheorem{satz}{Satz}
307     \renewtheorem{Proposition}{Proposition}
308     \renewtheorem{proposition}{Proposition}
309     \renewtheorem{Lemma}{Lemma}
310     \renewtheorem{lemma}{Lemma}
311     \renewtheorem{Korollar}{Korollar}
312     \renewtheorem{korollar}{Korollar}
313     \renewtheorem{Corollary}{Corollary}
314     \renewtheorem{corollary}{Corollary}
315
316     \theoremstyle{plainupright}
317     \theorembodyfont{\upshape}
318     \theoremsymbol{\HTMLUnicode{25A1}}% UTF-8 white box
319     \renewtheorem{Example}{Example}
320     \renewtheorem{example}{Example}
321     \renewtheorem{Beispiel}{Beispiel}
322     \renewtheorem{beispiel}{Beispiel}
323     \renewtheorem{Bemerkung}{Bemerkung}
324     \renewtheorem{bemerkung}{Bemerkung}
325     \renewtheorem{Anmerkung}{Anmerkung}
326     \renewtheorem{anmerkung}{Anmerkung}
327     \renewtheorem{Remark}{Remark}
328     \renewtheorem{remark}{Remark}
329     \renewtheorem{Definition}{Definition}
330     \renewtheorem{definition}{Definition}
331
332     \theoremstyle{nonumberplainuprightsc}
333     \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
334     \renewtheorem{Proof}{Proof}
335     \renewtheorem{proof}{Proof}
336     \renewtheorem{Beweis}{Beweis}
337     \renewtheorem{beweis}{Beweis}

```

```

338     \qedsymbol{\HTMLunicode{220E}}% UTF-8 end-of-proof
339
340     \theoremsymbol{}
341 \fi
342 }% not amsthm

```

§ 461.9 amsthm option

Only if the `amsthm` option was given:

```

343 \ifbool{LWR@ntheoremamsthm}{
344
345 \gdef\th@plain{%
346   \def\theorem@headerfont{\normalfont\bfseries}\itshape%
347   \def@\begintheorem##1##2{%
348     \LWR@inctheorem% l warp
349     \item[%
350       \InlineClass{theoremheaderplain}{##1\ ##2.}%
351     ]}%
352   \def\@opargbegintheorem##1##2##3{%
353     \LWR@inctheorem% l warp
354     \item[%
355       \InlineClass{theoremheaderplain}{##1\ ##2\ (#3).}%
356     ]}}%
357
358 \gdef\th@nonumberplain{%
359   \def\theorem@headerfont{\normalfont\bfseries}\itshape%
360   \def@\begintheorem##1##2{%
361     \LWR@inctheorem% l warp
362     \item[%
363       \InlineClass{theoremheaderplain}{##1.}%
364     ]}%
365   \def\@opargbegintheorem##1##2##3{%
366     \LWR@inctheorem% l warp
367     \item[%
368       \InlineClass{theoremheaderplain}{##1\ (#3).}%
369     ]}}%
370
371 \gdef\th@definition{%
372   \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
373   \def@\begintheorem##1##2{%
374     \LWR@inctheorem% l warp
375     \item[%
376       \InlineClass{theoremheaderdefinition}{##1\ ##2.}%
377     ]}%
378   \def\@opargbegintheorem##1##2##3{%
379     \LWR@inctheorem% l warp
380     \item[%
381       \InlineClass{theoremheaderdefinition}{##1\ ##2\ (#3).}%
382     ]}}%
383
384 \gdef\th@nonumberdefinition{%
385   \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
386   \def@\begintheorem##1##2{%
387     \LWR@inctheorem% l warp
388     \item[%
389       \InlineClass{theoremheaderdefinition}{##1.}%
390     ]}%
391   \def\@opargbegintheorem##1##2##3{%
392     \LWR@inctheorem% l warp

```

```
393     \item[  
394     \InlineClass{theoremheaderdefinition}{##1\ (###3).}  
395     ]}  
396  
397 \gdef\th@remark{  
398   \def\theorem@headerfont{\itshape}\normalfont%  
399   \def\@begintheorem##1##2{  
400     \LWR@intheorem% l warp  
401     \item[  
402     \InlineClass{theoremheaderremark}{##1\ ##2.}  
403     ]}  
404   \def\@opargbegintheorem##1##2##3{  
405     \LWR@intheorem% l warp  
406     \item[  
407     \InlineClass{theoremheaderremark}{##1\ ##2\ (###3).}  
408     ]}  
409  
410 \gdef\th@nonumberremark{  
411   \def\theorem@headerfont{\itshape}\normalfont%  
412   \def\@begintheorem##1##2{  
413     \LWR@intheorem% l warp  
414     \item[  
415     \InlineClass{theoremheaderremark}{##1.}  
416     ]}  
417   \def\@opargbegintheorem##1##2##3{  
418     \LWR@intheorem% l warp  
419     \item[  
420     \InlineClass{theoremheaderremark}{##1\ (###3).}  
421     ]}  
422  
423 \gdef\th@proof{  
424   \def\theorem@headerfont{\normalfont\bfseries}\itshape%  
425   \def\@begintheorem##1##2{  
426     \LWR@intheorem% l warp  
427     \item[  
428     \InlineClass{theoremheaderproof}{##1.}  
429     ]}  
430   \def\@opargbegintheorem##1##2##3{  
431     \LWR@intheorem% l warp  
432     \item[  
433     \InlineClass{theoremheaderproof}{##1\ (###3).}  
434     ]}  
435  
436  
437  
438 \newcounter{proof}%  
439 \if@thmmarks  
440   \newcounter{currproofctr}%  
441   \newcounter{endproofctr}%  
442 \fi  
443  
444 \gdef\proofSymbol{\openbox}  
445  
446 \newcommand{\proofname}{Proof}  
447  
448 \newenvironment{proof}[1][\proofname]{  
449   \th@proof  
450   \def\theorem@headerfont{\itshape}%  
451   \normalfont  
452   \theoremsymbol{\HTMLunicode{220E}}% UTF-8 end-of-proof
```

```

453     \@thm{proof}{proof}{#1}
454 }%
455 {\endtheorem}
456
457 }{}% amsthm option

```

§ 461.10 Ending a theorem

Patched for css:

```

458 \let\LWR@origendtheorem\endtheorem
459 \renewcommand{\endtheorem}{%
460 \ifbool{\LWR@ntheoremmarks}{%
461   \ifsetendmark{%
462     \InlineClass{theoremdmark}{\csname\InTheoType Symbol\endcsname}{%
463       \setendmarkfalse}%
464     \fix{%
465   }{}%
466 \LWR@origendtheorem% also does \endtrivlist
467 \ifbool{\LWR@ntheoremmarks}{\global\setendmarktrue}{}}%
468 \LWR@printpendingfootnotes%           l warp
469 \endBlockClass%
470 }

```

§ 461.11 \NoEndMark

```
471 \gdef\NoEndMark{\global\setendmarkfalse}
```

§ 461.12 List-of

Redefined to reuse the float mechanism to add list-of-theorem links:

```
\thm@thmline {\langle 1: printed type\rangle} {\langle 2: #\rangle} {\langle 3: optional\rangle} {\langle 4: page\rangle}
```

```

472 \renewcommand{\thm@thmline@noname}[4]{%
473 \hypertocfloat{1}{theorem}{thm}{#2 #3}{}}%
474 }%
475
476 \renewcommand{\thm@thmline@name}[4]{%
477 \hypertocfloat{1}{theorem}{thm}{#1 #2 #3}{}}%
478 }

```

This was redefined by ntheorem when loaded, so it is now redefined for l warp:

```
479 \def\thm@thmline{\thm@thmline@name}
```

Patch for css:

```

480 \xpretocmd{\listtheorems}{%
481   {\LWR@htmlelementclass{nav}{lothm}}%
482 }%
483 {\LWR@patcherror{ntheorem}{listtheorems}}%
484
485 \xapptocmd{\listtheorems}{%
486   {\LWR@htmlelementclassend{nav}{lothm}}%
487 }%
488 {\LWR@patcherror{ntheorem}{listtheorems}}

```

§ 461.13 Symbols

Proof QED symbol:

```

489 \newcommand{\qed}{\qquad\the\qedsymbol}
490
491 \AtBeginDocument{
492 \@ifundefined{LWR@orig@openbox}{
493 \LetLtxMacro{\LWR@orig@openbox}{\openbox}
494 \LetLtxMacro{\LWR@orig@blacksquare}{\blacksquare}
495 \LetLtxMacro{\LWR@orig@Box}{\Box}
496
497 \def\openbox{\text{\HTMLunicode{25A1}}}% UTF-8 white box
498 \def\blacksquare{\text{\HTMLunicode{220E}}}% UTF-8 end-of-proof
499 \def\Box{\text{\HTMLunicode{25A1}}}% UTF-8 white box
500
501 \appto{\LWR@restoreorigformatting}{%
502 \LetLtxMacro{\openbox}{\LWR@orig@openbox}%
503 \LetLtxMacro{\blacksquare}{\LWR@orig@blacksquare}%
504 \LetLtxMacro{\Box}{\LWR@orig@Box}%
505 }% appto
506 }{}% @ifundefined
507 }% AtBeginDocument

```

§ 461.14 Cross-referencing

\thref {⟨label⟩}

```
508 \newcommand*{\thref}[1]{\cref{#1}}%
```

File 353 **l warp-octave.sty**

§ 462 Package **octave**

(Emulates or patches code by ANDREW A. CASHNER.)

octave (*Pkg*) **octave** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{octave}[2017/10/31]

Remove the leading 1pt kern:

```

2 \VerifyCommand[l warp][octave]{\@PrintTicks}{26490A1A3593981987395ED149B4D54D}
3
4 \RenewDocumentCommand{\@PrintTicks}{ m }{%
5 \kern-1pt% l warp
6 \TickNum = #1%
7 \loop
8 \Tick{}%
9 \advance\TickNum by -1
10 \ifnum\TickNum > 0
11 \repeat
12 }

```

Use unicode for the prime character:

```
13 \RenewDocumentCommand{\Tick}{ }{\HTMLunicode{2032}}
```

Catch the inline font:

```

14 \VerifyCommand[l warp][octave]{\pitch}{3803E3D6B44EDFF8880F06BBE60571D9}
15
16 \RenewDocumentCommand{\pitch}{ m o m }{%
17 \if@OctaveNumber%
18 {%
19   \pitchfont{%
20     \LWR@textcurrentfont{ l warp
21       \MakeUppercase{#1}%
22       \IfValueTF{#2}{#2}{ }\textsubscript{#3}%
23     }%
24   }%
25 }%
26 \else%
27 {%
28   \pitchfont{%
29     \LWR@textcurrentfont{ l warp
30       \GetOctaveTick{#1}[#2]{#3}%
31     }%
32   }%
33 }%
34 \fi%
35 }
```

The original was hard to adapt to l warp's handling of &.

```

36 \StartDefiningTabulars
37 \renewcommand{\octavetable}{%
38 \begin{tabular}{ll}
39 \octaveprimes \pitch{C}{0} & \octavenumbers \pitch{C}{0} \\
40 \octaveprimes \pitch{C}{1} & \octavenumbers \pitch{C}{1} \\
41 \octaveprimes \pitch{C}{2} & \octavenumbers \pitch{C}{2} \\
42 \octaveprimes \pitch{C}{3} & \octavenumbers \pitch{C}{3} \\
43 \octaveprimes \pitch{C}{4} & \octavenumbers \pitch{C}{4} \\
44 \octaveprimes \pitch{C}{5} & \octavenumbers \pitch{C}{5} \\
45 \octaveprimes \pitch{C}{6} & \octavenumbers \pitch{C}{6} \\
46 \octaveprimes \pitch{C}{7} & \octavenumbers \pitch{C}{7} \\
47 \end{tabular}
48 }
49 \StopDefiningTabulars
```

File 354 l warp-orcidlink.sty

§ 463 Package orcidlink

(Emulates or patches code by LEO C. STEIN.)

orcidlink (*Pkg*) orcidlink is patched for use by l warp.

```

for HTML output: 1 \RequirePackage{l warp-scalerel}
2
3 \LWR@ProvidesPackagePass{orcidlink}[2023/12/30]

4 \VerifyCommand[l warp][orcidlink]{\orcidlink}{3158910F15AD114F9C397A208315B6D2}
5
6 \renewcommand\orcidlink[1]{%
```

```

7   \texorpdfstring%
8   {%
9     \href{%
10       {https://orcid.org/#1}%
11     {%
12       \begin{lateximage}[orcid #1]%
13         \mbox{%
14           \scalerel*{%
15             \begin{tikzpicture}[yscale=-1,transform shape]%
16               \pic{orcidlogo};%
17             \end{tikzpicture}%
18           }{|}%
19         }%
20       \end{lateximage}%
21     }%
22   }%
23 {}%
24 }%
25
26 \begin{warpMathJax}%
27 \CustomizeMathJax{\newcommand{\orcidlink}{[1]{}}}%
28 \end{warpMathJax}

```

File 355 **l warp-overpic.sty**§ 464 Package **overpic**

(Emulates or patches code by ROLF NIEPRASCHK.)

overpic (*Pkg*) overpic is patched for use by l warp.

⚠ scaling The macros \overpicfontsize and \overpicfontskip are used during HTML generation. These are sent to \fontsize to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the overpic and Overpic environments.

See section 88.2 for the print-mode version of \overpicfontsize and \overpicfontskip.

for HTML output: 1 \LWR@ProvidesPackagePass{overpic}[2017/10/06]

```

2 \newcommand*{\overpicfontsize}{12}%
3 \newcommand*{\overpicfontskip}{14}%
4
5 \BeforeBeginEnvironment{overpic}{%
6   \begin{lateximage}%
7   \fontsize{\overpicfontsize}{\overpicfontskip}%
8   \selectfont%
9 }%
10
11 \AfterEndEnvironment{overpic}{\end{lateximage}%
12
13 \BeforeBeginEnvironment{Overpic}{%
14   \begin{lateximage}%
15   \fontsize{\overpicfontsize}{\overpicfontskip}%
16   \selectfont%
17 }%
18

```

```
19 \AfterEndEnvironment{Overpic}{\end{lateximage}}
```

File 356 **l warp-pagegrid.sty**

§ 465 Package **pagegrid**

pagegrid (*Pkg*) pagegrid is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pagegrid}[2016/05/16]

```
2 \newcommand*\{pagegridsetup}[1]{}{}
```

File 357 **l warp-pagenote.sty**

§ 466 Package **pagenote**

pagenote (*Pkg*) pagenote works as-is, but the page option is disabled.

⚠ labels Note that labels in page notes do not appear as expected, even in the print version.

for HTML output: 1 \DeclareOption{page}{}
2 \LWR@ProvidesPackagePass{pagenote}[2009/09/03]

For MATHJAX:

```
3 \begin{warpMathJax}
4 \appto\lwr@syncnotenumbers{\lwr@synconenotenumber{\lwrpagenote}{\thepagenote}}
5 \CustomizeMathJax{\def\lwrpagenote{1}}
6 \CustomizeMathJax{\newcommand{\pagenote}[2][\lwrpagenote]{\{}^{\mathrm{\#1}}\}}
7 \end{warpMathJax}
```

There is no \pagenotemark, so the following are not required:

```
\providecommand{\pagenotename}{pagenote}
\appto\lwr@syncnotenames{\lwr@synconenotename{\lwrpagenote}{\pagenotename}}
```

File 358 **l warp-pagesel.sty**

§ 467 Package **pagesel**

pagesel (*Pkg*) pagesel is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pagesel}[2016/05/16]

File 359 **l warp-paralist.sty**

§ 468 Package **paralist**

(Emulates or patches code by BERND SCHANDL.)

`paralist (Pkg)` `paralist` is supported with minor changes.

for HTML output: 1 \LWR@ProvidesPackagePass{paralist}[2017/01/22]

The compact environments are identical to the regular ones:

```
2 \LetLtxMacro\compactitem\itemize
3 \LetLtxMacro\compactenum\enumerate
4 \LetLtxMacro\compactdesc\description
5 \LetLtxMacro\endcompactitem\enditemize
6 \LetLtxMacro\endcompactenum\endenumerate
7 \LetLtxMacro\endcompactdesc\enddescription
```

For the inline environments, revert `\item` to its original print-mode version:

```
8 \AtBeginEnvironment{inparaitem}{\LetLtxMacro\item\LWR@origitem}
9 \AtBeginEnvironment{inparaenum}{\LetLtxMacro\item\LWR@origitem}
10 \AtBeginEnvironment{inparadesc}{\LetLtxMacro\item\LWR@origitem}
```

Manual formatting of the description labels:

```
11 \def\paradescriptionlabel#1{{\normalfont\textbf{#1}}}
```

File 360 **l warp-parallel.sty**

§ 469 Package **parallel**

(Emulates or patches code by MATTHIAS ECKERMAN.)

`parallel (Pkg)` `parallel` is emulated.

Package options are ignored. Footnotes are treated as normal `l warp` footnotes.

Environment option `c` gives side-by-side `<div>`s of class `minipage`, each of whose width is a percent depending on the given left and right widths, proportional to `\ linewidth`.

Inside each environment, `\ linewidth` and `\ textwidth` are set for the print-output sizes.

for HTML output: Discard all options for `l warp-parallel`:

```
1 \LWR@ProvidesPackageDrop{parallel}[2003/04/13]
```

```
2 \newcounter{\LWR@parallel@Lwidth}
3 \newcounter{\LWR@parallel@Rwidth}
4 \newcommand*\{\LWR@parallel@border\}
5
6 \newenvironment*{Parallel}[3][]%
7   {%
8     \LWR@printpendingfootnotes%
9     \setlength{\linewidth}{\LWR@userstextwidth}%
10    \setlength{\textwidth}{\LWR@userstextwidth}%
11    \renewcommand*\{\LWR@parallel@border\}{%
12      \ifstreq{\#1}{v}{%
13        \renewcommand*\{\LWR@parallel@border\}{ ; border-left: 2px solid black}%
14      }%
15    }%
```

```
15      }%
16      {}%
17      \ifblank{#2}{%
18          \ifblank{#3}{% {}%
19              \setcounter{LWR@parallel@Lwidth}{45}%
20              \setcounter{LWR@parallel@Rwidth}{45}%
21          }% {}{}%
22          {}% {}{x}%
23              \setlength{\LWR@templengthone}{\linewidth - #3}%
24              \setcounter{LWR@parallel@Lwidth}{%
25                  90 * \ratio{\LWR@templengthone}{\linewidth}%
26              }%
27              \setcounter{LWR@parallel@Rwidth}{%
28                  90 * \ratio{#3}{\linewidth}%
29              }%
30          }% {}{x}%
31      }% #2 blank
32      {}% #2 non-blank
33      \ifblank{#3}{% {}{x}%
34          \setcounter{LWR@parallel@Lwidth}{%
35              90 * \ratio{#2}{\linewidth}%
36          }%
37          \setlength{\LWR@templengthone}{\linewidth - #2}%
38          \setcounter{LWR@parallel@Rwidth}{%
39              90 * \ratio{\LWR@templengthone}{\linewidth}%
40          }%
41          {}{x}{}%
42          {}{x}{x}%
43          \setcounter{LWR@parallel@Lwidth}{%
44              90 * \ratio{#2}{\linewidth}%
45          }%
46          \setcounter{LWR@parallel@Rwidth}{%
47              90 * \ratio{#3}{\linewidth}%
48          }%
49          {}{x}{x}%
50      }% #2 non-blank
51  }
52  {}%
53  \ParallelAtEnd%
54  \renewcommand*{\ParallelAtEnd}{}%
55  \LWR@printpendingfootnotes%
56  }
57
58 \newcommand*{\ParallelLText}[1]{%
59     \begin{BlockClass}[% width:\arabic{LWR@parallel@Lwidth}\% ; % space
60         padding: .5ex 1\% ; % space
61     ]{\minipage}%
62     #1%
63     \end{BlockClass}%
64 }
65
66
67 \newcommand*{\ParallelRTText}[1]{%
68     \begin{BlockClass}[% width:\arabic{LWR@parallel@Rwidth}\% ; % space
69         padding: .5ex 1\% ; % space
70         \LWR@parallel@border%
71     ]{\minipage}%
72     #1%
73     \end{BlockClass}%
74 }
```

```

75 }
76
77 \newcommand*{\ParallelPar}{\LWR@printpendingfootnotes}
78
79 \newcommand*{\ParallelAtEnd}{}

```

File 361 **l warp-parcolumns.sty**

§ 470 Package **parcolumns**

(Emulates or patches code by JONATHAN SAUER.)

parcolumns (*Pkg*) parcolumns is emulated.

rulebetween is honored. The other keys are ignored, including colwidths.

Each column is placed inside a <div> of class minipage, each of whose width is fixed at 85% divided by the number of columns. In most cases, this results in side-by-side minipages adapting to the browser width. Inside each minipage, \linewidth, \textwidth, and \textheight are set for a virtual 6×9 inch page, with \linewidth divided by the number of columns.

for HTML output: Discard all options for l warp-parcolumns:

```

1 \RequirePackage{keyval}%
2
3 \LWR@ProvidesPackageDrop{parcolumns}[2004/11/25]

4 \newcounter{\LWR@parcolumns@numcols}
5 \newcounter{\LWR@parcolumns@thiscol}
6 \newcounter{\LWR@parcolumns@width}
7 \newbool{\LWR@parcolumns@started}
8 \newbool{\LWR@parcolumns@rule}
9
10 \define@key{\LWRparcols}{colwidths}{}
11 \define@key{\LWRparcols}{distance}{}
12 \define@key{\LWRparcols}{rulebetween}[true]{%
13   \setbool{\LWR@parcolumns@rule}{#1}%
14 }
15 \define@key{\LWRparcols}{nofirstindent}{}
16 \define@key{\LWRparcols}{sloppy}{}
17 \define@key{\LWRparcols}{sloppyspaces}{}
18
19 \newenvironment*{parcolumns}[2][]{%
20   {%
21     \begin{LWR@setvirtualpage}*{[#2]}%
22     \setcounter{\LWR@parcolumns@numcols}{#2}%
23     \setcounter{\LWR@parcolumns@thiscol}{1}%
24     \boolfalse{\LWR@parcolumns@started}%
25     \boolfalse{\LWR@parcolumns@rule}%
26     \setcounter{\LWR@parcolumns@width}{%
27       85/#2
28     }%
29     \setkeys{\LWRparcols}{#1}%
30   }%
31   {%

```

```
32      \colplacechunks%
33      \end{LWR@setvirtualpage}%
34  }
35
36 \newcommand{\LWR@parcolumns@onecol}[1]{%
37   \ifbool{LWR@parcolumns@started}{%
38     {}%
39     {%
40       \LWR@htmldivclass{parcolumns}%
41       \booltrue{LWR@parcolumns@started}%
42     }%
43   \ifboolexpr{%
44     bool {LWR@parcolumns@rule} and
45     test {%
46       \ifnumgreater
47         {\value{LWR@parcolumns@thiscol}}%
48         {1}%
49     }%
50   }%
51   {\renewcommand{\LWR@tempone}{ ; border-left: 2px solid black}%
52   {\renewcommand{\LWR@tempone}{}}
53 \begin{BlockClass}[
54   width:\arabic{LWR@parcolumns@width}\% ; % space
55   padding: .5ex 1\% ; % space
56   \LWR@tempone%
57 ]{\minipage}%
58 #1%
59 \end{BlockClass}%
60 \addtocounter{LWR@parcolumns@thiscol}{1}%
61 }
62
63 \newcommand{\colchunk}[2][\value{LWR@parcolumns@thiscol}]{%
64   \whileboolexpr{%
65     test {%
66       \ifnumcomp%
67         {\value{LWR@parcolumns@thiscol}}%
68         {<}%
69         {#1}%
70     }%
71   }{%
72     \LWR@parcolumns@onecol{}%
73   }%
74   \LWR@parcolumns@onecol{#2}%
75 }
76
77 \newcommand*\colplacechunks{%
78   \ifbool{LWR@parcolumns@started}{%
79     {}%
80     \LWR@htmldivclassend{div}%
81     \boolfalse{LWR@parcolumns@started}%
82   }%
83   {}%
84   \setcounter{LWR@parcolumns@thiscol}{1}%
85 }
```

File 362 **l warp-parnotes.sty**

§ 471 Package **parnotes**

(Emulates or patches code by CHELSEA HUGHES.)

parnotes (*Pkg*) parnotes is supported with some patches.

for HTML output: 1 \LWR@ProvidesPackagePass{parnotes}[2019/07/23]

```

2 \VerifyCommand[l warp][parnotes]{\PN@parnote@real}{91361D751D6393BA644478FDE4A764DA}
3
4 \long\def\PN@parnote@real#1#2{%
5   \parnotemark{#1}%
6   % Unless this is the first parnote in \PN@text, add a separator first
7   \unless\ifx\PN@text\empty\g@addto@macro\PN@text{\parnoteintercmd}\fi
8   % Redefine \currentlabel to the parnote label, so \label works
9   \g@addto@macro\PN@text{%
10    \phantomsection%
11    \def\@currentlabel{#1}%
12    \def\cref@currentlabel{%
13      [parnotemark][\arabic{parnotemark}][]\theparnotemark%
14    }%
15  }%
16  \g@addto@macro\PN@text{%
17    \LWR@textcurrentfont{%
18      \parnotemark{#1}\nolinebreak\thinspace#2%
19    }%
20  }%
21 }
22
23 \VerifyCommand[l warp][parnotes]{\PN@parnotes@real}{AF1257823BFCBC31ADDA4AAE1F3F3710}
24
25 \def\PN@parnotes@real{%
26 \ifPN@inparnotes
27 \else
28   \LWR@stoppars%

```

Avoid nested paragraphs:

```

29   \addtocounter{\LWR@spandepth}{1}%
30   % We call \par later, so this avoids recursion with \PN@parnotes@auto
31   \PN@inparnotestru
32   \unless\ifvmode\par\fi
33   % Avoid page breaks between a paragraph and its parnotes
34   \nopagebreak\addvspace{\parnotevskip}%
35   \begin{BlockClass}{note}{footnotes}%
36   \leavevmode\LWR@orignewline%

```

Typeset the parnote inside its own group to avoid global changes:

```

37   {%
38     \parnotesfmt{\PN@text}%
39   }%
40   \leavevmode\LWR@orignewline%
41   \end{BlockClass}%
42   \leavevmode\LWR@orignewline%
43   \global\def\PN@text{}%
44   %
45   % These can be enabled or disabled by package options
46   %
47   \PN@disable@indent
48   \PN@reset@optional
49   \PN@inparnotesfalse

```

Reenable normal paragraph handling:

```

50   \addtocounter{\LWR@spandepth}{-1}%
51 \fi
52 }

53 \newbool{\LWR@parnotes@doingauto}
54 \boolfalse{\LWR@parnotes@doingauto}

55 \VerifyCommand[lwarp][parnotes]{\PN@parnotes@auto}{08CC1722ABA55FA01D64F2B29C919D70}
56
57 \def\PN@parnotes@auto{%
58   \ifbool{\LWR@parnotes@doingauto}{%
59     \ifx\currenvir\auton
60       \unless\if\PN@inparnotes
61         \unless\ifx\PN@text\empty
62           \expandafter\PN@parnotes@real
63         \fi
64       \fi
65     \fi
66   }{}%
67 }

```

Replace original logic due to the use of new L^AT_EXparagraph hook handling:

```

68 \renewenvironment{auton}%
69   {\booltrue{\LWR@parnotes@doingauto}}%
70   {\PN@parnotes@auto}%

```

If **cleveref** is in use, name the new notes:

```

71 \AtBeginDocument{
72   \ifdef{\crefname}{%
73     \crefname{parnotemark}{paragraph note}{paragraph notes}%
74     \Crefname{parnotemark}{Paragraph note}{Paragraph notes}%
75   }{}%
76 }

```

To nullify the footnotes where necessary:

```

77 \apptocmd{\LWR@nullifyfootnotes}{%
78   \renewcommand{\parnote}[2][]{%

```

```
79     \renewcommand\parnotemark[1]{}%
80 }{}{}
```

For MATHJAX:

```
81 \begin{warpMathJax}
82 \providecommand{\parnotename}{parnote}
83 \appto\LWR@syncnotenumbers{%
84     \addtocounter{parnotemark}{-1}% specific to parnotes
85     \LWR@syncnotenumber{\LWRparnote}{\theparnotemark}%
86     \addtocounter{parnotemark}{1}% specific to parnotes
87 }
88 \appto\LWR@syncnotenames{\LWR@syncnotename{\LWRparnote}{\parnotename}}
89 \CustomizeMathJax{\def{\LWRparnote}{1}}
90 \CustomizeMathJax{\newcommand{\parnote}[2][\LWRparnote]{\{}^{\mathrm{#1}}\}}
91 \CustomizeMathJax{\newcommand{\parnotemark}[1][\LWRparnote]{\{}^{\mathrm{#1}}\}}
92 \end{warpMathJax}
```

File 363 **l warp-parskip.sty**

§ 472 Package **parskip**

parskip (*Pkg*) **parskip** is ignored.

for HTML output: Discard all options for **l warp-parskip**.

```
1 \LWR@ProvidesPackageDrop{parskip}[2001/04/09]
```

File 364 **l warp-pbalance.sty**

§ 473 Package **pbalance**

pbalance (*Pkg*) **pbalance** is ignored.

for HTML output:

```
1 \RequirePackage{balance}
2
3 \LWR@ProvidesPackageDrop{pbalance}[2022/07/28]
```

```
4 \newcommand\shrinkLastPage[1]{}
5 \newcommand\balancePageNum[1]{}
6 \newcommand\nopbalance{}
```

File 365 **l warp-pbox.sty**

§ 474 Package **pbox**

(Emulates or patches code by SIMON LAW.)

pbox (*Pkg*) **pbox** is emulated.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{pbox}[2011/12/07]
```

```

2 \NewDocumentCommand{\pbox}{O{t} O{} O{t} m +m}{%
3 \global\booltrue{LWR@minipagefullwidth}%
4 \parbox[#1][#2][#3]{#4}{#5}%
5 }%
6 %
7 \newcommand{\settominwidth}[3][\columnwidth]{%
8 \setwidt{#2}{#3}%
9 }%
10 %
11 \newcommand{\widthofpbox}[1]{%
12 \widthof{#1}%
13 }

```

File 366 **l warp-pdfcol.sty**

§ 475 Package **pdfcol**

pdfcol (*Pkg*) *pdfcol* is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{pdfcol}[2018/11/01]%
2 %
3 \ltx@newif\ifpdfcolAvailable%
4 \pdfcolAvailablefalse%
5 %
6 \def\pdfcolErrorNoStacks{%
7   \PackageInfo{l warp-pdfcol}{Ignoring pdfcol for HTML output.}%
8 }%
9 %
10 \def\pdfcolInitStack#1{}%
11 %
12 \long\def\pdfcolIfStackExists#1#2#3{#3}%
13 %
14 \def\pdfcolSwitchStack#1{}%
15 %
16 \def\pdfcolSetCurrentColor{}%
17 %
18 \def\pdfcolSetCurrent#1{}%

```

File 367 **l warp-pdfcolfoot.sty**

§ 476 Package **pdfcolfoot**

pdfcolfoot (*Pkg*) *pdfcolfoot* is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{pdfcolfoot}[2016/05/16]%
2 %
3 \newcommand*{\pdfcolfoot@switch}{}%
4 %
5 \newcommand*{\pdfcolfoot@current}{}%

```

File 368 **l warp-pdfcolmk.sty**

§ 477 Package **pdfcolmk**

pdfcolmk (*Pkg*) pdfcolmk is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pdfcolmk}[2016/05/16]

File 369 **l warp-pdfcolparallel.sty**

§ 478 Package **pdfcolparallel**

pdfcolparallel (*Pkg*) pdfcolparallel is ignored.

for HTML output: 1 \RequirePackage{keyval}%
2
3 \LWR@ProvidesPackageDropA{pdfcolparallel}[2016/05/16]

Pass options to parallel:

4 \DeclareOption*{%
5 \PassoptionsToPackage{\CurrentOption}{parallel}%
6 }

Process the options:

7 \LWR@ProvidesPackageDropB

Require parallel with the given options:

8 \RequirePackage{parallel}[2003/04/13]

Ignore the new key:

9 \define@key{parallel}{rulebetweencolor}{}

File 370 **l warp-pdfcolparcolumns.sty**

§ 479 Package **pdfcolparcolumns**

pdfcolparcolumns (*Pkg*) pdfcolparcolumns is ignored.

for HTML output: 1 \LWR@ProvidesPackageDropA{pdfcolparcolumns}[2016/05/16]

Pass options to parcolumns:

2 \DeclareOption*{%
3 \PassoptionsToPackage{\CurrentOption}{parcolumns}%
4 }

Process the options:

```
5 \LWR@ProvidesPackageDropB
```

Require `parcolumns` with the given options:

```
6 \RequirePackage{parcolumns}[2004/11/25]
```

Ignore the new key:

```
7 \define@key{LWRparcols}{rulebetweencolor}{}{}
```

File 371 **l warp-pdfcomment.sty**

§ 480 Package **pdfcomment**

`pdfcomment` (*Pkg*) `pdfcomment` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pdfcomment}[2016/06/13]

```
2 \newenvironment{pdfsidelinecomment}[2][]{\begin{array}{c}}{\end{array}}
3 \newcommand{\pdfcomment}[2][]{\begin{array}{c}\text{#1}\end{array}}
4 \newcommand{\pdfmargincomment}[2][]{\begin{array}{c}\text{#1}\end{array}}
5 \newcommand{\pdfmarkupcomment}[3][]{\begin{array}{c}\text{#1}\end{array}\text{#2}\end{array}}
6 \newcommand{\pdffreetextcomment}[2][]{\begin{array}{c}\text{#1}\end{array}}
7 \newcommand{\pdfsquarecomment}[2][]{\begin{array}{c}\text{#1}\end{array}}
8 \newcommand{\pdfcirclecomment}[2][]{\begin{array}{c}\text{#1}\end{array}}
9 \newcommand{\pdplinecomment}[2][]{\begin{array}{c}\text{#1}\end{array}}
10 \newcommand{\pdftooltip}[3][]{\begin{array}{c}\text{#1}\end{array}\text{#2}\end{array}}
11 \newcommand{\pdfcommentsetup}[2][]{\begin{array}{c}\text{#1}\end{array}}
12 \newcommand{\listofpdfcomments}[1][]{\begin{array}{c}\text{#1}\end{array}}
13 \newcommand{\setliststyle}[1][]{\begin{array}{c}\text{#1}\end{array}}
14 \newcommand{\defineliststyle}[2][]{\begin{array}{c}\text{#1}\end{array}\text{#2}\end{array}}
15 \newcommand{\defineavatar}[2][]{\begin{array}{c}\text{#1}\end{array}\text{#2}\end{array}}
16 \newcommand{\definestyle}[2][]{\begin{array}{c}\text{#1}\end{array}\text{#2}\end{array}}
```

For MATHJAX:

```
17 \begin{warpMathJax}
18 \CustomizeMathJax{\newcommand{\pdfmarkupcomment}[3][]{\begin{array}{c}\text{#1}\end{array}\text{#2}\end{array}}
19 \CustomizeMathJax{\newcommand{\pdftooltip}[3][]{\begin{array}{c}\text{#1}\end{array}\text{#2}\end{array}}
20 \end{warpMathJax}
```

File 372 **l warp-pdfcrypt.sty**

§ 481 Package **pdfcrypt**

`pdfcrypt` (*Pkg*) `pdfcrypt` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pdfcrypt}[2016/05/16]

```
2 \newcommand*{\pdfcryptsetup}[1]{}{}
```

File 373 **l warp-pdflandscape.sty**

§ 482 Package **pdflandscape**

pdflandscape (*Pkg*) pdflandscape is ignored.

for HTML output: Discard all options for l warp-pdflandscape:

```
1 \LWR@ProvidesPackageDrop{pdflandscape}[2019/12/05]  
2 \let\landscape\relax  
3 \let\endlandscape\relax  
4  
5 \newenvironment*{landscape}{}{}
```

File 374 **l warp-pdfmarginpar.sty**

§ 483 Package **pdfmarginpar**

pdfmarginpar (*Pkg*) pdfmarginpar is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pdfmarginpar}[2011/08/05]
2 \newcommand{\pdfmarginpar}[2][]{
3 \newcommand{\pdfmarginparset}[1]{}

File 375 **l warp-pdfpages.sty**

§ 484 Package **pdfpages**

(Emulates or patches code by ANDREAS MATTHIAS.)

pdfpages (*Pkg*) pdfpages is patched for use by l warp.

Option link and linkname work:

```
\hyperlink{<filename>.pdf.<pagenumber>}{some text}  
\hyperlink{<linkname>.<pagenumber>}{some text}
```

Options which make no sense in HTML are disabled.

for HTML output: 1 \LWR@ProvidesPackagePass{pdfpages}[2022-10-09]

Disable option which have no meaning for HTML output:

```
2 \define@key{pdfpages}{fitpaper}[false]{  
3 \define@key{pdfpages}{landscape}[false]{}
```

```

4 \define@key{pdfpages}{openright}[false]{}
5 \define@key{pdfpages}{signature}{}
6 \define@key{pdfpages}{signature*}{}
7 \define@key{pdfpages}{booklet}[false]{}
8 \define@key{pdfpages}{rotateoversize}[false]{}
9 \define@key{pdfpages}{doublepages}[false]{}
10 \define@key{pdfpages}{doublepagestwist}[false]{}
11 \define@key{pdfpages}{doublepagestwistodd}[false]{}
12 \define@key{pdfpages}{doublepagestwist*}[false]{}
13 \define@key{pdfpages}{doublepagestwistodd*}[false]{}
14 \define@key{pdfpages}{duplicatepages}[2]{}
15 \define@key{pdfpages}{thread}[false]{}
16 \define@key{pdfpages}{threadname}{}
17 \define@key{pdfpages}{linkfit}{}
18 \define@key{pdfpages}{linktodoc}[false]{}
19 \define@key{pdfpages}{linktodocfit}{}
20 \define@key{pdfpages}{linkfilename}{}
21 \define@key{pdfpages}{survey}[false]{}
22 \define@key{pdfpages}{survey-nolink}[false]{}
23 \define@key{pdfpages}{newwindow}[false]{}

```

Use print mode while measuring the page numbers:

```
24 \xpretocmd{\AM@getpagecount}{\LWR@restoreorigformatting}{}{}
```

Emulate a bit of **eso-pic**:

```

25 \newif\ifESO@texcoord
26
27 \newcommand{\ESO@HookIIBG}{}%
28
29 \renewcommand{\AM@AddToShipoutPicture}{\g@addto@macro\ESO@HookIIBG}
30
31 \renewcommand{\ClearShipoutPicture}{}%

```

\LWR@esopic@newpage

At each \newpage.

```
32 \newcommand*{\LWR@esopic@newpage}{%
```

Is there something to draw?

```

33 \ifdefvoid{\ESO@HookIIBG}%
34 {}%
35 {%
```

If the **link** option was specified, add a hyper target:

```

36     \ifAM@link%
37         \hypertarget{\AM@linkname.\AM@page}{}%
38     \fi%
```

Draw inside a picture environment of the size of a virtual page:

```

39     \begingroup%
40     \setlength{\unitlength}{1in}%
41     \begin{picture}(8,10.5)%
42     \ESO@HookIIBG%
43     \end{picture}%
44     \endgroup%
45     \global\let\ESO@HookIIBG\empty%
46 }
47 }
```

\AM@output

Patched to use \LWR@esopic@newpage.

```

48 \VerifyCommand[l warp][pdfpages]{\AM@output@i}{642914BBA600927BFEC7D27A97A4A59D}
49
50 \xpatchcmd{\AM@output@i}
51   {\newpage}
52   {\LWR@esopic@newpage}
53   {}
54   {\LWR@patcherror{pdfpages}{AM@output-1}}
55
56 \xpatchcmd{\AM@output@i}
57   {\newpage}
58   {\LWR@esopic@newpage}
59   {}
60   {\LWR@patcherror{pdfpages}{AM@output-2}}
61
62 \xpatchcmd{\AM@output@i}
63   {\newpage}
64   {\LWR@esopic@newpage}
65   {}
66   {\LWR@patcherror{pdfpages}{AM@output-3}}

```

\includepdf

Patched to set the user's paper size.

```

67 \xpretocmd{\includepdf}{%
68   \begingroup%
69   \setlength{\paperwidth}{\LWR@userspaperwidth}%
70   \setlength{\paperheight}{\LWR@userspaperheight}%
71 }{}{%
72
73 \xapptocmd{\includepdf}{%
74   \endgroup%
75 }{}{%

```

\includepdfmerge

Patched to set the user's paper size.

```

76 \xpretocmd{\includepdfmerge}{%
77   \begingroup%
78   \setlength{\paperwidth}{\LWR@userspaperwidth}%
79   \setlength{\paperheight}{\LWR@userspaperheight}%
80 }{}{%
81
82 \xapptocmd{\includepdfmerge}{%
83   \endgroup%
84 }{}{%

```

\AM@hyper@begin@i

Hyper links are created by \LWR@esopic@newpage, so don't create them here:

```
85 \renewcommand{\AM@hyper@begin@i}{}%
```

File 376 **l warp-pdfprivacy.sty**

§ 485 Package **pdfprivacy**

pdfprivacy (*Pkg*) **pdfprivacy** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pdfprivacy}[2017/12/03]

File 377 **l warp-pdfrender.sty**

§ 486 Package **pdfrender**

pdfrender (*Pkg*) pdfrender is allowed during HTML, but it has no effect on HTML text output. pdfrender is enabled for use with xfakebold, and it is enabled during HTML so that it may be in use when an SVG math image is started. I.e. xfakebold's \setBold may be used outside of a math expression and still be detected when the math begins.

The l warp-pdfrender package is present because it used to disable pdfrender, so this newer version is to overwrite older versions.

for HTML output: 1 \LWR@ProvidesPackagePass{pdfrender}[2019/12/29]

File 378 **l warp-pdfsync.sty**

§ 487 Package **pdfsync**

(Emulates or patches code by J. LAURENS.)

pdfsync (*Pkg*) pdfsync is ignored.

for HTML output: Discard all options for l warp-pdfsync:

1 \LWR@ProvidesPackageDrop{pdfsync}[2008/01/26]

2 \newcommand*{\pdfsync}{}
3 \newcommand*{\pdfsyncstart}{}
4 \newcommand*{\pdfsyncstop}{}

File 379 **l warp-pdftricks.sty**

§ 488 Package **pdftricks**

(Emulates or patches code by C. V. RADHAKRISHNAN, C. V. RAJAGOPAL, ANTOINE CHAMBERT-LOIR.)

pdftricks (*Pkg*) pdftricks is patched for use by l warp.

⚠ convert image files The pdftricks image files <jobname>-fig*.pdf must be converted to .svg, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

Enter ⇒ **l warpmk pdftosvg <jobname>-fig*.pdf**

for HTML output: 1 \LWR@ProvidesPackagePass{pdftricks}[2003/08/10]

Reuse the print-mode images:

2 \def\PDFTfigname{\BaseJobname-fig\thePSfig}

If the .pdf images have not yet been converted to .svg then an error about a missing file will occur. Warn the user to convert the images.

```

3 \PackageWarning{l warp-pdftricks}{%
4 When the pdftricks images change,
5 remember to convert PDF images to SVG using 'l warpmk pdftosvg *-fig.pdf',
6 }
7
8 \AfterEndDocument{\typeout{***}}
9 \AfterEndDocument{\typeout{*** Note: If pdftricks images are not found, new, or updated,}}
10 \AfterEndDocument{\typeout{*** \space use 'l warpmk pdftosvg \BaseJobname-fig*.pdf'}}
11 \AfterEndDocument{\typeout{***}}

```

File 380 **l warp-pd fx.sty**

§ 489 Package **pd fx**

pd fx (*Pkg*) **pd fx** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pd fx}[2017/05/18]

File 381 **l warp-perpage.sty**

§ 490 Package **perpage**

(Emulates or patches code by DAVID KASTRUP.)

perpage (*Pkg*) **perpage** is mostly ignored, but support is added for footnote counters.

There is no page number in HTML, so most counters are not reset. If the document redefines \the<countername> to include \theperpage, it is necessary to place that redefinition inside a warpprint environment to avoid modifying the HTML definitions.

\AddAbsoluteCounter must not be inside warpprint, as the counter must be added for HTML also, although it is not incremented.

footnote numbering To have footnote numbers reset each time footnotes are printed:

\setcounter{footnoteReset}{1}

For **bigfoot**, **manyfoot**, or **perpage**:

\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}

The footnotes are reset when they are printed, according to section level as set by **FootnoteDepth**, which is not necessarily by HTML page. This is recommended for \alph, \Alph, or \fnsymbol footnotes, due to the limited number of symbols which are available.

for HTML output: 1 \LWR@ProvidesPackageDrop{perpage}[2014/10/25]

```

2 \newcommand{\AddAbsoluteCounter}[1]
3 {
4     \@ifundefined{c@abs#1}{%
5         \expandafter\newcount\csname c@abs#1\endcsname
6         \global\value{abs#1}\@ne
7 %         \global\expandafter\let\csname cl@abs#1\endcsname\@empty
8         \expandafter\xdef\csname theabs#1\endcsname{%
9             \noexpand\number \csname c@abs#1\endcsname
10        }%
11 %         \global\@namedef{c@pabs@#1}{\pp@cl@begin
12 %         \stepcounter{abs#1}%
13 %         \pp@cl@end}%
14 %         \@addtoreset{pabs@#1}{#1}
15     }
16 }
17 }
18
19 \AddAbsoluteCounter{page}
20 \def\theabspage{1}
21
22 \newcommand*\MakePerPage[2][1]{%
23     \ifltxcounter{#2Reset}{%
24         \setcounter{#2Reset}{#1}%
25     }%
26
27 }%
28 }
29
30 \newcommand*\MakeSorted[1]{}%
31
32 \newcommand*\MakeSortedPerPage[2][1]{%
33     \ifltxcounter{#2Reset}{%
34         \setcounter{#2Reset}{#1}%
35     }%
36 }%
37
38
39 \newcommand*{\theperpage}{1}

```

File 382 l warp-pfnote.sty

§ 491 Package **pfnote**

pfnote (*Pkg*) pfnote is ignored.

⚠ pfnote numbers While emulating pfnote, l warp is not able to reset HTML footnote numbers per page number to match the printed version, as HTML has no concept of page numbers. l warp therefore uses continuous footnote numbering even for pfnote.

for HTML output: 1 \LWR@ProvidesPackageDrop{pfnote}[1999/07/14]

File 383 l warp-phfqit.sty**§ 492 Package phfqit**

(Emulates or patches code by PHILIPPE FAIST.)

phfqit (*Pkg*) phfqit is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{phfqit}[2017/08/16]

```
2 \LetLtxMacro{\LWR@origbitstring}{\bitstring}
3
4 \renewcommand{\bitstring}[1]{%
5 \InlineClass[%%
6   text-decoration: overline underline ;
7 ]{\bitstring}{#1}%
8 \% \phfqit{\bitstring}{#1}%
9 }
10
11 \appto{\LWR@restoreorigformatting}{%
12 \LetLtxMacro{\bitstring}{\LWR@origbitstring}%
13 }
```

File 384 l warp-physics.sty**§ 493 Package physics**

(Emulates or patches code by SERGIO C. DE LA BARRERA.)

physics (*Pkg*) physics works as-is for HTML with SVG math.

For MATHJAX, the MATHJAX v3 physics extension is used.

for HTML output: 1 \LWR@ProvidesPackagePass{physics}% No date is provided by the package.

```
2 \begin{warpMathJax}
3 \PackageNoteNoLine{l warp, physics}{The MathJax v3 extension will be used}
4 \CustomizeMathJax{\require{physics}}
5 \end{warpMathJax}
```

File 385 l warp-physunits.sty**§ 494 Package physunits**

(Emulates or patches code by BRIAN W. MULLIGAN.)

physunits (*Pkg*) physunits is supported as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{physunits}[2020/03/26]

```
2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{physunits}
4
5 \CustomizeMathJax{\newcommand{\micro}{\mu}}
6 \CustomizeMathJax{\newcommand{\V}[1][ ]{\mathbf{\mathit{V}}}, \mathbf{\mathit{V}}}
7 \CustomizeMathJax{\newcommand{\Volt}[1][ ]{\mathbf{\mathit{V}}}, \mathbf{\mathit{V}}}
8 \CustomizeMathJax{\newcommand{\Coulomb}[1][ ]{\mathbf{\mathit{C}}}, \mathbf{\mathit{C}}}
9 \CustomizeMathJax{\newcommand{\esu}{\mathbf{\mathit{esu}}}}
10 \CustomizeMathJax{\newcommand{\Ohm}[1][ ]{\mathbf{\mathit{\Omega}}}, \mathbf{\mathit{\Omega}}}
11 \CustomizeMathJax{\newcommand{\Amp}[1][ ]{\mathbf{\mathit{A}}}, \mathbf{\mathit{A}}}
12 \CustomizeMathJax{\newcommand{\Farad}[1][ ]{\mathbf{\mathit{F}}}, \mathbf{\mathit{F}}}
13 \CustomizeMathJax{\newcommand{\Tesla}[1][ ]{\mathbf{\mathit{T}}}, \mathbf{\mathit{T}}}
14 \CustomizeMathJax{\newcommand{\Gauss}[1][ ]{\mathbf{\mathit{G}}}, \mathbf{\mathit{G}}}
15 \CustomizeMathJax{\newcommand{\Henry}[1][ ]{\mathbf{\mathit{H}}}, \mathbf{\mathit{H}}}
16 \CustomizeMathJax{\newcommand{\eV}[1][ ]{\mathbf{\mathit{eV}}}, \mathbf{\mathit{eV}}}
17 \CustomizeMathJax{\newcommand{\keV}{\mathbf{\mathit{keV}}}}
18 \CustomizeMathJax{\newcommand{\MeV}{\mathbf{\mathit{MeV}}}}
19 \CustomizeMathJax{\newcommand{\J}[1][ ]{\mathbf{\mathit{J}}}, \mathbf{\mathit{J}}}
20 \CustomizeMathJax{\newcommand{\Joule}[1][ ]{\mathbf{\mathit{J}}}, \mathbf{\mathit{J}}}
21 \CustomizeMathJax{\newcommand{\erg}{\mathbf{\mathit{erg}}}}
22 \CustomizeMathJax{\newcommand{\kcal}{\mathbf{\mathit{kcal}}}}
23 \CustomizeMathJax{\newcommand{\Cal}{\mathbf{\mathit{Cal}}}}
24 \CustomizeMathJax{\newcommand{\calorie}[1][ ]{\mathbf{\mathit{cal}}}, \mathbf{\mathit{cal}}}
25 \CustomizeMathJax{\newcommand{\BTU}{\mathbf{\mathit{BTU}}}}
26 \CustomizeMathJax{\newcommand{\tnt}{\mathbf{\mathit{ton}}, \mathbf{\mathit{of}}, \mathbf{\mathit{TNT}}}}
27 \CustomizeMathJax{\newcommand{\Watt}[1][ ]{\mathbf{\mathit{W}}}, \mathbf{\mathit{W}}}
28 \CustomizeMathJax{\newcommand{\hpi}{\mathbf{\mathit{hp(I)}}}}
29 \CustomizeMathJax{\newcommand{\hpm}{\mathbf{\mathit{hp(M)}}}}
30 \CustomizeMathJax{\newcommand{\hp}{\mathbf{\mathit{hp}}}}
31 \CustomizeMathJax{\newcommand{\meter}[1][ ]{\mathbf{\mathit{m}}}, \mathbf{\mathit{m}}}
32 \CustomizeMathJax{\newcommand{\m}[1][ ]{\mathbf{\mathit{m}}}, \mathbf{\mathit{m}}}
33 \CustomizeMathJax{\newcommand{\km}{\mathbf{\mathit{km}}}}
34 \CustomizeMathJax{\newcommand{\au}{\mathbf{\mathit{au}}}}
35 \CustomizeMathJax{\newcommand{\pc}[1][ ]{\mathbf{\mathit{pc}}}, \mathbf{\mathit{pc}}}
36 \CustomizeMathJax{\newcommand{\ly}[1][ ]{\mathbf{\mathit{ly}}}, \mathbf{\mathit{ly}}}
37 \CustomizeMathJax{\newcommand{\cm}{\mathbf{\mathit{cm}}}}
38 \CustomizeMathJax{\newcommand{\nm}{\mathbf{\mathit{nm}}}}
39 \CustomizeMathJax{\newcommand{\ft}{\mathbf{\mathit{ft}}}}
40 \CustomizeMathJax{\newcommand{\inch}{\mathbf{\mathit{in}}}}
41 \CustomizeMathJax{\newcommand{\mi}{\mathbf{\mathit{mi}}}}
42 \CustomizeMathJax{\newcommand{\s}[1][ ]{\mathbf{\mathit{s}}}, \mathbf{\mathit{s}}}
43 \CustomizeMathJax{\newcommand{\Sec}[1][ ]{\mathbf{\mathit{s}}}, \mathbf{\mathit{s}}}
44 \CustomizeMathJax{\newcommand{\Min}{\mathbf{\mathit{min}}}}
45 \CustomizeMathJax{\newcommand{\h}{\mathbf{\mathit{h}}}}
46 \CustomizeMathJax{\newcommand{\y}[1][ ]{\mathbf{\mathit{y}}}, \mathbf{\mathit{y}}}
47 \CustomizeMathJax{\newcommand{\Day}{\mathbf{\mathit{d}}}}
48
49 \CustomizeMathJax{\newcommand{\gm}[1][ ]{\mathbf{\mathit{g}}}, \mathbf{\mathit{g}}}
50 \CustomizeMathJax{\newcommand{\kg}{\mathbf{\mathit{kg}}}}
51 \CustomizeMathJax{\newcommand{\lb}{\mathbf{\mathit{lb}}}}
52 \CustomizeMathJax{\newcommand{\amu}{\mathbf{\mathit{amu}}}}
53 \CustomizeMathJax{\newcommand{\N}[1][ ]{\mathbf{\mathit{N}}}, \mathbf{\mathit{N}}}
54 \CustomizeMathJax{\newcommand{\Newton}[1][ ]{\mathbf{\mathit{N}}}, \mathbf{\mathit{N}}}
55 \CustomizeMathJax{\newcommand{\dyne}[1][ ]{\mathbf{\mathit{dyn}}}, \mathbf{\mathit{dyn}}}
56 \CustomizeMathJax{\newcommand{\lbf}{\mathbf{\mathit{lbf}}}}
57 \CustomizeMathJax{\newcommand{\kmmps}{\mathbf{\mathit{km}}}, \mathbf{\mathit{km}}}
58 \CustomizeMathJax{\newcommand{\kmph}{\mathbf{\mathit{km}}}, \mathbf{\mathit{km}}}
59 \CustomizeMathJax{\newcommand{\mps}{\mathbf{\mathit{m}}}, \mathbf{\mathit{m}}}
60 \CustomizeMathJax{\newcommand{\miph}{\mathbf{\mathit{mi}}}, \mathbf{\mathit{mi}}}
61 \CustomizeMathJax{\newcommand{\kts}{\mathbf{\mathit{kts}}}}
```

```

62 \CustomizeMathJax{\newcommand{\mpss}[1][ ]{\\", \mathrm{s}\#1m\}, \mathrm{s}^{-2}}}
64 \CustomizeMathJax{\newcommand{\gacc}{\\", \mathrm{g}}}
65 \CustomizeMathJax{\newcommand{\ftpss}{\\", \mathrm{ft}\}, \mathrm{s}^{-2}}}
66 \CustomizeMathJax{\newcommand{\K}[1][ ]{\\", \mathrm{#1K}}}
67 \CustomizeMathJax{\newcommand{\Kelvin}[1][ ]{\\", \mathrm{#1K}}}
68 \CustomizeMathJax{\newcommand{\Celsius}{\\", ^\circ\mathrm{C}}}
69 \CustomizeMathJax{\newcommand{\Rankine}{\\", ^\circ\mathrm{R}}}
70 \CustomizeMathJax{\newcommand{\Fahrenheit}{\\", ^\circ\mathrm{F}}}
71
72 \CustomizeMathJax{\newcommand{\rpm}{\\", \mathrm{rev}\}, \Min^{-1}}}
73
74 \CustomizeMathJax{\newcommand{\Hz}{\\", \mathrm{#1Hz}}}
75 \CustomizeMathJax{\newcommand{\barP}{\\", \mathrm{#1bar}}}
76 \CustomizeMathJax{\newcommand{\atm}{\\", \mathrm{atm}}}
77 \CustomizeMathJax{\newcommand{\Pa}{\\", \mathrm{#1Pa}}}
78 \CustomizeMathJax{\newcommand{\mmHg}{\\", \mathrm{mmHg}}}
79 \CustomizeMathJax{\newcommand{\inHg}{\\", \mathrm{inHg}}}
80 \CustomizeMathJax{\newcommand{\lbsi}{\\", \mathrm{psi}}}
81 \CustomizeMathJax{\newcommand{\lbsf}{\\", \mathrm{psf}}}
82 \CustomizeMathJax{\newcommand{\Ba}{\\", \mathrm{#1Ba}}}
83 \CustomizeMathJax{\newcommand{\Torr}{\\", \mathrm{#1Torr}}}
84 \CustomizeMathJax{\newcommand{\mol}{\\", \mathrm{mol}}}
85 \end{warpMathJax}

```

File 386 **lwarf-picinpar.sty**

§ 495 Package **picinpar**

(Emulates or patches code by FRIEDHELM SOWA.)

picinpar (Pkg) **picinpar** is patched for use by **lwarf**.

for HTML output: 1 \LWR@ProvidesPackagePass{picinpar}% No date is assigned.

The window is floated by a BlockClass style.

```

2 \long\def\LWR@HTML@window[#1,#2,#3,#4] {%
3     \if #2r%
4         \begin{BlockClass}[float:right](note){marginblock}%
5     \else%
6         \begin{BlockClass}[float:left](note){marginblock}%
7     \fi%
8     #3\par%
9     #4%
10    \end{BlockClass}%
11 }
12
13 \def\endLWR@HTML@window{}%
14
15 \LWR@formattedenv{window}

```

The **framepic** and **wframepic** are placed inside a BlockClass of class **framebox**.

```

16 \def\LWR@HTML@framepic#1{%
17     \begin{BlockClass}{framebox}%
18     \expandafter\box\csname #1box\endcsname%

```

```

19      \end{BlockClass}
20 }
21 \LWR@formatted{framepic}

22 \def\LWR@HTML@wframepic#1{%
23   \begin{BlockClass}{framebox}
24     \expandafter\box\csname #1box\endcsname%
25   \end{BlockClass}
26 }
27 \LWR@formatted{wframepic}

```

The caption is placed inside a BlockClass of class figurecaption.

```

28 \long\def\LWR@HTML@@makewincaption#1#2{%
29 \begin{BlockClass}{figurecaption}
30 #1: #2
31 \end{BlockClass}
32 }
33 \LWR@formatted{@makewincaption}

```

With HTML output, figwindow and tabwindow must not pre-decrement their counters.

```

34 \long\def\LWR@HTML@figwindow[#1,#2,#3,#4] {%
35 %       \advance\c@figure -1
36       \window[#1,#2,{#3},{\def\@capttype{figure}%
37         \wincaption#4\par}] }
38
39 \def\endLWR@HTML@figwindow{\endwindow}
40
41 \LWR@formattedenv{figwindow}

```

For tabwindow, to change the catcode of &, \StartDefiningTabulars is used before absorbing the arguments, and \EndDefiningTabulars is used at the end of the environment.

```

42 \long\def\LWR@HTML@subtabwindow[#1,#2,#3,#4] {%
43 %       \advance\c@table -1
44       \window[#1,#2,{#3},{\def\@capttype{table}%
45         \wincaption#4\par}] }
46
47 \newcommand*\LWR@HTML@tabwindow{%
48   \StartDefiningTabulars%
49   \LWR@HTML@subtabwindow%
50 }
51
52 \def\endLWR@HTML@tabwindow{%
53   \endwindow%
54   \StopDefiningTabulars%
55 }
56
57 \LWR@formattedenv{tabwindow}

```

File 387 l warp-pifont.sty**§ 496 Package pifont***(Emulates or patches code by WALTER SCHMIDT.)***pifont (Pkg)** pifont is patched for use by l warp.

Hashed inline images are used, as there may not be Unicode support for all icons.

for HTML output: 1 \LWR@ProvidesPackagePass{pifont}[2005/04/12]

```
2 \renewcommand{\Pisymbol}[2]{%
3   \begin{lateximage}*[Pisymbol][pisymbol#1#2]%
4     {\Pifont{\#1}\char#2}%
5   \end{lateximage}%
6 }
7
8 \newcommand{\LWR@HTML@Pifill}[2]{%
9   \Pisymbol{\#1}{\#2} \Pisymbol{\#1}{\#2} \Pisymbol{\#1}{\#2}%
10 }
11 \LWR@formatted{Pifill}
12
13 \newcommand{\LWR@HTML@Piline}[2]{%
14   \par\noindent\hspace*{0.5in}%
15   \Pifill{\#1}{\#2} \Pifill{\#1}{\#2} \Pifill{\#1}{\#2}%
16 }
17 \LWR@formatted{Piline}
```

File 388 l warp-pinlabel.sty**§ 497 Package pinlabel***(Emulates or patches code by COLIN ROURKE.)***pinlabel (Pkg)** pinlabel is patched for use by l warp.**for HTML output:** 1 \LWR@ProvidesPackagePass{pinlabel}% no date given

```
2 \xpretocmd{\psfig}
3   {\begin{lateximage}[-pinlabel-\~\PackageDiagramAltText]}
4   {}
5   {\LWR@patcherror{pinlabel}{psfigA}}
6
7 \xapptocmd{\psfig}
8   {\end{lateximage}}
9   {}
10 {\LWR@patcherror{pinlabel}{psfigB}}
```

File 389 **l warp-placeins.sty**

§ 498 Package **placeins**

(Emulates or patches code by DONALD ARSENEAU.)

placeins (*Pkg*) placeins is ignored.

Discard all options for l warp-placeins:

for HTML output: 1 \LWR@ProvidesPackageDrop{placeins}[2005/04/18]
2 \newcommand*\{\FloatBarrier}{}

File 390 **l warp-plarydshln.sty**

§ 499 Package **plarydshln**

plarydshln (*Pkg*) plarydshln is emulated by l warp-arydshln.

for HTML output: 1 \LWR@ProvidesPackageDrop{plarydshln}[2018/10/20]
2 \LWR@origRequirePackage{l warp-arydshln}

File 391 **l warp-plexst.sty**

§ 500 Package **plex**

plex (*Pkg*) plex is preloaded by jtarticle and related classes.

for HTML output: 1 \LWR@loadbefore{plex}
2
3 \LWR@ProvidesPackagePass{plex}[2017/07/21]

4 \let\tate\relax
5
6 \DeclareExpandableDocumentCommand{\rensushi}{s o m}{#3}
7
8 % \layoutfloat{width,height}[pos]#4
9 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
10
11 % \DeclareLayoutCaption{type} <dir>(width)[pos1pos2]
12 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d> d() o}{}
13
14 \LetLtxMacro\pcaption\caption
15
16 % \layoutcaption<dir>(width)[pos]
17 \DeclareDocumentCommand{\layoutcaption}{d> d() o}{}
18
19 \let\captiondir\relax

Add the optional <t/y> direction:

```

20 \RenewDocumentEnvironment{LWR@HTML@minipage}{d<> 0{t} 0{} 0{t} m}
21   {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
22   {\endLWR@HTML@sub@minipage}
23
24 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> 0{t} 0{} 0{t} m +m}
25 {
26 \LWR@traceinfo{parbox of width #4}%
27 \begin{minipage}[#2][#3][#4]{#5}%
28 #6
29 \end{minipage}%
30 }
31
32 % \pbox <t/y> [width] [l/r] {contents}
33 \RenewDocumentCommand{\pbox}{d<> 0{0pt} 0{c} m}{%
34 \global\booltrue{LWR@minipagefullwidth}%
35 \parbox{#2}{#4}%
36 }
```

picture, as modified by pext, is encapsulated by the l warp core.

File 392 l warp-plexarydshln.sty

§ 501 Package **plexarydshln**

plexarydshln (*Pkg*) plexarydshln is emulated by l warp-arydshln.

for HTML output:

- 1 \LWR@ProvidesPackageDrop{plexarydshln}[2018/10/20]
- 2 \LWR@origRequirePackage{l warp-arydshln}

File 393 l warp-plextcolortbl.sty

§ 502 Package **plextcolortbl**

plextcolortbl (*Pkg*) plexcolortbl is emulated by l warp-colortbl.

for HTML output:

- 1 \LWR@ProvidesPackageDrop{plextcolortbl}[2018/09/19]
- 2 \LWR@origRequirePackage{l warp-colortbl}

File 394 l warp-plimsoll.sty

§ 503 Package **plimsoll**

(Emulates or patches code by PALLE JØRGENSEN.)

plimsoll (*Pkg*) plimsoll is used as-is for SVG math, and emulated for MATHJAX.

The circ option is honored. For MATHJAX, \plimsollsans is the same as \plimsollroman.

for HTML output: 1 \LWR@ProvidesPackagePass{plimsoll}[2020/10/09]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\plimsollroman}{\unicode{x029B5}}}
4
5 \CustomizeMathJax{\let\plimsoll\plimsollroman}
6 \CustomizeMathJax{\let\plimsollsans\plimsoll}
7
8 \ifdefstring{\stst}{^{\circ}}
9   {\CustomizeMathJax{\newcommand{\stst}{^{\circ}}}}
10  {\CustomizeMathJax{\newcommand{\stst}{^{\plimsoll}}}}
11 \end{warpMathJax}
```

File 395 **l warp-prelim2e.sty**

§ 504 Package **prelim2e**

(Emulates or patches code by MARTIN SCHRÖDER.)

prelim2e (Pkg) **prelim2e** is ignored.

for HTML output: Discard all options for **l warp-prelim2e**:

```
1 \LWR@ProvidesPackageDrop{prelim2e}[2009/05/29]
2 \newcommand{\PrelimText}{}
3 \newcommand{\PrelimTextStyle}{}
4 \newcommand{\PrelimWords}{}
```

File 396 **l warp-prettyref.sty**

§ 505 Package **prettyref**

(Emulates or patches code by KEVIN S. RULAND.)

prettyref (Pkg) **prettyref** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{prettyref}[1998/07/09]

```
2 \newreformat{fig}{Figure \ref{#1}}
3 \newreformat{tab}{Table \ref{#1}}
```

File 397 **l warp-preview.sty**

§ 506 Package **preview**

preview (Pkg) **preview** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{preview}[2017/04/24]

```

2 \newenvironment{preview}{}{}
3 \newenvironment{nopreview}{}{}
4 \NewDocumentCommand{\PreviewMacro}{s o o +m} {}
5 \NewDocumentCommand{\PreviewEnvironment}{s o o +m} {}
6 \newcommand{\PreviewSnarfEnvironment}[2][]{}
7 \NewDocumentCommand{\PreviewOpen}{s o} {}
8 \NewDocumentCommand{\PreviewClose}{s o} {}
9 \let\ifPreview\iffalse% \fi for syntax highlighting

```

File 398 **l warp-psfrag.sty**

§ 507 Package **psfrag**

(Emulates or patches code by MICHAEL C. GRANT, DAVID CARLISLE.)

psfrag (*Pkg*) psfrag is patched for use by l warp.

⚠ use psfrags The psfrags environment is modified to use lateximage to encapsulate the image. Always use a psfrags environment to contain any local \psfrag macros and the associated \includegraphics or \epsfig calls. Outside of a psfrags environment, psfrags adjustments will not be seen by l warp.

⚠ Tip: Use a mono-spaced font for the tags in the EPS file.

for HTML output: 1 \LWR@ProvidesPackagePass{psfrag}[1998/04/11]

A lateximage captures the modified image from the document.

```

2 \BeforeBeginEnvironment{psfrags}{%
3   \begin{lateximage}[-psfrags-\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{psfrags}{\end{lateximage}}

```

File 399 **l warp-psfragx.sty**

§ 508 Package **psfragx**

(Emulates or patches code by PASCAL KOCKAERT.)

psfragx (*Pkg*) psfragx is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{psfragx}[2012/05/02]

A lateximage captures the modified image from the document.

```

2 \VerifyCommand[l warp][psfragx]{\pfx@includegraphicx}{45FCF58D66C0BFFC685913A78CADF20D}
3
4 \def\pfx@includegraphicx#1#2{%
5   \begin{lateximage}[-psfragx-\PackageDiagramAltText]%
6   \mbox{\pfx@overpix{#1}{#2}\endpfx@overpix}%
7   \end{lateximage}%
8 }
9

```

```

10 \VerifyCommand[l warp][psfragx]{\@@@overpix}{DD69D71E9C551D4D568AE4269AAC1C0}
11
12 \def\@@@overpix[#1]<#2>[#3]#4{%
13   \begin{ lateximage }[-psfragx-\~\PackageDiagramAltText]%
14     \pfx@overpix{#1},ovpfgd={#2},ovpbgd={#3}\{#4\}%
15   }
16
17 \VerifyCommand[l warp][psfragx]{\endoverpix}{722C858D87F96798ABE0BAF89CB13373}
18
19 \def\endoverpix{%
20   \endpfx@overpix%
21   \end{ lateximage }%
22 }
```

File 400 **l warp-pst-eps.sty**

§ 509 Package **pst-eps**

(Emulates or patches code by HERBERT VOSS.)

pst-eps (*Pkg*) pst-eps is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{pst-eps}[2005/05/20]

```

2 \renewenvironment{TeXtoEPS}{}{}
3 \renewcommand{\PSTtoEPS}[3][]{}
```

File 401 **l warp-pstool.sty**

§ 510 Package **pstool**

(Emulates or patches code by ZEBB PRIME, WILL ROBERTSON.)

pstool (*Pkg*) pstool is patched for use by l warp.

\graphicspath is ignored, and the file directory must be stated.

⚠ **path and filename** The filename must not have a file extension.

Use

Enter ⇒ **l warpmk html**

followed by

Enter ⇒ **l warpmk limages**

.

for HTML output: 1 \LWR@ProvidesPackagePass{pstool}[2018/01/20]

Each image is placed inside a `lateximage` to capture the results of `psfrag`.

```

2 \renewcommand{\pstool@alwaysprocess}[3][]{}
```

```

3   \begin{ lateximage } [ -pstool -\~\PackageDiagramAltText ] %
4   \includegraphics { #2.pdf } %
5   \end{ lateximage } %
6 }
7 \LetLtxMacro{\pstool@neverprocess}{\pstool@alwaysprocess}
8 \LetLtxMacro{\pstool@mAYBEprocess}{\pstool@alwaysprocess}
9
10 \renewcommand{\pstool@@psfragfig}[4]{%
11   \begin{ lateximage } [ -pstool -\~\PackageDiagramAltText ] %
12   \includegraphics { #2.pdf } %
13   \end{ lateximage } %
14 }

```

File 402 **l warp-pstricks.sty**

§ 511 Package **pstricks**

(Emulates or patches code by TIMOTHY VAN ZANDT.)

pstricks (*Pkg*) pstricks is patched for use by l warp.

⚠ **use pspicture** All pstricks content should be contained inside a pspicture environment.

for HTML output: 1 \LWR@ProvidesPackagePass{pstricks}[2018/01/06]

```

2 \BeforeBeginEnvironment{pspicture}{%
3   \begin{ lateximage } [ pspicture ] %
4 }
5 \AfterEndEnvironment{pspicture}{\end{ lateximage } }
6
7 \BeforeBeginEnvironment{pspicture*}{%
8   \begin{ lateximage } [ pspicture ] %
9 }
10 \AfterEndEnvironment{pspicture*}{\end{ lateximage } }

```

File 403 **l warp-pxatbegshi.sty**

§ 512 Package **pxatbegshi**

pxatbegshi (*Pkg*) pxatbegshi is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pxatbegshi}[2017/11/04]

```
2 \LWR@origRequirePackage{l warp-atbegshi}
```

File 404 **l warp-pxeveryshi.sty**

§ 513 Package **pxeveryshi**

pxeveryshi (*Pkg*) pxeveryshi is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pxeveryshi}[2012/05/19]

```
2 \LWR@origRequirePackage{l warp-everyshi}
```

File 405 **l warp-pxfonts.sty**

§ 514 Package **pxfonts**

(Emulates or patches code by YOUNG RYU.)

pxfonts (*Pkg*) pxfonts is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{pxfonts}[2008/01/22]

For MATHJAX:

```
2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{pxfonts}
6
7 \LWR@mathjax@addgreek@l@up{}{up}
8 \end{warpMathJax}
```

File 406 **l warp-pxftnright.sty**

§ 515 Package **pxftnright**

pxftnright (*Pkg*) pxftnright is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pxftnright}[2017/02/28]

```
2 \LWR@origRequirePackage{l warp-ftnright}
```

File 407 **l warp-pxjahyper.sty**

§ 516 Package **pxjahyper**

pxjahyper (*Pkg*) pxjahyper is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pxjahyper}[2018/07/15]

File 408 **l warp-quotchap.sty**

§ 517 Package **quotchap**

(Emulates or patches code by KARSTEN TINNEFELD, JAN KLEVER.)

quotchap (*Pkg*) quotchap is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{quotchap}[2019/07/09]

```

2 \newcommand{\@quotchap}{}
3 \newlength{\LWR@quotchapwidth}
4
5 \let\@printcites\relax
6
7 \newcommand*{\@iprintcites}{%

```

Place the quotes inside a <div> of class quotchap, of the maximum selected width:

```

8 \begin{BlockClass}[max-width: \LWR@printlength{\LWR@quotchapwidth}]{quotchap}
9 \% \begin{minipage}{\LWR@quotchapwidth}
10 \@quotchap
11 \% \end{minipage}
12 \end{BlockClass}

```

Deactivate the quote printing:

```

13 \global\let\@printcites\relax
14 }
15
16 \NewEnviron{savequote}[1][\linewidth]{%

```

Remember the width, adjusted for HTML, and make the length assignment global, per:

<https://tex.stackexchange.com/questions/300823/why-is-setlength-ineffective-inside-a-tabular-environment>

```

17 \setlength{\LWR@quotchapwidth}{#1*2}%
18 \global\LWR@quotchapwidth=\LWR@quotchapwidth%

```

Remember the body, and activate the quote printing:

```

19 \global\let\@quotchap BODY
20 \global\let\@printcites \@iprintcites%
21 }

```

The quotation author is placed inside a <div> of class qauthor:

```

22 \newcommand{\qauthor}[1]{%
23   \LWR@stoppars%
24   \begin{BlockClass}{qauthor}%
25   {#1}%
26   \end{BlockClass}%
27   \LWR@startpars%
28 }

```

Fonts are ignored. Use css.

```

29 \newcommand{\qsetcnfont}[1]{}
30 \providecommand*{\quotefont}{}
31 \providecommand*{\qauthorfont}{}

```

File 409 l warp-quoting.sty**§ 518 Package **quoting****

(Emulates or patches code by THOMAS TITZ.)

quoting (*Pkg*) quoting is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{quoting}[2014/01/28]

```
2 \VerifyEnvironment[l warp][quoting]{quoting}
3     {AEC586766C9109C2889BDED4AE083C05}{8CE7FB71438699772DFD79A2BC803AB3}
4
5 \xpatchcmd{\quoting}{\quo@begintext}
6     {\begin{LWR@blocktextcurrentfont}\quo@begintext}
7     {}
8     {\LWR@patcherror{quoting}{quoting}}
9
10 \xpatchcmd{\endquoting}{\quo@endtext}
11     {\quo@endtext\end{LWR@blocktextcurrentfont}\LWR@stoppars}
12     {}
13     {\LWR@patcherror{quoting}{endquoting}}
```

File 410 l warp-ragged2e.sty**§ 519 Package **ragged2e****

(Emulates or patches code by MARTIN SCHRÖDER.)

ragged2e (*Pkg*) ragged2e is emulated.

Discard all options for l warp-ragged2e:

for HTML output: 1 \LWR@ProvidesPackageDrop{ragged2e}[2009/05/21]

```
2 \LetLtxMacro\Centering\centering
3 \LetLtxMacro\RaggedLeft\raggedleft
4 \LetLtxMacro\RaggedRight\raggedright
5 \newcommand*\justify{}{}
6 \newlength{\CenteringLeftskip}
7 \newlength{\RaggedLeftLeftskip}
8 \newlength{\RaggedRightLeftskip}
9 \newlength{\CenteringRightskip}
10 \newlength{\RaggedLeftRightskip}
11 \newlength{\RaggedRightRightskip}
12 \newlength{\CenteringParfillskip}
13 \newlength{\RaggedLeftParfillskip}
14 \newlength{\RaggedRightParfillskip}
15 \newlength{\JustifyingParfillskip}
16 \newlength{\CenteringParindent}
17 \newlength{\RaggedLeftParindent}
18 \newlength{\RaggedRightParindent}
19 \newlength{\JustifyingParindent}
```

```

20 \newenvironment*{Center}{\center}{\endcenter}
21 \newenvironment*{FlushLeft}{\flushleft}{\endflushleft}
22 \newenvironment*{FlushRight}{\flushright}{\endflushright}
23 \newenvironment*{justify}{\justifying}{\endjustifying}

```

File 411 **lwarf-realscripts.sty**

§ 520 Package **realscripts**

(Emulates or patches code by WILL ROBERTSON.)

realscripts (*Pkg*) realscripts is emulated. See lwarf.css for the of class supsubscript.

for HTML output: 1 \LWR@ProvidesPackagePass{realscripts}[2016/02/13]

```

2 \ExplSyntaxOn
3
4 \DeclareDocumentCommand \LWR@HTML@realsubscript {m} {
5     \LWR@HTML@textsubscript{#1}
6 }
7
8 \LWR@formatted{realsubscript}
9
10
11 \DeclareDocumentCommand \LWR@HTML@realsuperscript {m} {
12     \LWR@HTML@textsupsript{#1}
13 }
14
15 \LWR@formatted{realsuperscript}
16
17
18 \ExplSyntaxOff
19
20
21 \newcommand*{\LWR@realscriptsalign}{}%
22
23 \newcommand*{\LWR@setrealscriptsalign}[1]{%
24     \renewcommand*{\LWR@realscriptsalign}{}%
25     \ifthenelse{\equal{#1}{c}}{%
26         \renewcommand{\LWR@realscriptsalign}{%
27             \LWR@print@mbox{text-align:center} ; %
28         }%
29     }{%
30     \ifthenelse{\equal{#1}{r}}{%
31         \renewcommand{\LWR@realscriptsalign}{%
32             \LWR@print@mbox{text-align:right} ; %
33         }%
34     }{%
35 }
36
37 \DeclareDocumentCommand \LWR@HTML@textsubsuperscript {s 0{l} mm} {%
38     \LWR@setrealscriptsalign{#2}%
39     \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
40         \textsupsript{#4}\textsubscript{#3}%
41     }%
42 }
43 \LWR@formatted{textsubsuperscript}

```

```

44
45 \FilenameNullify{%
46   \RenewDocumentCommand{\textsuperscript}{s m}{}
47   \RenewDocumentCommand{\textsubscript}{s m}{}
48   \renewcommand{\fakesubscript}[1]{}
49   \renewcommand{\fakesuperscript}[1]{}
50   \renewcommand{\realsubscript}[1]{}
51   \renewcommand{\realsuperscript}[1]{}
52   \renewcommand{\textsubsuperscript}[2]{}
53   \renewcommand{\textsupersubscript}[2]{}
54 }

```

File 412 **l warp-refcheck.sty**

§ 521 Package **refcheck**

refcheck (*Pkg*) **refcheck** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{refcheck}[2013/02/14]

```

2 \def\showrefnames{}
3 \def\norefnames{}
4 \def\showcitenames{}
5 \def\nocitenames{}
6 \def\setonmsgs{}
7 \def\setoffmsgs{}
8 \def\checkunlstd{}
9 \def\ignoreunlstd{}
10 \newcommand*\refcheckxrdoc[2][]{}

```

File 413 **l warp-register.sty**

§ 522 Package **register**

(Emulates or patches code by MATTHEW LOVELL.)

register (*Pkg*) **register** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{register}[2019/01/01]

Not using **\VerifyCommand** here because these patches are not likely to be affected by changes in the original.

```

2 \xpatchcmd{\register}
3   {\centering}
4   {%
5     \begin{center}%
6       \begin{ lateximage }[-register-\~\PackageDiagramAltText]%
7     }%
8   {}%
9   {\LWR@patcherror{register}{register}}%
10
11 \xpatchcmd{\endregister}

```

```

12      {\leftskip}
13      {%
14          \end{lateximage}\end{center}%
15          \leftskip%
16      }%
17      {}%
18      {\LWR@patcherror{register}{endregister}}
19
20 \expandafter\xapptocmd\csname register*\endcsname
21      {%
22          \begin{center}%
23              \begin{lateximage}[-register-\PackageDiagramAltText]%
24          }%
25          {}%
26          {\LWR@patcherror{register}{register*}}%
27
28 \expandafter\xpatchcmd\csname endregister*\endcsname
29      {\leftskip}
30      {%
31          \end{lateximage}\end{center}%
32          \leftskip%
33      }%
34      {}%
35      {\LWR@patcherror{register}{endregister*}}%
36
37 \setlength{\regWidth}{5in}

```

File 414 **l warp-relsize.sty**

§ 523 Package **relsize**

(Emulates or patches code by DONALD ARSENEAU, BERNIE COSELL, MATT SWIFT.)

relsize (Pkg) *relsize* is patched for use by **l warp**, and emulated for **MATHJAX**.

For **HTML**, only the inline macros are supported: `\textlarger`, `\textsmaller`, and `\textscale`. Each becomes an inline span of a modified font-size.

`\relsize`, `\larger`, `\smaller`, and `\relscale` are ignored.

While creating **SVG** math for **HTML**, the original definitions are temporarily restored, and so should work as expected.

⚠ **not small** The **HTML** browser's setting for minimum font size may limit how small the output will be displayed.

for HTML output: 1 \LWR@ProvidesPackagePass{relsize}[2013/03/29]

```

2 \let\LWR@origrelsize\relsize
3 \LetLtxMacro\LWR@origlarger\larger
4 \LetLtxMacro\LWR@origsmaller\smaller
5 \let\LWR@relscale\relscale
6 \LetLtxMacro\LWR@origtextlarger\textlarger
7 \LetLtxMacro\LWR@origtextsmaller\textsmaller
8 \let\LWR@textscale\textscale
9
10 \appto\LWR@restoreorigformatting{%

```

```

11 \let\relsize\LWR@origrelsize%
12 \LetLtxMacro\larger\LWR@origlarger%
13 \LetLtxMacro\smaller\LWR@origsmaller%
14 \let\relscale\LWR@relscaled%
15 \LetLtxMacro\textlarger\LWR@origtextlarger%
16 \LetLtxMacro\textsmaller\LWR@origtextsmaller%
17 \let\textscale\LWR@textscale%
18 }
19
20 \newcounter{LWR@relsizetemp}
21
22 \renewcommand*\relsize[1]{}
23 \renewcommand*\larger[1][]{}
24 \renewcommand*\smaller[1][]{}
25 \renewcommand*\relscale[1]{}
26
27 \renewcommand*\textlarger[2][1]{%
28 \setcounter{LWR@relsizetemp}{100+(#1*20)}%
29 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textlarger}{#2}%
30 }
31
32 \renewcommand*\textsmaller[2][1]{%
33 \setcounter{LWR@relsizetemp}{100-(#1*20)}%
34 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textsmaller}{#2}%
35 }
36
37 \renewcommand*\textscale[2]{%
38 \setcounter{LWR@relsizetemp}{100*\real{#1}}%
39 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textscale}{#2}%
40 }

```

For MATHJAX:

```

41 \begin{warpMathJax}
42 \CustomizeMathJax{\newcommand{\mathlarger}[1]{#1}}
43 \CustomizeMathJax{\newcommand{\mathsmaller}[1]{#1}}
44 \end{warpMathJax}

```

File 415 l warp-repeatingindex.sty

§ 524 Package **repeatingindex**

repeatingindex (*Pkg*) repeatingindex is emulated for l warp.

⚠ **style file** l warp must be used with a special style file:

```
\usepackage[makeindex,makeindexStyle={l warp_repeatingindex}]{l warp}
```

where l warp_repeatingindex.ist may be copied from the following modified version of l warp.ist:

```

preamble
"\begin{theindex}
 \providecommand*\lettergroupDefault[1]{}
 \providecommand*\lettergroup[1]{%
 \par\textbf{\#1}\par

```

```

        \\nopagebreak
    }
"
headings_flag 1
heading_prefix "
  \\lettergroup{
heading_suffix "}"
delim_0 ", \\hyperindexref{"
delim_1 ", \\hyperindexref{"
delim_2 ", \\hyperindexref{"
delim_n "}, \\hyperindexref{"
delim_r "} -- \\hyperindexref{"
delim_t "}"

item_0 "\n \\item ["

```

(The modifications are the `delim_0` and `item_0` entries.)

for HTML output: 1 \LWR@ProvidesPackageDrop{repeatindex}[2001/10/13]

In the `lwarp` core, `\LWR@indexitem` is modified to accept the optional `\item` argument.

```

2 \RequirePackage{makeidx}
3 \def\entryprefix{\itshape}
4 \def\entrypostfix{\dots}

```

File 416 **lwarp-repltext.sty**

§ 525 Package **repltext**

`repltext (Pkg)` `repltext` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{repltext}[2020/09/25]

```

2 \newcommand{\repltext}[2]{#2}
3 \newcommand*{\prevrepl}{} 

```

For MATHJAX:

```

4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\repltext}[2]{#2}}
6 \end{warpMathJax}

```

File 417 **lwarp-resizegather.sty**

§ 526 Package **resizegather**

`resizegather (Pkg)` `resizegather` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{resizegather}[2016/05/16]

```
2 \newcommand*\resizegathersetup}[1]{}
```

File 418 **l warp-returntogrid.sty**

§ 527 Package **returntogrid**

returntogrid (*Pkg*) **returntogrid** is ignored.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{returntogrid}[2018/08/21]
2 \NewDocumentCommand\returntogrid{ O {} }{}
3 \NewDocumentCommand\returntogridsetup { m } {}
4 \NewDocumentCommand\showdebugpagegrid {} {}
```

File 419 **l warp-rlepsf.sty**

§ 528 Package **rlepsf**

(*Emulates or patches code by MICHAEL GREENE, COLIN ROURKE.*)

rlepsf (*Pkg*) **rlepsf** is patched for use by **l warp**.

⚠ Rename the style file! The file *rlepsf.tex* must be copied to *rlepsf.sty* for **l warp** to detect and patch it.

for HTML output:

```
1 \LWR@ProvidesPackagePass{rlepsf}% No date given.
2 \xpretocmd{\relabelbox}
3   {\begin{ lateximage}}
4   {}
5   {\LWR@patcherror{rlepsf}{relabelbox}}
6
7 \xapptocmd{\endrelabelbox}
8   {\end{ lateximage}}
9   {}
10 {\LWR@patcherror{rlepsf}{endrelabelbox}}
```

File 420 **l warp-rmathbr.sty**

§ 529 Package **rmathbr**

(*Emulates or patches code by DENIS RYABOV.*)

rmathbr (*Pkg*) **rmathbr** is used as-is for SVG math, and emulated for MATHJAX.

for HTML output:

```
1 \LWR@ProvidesPackagePass{rmathbr}[2020/12/11]
2 \begin{warpMathJax}
3 \CustomizeMathJax{\def\*{\sim}}
4 \CustomizeMathJax{\newcommand{\cdott}{\cdot}}
5 \CustomizeMathJax{\newcommand{\nobr}{\phantom{.}}}
6 \end{warpMathJax}
```

File 421 **l warp-rmpage.sty**

§ 530 Package **rmpage**

rmpage (*Pkg*) rmpage is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{rmpage}[1997/09/29]

File 422 **l warp-romanbar.sty**

§ 531 Package **romanbar**

(Emulates or patches code by H.-MARTIN MÜNCH.)

romanbar (*Pkg*) romanbar is patched for use by l warp.

An inline class with an overline and underline is used.

for HTML output: 1 \LWR@ProvidesPackagePass{romanbar}[2012/01/01]

```
2 \DeclareRobustCommand{\Roman@bar}{\% #1 is in Roman, i.e. MMXII  
3 \InlineClass[%  
4   text-decoration: overline underline ;  
5 ]{\romanbar}{#1}%  
6 }
```

File 423 **l warp-romanbarpagenumber.sty**

§ 532 Package **romanbarpagenumber**

romanbarpagenumber (*Pkg*) romanbarpagenumber is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{romanbarpagenumber}[2015/02/06]

File 424 **l warp-rotating.sty**

§ 533 Package **rotating**

(Emulates or patches code by ROBIN FAIRBAIRNS, SEBASTIAN RAHTZ, LEONOR BARROCA.)

rotating (*Pkg*) rotating is emulated.

All rotations are ignored in HTML output.

for HTML output: 1 \LWR@ProvidesPackagePass{rotating}[2016/08/11]
2 \RequirePackage{graphicx}

```

3 \LetLtxMacro{\LWR@HTML@sidewaystable}{\table}
4 \let\endLWR@HTML@sidewaystable\endtable
5 \LWR@formattedenv{sidewaystable}
6
7 \LetLtxMacro{\LWR@HTML@sidewaysfigure}{\figure}
8 \let\endLWR@HTML@sidewaysfigure\endfigure
9 \LWR@formattedenv{sidewaysfigure}
10
11 \newenvironment*{\LWR@HTML@sideways}{}{}
12 \LWR@formattedenv{sideways}
13
14 \newenvironment*{\LWR@HTML@turn}[1]{}{}
15 \LWR@formattedenv{turn}
16
17 \newenvironment*{\LWR@HTML@rotate}[1]{}{}
18 \LWR@formattedenv{rotate}
19
20 \NewDocumentCommand{\LWR@HTML@turnbox}{m +m}{#2}
21 \LWR@formatted{turnbox}
22
23 \let\LWR@HTML@rotcaption\caption
24 \LWR@formatted{rotcaption}
25
26 \let\LWR@HTML@makerotcaption\@makecaption
27 \LWR@formatted{@makerotcaption}

```

File 425 **lwarf-rotfloat.sty**

§ 534 Package **rotfloat**

(Emulates or patches code by AXEL SOMMERFELDT.)

rotfloat (Pkg) rotfloat is emulated.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{rotfloat}[2004/01/04]
2
3 \RequirePackage{float}
4 \RequirePackage{rotating}

```

\newfloat {\langle 1: type \rangle} {\langle 2: placement \rangle} {\langle 3: ext \rangle} [\langle 4: within \rangle]

Emulates the \newfloat command from the float package. Sideways floats are \let to the same as regular floats.

“placement” is ignored.

```

5 \RenewDocumentCommand{\newfloat}{m m m o}{%
6 \IfValueTF{#4}{%
7 {%
8   \DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}%
9 }%
10 {%
11   \DeclareFloatingEnvironment[fileext=#3]{#1}%
12 }%
13 \csletcs{sideways#1}{#1}%
14 \csletcs{endsideways#1}{end#1}%

```

Remember the float style:

```
15 \csedef{\LWR@floatstyle@#1}{\LWR@floatstyle}%
16 \csedef{\LWR@floatstyle@sideways#1}{\LWR@floatstyle}%
```

newfloat package automatically creates the \listof command for new floats, but float does not, so remove \listof here in case it is manually created later:

```
17 \cslet{\listof#1s}\relax%
18 \cslet{\listof#1es}\relax%
19 \cslet{\listofsideways#1s}\relax%
20 \cslet{\listofsideways#1es}\relax%
21 }
```

File 426 **l warp-rviewport.sty**

§ 535 Package **rviewport**

rviewport (*Pkg*) **rviewport** is honored inside a `lateximage`, and otherwise ignored for `HTML` output.

If **rviewport** is important for an image, enclose the image inside a `lateximage` environment.

for HTML output: 1 \LWR@ProvidesPackagePass{rviewport}[2011/08/27]

```
2 \define@key{igraph}{rviewport}{}
```

File 427 **l warp-savetrees.sty**

§ 536 Package **savetrees**

savetrees (*Pkg*) **savetrees** is ignored.

for HTML output: Discard all options for **l warp-savetrees**:

```
1 \LWR@ProvidesPackageDrop{savetrees}[2016/04/13]
```

File 428 **l warp-scalefnt.sty**

§ 537 Package **scalefnt**

(Emulates or patches code by D. CARLISLE.)

scalefnt (*Pkg*) **scalefnt** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{scalefnt}

```
2 \DeclareRobustCommand\scalefont[1]{}
```

File 429 **l warp-scalerel.sty**

§ 538 Package **scalerel**

(Emulates or patches code by STEVEN B. SEGLETES.)

scalerel (*Pkg*) **scalerel** is used as-is for SVG math, and is emulated and ignored for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{scalerel}[2016/12/29]

For MATHJAX:

```

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{scalerel}
4
5 \CustomizeMathJax{\newcommand{\scalerel}{\ifstar{\scalerelplain}{\scalerelplus}}}
6 \CustomizeMathJax{\newcommand{\scalerelplain}[3][]{{#2}}}
7 \CustomizeMathJax{\newcommand{\scalerelplus}[3][]{{#2#3}}}
8 \CustomizeMathJax{\newcommand{\stretchrel}{\ifstar{\stretchrelplain}{\stretchrelplus}}}
9 \CustomizeMathJax{\newcommand{\stretchrelplain}[3][]{{#2}}}
10 \CustomizeMathJax{\newcommand{\stretchrelplus}[3][]{{#2#3}}}
11 \CustomizeMathJax{\newcommand{\scaleto}[3][]{{#2}}}
12 \CustomizeMathJax{\newcommand{\stretchto}[3][]{{#2}}}
13 \CustomizeMathJax{\newcommand{\scaleleftright}[4][]{{#2#3#4}}}
14 \CustomizeMathJax{\newcommand{\stretchleftright}[4][]{{#2#3#4}}}
15 \CustomizeMathJax{\newcommand{\hstretch}[2]{{#2}}}
16 \CustomizeMathJax{\newcommand{\vstretch}[2]{{#2}}}
17 \CustomizeMathJax{\newcommand{\scaleobj}[2]{{#2}}}
18 \CustomizeMathJax{\newcommand{\ThisStyle}[1]{{#1}}}
19 \CustomizeMathJax{\newcommand{\SavedStyle}{}}
20 \CustomizeMathJax{\def\scriptstyleScaleFactor{.7}}
21 \CustomizeMathJax{\def\scriptscriptstyleScaleFactor{.5}}
22 \CustomizeMathJax{\newcommand{\discernmathstyle}{}}
23 \CustomizeMathJax{\newcommand{\ignoremathstyle}[1][T]{}}
24 \CustomizeMathJax{\newcommand{\Isnextbyte}[3][v]{}}
25 \end{warpMathJax}
```

File 430 **l warp-schemata.sty**

§ 539 Package **schemata**

(Emulates or patches code by CHARLES P. SCHAUM.)

schemata (*Pkg*) **schemata** is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{schemata}[2020/11/23]

```

2 \LetLtxMacro{\LWR@schemata}{\origschemata\schema}
3 \LetLtxMacro{\LWR@origSchema}{\origSchema\Schema}
4
5 \renewcommand{\schema}[3][open]{%
6   \begin{ lateximage }[-schemata-~\PackageDiagramAltText]%
7     \LWR@print@normalsize%
```

```

8      \LWR@schemata@origschema[#1]{#2}{#3}%
9      \end{lateximage}%
10 }
11
12 \renewcommand{\Schema}[5][open]{%
13     \begin{lateximage}[-schemata-\PackageDiagramAltText]%
14     \LWR@print@normalsize%
15     \LWR@schemata@origSchema[#1]{#2}{#3}{#4}{#5}%
16     \end{lateximage}%
17 }

```

File 431 **l warp-scrextend.sty**

§ 540 Package **scrextend**

scrextend (*Pkg*) **scrextend** is emulated.

This package may be loaded standalone, but is also loaded automatically if *koma-script* classes are in use. *\DeclareDocumentCommand* is used to overwrite the *koma-script* definitions.

for HTML output: 1 \LWR@ProvidesPackageDrop{scrextend}[2020/01/24]

```

2 \DeclareDocumentCommand{\setkomafont}{m m}{}
3 \DeclareDocumentCommand{\addkomafont}{m m}{}
4 \DeclareDocumentCommand{\usekomafont}{m}{}
5
6 \DeclareDocumentCommand{\usefontofkomafont}{m}{}
7 \DeclareDocumentCommand{\useencodingofkomafont}{m}{}
8 \DeclareDocumentCommand{\usesizeofkomafont}{m}{}
9 \DeclareDocumentCommand{\usefamilyofkomafont}{m}{}
10 \DeclareDocumentCommand{\useseriesofkomafont}{m}{}
11 \DeclareDocumentCommand{\useshapeofkomafont}{m}{}
12
13 \providetoggle{\coverpagetopmargin}{}
14 \providetoggle{\coverpagebottommargin}{}
15 \providetoggle{\coverpageleftmargin}{}
16 \providetoggle{\coverpagerightmargin}{}
17

```

Title page:

```

18 \AtBeginDocument{
19     \let\LWR@koma@orig@maketitle\maketitle
20     \DeclareDocumentCommand{\maketitle}{o}{\LWR@koma@orig@maketitle}
21 }
22
23 \providetoggle{\@maketitle}{}
24 \renewrobustcmd{\@maketitle}{%
25     \ifdefvoid{\@titlehead}{}
26         \begin{BlockClass}{titlehead}%
27             \@titlehead%
28         \end{BlockClass}%
29     }%
30     \ifdefvoid{\@subject}{}
31         \begin{BlockClass}{subject}%

```

```
32      \@subject%
33      \end{BlockClass}%
34  }%
35  \LWR@stoppars%
36  \LWR@htmltag{\LWR@tagtitle}%
37  \@title%
38  \LWR@htmltag{\LWR@tagtitleend}%
39  \ifdefvoid{\@subtitle}{}{%
40      \begin{BlockClass}{subtitle}%
41      \@subtitle%
42      \end{BlockClass}%
43  }%
44  \LWR@startpars%
45  \begin{BlockClass}{author}%

46  \renewcommand*{\cr}{\relax}%
47  \renewcommand*{\cocr}{\relax}%
48  \renewcommand*{\noalign}{\relax}%

49  \renewcommand{\and}{%
50      \end{BlockClass}%
51      \begin{BlockClass}{oneauthor}%
52  }%
53  \begin{BlockClass}{oneauthor}%
54  \@author%
55  \end{BlockClass}%
56  \end{BlockClass}%
57  \begin{BlockClass}{titledate}%
58  \@date%
59  \end{BlockClass}%
60  \ifdefvoid{\@published}{}{%
61      \begin{BlockClass}{published}%
62      \@published%
63      \end{BlockClass}%
64  }%
65 }
66
67 \AddSubtitlePublished
68
69 \DeclareDocumentCommand{\extratitle}{m}{}%
70 \DeclareDocumentCommand{\frontispiece}{m}{}%
71
72 \def\@titlehead{}%
73 \DeclareDocumentCommand{\titlehead}{m}{\gdef\@titlehead{\#1}}%
74
75 \def\@subject{}%
76 \DeclareDocumentCommand{\subject}{m}{\gdef\@subject{\#1}}%
77
78% \subtitle and \published are defined by \AddSubtitlePublished
79
80 \DeclareDocumentCommand{\publishers}{m}{\published{\#1}}%
81
82 \DeclareDocumentCommand{\uppertitleback}{m}{}%
83 \DeclareDocumentCommand{\lowertitleback}{m}{}%
84 \DeclareDocumentCommand{\dedication}{m}{}%
85
86 \DeclareDocumentCommand{\ifthispageodd}{m m}{\#1}%
87
88 \DeclareDocumentCommand{\cleardoublepageusingstyle}{m}{}%
89 \DeclareDocumentCommand{\cleardoubleemptypage}{}{}
```

```
90 \DeclareDocumentCommand{\cleardoubleplainpage}{}{%
91 \DeclareDocumentCommand{\cleardoublestandardpage}{}{%
92 \DeclareDocumentCommand{\cleardoubleoddpage}{}{%
93 \DeclareDocumentCommand{\cleardoubleoddpageusingstyle}{m}{%
94 \DeclareDocumentCommand{\cleardoubleoddemptypage}{}{%
95 \DeclareDocumentCommand{\cleardoubleoddplainpage}{}{%
96 \DeclareDocumentCommand{\cleardoubleoddstandardpage}{}{%
97 \DeclareDocumentCommand{\cleardoubleevenpage}{}{%
98 \DeclareDocumentCommand{\cleardoubleevenpageusingstyle}{m}{%
99 \DeclareDocumentCommand{\cleardoubleevenemptytypepage}{}{%
100 \DeclareDocumentCommand{\cleardoubleevenplainpage}{}{%
101 \DeclareDocumentCommand{\cleardoubleevenstandardpage}{}{%
102
103 \DeclareDocumentCommand{\multiplefootnoteseparator}{}{%
104   \begingroup\let\thefootnotemark\multfootsep\@makefnmark\endgroup
105 }
106
107 \DeclareDocumentCommand{\multfootsep}{}{,}
108
109 \DeclareDocumentCommand{\footref}{m}{%
110   \begingroup
111     \unrestored@protected@xdef\@thefnmark{\ref{\#1}}%
112   \endgroup
113   \@footnotemark
114 }
115
116 \DeclareDocumentCommand{\deffootnote}{o m m}{%
117 \DeclareDocumentCommand{\deffootnotemark}{m}{%
118 \DeclareDocumentCommand{\setfootnoterule}{o m}{%
119 \DeclareDocumentCommand{\raggedfootnote}{}{%
120
121 \begin{LWR@BlockClassWP}{\LWR@print@mbox{text-align:right}}{}{dictum}
122   #
123   \IfValueT{\#1}
124   {
125     \LWR@stoppars%
126     \ifbool{FormatWP}
127       {\begin{BlockClass}[\LWR@print@mbox{border-top: 1px solid gray}{dictumauthor}]
128         \begin{BlockClass}{dictumauthor}
129           \dictumauthorformat{\#1}
130         \end{BlockClass}
131       }
132     \end{LWR@BlockClassWP}
133   }
134
135 \DeclareDocumentCommand{\dictumwidth}{}{%
136 \DeclareDocumentCommand{\dictumauthorformat}{m}{(\#1)}
137 \DeclareDocumentCommand{\dictumrule}{}{%
138 \DeclareDocumentCommand{\raggeddictum}{}{%
139 \DeclareDocumentCommand{\raggeddictumtext}{}{%
140 \DeclareDocumentCommand{\raggeddictumauthor}{}{%
141
142 \DeclareDocumentEnvironment{labeling}{o m}
143 {%
144 \def\sc@septext{\#1}%
145 \list{}{}%
146 \let\makelabel\labelinglabel%
147 }
148 {
```

```

149 \endlist
150 }
151
152 \DeclareDocumentCommand{\labelinglabel}{m}{%
153 #1 \qquad \sc@septext%
154 }
155
156 \let\addmargin\relax
157 \let\endaddmargin\relax
158 \cslet{addmargin*}{\relax}
159 \cslet{endaddmargin*}{\relax}

160 \NewDocumentEnvironment{addmargin}{s O{} m}
161 {
162 \LWR@stoppars%
163 \setlength{\LWR@templengthtwo}{#3}
164 \ifblank{#2}
165 {
166   \begin{BlockClass}[
167     \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
168     \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
169   ]{addmargin}
170 }
171 {
172   \setlength{\LWR@templengthone}{#2}
173   \begin{BlockClass}[
174     \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ;
175     \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
176   ]{addmargin}
177 }
178 }
179 {\end{BlockClass}\LWR@startpars}

```

Ref to create a starred environment:

<https://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment>

```

180
181 \ExplSyntaxOn
182 \cs_new:cpn {addmargin*} {\addmargin*}
183 \cs_new_eq:cN {endaddmargin*} \endaddmargin
184 \ExplSyntaxOff
185
186 \DeclareDocumentCommand{\marginline}{m}{\marginpar[#1]}

```

File 432 l warp-scrhack.sty

§ 541 Package **scrhack**

scrhack (*Pkg*) scrhack is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{scrhack}[2018/03/30]

File 433 **l warp-scrlayer.sty**

§ 542 Package **scrlayer**

(Emulates or patches code by MARKUS KOHM.)

scrlayer (*Pkg*) scrlayer is emulated.

⚠ Not fully tested! Please send bug reports!

for HTML output: 1 \LWR@ProvidesPackageDrop{scrlayer}[2018/03/30]

```
2 \newcommand*{\DeclareSectionNumberDepth}[2]{}
3 \newcommand*{\DeclareLayer}[2][]{}
4 \newcommand*{\DeclareNewLayer}[2][]{}
5 \newcommand*{\ProvideLayer}[2][]{}
6 \newcommand*{\RedeclareLayer}[2][]{}
7 \newcommand*{\ModifyLayer}[2][]{}
8 \newcommand*{\layerhalign}{}%
9 \newcommand*{\layervalign}{}%
10 \newcommand*{\layerxoffset}{}%
11 \newcommand*{\layeryoffset}{}%
12 \newcommand*{\layerwidth}{}%
13 \newcommand*{\layerheight}{}%
14 \providecommand*{\LenToUnit}[1]{\strip@pt\dimexpr#1*\p@/\unitlength}
15 \newcommand*{\putUL}[1]{}%
16 \newcommand*{\putUR}[1]{}%
17 \newcommand*{\putLL}[1]{}%
18 \newcommand*{\putLR}[1]{}%
19 \newcommand*{\putC}[1]{}%
20 \newcommand*{\GetLayerContents}[1]{}%
21 \newcommand{\IfLayerExists}[3]{#3}%
22 \newcommand*{\DestroyLayer}[1]{}%
23 \newcommand*{\layercontentsmeasure}{}%
24 \newcommand*{\currentpagestyle}{}%
25 \newcommand*{\BeforeSelectAnyPageStyle}[1]{}%
26 \newcommand*{\AfterSelectAnyPageStyle}[1]{}%
27 \newcommand*{\DeclarePageStyleAlias}[2]{}%
28 \newcommand*{\DeclareNewPageStyleAlias}[2]{}%
29 \newcommand*{\ProvidePageStyleAlias}[2]{}%
30 \newcommand*{\RedeclarePageStyleAlias}[2]{}%
31 \newcommand*{\DestroyPageStyleAlias}[1]{}%
32 \newcommand*{\GetRealPageStyle}[1]{}%
33 \newcommand*{\DeclarePageStyleByLayers}[3][]{}
34 \newcommand*{\DeclareNewPageStyleByLayers}[3][]{}
35 \newcommand*{\ProvidePageStyleByLayers}[3][]{}
36 \newcommand*{\RedeclarePageStyleByLayers}[3][]{}
37 \NewDocumentCommand{\ForEachLayerOfPageStyle}{s m m}{}%
38 \newcommand*{\AddLayersToPageStyle}[2]{}%
39 \newcommand*{\AddLayersAtBeginOfPageStyle}[2]{}%
40 \newcommand*{\AddLayersAtEndOfPageStyle}[2]{}%
41 \newcommand*{\RemoveLayersFromPageStyle}[2]{}%
42 \newcommand*{\AddLayersToPageStyleBeforeLayer}[3]{}%
43 \newcommand*{\AddLayersToPageStyleAfterLayer}[3]{}%
44 \newcommand*{\UnifyLayersAtPageStyle}[1]{}%
45 \newcommand*{\ModifyLayerPageStyleOptions}[2]{}%
```

```

46 \newcommand*\AddToLayerPageStyleOptions}[2]{}
47 \newcommand{\IfLayerPageStyleExists}[3]{#3}
48 \newcommand{\IfRealLayerPageStyleExists}[3]{#3}
49 \newcommand{\IfLayerAtPageStyle}[4]{#4}
50 \newcommand{\IfSomeLayerAtPageStyle}[4]{#4}
51 \newcommand{\IfLayersAtPageStyle}[4]{#4}
52 \newcommand*\DestroyRealLayerPageStyle}[1]{}
53 \@ifundefined{fooheight}{\newlength\fooheight}{}
54 \DeclareDocumentCommand{\automark}{s o m}{}
55 \DeclareDocumentCommand{\manualmark}{}{m}
56 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}

57 \newcommand{\partmarkformat}{}
58 \if@chapter
59 \newcommand{\chaptermarkformat}{}
60 \fi
61 \newcommand{\sectionmarkformat}{}
62 \DeclareDocumentCommand{\GenericMarkFormat}{m}{}

63 \newcommand*\@mkleft}[1]{}
64 \newcommand*\@mkright}[1]{}
65 \newcommand*\@mkdouble}[1]{}
66 \newcommand*\@mkboth}[2]{}
67 \newcommand*\scrlayerInitInterface}[1][]{}
68 \newcommand*\scrlayerAddToInterface}[3][]{}
69 \newcommand*\scrlayerAddCsToInterface}[3][]{}
70 \newcommand*\scrlayerOnAutoRemoveInterface}[2][]{}

```

File 434 **l warp-scrlayer-notecolumn.sty**

§ 543 Package **scrlayer-notecolumn**

(Emulates or patches code by MARKUS KOHM.)

scrlayer-notecolumn (*Pkg*) scrlayer-notecolumn is emulated.

⚠ Not fully tested! Please send bug reports!

for HTML output:

```

1 \LWR@ProvidesPackageDrop{scrlayer-notecolumn}[2018/02/02]

2 \newcommand*\DeclareNoteColumn}[2][]{}
3 \newcommand*\DeclareNewNoteColumn}[2][]{}
4 \newcommand*\ProvideNoteColumn}[2][]{}
5 \newcommand*\RedeclareNoteColumn}[2][]{}
6 \NewDocumentCommand{\makernote}{s o m}{\marginpar{#3}}
7 \newcommand*\syncwithnotecolumn}[1][]{}
8 \newcommand*\syncwithnotecolumns}[1][]{}
9 \newcommand*\clearnotecolumn}[1][]{}
10 \newcommand*\clearnotecolumns}[1][]{}

```

File 435 **l warp-scrlayer-scrpage.sty**

§ 544 Package **scrlayer-scrpage**

(Emulates or patches code by MARKUS KOHM.)

scrlayer-scrpage (*Pkg*) scrlayer-scrpage is ignored.

⚠ Not fully tested! Please send bug reports!

for HTML output:

```
1 \LWR@ProvidesPackageDrop{scrlayer-scrpage}[2018/03/30]

2 \@ifundefined{fooheight}{\newlength\fooheight}{}
3 \NewDocumentCommand{\lehead}{s o m}{}
4 \NewDocumentCommand{\cehead}{s o m}{}
5 \NewDocumentCommand{\rehead}{s o m}{}
6 \NewDocumentCommand{\lohead}{s o m}{}
7 \NewDocumentCommand{\cohead}{s o m}{}
8 \NewDocumentCommand{\rohead}{s o m}{}
9 \NewDocumentCommand{\lefoot}{s o m}{}
10 \NewDocumentCommand{\ceffoot}{s o m}{}
11 \NewDocumentCommand{\refoot}{s o m}{}
12 \NewDocumentCommand{\lofoot}{s o m}{}
13 \NewDocumentCommand{\cofoot}{s o m}{}
14 \NewDocumentCommand{\rofoot}{s o m}{}
15 \NewDocumentCommand{\ohead}{s o m}{}
16 \NewDocumentCommand{\chead}{s o m}{}
17 \NewDocumentCommand{\ihead}{s o m}{}
18 \NewDocumentCommand{\ofoot}{s o m}{}
19 \NewDocumentCommand{\cfoot}{s o m}{}
20 \NewDocumentCommand{\ifoot}{s o m}{}

21 \NewDocumentCommand{\automark}{s o m}{}
22 \newcommand*\manualmark{}{}

23 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}

24 \let\headmark\leftmark
25 \providecommand{\pnumfont}{\normalfont}%
26 \ DeclareRobustCommand\pagemark{{\pnumfont{\thepage}}}%

27 \newcommand*\defpairofpagestyles[3][]{}
28 \newcommand*\newpairofpagestyles[3][]{}
29 \newcommand*\renewpairofpagestyles[3][]{}
30 \newcommand*\providepairofpagestyles[3][]{}

31 \newcommand*\clearmainofpairofpagestyles(){}
32 \newcommand*\clearplainofpairofpagestyles(){}
33 \newcommand*\clearpairofpagestyles(){}
34 \newcommand*\clearscrheadings(){}
35 \newcommand*\clearscrheadfoot(){}
36 \newcommand*\clearscrplain(){}

37 \NewDocumentCommand{\deftriplepagestyle}{m o o m m m m m m}{}
38 \NewDocumentCommand{\newtriplepagestyle}{m o o m m m m m}{}
39 \NewDocumentCommand{\renewtriplepagestyle}{m o o m m m m m}{}
40 \NewDocumentCommand{\providetriplepagestyle}{m o o m m m m m}{}
41 \newcommand*\defpagestyle[3]({})
42 \newcommand*\newpagestyle[3]({})
43 \newcommand*\providepagestyle[3]({})
44 \newcommand*\renewpagestyle[3]({})
```

File 436 **l warp-scrpage2.sty**

§ 545 Package **scrpage2**

(Emulates or patches code by MARKUS KOHM.)

scrpage2 (*Pkg*) scrpage2 is ignored.

⚠ Not fully tested! Please send bug reports!

for HTML output: 1 \LWR@ProvidesPackageDrop{scrpage2}[2018/03/30]

```
2 \@ifundefined{fooheight}{\newlength\fooheight}{}  
3 \NewDocumentCommand{\lehead}{o m}{}  
4 \NewDocumentCommand{\cehead}{o m}{}  
5 \NewDocumentCommand{\rehead}{o m}{}  
6 \NewDocumentCommand{\lohead}{o m}{}  
7 \NewDocumentCommand{\cohead}{o m}{}  
8 \NewDocumentCommand{\rohead}{o m}{}  
9 \NewDocumentCommand{\lefoot}{o m}{}  
10 \NewDocumentCommand{\cefoot}{o m}{}  
11 \NewDocumentCommand{\refoot}{o m}{}  
12 \NewDocumentCommand{\lofoot}{o m}{}  
13 \NewDocumentCommand{\cofoot}{o m}{}  
14 \NewDocumentCommand{\rofoot}{o m}{}  
15 \NewDocumentCommand{\ohead}{o m}{}  
16 \NewDocumentCommand{\chead}{o m}{}  
17 \NewDocumentCommand{\ihead}{o m}{}  
18 \NewDocumentCommand{\ofoot}{o m}{}  
19 \NewDocumentCommand{\cfoot}{o m}{}  
20 \NewDocumentCommand{\ifoot}{o m}{}  
21 \DeclareDocumentCommand{\automark}{o m}{}  
22 \DeclareDocumentCommand{\manualmark}{}{}  
23 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}  
24 \NewDocumentCommand{\deftripstyle}{m o o m m m m m}{}  
25 \NewDocumentCommand{\defpagestyle}{s m m m}{}  
26 \NewDocumentCommand{\newpagestyle}{s m m m}{}  
27 \NewDocumentCommand{\renewpagestyle}{s m m m}{}  
28 \NewDocumentCommand{\providepagestyle}{s m m m}{}  
29 \newcommand{\partmarkformat}{}  
30 \if@chapter  
31 \newcommand{\chaptermarkformat}{}  
32 \fi  
33 \newcommand{\sectionmarkformat}{}  
34 \newcommand{\subsectionmarkformat}{}  
35 \newcommand{\subsubsectionmarkformat}{}  
36 \newcommand{\paragraphmarkformat}{}  
37 \newcommand{\ subparagraphmarkformat}{}  
38  
39 \newcommand*{\clearscrheadings}{}  
40 \newcommand*{\clearscrheadfoot}{}  
41 \newcommand*{\clearscrplain}{}  
42
```

File 437 **l warp-section.sty**

§ 546 Package **section**

section (*Pkg*) **section** is ignored.

(*Emulates or patches code by OLIVER PRETZEL.*)

for HTML output: 1 \LWR@ProvidesPackageDrop{section}

```
2 \ifx\chapter\undefined
3 \def\chsize{\Large}\def\hdsizes{\huge}\else
4 \def\chsize{\huge}\def\hdsizes{\Huge}
5 \fi
6 \let\ttsize\LARGE
7 \let\ausize\large
8 \let\dasize\large
9 \let\secsize\Large
10 \let\subsize\large
11 \let\hdpos\raggedright
12 \newcounter{hddepth}
13 \let\fbind\relax
14 \def\ttfnt{}
15 \def\hdfnt{}
16 \def\fefnt{}
17 \def\thfnt{}
18 \def\pgfnt{}
19 \def\hmkfnt{}
20 \let\mkcse\uppercase
21 \def\hddot{}
22 \def\cpdot{:}
23 \def\nmdot{}
24 \ifx\secindent\undefined
25 \newdimen\secindent
26 \newskip\secpreskp
27 \newskip\secpstskp
28 \newdimen\subindent
29 \newskip\subpreskp
30 \newskip\subpstskp
31 \newskip\parpstskp
32 \newcount\c@hddepth
33 \fi
```

File 438 **l warp-sectionbreak.sty**

§ 547 Package **sectionbreak**

(*Emulates or patches code by MICHAL HOFTICH.*)

sectionbreak (*Pkg*) **sectionbreak** is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{sectionbreak}[2018-01-03]

```

2 \renewcommand\asterism{\HTMLunicode{2042}}
3
4 \renewcommand\pre@sectionbreak{}
5 \renewcommand\post@sectionbreak{}
6
7 \renewcommand\print@sectionbreak[1]{%
8 \begin{center}%
9 #1
10 \end{center}%
11 }
12

```

File 439 **l warp-sectsty.sty**

§ 548 Package **sectsty**

(Emulates or patches code by ROWLAND McDONNELL.)

sectsty (*Pkg*) sectsty is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{sectsty}[2002/02/25]

```

2 \newcommand*\partfont [1] {}
3 \newcommand*\partnumberfont [1] {}
4 \newcommand*\parttitlefont [1] {}
5 \newcommand*\chapterfont [1] {}
6 \newcommand*\chapternumberfont [1] {}
7 \newcommand*\chaptertitlefont [1] {}
8 \newcommand*\sectionfont [1] {}
9 \newcommand*\subsectionfont [1] {}
10 \newcommand*\subsubsectionfont [1] {}
11 \newcommand*\paragraphfont [1] {}
12 \newcommand*\subparagraphfont [1] {}
13 \newcommand*\minisecfont [1] {}
14 \newcommand*\allsectionsfont[1] {}
15 \newcommand{\nohang}{}

```

\sectionrule is only to be used in *font commands, thus it is ignored.

```

16 \newcommand*\sectionrule[5] {}
17
18 \def\ulemheading#1#2{}

```

File 440 **l warp-selectp.sty**

§ 549 Package **selectp**

selectp (*Pkg*) selectp is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{selectp}% no date given

```

2 \newcommand*\outputonly[1] {}

```

File 441 **l warp-semantic-markup.sty**

§ 550 Package **semantic-markup**

(Emulates or patches code by ANDREW A. CASHNER.)

semantic-markup (*Pkg*) semantic-markup is patched for use by l warp.

 If using the endnotes option, add \theendnotes where desired.

for HTML output: 1 \LWR@ProvidesPackagePass{semantic-markup}[2018/05/21]

The endnotes must be printed by the user before the end of the document, since the end is after the HTML footer, etc.

```
2 \ifendnotes
3 \RenewDocumentCommand{\SetupEndnotes}{}{%
4   \let\footnote=\endnote
5 %   \AtEndDocument{\DoBeforeEndnotes{\EndnoteFont\theendnotes}}%
6 }
7 \fi
```

HTML unicode characters from musicography are used.

```
8 \RequirePackage{musicography}
9
10 \let\fl\musFlat
11 \let\sh\musSharp
12 \let\na\musNatural
```

The \musfig is placed inside a hashed image, with a simple alt tag.

```
13 \RequirePackage{amsmath}
14
15 \RenewDocumentCommand{\musfig}{ m m }{%
16   \LWR@subsingle dollar*%
17   {#1/#2}% alt tag
18   {musfig}% addl' hashing
19   {%
20     \LWR@origensuredmath{%
21       \genfrac{}{}{0pt}{1}{\text{#1}}{\text{#2}}%
22     }%
23   }%
24 }
```

The \meter is taken from musicography, and becomes a hashed image with a simple alt tag.

```
25 \RenewDocumentCommand{\meter}{ m m }{%
26   \musMeter{#1}{#2}%
27 }
```

File 442 **l warp-seqsplit.sty**

§ 551 Package **seqsplit**

(Emulates or patches code by BORIS VEYTSMAN.)

seqsplit (*Pkg*) seqsplit is patched for use by l warp.

For HTML output, the results are similar to print mode, and respond to window size.

⚠ **SVG math results** For SVG math, the output differs from print mode in that the contents are formatted in a minipage, which is then inline with the surrounding math.

For MATHJAX, the contents are used as-is.

for HTML output: 1 \LWR@ProvidesPackagePass{seqsplit}[2006/08/07]

Special handling because l warp uses a box for SVG math, which does not normally allow line breaks, so a print-mode minipage must be used to allow line breaks. The minipage will not be wrapped inline with any surrounding math.

```
2 \begin{warpHTML}
3 \LetLtxMacro{\LWR@orig}{\seqsplit}
4
5 \renewcommand*{\seqsplit}[1]{%
6   \ifmmode%
7     \begin{LWR@print@minipage}{6in}%
8       \LWR@orig{\seqsplit[#1]}%
9     \end{LWR@print@minipage}%
10   \else%
11     \InlineClass[word-wrap:break-word]{\seqsplit}{\LWR@orig{\seqsplit[#1]}}%
12   \fi
13 }
```

Between characters, an empty HTML comment is placed to allow a line wrap in the HTML source, without adding spaces in the output.

```
14 \AtBeginDocument{
15   \newcommand*{\LWR@HTML@seqinsert}{%
16     \LWR@htmlcomment{ }%
17   }
18   \LWR@formatted{\seqinsert}
19 }
20 \end{warpHTML}
21
22 \begin{warpMathJax}
23 \CustomizeMathJax{\newcommand{\seqsplit}[1]{#1}}
24 \end{warpMathJax}
```

File 443 **l warp-setspace.sty**

§ 552 Package **setspace**

(Emulates or patches code by ROBIN FAIRBAIRNS.)

setspace (*Pkg*) **setspace** is emulated.

Discard all options for **l warp-setspace**:

for HTML output:

```
1 \LWR@ProvidesPackageDrop{setspace}[2011/12/19]
2
3 \newcommand*{\setstretch}[1]{}
4 \newcommand*{\SetSinglespace}[1]{}
5 \newcommand*{\singespacing}{}
6 \newcommand*{\onehalfspacing}{}
7 \newcommand*{\doublespacing}{}
8
9 \newenvironment*{singlespace}
10 {
11 \LWR@forcenewpage
12 \BlockClass{singlespace}
13 }
14 {\endBlockClass}
15
16 \newenvironment*{singlespace*}
17 {
18 \LWR@forcenewpage
19 \BlockClass{singlespace}
20 }
21 {\endBlockClass}
22
23 \newenvironment*{spacing}[1]{
24
25 }{
26
27 }
28
29 \newenvironment*{onehalfspace}
30 {
31 \LWR@forcenewpage
32 \BlockClass{onehalfspace}
33 }
34 {\endBlockClass}
35
36 \newenvironment*{doublespace}
37 {
38 \LWR@forcenewpage
39 \BlockClass{doublespace}
40 }
41 {\endBlockClass}
```

File 444 l warp-shadethm.sty**§ 553 Package shadethm**

(Emulates or patches code by JIM HEFFERON.)

shadethm (*Pkg*) shadethm is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{shadethm}[1999/11/23]

```
2 \newenvironment{\LWR@HTML@shadebox}{%
3 {%
4   \convertcolorspec{named}{shadethmcolor}{HTML}\LWR@tempcolor%
5   \convertcolorspec{named}{shaderulecolor}{HTML}\LWR@tempcolortwo%
6   \begin{BlockClass}[
7     background: \LWR@origpound\LWR@tempcolor ;
8     border: 1px solid \LWR@origpound\LWR@tempcolortwo ;
9   ]\{shadebox\}
10 }%
11 {\end{BlockClass}}
12 \LWR@formattedenv{shadebox}
```

File 445 l warp-shadow.sty**§ 554 Package shadow**

(Emulates or patches code by MAURO ORLANDINI.)

shadow (*Pkg*) shadow is emulated.

for HTML output: Discard all options for l warp-shadow:

```
1 \LWR@ProvidesPackageDrop{shadow}[2003/02/19]
2 \newdimen\sboxsep
3 \newdimen\sboxrule
4 \newdimen\sdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8 }
```

File 446 l warp-shapepar.sty**§ 555 Package shapepar**

(Emulates or patches code by DONALD ARSENEAU.)

shapepar (*Pkg*) shapepar is patched for use by l warp. Shapes appear in print mode, as well as inside a *lateximage*, but are ignored for HTML.

for HTML output: 1 \LWR@ProvidesPackagePass{shapepar}[2013/03/26]

```
2 \newcommand*\LWR@HTML@shapepar[2][]{}
3 \LWR@formatted{shapepar}
4
5 \NewDocumentCommand{\LWR@HTML@cutout}{m d(){}}
6 \LWR@formatted{cutout}
```

File 447 **l warp-showidx.sty**

§ 556 Package **showidx**

showidx (*Pkg*) showidx is ignored.

for HTML output: Discard all options for l warp-showidx:

1 \LWR@ProvidesPackageDrop{showidx}[2014/09/29]

\@wrindex is redefined \AtBeginDocument by the l warp core.

File 448 **l warp-showkeys.sty**

§ 557 Package **showkeys**

(*Emulates or patches code by DAVID CARLISLE, MORTEN HØGHOLM.*)

showkeys (*Pkg*) showkeys is ignored.

for HTML output: Discard all options for l warp-showkeys:

1 \LWR@ProvidesPackageDrop{showkeys}[2014/10/28]

2 \NewDocumentCommand{\showkeys}{s}{}

File 449 **l warp-showlabels.sty**

§ 558 Package **showlabels**

showlabels (*Pkg*) showlabels is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{showlabels}[2021/10/27]

```
2 \providecommand{\showlabelfont}{}{}
3 \providecommand{\showlabelsetlabel}[1]{}{}
4 \newcommand*\showlabels[2][]{}
5 \newcommand*\showlabelrefline{}{}
6 \newcommand*\showlabelsinline{}{}
```

File 450 **l warp-showtags.sty**

§ 559 Package **showtags**

showtags (*Pkg*) showtags is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{showtags} no version is given
2 \newcommand{\thecitetag}[1]{}

File 451 **l warp-shuffle.sty**

§ 560 Package **shuffle**

(Emulates or patches code by JULIAN GILBEY AND ANTOINE LEJAY.)

shuffle (*Pkg*) shuffle is emulated for SVG math, and also emulated for MATHJAX.

The font used for shuffle may not render correctly when converted to SVG math, so a picture environment drawing is used instead.

For MATHJAX, the Unicode character is used, and for \cshuffle a \bar is added.

for HTML output: 1 \LWR@ProvidesPackageDrop{shuffle}[2008/10/27]
2 \LWR@origRequirePackage{l warp-common-mathjax-overlaysymbols}

3 \newcommand*{\LWR@shuffle@start}{%
4 \hspace*{.2em}
5 \begin{picture}(.75,0.65)
6 \setlength{\unitlength}{1em}
7 \put(0,0){\line(1,0){.75}}
8 \put(0,0){\line(0,1){.5}}
9 \put(.375,0){\line(0,1){.5}}
10 \put(.75,0){\line(0,1){.5}}
11 }
12
13 \newcommand*{\LWR@shuffle@finish}{%
14 \end{picture}
15 \hspace*{.75em}
16 \hspace*{.2em}
17 }
18
19 \newcommand*{\shuffle}{%
20 \LWR@shuffle@start%
21 \LWR@shuffle@finish%
22 }
23
24 \newcommand*{\cshuffle}{%
25 \LWR@shuffle@start%
26 \put(.05,.65){\line(1,0){.65}}%
27 \LWR@shuffle@finish%
28 }

```

29 \begin{warpMathJax}
30 \CustomizeMathJax{\newcommand{\shuffle}{\mathbin{\text{\scriptsize\texttt{\textbackslash unicode{0x29E2}}}}}}
31 \CustomizeMathJax{\newcommand{\cshuffle}{%
32   \mathbin{\text{\LWRoverlaysymbols{\raise{.6ex}{-}}{\text{\scriptsize\texttt{\textbackslash unicode{0x29E2}}}}}}%
33 }%
34 \end{warpMathJax}
```

File 452 **l warp-sidecap.sty**

§ 561 Package **sidecap**

(Emulates or patches code by ROLF NIEPRASCHK, HUBERT GÄSSELEIN.)

- sidecap (*Pkg*) sidecap is emulated.
for HTML output: Discard all options for l warp-sidecap.

```
1 \LWR@ProvidesPackageDrop{sidecap}[2003/06/06]
```

See:

<http://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment>
 regarding the creation of starred environments with xparse.

```

2 \NewDocumentEnvironment{SCtable}{soo}
3 {\IfValueTF{#3}{\table[#3]}{\table}}
4 {\endtable}
5
6 \ExplSyntaxOn
7 \cs_new:cpx {SCtable*} {\SCtable*}
8 \cs_new_eq:cN {endSCtable*} \endSCtable
9 \ExplSyntaxOff
10
11
12 \NewDocumentEnvironment{SCfigure}{soo}
13 {\IfValueTF{#3}{\figure[#3]}{\figure}}
14 {\endfigure}
15
16 \ExplSyntaxOn
17 \cs_new:cpx {SCfigure*} {\SCfigure*}
18 \cs_new_eq:cN {endSCfigure*} \endSCfigure
19 \ExplSyntaxOff
20
21
22 \newenvironment*{wide}{}{}
```

File 453 **l warp-sidenotes.sty**

§ 562 Package **sidenotes**

(Emulates or patches code by ANDY THOMAS, OLIVER SCHEBAUM.)

- sidenotes (*Pkg*) Patched for l warp.

for HTML output:

Load the original package:

```
1 \LWR@ProvidesPackagePass{sidenotes}
```

The following patch **sidenotes** for use with **l warp**.

An ARIA note role is not assigned since the caption is an important part of the figure.

```
\sidecaption
  * [<entry>] [<offset>] {<text>}
  2 \VerifyCommand[l warp][sidenotes]{\sidecaption}{2EFE2196F612943BCF13746EC12E69D6}
  3
  4 \RenewDocumentCommand \sidecaption {s o o m}
  5 {
  6   \LWR@stoppars
  7   \begingroup
  8   \captionsetup{style=sidecaption}%
  9   \IfBooleanTF{#1}
 10   { % starred
 11     \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}%
 12     \caption*{#4}%
 13     \end{BlockClass}
 14   }
 15   { % unstarred
 16     \IfNoValueOrEmptyTF{#2}
 17     {\def@sidenotes@sidecaption@tov{#4}}
 18     {\def@sidenotes@sidecaption@tov{#2}}
 19     \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}%
 20     \caption[\@sidenotes@sidecaption@tov]{#4}
 21     \end{BlockClass}
 22   }
 23   \endgroup
 24   \LWR@startpars
 25 }
```

Borrowed from the **l warp** version of **keyfloat**:

```
26 \NewDocumentEnvironment{KFLTsidenotes@marginfloat}{O{-1.2ex} m}
27 {%
28   start
29   \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
30   \renewcommand*\@captype{#2}%
31 }%
32 \endLWR@BlockClassWP%
33 %
34 %
35 \RenewDocumentEnvironment{marginfigure}{o}
36 { \begin{KFLTsidenotes@marginfloat}{figure} }
37 { \end{KFLTsidenotes@marginfloat} }
38 %
39 \RenewDocumentEnvironment{margintable}{o}
40 { \begin{KFLTsidenotes@marginfloat}{table} }
41 { \end{KFLTsidenotes@marginfloat} }
```

The following were changed by **sidenotes**, and now are reset back to their **l warp**-supported originals:

Restoring the definition from the L^AT_EX 2_E article.cls source:

```
42 \renewenvironment{figure*}
43         {\@dblfloat{figure}}
44         {\end@dblfloat}
45
46 \renewenvironment{table*}
47         {\@dblfloat{table}}
48         {\end@dblfloat}
```

For MATHJAX:

 Note that sidenotes does not support \sidenote inside math in print mode. Use \sidenotemark and \sidenotetext instead.

```
49 \begin{warpMathJax}
50 \providecommand{\sidenotename}{\sidenote}
51 \appto\LWR@syncnotenumbers{\LWR@synconenotenumber{\LWR@sidenote}{\thesidenote}}
52 \appto\LWR@syncnotenames{\LWR@synconenotename{\LWR@sidenote}{\sidenotename}}
53 \CustomizeMathJax{\def\LWR@sidenote{1}}
54 \CustomizeMathJax{\newcommand{\sidenotemark}[1][\LWR@sidenote]{{}^{\mathrm{\#1}}}}
55 \end{warpMathJax}
```

The following is not defined since is not allowed inside math in print mode, and also would have to be modified to parse the optional offset argument:

```
\CustomizeMathJax{\newcommand{\sidenote}[2][\LWR@sidenote]{{}^{\mathrm{\#1}}}}
```

File 454 lwarp-simplebnf.sty

§ 563 Package **simplebnf**

(Emulates or patches code by JAY LEE.)

simplebnf (*Pkg*) simplebnf is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{simplebnf}[2023-11-25]

The entire object is placed inside a `lateximage` whose alt text is the L^AT_EX source BNF expression.

```
2 \ExplSyntaxOn
3
4 \VerifyEnvironment[lwarp][simplebnf]{bnf}
5     {A7E8911B9291D4EB7C1CD8366CD75341}{3B45D7D9107687D718F5303B6632776C}
6
7 \RenewDocumentEnvironment { bnf } { d() 0{llcll} +b }
8 {
9     \begin{lateximage}[bnf:\space\detokenize{\#3}]%           lwarp
10
11    \IfNoValueF { #1 }
12        { \keys_set:nn { simplebnf } { #1 } }
13
14    \__simplebnf_build_grammar:n { #3 }
15}
```

```

16  \begin{@simplebnf_tblr_env}[expand=\l__simplebnf_table_tl]{#2}
17    \tl_use:N \l__simplebnf_table_tl
18  \end{@simplebnf_tblr_env}
19  \end{lateximage}%
20 } l warp
21 { }
22
23 \VerifyEnvironment[l warp][simplebnf]{bnfgrammar}
24   {E7326E6CAE6E35827E866B4A08C5CEA8}{A9B27A2478E8BD67B19E94ECF8A44F14}
25
26 \RenewDocumentEnvironment { bnfgrammar } { O{\llcll} O{[^{|}]|[^{|}]} O{\|{\|}} +b }
27 {
28   \msg_warning:nn { simplebnf } { dep }
29   \begin{center}
30     \begin{lateximage}[bnf:\space\detokenize{#4}]% l warp
31     \begin{tabular}{#1}
32       \@dep__simplebnf_typeset_grammar:nnn { #2 } { #3 } { #4 }
33       \tl_use:N \l__simplebnf_table_tl
34     \end{tabular}
35     \end{lateximage}%
36   \end{center}
37 }
38 { }
39
40 \ExplSyntaxOff

```

File 455 **l warp-SIunits.sty**

§ 564 Package **Slunits**

(Emulates or patches code by MARCEL HELDOORN.)

SIunits (*Pkg*) Slunits is patched for use by l warp.

For SVG math, it is recommended to use \unit where possible, which combines the entire expression into a single lateximage, and adds the alt tag containing the L^AT_EX code, allowing for copy/paste. When units are used outside of the \unit macro, each unit macro will have its own lateximage, and each will have the alt tag set according to \MathImageAltText, which defaults to (math image).

For MATHJAX, individual units used in text will appear as SVG images, since \ensuremath is used in the original definitions, and \ensuremath often has expressions which do not work well in MATHJAX, so it is always forced to an SVG image. If, however, \unit is used, the result is expressed with MATHJAX instead of an SVG image.

for HTML output: 1 \LWR@ProvidesPackagePass{SIunits}[2007/12/02]

Patched for copy/paste with the HTML alt tag:

```

2 \ifboolexpr{mathjax}%
3   \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
4     \begingroup%
5     \boolfalse{LWR@HTML@sanitize@tmpb@removebackslash}%
6     \LWR@singledollar*% l warp
7     {%
8       \textbackslash alt tag
9       \textbackslash textbackslash{}unit%

```

```

9          \{\LWR@HTMLsanitizeddetokenized{\detokenize{\#1}}\}%
10         \{ \LWR@HTMLsanitizeddetokenized{\detokenize{\#2}}\}%
11         }%
12         {SIunits}%
13         {%
14             #1\,{#2}%
15         }%
16         \endgroup%
17     }%
18 }% not MathJax
19 \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
20     \@inunitcommandtrue%
21     \LWR@subsingledollar*% l warp
22     {% alt tag
23         \textbackslash{}unit\{\LWR@HTMLsanitizeddetokenized{\detokenize{\#1}}\}%
24         \{ \LWR@HTMLsanitizeddetokenized{\detokenize{\#2}}\}%
25         }%
26         {SIunits}%
27         {%
28             \LWR@origensuredmath{%
29                 \SI@fstyle{%
30                     {\#1}@qsk\period@active{\#2}%
31                 }%
32             }%
33         }%
34         \@inunitcommandfalse%
35     }%
36 }% not MathJax
37 \LWR@formatted{unit}

```

For MATHJAX:

```

38 \begin{warpMathJax}
39 \LWR@infoprocessingmathjax{SIunits}
40
41 \CustomizeMathJax{\newcommand{\one}{}}%
42 \CustomizeMathJax{\newcommand{\meter}{\metre}}%
43 \CustomizeMathJax{\newcommand{\deka}{\deca}}%
44 \CustomizeMathJax{\newcommand{\dekad}{\decad}}%
45 \CustomizeMathJax{\newcommand{\per}{/}}%
46 \CustomizeMathJax{\newcommand{\usk}{\;}}%
47 \CustomizeMathJax{\newcommand{\unit}[2]{\#1\,{\#2}}}
48 \CustomizeMathJax{\newcommand{\power}[2]{\#1^{\#2}}}
49
50 \AtBeginDocument{%
51   \if@redefsquare
52     \CustomizeMathJax{\renewcommand{\square}{[1]{\power{\#1}{2}}}}
53   \else
54     \if@defsquaren
55       \CustomizeMathJax{\newcommand{\squaren}{[1]{\power{\#1}{2}}}}
56     \else
57       \CustomizeMathJax{\renewcommand{\square}{[1]{\power{\#1}{2}}}}
58     \fi %\if@defsquaren
59   \fi %\if@redefsquare
60 }    %\AtBeginDocument
61
62 \CustomizeMathJax{\newcommand{\squared}{^{[2]}}}
63 \CustomizeMathJax{\newcommand{\cubic}{[1]{\power{\#1}{3}}}}
64 \CustomizeMathJax{\newcommand{\cubed}{^{[3]}}}
65 \CustomizeMathJax{\newcommand{\fourth}{[1]{\power{\#1}{4}}}}

```

```
66 \CustomizeMathJax{\newcommand{\reciprocal}[1]{\power{#1}{-1}}}
67 \CustomizeMathJax{\newcommand{\rp}{\reciprocal}}
68 \CustomizeMathJax{\newcommand{\rpsquare}[1]{\power{#1}{-2}}}
69 \CustomizeMathJax{\newcommand{\rpsquared}{\^{\!-2}}}
70 \CustomizeMathJax{\newcommand{\rpcubic}[1]{\power{#1}{-3}}}
71 \CustomizeMathJax{\newcommand{\rpcubed}{\^{\!-3}}}
72 \CustomizeMathJax{\newcommand{\rpfourth}[1]{\power{#1}{-4}}}
73 \CustomizeMathJax{\newcommand{\yocto}{\mathrm{y}}}
74 \CustomizeMathJax{\newcommand{\zepto}{\mathrm{z}}}
75 \CustomizeMathJax{\newcommand{\atto}{\mathrm{a}}}
76 \CustomizeMathJax{\newcommand{\femto}{\mathrm{f}}}
77 \CustomizeMathJax{\newcommand{\pico}{\mathrm{p}}}
78 \CustomizeMathJax{\newcommand{\nano}{\mathrm{n}}}
79 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
80 \CustomizeMathJax{\newcommand{\milli}{\mathrm{m}}}
81 \CustomizeMathJax{\newcommand{\centi}{\mathrm{c}}}
82 \CustomizeMathJax{\newcommand{\deci}{\mathrm{d}}}
83 \CustomizeMathJax{\newcommand{\deca}{\mathrm{da}}}
84 \CustomizeMathJax{\newcommand{\hecto}{\mathrm{h}}}
85 \CustomizeMathJax{\newcommand{\kilo}{\mathrm{k}}}
86 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
87 \CustomizeMathJax{\newcommand{\giga}{\mathrm{G}}}
88 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
89 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
90 \CustomizeMathJax{\newcommand{\exa}{\mathrm{E}}}
91 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
92 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
93 \CustomizeMathJax{\newcommand{\yoctod}{\power{10}{-24}}}
94 \CustomizeMathJax{\newcommand{\zeptod}{\power{10}{-21}}}
95 \CustomizeMathJax{\newcommand{\attod}{\power{10}{-18}}}
96 \CustomizeMathJax{\newcommand{\femtod}{\power{10}{-15}}}
97 \CustomizeMathJax{\newcommand{\picod}{\power{10}{-12}}}
98 \CustomizeMathJax{\newcommand{\nanod}{\power{10}{-9}}}
99 \CustomizeMathJax{\newcommand{\microd}{\power{10}{-6}}}
100 \CustomizeMathJax{\newcommand{\millid}{\power{10}{-3}}}
101 \CustomizeMathJax{\newcommand{\centid}{\power{10}{-2}}}
102 \CustomizeMathJax{\newcommand{\decid}{\power{10}{-1}}}
103 \CustomizeMathJax{\newcommand{\decad}{\power{10}{1}}}
104 \CustomizeMathJax{\newcommand{\hectod}{\power{10}{2}}}
105 \CustomizeMathJax{\newcommand{\kilod}{\power{10}{3}}}
106 \CustomizeMathJax{\newcommand{\megad}{\power{10}{6}}}
107 \CustomizeMathJax{\newcommand{\gigad}{\power{10}{9}}}
108 \CustomizeMathJax{\newcommand{\terad}{\power{10}{12}}}
109 \CustomizeMathJax{\newcommand{\petad}{\power{10}{15}}}
110 \CustomizeMathJax{\newcommand{\exad}{\power{10}{18}}}
111 \CustomizeMathJax{\newcommand{\zettad}{\power{10}{21}}}
112 \CustomizeMathJax{\newcommand{\yottad}{\power{10}{24}}}
113 \CustomizeMathJax{\newcommand{\gram}{\mathrm{g}}}
114 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
115 \CustomizeMathJax{\newcommand{\kilogram}{\mathrm{kilo}\mathrm{gram}}}
116 \CustomizeMathJax{\newcommand{\second}{\mathrm{s}}}
117 \CustomizeMathJax{\newcommand{\ampere}{\mathrm{A}}}
118 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}
119 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
120 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
121 \CustomizeMathJax{\newcommand{\radian}{\mathrm{rad}}}
122 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
123 \CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}
124 \CustomizeMathJax{\newcommand{\newton}{\mathrm{N}}}
125 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
```

```
126 \CustomizeMathJax{\newcommand{\joule}{\mathrm{J}}}
127 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
128 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
129 \CustomizeMathJax{\newcommand{\volt}{\mathrm{V}}}
130 \CustomizeMathJax{\newcommand{\farad}{\mathrm{F}}}
131 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
132 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
133 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
134 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
135 \CustomizeMathJax{\newcommand{\henry}{\mathrm{H}}}
136 \CustomizeMathJax{\newcommand{\degrecelsius}{\mathrm{\text{\scriptsize{u}nicode{x2103}}}}}
137 \CustomizeMathJax{\newcommand{\celsius}{\mathrm{celsius}}{\degrecelsius}}
138 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
139 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}
140 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
141 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
142 \CustomizeMathJax{\newcommand{\katal}{\mathrm{kat}}}
143
144 \ifdef{\radianbase}{%
145 \CustomizeMathJax{\newcommand{\radianbase}{%
146     {\mathrm{metre}\mathrm{usk}\mathrm{reciprocal}\mathrm{metre}}%
147 \CustomizeMathJax{\newcommand{\steradianbase}{%
148     {\mathrm{squaremetre}\mathrm{usk}\mathrm{rpsquare}\mathrm{metre}}}}
149 \CustomizeMathJax{\newcommand{\hertzbase}{%
150     {\mathrm{reciprocal}\mathrm{second}}}}
151 \CustomizeMathJax{\newcommand{\newtonbase}{%
152     {\mathrm{metre}\mathrm{usk}\mathrm{kilogram}\mathrm{usk}\mathrm{second}\mathrm{rpsquared}}}}
153 \CustomizeMathJax{\newcommand{\pascalbase}{%
154     {\mathrm{reciprocal}\mathrm{metre}\mathrm{usk}\mathrm{kilogram}\mathrm{usk}\mathrm{second}\mathrm{rpsquared}}}}
155 \CustomizeMathJax{\newcommand{\joulebase}{%
156     {\mathrm{squaremetre}\mathrm{usk}\mathrm{kilogram}\mathrm{usk}\mathrm{second}\mathrm{rpsquared}}}}
157 \CustomizeMathJax{\newcommand{\wattbase}{%
158     {\mathrm{squaremetre}\mathrm{usk}\mathrm{kilogram}\mathrm{usk}\mathrm{rpcubic}\mathrm{second}}}}
159 \CustomizeMathJax{\newcommand{\coulombbase}{%
160     {\mathrm{ampere}\mathrm{usk}\mathrm{second}}}}
161 \CustomizeMathJax{\newcommand{\voltbase}{%
162     {\mathrm{squaremetre}\mathrm{usk}\mathrm{kilogram}\mathrm{usk}\mathrm{rpcubic}\mathrm{second}\mathrm{usk}\mathrm{reciprocal}\mathrm{ampere}}}}
163 \CustomizeMathJax{\newcommand{\faradbase}{%
164     {\mathrm{rpsquare}\mathrm{metre}\mathrm{usk}\mathrm{reciprocal}\mathrm{kilogram}\mathrm{usk}\mathrm{fourth}\mathrm{second}\mathrm{usk}\mathrm{ampere}\mathrm{squared}}}}
165 \CustomizeMathJax{\newcommand{\ohmbase}{%
166     {\mathrm{squaremetre}\mathrm{usk}\mathrm{kilogram}\mathrm{usk}\mathrm{rpcubic}\mathrm{second}\mathrm{usk}\mathrm{rpsquare}\mathrm{ampere}}}}
167 \CustomizeMathJax{\newcommand{\siemensbase}{%
168     {\mathrm{rpsquare}\mathrm{metre}\mathrm{usk}\mathrm{reciprocal}\mathrm{kilogram}\mathrm{usk}\mathrm{cubic}\mathrm{second}\mathrm{usk}\mathrm{ampere}\mathrm{squared}}}}
169 \CustomizeMathJax{\newcommand{\weberbase}{%
170     {\mathrm{squaremetre}\mathrm{usk}\mathrm{kilogram}\mathrm{usk}\mathrm{second}\mathrm{rpsquared}\mathrm{usk}\mathrm{reciprocal}\mathrm{ampere}}}}
171 \CustomizeMathJax{\newcommand{\teslabase}{%
172     {\mathrm{kilogram}\mathrm{usk}\mathrm{second}\mathrm{rpsquared}\mathrm{usk}\mathrm{reciprocal}\mathrm{ampere}}}}
173 \CustomizeMathJax{\newcommand{\henrybase}{%
174     {\mathrm{squaremetre}\mathrm{usk}\mathrm{kilogram}\mathrm{usk}\mathrm{second}\mathrm{rpsquared}\mathrm{usk}\mathrm{rpsquare}\mathrm{ampere}}}}
175 \CustomizeMathJax{\newcommand{\celsiusbase}{%
176     {\mathrm{kelvin}}}}
177 \CustomizeMathJax{\newcommand{\lumenbase}{%
178     {\mathrm{candela}\mathrm{usk}\mathrm{squaremetre}\mathrm{usk}\mathrm{rpsquare}\mathrm{metre}}}}
179 \CustomizeMathJax{\newcommand{\luxbase}{%
180     {\mathrm{candela}\mathrm{usk}\mathrm{squaremetre}\mathrm{usk}\mathrm{rpfourth}\mathrm{metre}}}}
181 \CustomizeMathJax{\newcommand{\becquerelbase}{%
182     {\mathrm{hertzbase}}}}
183 \CustomizeMathJax{\newcommand{\graybase}{%
184     {\mathrm{squaremetre}\mathrm{usk}\mathrm{second}\mathrm{rpsquared}}}}
185 \CustomizeMathJax{\newcommand{\sievertbase}{%
```

```
186      {\graybase}%
187 \CustomizeMathJax{\newcommand{\katalbase}%
188      {\rp\second\usk\mole }%
189 }{%
190
191 \ifdef{\derradian}{%
192 \CustomizeMathJax{\newcommand{\derradian}%
193      {\metre\usk\reciprocal\metre}%
194 \CustomizeMathJax{\newcommand{\dersteradian}%
195      {\squaremetre\usk\rpsquare\metre}%
196 \CustomizeMathJax{\newcommand{\derhertz}%
197      {\reciprocal\second}%
198 \CustomizeMathJax{\newcommand{\dernewton}%
199      {\metre\usk\kilogram\usk\second\rpsquared}%
200 \CustomizeMathJax{\newcommand{\derpascal}%
201      {\newton\usk\rpsquare\metre}%
202 \CustomizeMathJax{\newcommand{\derjoule}%
203      {\newton\usk\metre}%
204 \CustomizeMathJax{\newcommand{\derwatt}%
205      {\joule\usk\reciprocal\second}%
206 \CustomizeMathJax{\newcommand{\dercoulomb}%
207      {\ampere\usk\second}%
208 \CustomizeMathJax{\newcommand{\dervolt}%
209      {\watt\usk\reciprocal\ampere}%
210 \CustomizeMathJax{\newcommand{\derfarad}%
211      {\coulomb\usk\reciprocal\volt}%
212 \CustomizeMathJax{\newcommand{\derohm}%
213      {\volt\usk\reciprocal\ampere}%
214 \CustomizeMathJax{\newcommand{\dersiemens}%
215      {\ampere\usk\reciprocal\volt}%
216 \CustomizeMathJax{\newcommand{\derweber}%
217      {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}%
218 \CustomizeMathJax{\newcommand{\dertesla}%
219      {\weber\usk\rpsquare\metre}%
220 \CustomizeMathJax{\newcommand{\derhenry}%
221      {\weber\usk\reciprocal\ampere}%
222 \CustomizeMathJax{\newcommand{\dercelsius}%
223      {\kelvin}%
224 \CustomizeMathJax{\newcommand{\derlumen}%
225      {\candela\usk\steradian}%
226 \CustomizeMathJax{\newcommand{\derlux}%
227      {\lumen\usk\rpsquare\metre}%
228 \CustomizeMathJax{\newcommand{\derbecquerel}%
229      {\derhertz}%
230 \CustomizeMathJax{\newcommand{\dergray}%
231      {\joule\usk\reciprocal\kilogram}%
232 \CustomizeMathJax{\newcommand{\dersievert}%
233      {\dergray}%
234 \CustomizeMathJax{\newcommand{\derkatal}%
235      {\katalbase}%
236 }{%
237
238 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}%
239 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}%
240 \CustomizeMathJax{\newcommand{\dday}{\mathrm{d}}}%
241 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}%
242 \CustomizeMathJax{\newcommand{\paminute}{\mathrm{^\prime}}}%
243 \CustomizeMathJax{\newcommand{\arcminute}{\mathrm{^\prime\prime}}}%
244 \CustomizeMathJax{\newcommand{\pasecond}{\mathrm{^\prime\prime\prime}}}%
245 \CustomizeMathJax{\newcommand{\arcsecond}{\mathrm{^\prime\prime\prime\prime}}}}
```

```
246 \CustomizeMathJax{\newcommand{\ton}{\mathrm{t}}}
247 \CustomizeMathJax{\newcommand{\tonne}{\mathrm{t}}}
248 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
249 \CustomizeMathJax{\newcommand{\litre}{\mathrm{l}}}
250 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}
251 \CustomizeMathJax{\newcommand{\bel}{\mathrm{B}}}
252 \CustomizeMathJax{\newcommand{\curie}{\mathrm{Ci}}}
253 \CustomizeMathJax{\newcommand{\rad}{\mathrm{rad}}}
254 \CustomizeMathJax{\newcommand{\arad}{\mathrm{rd}}}
255 \CustomizeMathJax{\newcommand{\rem}{\mathrm{rem}}}
256 \CustomizeMathJax{\newcommand{\roentgen}{\mathrm{R}}}
257 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{eV}}}
258 \CustomizeMathJax{\newcommand{\atomicmass}{\mathrm{u}}}
259 \CustomizeMathJax{\newcommand{\atomicmassunit}{\mathrm{u}}}
260 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{Da}}}
261 \CustomizeMathJax{\newcommand{\are}{\mathrm{a}}}
262 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{hecto}\mathrm{a}}}
263 \CustomizeMathJax{\newcommand{\barn}{\mathrm{b}}}
264 \CustomizeMathJax{\newcommand{\bbar}{\mathrm{bar}}}
265 \CustomizeMathJax{\newcommand{\gal}{\mathrm{Gal}}}
266 \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\AA}}}
267 \CustomizeMathJax{\newcommand{\rperminute}{\mathrm{r}\mathrm{per}\mathrm{minute}}}
268 \CustomizeMathJax{\newcommand{\rpersecond}{\mathrm{r}\mathrm{per}\mathrm{second}}}
269 \CustomizeMathJax{\newcommand{\squaremetre}{\mathrm{metre}^2}}
270 \CustomizeMathJax{\newcommand{\cubicmetre}{\mathrm{cubic}\mathrm{metre}}}
271 \CustomizeMathJax{\newcommand{\graypersecond}{\mathrm{gray}\mathrm{per}\mathrm{second}}}
272 \CustomizeMathJax{\newcommand{\graypersecondnp}{\mathrm{gray}\mathrm{usk}\mathrm{reciprocal}\mathrm{second}}}
273 \CustomizeMathJax{\newcommand{\metrepersquaresecond}{\mathrm{metre}\mathrm{per}\mathrm{second}\mathrm{squared}}}
274 \CustomizeMathJax{\newcommand{\metrepersquaresecondnp}{\mathrm{metre}\mathrm{usk}\mathrm{second}\mathrm{rpsquared}}}
275 \CustomizeMathJax{\newcommand{\joulepermole}{\mathrm{joule}\mathrm{per}\mathrm{mole}}}
276 \CustomizeMathJax{\newcommand{\joulepermolenp}{\mathrm{joule}\mathrm{usk}\mathrm{reciprocal}\mathrm{mole}}}
277 \CustomizeMathJax{\newcommand{\molepercubicmetre}{\mathrm{mole}\mathrm{per}\mathrm{cubic}\mathrm{metre}}}
278 \CustomizeMathJax{\newcommand{\molepercubicmetrenp}{\mathrm{mole}\mathrm{usk}\mathrm{rpcubic}\mathrm{metre}}}
279 \CustomizeMathJax{\newcommand{\radianpersquaresecond}{\mathrm{radian}\mathrm{per}\mathrm{second}\mathrm{squared}}}
280 \CustomizeMathJax{\newcommand{\radianpersquaresecondnp}{\mathrm{radian}\mathrm{usk}\mathrm{second}\mathrm{rpsquared}}}
281 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecond}{\%}}
282     \kilogram\usk\squaremetre\per\second%
283 }
284 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecondnp}{\%}}
285     \kilogram\usk\squaremetre\usk\reciprocal\second%
286 }
287 \CustomizeMathJax{\newcommand{\radianpersecond}{\mathrm{radian}\mathrm{per}\mathrm{second}}}
288 \CustomizeMathJax{\newcommand{\radianpersecondnp}{\mathrm{radian}\mathrm{usk}\mathrm{reciprocal}\mathrm{second}}}
289 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetre}{\mathrm{squaremetre}\mathrm{per}\mathrm{cubic}\mathrm{metre}}}
290 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetrenp}{\%}}
291     \squaremetre\usk\mathrm{rpcubic}\mathrm{metre}\%
292 }
293 \CustomizeMathJax{\newcommand{\katalpercubicmetre}{\mathrm{katal}\mathrm{per}\mathrm{cubic}\mathrm{metre}}}
294 \CustomizeMathJax{\newcommand{\katalpercubicmetrenp}{\mathrm{katal}\mathrm{usk}\mathrm{rpcubic}\mathrm{metre}}}
295 \CustomizeMathJax{\newcommand{\coulombpermol}{\mathrm{coulomb}\mathrm{per}\mathrm{mole}}}
296 \CustomizeMathJax{\newcommand{\coulombpermolnp}{\mathrm{coulomb}\mathrm{usk}\mathrm{reciprocal}\mathrm{mole}}}
297 \CustomizeMathJax{\newcommand{\amperepersquaremetre}{\mathrm{ampere}\mathrm{per}\mathrm{squaremetre}}}
298 \CustomizeMathJax{\newcommand{\amperepersquaremetrenp}{\mathrm{ampere}\mathrm{usk}\mathrm{rpsquare}\mathrm{metre}}}
299 \CustomizeMathJax{\newcommand{\kilogrampercubicmetre}{\mathrm{kilogram}\mathrm{per}\mathrm{cubic}\mathrm{metre}}}
300 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrenp}{\mathrm{kilogram}\mathrm{usk}\mathrm{rpcubic}\mathrm{metre}}}
301 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecond}{\%}}
302     \squaremetre\per\newton\usk\second%
303 }
304 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecondnp}{\%}}
305     \squaremetre\usk\reciprocal\newton\usk\reciprocal\second%
```

```
306 } }
307 \CustomizeMathJax{\newcommand{\pascalsecond}{\pascal\usk\second}}
308 \CustomizeMathJax{\newcommand{\coulombpercubicmetre}{\coulomb\per\cubic\metre}}
309 \CustomizeMathJax{\newcommand{\coulombpercubicmetrenp}{\coulomb\usk\rpcubic\metre}}
310 \CustomizeMathJax{\newcommand{\amperemetresecond}{\ampere\usk\metre\usk\second}}
311 \CustomizeMathJax{\newcommand{\voltpermetre}{\volt\per\metre}}
312 \CustomizeMathJax{\newcommand{\voltpermetrenp}{\volt\usk\reciprocal\metre}}
313 \CustomizeMathJax{\newcommand{\coulombpersquaremetre}{\coulomb\per\squaremetre}}
314 \CustomizeMathJax{\newcommand{\coulombpersquaremetrenp}{\coulomb\usk\rpsquare\metre}}
315 \CustomizeMathJax{\newcommand{\faradpermetre}{\farad\per\metre}}
316 \CustomizeMathJax{\newcommand{\faradpermetrenp}{\farad\usk\reciprocal\metre}}
317 \CustomizeMathJax{\newcommand{\ohmmetre}{\ohm\usk\metre}}
318 \CustomizeMathJax{\newcommand{\kilowatthour}{\kilo\watt\hour}}
319 \CustomizeMathJax{\newcommand{\wattpersquaremetre}{\watt\per\squaremetre}}
320 \CustomizeMathJax{\newcommand{\wattpersquaremetrenp}{\watt\usk\rpsquare\metre}}
321 \CustomizeMathJax{\newcommand{\joulepersquaremetre}{\joule\per\squaremetre}}
322 \CustomizeMathJax{\newcommand{\joulepersquaremetrenp}{\joule\usk\rpsquare\metre}}
323 \CustomizeMathJax{\newcommand{\newtonpercubicmetre}{\newton\per\cubic\metre}}
324 \CustomizeMathJax{\newcommand{\newtonpercubicmetrenp}{\newton\usk\rpcubic\metre}}
325 \CustomizeMathJax{\newcommand{\newtonperkilogram}{\newton\per\kilogram}}
326 \CustomizeMathJax{\newcommand{\newtonperkilogramnp}{\newton\usk\reciprocal\kilogram}}
327 \CustomizeMathJax{\newcommand{\jouleperkelvin}{\joule\per\kelvin}}
328 \CustomizeMathJax{\newcommand{\jouleperkelvinnp}{\joule\usk\reciprocal\kelvin}}
329 \CustomizeMathJax{\newcommand{\jouleperkilogram}{\joule\per\kilogram}}
330 \CustomizeMathJax{\newcommand{\jouleperkilogramnp}{\joule\usk\reciprocal\kilogram}}
331 \CustomizeMathJax{\newcommand{\coulombperkilogram}{\coulomb\per\kilogram}}
332 \CustomizeMathJax{\newcommand{\coulombperkilogramnp}{\coulomb\usk\reciprocal\kilogram}}
333 \CustomizeMathJax{\newcommand{\squaremetrepersecond}{\squaremetre\per\second}}
334 \CustomizeMathJax{\newcommand{\squaremetrepersecondnp}{%
335     \squaremetre\usk\reciprocal\second%
336 }}
337 \CustomizeMathJax{\newcommand{\squaremetrepersquaresecond}{%
338     \squaremetre\per\second\squared%
339 }}
340 \CustomizeMathJax{\newcommand{\squaremetrepersquaresecondnp}{%
341     \squaremetre\usk\second\rpsquared%
342 }}
343 \CustomizeMathJax{\newcommand{\kilogrammetrepersecond}{%
344     \kilogram\usk\metre\per\second%
345 }}
346 \CustomizeMathJax{\newcommand{\kilogrammetrepersecondnp}{%
347     \kilogram\usk\metre\usk\reciprocal\second%
348 }}
349 \CustomizeMathJax{\newcommand{\candelapersquaremetre}{\candela\per\squaremetre}}
350 \CustomizeMathJax{\newcommand{\candelapersquaremetrenp}{\candela\usk\rpsquare\metre}}
351 \CustomizeMathJax{\newcommand{\amperepermetre}{\ampere\per\metre}}
352 \CustomizeMathJax{\newcommand{\amperepermetrenp}{\ampere\usk\reciprocal\metre}}
353 \CustomizeMathJax{\newcommand{\joulepertesla}{\joule\per\tesla}}
354 \CustomizeMathJax{\newcommand{\jouleperteslanp}{\joule\usk\reciprocal\tesla}}
355 \CustomizeMathJax{\newcommand{\henrypermetre}{\henry\per\metre}}
356 \CustomizeMathJax{\newcommand{\henrypermetrenp}{\henry\usk\reciprocal\metre}}
357 \CustomizeMathJax{\newcommand{\kilogrampersecond}{\kilogram\per\second}}
358 \CustomizeMathJax{\newcommand{\kilogrampersecondnp}{\kilogram\usk\reciprocal\second}}
359 \CustomizeMathJax{\newcommand{\kilogrampersquaremetresecond}{%
360     \kilogram\per\squaremetre\usk\second%
361 }}
362 \CustomizeMathJax{\newcommand{\kilogrampersquaremetrenp}{%
363     \kilogram\usk\rpsquare\metre\usk\reciprocal\second%
364 }}
365 \CustomizeMathJax{\newcommand{\kilogrampersquaremetre}{\kilogram\per\squaremetre}}
```

```

366 \CustomizeMathJax{\newcommand{\kilogrampersquaremetre}{\kilogram\usk\rpsquare\metre}}
367 \CustomizeMathJax{\newcommand{\kilogrampermetre}{\kilogram\per\metre}}
368 \CustomizeMathJax{\newcommand{\kilogrampermetrenp}{\kilogram\usk\reciprocal\metre}}
369 \CustomizeMathJax{\newcommand{\joulepermolekelvin}{\joule\per\mole\usk\kelvin}}
370 \CustomizeMathJax{\newcommand{\joulepermolekelvinnp}{%
371     \joule\usk\reciprocal\mole\usk\reciprocal\kelvin%
372 }}
373 \CustomizeMathJax{\newcommand{\kilogramperkilomole}{\kilogram\per\kilo\mole}}
374 \CustomizeMathJax{\newcommand{\kilogramperkilomolenp}{%
375     \kilogram\usk\kilo\reciprocal\mole%
376 }}
377 \CustomizeMathJax{\newcommand{\kilogramsquaremetre}{\kilogram\usk\squaremetre}}
378 \CustomizeMathJax{\newcommand{\kilogramsquaremetrenp}{\kilogramsquaremetre}}
379 \CustomizeMathJax{\newcommand{\kilogrammetrepersquaresecond}{%
380     \kilogram\usk\metre\per\second\squared%
381 }}
382 \CustomizeMathJax{\newcommand{\kilogrammetrepersquaresecondnp}{%
383     \kilogram\usk\metre\usk\second\rpsquared%
384 }}
385 \CustomizeMathJax{\newcommand{\newtonpersquaremetre}{\newton\per\squaremetre}}
386 \CustomizeMathJax{\newcommand{\newtonpersquaremetrenp}{\newton\usk\rpsquare\metre}}
387 \CustomizeMathJax{\newcommand{\persquaremetresecond}{1\per\squaremetre\usk\second}}
388 \CustomizeMathJax{\newcommand{\persquaremetresecondnp}{%
389     \rpsquare\metre\usk\reciprocal\second%
390 }}
391 \CustomizeMathJax{\newcommand{\wattperkilogram}{\watt\per\kilogram}}
392 \CustomizeMathJax{\newcommand{\wattperkilogramnp}{\watt\usk\reciprocal\kilogram}}
393 \CustomizeMathJax{\newcommand{\wattpercubicmetre}{\watt\per\cubic\metre}}
394 \CustomizeMathJax{\newcommand{\wattpercubicmetrenp}{\watt\usk\rpcubic\metre}}
395 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradian}{%
396     \watt\per\squaremetre\usk\steradian%
397 }}
398 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradiannp}{%
399     \watt\usk\rpsquare\metre\usk\rp\steradian%
400 }}
401 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvin}{\joule\per\kilogram\usk\kelvin}}
402 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvinnp}{%
403     \joule\usk\reciprocal\kilogram\usk\reciprocal\kelvin%
404 }}
405 \CustomizeMathJax{\newcommand{\squaremetreperkilogram}{\squaremetre\per\kilogram}}
406 \CustomizeMathJax{\newcommand{\rpsquaremetreperkilogram}{%
407     \squaremetre\usk\reciprocal\kilogram%
408 }}
409 \CustomizeMathJax{\newcommand{\cubicmetreperkilogram}{\cubic\metre\per\kilogram}}
410 \CustomizeMathJax{\newcommand{\rpcubicmetreperkilogram}{%
411     \cubic\metre\usk\reciprocal\kilogram%
412 }}
413 \CustomizeMathJax{\newcommand{\newtonpermetre}{\newton\per\metre}}
414 \CustomizeMathJax{\newcommand{\newtonpermetrenp}{\newton\usk\reciprocal\metre}}
415 \CustomizeMathJax{\newcommand{\Celsius}{\text{\textnormal{C}}\text{\textnormal{elcius}}}}
416 \CustomizeMathJax{\newcommand{\wattpermetrekelvin}{\watt\per\metre\usk\kelvin}}
417 \CustomizeMathJax{\newcommand{\wattpermetrekelvinnp}{%
418     \watt\usk\reciprocal\metre\usk\reciprocal\kelvin%
419 }}
420 \CustomizeMathJax{\newcommand{\newtonmetre}{\newton\usk\metre}}
421 \CustomizeMathJax{\newcommand{\newtonmetrenp}{\newton\metre}}
422 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecond}{%
423     \squaremetre\per\cubic\second%
424 }}
425 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecondnp}{%

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```

426     \squaremetre\usk\rpcubic\second%
427 }
428 \CustomizeMathJax{\newcommand{\metrepersecond}{\metre\per\second}}
429 \CustomizeMathJax{\newcommand{\metrepersecondnp}{\metre\usk\reciprocal\second}}
430 \CustomizeMathJax{\newcommand{\joulepercubicmetre}{\joule\per\cubicmetre}}
431 \CustomizeMathJax{\newcommand{\joulepercubicmetrepn}{\joule\usk\rpcubic\metre}}
432 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulomb}{%
433     \kilogram\per\cubic\metre\usk\coulomb%
434 }}
435 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulombnp}{%
436     \kilogram\usk\rpcubic\metre\usk\reciprocal\coulomb%
437 }}
438 \CustomizeMathJax{\newcommand{\cubicmetrepersecond}{\cubicmetre\per\second}}
439 \CustomizeMathJax{\newcommand{\rpcubicmetrepersecond}{\cubicmetre\usk\reciprocal\second}}
440 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetre}{%
441     \kilogram\per\second\usk\cubicmetre%
442 }}
443 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetrepn}{%
444     \kilogram\usk\reciprocal\second\usk\rpcubic\metre%
445 }}
446 \end{warpMathJax}

```

File 456 l warp-siunitx.sty

§ 565 Package **siunitx**

(Emulates or patches code by JOSEPH WRIGHT.)

siunitx (Pkg) siunitx is patched for use by l warp, and is emulated for MATHJAX.

for HTML output:

```

1 \providecommand\DeclareRelease[3]{}
2 \providecommand\DeclareCurrentRelease[2]{}
3
4 \DeclareRelease{2}{2010-05-23}{l warp-siunitx-v2.sty}
5 \DeclareRelease{v2}{2010-05-23}{l warp-siunitx-v2.sty}
6 \DeclareCurrentRelease{}{2021-05-17}
7
8 \RequirePackage{xcolor}%
9   for \convertcolorspec
10 \LWR@ProvidesPackagePass{siunitx}[2023-11-14]
11
12 \ExplSyntaxOn

13 \VerifyCommand[l warp][siunitx]{\siunitx_number_format:nN}{33A1ECC8D70AC60AEB82D78E598155E6}
14
15 \cs_set_protected:Npn \siunitx_number_format:nN #1#2
16  {
17     \group_begin:
18     \bool_if:NTF \l_siunitx_number_parse_bool
19     {
20         \siunitx_number_parse:nN {#1} \l__siunitx_number_parsed_tl
21         \siunitx_number_process:NN \l__siunitx_number_parsed_tl \l__siunitx_number_parsed_tl
22         \tl_set:Nx \l__siunitx_number_outputted_tl
23         { \siunitx_number_output:N \l__siunitx_number_parsed_tl }
24     }
25     {
26         \tl_set:Nn \l__siunitx_number_outputted_tl

```

```

27      {
28          \boolearn{mathjax}%
29          \LWR@subsingle$%
30          \textbackslash( % space
31          \LWR@HTMLsanitizeddetokenized{%
32              \detokenize{\#1}%
33              } \textbackslash)%
34          }%
35          {\siunitx unparsed}%
36          {\ensuremath{\#1}}%
37      }
38  }
39 \exp_args:NNN \group_end:
40 \tl_set:Nn #2 \l_siunitx_number_outputted_tl
41 }

42 \VerifyCommand[l warp][siunitx]{\__siunitx_compound_unparsed:n}{C6CACB29BD6BD43225E174AD2FBD750C}
43
44 \cs_set_protected:Npn \__siunitx_compound_unparsed:n #1
45  {
46      \tl_if_blank:nF {\#1}
47      { \seq_put_right:Nn \l_siunitx_compound_tmp_seq
48          {
49              \boolearn{mathjax}%
50              \LWR@subsingle$%
51              \textbackslash( % space
52              \LWR@HTMLsanitizeddetokenized{%
53                  \detokenize{\#1}%
54                  } \textbackslash)%
55              }%
56              {\siunitx unparsed}%
57              {\ensuremath{\#1}}%
58          }
59      }
60  }

```

\LWR@siunitx@mathrm {<text>}

If in text mode, use \textrm instead. Avoids crashing while using \mathrm in text mode.

```

61 \LetLtxMacro\LWR@siunitx@orig@mathrm\mathrm
62
63 \newcommand*{\LWR@siunitx@mathrm}[1]{%
64     \ifmmode{\LWR@siunitx@orig@mathrm{\#1}}\else{\#1}\fi%
65 }

```

If not in a lateximage, always use text mode. Ignore current text font if resetting text family, series, and shape.

```

66 \VerifyCommand[l warp][siunitx]{\__siunitx_print_aux:nn}{FD2679699363E8095304C0665CAC4072}
67
68 \cs_set_protected:Npn \__siunitx_print_aux:nn #1#2
69  {
70      \LetLtxMacro\mathrm{\LWR@siunitx@mathrm}%
71      \tl_if_empty:oF {\#2}
72      {
73          \tl_if_empty:cTF { \l_siunitx_print_ #1 _color_tl }
74          { \use:n }
75          { \ExpandArgs { v } \textcolor { \l_siunitx_print_ #1 _color_tl } } }

```

```

76      {
77          \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
78          {
79              \use:c
80              {
81                  siunitx_print_
82                  \tl_use:c { l_siunitx_print_ #1 _mode_tl } :n
83                  }
84                  {#2}
85              }
86              {
87                  \bool_lazy_all:nTF%     l warp
88                  {
89                      {\l_siunitx_print_text_family_bool}
90                      {\l_siunitx_print_text_series_bool}
91                      {\l_siunitx_print_text_shape_bool}
92                  }
93                  {%
94                      \use:c
95                      {
96                          siunitx_print_%
97                          text%
98                          :n%
99                          }%
100                         {#2}%
101                     }
102                     {
103                         \LWR@textcurrentfont{%
104                             \use:c
105                             {
106                                 siunitx_print_%
107                                 text%
108                                 :n%
109                                 }%
110                                 {#2}%
111                             }
112                         }
113                     }
114                 }
115             }
116 }
```

To determine whether to make a complex root be italic or upright, `\l_siunitx_complex_output_root_tl` is compared to `\LWR@siunitx@complexrmi/j`, and the css style for *i,j* is set to `ijit` or `ijup`.

```

117 \newcommand*{\LWR@siunitx@complexrootstyle}{\textrm}
118
119 \newcommand*{\LWR@siunitx@complexrmi}{\mathrm{i}}
120 \newcommand*{\LWR@siunitx@complexrmj}{\mathrm{j}}
121
122 \newcommand*{\LWR@siunitx@setcomplexroot}{%
123     \renewcommand*{\LWR@siunitx@complexrootstyle}{ijit}%
124     \ifdefequal{\l_siunitx_complex_output_root_tl}{\LWR@siunitx@complexrmi}%
125         {\renewcommand*{\LWR@siunitx@complexrootstyle}{ijup}}%
126         {}%
127     \ifdefequal{\l_siunitx_complex_output_root_tl}{\LWR@siunitx@complexrmj}%
128         {\renewcommand*{\LWR@siunitx@complexrootstyle}{ijup}}%
129         {}%
130 }
```

```

131 \VerifyCommand[l warp][siunitx]{\__siunitx_complex_format_cartesian_auxii:n}
132     {DC0897DBE172C13B6F7282D266BE1156}
133
134 \cs_set_protected:Npn \__siunitx_complex_format_cartesian_auxii:n #1
135 {
136     \LWR@siunitx@setcomplexroot%          l warp
137     \__siunitx_complex_format_cartesian_units:n {#1}
138     \tl_if_empty:NF \l__siunitx_complex_real_tl
139     { \exp_after:wN \__siunitx_complex_drop_exponent:nnnnnn \l__siunitx_complex_real_tl }
140     \exp_after:wN \__siunitx_complex_format_sign:nnnnnn \l__siunitx_complex_img_tl
141     \tl_set:Nx \l__siunitx_complex_tmp_tl
142     { \siunitx_number_output:NN \l__siunitx_complex_img_tl \q_nil }
143     \exp_after:wN \__siunitx_complex_extract_exponent:w \l__siunitx_complex_tmp_tl \q_stop
144     \tl_set:Nx \l__siunitx_complex_tmp_tl
145     {
146         \bool_lazy_or:nnTF
147         {
148             \bool_lazy_and_p:nn
149             { \l__siunitx_number_bracket_ambiguous_bool }
150             { ! \tl_if_empty_p:N \l__siunitx_complex_exp_tl }
151         }
152         {
153             ! \bool_lazy_any_p:n
154             {
155                 { \tl_if_blank_p:n {#1} }
156                 { \tl_if_empty_p:N \l__siunitx_complex_real_tl }
157                 { \tl_if_empty_p:N \l__siunitx_complex_img_tl }
158             }
159         }
160     { \__siunitx_complex_format_bracket:n }
161     { \use:n }
162     {
163         \siunitx_number_output:N \l__siunitx_complex_real_tl
164         \exp_not:V \l__siunitx_complex_sign_tl
165         \bool_if:NF \l__siunitx_complex_root_after_bool
166         {
167             \InlineClass{\LWR@siunitx@complexrootstyle}%      l warp
168             {
169                 \exp_not:V \l__siunitx_complex_output_root_tl
170             }
171         }
172         \exp_not:V \l__siunitx_complex_tmp_tl
173         \bool_if:NT \l__siunitx_complex_root_after_bool
174         {
175             \InlineClass{\LWR@siunitx@complexrootstyle}%      l warp
176             {
177                 \exp_not:V \l__siunitx_complex_output_root_tl
178             }
179         }
180     }
181     \exp_not:V \l__siunitx_complex_exp_tl
182 }
183 }
```

{⟨1: deg/min/sec character⟩} {⟨2: ?⟩} {⟨3: ?⟩} {⟨4: integer part of angle⟩} {⟨5: decimal point character⟩} {⟨6: decimal part of angle⟩} {⟨7: ?⟩} {⟨8: ?⟩}

If not in a `\lateximage`, print a simplified verison without the box measurement things which conflict with `lwarp`:

```

184 \VerifyCommand[lwarp][siunitx]{\__siunitx_angle_arc_print_auxii:nw}
185   {7CEE155CD4C7A9CDFEA3AF8DD154B03}
186
187 \cs_set_protected:Npn \__siunitx_angle_arc_print_auxii:nw
188   #1#2 \q_nil #3 \q_nil #4 \q_nil #5 \q_nil #6 \q_nil #7 \q_nil #8 \q_stop
189 {
190   \mode_if_math:TF
191     { \bool_set_true:N \l__siunitx_angle_tmp_bool }
192     { \bool_set_false:N \l__siunitx_angle_tmp_bool }
193   \siunitx_print_number:n {#2#3#4}
194   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
195   {%
196     \tl_if_blank:nTF {#6}
197       { \__siunitx_angle_arc_print_auxvi:n {#1} }
198       {
199         \hbox_set:Nn \l__siunitx_angle_marker_box
200         {
201           \__siunitx_angle_arc_print_auxiii:n
202             { \siunitx_print_number:n {#5} }
203         }
204         \hbox_set:Nn \l__siunitx_angle_unit_box
205         {
206           \__siunitx_angle_arc_print_auxiii:n
207             {
208               \siunitx_unit_format:nN {#1} \l__siunitx_angle_tmp_tl
209               \siunitx_print_unit:V \l__siunitx_angle_tmp_tl
210               \skip_horizontal:n { -\scriptspace }
211             }
212         }
213         \dim_compare:nNnTF { \box_wd:N \l__siunitx_angle_marker_box } >
214         { \box_wd:N \l__siunitx_angle_unit_box }
215         {
216           \__siunitx_angle_arc_print_auxiv:NN
217           \l__siunitx_angle_marker_box
218           \l__siunitx_angle_unit_box
219         }
220       }
221       \__siunitx_angle_arc_print_auxiv:NN
222       \l__siunitx_angle_unit_box
223       \l__siunitx_angle_marker_box
224     }
225     \hbox_set_to_wd:Nnn \l__siunitx_angle_marker_box
226     \l__siunitx_angle_tmp_dim
227     {
228       \hbox_overlap_right:n
229         { \box_use_drop:N \l__siunitx_angle_marker_box }
230       \hbox_overlap_right:n
231         { \box_use_drop:N \l__siunitx_angle_unit_box }
232       \tex_hfil:D
233     }
234     \box_use:N \l__siunitx_angle_marker_box
235     \skip_horizontal:N \scriptspace
236     \siunitx_print_number:n {#6}
237   }
238 }%

```

{⟨1: deg/min/sec character⟩} {⟨2: ?⟩} {⟨3: ?⟩} {⟨4: integer part of angle⟩} {⟨5: decimal point character⟩} {⟨6: decimal part of angle⟩} {⟨7: ?⟩} {⟨8: ?⟩}

```

239      {%
240          lwarp: not in a lateximage, simplify for HTML
241          \tl_if_blank:nTF {#6}
242          { \__siunitx_angle_arc_print_auxvi:n {#1} }
243          {
244              \__siunitx_angle_arc_print_auxiii:n
245              {
246                  \siunitx_print_number:n {#5}
247              }
248              \__siunitx_angle_arc_print_auxiii:n
249              {
250                  \siunitx_unit_format:nN {#1} \l__siunitx_angle_tmp_tl
251                  \siunitx_print_unit:V \l__siunitx_angle_tmp_tl
252              }
253              \siunitx_print_number:n {#6}
254          }%
255      }%
256  }%
257 }
```

If not in a `lateximage`, print a simple inline fraction, avoiding the use of `svg` math:

```

256 \VerifyCommand[lwarp][siunitx]{\__siunitx_print_text_fraction:Nnn}
257     {F47521F256C661719258012969E7AE04}
258
259 \cs_set_protected:Npn \__siunitx_print_text_fraction:Nnn #1#2#3
260 {
261     \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{%
262         lwarp
263         {%
264             \ensuremath
265             {%
266                 \mbox { \__siunitx_print_text_replace:n {#2} } }%
267                 \mbox { \__siunitx_print_text_replace:n {#3} } }%
268             }%
269         }%
270     {%
271         \mbox { \__siunitx_print_text_replace:n {#2} } }% lwarp
272         /% lwarp
273         \mbox { \__siunitx_print_text_replace:n {#3} } }% lwarp
274     }%
275 }
```

If not in a `lateximage`, print a `\textsubscript`:

```

276 \VerifyCommand[lwarp][siunitx]{\__siunitx_unit_format_qualifier_subscript:}
277     {543B01848C00E4089F0E0C53988F6A28}
278
279 \cs_set_protected:Npn \__siunitx_unit_format_qualifier_subscript:
280 {
281     \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{%
282         lwarp
283         {%
284             \__siunitx_unit_format_font:
285             \tl_set:Nx \l__siunitx_unit_part_tl
286             {%
287                 \c__siunitx_unit_math_subscript_tl
288                 {%
289                     \exp_not:V \l__siunitx_unit_font_tl
290                     { \exp_not:V \l__siunitx_unit_part_tl } } } } } }
```

```

290          }
291      }
292  %}
293  {%
294      l warp simplified for HTML:
295      \_\_siunitx\_unit\_format\_font:
296      \tl_set:Nx \l\_\_siunitx\_unit\_part\_tl
297      {
298          \textsubscript
299          {
300              \exp_not:V \l\_\_siunitx\_unit\_font\_tl
301              { \exp_not:V \l\_\_siunitx\_unit\_part\_tl }
302          }
303      }
304  }

305 \VerifyCommand[l warp][siunitx]{\siunitx_quantity:nn}
306     {AEF3237DB5107FE46437AF1D3ABD03DE}
307
308 \cs_set_protected:Npn \siunitx_quantity:nn #1#2
309  {
310      \group_begin:
311          \siunitx_unit_options_apply:n {#2}
312          \tl_if_blank:nTF {#1}
313          {
314              \siunitx_unit_format:nN {#2} \l\_\_siunitx_quantity_unit_tl
315              \siunitx_print_unit:V \l\_\_siunitx_quantity_unit_tl
316          }
317          {
318              \bool_if:NTF \l\_\_siunitx_number_parse_bool
319              { \__siunitx_quantity_parsed:nn {#1} {#2} }
320              {
321                  \tl_set:Nn \l\_\_siunitx_quantity_number_tl {
322                      \boolfalse{mathjax}%
323                      \LWR@subsingledollar{%
324                          \textbackslash( % space
325                          \LWR@HTMLsanitizeddetokenized{%
326                              \detokenize{#1}%
327                          } \textbackslash)%
328                      }%
329                      {\siunitx unparsed}%
330                      {\ensuremath{#1}}%
331                  }
332                  \siunitx_unit_format:nN {#2} \l\_\_siunitx_quantity_unit_tl
333                  \siunitx_quantity_print:VV
334                  \l\_\_siunitx_quantity_number_tl \l\_\_siunitx_quantity_unit_tl
335              }
336          }
337      \group_end:
338  }

\cancel for HTML does not work yet.

339 \newcommand*\LWR@siunitx@nocancel}[1]{%
340     \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{%
341         {\cancel{#1}}% SVG
342         {#1}% HTML
343     }%
344
345 \AtBeginDocument{

```

```

346 \__siunitx_unit_set_symbolic:Npn \cancel
347   { }
348 %   { \__siunitx_unit_parse_special:n { \cancel } }
349   { \__siunitx_unit_parse_special:n { \LWR@siunitx@nocancel } }%     l warp
350 }
```

For HTML, use a simple unaligned \num:

```

351 \newcommand{\LWR@HTML@tablenum}[2][]{{\num[#1]{#2}}}
352 \LWR@formatted{tablenum}
```

For HTML, the S column is simplified to a c column. Keys are set locally, allowing drop-exponent, etc.

```

353 \AtBeginDocument{
354 \HTMLnewcolumntype{S}[1][]{{\begingroup\sisetup{#1}c<{\endgroup}}}
355 }
```

To define simplified units for HTML:

\HTMLDeclareSIUnit [<options>] {<name>} {<definition>}

```

356 \NewDocumentCommand{\HTMLDeclareSIUnit}{o +m m}
357 {
358   \ifcsdef{ __siunitx_unit_ \token_to_str:N #2 :w }
359   {}
360   {
361     \PackageError{l warp}
362     {%
363       First~use\MessageBreak
364       \space\space\protect\DeclareSIUnit{%
365         \token_to_str:N#2}{...}\MessageBreak
366       before~using\MessageBreak
367       \space\space\protect\HTMLDeclareSIUnit{%
368         \token_to_str:N#2}{...}%
369     }
370     {%
371       See~the~L warp~manual~section~about~special~cases, ~
372       regarding~siunitx.%
373     }
374   }
375   \csNewCommandCopy{%
376     { __orig_siunitx_unit_ \token_to_str:N #2 :w }
377     { __siunitx_unit_ \token_to_str:N #2 :w }
378   }{\DeclareSIUnit[#1]{#2}}
379   {
380     \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}
381     {\csuse{ __orig_siunitx_unit_ \token_to_str:N #2 :w }{#3}}
382   }
383 }
384 }
```

385 \ExplSyntaxOff

HTML versions for existing units:

```

386 \AtBeginDocument{
387 \HTMLDeclareSIUnit\celsius{\LWR@siunitx@textcelsius}
```

```

388 \HTMLDeclareSIUnit\arcminute{\LWR@siunitx@textprime}
389 \HTMLDeclareSIUnit\arcsecond{\LWR@siunitx@textdblprime}
390 \HTMLDeclareSIUnit\elementarycharge{\textit{e}}
391 %
392 \HTMLDeclareSIUnit\clight{\text{\textit{c}}\textsubscript{0}}
393 \HTMLDeclareSIUnit\bohr{\text{\textit{a}}\textsubscript{0}}
394 \HTMLDeclareSIUnit\electronmass{\text{\textit{m}}\textsubscript{e}}
395 \HTMLDeclareSIUnit\hartree{\text{\textit{E}}\textsubscript{h}}
396 \HTMLDeclareSIUnit\planckbar{\LWR@siunitx@textplanckbar}
397 }% \AtBeginDocument

```

Initial options:

```

398 \AtBeginDocument{
399 \sisetup{
400     per-mode=symbol,    % fraction is not seen by pdftotext
401     angle-symbol-degree = {\LWR@siunitx@textdegree},
402     angle-symbol-minute = {\LWR@siunitx@textprime} ,
403     angle-symbol-second = {\LWR@siunitx@textdblprime} ,
404 }
405 }

```

Load late patches for lltjp-siunitx:

```

406 \AtBeginDocument{
407 \ifdef{\ltj@allalchar}
408 {\LWR@origRequirePackage{l warp-lltjp-siunitx}}
409 {}
410 }

```

For MATHJAX:

```

411 \LWR@origRequirePackage{l warp-common-mathjax-siunitx}
412
413 \begin{warpMathJax}
414 \CustomizeMathJax{\let\unit\si}
415 \CustomizeMathJax{\let\qty\SI}
416 \CustomizeMathJax{\let\qtylist\SIlist}
417 \CustomizeMathJax{\let\qtyrange\SIrange}
418 \CustomizeMathJax{\let\numproduct\num}
419 \CustomizeMathJax{\let\qtyproduct\SI}
420 \CustomizeMathJax{\let\complexnum\num}
421 \CustomizeMathJax{\newcommand{\complexqty}[3]{\complexnum{#2}\si{#3}}}
422 \end{warpMathJax}

```

Pass range-phrase to common-mathjax-siunitx:

```

423 \ExplSyntaxOn
424 \AtBeginDocument{
425 \edef\LWR@siunitx@rangephrase{\l_siunitx_range_phrase_tl}
426 \expandafter\CustomizeMathJax\expandafter{%
427     \expandafter\def\expandafter\lWRsiunitxrangephrase%
428     \expandafter{\lWR@siunitx@rangephrase}%
429 }
430 }
431 \ExplSyntaxOff

```

File 457 **l warp-siunitx-v2.sty**

§ 566 Package **siunitx-v2**

(Emulates or patches code by JOSEPH WRIGHT.)

`siunitx-v2 (Pkg)` `siunitx-v2` is patched for use by `l warp`, and is emulated for `MATHJAX`.

`siunitx` is well supported by `l warp`.

Limitations Some general limitations:

fractions Due to `pdftotext` limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

`\cancel` is not currently supported for `siunitx v3`.

Negative values are not automatically colored.

tabular Tabular S and s columns are rendered as simple c columns, although key settings will be set. If using scientific notation, table-format, table-align-uncertainty, drop-exponent, etc.. use `\tablenum` for each cell. This is especially required for drop-exponent, without which the value will be shown incorrectly.

drop-exponent

table-auto-round `table-auto-round` is ignored.

Math rendering Math may be rendered in several ways in the same document:

For math mode with SVG display: The original `siunitx` code is used while generating the SVG image.

For HTML text mode: `l warp` uses `siunitx` code patched for HTML, and simplified units.

For math expressions while using MATHJAX: A limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. The result usually looks fine, and otherwise is enough to get the meaning across.

Custom units `siunitx` allows customized units:

`\DeclareSIUnit` `\{\langle name \rangle\} \{\langle definition \rangle\}`

`\DeclareSIUnit` declares a version of the unit for the print version. This is also used when the unit is printed in SVG math or a `lateXimage`. It is also used for HTML if an HTML-specific version is not defined with `\HTMLDeclareSIUnit`.

`\DeclareSIUnit\myunit{\ensuremath{\text{m}_y}}`

`\HTMLDeclareSIUnit` `\{\langle name \rangle\} \{\langle definition \rangle\}`

△ v3 only! Use this after the print unit has been defined. For `siunitx` v3, `\HTMLDeclareSIUnit`

declares a simplified version of the unit for HTML, for example if the print-mode unit uses TeX boxes or \ensuremath:

```
\HTMLDeclareSIUnit\myunit{\text{m}}\textsubscript{\textit{y}}}}
```

It is also possible to provide a custom unit for MATHJAX:

```
\CustomizeMathJax{\newcommand{\myunit}{\text{m}_y}}
```

Predefined units Most units work as-is with HTML. For the following units, l warp has already set \HTMLDeclareSIUnit: \celsius, \arcminute, \arcsecond, \elementarycharge, \clight, \bohr, \electronmass, \hartree, \planckbar.

⚠ MathJax

Document modifications required for MATHJAX

⚠ \sisetup

- Place \sisetup in the preamble before \begin{document}. Changes made later may be ignored, especially with MATHJAX. The MATHJAX emulation also ignores most macro options.

⚠ complex numbers

custom units

- Complex numbers are displayed as entered, ignoring output-complex-root.
- Custom units may be added with \CustomizeMathJax. For example, from l warp-common-mathjax-siunitx:

```
\CustomizeMathJax{\newcommand{\hartree}{\mathit{E}_{\mathrm{h}}}}
\CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\AA}}}
```

- Units work better using ~ between units instead of using periods.

⚠ \square, \cubic

- To square or cube compound units, enclose the following compound units in braces:

```
\cubic{\centi\meter}
```

Single units do not require braces.

- For \numlist, the argument is printed as text as-is, so use space between semicolons for improved readability.
- If using parse-numbers = false, also use \num or \qty. siunitx=siunitx>Missing \$ inserted.

Also see [MATHJAX option](#), section 8.7.5.

for HTML output:

```
1 \RequirePackage{xcolor}%
2   for \convertcolorspec
3 \LWR@ProvidesPackagePass{siunitx}[=v2]%
4   2021-04-17
```

```
4 \AtBeginDocument{%
5   in case textcomp was not loaded
6   \DeclareSIUnit\bohr{\textit{a}}\textsubscript{0}}
7   \DeclareSIUnit\clight{\textit{c}}\textsubscript{0}}
8   \DeclareSIUnit\elementarycharge{\textit{e}}
9   \DeclareSIUnit\electronmass{\textit{m}}\textsubscript{e}}
10  \DeclareSIUnit\hartree{\textit{E}}\textsubscript{h}}
11  \DeclareSIUnit\planckbar{\LWR@siunitx@textplanckbar}
11 }%
```

Support the S and s column types:

```
12 \AtBeginDocument{
13 \HTMLnewcolumntype{S}[]{}>{\begingroup\sisetup{#1}c<\endgroup}
14 \HTMLnewcolumntype{s}[]{}>{\begingroup\sisetup{#1}c<\endgroup}
15 }
```

\@ensuredmath is not supported inside an \hbox, so it must temporarily be restored to its original. Similar for \mbox. SVG math is created explicitly when necessary, using \LWR@subsingle\$.

```
16
17 \ExplSyntaxOn
18 %
```

Modified to use the print version of \@ensuredmath to avoid having a `lateXimage` each time.

```
19 \AtBeginDocument{
20 \cs_set_protected:Npn \__siunitx_print_text:
21 {
22     \LetLtxMacro{\ensuredmath}{\LWR@origensuredmath%           lwarp
23     \tl_replace_all:Nnn \l__siunitx_print_arg_tl { - }
24     { \textminus }
25     \__siunitx_print_text_aux:
26     \tl_replace_all:Nnn \l__siunitx_print_arg_tl { \mp }
27     { \ensuremath{ \mp } }
28     \tl_remove_all:Nn \l__siunitx_print_arg_tl { \mathord }
29     \cs_set_eq:NN \PrintSubscript \__siunitx_print_text_sub:n
30     \cs_set_eq:NN \PrintSuperscript \__siunitx_print_text_super:n
31     \__siunitx_print_text_aux:Nnn
32     _ { \math_subscript } \__siunitx_print_text_sub:n
33     _ { active } \__siunitx_print_text_sub:n
34     ^ { \math_superscript } \__siunitx_print_text_super:n
35     ^ { active } \__siunitx_print_text_super:n
36     \q_recursion_tail ? ?
37     \q_recursion_stop
38     \l__siunitx_print_arg_tl
39 }
40 }
```

Modified to set set `HTML \textcolor` if not black:

```
41 \cs_new_protected:Npn \LWR@HTML@__siunitx_print_aux:
42 {
43     \text
44     {
45         \__siunitx_ensure_ltr:n
46         {
47             \color@begingroup
48 %
49             \__siunitx_print_color:
50             \__siunitx_font_shape:
51             \__siunitx_font_weight:
52             \use:c
53             {
54                 \__siunitx_ \l__siunitx_print_type_tl -
55                 text \l__siunitx_font_family_tl :
56             }
57 }
```

```

57 %           \bool_if:NTF \l__siunitx_font_math_mode_bool
58 %           {
59 %               \__siunitx_print_math:
60 %           }
61           {
62               \LWR@findcurrenttextcolor% l warp
63               \ifdefstring{\LWR@tempcolor}{000000}% l warp
64                   {\__siunitx_print_text:}% l warp
65                   {% l warp
66                       \LWR@textcurrentcolor% l warp
67                           \__siunitx_print_text:
68                           }% l warp
69                   }% l warp
70           }
71           \color@endgroup
72 %
73       }
74   }
75 }
76 \LWR@formatted{\__siunitx_print_aux:}
77
78 \cs_new_protected:Npn \LWR@HTML@__siunitx_set_math_fam:n #1 {
79     \group_begin:
80         \LetLtxMacro{\ensuredmath}{\LWR@origensuredmath% l warp
81         \LetLtxMacro{\mbox}{\LWR@print@mbox% l warp
82             \hbox_set:Nn \l__siunitx_tmp_box
83             {
84                 \ensuremath
85                 {
86                     \use:c { math #1 }
87                     {
88                         \int_const:cn { c__siunitx_math #1 _int } { \fam }
89                     }
90                 }
91             }
92         \group_end:
93     }
94 \LWR@formatted{\__siunitx_set_math_fam:n}
95
96 \cs_new_protected:Npn \LWR@HTML@__siunitx_combined_output:n #1 {
97 %
98     \group_begin:% l warp
99     \bool_if:NTF \l__siunitx_number_parse_bool
100    {
101        \tl_clear:N \l__siunitx_number_out_tl
102        \bool_set_false:N \l__siunitx_number_compound_bool
103        \__siunitx_number_output_parse:n {#1}
104    }
105    {

```

For parse-numbers=false:

```

106     \__siunitx_unit_output_pre_print:
107     \begingroup%                                l warp
108         \boolfalse{mathjax}%                  l warp
109     \__siunitx_print:nn { number } { \ensuremath { #1 } }
110         \LWR@subsingle dollar%      l warp
111         {%
112             \textbackslash( % space
113             \LWR@HTMLsanitizedetokenized{%

```

```

114                               \detokenize{#1}%
115                         } \textbackslash%           l warp
116                         }
117                         {siunitx}%
118                         addl hashing
119                         {%
120                           \_\_siunitx\_print:nn { number } {%
121                             \LWR@origensuredmath{#1}%
122                           }%
123                         }%
124                         \endgroup%
125                         l warp
126                         \_\_siunitx\_unit\_output\_print:
127                         }%
128                         \group_end:%
129 \LWR@formatted{\_\_siunitx\_combined\_output:n}

```

For parse-numbers=false:

```

130 \cs_new_protected:Npn \LWR@HTML{\_\_siunitx\_range\_numbers\_aux:n #1
131   {
132     \bool_if:NTF \l_\_siunitx_number_parse_bool
133     {
134       \tl_clear:N \l_\_siunitx_number_out_tl
135       \tl_clear:N \l_\_siunitx_number_out_saved_tl
136       \bool_set_false:N \l_\_siunitx_number_compound_bool
137       \_\_siunitx_number_output_parse:n {#1}
138       \bool_if:NT \l_\_siunitx_number_compound_bool
139         { \msg_error:nnx { siunitx } { multi-part-range } {#1} }
140     }
141     {
142       \_\_siunitx_unit_output_pre_print:
143       \begingroup%
144         \boolefalse{mathjax}%
145 %         \_\_siunitx\_print:nn { number } {#1}
146         \LWR@subsingledollar%
147           {%
148             \textbackslash( % space
149             \LWR@HTMLsanitizeddetokenized{%
150               \detokenize{#1}%
151             } \textbackslash)%
152           }%
153           {siunitx}%
154           addl hashing
155           {%
156             \_\_siunitx\_print:nn { number } {%
157               \LWR@origensuredmath{#1}%
158             }%
159           }%
160           \endgroup%
161           \_\_siunitx_unit_output_print:
162     }
163 \LWR@formatted{\_\_siunitx_range_numbers_aux:n}

```

For parse-numbers=false:

```

164 \cs_new_protected:Npn \LWR@HTML{\_\_siunitx_angle_print_direct_aux:nn #1#2 {
165   \tl_if_empty:nF {#1}
166   {
167     \tl_set:Nn \l_\_siunitx_unit_tl {#2}

```

```

168      \begingroup%                                lwarp
169          \boolfalse{mathjax}%                  lwarp
170 %         \__siunitx_print:nn { number } {#1}    lwarp
171             \LWR@subsingledollar{%
172                 \textbackslash% space
173                 \LWR@HTMLsanitizeddetokenized{%
174                     \detokenize{#1}%
175                 } \textbackslash%                      lwarp
176             }%
177             \siunitx{}%
178             {%
179                 \__siunitx_print:nn { number } {%
180                     \LWR@origensuredmath{#1}%
181                 }%
182             }%
183             \endgroup%                           lwarp
184     \__siunitx_unit_output_print:            lwarp
185 }
186 }                                         lwarp
187 \LWR@formatted{\__siunitx_angle_print_direct_aux:nn}
188 %

```

For quotients, the fraction code is replaced by the symbol code:

```

189 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_output_quotient_fraction: {
190   \bool_set_true:N \l__siunitx_number_compound_bool
191   \__siunitx_number_output_quotient_aux_i:
192   \tl_set_eq:NN \l__siunitx_number_out_tl
193     \l__siunitx_number_numerator_tl
194   \tl_put_right:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
195   \tl_put_right:NV \l__siunitx_number_out_tl
196     \l__siunitx_number_denominator_tl
197   \__siunitx_number_output_single_aux:
198 }
199 \LWR@formatted{\__siunitx_number_output_quotient_fraction:}

```

For units, the fraction code is replaced by the symbol code:

```

200 \cs_new_protected:Npn \LWR@HTML@__siunitx_unit_format_fraction: {
201   \__siunitx_unit_format_fraction_symbol_aux:
202   \int_compare:nNnT { \l__siunitx_unit_denominator_int } > { 1 }
203   {
204     \bool_if:NT \l__siunitx_unit_denominator_bracket_bool
205     {
206       \tl_put_left:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_open_tl
207       \tl_put_right:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_close_tl
208     }
209   }
210   \tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
211   \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
212   \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_unit_denominator_tl
213 }
214 \LWR@formatted{\__siunitx_unit_format_fraction:}

215 \cs_new_protected:Npn \LWR@HTML@__siunitx_angle_print_astronomy_aux: {
216   \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer }
217   \l__siunitx_tmpa_tl
218   { \__siunitx_print:nV { number } \l__siunitx_tmpa_tl }
219   \ifnumcomp{\value{\LWR@lateximagedepth}}{0}{>}{0}%

```

```

220 {%
221   \hbox_set:Nn \l_siunitx_angle_marker_box
222   {
223     \__siunitx_print:nn { number } { \l_siunitx_output_decimal_tl } }
224   }
225 \hbox_set:Nn \l_siunitx_angle_unit_box
226   {
227     \__siunitx_print:nV { unit } \l_siunitx_unit_tl
228     \skip_horizontal:n { -\scriptspace }
229   }
230 \__siunitx_angle_print_astronomy_aux:n { marker }
231 \__siunitx_angle_print_astronomy_aux:n { unit }
232 \hbox_set:Nn \l_siunitx_angle_marker_box
233   {
234     \box_use:N \l_siunitx_angle_marker_box
235     \box_use:N \l_siunitx_angle_unit_box
236   }
237 \dim_compare:nNnTF
238   { \l_siunitx_angle_marker_dim } > { \l_siunitx_angle_unit_dim }
239   { \__siunitx_angle_print_astronomy_marker: }
240   { \__siunitx_angle_print_astronomy_unit: }
241 }%
242 {%
243   \__siunitx_print:nn { number } { \l_siunitx_output_decimal_tl } }
244   \__siunitx_print:nV { unit } \l_siunitx_unit_tl
245 }%
246 \prop_get:NnNT \l_siunitx_number_out_prop { mantissa-decimal }
247 \l_siunitx_tmpa_tl
248   \__siunitx_print:nV { number } \l_siunitx_tmpa_tl
249 }
250 \LWR@formatted{\__siunitx_angle_print_astronomy_aux:}

251 \cs_new_protected:Npn \LWR@HTML@__siunitx_textsuperscript:n #1 {\textsuperscript{#1}}
252 \LWR@formatted{\__siunitx_textsuperscript:n}
253
254 \cs_new_eq:NN \LWR@HTML@__siunitx_print_text_super:n \textsuperscript
255 \LWR@formatted{\__siunitx_print_text_super:n}
256
257 \cs_new_eq:NN \LWR@HTML@__siunitx_print_text_sub:n \textsubscript
258 \LWR@formatted{\__siunitx_print_text_sub:n}

```

\LWR@origenduresmath is added here in case the user asks for \mathrm, etc. for output-exponent-marker.

```

259 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_format_final_exponent: {%
260   \prop_get:NnN \l_siunitx_number_out_prop { exponent }
261   \l_siunitx_tmpa_tl
262   \tl_if_empty:NTF \l_siunitx_output_exponent_tl
263   {
264     \tl_set:Nx \l_siunitx_tmpa_tl
265     { ^ { \exp_not:V \l_siunitx_tmpa_tl } }
266     \tl_put_left:NV \l_siunitx_tmpa_tl \l_siunitx_exponent_base_tl
267   }
268   {
269     \tl_set:Nx \l_siunitx_tmpa_tl
270     {
271       \LWR@origensuredmath{%
272         \exp_not:V \l_siunitx_output_exponent_tl
273       }%
274     }
275   }
276 }
```

```

274           \exp_not:N \mathord
275           \exp_not:V \l_siunitx_tmpa_tl
276       }
277   }
278 \prop_put:NnV \l_siunitx_number_out_prop { exponent-result }
279   \l_siunitx_tmpa_tl
280 }
281 \LWR@formatted{__siunitx_number_format_final_exponent:}

```

\LWR@origensuredmath is added here to avoid using an image for the exponent product.

```

282 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_format_final_combined: {
283   \__siunitx_number_format_brackets:n { mantissa }
284   \prop_get:NnN \l_siunitx_number_out_prop { mantissa-result }
285     \l_siunitx_tmpa_tl
286   \tl_if_empty:NT \l_siunitx_output_exponent_tl
287   {
288     \tl_put_right:Nx \l_siunitx_tmpa_tl
289     {
290       \exp_not:N \LWR@origensuredmath% l warp
291       {
292         \bool_if:NTF \l_siunitx_tight_bool
293           { { \exp_not:V \l_siunitx_exponent_product_tl } }
294           { { } \exp_not:V \l_siunitx_exponent_product_tl { } }
295       }
296     }
297   }
298   \prop_get:NnN \l_siunitx_number_out_prop { exponent-result }
299   \l_siunitx_tmpb_tl
300 \tl_put_right:NV \l_siunitx_tmpa_tl \l_siunitx_tmpb_tl
301 \prop_put:NnV \l_siunitx_number_out_prop { result }
302   \l_siunitx_tmpa_tl
303 \prop_put:Nnn \l_siunitx_number_out_prop
304   { result-bracket-exponent } { true }
305 }
306 \LWR@formatted{__siunitx_number_format_final_combined:}

```

\LWR@origensuredmath is added here to avoid using an image for the exponent product.

```

307 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_output_parts_aux: {
308   \bool_if:NTF \l_siunitx_multi_repeat_bool
309   {
310     \prop_if_in:NnT \l_siunitx_number_out_prop { mantissa-result }
311     {
312       \__siunitx_number_output_parts_aux:n { mantissa }
313       \__siunitx_number_output_parts_aux:n { complex }
314     }
315     \prop_get:NnNT \l_siunitx_number_out_prop { exponent-result }
316     \l_siunitx_tmpa_tl
317   {
318     \prop_if_in:NnT \l_siunitx_number_out_prop { mantissa-result }
319     {
320       \tl_put_left:Nx \l_siunitx_tmpa_tl
321       {
322         \exp_not:N \LWR@origensuredmath
323         {
324           \bool_if:NTF \l_siunitx_tight_bool
325             { { \exp_not:V \l_siunitx_exponent_product_tl } }

```

```

326          { { } \exp_not:V \l_siunitx_exponent_product_tl { } }
327      }
328    }
329    \prop_put:NnV \l_siunitx_number_out_prop { exponent }
330    \l_siunitx_tmpa_tl
331  }
332  \__siunitx_number_output_parts_print:n { exponent }
333 }
334 }
335 { \__siunitx_number_output_single: }
336 }
337 \LWR@formatted{\__siunitx_number_output_parts_aux:}

```

\LWR@origensuredmath is added here to avoid using an image for the exponent product.

```

338 \cs_new_protected:Npn \LWR@HTML@__siunitx_unit_output_print: {
339   \int_compare:nNnF { \l_siunitx_unit_prefix_int } = { 0 }
340   {
341     \tl_set:Nx \l_siunitx_tmpa_tl
342     {
343       \bool_if:NTF \l_siunitx_tight_bool
344       {
345         \exp_not:N \LWR@origensuredmath% l warp
346         { { } \exp_not:V \l_siunitx_exponent_product_tl } }
347       }
348       {
349         \exp_not:N \LWR@origensuredmath% l warp
350         { { } \exp_not:V \l_siunitx_exponent_product_tl { } }
351       }
352       \int_use:N \l_siunitx_unit_prefix_base_int
353       ^ { \int_use:N \l_siunitx_unit_prefix_int }
354     }
355     \__siunitx_print:nV { number } \l_siunitx_tmpa_tl
356   }
357 \tl_if_empty:NF \l_siunitx_unit_tl
358   {
359     \__siunitx_unit_output_number_sep:
360     \__siunitx_print:nV { unit } \l_siunitx_unit_tl
361   }
362 }
363 \LWR@formatted{\__siunitx_unit_output_print:}

```

\LWR@origensuredmath is added here to avoid using an image for the exponent product.

```

364 \cs_new_protected:Npn \LWR@HTML@__siunitx_range_exponent:
365   {
366     \bool_if:NT \l_siunitx_process_fixed_bool
367     {
368       \tl_set_eq:NN \l_siunitx_tmpa_tl \l_siunitx_exponent_product_tl
369       \bool_if:NT \l_siunitx_tight_bool
370       {
371         \tl_set:Nx \l_siunitx_tmpa_tl
372         { \exp_not:N \mathord \exp_not:o \l_siunitx_tmpa_tl }
373       }
374       \tl_set:Nx \l_siunitx_tmpa_tl
375       {
376         \exp_not:N \LWR@origensuredmath {%
377           \exp_not:o \l_siunitx_tmpa_tl { } }

```

```

378         }
379         10 \exp_not:N \PrintSuperscript
380         { \int_use:N \l__siunitx_process_fixed_int }
381     }
382     \__siunitx_print:nV { number } \l__siunitx_tmpa_tl
383   }
384 }
385 \LWR@formatted{\__siunitx_range_exponent:}

```

\LWR@origensuredmath is added here to avoid using an image for the exponent product.

```

386 \cs_new_protected:Npn \LWR@HTML@__siunitx_table_print_S_reserved_exponent_product:
387 {
388   \tl_set_eq:NN \l__siunitx_tmpb_tl \l__siunitx_exponent_product_tl
389   \bool_if:NT \l__siunitx_tight_bool
390   {
391     \tl_set:Nx \l__siunitx_tmpb_tl
392     { \exp_not:N \mathord \exp_not:o \l__siunitx_tmpb_tl }
393   }
394   \tl_set:Nx \l__siunitx_tmpa_tl
395   {
396     \exp_not:N \LWR@origensuredmath { { } \exp_not:o \l__siunitx_tmpb_tl { } }
397     \exp_not:o \l__siunitx_tmpa_tl
398   }
399 }
400 \LWR@formatted{\__siunitx_table_print_S_reserved_exponent_product:}

```

\LWR@origensuredmath is added here to avoid using an image for the output product.

```

401 \cs_new_protected:Npn \LWR@HTML@__siunitx_number_output_product_aux: {
402   \bool_set_true:N \l__siunitx_number_compound_bool
403   \__siunitx_number_preprocess:V \l__siunitx_number_arg_tl
404   \bool_if:NF \l__siunitx_error_bool
405   {
406     \tl_if_empty:NTF \l__siunitx_number_multi_tl
407     { \__siunitx_number_output_parse_aux: }
408     { \__siunitx_number_output_quotient: }
409     \tl_if_empty:NTF \l__siunitx_number_next_tl
410     {
411       \bool_if:NTF \l__siunitx_tight_bool
412       {
413         \__siunitx_print:nn { number }
414         { \LWR@origensuredmath { \l__siunitx_output_product_tl } }
415       }
416       {
417         \__siunitx_print:nn { number }
418         { \LWR@origensuredmath { { } \l__siunitx_output_product_tl { } } }
419       }
420       \__siunitx_number_output_parse:V \l__siunitx_number_next_tl
421     }
422   }
423 }
424 \LWR@formatted{\__siunitx_number_output_product_aux:}

```

Used to detect the math font.

```

425 \cs_set_protected:Npn \__siunitx_set_math_fam:n #1 {

```

```

426 \group_begin:
427   \hbox_set:Nn \l__siunitx_tmp_box
428   {
429     \LWR@origensuredmath%      l warp
430     {
431       \use:c { math #1 }
432       {
433         \int_const:cn { c__siunitx_math #1 _int } { \fam }
434       }
435     }
436   }
437 \group_end:
438 }
```

Force \text:

```

439 \cs_set_protected:Npn \__siunitx_range_numbers:nn #1#2
440   {
441     \__siunitx_range_numbers_aux:n {#1}
442     \text{\l__siunitx_range_phrase_tl}%
443     \__siunitx_range_numbers_aux:n {#2}
444   }
```

Force \text:

```

445 \cs_set_protected:Npn \__siunitx_range_unit:nnnn #1#2#3#4 {
446   \__siunitx_unit_parse_options:nn {#1} {#2}
447   \bool_if:NTF \l__siunitx_range_repeat_bool
448   {
449     \__siunitx_unit_in:nn {#1} {#2}
450     \__siunitx_range_numbers_aux:n {#3}
451     \text{\l__siunitx_range_phrase_tl}%
452     \__siunitx_range_numbers_aux:n {#4}
453   }
454   {
455     \bool_if:NT \l__siunitx_process_fixed_bool
456     { \bool_set_true:N \l__siunitx_process_drop_exponent_bool }
457     \bool_if:NT \l__siunitx_range_brackets_bool
458     { \__siunitx_print:nV { number } \l__siunitx_bracket_open_tl }
459     \__siunitx_range_numbers:nn {#3} {#4}
460     \bool_if:NT \l__siunitx_range_brackets_bool
461     { \__siunitx_print:nV { number } \l__siunitx_bracket_close_tl }
462     \__siunitx_range_exponent:
463     \__siunitx_unit_output_number_sep:
464     \__siunitx_unit_output:nn {#1} {#2}
465   }
466 }
```

```
467 \ExplSyntaxOff
```

```

468 \AtBeginDocument{
469 \sisetup{
470   detect-mode=true,
471   per-mode=symbol,    % fraction is not seen by pdftotext
472   text-celsius = {\LWR@siunitx@textcelsius},
473   text-degree = {\LWR@siunitx@textdegree},
474   text-arcminute = {\LWR@siunitx@textprime} ,
475   text-arcsecond = {\LWR@siunitx@textdblprime} ,
476 }
```

```
477 }

478 \LWR@origRequirePackage{l warp-common-mathjax-siunitx}
```

Passing range-phrase to common-mathjax-siunitx does not seem to work with v2 using translator as it does with v3 using translations. The range-phrase therefore is set to an en-dash.

```
479 \AtBeginDocument{
480 \CustomizeMathJax{\def\LWRsiunitxrangephase{\unicode{x2013}}}
481 }
```

File 458 l warp-common-mathjax-siunitx.sty

common-mathjax-siunitx

(Emulates or patches code by JOSEPH WRIGHT.)

common-mathjax-siunitx (*Pkg*) common-mathjax-siunitx adds MATHJAX for siunitx and siunitx-v2.

for HTML output:
MATHJAX

The following runs much faster as separate \CusomizeMathJax calls instead of one single call.

```
1 \begin{warpMathJax}
2 \LWR@infoprocessingmathjax{siunitx}

3 \CustomizeMathJax{\newcommand{\tothe}[1]{^{#1}}}
4 \CustomizeMathJax{\newcommand{\raiseto}[2]{^{#2}^{#1}}}
```

Used as an end marker when parsing values:

```
5 \CustomizeMathJax{\newcommand{\LWRsiunitxEND}{}}
```

\ang

```
[<options>] {<value>}
6 \CustomizeMathJax{\def\LWRsiunitxang#1;#2;#3;#4\LWRsiunitxEND{%
7   \ifblank{#1}{}{\num{#1}\degree}%
8   \ifblank{#2}{}{\num{#2}^{\unicode{x2032}}}\prime%
9   \ifblank{#3}{}{\num{#3}^{\unicode{x2033}}}\dblprime%
10 }%
11 \CustomizeMathJax{\newcommand{\ang}[2][]{\LWRsiunitxang#2; ;\LWRsiunitxEND}}
```

\num

```
[<options>] {<value>}
```

\num handles optional powers (e, E, d, D), multiples (x), plus and minus, and period or comma decimal output.

To split the string, \def is used with parameter delimiters. When each of the following macros is used, extra delimiters are padded to the end of the arguments of each macro when used, and the final argument of each collects any extra unused delimiters.

The number is split by dimensions (x), then by powers (E, e, D, d), then by plus / minus (+-, \pm), then by plus and minus (+, -), then into pieces before and after the decimal point or decimal comma.

Determine if the number is output with a decimal period or a decimal comma.
The enclosing braces tell MATHJAX to not add extra space after the punctuation.

```
12 \ExplSyntaxOn
13 \AtBeginDocument{
14 \ifdefstring{\l_siunitx_output_decimal_tl}{{,}{.}}
15   {\CustomizeMathJax{\def\LWRsiunitxdecimal{,}}}
16   {\CustomizeMathJax{\def\LWRsiunitxdecimal{.}}}
17 }
18 \ExplSyntaxOff
```

Any units which must be distributed across multiple dimensions:

```
19 \CustomizeMathJax{\def\LWRsiunitxdistribunit{}}
```

`siunitx` accepts either commas or periods as decimal points. `\LWRsiunitxprintdecimal` splits its input by periods then commas, parsing out before and after sections to print on either side of the decimal point.

`\LWRsiunitxENDTWO` is used only by `\LWRsiunitxprintdecimalsubtwo`, to avoid a parsing conflict with the more widely-used `\LWRsiunitxEND`.

The following splits by decimal commas:

```
20 \CustomizeMathJax{\newcommand{\LWRsiunitxENDTWO}{}}
21
22 \CustomizeMathJax{\def\LWRsiunitxprintdecimalsubtwo#1,#2,#3\LWRsiunitxENDTWO{%
```

If nothing is ahead of the decimal comma, add a leading zero:

```
23   \ifblank{#1}{0}{\mathrm{#1}}%
```

If something is after the decimal comma, print the decimal and the fraction:

```
24   \ifblank{#2}{%
25     {}
26     {%
27       {\LWRsiunitxdecimal}%
28       \mathrm{#2}%
29     }%
30   }%
```

The following splits by decimal periods:

```
31 \CustomizeMathJax{\def\LWRsiunitxprintdecimalsub#1.#2.#3\LWRsiunitxEND{%
32   \LWRsiunitxprintdecimalsubtwo#1,,\LWRsiunitxENDTWO%
33   \ifblank{#2}{%
34     {}
35     {%
36       {\LWRsiunitxdecimal}%
37       \LWRsiunitxprintdecimalsubtwo#2,,\LWRsiunitxENDTWO%
38     }%
39   }%
40
41 \CustomizeMathJax{\newcommand{\LWRsiunitxprintdecimal}[1]{%
42   \LWRsiunitxprintdecimalsub#1...\LWRsiunitxEND%
43 }}
```

The following splits by +

```
44 \CustomizeMathJax{\def\LWRsiunitxnumplus#1+#2+\#3\LWRsiunitxEND{%
45   \ifblank{#2}{%
46     {}
47     \LWRsiunitxprintdecimal{#1}%
48   }% no plus
49   {%
```

```

50      \ifblank{#1}%
51          {\LWRsiunitxprintdecimal{#2}}% leading plus, ignore
52          {%
53              \LWRsiunitxprintdecimal{#1}%
54              \unicode{x02B}% plus sign
55              \LWRsiunitxprintdecimal{#2}%
56          }%
57      }%
58      \LWRsiunitxdistribunit%
59 }

```

The following splits by -

```

60 \CustomizeMathJax{\def\lWRsiunitxnumminus#1-#2-#3\lWRsiunitxEND{%
61     \ifblank{#2}%
62         {\lWRsiunitxnumplus#1+++ \lWRsiunitxEND}%
63         {%
64             \ifblank{#1}{}{\lWRsiunitxprintdecimal{#1}}%
65             \unicode{x02212}% mathematical minus sign
66             \lWRsiunitxprintdecimal{#2}%
67             \lWRsiunitxdistribunit%
68         }%
69 }

```

The following splits by \pm

```

70 \CustomizeMathJax{\def\lWRsiunitxnumppmacro#1\pm#2\pm#3\lWRsiunitxEND{%
71     \ifblank{#2}%
72         {\lWRsiunitxnumminus#1--- \lWRsiunitxEND}%
73         {%
74             \lWRsiunitxprintdecimal{#1}%
75             \unicode{x0B1}% \pm
76             \lWRsiunitxprintdecimal{#2}%
77             \lWRsiunitxdistribunit%
78         }%
79 }

```

The following splits by +-

```

80 \CustomizeMathJax{\def\lWRsiunitxnumppm#1+-#2+-#3\lWRsiunitxEND{%
81     \ifblank{#2}%
82         {\lWRsiunitxnumppmacro#1\pm\pm\pm\lWRsiunitxEND}%
83         {%
84             \lWRsiunitxprintdecimal{#1}%
85             \unicode{x0B1}% \pm
86             \lWRsiunitxprintdecimal{#2}%
87             \lWRsiunitxdistribunit%
88         }%
89 }

```

Processes scientific notation. Special handling for a mantissa which is either empty or only a minus sign.

```

90 \CustomizeMathJax{\newcommand{\lWRsiunitxnumscientific}[2]{%
91     \ifblank{#1}%
92         {}%
93         {%
94             \ifstreq{#1}{-}%
95                 {-}%
96                 {\lWRsiunitxprintdecimal{#1}\times}%
97             }%
98             10^{ \lWRsiunitxprintdecimal{#2}}%
99             \lWRsiunitxdistribunit%
100 }

```

The following splits by D

```
101 \CustomizeMathJax{\def\LWRsiunitxnumD#1#2#3\LWRsiunitxEND{%
102     \ifblank{#2}{%
103         {\LWRsiunitxnumpm#1+--\LWRsiunitxEND}%
104         {\mathrm{\LWRsiunitxnumscientific[#1]{#2}}}}%
105 }}
```

The following splits by d

The following splits by E

```
111 \CustomizeMathJax{\def\lwr{\si{#1E#2E#3}}\def\lur{\si{#1E#2E#3}}%  
112     \ifblank{#2}{%  
113         {\lwr{\#1dd}\lur{\#1}}%  
114         {\mathrm{\lwr{\#1}scientific{#2}}}}%  
115 }}
```

The following splits by e

```
116 \CustomizeMathJax{\def\lwr#1#2\lwr#1{%
117     \ifblank{#2}{%
118         {\lwr#1EEE\lwr#1}%
119         {\mathrm{\lwr#1numscientific{#1}{#2}}}}%
120 }}}
```

The following splits by x

```
121 \CustomizeMathJax{\def\LWRsiunitxnum{#1x#2x#3x#4}\LWRsiunitxEND{%
122     \ifblank{#2}{%
123         {\LWRsiunitxnum{#1eee}\LWRsiunitxEND}%
124     {%
125         \ifblank{#3}{%
126             {%
127                 \LWRsiunitxnum{#1eee}\LWRsiunitxEND%
128                 \times%
129                 \LWRsiunitxnum{#2eee}\LWRsiunitxEND%
130             }%
131         {%
132             \LWRsiunitxnum{#1eee}\LWRsiunitxEND%
133             \times%
134             \LWRsiunitxnum{#2eee}\LWRsiunitxEND%
135             \times%
136             \LWRsiunitxnum{#3eee}\LWRsiunitxEND%
137         }%
138     }%
139 }}
```

```
140 \CustomizeMathJax{\newcommand{\num}[2][]{\%  
141     \LWRsiunitxnumx#2xxxxx\LWRsiunitxEND%  
142 }}
```

[*options*] {*unit*}

~ is converted to a thin space. Not able to convert period to thin space because the period might be in \raisebox, for example.

```
143 \CustomizeMathJax{\newcommand{\si}[2][]{\%
```

```

144     \mathrm{\gsubstitute{#2}{\sim}{\, ,}}%
145 }

```

$[\langle options \rangle] \{ \langle value \rangle \} [\langle prefix \rangle] \{ \langle unit \rangle \}$

\SI has a second optional arg, which is parsed using \ifnextchar.

```

146 \CustomizeMathJax{\def\LWRsiunitxSIopt#1[#2]#3{%
147   \def\LWRsiunitxdistribunit{\, \si{#3}}%
148   {#2}\num{#1}%
149   \def\LWRsiunitxdistribunit{}%
150 }%
151
152 \CustomizeMathJax{\newcommand{\LWRsiunitxSI}[2]{%
153   \def\LWRsiunitxdistribunit{\, \si{#2}}%
154   \num{#1}%
155   \def\LWRsiunitxdistribunit{}%
156 }%
157 \CustomizeMathJax{\newcommand{\SI}[2][]{%
158   \ifnextchar[%%
159     {\LWRsiunitxSIopt{#2}}%
160     {\LWRsiunitxSI{#2}}%
161 }%

```

$[\langle options \rangle] \{ \langle list \rangle \}$

\numlist should only be used in text mode. If used in MATHJAX, it is merely printed as text, so add space around the semicolons.

```
162 \CustomizeMathJax{\newcommand{\numlist}[2][]{\text{#2}}}
```

$[\langle options \rangle] \{ \langle value1 \rangle \} \{ \langle value2 \rangle \}$

\numrange should only be used in text mode. If used in MATHJAX math, an en-dash is used instead of the range-phrase.

```

163 \CustomizeMathJax{\newcommand{\numrange}[3][]{%
164   \num{#2}\, \LWRsiunitxrangephase\, \num{#3}}%
165 }%

```

$[\langle options \rangle] \{ \langle list \rangle \}$

\SIList and \SIRange should only be used in text mode. If used in MATHJAX, a simple emulation is provided.

```
166 \CustomizeMathJax{\newcommand{\SIList}[3][]{\text{#2}\, \si{#3}}}
```

$[\langle options \rangle] \{ \langle value1 \rangle \} \{ \langle value2 \rangle \} \{ \langle unit \rangle \}$

```

167 \CustomizeMathJax{\newcommand{\SIRange}[4][]{%
168   \num{#2}\, \#4\, \LWRsiunitxrangephase\, \num{#3}\, \#4}%
169 }%

```

$[\langle options \rangle] \{ \langle value \rangle \}$

```
170 \CustomizeMathJax{\newcommand{\tablenum}[2][]{\mathrm{#2}}}
```

```

171 \CustomizeMathJax{\newcommand{\ampere}{\mathrm{A}}}
172 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
173 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}

```

```
174 \CustomizeMathJax{\newcommand{\kilogram}{\mathrm{kg}}}}
175 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
176 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
177 \CustomizeMathJax{\newcommand{\second}{\mathrm{s}}}
178 %
179 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
180 \CustomizeMathJax{\newcommand{\degreeCelsius}{\mathrm{\mathit{\Omega}}}}
181 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
182 \CustomizeMathJax{\newcommand{\farad}{\mathrm{F}}}
183 \CustomizeMathJax{\newcommand{\gray}{\mathrm{Gy}}}
184 \CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}
185 \CustomizeMathJax{\newcommand{\henry}{\mathrm{H}}}
186 \CustomizeMathJax{\newcommand{\joule}{\mathrm{J}}}
187 \CustomizeMathJax{\newcommand{\katal}{\mathrm{kat}}}
188 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
189 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}
190 \CustomizeMathJax{\newcommand{\newton}{\mathrm{N}}}
191 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
192 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
193 \CustomizeMathJax{\newcommand{\radian}{\mathrm{rad}}}
194 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
195 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
196 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
197 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
198 \CustomizeMathJax{\newcommand{\volt}{\mathrm{V}}}
199 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
200 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
201 \CustomizeMathJax{\newcommand{\day}{\mathrm{d}}}
202 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}
203 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{ha}}}
204 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}
205 \CustomizeMathJax{\newcommand{\litre}{\mathrm{l}}}
206 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
207 \CustomizeMathJax{\newcommand{\arcminute}{\mathrm{'}\prime}}
208 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}
209 \CustomizeMathJax{\newcommand{\arcsecond}{\mathrm{''}\prime\prime}}
210 \CustomizeMathJax{\newcommand{\tonne}{\mathrm{t}}}
211 \CustomizeMathJax{\newcommand{\astronomicalunit}{\mathrm{au}}}
212 \CustomizeMathJax{\newcommand{\atomicmassunit}{\mathrm{u}}}
213 \CustomizeMathJax{\newcommand{\bohr}{\mathrm{a}_0}}
214 \CustomizeMathJax{\newcommand{\clight}{\mathrm{c}_0}}
215 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{D}_\mathrm{a}}}
216 \CustomizeMathJax{\newcommand{\electronmass}{\mathrm{m}_e}}
217 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{eV}}}
218 \CustomizeMathJax{\newcommand{\elementarycharge}{\mathrm{e}}}
219 \CustomizeMathJax{\newcommand{\hartree}{\mathrm{E}_h}}
220 \CustomizeMathJax{\newcommand{\planckbar}{\mathrm{\hbar}}}
221 \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\text{\AA}}}}
222 \CustomizeMathJax{\let\LRorigbar\bar}
223 \CustomizeMathJax{\newcommand{\bar}{\mathrm{bar}}}
224 \CustomizeMathJax{\newcommand{\barn}{\mathrm{b}}}
225 \CustomizeMathJax{\newcommand{\bel}{\mathrm{B}}}
226 \CustomizeMathJax{\newcommand{\decibel}{\mathrm{dB}}}
227 \CustomizeMathJax{\newcommand{\knot}{\mathrm{kn}}}
228 \CustomizeMathJax{\newcommand{\mmHg}{\mathrm{mmHg}}}
229 \CustomizeMathJax{\newcommand{\nauticalmile}{\mathrm{M}}}
230 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}
231 %
232 \CustomizeMathJax{\newcommand{\yocto}{\mathrm{y}}}
233 \CustomizeMathJax{\newcommand{\zepto}{\mathrm{z}}}
```

```
234 \CustomizeMathJax{\newcommand{\atto}{\mathrm{a}}}
235 \CustomizeMathJax{\newcommand{\femto}{\mathrm{f}}}
236 \CustomizeMathJax{\newcommand{\pico}{\mathrm{p}}}
237 \CustomizeMathJax{\newcommand{\nano}{\mathrm{n}}}
238 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
239 \CustomizeMathJax{\newcommand{\milli}{\mathrm{m}}}
240 \CustomizeMathJax{\newcommand{\centi}{\mathrm{c}}}
241 \CustomizeMathJax{\newcommand{\deci}{\mathrm{d}}}
242 \CustomizeMathJax{\newcommand{\deca}{\mathrm{da}}}
243 \CustomizeMathJax{\newcommand{\hecto}{\mathrm{h}}}
244 \CustomizeMathJax{\newcommand{\kilo}{\mathrm{k}}}
245 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
246 \CustomizeMathJax{\newcommand{\giga}{\mathrm{G}}}
247 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
248 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
249 \CustomizeMathJax{\newcommand{\exa}{\mathrm{E}}}
250 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
251 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
252 %
253 \CustomizeMathJax{\newcommand{\percent}{\mathrm{\%}}}
254 %
255 \CustomizeMathJax{\newcommand{\meter}{\mathrm{m}}}
256 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
257 %
258 \CustomizeMathJax{\newcommand{\gram}{\mathrm{g}}}
259 \CustomizeMathJax{\newcommand{\kg}{\mathrm{kilo}\mathrm{gram}}}
260 \CustomizeMathJax{\newcommand{\of}[1]{\mathrm{\#1}}}
261 \CustomizeMathJax{\newcommand{\squared}{^2}}
262 \CustomizeMathJax{\newcommand{\square}[1]{\mathrm{\#1}^2}}
263 \CustomizeMathJax{\newcommand{\cubed}{^3}}
264 \CustomizeMathJax{\newcommand{\cubic}[1]{\mathrm{\#1}^3}}
265 \CustomizeMathJax{\newcommand{\per}{\mathrm{/}}}
266 \CustomizeMathJax{\newcommand{\celsius}{\mathrm{\unicode{x2103}}}}
267 %
268 \CustomizeMathJax{\newcommand{\fg}{\mathrm{femto}\mathrm{gram}}}
269 \CustomizeMathJax{\newcommand{\pg}{\mathrm{pico}\mathrm{gram}}}
270 \CustomizeMathJax{\newcommand{\ng}{\mathrm{nano}\mathrm{gram}}}
271 \CustomizeMathJax{\newcommand{\ug}{\mathrm{micro}\mathrm{gram}}}
272 \CustomizeMathJax{\newcommand{\mg}{\mathrm{milli}\mathrm{gram}}}
273 \CustomizeMathJax{\newcommand{\g}{\mathrm{gram}}}
274 \CustomizeMathJax{\newcommand{\kg}{\mathrm{kilo}\mathrm{gram}}}
275 %
276 \CustomizeMathJax{\newcommand{\amu}{\mathrm{u}}}
277 %
278 \CustomizeMathJax{\newcommand{\pm}{\mathrm{pico}\mathrm{metre}}}
279 \CustomizeMathJax{\newcommand{\nm}{\mathrm{nano}\mathrm{metre}}}
280 \CustomizeMathJax{\newcommand{\um}{\mathrm{micro}\mathrm{metre}}}
281 \CustomizeMathJax{\newcommand{\mm}{\mathrm{milli}\mathrm{metre}}}
282 \CustomizeMathJax{\newcommand{\cm}{\mathrm{centi}\mathrm{metre}}}
283 \CustomizeMathJax{\newcommand{\dm}{\mathrm{deci}\mathrm{metre}}}
284 \CustomizeMathJax{\newcommand{\m}{\mathrm{metre}}}
285 \CustomizeMathJax{\newcommand{\km}{\mathrm{kilo}\mathrm{metre}}}
286 %
287 \CustomizeMathJax{\newcommand{\as}{\mathrm{atto}\mathrm{second}}}
288 \CustomizeMathJax{\newcommand{\fs}{\mathrm{femto}\mathrm{second}}}
289 \CustomizeMathJax{\newcommand{\ps}{\mathrm{pico}\mathrm{second}}}
290 \CustomizeMathJax{\newcommand{\ns}{\mathrm{nano}\mathrm{second}}}
```

```
291 \CustomizeMathJax{\newcommand{\us}{\micro\second}}
292 \CustomizeMathJax{\newcommand{\ms}{\milli\second}}
293 \CustomizeMathJax{\newcommand{\s}{\second}}
294 %
295 \CustomizeMathJax{\newcommand{\fmol}{\femto\mol}}
296 \CustomizeMathJax{\newcommand{\pmol}{\pico\mol}}
297 \CustomizeMathJax{\newcommand{\nmol}{\nano\mol}}
298 \CustomizeMathJax{\newcommand{\umol}{\micro\mol}}
299 \CustomizeMathJax{\newcommand{\mmol}{\milli\mol}}
300 \CustomizeMathJax{\newcommand{\mol}{\mol}}
301 \CustomizeMathJax{\newcommand{\kmol}{\kilo\mol}}
302 %
303 \CustomizeMathJax{\newcommand{\pA}{\pico\ampere}}
304 \CustomizeMathJax{\newcommand{\nA}{\nano\ampere}}
305 \CustomizeMathJax{\newcommand{\uA}{\micro\ampere}}
306 \CustomizeMathJax{\newcommand{\mA}{\milli\ampere}}
307 \CustomizeMathJax{\newcommand{\A}{\ampere}}
308 \CustomizeMathJax{\newcommand{\kA}{\kilo\ampere}}
309 %
310 \CustomizeMathJax{\newcommand{\ul}{\micro\litre}}
311 \CustomizeMathJax{\newcommand{\ml}{\milli\litre}}
312 \CustomizeMathJax{\newcommand{\l}{\litre}}
313 \CustomizeMathJax{\newcommand{\hl}{\hecto\litre}}
314 \CustomizeMathJax{\newcommand{\uL}{\micro\liter}}
315 \CustomizeMathJax{\newcommand{\mL}{\milli\liter}}
316 \CustomizeMathJax{\newcommand{\L}{\liter}}
317 \CustomizeMathJax{\newcommand{\hL}{\hecto\liter}}
318 %
319 \CustomizeMathJax{\newcommand{\mHz}{\milli\hertz}}
320 \CustomizeMathJax{\newcommand{\Hz}{\hertz}}
321 \CustomizeMathJax{\newcommand{\kHz}{\kilo\hertz}}
322 \CustomizeMathJax{\newcommand{\MHz}{\mega\hertz}}
323 \CustomizeMathJax{\newcommand{\GHz}{\giga\hertz}}
324 \CustomizeMathJax{\newcommand{\THz}{\tera\hertz}}
325 %
326 \CustomizeMathJax{\newcommand{\mN}{\milli\newton}}
327 \CustomizeMathJax{\newcommand{\N}{\newton}}
328 \CustomizeMathJax{\newcommand{\kN}{\kilo\newton}}
329 \CustomizeMathJax{\newcommand{\MN}{\mega\newton}}
330 %
331 \CustomizeMathJax{\newcommand{\Pa}{\pascal}}
332 \CustomizeMathJax{\newcommand{\kPa}{\kilo\pascal}}
333 \CustomizeMathJax{\newcommand{\MPa}{\mega\pascal}}
334 \CustomizeMathJax{\newcommand{\GPa}{\giga\pascal}}
335 %
336 \CustomizeMathJax{\newcommand{\mohm}{\milli\ohm}}
337 \CustomizeMathJax{\newcommand{\kohm}{\kilo\ohm}}
338 \CustomizeMathJax{\newcommand{\Mohm}{\mega\ohm}}
339 %
340 \CustomizeMathJax{\newcommand{\pV}{\pico\volt}}
341 \CustomizeMathJax{\newcommand{\nV}{\nano\volt}}
342 \CustomizeMathJax{\newcommand{\uv}{\micro\volt}}
343 \CustomizeMathJax{\newcommand{\mV}{\milli\volt}}
344 \CustomizeMathJax{\newcommand{\V}{\volt}}
345 \CustomizeMathJax{\newcommand{\kV}{\kilo\volt}}
346 %
347 \CustomizeMathJax{\newcommand{\W}{\watt}}
348 \CustomizeMathJax{\newcommand{\uW}{\micro\watt}}
349 \CustomizeMathJax{\newcommand{\mW}{\milli\watt}}
350 \CustomizeMathJax{\newcommand{\kW}{\kilo\watt}}
```

```

351 \CustomizeMathJax{\newcommand{\MW}{\mega\watt}}
352 \CustomizeMathJax{\newcommand{\GW}{\giga\watt}}
353 %
354 \CustomizeMathJax{\newcommand{\J}{\joule}}
355 \CustomizeMathJax{\newcommand{\uJ}{\micro\joule}}
356 \CustomizeMathJax{\newcommand{\mJ}{\milli\joule}}
357 \CustomizeMathJax{\newcommand{\kJ}{\kilo\joule}}
358 %
359 \CustomizeMathJax{\newcommand{\eV}{\electronvolt}}
360 \CustomizeMathJax{\newcommand{\meV}{\milli\electronvolt}}
361 \CustomizeMathJax{\newcommand{\keV}{\kilo\electronvolt}}
362 \CustomizeMathJax{\newcommand{\MeV}{\mega\electronvolt}}
363 \CustomizeMathJax{\newcommand{\GeV}{\giga\electronvolt}}
364 \CustomizeMathJax{\newcommand{\TeV}{\tera\electronvolt}}
365 %
366 \CustomizeMathJax{\newcommand{\kWh}{\kilo\watt\hour}}
367 %
368 \CustomizeMathJax{\newcommand{\F}{\farad}}
369 \CustomizeMathJax{\newcommand{\FF}{\femto\farad}}
370 \CustomizeMathJax{\newcommand{\pF}{\pico\farad}}
371 %
372 \CustomizeMathJax{\newcommand{\K}{\mathrm{K}}}
373 %
374 \CustomizeMathJax{\newcommand{\dB}{\mathrm{dB}}}
375 %
376 \CustomizeMathJax{\newcommand{\kibi}{\mathrm{Ki}}}
377 \CustomizeMathJax{\newcommand{\mebi}{\mathrm{Mi}}}
378 \CustomizeMathJax{\newcommand{\gibi}{\mathrm{Gi}}}
379 \CustomizeMathJax{\newcommand{\tebi}{\mathrm{Ti}}}
380 \CustomizeMathJax{\newcommand{\pebi}{\mathrm{Pi}}}
381 \CustomizeMathJax{\newcommand{\exbi}{\mathrm{Ei}}}
382 \CustomizeMathJax{\newcommand{\zebi}{\mathrm{Zi}}}
383 \CustomizeMathJax{\newcommand{\yobi}{\mathrm{Yi}}}
384 \end{warpMathJax}

```

File 459 lwarf-skmath.sty

§ 568 Package **skmath**

(Emulates or patches code by SIMON SIGURDHSSON.)

skmath (*Pkg*) skmath is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{skmath}[2019/10/15]

Only defined if package option requested:

```

2 \begin{warpMathJax}
3 \ExplSyntaxOn
4 \bool_if:NT\g__skmath_define_common_sets_bool{
5 \CustomizeMathJax{\newcommand{\N}{\mathbb{N}}}
6 \CustomizeMathJax{\newcommand{\Z}{\mathbb{Z}}}
7 \CustomizeMathJax{\newcommand{\Q}{\mathbb{Q}}}
8 \CustomizeMathJax{\newcommand{\R}{\mathbb{R}}}
9 \CustomizeMathJax{\newcommand{\C}{\mathbb{C}}}
10 }

```

skmath is using `\3keys`, which does not seem to have an equivalent to `\@ifpackagewith`. To detect package options, comparisons with the following are made to see if various macros have been defined as follows:

```
11 \cs_gset_nopar:Npn\LWR__skmath_imaginary_unit:n#1{{#1}}
12 \cs_gset_nopar:Npn\LWR__skmath_natural_log_e:{e}
13 \cs_gset_nopar:Npn\LWR__skmath_integral_d:{d}
14 \cs_gset_nopar:Npn\LWR__skmath_total_derivative_d:{d}
```

If `notation=iso`, use upright, else italic:

```
15 \cs_if_eq:NNTF \__skmath_imaginary_unit:n \LWR__skmath_imaginary_unit:n
16   {
17     \CustomizeMathJax{\newcommand{ii}{\mathit{i}}}
18     \CustomizeMathJax{\newcommand{jj}{\mathit{j}}}
19   }
20   {
21     \CustomizeMathJax{\newcommand{ii}{\mathrm{i}}}
22     \CustomizeMathJax{\newcommand{jj}{\mathrm{j}}}
23 }
```

If `notation=iso`, use upright, else italic:

```
24 \cs_if_eq:NNTF \__skmath_natural_log_e: \LWR__skmath_natural_log_e:
25   { \CustomizeMathJax{\newcommand{\ee}{\mathit{e}}} }
26   { \CustomizeMathJax{\newcommand{\ee}{\mathrm{e}}} }
```

skmath uses `\DeclarePairedDelimiter` from `mathtools` for `\abs` and `\norm`, and **l warp** uses this to automatically define MATHJAX definitions for each.

If `notation=english`, use slanted, else upright:

```
27 \cs_if_eq:NNTF \__skmath_integral_d: \LWR__skmath_integral_d:
28   { \CustomizeMathJax{\newcommand{\d}{\mathit{d}}} }
29   { \CustomizeMathJax{\newcommand{\d}{\mathrm{d}}} }
```

Used to parse comma and caret arguments for `\pd` and `\td`:

```
30 \CustomizeMathJax{\def\LWRskmathEND{}}
```

Parse the arguments with up to four commas. Argument 6 contains any leftover commas.

```
31 \CustomizeMathJax{\def\LWRskmathpdstarsub#1#2,#3,#4,#5,#6\LWRskmathEND{
32   #1_{#2#3#4#5}%
33 }%
34 %
35 \CustomizeMathJax{\newcommand{\LWRskmathpdstar}[2]{%
36   \LWRskmathpdstarsub{#1}#2,,,\LWRskmathEND%
37 }}
```

Parse the arguments with up to two carets. Argument 3 contains any leftover carets. `\LWRskmathpdplus` is used to only place a plus sign starting after the first term. `\LWRskmathpddone` is used to only place a 1 digit if a second or later term does not have a power.

```
38 \CustomizeMathJax{\def\LWRskmathpdnumeratorm#1^#2^#3\LWRskmathEND{%
39   \ifblank{#1}{}}
```

```

40           \ifblank{#2}{\LWRskmathpdplus\LWRskmathpddone}{\LWRskmathpdplus#2}
41       }
42 }

```

Parse the arguments with up to two carets. Argument 3 contains any leftover carets.

```

43 \CustomizeMathJax{\def\LWRskmathpddenominator#1^#2^#3\LWRskmathEND{%
44   \ifblank{#1}{}{%
45     \ifblank{#2}{%
46       {\partial{#1}}%
47       {\partial{#1}^{#2}}%
48     }%
49   }%

```

Factored from `\LWRskmathpdnostarsub`, following:

The phrase `^{}{}` appears to be required while parsing the carets. `\LWRskmathpdplus` is used to only place a plus sign starting after the first term. `\LWRskmathpddone` is used to only place a 1 digit if a second or later term does not have a power.

This may not be recursion-safe. (Is there really such a thing as nested differentials?)

```

50 \CustomizeMathJax{\newcommand{\LWRskmathdonumerator}[5]{%
51   \partial^{%
52     \def\LWRskmathpdplus{}{%
53       \LWRskmathpdnumerator#2^{}{}^{}\LWRskmathEND{%
54         \def\LWRskmathpdplus{+}{%
55           \def\LWRskmathpddone{1}{%
56             \LWRskmathpdnumerator#3^{}{}^{}\LWRskmathEND{%
57               \LWRskmathpdnumerator#4^{}{}^{}\LWRskmathEND{%
58                 \LWRskmathpdnumerator#5^{}{}^{}\LWRskmathEND{%
59               }%
60             {#1}}%
61           }%
62         }%
63       \CustomizeMathJax{\newcommand{\LWRskmathdodenominator}[4]{%
64         \LWRskmathpdnumerator#1^{}{}^{}\LWRskmathEND{%
65           \ifblank{#2}{}{,}%
66           \LWRskmathpdnumerator#2^{}{}^{}\LWRskmathEND{%
67             \ifblank{#3}{}{,}%
68             \LWRskmathpdnumerator#3^{}{}^{}\LWRskmathEND{%
69               \ifblank{#4}{}{,}%
70               \LWRskmathpdnumerator#4^{}{}^{}\LWRskmathEND{%
71             }}}%

```

Parse the arguments with up to four commas. Argument 6 contains any leftover commas.

```

72 \CustomizeMathJax{\def\LWRskmathpdnostarsub#1#2,#3,#4,#5,#6\LWRskmathEND{%
73   \ifblank{#3}{\def\LWRskmathpddone{}{\def\LWRskmathpddone{1}}}
74   \frac{%
75     {\LWRskmathdonumerator{#1}{#2}{#3}{#4}{#5}}%
76     {\LWRskmathdodenominator{#2}{#3}{#4}{#5}}%
77   }%
78 }
79 \CustomizeMathJax{\newcommand{\LWRskmathpdnostar}[2]{%
80   \LWRskmathpdnostarsub{#1}{#2},,,,\LWRskmathEND%

```

```

81 }}

82 \CustomizeMathJax{\newcommand{\pd}{\ifstar\LWRskmathpdstar\LWRskmathpdnostar}{}}

If notation=english or legacy, use slanted, else upright:

83 \cs_if_eq:NNTF \__skmath_total_derivative_d: \LWR__skmath_total_derivative_d:
84   { \CustomizeMathJax{\newcommand{\LWRskmathtd}{\mathit{#d}}} }
85   { \CustomizeMathJax{\newcommand{\LWRskmathtd}{\mathrm{#d}}} }

86 \CustomizeMathJax{\def\LWRskmathtdsub#1#2^#3\LWRskmathEND{%
87   \frac
88     {\LWRskmathtd^{#3}{#1}}
89     {\LWRskmathtd^{#2}{#3}}
90 }}}
91
92 \CustomizeMathJax{\newcommand{\td}[2]{%
93   \LWRskmathtdsub{#1}{#2}{}}\LWRskmathEND%
94 }}

95 \CustomizeMathJax{\newcommand{\E}[1]{%
96   \operatorname{E}\left[\#1\right]}
97 }}

98 \CustomizeMathJax{\let\given\mid}
99
100 \CustomizeMathJax{\newcommand{\P}[1]{%
101   \operatorname{P}\left(\#1\right)}
102   \left(\#1\right)}
103 }}

104 \CustomizeMathJax{\newcommand{\var}[1]{%
105   \operatorname{Var}\left(\#1\right)}
106 }}
107
108 \CustomizeMathJax{\newcommand{\cov}[2]{%
109   \operatorname{Cov}\left(\#1,\#2\right)}
110 }}

```

Common code for \sin etc:

```

111 \CustomizeMathJax{\newcommand{\LWRskmathtrigtwo}[2][]{%
112   \ifblank{#1}{}{\^{#1}}%
113   \ifblank{#2}{}{\left(\#2\right)}%
114 }}
115
116 \CustomizeMathJax{\newcommand{\LWRskmathtrig}[1]{%
117   \operatorname{#1}\left(\#1\right)}
118   \LWRskmathtrigtwo%
119 }}

120 \CustomizeMathJax{\renewcommand{\sin}{\LWRskmathtrig{sin}}}
121 \CustomizeMathJax{\renewcommand{\arcsin}{\LWRskmathtrig{arcsin}}}
122
123 \CustomizeMathJax{\renewcommand{\cos}{\LWRskmathtrig{cos}}}
124 \CustomizeMathJax{\renewcommand{\arccos}{\LWRskmathtrig{arccos}}}
125
126 \CustomizeMathJax{\renewcommand{\tan}{\LWRskmathtrig{tan}}}

```

```

127 \CustomizeMathJax{\renewcommand{\arctan}{\LWRskmathtrig{arctan}}}
128
129 \CustomizeMathJax{\renewcommand{\cot}{\LWRskmathtrig{cot}}}
130
131 \CustomizeMathJax{\renewcommand{\sinh}{\LWRskmathtrig{sinh}}}
132 \CustomizeMathJax{\renewcommand{\cosh}{\LWRskmathtrig{cosh}}}
133 \CustomizeMathJax{\renewcommand{\tanh}{\LWRskmathtrig{tanh}}}
```

Common code for `\ln` and `\log`:

```

134 \CustomizeMathJax{\newcommand{\LWRskmathlogtwo}[2][]{%
135   \ifblank{#1}{}{_{}{#1}}%
136   \ifblank{#2}{}{\left(#2\right)}%
137 }%
138
139 \CustomizeMathJax{\newcommand{\LWRskmathlog}[1]{%
140   \operatorname{#1}}%
141   \LWRskmathlogtwo%
142 }}

143 \CustomizeMathJax{\renewcommand{\ln}{\LWRskmathlog{ln}}}
144 \CustomizeMathJax{\renewcommand{\log}{\LWRskmathlog{log}}}

145 \CustomizeMathJax{\newcommand{\LWRskmathxpparens}[1]{%
146   \operatorname{exp}}%
147   \ifblank{#1}{}{\left(#1\right)}%
148 }}
```

See the `skmath` source for the original of the following:

```

149 \CustomizeMathJax{\newcommand{\LWRskmathxpnostar}[1]{%
150   \mathchoice
151     {\mathrm{e}^{#1}}
152     {\mathrm{LWRskmathxpparens}{#1}}
153     {\mathrm{LWRskmathxpparens}{#1}}
154     {\mathrm{LWRskmathxpparens}{#1}}%
155 }%
156
157 \CustomizeMathJax{\renewcommand{\exp}{\mathrm{ifstar}\mathrm{LWRskmathxpparens}\mathrm{LWRskmathxpnostar}}}}
```

Common code for `\min` etc:

```

158 \CustomizeMathJax{\newcommand{\LWRskmathminstar}[2][]{%
159   \operatorname{\LWRskmathminname}}%
160   \ifblank{#1}{}{%
161     _{\mathchoice{\mathclap{#1}}{#1}{#1}{#1}}%
162   }%
163   \ifblank{#2}{}{#2}}%
164 }

165 \CustomizeMathJax{\newcommand{\LWRskmathminnostar}[2][]{%
166   \ifblank{#1}{%
167     \operatorname{\LWRskmathminname}}{%
168     \%\\underset{\mathchoice{\mathclap{#1}}{#1}{#1}{#1}}{\operatorname{\LWRskmathminname}}}}%
169   \ifblank{#2}{%
170     \operatorname{\LWRskmathminname}}{%
171     \operatorname{\LWRskmathminname}}}}%
172 }
```

```

173     \ifblank{#2}{}{\left\{#2\right\}}%
174 }

\LWRskmathminname seems to be recursion-safe since it is used immediately.

175 \CustomizeMathJax{\newcommand{\LWRskmathmin}[1]{%
176     \def\LWRskmathminname{#1}%
177     \ifstar\LWRskmathminstar\LWRskmathminnostar%
178 }}

179 \CustomizeMathJax{\renewcommand{\min}{\LWRskmathmin{min}}}%
180 \CustomizeMathJax{\renewcommand{\argmin}{\arg\LWRskmathmin{min}}}%
181
182 \CustomizeMathJax{\renewcommand{\max}{\LWRskmathmin{max}}}%
183 \CustomizeMathJax{\renewcommand{\argmax}{\arg\LWRskmathmin{max}}}%
184 \CustomizeMathJax{\renewcommand{\sup}{\LWRskmathmin{sup}}}%
185 \CustomizeMathJax{\renewcommand{\inf}{\LWRskmathmin{inf}}}

186 \CustomizeMathJax{\let\bar\overline}
187
188 \CustomizeMathJax{\let\vec\boldsymbol}

```

Remember the original definitions:

```

189 \CustomizeMathJax{\let\LWRskmathRe\Re}
190 \CustomizeMathJax{\let\LWRskmathIm\Im}

```

Redefine depending on notation=iso:

```

191 \bool_if:NTF\g__skmath_iso_complex_parts_bool{%
192     \CustomizeMathJax{\renewcommand{\Re}[1]{%
193         \LWRskmathRe%
194         \ifblank{#1}{}{\left(#1\right)}%
195     }%
196     \CustomizeMathJax{\renewcommand{\Im}[1]{%
197         \LWRskmathIm%
198         \ifblank{#1}{}{\left(#1\right)}%
199     }%
200 }{%
201     \CustomizeMathJax{\renewcommand{\Re}[1]{%
202         \operatorname{Re}%
203         \ifblank{#1}{}{\#1}%
204     }%
205     \CustomizeMathJax{\renewcommand{\Im}[1]{%
206         \operatorname{Im}%
207         \ifblank{#1}{}{\#1}%
208     }%
209 }
210
211 \ExplSyntaxOff
212 \end{warpMathJax}

```

File 460 **l warp-slantsc.sty**

§ 569 Package **slantsc**

(Emulates or patches code by HARALD HARDERS.)

slantsc (Pkg) slantsc is emulated for HTML, and used as-is for print output.

for HTML output:

```
1 \LWR@ProvidesPackagePass{slantsc}[2012/01/01]

2 \newcommand*\LWR@HTML@noscshape{}{}
3 \LWR@formatted{noscshape}
4
5 \FilenameNullify{%
6   \LetLtxMacro\noscshape\empty%
7 }
```

File 461 **l warp-slashed.sty**

§ 570 Package **slashed**

(Emulates or patches code by DAVID CARLISLE.)

slashed (Pkg) slashed works as-s for HTML SVG math. For MATHJAX, emulation is provided.

for HTML output:

```
1 \LWR@ProvidesPackagePass{slashed}[1997/01/16]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\slashed}[1]{\cancel{#1}}}
4 \end{warpMathJax}
```

File 462 **l warp-soul.sty**

§ 571 Package **soul**

(Emulates or patches code by MELCHIOR FRANZ.)

soul (Pkg) soul is emulated.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{soul}[2003/11/17]
2 \RequirePackage{xcolor} for \convertcolorspec
```

Storage for the colors to use:

```
3 \newcommand*\LWR@soululcolor{}{}
4
5 \newcommand*\LWR@soulstcolor{}{}
6
7 \% \definecolor{\LWR@soulhlcolordefault}{HTML}{F8E800}
8 \% \newcommand*\LWR@soulhlcolor{\LWR@soulhlcolordefault}
9 \newcommand*\LWR@soulhlcolor{}{}
```

\so
 {<text>}

Basic markup with css:

```
10 \newcommand{\so}[1]{%
11 \InlineClass(letter-spacing:.2ex){letterspacing}{#1}%
12 }
```

```

\caps {<text>}

13 \newcommand{\caps}[1]{%
14     \InLineClass%
15         (font-variant:small-caps;letter-spacing:.1ex)%
16         {capsspacing}{#1}%
17 }

\LWR@soulcolor {<text>} {<color>} {<class>} {<colorstyle>} {<FormatWPstyle>}
Add colors if not empty:

18 \newcommand{\LWR@soulcolor}[5]{%
19 \ifcsempty{#2}%
20 {%
21     \InLineClass(#5){#3}{#1}%
22 }%
23 {%
24     \convertcolorspec{named}{\nameuse{#2}}{HTML}\LWR@tempcolor%
25     \LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}%
26 }%
27 }

28 \newcommand{\ul}[1]{%
29 \LWR@soulcolor{#1}{\LWR@soululcolor}{\uline}{text-decoration-color}%
30     {text-decoration:underline; text-decoration-skip: auto;}%
31 }
32
33 \newcommand{\st}[1]{%
34 \LWR@soulcolor{#1}{\LWR@soulstcolor}{\sout}{text-decoration-color}%
35     {text-decoration:line-through}%
36 }
37
38 \newcommand{\hl}[1]{%
39 \LWR@soulcolor{#1}{\LWR@soulhlc}{highlight}{background-color}%
40     {background:\LWR@origpound{}F8E800}%
41 }

```

Nullified:

```

42 \newcommand*\soulaccent}[1]{}
43 \newcommand*\soulregister}[2]{}
44 \newcommand{\sloppyword}[1]{#1}
45 \newcommand*\sodef}[5]{\DeclareRobustCommand*#1[1]{\so{##1}}}
46 \newcommand*\resetso(){}
47 \newcommand*\capsdef}[5]{}
48 \newcommand*\capsreset(){}
49 \newcommand*\capssave}[1]{}
50 \newcommand*\capsselect}[1]{}
51 \newcommand*\setul}[2]{}
52 \newcommand*\resetul(){}
53 \newcommand*\setuldepth}[1]{}
54 \newcommand*\setuloverlap}[1]{}
55 \newcommand*\lless(){}

```

Set colors:

```

56 \newcommand*\setulcolor}[1]{\renewcommand{\LWR@soululcolor}{#1}}
57 \newcommand*\setstcolor}[1]{\renewcommand{\LWR@soulstcolor}{#1}}

```

```
58 \newcommand*{\sethlcolor}[1]{\renewcommand{\LWR@soulhlcolor}{#1}}
```

Long versions of the user-level macros:

```
59 \let\textso\so
60 \let\textul\ul
61 \let\texthl\hl
62 \let\textcaps\caps
```

File 463 **l warp-soulpos.sty**

§ 572 Package **soulpos**

(Emulates or patches code by JAVIER BEZOS.)

soulpos (Pkg) **soulpos** is emulated.

for HTML output:

```
1 \RequirePackage{soul}
2 \RequirePackage{soulutf8}
3 \LWR@ProvidesPackageDrop{soulpos}[2012/02/25]

4 \NewDocumentCommand{\ulposdef}{m o m}{}%
5
6 \newdimen\ulwidth
7
8 \newcommand\ifulstarttype[1]{%
9 \expandafter\@secondoftwo%
10 }%
11
12 \newcommand\ifulenctype[1]{%
13 \expandafter\@secondoftwo%
14 }%
15
16 \newcommand{\ulstarttype}{0}
17 \newcommand{\ulenctype}{0}
18 \newcommand{\ulpostolerance}{0}%
```

File 464 **l warp-soulutf8.sty**

§ 573 Package **soulutf8**

soulutf8 (Pkg) **soulutf8** is emulated.

l warp's HTML output naturally supports UTF-8 encoding.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{soulutf8}[2016/05/16]
2 \RequirePackage{soul}
```

File 465 **l warp-splitbib.sty**

§ 574 Package **splitbib**

(Emulates or patches code by NICOLAS MARKEY.)

splitbib (*Pkg*) **splitbib** is patched for use by **l warp**.

for HTML output:

```

1 \LWR@ProvidesPackagePass{splitbib}[2005/12/22]

2 \def\NMSB@stylebox#1#2{%
3 \begin{BlockClass}[text-align:center ; border: 1px solid black]{splitbibbox}
4     \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{#1#2}}
5 \end{BlockClass}
6 }
7
8 \def\NMSB@stylebar#1#2{%
9 \begin{BlockClass}[%]
10    text-align:center ;
11    border-top: 1px solid black ;
12    border-bottom: 1px solid black ;
13 ]{splitbibbar}
14     \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{#1#2}}
15 \end{BlockClass}
16 }
17
18 \def\NMSB@styledash#1#2{%
19 \begin{BlockClass}[%]
20    text-align:center ;
21 ]{splitbibdash}
22     \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{---#1#2---}}
23 \end{BlockClass}
24 }
25
26 \def\NMSB@stylenone#1#2{%
27     \par
28 }
29
30 \def\NMSB@stylesimple#1#2{%
31 \par
32 \csname SB\NMSB@level font\endcsname{\LWR@textcurrentfont{#1#2}}
33 \par
34 }
```

File 466 **l warp-splitidx.sty**

§ 575 Package **splitidx**

(*Emulates or patches code by MARKUS KOHM.*)

splitidx (*Pkg*) **splitidx** is patched for use by **l warp**.

If the **latexmk** option is selected for **l warp**, **latexmk** will compile the document but will *not* compile the indexes. **l warpmk printindex** and **l warpmk htmlindex** will still be required.

⚠ **\thepage** When using **\AtWriteToIndex** or **\AtNextWriteToIndex**, the user must not refer to **\thepage** during **HTML output**, as the concept of a page number is meaningless. Instead, do

```

\addtocounter{\LWR@autoindex}{1}
\LWR@new@label{\LWRindex-\arabic{\LWR@autoindex}}
```

where the \index-like action occurs, and then refer to \arabic{LWR@autoindex} instead of \thepage where the reference should occur.

See section 699.17 in the lwarf-patch-memoir package for the \@@wrspindexhyp macro as an example.

for HTML output: 1 \LWR@ProvidesPackagePass{splitidx}[2016/02/18]

```

2 \VerifyCommand[lwarf][splitidx]{\newindex}{84695DF9965D5007036BA0B4023C59B5}
3
4 \catcode`\_=12%
5 \xpatchcmd{\newindex}
6   {\jobname-\#2.idx}
7   {\jobname-\#2_html.idx}
8   {}
9   {\LWR@patcherror{splitidx}{\newindex}}
10 \catcode`\_=8%

```

Patched to use lwarf's automatic indexing counter instead of \thepage:

```

11 \VerifyCommand[lwarf][splitidx]{\@wrsindex}{6E1A6193E20ABD0DFD6A1FC3F35113A6}
12
13 \renewcommand*{\@wrsindex}[2][]{%
14   \ifx\relax#1\relax
15     \if@splitidx
16       \@wrsindex[idx]{#2}%
17     \else
18       \def\@tempa{#2}%
19       \if@verbindex\@onelvel@sanitize\@tempa\fi
20       \@wrindex{\@tempa}%
21     \fi
22   \else
23     \def\@tempa{#2}%
24     \csname index@\#1@hook\endcsname
25   \expandafter\ifx\csname @@wrsindex\endcsname\relax
26     \addtocounter{LWR@autoindex}{1}%
27     \lwarf
28     \@@@wrsindex{\#1}{\@tempa}{\thepage}%
29     \@@@wrsindex{\#1}{\@tempa}{\arabic{LWR@autoindex}}%
30   \else
31     \def\@tempb{\@wrsindex{#1}}%
32     \expandafter\@tempb\@tempa||\\%
33   \fi

```

The label is assigned after the file write to avoid conflict with cleveref.

```

33   \label{LWRindex-\arabic{LWR@autoindex}}% lwarf
34   \endgroup
35   \esphack
36 \fi
37 }

```

lwarf defines sectioning commands with xpars, so the below patches are done as temporary redefinitions instead of being \let.

Not using \VerifyCommand here since the patches are not likely to be affected by changes in the original.

```

38 \xpatchcmd{\printsubindex}
39   {\let\section\subsection}

```

```

40      {\renewcommand*\{\section}{\subsection}}
41      {}
42      {\LWR@patcherror{splitidx}{printsubindex-section}}
43
44 \xpatchcmd{\printsubindex}
45   {\let\chapter\section}
46   {\renewcommand*\{\chapter}{\section}}
47   {}
48   {\LWR@patcherror{splitidx}{printsubindex-chapter}}
49
50 \xpatchcmd{\printsubindex}
51   {\let\@makechapterhead\section}
52   {\def\@makechapterhead{\section}}
53   {}
54   {\LWR@patcherror{splitidx}{printsubindex-chapter}}

```

File 467 **l warp-srcltx.sty**§ 576 Package **srcltx**srcltx (*Pkg*) srcltx is ignored.**for HTML output:** 1 \LWR@ProvidesPackageDrop{srcltx}[2006/11/12]

```

2 \newif\ifSRCOK \SRCOKfalse
3 \newcommand*\srcIncludeHook[1]{}
4 \newcommand*\srcInputHook[1]{}
5 \newcommand*\MainFile{}
6 \def\MainFile{\jobname.tex}
7 \newcommand*\CurrentInput{}
8 \gdef\CurrentInput{\MainFile}
9 \newcommand\Input{}
10 \let\Input\input

```

File 468 **l warp-srctex.sty**§ 577 Package **srctex**srctex (*Pkg*) srctex is ignored.**for HTML output:** 1 \LWR@ProvidesPackageDrop{srctex}[2006/11/12]
2 \LWR@origRequirePackage{l warp-srcltx}File 469 **l warp-stabular.sty**§ 578 Package **stabular**

(Emulates or patches code by SIGITAS TOLUŠIS.)

stabular (*Pkg*) stabular is emulated.**for HTML output:** 1 \LWR@ProvidesPackageDrop{stabular}[2014/03/20]

```

Env stabular  [<vpos>] {<colspec>}

 2 \newenvironment{stabular}[2][c]
 3 {
 4 \begin{tabular}[#1]{#2}
 5 \renewcommand{\noalign}{\vphantom{#1}\vphantom{#2}}
 6 }
 7 \end{tabular}

Env stabular  {<width>} [<vpos>] {<colspec>}

 8 \NewDocumentEnvironment{stabular*}{m o m}
 9 {
10 \begin{tabular}[#2]{#3}
11 \renewcommand{\noalign}{\vphantom{#1}\vphantom{#3}}
12 }
13 \end{tabular}

```

File 470 **l warp-stackengine.sty**

§ 579 Package **stackengine**

(Emulates or patches code by STEVEN B. SEGETES.)

stackengine (*Pkg*) **stackengine** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{stackengine}[2017/02/13]

Not using `\VerifyCommand` here because these patches appear to be fairly transparent to changes in the original

The original version is necessary for the patched `\@stack` and `\stackanchor`, where nesting `lateximages` does not work:

```

2 \LetLtxMacro{\LWR@orig@stackengine}{stackengine}

3 \renewcommand*{\stackengine}[8]{%
4   \ifstreq{\#4}{0}{%
5     {\begin{lateximage}[\ImageAltText]}{%
6       {\begin{lateximage}[\ImageAltText][][vertical-align:top]}{%
7         \LWR@orig@stackengine{\#1}{\#2}{\#3}{\#4}{\#5}{\#6}{\#7}{\#8}}{%
8       \end{lateximage}}{%
9     }{%

```

`\@stack` uses a `lateximage` with a vertical alignment:

```

10 \LetLtxMacro{\LWR@orig@stack}{\@stack}
11 \xpatchcmd{\LWR@orig@stack}{\stackengine}{\LWR@orig@stackengine}{\LWR@orig@stackengine}
12 {}
13 {\LWR@patcherror{stackengine}{\LWR@orig@stack}}
14 
15 \renewcommand*{\@stack}[4]{%
16   \ifstreq{\#3}{0}{%
17     {\begin{lateximage}[\ImageAltText]}{%
18       {\begin{lateximage}[\ImageAltText][][vertical-align:top]}{%
19         \LWR@orig@stackengine{\#1}{\#2}{\#3}{\#4}{\#5}{\#6}{\#7}{\#8}}{%

```

```

20      \LWR@orig@@stack{#1}{#2}{#3}{#4}%
21      \end{lateximage}%
22 }

```

The lapping macros are disabled for HTML:

```

23 \newcommand*\LWR@HTML@@stacklap[4]{#3}
24 \LWR@formatted{@stacklap}

```

\stackanchor is patched for two instances of \stackengine. A lateximage with vertical alignment is used.

```

25 \xpatchcmd{\stackanchor}{\stackengine}{\LWR@orig@stackengine}
26     {}
27     {\LWR@patcherror{stackengine}{stackanchor patch 1}}
28
29 \xpatchcmd{\stackanchor}{\stackengine}{\LWR@orig@stackengine}
30     {}
31     {\LWR@patcherror{stackengine}{stackanchor patch 2}}
32
33 \xpretocmd{\stackanchor}
34     {\begin{lateximage}[\ImageAltText]{}[vertical-align:middle]}
35     {}
36     {\LWR@patcherror{stackengine}{stackanchor pre}}
37
38 \xapptocmd{\stackanchor}{\end{lateximage}}
39     {}
40     {\LWR@patcherror{stackengine}{stackanchor app}}

```

\Centerstack is simply placed inside a lateximage with a vertical alignment:

```

41 \xpretocmd{\Centerstack}
42     {\begin{lateximage}[\ImageAltText]{}[vertical-align:middle]}
43     {}
44     {\LWR@patcherror{stackengine}{Centerstack pre}}
45
46 \xapptocmd{\Centerstack}{\end{lateximage}}
47     {}
48     {\LWR@patcherror{stackengine}{Centerstack app}}

```

\savestack reverts to print mode while saving the box, then places it inside a lateximage when used:

```

49 \VerifyCommand[l warp][stackengine]{\savestack}{4B06A7F9D3F0B829FE293FB452D43430}
50
51 \renewcommand*\savestack[2]{%
52     \xdef\sv@name{\stack@macro@name{#1}}%
53     \@ifundefined{\sv@name content}{%
54         \expandafter\newsavebox\expandafter{\csname\sv@name content\endcsname}%
55     }{}%
56     \begingroup%    l warp
57     \LWR@restoreorigformatting%    l warp
58     \RenewDocumentEnvironment{lateximage}{soso o d(){}{}% l warp: inside group
59     \expandafter\lwr@gsavebox\csname\sv@name content\endcsname{#2}%
60     \expandafter\gdef\expandafter#1\expandafter{%
61         \expandafter\begin\expandafter{lateximage\expandafter}%    l warp
62         \expandafter\usebox\expandafter%
63         {\csname\sv@name content\endcsname}%
64         \expandafter\end\expandafter{lateximage\expandafter}%    l warp

```

```

65      }%
66      \endgroup%      l warp
67 }

```

File 471 **l warp-stackrel.sty**

§ 580 Package **stackrel**

(Emulates or patches code by HEIKO OBERDIEK.)

stackrel (*Pkg*) **stackrel** is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{stackrel}[2016/05/16]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\renewcommand{\stackrel}{\stackrel[]{}{}}%
4   \mathrel{\mathop{\#3}\limits_{\#1}^{\#2}}%
5 }%
6
7 \CustomizeMathJax{\newcommand{\stackbin}{\stackbin[]{}{}}%
8   \mathbin{\mathop{\#3}\limits_{\#1}^{\#2}}%
9 }%
10 \end{warpMathJax}

```

File 472 **l warp-statex2.sty**

§ 581 Package **statex2**

(Emulates or patches code by RODNEY A SPARAPANI.)

statex2 (*Pkg*) **statex2** is patched for use by **l warp**, and emulated for MATHJAX.

- ⚠ As of this version, option `autobold` does not appear to work for PDF output.
- ⚠ For MATHJAX, the tilde character `~` does not create `\sim`. Use `\sim` directly.
- ⚠ Because MATHJAX has limited conditional processing:

- `\wrap` only creates square braces, no matter what its optional arguments.
- `\P`, `\pCau`, `\pN`, and `\pU` do not handle special cases.

⚠ `\and` To have `\and` work if using `\maketitle`, place the following after the start of the document:

```

\newcommand*{\and}{%
  \relax\ifmmode%
    \expandafter\; \mb{\mathrm{and}}\;%
  \else%
    \expandafter\STATEand%
  \fi%
}

```

for HTML output:

```
1 \LWR@ProvidesPackagePass{statex2}[2011/09/14]

2 \newcommand*\LWR@HTML@Alpha[1][]{%
3     \fcolorbox{black}{ForestGreen}{\textcolor{white}{\textsf{ALPHA}}}}%
4     \textbf{\textcolor{ForestGreen}{\textsf{\#1}}}}%
5 }
6 \LWR@formatted{Alpha}
7
8 \newcommand*\LWR@HTML@List[1]{%
9     \textbf{\textcolor{Dandelion}{\textsf{L}}}\textsubscript{\textit{\#1}}}}%
10 }
11 \LWR@formatted{List}
12
13 \newcommand*\LWR@HTML@Snd[1][]{%
14     \fcolorbox{black}{Dandelion}{\textcolor{white}{\textsf{2nd}}}}%
15     \textbf{\textcolor{Dandelion}{\textsf{\#1}}}}%
16 }
17 \LWR@formatted{Snd}
18
19 \begin{warpMathJax}
20 \LWR@infoprocessingmathjax{statex2}
21
22 \CustomizeMathJax{\newcommand{\cpi}{\boldsymbol{\pi}}}
23 \CustomizeMathJax{\newcommand{\c}[1]{\boldsymbol{\mathsf{#1}}}}
24 \CustomizeMathJax{\newcommand{\sfsl}[1]{\mathsf{#1}}}% not slanted
25
26 \if@manualbold
27 \CustomizeMathJax{\newcommand{\mb}[1]{\boldsymbol{\mathsf{#1}}}}
28 \else
29 \CustomizeMathJax{\newcommand{\mb}[1]{\boldsymbol{\mathsf{#1}}}}
30 \fi
31
32 \CustomizeMathJax{\newcommand{\diag}{\mathsf{diag}}}
33 \CustomizeMathJax{\newcommand{\blockdiag}{\mathsf{blockdiag}}}
34 \CustomizeMathJax{\newcommand{\erf}{\mathsf{erf}}}
35 \CustomizeMathJax{\newcommand{\logit}{\mathsf{logit}}}
36 \CustomizeMathJax{\newcommand{\trace}{\mathsf{trace}}}
37
38 \CustomizeMathJax{\newcommand{\chisq}{\mathsf{\chi^2}}}
39 \CustomizeMathJax{\newcommand{\deriv}[2]{\frac{\mathrm{d}{}^{#1}}{\mathrm{d}{}^{#2}}}\wrap{\mathsf{#2}}}}
40 \CustomizeMathJax{\newcommand{\derivf}[2]{\frac{\mathrm{d}{}^{#1}}{\mathrm{d}{}^{#2}}}\wrap{\mathsf{#1}}}}
41 \CustomizeMathJax{\newcommand{\e}[1]{\mathsf{e}^{#1}}}
42 \CustomizeMathJax{\newcommand{\E}[2]{\mathsf{E}^{#1}_{#2}}\wrap{\mathsf{#2}}}}
43 \CustomizeMathJax{\newcommand{\ha}{\frac{\alpha}{2}}}
44 \CustomizeMathJax{\newcommand{\I}[2]{\mathsf{I}^{#1}_{#2}}\%
45     \mathsf{I}^{#1}_{#2}\LWRrapparen{\mathsf{#2}}\%}
46 }
47 \CustomizeMathJax{\newcommand{\IBeta}[2]\%
48     \frac{\Gamma{#1+#2}}{\Gamma{#1}\Gamma{#2}}\%}
49 }
50 \CustomizeMathJax{\newcommand{\If}{\mathsf{if}}\%
51 \CustomizeMathJax{\newcommand{\im}{\mathsf{i}}\%}
52 \CustomizeMathJax{\newcommand{\ol}{\overline{\mathsf{ol}}}\%}
53 \CustomizeMathJax{\newcommand{\ow}{\mathsf{otherwise}}\%}
54 \CustomizeMathJax{\newcommand{\pderiv}[2]\%
55     \frac{\partial}{\partial \mathsf{#1}}\wrap{\mathsf{#2}}\%}
56 }
57 \CustomizeMathJax{\newcommand{\pderivf}[2]\%
58     \frac{\partial}{\partial \mathsf{#1}}\wrap{\mathsf{#2}}\%}
59 }
```

```

60 \CustomizeMathJax{\newcommand{\sd}{\mb{\sigma}}}
61 \CustomizeMathJax{\newcommand{\ul}{\underline}}
62 \CustomizeMathJax{\newcommand{\V}[2][]{\mb{\mathrm{V}}}_{\mb{#1}} \wrap{\mb{#2}}}
63 \CustomizeMathJax{\newcommand{\vs}{\; \mb{\mathrm{vs.}}\;}}
64 \CustomizeMathJax{\newcommand{\where}{\; \mb{\mathrm{where}}\;}}
65 \CustomizeMathJax{\newcommand{\wrap}[2][][\left[ \#2 \right]]% only []}
66 \CustomizeMathJax{\newcommand{\LWRwrapparen}[1]{\left( \#1 \right)}% l warp
67
68 % \CustomizeMathJax{\renewcommand{\sim}{\mb{\sim}}} doesn't work,
69 % replace <space>\sim<space> with <space>\sim<space>
70
71 \CustomizeMathJax{\newcommand{\iid}{\; \stackrel{\mathrel{\mathop:}=}{\mb{\mathrm{iid}}}}{\sim}\;}}
72 \CustomizeMathJax{\newcommand{\ind}{\; \stackrel{\mathrel{\mathop:}=}{\mb{\mathrm{ind}}}}{\sim}\;}}
73 \CustomizeMathJax{\newcommand{\indpr}{%
74   \; \stackrel{\mathrel{\mathop:}=}{\mb{\mathrm{ind}}}}{\stackrel{\mathrel{\mathop:}=}{\mb{\mathrm{prior}}}}{\sim}\;}}
75 }
76 \CustomizeMathJax{\newcommand{\post}{\; \stackrel{\mathrel{\mathop:}=}{\mb{\mathrm{post}}}}{\sim}\;}}
77 \CustomizeMathJax{\newcommand{\prior}{\; \stackrel{\mathrel{\mathop:}=}{\mb{\mathrm{prior}}}}{\sim}\;}}
78
79 \CustomizeMathJax{\let\STATEXGamma=\Gamma}
80 \CustomizeMathJax{\renewcommand{\Gamma}[1][]{\mb{\STATEXGamma}}\LWRwrapparen{\mb{#1}}}}
81 %
82 \CustomizeMathJax{\renewcommand{\and}{\; \mb{\mathrm{and}}\;}}
83 %
84 \CustomizeMathJax{\newcommand{\H}{\mb{\mathrm{H}}}}
85 %
86 \CustomizeMathJax{\newcommand{\P}[2][]{\mb{\mathrm{P}}}_{\mb{#1}} \wrap{\mb{#2}}}}
87 %
88 \CustomizeMathJax{\newcommand{\mid}{\mb{\mid}}}
89
90 \CustomizeMathJax{\newcommand{\B}[1]{\mb{\mathrm{B}}}\LWRwrapparen{\mb{#1}}}}
91 \CustomizeMathJax{\newcommand{\BB}[1]{\mb{\mathrm{BetaBin}}}\LWRwrapparen{\mb{#1}}}}
92 \CustomizeMathJax{\newcommand{\Bin}[2]{\mb{\mathrm{Bin}}}_{\mb{#1}}\LWRwrapparen{\mb{#1}, \#2}}}
93 \CustomizeMathJax{\newcommand{\Dir}[1]{\mb{\mathrm{Dirichlet}}}\LWRwrapparen{\mb{#1}}}}
94 \CustomizeMathJax{\newcommand{\HG}[3]{%
95   \mb{\mathrm{Hypergeometric}}}\LWRwrapparen{\mb{#1}, \#2, \#3}}}
96 }
97 \CustomizeMathJax{\newcommand{\M}[2]{%
98   \mb{\mathrm{Multinomial}}}\LWRwrapparen{\mb{#1}, \#2}}}
99 }
100 \CustomizeMathJax{\newcommand{\NB}[2]{\mb{\mathrm{NegBin}}}\LWRwrapparen{\mb{#1}, \#2}}}
101 \CustomizeMathJax{\newcommand{\Poi}[1]{\mb{\mathrm{Poisson}}}\LWRwrapparen{\mb{#1}}}}
102 \CustomizeMathJax{\let\Poisson=\Poi}
103
104 \CustomizeMathJax{\newcommand{\pBB}[4][x]{%
105   \frac{\Gamma[\#2+1]\Gamma[\#3+\#1]\Gamma[\#2+\#4-\#1]\Gamma[\#3+\#4]}{%
106     \Gamma[\#1+1]\Gamma[\#2-\#1+1]\Gamma[\#2+\#3+\#4]\Gamma[\#3]\Gamma[\#4]}}%
107   \; \text{I}[\#1]\{\{0, 1, \_, \#2\}\}, \text{where } \#3>0, \#4>0 \text{ and } n=1, 2, \_.\}%
108 }}
109 \CustomizeMathJax{\newcommand{\pBin}[3][x]{%
110   \binom{\#2}{\#1}\#3^{\#1} \LWRwrapparen{\mb{1-\#3}^{\#2-\#1}}}}%
111   \; \text{I}[\#1]\{\{0, 1, \_, \#2\}\}, \text{where } p \in (0, 1) \text{ and } n=1, 2, \_.\}%
112 }
113 \CustomizeMathJax{\newcommand{\pPoi}[2][x]{%
114   \frac{1}{\Gamma[\#1+\#2]}\#1^{\#1}\#2^{\#2}\Gamma[\#1]\{\{0, 1, \_.\}\}, \text{where } \#2>0\}%
115 }}
116
117 \CustomizeMathJax{\newcommand{\Cau}[2]{\mb{\mathrm{Cauchy}}}\LWRwrapparen{\mb{#1}, \#2}}}
118 \CustomizeMathJax{\let\Cauchy=\Cau}
119 \CustomizeMathJax{\newcommand{\Chi}[2][]{%

```

```

120      \chisq_{\mb{#1}}\LWRwapparen{\mb{#2}}%
121  }
122 \CustomizeMathJax{\let\Chisq=\Chi}
123 \CustomizeMathJax{\newcommand{\Bet}[2]{\mb{\mathrm{Beta}}}\LWRwapparen{\mb{#1},\ #2}}}
124 \CustomizeMathJax{\let\Beta=\Bet}
125 \CustomizeMathJax{\newcommand{\Exp}[1]{\mb{\mathrm{Exp}}}\LWRwapparen{\mb{#1}}}
126 \CustomizeMathJax{\newcommand{\F}[2]{\mb{\mathrm{F}}}\LWRwapparen{\mb{#1},\ #2}}}
127 \CustomizeMathJax{\newcommand{\Gam}[2]{\mb{\mathrm{Gamma}}}\LWRwapparen{\mb{#1},\ #2}}}
128 \CustomizeMathJax{\newcommand{\IC}[1]{\mb{\mathrm{\chi}^{-2}}}\LWRwapparen{\mb{#1}}}
129 \CustomizeMathJax{\newcommand{\IG}[2]{%
130   \mb{\mathrm{Gamma}^{-1}}}\LWRwapparen{\mb{#1},\ #2}}%
131 }
132 \CustomizeMathJax{\newcommand{\IW}[2]{%
133   \mb{\mathrm{Wishart}^{-1}}}\LWRwapparen{\mb{#1},\ #2}}%
134 }
135 \CustomizeMathJax{\newcommand{\Log}[2]{%
136   \mb{\mathrm{Logistic}}}\LWRwapparen{\mb{#1},\ #2}}%
137 }
138 \CustomizeMathJax{\newcommand{\LogN}[2]{%
139   \mb{\mathrm{Log}\!-\!\mathrm{!N}}}\LWRwapparen{\mb{#1},\ #2}}%
140 }
141 \CustomizeMathJax{\newcommand{\N}[3]{[]}{%
142   \mb{\mathrm{N}}_{}\_{\mb{#1}}\LWRwapparen{\mb{#2},\ #3}}%
143 }
144 \CustomizeMathJax{\newcommand{\Par}[2]{\mb{\mathrm{Pareto}}}\LWRwapparen{\mb{#1},\ #2}}}
145 \CustomizeMathJax{\let\Pareto=\Par}
146 \CustomizeMathJax{\newcommand{\Tsq}[2]{\mb{\mathrm{T}^2}}\LWRwapparen{\mb{#1},\ #2}}}
147 \CustomizeMathJax{\newcommand{\U}[1]{\mb{\mathrm{U}}}\LWRwapparen{\mb{#1}}}
148 \CustomizeMathJax{\newcommand{\W}[2]{\mb{\mathrm{Wishart}}}\LWRwapparen{\mb{#1},\ #2}}}
149
150 \CustomizeMathJax{\renewcommand{\t}[1]{\mb{\mathrm{t}}}\LWRwapparen{\mb{#1}}}
151
152 \CustomizeMathJax{\newcommand{\pBet}[3][x]{%
153   \mathrm{IBeta}\#\#2\#\#3}%
154   \#1^{\#2-1}\LWRwapparen{1-\#1}^{\#3-1}\mathrm{I}\#\#1\{0,\ 1}, \where \#2>0 \and \#3>0%
155 }
156 \CustomizeMathJax{\newcommand{\pCau}[3][x]{%
157 %   \ifthenelse{\equal{\#2,\ #3}{0,\ 1}}{\frac{1}{\cpi}\LWRwapparen{1+\#1}^2}%
158   {\frac{1}{\cpi}\left\{1+\wrap{\LWRwapparen{x-\#2}/\#3}^2\right\}}, \where \#3>0}%
159 }% no special case for 0,1
160 \CustomizeMathJax{\newcommand{\pChi}[2][x]{%
161   \frac{2^{-\#2/2}}{\Gamma\#\#2}\#\#1^{\#2-1}\mathrm{e}^{-\#1/2}%
162   \mathrm{I}\#\#1\{0,\infty\}, \where \#2>0%
163 }
164 \CustomizeMathJax{\newcommand{\pExp}[2][x]{%
165   \frac{1}{\cpi}\mathrm{e}^{-\#1/\#2}\mathrm{I}\#\#1\{0,\infty\}, %
166   \where \#2>0%
167 }
168 \CustomizeMathJax{\newcommand{\pGam}[3][x]{%
169   \frac{\#3^{\#2}}{\Gamma\#\#2}\#\#1^{\#2-1}\mathrm{e}^{-\#3\#1}%
170   \mathrm{I}\#\#1\{0,\infty\}, \where \#2>0 \and \#3>0%
171 }
172 \CustomizeMathJax{\newcommand{\pN}[3][x]{%
173 %   \ifthenelse{\equal{\#2,\ #3}{0,\ 1}}{%
174 %     \frac{1}{\sqrt{2\cpi}}\mathrm{e}^{-\#1^2/2}%
175 %     \frac{1}{\sqrt{2\cpi}}\sqrt{\#3}\mathrm{e}^{-\#1-\#2^2/2}\LWRwapparen{\#1-\#2}^2/2\cdot\#3}%
176 }% no test for 0,1, must add \cdot
177 \CustomizeMathJax{\newcommand{\pPar}[3][x]{%
178   \frac{\#3}{\#2}\LWRwapparen{1+\#1/\#2}^{\#3+1}\mathrm{I}\#\#1\{0,\infty\}, %
179   \where \#2>0 \and \#3>0%

```

```

180 }}
181 \CustomizeMathJax{\newcommand{\pU}[3][x]{%
182 %      \ifthenelse{\equal{#2, #3}{0, 1}}{\I[#1]{0,\ 1}}{%
183 %          {\frac{1}{#3-#2}\I[#1]{#2,\ #3}, \where {#2<#3}}%
184 }}% no special case for 0,1
185
186 \CustomizeMathJax{\newcommand{\=}[1]{\bar{#1}}}
187 \CustomizeMathJax{\let\^{\widehat{}}}
188 \CustomizeMathJax{\let\~{\widetilde{}}}
189 \CustomizeMathJax{\newcommand{\'}[1]{\LWRwraphren{\mb{#1}}}}
190 \CustomizeMathJax{\newcommand{\b}[1]{\bar{#1}}}
191 \CustomizeMathJax{\newcommand{\c}[1]{\mb{\mathrm{#1}}}}
192 \CustomizeMathJax{\newcommand{\d}[1]{\,,\mb{\mathrm{d}}{#1}}}
193 \CustomizeMathJax{\newcommand{\.}{\mb{\ldots}}}
194 \end{warpMathJax}

```

File 473 **l warp-statistics.sty**

§ 582 Package **statistics**

(Emulates or patches code by JULIEN RIVAUD.)

statistics (Pkg) statistics is patched for use by l warp.

- ⚠ **\color** The statistics documentation examples include the use of the \color macro. Use \textcolor instead.
- ⚠ **math** The statistics package uses math arrays, but the HTML version uses text tabulars to allow text copy/paste. If math is required, use \ensuremath or \(\) and \) as needed.

Pre/postline is ignored, and \hline is used instead. Each table will have an \hline above and below as a frame.

for HTML output: 1 \LWR@ProvidesPackagePass{statistics}[2019/09/29]

2 \ExplSyntaxOn

To use text tabular instead of math array. This allows text copy/paste of the results.

In the following, all changes for the Lwarp package are labelled "l warp".

Redefined using the l warp version of &:

```

3 \VerifyCommand[l warp][statistics]{\__statistics_table_make:nn}
4     {DC8BA2460EA83AE75FA0C0F00E775B5E}
5
6 \StartDefiningTabulars%      l warp, no other changes below
7 \cs_set_protected_nopar:Nn \__statistics_table_make:nn {
8     \int_compare:nT
9         { 0 < \l__statistics_table_maxcols_int
10             = \l__statistics_nbvals_int } {
11             \__statistics_table_end:
12             \tl_use:N \l__statistics_table_sep_tl
13             \__statistics_table_start:
14         }

```

```
15  \int_incr:N \l__statistics_nbvals_int
16  \int_incr:N \l__statistics_currange_int
17  \fp_add:Nn \l__statistics_curtotal_fp { #2 }
18  \__statistics_set_if_shown:N \l_tmpa_bool
19  \tl_set:Nx \l_tmpa_tl {
20      \exp_not:n { & \tl_set:Nn \currentcolumn } {
21          \int_use:N \l__statistics_currange_int
22      }
23  }
24  \bool_if:NTF \l_tmpa_bool {
25      \tl_put_right:Nn \l_tmpa_tl
26          {\__statistics_table_shown_format:n}
27  }{
28      \tl_put_right:Nn \l_tmpa_tl
29          {\__statistics_table_hidden_format:n}
30  }
31  \seq_put_right:Nn \l__statistics_store_values_seq { #1 }
32  \bool_if:NT \l__statistics_table_values_bool {
33      \tl_put_right:Nx \l__statistics_table_values_tl {
34          \exp_not:V \l_tmpa_tl {
35              \exp_not:n {
36                  \__statistics_table_values_format:n { #1 }
37              }
38          }
39      }
40  }
41  \seq_put_right:Nx \l__statistics_store_counts_seq { \fp_eval:n {#2} }
42  \bool_if:NT \l__statistics_table_counts_bool {
43      \tl_put_right:Nx \l__statistics_table_counts_tl {
44          \exp_not:V \l_tmpa_tl {
45              \exp_not:n {
46                  \__statistics_table_counts_format:n {
47                      { \__statistics_table_allcounts_format:n { #2 } }
48                  }
49              }
50          }
51      }
52  }
53  \bool_if:NT \l__statistics_table_icc_bool {
54      \tl_put_right:Nx \l__statistics_table_icc_tl {
55          \exp_not:V \l_tmpa_tl {
56              \exp_not:n { \__statistics_table_icc_format:n }
57          {
58              \exp_not:n{ \__statistics_table_allcounts_format:n }
59              { \fp_use:N \l__statistics_curtotal_fp }
60          }
61      }
62  }
63  }
64  \bool_if:NT \l__statistics_table_dcc_bool {
65      \tl_put_right:Nx \l__statistics_table_dcc_tl {
66          \exp_not:V \l_tmpa_tl {
67              \exp_not:n { \__statistics_table_dcc_format:n }
68          {
69              \exp_not:n{ \__statistics_table_allcounts_format:n }
70          }
71          \fp_eval:n {
72              \l__statistics_total_fp
73                  - \l__statistics_curtotal_fp
74                  + #2
```

```
75          }
76      }
77  }
78  }
79  }
80  }
81 \fp_set:Nn \l__statistics_table_curICF_fp {
82     round(\l__statistics_curtotal_fp
83           / \l__statistics_total_fp,
84           \l__statistics_table_round_int)
85 }
86 \bool_if:NT \l__statistics_table_frequencies_bool {
87     \tl_put_right:Nx \l__statistics_table_frequencies_tl {
88         \exp_not:V \l_tmpa_tl {
89             \exp_not:n { \__statistics_table_frequencies_format:n }
90             {
91                 \exp_not:n{ \__statistics_table_allfreqs_format:n }
92                 {
93                     \fp_eval:n {
94                         \l__statistics_table_curICF_fp
95                         - \l__statistics_table_prevICF_fp
96                     }
97                 }
98             }
99         }
100    }
101 }
102 \bool_if:NT \l__statistics_table_icf_bool {
103     \tl_put_right:Nx \l__statistics_table_icf_tl {
104         \exp_not:V \l_tmpa_tl {
105             \exp_not:n { \__statistics_table_icf_format:n }
106             {
107                 \exp_not:n{ \__statistics_table_allfreqs_format:n }
108                 { \fp_to_decimal:N \l__statistics_table_curICF_fp }
109             }
110         }
111     }
112 }
113 \bool_if:NT \l__statistics_table_dcf_bool {
114     \tl_put_right:Nx \l__statistics_table_dcf_tl {
115         \exp_not:V \l_tmpa_tl {
116             \exp_not:n { \__statistics_table_dcf_format:n }
117             {
118                 \exp_not:n{ \__statistics_table_allfreqs_format:n }
119                 {
120                     \fp_eval:n {
121                         1 - \l__statistics_table_prevICF_fp
122                     }
123                 }
124             }
125         }
126     }
127 }
128 \fp_set_eq:NN
129     \l__statistics_table_prevICF_fp
130     \l__statistics_table_curICF_fp
131 }
132 \StopDefiningTabulars% lwarf
```

Redefined using `tabular`. Also, `preline` and `postline` do not work correctly with `l warp`, which looks for certain tokens to detect `\hlines`, so `\hline` is used instead.

```

133 \VerifyCommand[l warp][statistics]{\__statistics_table_end:}
134     {B2F9FC5A36B44E6E06A8D9807FCBA6D}
135
136 \cs_set_protected_nopar:Nn \__statistics_table_end: {
137     \tl_set:Nx \l__statistics_table_preamble_tl {
138 %         \exp_not:n { \begin{array}[ }
139         \exp_not:n { \begin{tabular}[ }%      l warp
140             \exp_not:V \l__statistics_table_valign_tl
141             \exp_not:n { ] }
142                 { \exp_not:V \l__statistics_table_headcoltype_tl
143                     \prg_replicate:nn { \l__statistics_nbvals_int }
144                         { \exp_not:V \l__statistics_table_coltype_tl } }
145             }
146             \seq_clear:N \l__statistics_table_contents_seq
147             \clist_map_inline:nn { values, counts, icc, dcc, frequencies, icf, dcf } {
148                 \bool_if:cT { \l__statistics_table_##1_bool } {
149                     \seq_put_right:Nv
150                         \l__statistics_table_contents_seq
151                         { \l__statistics_table_##1_tl }
152                 }
153             }
154 %
155             $%
156             \tl_use:N \l__statistics_table_preamble_tl
157 %                 \hline%      l warp
158             \l__statistics_table_preline_tl
159             \seq_use:Nn
160                 \l__statistics_table_contents_seq
161                 { \l__statistics_table_newline_tl }
162 %
163             \\%
164             \l__statistics_table_postline_tl
165             \hline%      l warp
166             \end{array}$
167             \end{tabular}%
168             l warp
169 }
```

With `l warp`, `\ensuremath` creates an SVG image, but its `alt` tag does not contain the text of the contents for copy/paste, since these expressions are usually not simple text. For the `statistics` package, copy/paste is restored by using text instead of math output.

For the leftmost column. Redefined to use text output:

```

167 \VerifyCommand[l warp][statistics]{\__statistics_table_start:}
168     {624FAC0783057B481861D9F02764F6C5}
169
170 \cs_set_protected_nopar:Nn \__statistics_table_start: {
171     \int_zero:N \l__statistics_nbvals_int
172     \clist_pop:NNT \l__statistics_table_maxcols_clist \l_tmpa_tl {
173         \int_set:Nn \l__statistics_table_maxcols_int { \l_tmpa_tl }
174     }
175     \clist_map_inline:nn { values, counts, frequencies, icc, icf, dcf } {
176         \tl_set:cx { \l__statistics_table_##1_tl } {
177 %             \exp_not:N \ensuremath {
178                 \exp_not:N \hbox {
179                     \exp_not:c { \l__statistics_table_##1_name_tl }
180                 }
181 %             }
182 }
```

```

182         }
183     }
184 }
```

For the first row. Redefined to use text output:

```

185 \VerifyCommand[l warp][statistics]{\__statistics_IN:w}
186   {DD1B22587CFB4DEDCEE4D8E9A1E0CCAF}
187
188 \RenewDocumentCommand \__statistics_IN:w { m u{}; } u{}; m } {
189 %   \ensuremath{ \left#1 \num{#2} \mathbin{} \num{#3} \right#4 }
190   #1 #2 ; #3 #4%      l warp
191 }
192
193 \__statistics_setup:nn { table } {
194 %   values/format = \ensuremath{\#1},
195   values/format = {\#1},%      l warp
196 }
```

Added \ExplSyntaxOn/Off to avoid errors. (In once instance, a double subscript error appeared.)

```

197 \VerifyCommand[l warp][statistics]{\StatsGraph}
198   {998267D2E90514DBDFD5544FB69AD6C8}
199
200 \RenewDocumentCommand \StatsGraph { +0{} +m +0{} } {
201   \group_begin:
202   \int_gincr:N \g__statistics_graph_last_int
203   \tl_set:Nx \l_tmpa_tl {
204     \exp_not:n { \g__statistics_graph_xstep_ }
205     \int_use:N \g__statistics_graph_last_int
206     \exp_not:n { \tl }
207   }
208   \tl_if_exist:cTF { \l_tmpa_tl } {
209     \fp_gset:Nn \g__statistics_graph_xstep_fp
210       { \int_use:c { \l_tmpa_tl } }
211   }{
212     \fp_gset:Nn \g__statistics_graph_xstep_fp { \c_one_int }
213   }
214   \__statistics_setup:nn { graph } { #1, #3 }
215   \tl_if_single:nTF { #2 } {
216     \cs_if_exist:NF #2 { #2 }
217     \tl_set_eq:NN \l__statistics_data_tl #2
218   }{
219     \tl_set:Nn \l__statistics_data_tl { #2 }
220   }
221   \fp_zero:N \l__statistics_graph_maxheight_fp
222   \fp_set:Nn \l__statistics_graph_minvalue_fp { inf }
223   \fp_set:Nn \l__statistics_graph_maxvalue_fp { -inf }
224   \fp_zero:N \l__statistics_total_fp
225   \int_zero:N \l__statistics_nbvals_int
226   \bool_set_true:N \l__statistics_graph_allranges_bool
227   \keyval_parse:NNV
228     \__statistics_graph_prepare:n
229     \__statistics_graph_prepare:nn
230     \l__statistics_data_tl
231   \tl_clear:N \l__statistics_graph_tikzdata_tl
232   \tl_clear:N \l__statistics_graph_tikzinfo_tl
233   \int_zero:N \l__statistics_currange_int
234   \bool_if:NTF \l__statistics_graph_allranges_bool {
```

```

235           \bool_if:NTF \l__statistics_graph_cumulative_bool {
236   \ExplSyntaxOn%     l warp
237           \__statistics_graph_dopicture_cumulative:
238   \ExplSyntaxOff%     l warp
239           }{
240   \ExplSyntaxOn%     l warp
241           \__statistics_graph_dopicture_hist:
242   \ExplSyntaxOff%     l warp
243           }
244           }{
245   \ExplSyntaxOn%     l warp
246           \__statistics_graph_dopicture_comb:
247   \ExplSyntaxOff%     l warp
248           }
249   \iow_now:Nx \@auxout {
250       \exp_not:n {
251           \ExplSyntaxOn
252           \tl_gset:cn
253       }
254       {
255           \exp_not:n {g__statistics_graph_xstep_}
256           \int_use:N \g__statistics_graph_last_int
257           \exp_not:n {_tl}
258       }
259       {
260           \fp_to_decimal:N \g__statistics_graph_xstep_fp
261       }
262       \exp_not:n {
263           \ExplSyntaxOff
264       }
265   }
266   \group_end:
267 }
268
269 \ExplSyntaxOff

```

File 474 **l warp-statmath.sty**

§ 583 Package **statmath**

(Emulates or patches code by SEBASTIAN ANKARGREN.)

statmath (Pkg) statmath is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{statmath}[2018/03/08]

2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{statmath}
6
7 \ifdefequal{\abcbf}{\mathbf}
8     {\CustomizeMathJax{\newcommand{\abcbf}[1]{\mathbf{#1}}}}
9     {\CustomizeMathJax{\newcommand{\abcbf}[1]{\boldsymbol{#1}}}}
10
11 \CustomizeMathJax{\newcommand{\greekbf}[1]{\boldsymbol{#1}}}
12

```

```
13 \CustomizeMathJax{\newcommand{\bfA}{\abcbf A}}
14 \CustomizeMathJax{\newcommand{\bfB}{\abcbf B}}
15 \CustomizeMathJax{\newcommand{\bfC}{\abcbf C}}
16 \CustomizeMathJax{\newcommand{\bfD}{\abcbf D}}
17 \CustomizeMathJax{\newcommand{\bfE}{\abcbf E}}
18 \CustomizeMathJax{\newcommand{\bfF}{\abcbf F}}
19 \CustomizeMathJax{\newcommand{\bfG}{\abcbf G}}
20 \CustomizeMathJax{\newcommand{\bfH}{\abcbf H}}
21 \CustomizeMathJax{\newcommand{\bfI}{\abcbf I}}
22 \CustomizeMathJax{\newcommand{\bfJ}{\abcbf J}}
23 \CustomizeMathJax{\newcommand{\bfK}{\abcbf K}}
24 \CustomizeMathJax{\newcommand{\bfL}{\abcbf L}}
25 \CustomizeMathJax{\newcommand{\bfM}{\abcbf M}}
26 \CustomizeMathJax{\newcommand{\bfN}{\abcbf N}}
27 \CustomizeMathJax{\newcommand{\bfO}{\abcbf O}}
28 \CustomizeMathJax{\newcommand{\bfP}{\abcbf P}}
29 \CustomizeMathJax{\newcommand{\bfQ}{\abcbf Q}}
30 \CustomizeMathJax{\newcommand{\bfR}{\abcbf R}}
31 \CustomizeMathJax{\newcommand{\bfS}{\abcbf S}}
32 \CustomizeMathJax{\newcommand{\bfT}{\abcbf T}}
33 \CustomizeMathJax{\newcommand{\bfU}{\abcbf U}}
34 \CustomizeMathJax{\newcommand{\bfV}{\abcbf V}}
35 \CustomizeMathJax{\newcommand{\bfW}{\abcbf W}}
36 \CustomizeMathJax{\newcommand{\bfX}{\abcbf X}}
37 \CustomizeMathJax{\newcommand{\bfY}{\abcbf Y}}
38 \CustomizeMathJax{\newcommand{\bfZ}{\abcbf Z}}
39 \CustomizeMathJax{\newcommand{\bfa}{\abcbf a}}
40 \CustomizeMathJax{\newcommand{\bfb}{\abcbf b}}
41 \CustomizeMathJax{\newcommand{\bfc}{\abcbf c}}
42 \CustomizeMathJax{\newcommand{\bfd}{\abcbf d}}
43 \CustomizeMathJax{\newcommand{\bfe}{\abcbf e}}
44 \CustomizeMathJax{\newcommand{\bff}{\abcbf f}}
45 \CustomizeMathJax{\newcommand{\bfg}{\abcbf g}}
46 \CustomizeMathJax{\newcommand{\bfh}{\abcbf h}}
47 \CustomizeMathJax{\newcommand{\bfi}{\abcbf i}}
48 \CustomizeMathJax{\newcommand{\bfj}{\abcbf j}}
49 \CustomizeMathJax{\newcommand{\bfk}{\abcbf k}}
50 \CustomizeMathJax{\newcommand{\bfl}{\abcbf l}}
51 \CustomizeMathJax{\newcommand{\bfm}{\abcbf m}}
52 \CustomizeMathJax{\newcommand{\bfn}{\abcbf n}}
53 \CustomizeMathJax{\newcommand{\bfo}{\abcbf o}}
54 \CustomizeMathJax{\newcommand{\bfp}{\abcbf p}}
55 \CustomizeMathJax{\newcommand{\bfq}{\abcbf q}}
56 \CustomizeMathJax{\newcommand{\bfr}{\abcbf r}}
57 \CustomizeMathJax{\newcommand{\bfss}{\abcbf s}}
58 \CustomizeMathJax{\newcommand{\bft}{\abcbf t}}
59 \CustomizeMathJax{\newcommand{\bfu}{\abcbf u}}
60 \CustomizeMathJax{\newcommand{\bfv}{\abcbf v}}
61 \CustomizeMathJax{\newcommand{\bfw}{\abcbf w}}
62 \CustomizeMathJax{\newcommand{\bfx}{\abcbf x}}
63 \CustomizeMathJax{\newcommand{\bfy}{\abcbf y}}
64 \CustomizeMathJax{\newcommand{\bfz}{\abcbf z}}
65
66 \LWR@mathjax@addgreek@l@bf{{}}% Greek lowercase bold face italic
67 \LWR@mathjax@addgreek@u@bfup*{{}}% Greek uppercase bold face upright, cap macros.
68
69 \CustomizeMathJax{\newcommand{\bfzero}{\greekbf 0}}
70
71 \CustomizeMathJax{\DeclareMathOperator{\cov}{Cov}}
72 \CustomizeMathJax{\DeclareMathOperator{\E}{E}}
```

```

73 \CustomizeMathJax{\DeclareMathOperator{\V}{V}}
74 \CustomizeMathJax{\newcommand{\inas}{\overset{a.s.}{\to}}}
75 \CustomizeMathJax{\newcommand{\indist}{\overset{d}{\to}}}
76 \CustomizeMathJax{\newcommand{\inprob}{\overset{p}{\to}}}
77 \CustomizeMathJax{\DeclareMathOperator{\plim}{plim}}
78 \CustomizeMathJax{\DeclareMathOperator{\tr}{tr}}
79 \CustomizeMathJax{\DeclareMathOperator{\vc}{vec}}
80 \CustomizeMathJax{\DeclareMathOperator{\vcs}{vecs}}
81 \CustomizeMathJax{\DeclareMathOperator{\vch}{vech}}
82 \CustomizeMathJax{\DeclareMathOperator{\diag}{diag}}
83 \CustomizeMathJax{\DeclareMathOperator{\argmin}{arg\,min}}
84 \CustomizeMathJax{\DeclareMathOperator{\argmax}{arg\,max}}
85 \end{warpMathJax}

```

File 475 **l warp-steinmetz.sty**

§ 584 Package **steinmetz**

(Emulates or patches code by ENRICO GREGORIO.)

steinmetz (Pkg) **steinmetz** is patched for use by **l warp**. Emulation is provided for MATHJAX

for HTML output: 1 \LWR@ProvidesPackagePass{steinmetz}[2009/06/14]

```

2 \renewcommand{\phase}[2][]{%
3   \begin{lateximage}*[steinmetz{\detokenize{\#2}}]
4   \ensuremath{\underline{/}\#2}
5   \end{lateximage}
6 }
7
8 \begin{warpMathJax}
9 \CustomizeMathJax{\newcommand{\phase}[2][]{\underline{/}\#2}}
10 \end{warpMathJax}

```

File 476 **l warp-stfloats.sty**

§ 585 Package **stfloats**

stfloats (Pkg) **stfloats** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{stfloats}[2017/03/27]

stfloats may have been preloaded by a **ltj*** class.

The following are provided in case they have not yet been defined:

```

2 \providecommand*\fnbelowfloat{}
3 \providecommand*\fnunderfloat{}
4 \providecommand*\setbaselinefloat{}
5 \providecommand*\setbaselinefixed{}

```

Nullified for HTML:

```

6 \renewcommand*\fnbelowfloat(){}
7 \renewcommand*\fnunderfloat(){}
8 \renewcommand*\setbaselinefloat(){}
9 \renewcommand*\setbaselinefixed(){}

```

File 477 **l warp-struktex.sty**

§ 586 Package **struktex**

(Emulates or patches code by JOBST HOFFMANN.)

struktex (*Pkg*) struktex is patched for use by l warp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{struktex}

2 \BeforeBeginEnvironment{struktogramm}{%
3   \begin{lateximage}[-struktex-\~\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{struktogramm}{\end{lateximage}}
6
7 \newenvironment{\LWR@HTML@centerNss}{\begin{center}}{\end{center}}
8 \LWR@formattedenv{centerNss}
9
10 \newcommand{\LWR@HTML@CenterNssFile}[1]{%
11   \begin{center}
12   \input{#1.nss}
13   \end{center}
14 }
15 \LWR@formatted{CenterNssFile}
16
17 \newcommand{\LWR@HTML@centerNssfile}{\LWR@HTML@CenterNssFile}
18 \LWR@formatted{centerNssfile}

```

File 478 **l warp-subcaption.sty**

§ 587 Package **subcaption**

(Emulates or patches code by AXEL SOMMERFELDT.)

subcaption (*Pkg*) subcaption is patched for use by l warp.

for HTML output:

```
1 \LWR@ProvidesPackagePass{subcaption}[2018/05/01]
```

Tells l warp to ignore minipage widths inside a subfigure or subtable. In print mode the minipages are used to place the items next to each other. In HTML they are placed side-by-side automatically.

```

2 \xpretocmd{\subcaption@iiminipage}
3   {\minipagefullwidth}
4   {}
5   {\LWR@patcherror{subcaption}{subcaption@iiminipage}}

```

Likewise for a \subcaptionbox:

```

6 \xpretocmd{\subcaptionbox}
7   {\minipage{fullwidth}}
8   {}
9   {\LWR@patcherror{subcaption}{subcaptionbox}}

```

File 479 **l warp-subfig.sty**

§ 588 Package **subfig**

(Emulates or patches code by STEVEN DOUGLAS COCHRAN.)

subfig (Pkg) **subfig** is supported and patched by **l warp**.

⚠ table numbering To have correct sub table numbers:

```
\usepackage{caption}
\captionsetup[table]{position=top}
```

⚠ lof/lotdepth At present, the package options for `lofdepth` and `lotdepth` are not working. These counters must be set separately after the package has been loaded.

⚠ horizontal spacing In the document source, use `\hfill` and `\hspace*` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

for HTML output: Accept all options for **l warp-subfig**:

```
1 \LWR@ProvidesPackagePass{subfig}[2005/06/28]
```

\sf@@@subfloat $\langle 1 \text{ type} \rangle [\langle 2 \text{ lof entry} \rangle] [\langle 3 \text{ caption} \rangle] \{ \langle 4 \text{ contents} \rangle \}$

The outer minipage allows side-by-side subfloats with `\hfill` between.

```

2 \VerifyCommand[l warp][subfig]{\sf@@@subfloat}{B29FEC2418FD15B9E58ACF593B81BA93}
3
4 \long\def\sf@@@subfloat#1[#2][#3]{%
5 \begin{minipage}{\linewidth} l warp
6 \IfValueTF{#2}{%
7   \LWR@setlatestname{#2}%
8 }{%
9   \IfValueTF{#3}{%
10     \LWR@setlatestname{#3}%
11   }{%
12 }%
13 \LWR@stopars% l warp
14 \@ifundefined{FBsc@max}{%
15   {\FB@readaux{\let\FBsuboheight\relax}}%
16   \tempcnta=\ne
17   \if@minipage
18     \tempcnta=z@
19   \else\ifdim \lastskip=z@\else
20     \tempcnta=tw@
21   \fi\fi
22   \ifmaincaptiontop
23     \sf@top=\sf@nearskip
24     \sf@bottom=\sf@farskip

```

```

25      \else
26          \sf@top=\sf@farskip
27          \sf@bottom=\sf@nearskip
28      \fi
29      \leavevmode

30%     \setbox\@tempboxa \hbox{\#4}%
31%     \tempdima=\wd\@tempboxa
32%     \@ifundefined{FBsc@max}{ }%
33%         {\global\advance\Xhsize-\wd\@tempboxa
34%          \dimen@=\ht\@tempboxa
35%          \advance\dimen@\dp\@tempboxa
36%          \ifdim\dimen@>\FBso@max
37%              \global\FBso@max\dimen@
38%          \fi}%

```

Do not use boxes, which interfere with `\textrimage`:

```

39%     \vtop%
40     \bgroup
41%     \vbox%
42     \bgroup
43     \ifcase\@tempcna
44     \@minipagefalse
45     \or
46%       \vskip\sf@top
47     \or
48     \ifdim \lastskip=\z@ \else
49%       \atempskipb\sf@top\relax\xaddvskip
50     \fi
51     \fi
52     \sf@ifpositiontop{ }
53     \ifx \empty\#3\relax \else
54     \sf@subcaption{\#1}{\#2}{\#3}%
55%       \vskip\sf@capskip
56%       \vskip\sf@captionadj
57     \fi\egroup
58%       \hrule width0pt height0pt depth0pt
59       \LWR@startpars% lwarp
60%     \box\@tempboxa
61     #4
62     \LWR@stopars% lwarp
63     }{ %
64     \LWR@startpars% lwarp
65     \@ifundefined{FBsc@max}{ }%
66     {
67%     \box\@tempboxa
68     #4
69     }%
70     {\ifx\FBsuboheight\relax
71%       \box\@tempboxa
72     #4
73     \else
74%       \vbox to \FBsuboheight{\FBafil\box\@tempboxa\FBbfil}%
75     #4
76     \fi}%
77     \LWR@stopars% lwarp
78     \egroup
79     \ifx \empty\#3\relax \else
80%       \vskip\sf@capskip
81%       \hrule width0pt height0pt depth0pt

```

```

82           \sf@subcaption{\#1}{\#2}{\#3}%
83           \fi
84       }%
85 %      \vskip\sf@bottom
86   \egroup
87   \@ifundefined{FBsc@max}{}
88   {\addtocounter{FRobj}{-1}%
89    \ifnum\c@FRobj=0\else
90     \subfloatrowsep
91     \fi}%
92   \ifmaincaptiontop\else
93     \global\advance\@nameuse{c@\@capttype}\m@ne
94   \fi
95 \end{minipage}%
96 \LWR@startpars%
97 \endgroup\ignorespaces%
98 }%


\sf@subcaption
{<1 type>} {<2 lofentry>} {<3 caption>}
99 \VerifyCommand[l warp][subfig]{\sf@subcaption}{63123F93BADE8F3BBC127012A832A4C4}
100
101 \long\def\sf@subcaption#1#2#3{%
102 \LWR@stopars%
103   \ifx \relax#2\relax \else
104     \bgroup
105       \let\label=\gobble
106       \let\protect=\string
107       \def\@subcaplabel{%
108         \caption@lstfmt{\@nameuse{p@\#1}}{\@nameuse{the\#1}}%
109         \sf@updatecaptionlist{\#1}{\#2}{\the\value{@capttype}}{\the\value{\#1}}%
110       }%
111     \fi
112   \bgroup
113     \ifx \relax#3\relax
114       \let\captionlabelsep=\relax
115     \fi
116 %     \setbox0\vbox{%
117 %       \hb@xt@{\the\@tempdima}{%
118 %
119 %         \hss
120 %         \parbox[t]{\the\@tempdima}{%
121 %           \caption@make
122 %             {\@nameuse{sub\@capttype name}}%
123 %             {\@nameuse{thesub\@capttype}}%
124 %             {\#3}%
125 %           }%
126 %         \hss
127 %       }
128 %     }%
129   \@ifundefined{FBsc@max}{}
130 %     {\box0}%
131   {
132 %     \parbox[t]{\the\@tempdima}{%
133 \LWR@traceinfo{sfsubcap B1}%
134     \LWR@figcaption%
135     \caption@make
136       {\@nameuse{sub\@capttype name}}%
137       {\@nameuse{thesub\@capttype}}%
138       {\LWR@isolate{\#3}}%

```

```

139          \endLWR@figcaption%      l warp
140 \LWR@traceinfo{sfsubcap B2}%
141 %    }%
142     }%
143     {\dimen@\ht0%
144     \advance\dimen@\dp0%
145     \ifdim\dimen@>\FBsc@max
146     \global\FBsc@max\dimen@
147     \fi
148     \FB@readaux{\let\FBsubcheight\relax}%
149     \ifx\FBsubcheight\relax
150     \def\next{
151 %   \parbox[t]{\the\@tempdima}
152     }%
153     \else
154     \def\next{
155 %   \parbox[t][\FBsubcheight][t]{\the\@tempdima}
156     }%
157     \fi
158 %   \vbox{%
159 %     \hb@xt@\the\@tempdima{%
160
161 %   \hss
162 %   \next{%
163 \LWR@traceinfo{sfsubcap C1}% l warp
164         \caption@make
165         {\@nameuse{sub@\capttype name}}%
166         {\@nameuse{thesub@\capttype}}%
167         {#3}
168 \LWR@traceinfo{sfsubcap C1}% l warp
169 %   }%
170 %   \hss
171
172 %   }
173 %   }
174     }%
175   \egroup
176 \LWR@startpars% l warp
177 }

```

\subfloat@label

Patches for \sf@sub@label:

```

178 \xpretocmd{\subfloat@label}
179   {\LWR@ensuredoingapar}
180   {}
181   {\LWR@patcherror{subfig}{subfloat@label}}

```

Patches for \subref.

\sf@subref

{*<label>*}

The unstarred version uses a \ref link whose printed text comes from the sub@<label>:

```

182 \renewcommand{\sf@subref}[1]{%
183   \LWR@subnewref{#1}{sub@#1}%
184 }

```

\sf@@subref

{*<label>*}

The starred version uses the printed `\sf@<label>` which is stored as if it were a page number:

```
185 \renewcommand{\sf@<subref>}[1]{\LWR@orig@pageref{sub@#1}}
```

Defining new subfloats. The `\l@sub<type>` for each is redefined.

`\@newsubfloat`

```
186 \LetLtxMacro{\LWR@orig@newsubfloat}{\@newsubfloat}
187
188 \def\@newsubfloat[#1]#2{%
189   \LWR@orig@newsubfloat[#1]{#2}%
190   \renewcommand{\l@sub#2}[2]{\hypertocfloat{2}{sub#2}{\ext@sub#2}{##1}{##2}}%
191 }
```

Pre-defined for figures and tables:

`\l@subfigure`

```
{<text>} {<pagenum>}
192 \renewcommand{\l@subfigure}[2]{\hypertocfloat{2}{subfigure}{lof}{#1}{#2}}
```

`\l@subtable`

```
{<text>} {<pagenum>}
193 \renewcommand{\l@subtable}[2]{\hypertocfloat{2}{subtable}{lot}{#1}{#2}}
```

File 480 **lwarp-subfigure.sty**

§ 589 Package **subfigure**

`subfigure (Pkg)` **subfigure** is emulated by **subfig**.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{subfigure}[2002/03/15]
2 \RequirePackage{subfig}
```

```
3 \LetLtxMacro{\subfigure}{\subfloat}
4 \LetLtxMacro{\subtable}{\subfloat}
5 \LetLtxMacro{\Subref}{\subref}
6 \@ifundefined{figuretopcaptrue}{\newif\iffiguretopcap{}}%
7 \newif\ifsubfiguretopcap
8 \newif\ifsubcaphang
9 \newif\ifsubcapcenter
10 \newif\ifsubcapcenterlast
11 \newif\ifsubcapnooneline
12 \newif\ifsubcapraggedright
13 \newskip\subfigtopskip
14 \newskip\subfigcapskip
15 \newdimen\subfigcaptionadj
16 \newskip\subfigbottomskip
17 \newdimen\subfigcapmargin
18 \newskip\subfiglabelskip
19 \newcommand*\subcapsize{%
20 \newcommand*\subcaplabelfont{%
21 \newcommand*\subcapfont{}}
```

File 481 **l warp-subsupscripts.sty**

§ 590 Package **subsupscripts**

(Emulates or patches code by RICCARDO BRESCIANI.)

subsupscripts (*Pkg*) **subsupscripts** is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{subsupscripts}[2009/10/27]

The larger skips are used here.

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{%
4   \newcommand{\fourscriptsC}[7]{%
5     {}^{\#2}_{\#3}\hspace{\#6}\#1\hspace{\#7}{}^{\#4}_{\#5}%
6   }
7 }
8 \CustomizeMathJax{%
9   \newcommand{\lrsubscriptsC}[5]{%
10    \fourscriptsC{\#1}{\#2}{\#3}{\#4}{\#5}%
11  }
12 }
13 \CustomizeMathJax{%
14   \newcommand{\rlsuperscriptsC}[5]{%
15    \fourscriptsC{\#1}{\#2}{\#3}{\#4}{\#5}%
16  }
17 }
18 \CustomizeMathJax{%
19   \newcommand{\fourscripts}[5]{%
20     \fourscriptsC{\#1}{\#2}{\#3}{\#4}{\#5}{\#0ex}{\#0ex}%
21   }
22 }
23 \CustomizeMathJax{%
24   \newcommand{\lrsuperscripts}[3]{\fourscripts{\#1}{\#2}{\#3}{}}
25 }
26 \CustomizeMathJax{%
27   \newcommand{\rlsubscripts}[3]{\fourscripts{\#1}{\#2}{\#3}{}}
28 }
29 \CustomizeMathJax{%
30   \newcommand{\twolscripts}[4][- .16ex]{{}^{\#3}_{\#4}\hspace{\#1}\#2}%
31 }
32 \CustomizeMathJax{%
33   \newcommand{\tworscripts}[4][- .07ex]{{\#2}\hspace{\#1}{}^{\#3}_{\#4}}%
34 }
35 \CustomizeMathJax{%
36   \newcommand{\lsubscript}[3][- .16ex]{\twolscripts{\#1}{\#2}{\#3}{}}
37 }
38 \CustomizeMathJax{%
39   \newcommand{\lsuperscript}[3][- .16ex]{\twolscripts{\#1}{\#2}{\#3}{}}
40 }
41 \CustomizeMathJax{%
42   \newcommand{\rsubscript}[3][- .07ex]{\tworscripts{\#1}{\#2}{\#3}{}}
43 }
44 \CustomizeMathJax{%
45   \newcommand{\rsuperscript}[3][- .07ex]{\tworscripts{\#1}{\#2}{\#3}{}}
}
```

```
46 }
47 \end{warpMathJax}
```

File 482 **l warp-supertabular.sty**

§ 591 Package **supertabular**

(Emulates or patches code by JOHANNES BRAAMS, THEO JURRIENS.)

supertabular (*Pkg*) supertabular is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{supertabular}[2004/02/20]

⚠ Misplaced alignment
tab character &

```
\StartDefiningTabulars
\tablefirsthead
...
\StopDefiningTabulars
```

See section 8.10.1.

⚠ **latextimage** supertabular and xtab are not supported inside a latextimage.

```
2 \newcommand{\LWRST@firsthead}(){}
3
4 \newcommand{\tablefirsthead}[1]{%
5   \long\gdef\LWRST@firsthead{\#1}%
6 }
7
8 \newcommand{\tablehead}[1]{}%
9 \newcommand{\tabletail}[1]{}%
10
11 \newcommand{\LWRST@lasttail}{}%
12
13 \newcommand{\tablelasttail}[1]{%
14   \long\gdef\LWRST@lasttail{\#1}%
15 }

16 \newcommand{\tablecaption}[2][]{%
17   \long\gdef\LWRST@caption{%
18     \ifblank{\#1}{%
19       {\caption{\#2}}%
20       {\caption[\#1]{\#2}}%
21     }%
22   }%
23
24 \let\topcaption\tablecaption
25 \let\bottomcaption\tablecaption

26 \newcommand*\LWRST@caption{}%
27
28 \newcommand*\shrinkheight[1]{}%
29
30 \NewDocumentEnvironment{supertabular}{s o m}
31 {%
```

```

32 \LWR@traceinfo{supertabular}%
33 \begin{table}%
34 \LWRST@caption%
35 \begin{tabular}{#3}%
36 \TabularMacro\ifdefvoid{\LWRST@firsthead}%
37 {\LWR@getmynexttoken}%
38 {\expandafter\LWR@getmynexttoken\LWRST@firsthead}%
39 }%
40 {%
41 \ifdefvoid{\LWRST@lasttail}%
42 {}%
43 {%
44 \TabularMacro\ResumeTabular%
45 \LWRST@lasttail%
46 }%
47 \end{tabular}%
48 \end{table}%

49 \gdef\LWRST@caption{}%

50 \LWR@traceinfo{supertabular done}%
51 }%
52
53 \NewDocumentEnvironment{mpsupertabular}[s o m]{%
54 {\minipage{\linewidth}\supertabular{#3}}%
55 {\endsupertabular\endminipage}

```

File 483 **l warp-svg.sty**

§ 592 Package **SVG**

(Emulates or patches code by PHILIP ILTEN, FALK HANISCH.)

svg (*Pkg*) **svg** is patched for use by **l warp**.

for **HTML output**: 1 \LWR@ProvidesPackagePass{svg}[2020/10/23]

```

2 \xpretocmd{\includesvg}{%
3   {\begin{lateximage}}%
4   {}%
5   {\LWR@patcherror{svg}{includesvg}}%
6
7 \xapptocmd{\includesvg}{%
8   {\end{lateximage}}%
9   {}%
10 {\LWR@patcherror{svg}{includesvg}}%
11
12 \xpretocmd{\includeinkscape}{%
13   {\begin{lateximage}}%
14   {}%
15   {\LWR@patcherror{svg}{includeinkscape}}%
16
17 \xapptocmd{\includeinkscape}{%
18   {\end{lateximage}}%
19   {}%
20   {\LWR@patcherror{svg}{includeinkscape}}%

```

File 484 **l warp-swfigure.sty**

§ 593 Package **swfigure**

(Emulates or patches code by CLAUDIO BECCARI.)

swfigure (*Pkg*) **swfigure** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{swfigure}[2020-11-10]

```
2 \NewDocumentEnvironment{DFimage}%
3   {O{SW} m O{#4} m o D(){0.8} D<>{0} D||{0.25} D!!{}}
4 {%
5   \begin{figure}
6     \centering
7     \includegraphics{#2}
8     \caption[#3]{#4}
9     \IfValueT{#5}{\label{#5}}
10    \end{figure}
11 }%
12 { }
```

File 485 **l warp-sympytex.sty**

§ 594 Package **sympytex**

(Emulates or patches code by TIM MOLTENO.)

sympytex (*Pkg*) **sympytex** is patched for use by **l warp**.

for HTML output: 1 \LWR@ProvidesPackagePass{sympytex}[2014/05/16]

```
2 \AfterEndPreamble{
3
4 \AtBeginEnvironment{sympyblock}{%
5   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{%
6     {}%
7     {}%
8       \LWR@forcenewpage%
9       \LWR@atbeginverbatim{verbatim}%
10      {}%
11  }%
12
13 \AfterEndEnvironment{sympyblock}{%
14   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{%
15     {}%
16     {}%
17       \LWR@afterendverbatim%
18     {}%
19  }%
20
21 }
```

File 486 l warp-syntonly.sty**§ 595 Package syntonly**

(Emulates or patches code by FRANK MITTELBACH, RAINER SCHÖPF.)

syntonly (*Pkg*) syntonly is ignored.

for HTML output: Discard all options for l warp-syntonly:

```
1 \LWR@ProvidesPackageDrop{syntonly}[2017/06/30]

2 \newif\ifsyntax@
3 \syntax@false
4
5 \newcommand*{\syntaxonly}{{}}
6
7 \@onlypreamble\syntaxonly

8 \def\nopages@{}

---


```

File 487 l warp-tabfigures.sty**§ 596 Package tabfigures**

tabfigures (*Pkg*) tabfigures is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{tabfigures}[2012/01/24]

File 488 l warp-tablefootnote.sty**§ 597 Package tablefootnote**

tablefootnote (*Pkg*) tablefootnote is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{tablefootnote}[2014/01/26]

This works because in HTML tables are no longer floats.

```
2 \LetLtxMacro\tablefootnote\footnote

---


```

File 489 l warp-tables.sty**§ 598 Package tabs**

(Emulates or patches code by DONALD ARSENEAU.)

tabls (Pkg) tabls is emulated. \LWR@hline is used to handle the optional argument when tabls is loaded.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{tabls}

2 \newdimen\tablinesep
3 \newdimen\arraylinesep
4 \newdimen\extrarulesep

```

File 490 **l warp-tabularx.sty**

§ 599 Package **tabularx**

(Emulates or patches code by DAVID CARLISLE.)

tabularx (Pkg) tabularx is emulated by l warp.

for HTML output: Discard all options for l warp-tabularx:

```

1 \LWR@ProvidesPackageDrop{tabularx}[2016/02/03]
2 \RequirePackage{array}

```

\tabularxcolumn is ignored. All X columns will be p for now. The width is ignored.

```

3 \def\tabularxcolumn#1{p{#1}}
4 \newcolumntype{X}{p{1in}}


5 \DeclareDocumentEnvironment{tabularx}{m o m}
6   {\begin{array}{#1}}
7   {\end{array}}
8
9 \DeclareDocumentEnvironment{tabularx*}{m o m}
10  {\begin{array}{#1}}
11  {\end{array}}

```

File 491 **l warp-tabulary.sty**

§ 600 Package **tabulary**

(Emulates or patches code by DAVID CARLISLE.)

tabulary (Pkg) tabulary is emulated by l warp.

for HTML output: Discard all options for l warp-tabulary.

Column types L, C, R, and J are emulated by l warp core code.

```

1 \LWR@ProvidesPackageDrop{tabulary}[2014/06/11]
2 \RequirePackage{array}

```

```

3 \NewDocumentEnvironment{tabulary}{m o m}
4 {\begin{array}{#1}}
5 {\end{array}}

```

```

6
7 \NewDocumentEnvironment{tabulary*}{m o m}
8 {\begin{array}{#3}}
9 {\end{array}}
10 \newcolumntype{L}{l}
11 \newcolumntype{C}{c}
12 \newcolumntype{R}{r}
13 \newcolumntype{J}{l}
14 \newdimen\tymin
15 \newdimen\tymax
16 \def\tyformat{}

```

File 492 **l warp-tagpdf.sty**§ 601 Package **tagpdf**

tagpdf (*Pkg*) tagpdf adds alt text, for images only. (HTML only has alternate text for images.)

The overall strategy is that tagpdf is deactivated, and slightly patched to process alt tags. Also see tagpdf-base, tagpdf-mc-code-generic, and tagpdf-mc-code-lua, following tagpdf.

for HTML output: 1 \LWR@ProvidesPackagePass{tagpdf}[2022-08-24]

```

2 \ExplSyntaxOn
3
4 \keys_define:nn { __tag / struct }
5 {
6   alt .code:n      = % Alt property
7   {
8     \str_set_convert:Noon
9     \l__tag_tmpa_str
10    { #1 }
11    { default }
12    { utf16/hex }
13    \__tag_prop_gput:c
14    { g__tag_struct_\int_eval:n { \c@g__tag_struct_abs_int }_prop }
15    { Alt }
16    { <\l__tag_tmpa_str> }
17    \gdef\lWR@ThisAltText{\detokenize\expandafter{#1}}%      l warp
18  },
19 }
20
21 \ExplSyntaxOff

```

The package is deactivated on load, and also each time \tagpdfsetup is used.

22 \LWR@tagpdf@deactivate

File 493 **l warp-tagpdf-base.sty**

§ 602 Package **tagpdf-base**

(Emulates or patches code by ULRIKE FISCHER.)

tagpdf-base (*Pkg*) tagpdf-base is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{tagpdf-base}[2022-08-24]

```
2 \ExplSyntaxOn
3
4 \newcommand*\LWR@tagpdf@deactivate{%
5     \keys_set:nn { __tag / setup } {
6         activate-space = false ,
7         activate-mc = false ,
8         activate-tree = false ,
9         activate-struct = false
10    }
11 }
12
13 \RenewDocumentCommand \tagpdfsetup { m }{
14     \keys_set:nn { __tag / setup } { #1 }
15     \LWR@tagpdf@deactivate
16 }
17
18 \RenewDocumentCommand \tagmcbegin { m }
19 {
20%     \tag_mc_begin:n {#1}
21     \keys_set:nn { __tag / mc } {#1}
22 }
23
24 \RenewDocumentCommand \tagmcend { }
25 {
26%     \tag_mc_end:
27     \ThisAltText{}%      l warp
28 }
29
30 \RenewDocumentCommand \tagmcuse { m }
31 {
32%     \tag_mc_use:n {#1}
33 }
34
35 \RenewDocumentCommand \tagstructbegin { m }
36 {
37     \keys_set:nn { __tag / struct} { #1 }%      l warp
38%     \tag_struct_begin:n {#1}
39 }
40
41 \RenewDocumentCommand \tagstructend { }
42 {
43%     \tag_struct_end:
44     \ThisAltText{}%      l warp
45 }
46
47 \RenewDocumentCommand \tagstructuse { m }
```

```

48  {
49 %     \tag_struct_use:n {#1}
50  }
51
52 \ExplSyntaxOff

```

File 494 **l warp-tagpdf-mc-code-generic.sty**

§ 603 Package **tagpdf-mc-code-generic**

(Emulates or patches code by ULRIKE FISCHER.)

tagpdf-mc-code-generic (*Pkg*) tagpdf-mc-code-generic is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{tagpdf-mc-code-generic}[2022-08-24]

```

2 \ExplSyntaxOn
3
4 % From tagpdf-mc-code-generic.sty:
5 \keys_define:nn { __tag / mc }
6  {
7      alt .code:n      = % Alt property
8      {
9 %         \str_set_convert:Noon
10 %             \l__tag_tmpa_str
11 %                 { #1 }
12 %                 { default }
13 %                 { utf16/hex }
14 %             \tl_put_right:Nn \l__tag_mc_key_properties_tl { /Alt~< }
15 %             \tl_put_right:No \l__tag_mc_key_properties_tl { \l__tag_tmpa_str>~ }
16             \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%      l warp
17         },
18     }
19
20 \ExplSyntaxOff

```

File 495 **l warp-tagpdf-mc-code-lua.sty**

§ 604 Package **tagpdf-mc-code-lua**

(Emulates or patches code by ULRIKE FISCHER.)

tagpdf-mc-code-lua (*Pkg*) tagpdf-mc-code-lua is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{tagpdf-mc-code-lua}[2022-08-24]

```

2 \ExplSyntaxOn
3
4 \keys_define:nn { __tag / mc }
5  {
6      alt .code:n      = % Alt property
7      {
8 %         \str_set_convert:Noon
9 %             \l__tag_tmpa_str

```

```

10 %          { #1 }
11 %          { default }
12 %          { utf16/hex }
13 %          \tl_put_right:Nn \l__tag_mc_key_properties_tl { /Alt~< }
14 %          \tl_put_right:No \l__tag_mc_key_properties_tl { \l__tag_tmpa_str>~ }
15 %          \lua_now:e
16 %
17 %          {
18 %              ltx.__tag.func.store_mc_data
19 %              (
20 %                  \__tag_get_mc_abs_cnt:, "alt", "/Alt~<\str_use:N \l__tag_tmpa_str>"
21 %              )
22 %          }
23 %          \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%      l warp
24 },
25
26 \ExplSyntaxOff

```

File 496 **l warp-tascmac.sty**§ 605 Package **tascmac**tascmac (*Pkg*) tascmac is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{tascmac}[2018/03/09]

```

2 \newenvironment*{boxnote}
3 {
4     \BlockClass[
5         padding: .5ex ;
6         border: 1px solid black ;
7         border-top: 1px dashed black ;
8     ]{boxnote}
9 }
10 {\endBlockClass}
11
12 \newenvironment*{screen}[1][]
13 {
14     \BlockClass[
15         padding: .5ex ;
16         border: 1px solid gray ;
17         border-radius: 8pt
18     ]{boxnote}
19 }
20 {\endBlockClass}
21
22 \newenvironment*{itembox}[2][]
23 {
24     \BlockClass[
25         padding: .5ex ;
26         border: 1px solid gray ;
27         border-radius: 8pt
28     ]{boxnote}
29     \InlineClass{itemboxtitle}{#2}\par
30 }
31 {\endBlockClass}
32

```

```

33 \newenvironment*{shadebox}{%
34     {
35         \BlockClass[%
36             padding: .5ex ;
37             border: 1px solid black ;
38             box-shadow: 3px 3px 3px \#808080 ;
39         ]{boxnote}
40     }
41     {\endBlockClass}
42 }
43 \newcommand*{\mask}[2]{%
44     \InlineClass[background: lightgray]{mask}{#1}%
45 }
46
47 \newcommand*{\maskbox}[5]{%
48     \InlineClass[background: lightgray]{mask}{#5}%
49 }
50
51 \newcommand*{\Maskbox}[6]{%
52     \InlineClass[%
53         background: lightgray ;
54         border: #5 solid black
55     ]{mask}{#6}%
56 }
57
58 \newcommand*{\keytop}[2][]{%
59     \InlineClass[%
60         padding: .2ex ;
61         border: 1px solid black ;
62         border-radius: .7ex ;
63     ]{keytop}{#2}%
64 }
65
66 \def\yen{\HTMLunicode{00A5}}
67
68 \def\return{\HTMLunicode{23CE}}
69
70 \def\Return{\HTMLunicode{23CE}}
71
72 \def\ascii{ASCII Corporation}
73
74 \def\Ascii{ASCII Corporation}
75
76 \def\ASCII{ASCII Corporation}

```

File 497 **lwarf-tcolorbox.sty**

§ 606 Package **tcolorbox**

(Emulates or patches code by THOMAS F. STURM.)

tcolorbox (*Pkg*) **tcolorbox** is patched for use by **lwarf**.

See section [8.3.8](#) for limitations.

for HTML output: 1 \LWR@ProvidesPackagePass{tcolorbox}[2023/06/19]

```
2 \newbool{LWR@havetcblower}
3 \boolfalse{LWR@havetcblower}
```

Colors are supported via HTML styles:

```
4 \newcommand{\LWR@tcolorbox@findcolors}{%
5   \convertcolorspec{named}{tcbscolback}{HTML}\LWR@tcbscolback
6   \convertcolorspec{named}{tcbscolframe}{HTML}\LWR@tcbscolframe
7   \iftcb@titlefilled%
8     \convertcolorspec{named}{tcbscolbacktitle}{HTML}\LWR@tcbscolbacktitle
9   \else
10     \convertcolorspec{named}{tcbscolframe}{HTML}\LWR@tcbscolbacktitle
11   \fi
12   \convertcolorspec{named}{tcbscoltitle}{HTML}\LWR@tcbscoltitle
13   \convertcolorspec{named}{tcbscolupper}{HTML}\LWR@tcbscolupper
14   \convertcolorspec{named}{tcbscollower}{HTML}\LWR@tcbscollower
15 }
16
17 \newcommand*{\LWR@tcolorbox@titlecolorstyles}{%
18   border-top: 1px solid \LWR@origpound\LWR@tcbscolframe ;
19   border-bottom: 1px solid \LWR@origpound\LWR@tcbscolframe ;
20   background: \LWR@origpound\LWR@tcbscolbacktitle ;
21   color: \LWR@origpound\LWR@tcbscoltitle ;
22 }
```

The title is placed inside its own <div> of class `tcolorboxtitle`.

```
23 \newcommand*{\LWR@showtitle@}[1]{%
24   \begin{BlockClass}[
25     \LWR@tcolorbox@titlecolorstyles
26   ]\tcolorboxtitle
27 %           \cmdKV@LWRtcolorbox@title\par
28   \kvtcb@before@title#1\kvtcb@after@title
29   \end{BlockClass}
30 }
```

If no title, a non-breakable space is used to take some vertical space.

```
31 \newcommand*{\LWR@showtitle}[1]{%
32   \iftcb@titlevisible
33   \LWR@showtitle@{#1}
34   \else
35   \LWR@showtitle@{~}
36   \fi
37 }
38
39 \newcommand*{\LWR@tcolorbox@dophantom}{%
40 %           \sbox\tcb@phantombox{\kvtcb@phantom}%
41 %           \iftcb@hasPhantom%
42 %             \box\tcb@phantombox%
43 %             \tcb@hasPhantomfalse%
44 %           \fi%
45   \kvtcb@phantom
46   \let\kvtcb@phantom\empty%
47 }
```

The `tcolorbox` is placed inside an external `<div>` of class #1, which is `tcolorbox` or `tcolorbox inlineminipage`. The upper and lower parts are placed into their own internal `<div>`s of class `tcolorboxupper` and `tcolorboxlower`.

```
48 \newcommand*{\LWR@tcolorboxstart}[1]{%
49   \LWR@tcolorbox@findcolors
50   \begin{BlockClass}[
51     border: 1px solid \LWR@origpound\LWR@tcbcolframe ;
52     background: \LWR@origpound\LWR@tcbcolback ;
53   ]{#1}
54   \LWR@tcolorbox@dophantom%
55   \ifdefvoid{\kvtcb@title}{%
56     {}
57     {
58       \LWR@showtitle{\kvtcb@title}
59     }
60   } \begin{BlockClass}[
61     color: \LWR@origpound\LWR@tcbcolupper ;
62   ]{tcolorboxupper}
63 }
```

Floats enclose the `tcolorbox`.

```
64 \newcommand*{\LWR@tcolorbox@dosstartfloat}{%
65   \ifx\kvtcb@float\@empty%
66 %     \tcb@set@normal@unbroken@beforeafter%
67   \else%
68 %     \edef\tcb@before@unbroken{%
69 %       \noexpand\tcb@float@env@begin{tcbbfloat}[\kvtcb@float]%
70 %       \noexpand\kvtcb@everyfloat%
71 %     }%
72 %     \let\tcb@after@unbroken=\tcb@float@env@end%
73 %     \tcb@float@env@begin{tcbbfloat}[\kvtcb@float]
74 %     \noexpand\kvtcb@everyfloat
75   \fi%
76 }
77
78 \newcommand*{\LWR@tcolorbox@doendfloat}{%
79   \ifx\kvtcb@float\@empty%
80   \else%
81     \tcb@float@env@end%
82   \fi%
83 }
```

Footnotes are handled via the main footnote mechanism, and pending notes are printed before and after each `tcolorbox`. Footnote numbering will not match the print output.

Not using `\VerifyCommand` here because `tcolorbox` changes meaning.

```
84 \renewenvironment{tcolorbox}[1][]
85   {
86     \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{%
87     {
88       \PackageError{l warp}{%
89         Lwarp cannot process a tcolorbox inside a lateximage\MessageBreak
90         or SVG math.\MessageBreak
91         Enter 'H' for possible solutions%
92     }
```

```

93          }
94          {%
95              Use \protect\tcbox, \protect\tcboxmath, or
96              \protect\tcbhighmath\space instead.\MessageBreak%
97              (Inside math, you probably want to use these anyhow.)%
98          }
99          }{\relax}
100         \LWR@printpendingfootnotes
101         \tcb@layer@inc
102         \tcb@apply@box@options{#1}
103         \LWR@tcolorbox@dostartfloat%
104         \tcbset{title=#1}
105         \boolfalse{LWR@havetcblower}
106         \LWR@tcolorboxstart{tcolorbox}
107         \tcb@insert@before@upper%
108     }
109     {
110         \ifbool{LWR@havetcblower}{%
111             \tcb@insert@after@lower%
112         }{%
113             \tcb@insert@after@upper%
114         }%
115         \end{BlockClass}
116         \LWR@printpendingfootnotes
117         \tcb@layer@dec
118         \end{BlockClass}
119         \LWR@tcolorbox@doendfloat%
120     }

```

For the lower part, the upper part is finished then the lower is started.

\tcblower is \let to \tcb@error@nolower globally, which gives an error in print mode, but is redefined here for HTML.

```

121 \newcommand{\LWR@HTML@tcb@error@nolower}{%
122     \tcb@insert@after@upper%
123     \end{BlockClass}
124     \begin{BlockClass}{%
125         border-top: 1px dashed \LWR@origpound\LWR@tcbsolidframe ;
126         color: \LWR@origpound\LWR@tcblower ;
127     }{\tcolorboxlower}
128     \tcb@insert@before@lower%
129 }
130 \LWR@formatted{tcb@error@nolower}

```

Starred and unstarred \tcbline are simple \hrules.

```

131 \AtBeginDocument{
132 \ifdef{\tcbline}{%
133     \newcommand*{\LWR@sub@tcbline}{%
134         \begin{BlockClass}{\hrule}
135         \end{BlockClass}
136     }
137     \newcommand{\LWR@HTML@tcbline}{\@ifstar{\LWR@sub@tcbline}{\LWR@sub@tcbline}}
138     \LWR@formatted{tcbline}
139 }{}%
140 }
141
142 \newcommand{\LWR@HTML@tcbox}[2][]{%
143     \LWR@printpendingfootnotes

```

```

144   \LWR@tcolorbox@dostartfloat%
145   \begingroup
146   \tcb@layer@inc
147   \tcb@apply@box@options{#1}
148 %     \tcbset{title=#1}
149   \boolfalse{LWR@havetcblower}
150   \LWR@tcolorboxstart{tcolorbox inlineminipage}
151   \tcb@insert@before@upper%
152   #2
153   \ifbool{LWR@havetcblower}{%
154     \tcb@insert@after@lower%
155   }{%
156     \tcb@insert@after@upper%
157   }%
158   \end{BlockClass}
159   \LWR@printpendingfootnotes
160   \end{BlockClass}
161   \tcb@layer@dec%
162   \endgroup%
163   \LWR@tcolorbox@dostartfloat%
164   \global\booltrue{LWR@minipagethispar}%
165 }
166 \LWR@formatted{tcbox}
167
168 \appto{\LWR@restoreMathJaxformatting}{%
169   \renewcommand{\tcbox}[2][]{\#2}%
170 }

```

Patches for the subtitle, which is placed inside a <div> of class tcolorboxsubtitle.

```

171 \xpatchcmd{\tcbsubtitle}
172   {\begingroup}
173   {\begingroup\let\kvtcb@title\relax\begin{BlockClass}{tcolorboxsubtitle}}
174   {}
175   {\LWR@patcherror{tcolorbox}{tcbsubtitle}}
176
177 \xpatchcmd{\tcbsubtitle}
178   {\endgroup}
179   {\end{BlockClass}\endgroup}
180   {}
181   {\LWR@patcherror{tcolorbox}{tcbsubtitleB}}

```

\tcboxfit is the same as \tcbox.

```

182 \AtBeginDocument{
183   \ifdef{\tcboxfit}{%
184     \let\LWR@HTML@tcboxfit\tcbox%
185     \LWR@formatted{tcboxfit}
186   }{}%
187 }

```

\tcbttitle is patched to support the text font.

```

188 \VerifyCommand[lwarf][tcolorbox]{\tcbttitle}{8C821A2BDC95C579A4FA340365D9A5CB}
189
190 \LetLtxMacro{\LWR@HTML@tcbttitle}{\tcbttitle}
191 \xpatchcmd{\LWR@HTML@tcbttitle}
192   {\tcb@insert@before@title\tcbtitletext}
193   {\tcb@insert@before@title\LWR@textcurrentfont{\LWR@textcurrentcolor{\tcbtitletext}}}
194   {}

```

```
195     {\LWR@patcherror{tcolorbox}{\LWR@HTML@tcboxtitle}}
196 \LWR@formatted{tcboxtitle}
```

List-of:

```
197 \renewcommand*\l@tcolorbox[2]{\hypertocfloat{1}{tcolorbox}{lof}{#1}{#2}}
```

Theorem limitations. An error is printed if the document uses `math`, `ams equation`, etc. `\tcboxmath` and `\tcbhighmath` are ignored for `HTML`.

```
198 \AtBeginDocument{
199 \pgfkeysifdefined{/tcb/libload/theorems}{
200
201     \def\LWR@HTML@tcb@hack@amsmath{%
202         \PackageError{lwarp}{%
203             tcolorbox ‘math’, ‘ams equation’, and related\MessageBreak
204             are not supported.\MessageBreak
205             \protect\tcboxmath\space and
206             \protect\tcbhighmath\space are emulated.\MessageBreak
207             Enter ‘H’ for possible solutions%
208         }%
209     }%
210     Remove tcolorbox math-related options, and instead\MessageBreak
211     use the usual math environments inside each tcolorbox.%%
212   }%
213 }
214 \LWR@formatted{tcb@hack@amsmath}
215
216 % Cause an error if using math:
217 \tcbset{%
218     math upper/.style={before upper*=\tcb@hack@amsmath,after upper*=$},%
219     math lower/.style={before lower*=\tcb@hack@amsmath,after lower*=$},%
220   }
221
222 \appto{\LWR@restoreorigformatting}{%
223 \tcbset{%
224     math upper/.style={before upper*=$\displaystyle,after upper*=$},%
225     math lower/.style={before lower*=$\displaystyle,after lower*=$},%
226   }%
227 }
228
229 \newcommand{\LWR@HTML@tcboxmath}[2][]{\#2}
230 \LWR@formatted{tcboxmath}
231 \newcommand{\LWR@HTML@tcbhighmath}[2][]{\#2}
232 \LWR@formatted{tcbhighmath}
233 \appto{\LWR@restoreMathJaxformatting}{%
234     \renewcommand{\tcboxmath}[2][]{\#2}%
235     \renewcommand{\tcbhighmath}[2][]{\#2}%
236   }
237 }
238 }% theorems loaded
239 }% AtBeginDocument
```

For MATHJAX:

```
240 \CustomizeMathJax{\newcommand{\tcbset}[1]{}}
241 \CustomizeMathJax{\newcommand{\tcbsetforeverylayer}[1]{}}
242 \CustomizeMathJax{\newcommand{\tcbox}[2][]{\boxed{\text{\#2}}}}
243 \CustomizeMathJax{\newcommand{\tcboxfit}[2][]{\boxed{\#2}}}
```

```

244 \CustomizeMathJax{\newcommand{\tcblower}{}}
245 \CustomizeMathJax{\newcommand{\tcbline}{}}
246 \CustomizeMathJax{\newcommand{\tcbttitle}{}}
247 \CustomizeMathJax{\newcommand{\tcbsubtitle[2][]{\mathrm{\#2}}}}
248 \CustomizeMathJax{\newcommand{\tcbxmath}[2][]{\boxed{\#2}}}
249 \CustomizeMathJax{\newcommand{\tcbhighmath}[2][]{\boxed{\#2}}}

```

File 498 **l warp-tensor.sty**

§ 607 Package **tensor**

(Emulates or patches code by PHILIP G. RATCLIFFE.)

tensor (Pkg) **tensor** is used as-is for SVG math, and is emulated for MATHJAX.

⚠ spacing Compressed spacing and left justification are not possible with MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{tensor}[2004/12/20]

For MATHJAX. Special handling is required to parse the superscript and subscript arguments.

When a superscript or subscript is seen, it is processed and then the remainder is processesed recursively.

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\def\LWRtensorindicesthreesub#1#2{{_{\#2}}}\LWRtensorindicesthree}
4 \CustomizeMathJax{\def\LWRtensorindicesthreesup#1#2{{^{\#2}}}\LWRtensorindicesthree}

```

If not a superscript nor a subscript, processing stops.

```
5 \CustomizeMathJax{\newcommand{\LWRtensorindicesthreenotsup}{}}
```

Check ahead for a superscript or a subscript.

```

6 \CustomizeMathJax{\newcommand{\LWRtensorindicesthreenotsub}{
7   \ifnextchar ^ \LWRtensorindicesthreesup \LWRtensorindicesthreenotsup
8 }
9
10 \CustomizeMathJax{\newcommand{\LWRtensorindicesthree}{
11   \ifnextchar _ \LWRtensorindicesthreesub \LWRtensorindicesthreenotsub
12 }}
```

Ignore star.

```

13 \CustomizeMathJax{\newcommand{\LWRtensorindicestwo}{
14   \ifstar \LWRtensorindicesthree \LWRtensorindicesthree
15 }}
```

Remove the outer brace of the argument.

```
16 \CustomizeMathJax{\newcommand{\indices}[1]{\LWRtensorindicestwo#1}}
```

Attempting to use \vphantom here does not work:

```
17 \CustomizeMathJax{\newcommand{\LWRtensortwo}[3][]{\vphantom{\#1}\#2\#3}}
```

Ignore star.

```
18 \CustomizeMathJax{\newcommand{\tensor}{\ifstar\LWRtensortwo\LWRtensortwo}}
```

In text mode, \nuclide is converted to an svg image.

```
19 \CustomizeMathJax{%
20   \newcommand{\LWRnuclidetwo}[2][]{%
21     {%
22       \vphantom{\mathrm{#2}}%
23       {}^{\LWRtensornucleonnumber_{\mathrm{#1}}\mathrm{#2}}%
24       \mathrm{#2}%
25     }%
26   }%
27 }

28 \CustomizeMathJax{%
29   \newcommand{\nuclide}[1][]{%
30     \def\LWRtensornucleonnumber{\#1}%
31     \LWRnuclidetwo%
32   }%
33 }
34 \end{warpMathJax}
```

File 499 **lwarf-termcal.sty**

§ 608 Package **termcal**

(Emulates or patches code by BILL MITCHELL.)

termcal (*Pkg*) **termcal** is patched for use by **lwarf**.

for HTML output: 1 \LWR@ProvidesPackagePass{termcal}% questionable date in the .sty file

Nullify the @ because everything is being done in a token list.

```
2 \xpatchcmd{\endcalendar}
3   {@{}}
4   {}
5   {}
6   {\LWR@patcherror{termcal}{endcalendar}}
```

Remove the hbox:

```
7 \xpatchcmd{\ca@doday}
8   {\hbox to \hsize{\calprintdate\hfill\ifclassday\calprintclass\fi}}
9   {%
10    \calprintdate\hfill\ifclassday\calprintclass\fi%
11  }
12  {}
13  {\LWR@patcherror{termcal}{ca@doday}}
```

Change each of two ampersands to call the lwarf tabular version:

```
14 \xpatchcmd{\calday}
15   {&}
```

```

16      {\LWR@tabularampersand}
17      {}
18      {\LWR@patcherror{termcal}{calday}}
19
20 \xpatchcmd{\calday}
21     {&}
22     {\LWR@tabularampersand}
23     {}
24     {\LWR@patcherror{termcal}{calday B}}

```

File 500 **l warp-textarea.sty**

§ 609 Package **textarea**

(Emulates or patches code by ALEXANDER I. ROZHENKO.)

textarea (*Pkg*) **textarea** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{textarea}[2005/12/26]

```

2 \newcommand\StartFromTextArea{}
3 \newcommand\StartFromHeaderArea{}
4 \newcommand*\RestoreTextArea{}
5 \newcommand*\ExpandTextArea[1][*]{}
6 \let\NCC@restoretexarea@\empty

```

File 501 **l warp-textcomp.sty**

§ 610 Package **textcomp**

(Emulates or patches code by FRANK MITTELBACH, ROBIN FAIRBAIRNS, WERNER LEMBERG.)

textcomp (*Pkg*) **textcomp** is patched for use by **l warp**.

For MATHJAX, the MATHJAX packge is used.

§ 610.1 **Limitations**

Some **textcomp** symbols do not have Unicode equivalents, and thus are not supported.

- ⚠ **missing symbols** Many **textcomp** symbols are not supported by many system/browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

§ 610.2 Package loading

for HTML output: 1 \LWR@ProvidesPackagePass{textcomp}[2017/04/05]

§ 610.3 HTML symbols

For HTML, use HTML entities or direct Unicode, depending on the engine.

\AtBeginDocument improves support for Lua^LATEX and X^EPLATEX.

§ 610.3.1 pdf^LATEX symbols

```

2 \AtBeginDocument{
3   \ifPDFTeX% pdflatex or dvi latex
4     \newcommand*{\LWR@HTML@textdegree}{\HTMLentity{deg}}
5     \newcommand*{\LWR@HTML@textcelsius}{\HTMLunicode{2103}}
6     \newcommand*{\LWR@HTML@textohm}{\HTMLunicode{2126}}
7     \newcommand*{\LWR@HTML@textmu}{\HTMLunicode{00B5}}
8     \newcommand*{\LWR@HTML@textlquill}{\HTMLunicode{2045}}
9     \newcommand*{\LWR@HTML@textrquill}{\HTMLunicode{2046}}
10    \newcommand*{\LWR@HTML@textcircledP}{\HTMLunicode{2117}}
11    \newcommand*{\LWR@HTML@texttwelveudash}{\HTMLunicode{2014}}%
12    \newcommand*{\LWR@HTML@textthreequartersemdash}{\HTMLunicode{2014}}%
13    \newcommand*{\LWR@HTML@textmho}{\HTMLunicode{2127}}
14    \newcommand*{\LWR@HTML@textnaira}{\HTMLunicode{20A6}}
15    \newcommand*{\LWR@HTML@textpeso}{\HTMLunicode{20B1}}
16    \newcommand*{\LWR@HTML@textrecipe}{\HTMLunicode{211E}}
17    \newcommand*{\LWR@HTML@textinterrobang}{\HTMLunicode{203D}}
18    \newcommand*{\LWR@HTML@textinterrobangdown}{\HTMLunicode{2E18}}
19    \newcommand*{\LWR@HTML@textperthousand}{\HTMLunicode{2030}}
20    \newcommand*{\LWR@HTML@textpertenthousand}{\HTMLunicode{2031}}
21    \newcommand*{\LWR@HTML@textbaht}{\HTMLunicode{0E3F}}
22    \newcommand*{\LWR@HTML@textdiscount}{\%}
23    \newcommand*{\LWR@HTML@textservicemark}{\HTMLunicode{2120}}
24  \else

```

§ 610.3.2 X^EPLATEX and Lua^LATEX symbols

NOTE: Some of the following do not print well in the listing. Consult the .dtx or .sty file for the actual characters.

```

25   \newcommand*{\LWR@HTML@textdegree}{°}
26   \newcommand*{\LWR@HTML@textcelsius}{℃}
27   \newcommand*{\LWR@HTML@textohm}{Ω}
28   \newcommand*{\LWR@HTML@textmu}{μ}
29   \newcommand*{\LWR@HTML@textlquill}{ℓ}
30   \newcommand*{\LWR@HTML@textrquill}{₹}
31   \newcommand*{\LWR@HTML@textcircledP}{®}
32   \newcommand*{\LWR@HTML@texttwelveudash}{–}%
33   \newcommand*{\LWR@HTML@textthreequartersemdash}{–}%
34   \newcommand*{\LWR@HTML@textmho}{℧}
35   \newcommand*{\LWR@HTML@textnaira}{₦}
36   \newcommand*{\LWR@HTML@textpeso}{₱}
37   \newcommand*{\LWR@HTML@textrecipe}{℞}
38   \newcommand*{\LWR@HTML@textinterrobang}{⁇}
39   \newcommand*{\LWR@HTML@textinterrobangdown}{ ⓘ}
40   \newcommand*{\LWR@HTML@textperthousand}{‰}

```

```

41 \newcommand*{\LWR@HTML@textpertenthousand}{\%}
42 \newcommand*{\LWR@HTML@textbaht}{\$}
43 \newcommand*{\LWR@HTML@textdiscount}{\%}
44 \newcommand*{\LWR@HTML@textservicemark}{\textcircled{S}}
45 \fi
46
47 \LWR@formatted{textdegree}
48 \LWR@formatted{textcelsius}
49 \LWR@formatted{textohm}
50 \LWR@formatted{textmu}
51 \LWR@formatted{textlquill}
52 \LWR@formatted{textrquill}
53 \LWR@formatted{textcircledP}
54 \LWR@formatted{texttwelveudash}
55 \LWR@formatted{textthreequartersemdash}
56 \LWR@formatted{textmho}
57 \LWR@formatted{textnaira}
58 \LWR@formatted{textpeso}
59 \LWR@formatted{textrecipe}
60 \LWR@formatted{textinterrobang}
61 \LWR@formatted{textinterrobangdown}
62 \LWR@formatted{textperthousand}
63 \LWR@formatted{textpertenthousand}
64 \LWR@formatted{textbaht}
65 \LWR@formatted{textdiscount}
66 \LWR@formatted{textservicemark}

```

§ 610.4 HTML diacritics

For HTML, Unicode diacritical marks are used:

```

67 \newcommand*{\LWR@HTML@capitalcedilla}[1]{\#1\HTMLUnicode{0327}}
68 \newcommand*{\LWR@HTML@capitalogonek}[1]{\#1\HTMLUnicode{0328}}
69 \newcommand*{\LWR@HTML@capitalgrave}[1]{\#1\HTMLUnicode{0300}}
70 \newcommand*{\LWR@HTML@capitalacute}[1]{\#1\HTMLUnicode{0301}}
71 \newcommand*{\LWR@HTML@capitalcircumflex}[1]{\#1\HTMLUnicode{0302}}
72 \newcommand*{\LWR@HTML@capitaltilde}[1]{\#1\HTMLUnicode{0303}}
73 \newcommand*{\LWR@HTML@capitaldieresis}[1]{\#1\HTMLUnicode{0308}}
74 \newcommand*{\LWR@HTML@capitalhungarumlaut}[1]{\#1\HTMLUnicode{30B}}
75 \newcommand*{\LWR@HTML@capitalring}[1]{\#1\HTMLUnicode{30A}}
76 \newcommand*{\LWR@HTML@capitalcaron}[1]{\#1\HTMLUnicode{30C}}
77 \newcommand*{\LWR@HTML@capitalbreve}[1]{\#1\HTMLUnicode{306}}
78 \newcommand*{\LWR@HTML@capitalmacron}[1]{\#1\HTMLUnicode{304}}
79 \newcommand*{\LWR@HTML@capitaldotaccent}[1]{\#1\HTMLUnicode{307}}

```

\textcircled becomes a span with a rounded border. \providecommand is used to avoid conflict with xunicode.

```

80 \providecommand*{\LWR@HTML@textcircled}[1]{%
81   \InlineClass[border: 1px solid \LWR@currentTextColor]{textcircled}{\#1}%
82 }
83
84 \LWR@formatted{capitalcedilla}
85 \LWR@formatted{capitalogonek}
86 \LWR@formatted{capitalgrave}
87 \LWR@formatted{capitalacute}
88 \LWR@formatted{capitalcircumflex}
89 \LWR@formatted{capitaltilde}
90 \LWR@formatted{capitaldieresis}
91 \LWR@formatted{capitalhungarumlaut}

```

```

92 \LWR@formatted{capitalring}
93 \LWR@formatted{capitalcaron}
94 \LWR@formatted{capitalbreve}
95 \LWR@formatted{capitalmacron}
96 \LWR@formatted{capitaldotaccent}
97
98 \LWR@formatted{textcircled}

```

Nullify `textcomp` macros when generating filenames:

```

99 \FilenameNullify{%
100     \renewcommand*{\textdegree}{\textdegree}%
101     \renewcommand*{\textcelsius}{\textcelsius}%
102     \renewcommand*{\textohm}{\textohm}%
103     \renewcommand*{\textmu}{\textmu}%
104     \renewcommand*{\textlquill}{\textlquill}%
105     \renewcommand*{\textrquill}{\textrquill}%
106     \renewcommand*{\textcircledP}{\textcircledP}%
107     \renewcommand*{\texttwelveudash}{\texttwelveudash}%
108     \renewcommand*{\textthreequartersemdash}{\textthreequartersemdash}%
109     \renewcommand*{\textmho}{\textmho}%
110     \renewcommand*{\textnaira}{\textnaira}%
111     \renewcommand*{\textpeso}{\textpeso}%
112     \renewcommand*{\textrecipe}{\textrecipe}%
113     \renewcommand*{\textinterrobang}{\textinterrobang}%
114     \renewcommand*{\textinterrobangdown}{\textinterrobangdown}%
115     \renewcommand*{\textperthousand}{\textperthousand}%
116     \renewcommand*{\textpertenthousand}{\textpertenthousand}%
117     \renewcommand*{\textbaht}{\textbaht}%
118     \renewcommand*{\textdiscount}{\textdiscount}%
119     \renewcommand*{\textservicemark}{\textservicemark}%
120     \renewcommand*{\textcircled}[1]{\textcircled{#1}}%
121     \renewcommand*{\capitalcedilla}[1]{\capitalcedilla{#1}}%
122     \renewcommand*{\capitalogonek}[1]{\capitalogonek{#1}}%
123     \renewcommand*{\capitalgrave}[1]{\capitalgrave{#1}}%
124     \renewcommand*{\capitalacute}[1]{\capitalacute{#1}}%
125     \renewcommand*{\capitalcircumflex}[1]{\capitalcircumflex{#1}}%
126     \renewcommand*{\capitaltilde}[1]{\capitaltilde{#1}}%
127     \renewcommand*{\capitaldieresis}[1]{\capitaldieresis{#1}}%
128     \renewcommand*{\capitalhungarumlaut}[1]{\capitalhungarumlaut{#1}}%
129     \renewcommand*{\capitalring}[1]{\capitalring{#1}}%
130     \renewcommand*{\capitalcaron}[1]{\capitalcaron{#1}}%
131     \renewcommand*{\capitalbreve}[1]{\capitalbreve{#1}}%
132     \renewcommand*{\capitalmacron}[1]{\capitalmacron{#1}}%
133     \renewcommand*{\capitaldotaccent}[1]{\capitaldotaccent{#1}}%
134 }% \FilenameNullify
135
136 }% \AtBeginDocument

```

For MATHJAX:

```
137 \CustomizeMathJax{\require{textcomp}}
```

File 502 l warp-textfit.sty**§ 611 Package textfit**

textfit (Pkg) textfit is emulated.

Text is placed into a of class textfit. Sizes are approximated, and also limited by browser min/max font-size settings.

for HTML output: 1 \LWR@ProvidesPackageDrop{textfit}[1994/04/15]

```
2 \newsavebox{\LWR@textfitbox}
3
4 \newcommand*\LWR@textfitscale[2]{%
5 \setlength{\LWR@templengthone}{#1}%
6 \setlength{\LWR@templengthone}{%
7   1em*\ratio{\LWR@templengthone}{\LWR@templengthtwo}%
8 }%
9 \InlineClass[font-size:\LWR@printlength{\LWR@templengthone}]{textfit}{#2}%
10 }
11
12 \newcommand*\scaletowidth[2]{%
13 \sbox{\LWR@textfitbox}{#2}%
14 \settowidth{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
15 \LWR@textfitscale{#1}{#2}%
16 }
17
18 \newcommand*\scaletoheight[2]{%
19 \sbox{\LWR@textfitbox}{#2}%
20 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
21 \LWR@textfitscale{#1}{#2}%
22 }
```

File 503 l warp-textpos.sty**§ 612 Package textpos**

(Emulates or patches code by NORMAN GRAY.)

textpos (Pkg) textpos is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{textpos}[2020/09/26]

```
2 \NewDocumentEnvironment{textblock}{m o r(){}{}}
3 \NewDocumentEnvironment{textblock*}{m o r(){}{}}
4 \newcommand*\TPGrid[3][]{}
5 \def\TPShowGrid{@ifstar{\@TPShowGrid}{\@TPShowGrid}}
6 \def\@TPShowGrid#1#2{}
7 \NewDocumentCommand{\TPMargin}{s o}{}
8 \newcommand*\textblockcolour[1] {}
9 \newcommand*\textblockrulecolour[1] {}
10 \newcommand*\textblockcolor[1] {}
11 \newcommand*\textblockrulecolor[1] {}

---


```

```

12 \newcommand*\tekstblokkulur}[1]{}
13 \newcommand*\tekstblokrulekulur}[1]{}
14 \newlength{\TPHorizModule}
15 \newlength{\TPVertModule}
16 \newlength{\TPboxrulesize}
17 \newcommand{\textblocklabel}[1]{}
18 \newcommand{\showtextsize}{}
19 \newcommand{\textblockorigin}[2]{}
20 \newcommand{\TOptions}[1]{}
21 \newcommand{\TPReferencePosition}[1]{}

```

File 504 **l warp-theorem.sty**

§ 613 Package **theorem**

(Emulates or patches code by FRANK MITTELBACH.)

theorem (*Pkg*) **theorem** is patched for use by **l warp**.

Table 21: Theorem package—css styling of theorems and proofs

Theorem: <div> of class theorembody<theoremstyle>

Theorem Header: of class theoremheader

where <theoremstyle> is plain, break, etc.

for HTML output: 1 \LWR@ProvidesPackagePass{theorem}[2023/07/05]

§ 613.1 Remembering the theorem style

Storage for the style being used for new theorems:

2 \newcommand{\LWR@newtheoremstyle}{plain}

Patched to remember the style being used for new theorems:

```

3 \VerifyCommand[l warp][theorem]{\theoremstyle}{B805673118A2EA934449A9B7D25A5D33}
4
5 \gdef\theoremstyle#1{%
6   \@ifundefined{th@#1}{\@warning
7     {Unknown theoremstyle ‘#1’. Using ‘plain’}%
8     \theoremstyle{plain}%
9     \renewcommand{\LWR@newtheoremstyle}{plain}%
10    }%
11   {%
12     \theoremstyle{#1}%
13     \renewcommand{\LWR@newtheoremstyle}{#1}%
14   }%
15   \begingroup
16     \csname th@\the\theoremstyle \endcsname
17   \endgroup

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```
18 \VerifyCommand[l warp][theorem]{\@xnthm}{D6164703589C684059381DB798F89158}
19
20 \gdef \@xnthm#1#2[#3]{%
21   \expandafter\ifdefinable\csname #1\endcsname
22   {%
23     \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}\% l warp
24     \@definecounter{#1}\@newctr{#1}[#3]\%
25     \expandafter\xdef\csname the#1\endcsname
26       {\expandafter\noexpand\csname the#3\endcsname
27         \thmcntersep \thmcnter{#1}}\%
28     \def\@tempa{\global\@namedef{#1}}\%
29     \expandafter\@tempa \expandafter{%
30       \csname th@\the \theorem@style
31         \expandafter\endcsname \the \theorem@bodyfont
32         \atthm{#1}{#2}}\%
33       \global \expandafter\let \csname end#1\endcsname \endtheorem
34     \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}\% l warp
35   }%
36 }
37 \VerifyCommand[l warp][theorem]{\@ynthm}{C5A12EBEFBCD5C5628C65B16A01DFB4}
38
39 \gdef \@ynthm#1#2{%
40   \expandafter\ifdefinable\csname #1\endcsname
41   {%
42     \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}\% l warp
43     \@definecounter{#1}\%
44     \expandafter\xdef\csname the#1\endcsname{@thmcnter{#1}}\%
45     \def\@tempa{\global\@namedef{#1}}\expandafter\@tempa
46       \expandafter{\csname th@\the \theorem@style \expandafter
47         \endcsname \the \theorem@bodyfont \atthm{#1}{#2}}\%
48       \global \expandafter\let \csname end#1\endcsname \endtheorem
49     \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}\% l warp
50   }%
51 }
52 \VerifyCommand[l warp][theorem]{\@othm}{93B7CCDCEFDF36BEEF31477D6D390AC3}
53
54 \gdef \@othm#1[#2]{%
55   \expandafter\ifx\csname c@#2\endcsname\relax
56     \nocounterr{#2}\%
57   \else
58     \expandafter\ifdefinable\csname #1\endcsname
59     {%
60       \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}\% l warp
61       \expandafter\xdef\csname the#1\endcsname
62         {\expandafter\noexpand\csname the#2\endcsname}\%
63       \def\@tempa{\global\@namedef{#1}}\expandafter\@tempa
64         \expandafter{\csname th@\the \theorem@style \expandafter
65           \endcsname \the \theorem@bodyfont \atthm{#2}{#3}}\%
66       \global \expandafter\let \csname end#1\endcsname \endtheorem
67     \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}\% l warp
68   }%
69 \fi}
```

§ 613.2 css patches

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<style>.

Each header is encased in an \InlineClass of class theoremheader.

```

70 \gdef\th@plain{%
71   \def\@begintheorem##1##2{%
72     \item[
73       \InlineClass{theoremheader}{##1\ ##2}
74     ]
75   }%
76 \def\@opargbegintheorem##1##2##3{%
77   \item[
78     \InlineClass{theoremheader}{##1\ ##2\ (###3)}
79   ]
80 }
81 }%
82
83 \gdef\th@break{%
84   \def\@begintheorem##1##2{%
85     \item[
86       \InlineClass{theoremheader}{##1\ ##2}\newline%
87     ]
88   }%
89 \def\@opargbegintheorem##1##2##3{%
90   \item[
91     \InlineClass{theoremheader}{##1\ ##2\ (###3)}\newline%
92   ]
93 }
94 }%
95
96 \gdef\th@marginbreak{%
97   \def\@begintheorem##1##2{%
98     \item[
99       \InlineClass{theoremheader}{##2 \qquad ##1}\newline%
100    ]
101  }%
102 \def\@opargbegintheorem##1##2##3{%
103   \item[
104     \InlineClass{theoremheader}{##2 \qquad ##1\ %
105     (###3)}\newline%
106   ]
107 }
108 }%
109
110 \gdef\th@changebreak{%
111   \def\@begintheorem##1##2{%
112     \item[
113       \InlineClass{theoremheader}{##2\ ##1}\newline%
114     ]
115   }%
116 \def\@opargbegintheorem##1##2##3{%
117   \item[
118     \InlineClass{theoremheader}{ ##2\ ##1\ %

```

```

119      (##3)\newline
120    ]
121  }
122 }
123
124 \gdef\th@change{%
125   \def\@begintheorem##1##2{
126     \item[
127       \InlineClass{theoremheader}{##2\ ##1}
128     ]
129   }%
130 \def\@opargbegintheorem##1##2##3{%
131   \item[
132     \InlineClass{theoremheader}{##2\ ##1\ (##3)}
133   ]
134 }
135 }
136
137 \gdef\th@margin{%
138   \def\@begintheorem##1##2{
139     \item[
140       \InlineClass{theoremheader}{##2 \qquad ##1}
141     ]
142   }%
143 \def\@opargbegintheorem##1##2##3{%
144   \item[
145     \InlineClass{theoremheader}{##2 \qquad ##1\ (##3)}
146   ]
147 }
148 }

```

Patched for css:

```

149 \VerifyCommand[lwarf][theorem]{\@thm}{4632915C52ABB4DB5D462AA58A80BAF2}
150
151 \gdef\@thm#1#2{\refstepcounter{#1}%
152 \LWR@forcenewpage% lwarf

153 \LWR@printpendingfootnotes% lwarf

154 \BlockClass{theorembody}\LWR@thisthmstyle}% lwarf
155 \trivlist
156 \@topsep \theorempreskipamount % used by first \item
157 \@topseppadd \theorempostskipamount % used by \endparenv
158 \@ifnextchar [%]
159 {\@ythm{#1}{#2}}%
160 {\@begintheorem{#2}{\csname the#1\endcsname}\ignorespaces}}
161
162 \gdef\@endtheorem{%
163 \endtrivlist

164 \LWR@printpendingfootnotes% lwarf

165 \endBlockClass
166 }

```

File 505 **l warp-thinsp.sty**

§ 614 Package **thinsp**

thinsp (*Pkg*) thinsp is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{thinsp}[2016/10/02]

```

2 \AtBeginDocument{
3 \let\thinthinspace\relax% defined by some packages
4 \newcommand*\thinthinspace{\thinspace}
5 }
6
7 \newcommand*\stretchthinspace{\thinspace}
8 \newcommand*\stretchthinthinspace{\thinthinspace}
9 \newcommand*\stretchnegthinspace{\negthinspace}
```

File 506 **l warp-thm-listof.sty**

§ 615 Package **thm-listof**

(Emulates or patches code by ULRICH M. SCHWARZ, YUKAI CHOU.)

thm-listof (*Pkg*) thm-listof is part of thmtools, and is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{thm-listof}[2019/12/22]

For font control, see the generated HTML and use css per amsthm or ntheorem.

Other thm-* package may be loaded by thm-listof.

```

2 \IfPackageAtLeastTF{thm-listof}{2020/08/01}{% v0.72
3 \VerifyCommand[l warp][thm-listof]{\thmtlo@newentry}{AF7BF291DC508ED71058DAF745F9C018}
4 \def\thmtlo@newentry{%
5   \csdef{l@\thmt@envname}##1##2{\hypertocfloat{1}{figure}{lof}##1##2}%
6 }
7 }{% earlier than v0.72
8   \xpatchcmd{\listoftheorems}{%
9     {%
10       \xa\protected\edef\csname l@\thmt@envname\endcsname{%
11         \nx\dottedtocline{1}{1.5em}{\nx\thmt@listnumwidth}}%
12     }%
13   }{%
14   }{%
15   \csdef{l@\thmt@envname}##1##2{\hypertocfloat{1}{figure}{lof}##1##2}%
16   }{%
17   }{%
18   \LWR@patcherror{thm-listof}{listoftheorems}}%
19
20 \xpatchcmd{\thmt@mklstcmd}{%
21   {%
22     \xa\protected\edef\csname l@\thmt@envname\endcsname{%
```

```

23           \@nx\@dottedtocline{1}{1.5em}{\@nx\thmt@listnumwidth}%
24       }%
25   }%
26   {%
27     \csdef{l@\thmt@envname}##1##2{\hypertocfloat{1}{figure}{lof}##1##2}%
28   }%
29   {}%
30   {\LWR@patcherror{thm-listof}{\thmt@mklistcmd}}%
31 }

```

File 507 **l warp-thm-restate.sty**

§ 616 Package **thm-restate**

(Emulates or patches code by ULRICH M. SCHWARZ.)

thm-restate (*Pkg*) thm-restate is part of thmtools, and is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{thm-restate}[2020/08/01]

```

2 \VerifyCommand[l warp][thm-restate]{\thmt@restatable}{C912622BBA051C5F22994335F66976AB}%
3
4 \xpatchcmd{\thmt@restatable}%
5   {@ifstar}%
6   {\edef\LWR@thisthmstyle{#2}@ifstar}%
7   {}%
8   {\LWR@patcherror{thm-restate}{\thmt@restatable}}

```

File 508 **l warp-thmbox.sty**

§ 617 Package **thmbox**

(Emulates or patches code by EMMANUEL BEFFARA.)

thmbox (*Pkg*) thmbox is emulated for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{thmbox}[2005/04/24]

```

2 \renewenvironment{thmbox}[2][]{%
3   {%
4     \begin{BlockClass}{thmbox}%
5     \begin{BlockClass}{thmboxtitle}%
6     #2%
7     \end{BlockClass}%
8   }%
9   \end{BlockClass}%
10
11 \renewenvironment{proof}[1][]{%
12   {%
13     \begin{BlockClass}{thmboxproof}%
14     \InlineClass{thmboxproofname}{\proofname\ #1\unskip\,,:}%
15   }%
16   {%
17     \qquad\HTMLunicode{220E}

```

```

18      \end{BlockClass}
19  }
20
21 \renewenvironment{example}[1][\examplename]{%
22   {%
23     \begin{BlockClass}{\thmboxexample}%
24     \InlineClass{\thmboxexamplenam}{\#1,:}%
25   }%
26   {\end{BlockClass}}%
27
28 \renewenvironment{leftbar}[1][]{%
29   {\begin{BlockClass}{\thmboxleftbar}}%
30   {\end{BlockClass}}%

```

File 509 **l warp-thmtools.sty**

§ 618 Package **thmtools**

(Emulates or patches code by ULRICH M. SCHWARZ.)

thmtools (*Pkg*) thmtools is patched for use by l warp.

Also see thm-listof and thm-restate.

for HTML output: 1 \LWR@ProvidesPackagePass{thmtools}[2020/08/01]

The following patches either thm-amsthm or thm-ntheorem.

```

2 \def\thmt@headstyle@margin{%
3   \InlineClass{amsthmnumbertheorem}{\NUMBER}%
4   \%
5   \InlineClass{amsthmnametheorem}{\NAME}%
6   \InlineClass{amsthmnotetheorem}{\NOTE}%
7 }%
8
9 \let\thmt@headstyle@swapnumber\thmt@headstyle@margin

```

File 510 **l warp-threadcol.sty**

§ 619 Package **threadcol**

threadcol (*Pkg*) threadcol is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{threadcol}[2013/01/06]

```

2 \newcommand{\setthreadname}[1]{}

```

File 511 **l warp-threepartable.sty**

§ 620 Package **threepartable**

(Emulates or patches code by DONALD ARSENEAU.)

threeparttable (*Pkg*) threeparttable is emulated.

Table note are contained inside a css <div> of class tnotes. If enumitem is used, the note item labels are also individually highlighted with an additional css of class tnoteitemheader, otherwise they are plain text.

for HTML output: 1 \LWR@ProvidesPackageDrop{threeparttable}[2003/06/13]

```

Env  threeparttable      [<alignment>]
      1 \newenvironment*{threeparttable}[1][b]
      2   {\def\@capttype{table}}
      3   {}
      4

Env  tablenotes          [<options>]
      5 \newenvironment*{tablenotes}[1] []
      6 {%
      7 \LWR@forcenewpage
      8 \BlockClass{tnotes}%
      9 \description%
      10 }
      11 {%
      12 \enddescription%
      13 \endBlockClass%
      14 }

\tnote          {<text>}
      15 \newcommand{\tnote}[1]{\LWR@htmlspan{sup}{#1}}


Env  measuredfigure       [<alignment>]
      16 \newenvironment*{measuredfigure}[1][t]
      17   {\def\@capttype{figure}}
      18   {}

```

File 512 l warp-threeparttablex.sty

§ 621 Package **threeparttablex**

threeparttablex (*Pkg*) threeparttablex is patched for use by l warp.

threeparttablex is used with longtable and booktabs as follows:

```
\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[ . . . ] \endhead % or \endfirsthead
[ . . . ] \endfoot
\bottomrule \insertTableNotes \endlastfoot
}
... table contents ...
\warpHTMLonly{ % HTML last footer
\bottomrule
\UseMinipageWidths % optional
\insertTableNotes
\endlastfoot
}
\end{longtable}
```

table width The table notes are created using a `\multicolumn`. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, `l warp` guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use `\UseMinipageWidths` before `\insertTableNotes`. The width is then specified, and in many cases the result is an improvement in overall table layout.

for HTML output: 1 \LWR@ProvidesPackagePass{threeparttablex}[2013/07/23]

The width is guessed depending on the number of columns, then limited to a min/max.

```
2 \renewcommand\insertTableNotes{%
3   \setlength{\LWR@templengthone}{.375in*\value{\LWR@tabletotalLaTeXcols}}%
4   \setlength{\LWR@templengthone}{\minof{\textwidth}{\LWR@templengthone}}%
5   \setlength{\LWR@templengthone}{\maxof{2.5in}{\LWR@templengthone}}%
6   \multicolumn{\value{\LWR@tabletotalLaTeXcols}}{c}{%
7     \parbox{\LWR@templengthone}{%
8       \begin{tablenotes}[\TPTL@optarg]%
9         \TPTL@font%
10        \TPTL@body%
11        \end{tablenotes}%
12      }%
13    }%
14 }

15 \providecommand{\TPTL@tnotex}{}
16 \renewcommand{\TPTL@tnotex}[2]{\tnote{\nameref{#2}}}
```

File 513 **l warp-thumb.sty**

§ 622 Package **thumb**

`thumb` (*Pkg*) `thumb` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{thumb}[1997/12/24]

```
2 \newcommand*\Overviewpage{}
```

```
3 \newlength{\thumbheight}
4 \newlength{\thumbwidth}
```

File 514 **l warp-thumbs.sty**

§ 623 Package **thumbs**

thumbs (*Pkg*) **thumbs** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{thumbs}[2014/03/09]

```
2 \newcommand{\addthumb}{[4]{}}
3 \newcommand{\addtitlethumb}{[5]{}}
4 \newcommand{\stopthumb}{}
5 \newcommand{\continuethumb}{}
6 \newcommand{\thumbsoverview}{[1]{}}
7 \newcommand{\thumbsoverviewback}{[1]{}}
8 \newcommand{\thumbsoverviewverso}{[1]{}}
9 \newcommand{\thumbsoverviewdouble}{[1]{}}
10 \newcommand{\thumbnewcolumn}{}
11 \newcommand{\addthumbsoverviewtocontents}{[2]{}}
12 \newcommand{\thumbsnophantom}{}
```

File 515 **l warp-tikz.sty**

§ 624 Package **tikz**

(Emulates or patches code by TILL TANTAU.)

tikz (*Pkg*) **tikz** is supported.

⚠ **displaymath and matrices** If using display math with *tikzpicture* or *\tikz*, along with matrices with the & character, the document must be modified as follows:

```
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}
```

and each instance of & in the *tikz* expression must be replaced with \&.

Accept all options for *l warp-tikz*:

1 \LWR@ProvidesPackagePass{tikz}[2015/08/07]

catcodes *l warp* changes the catcode of \$ for its own use. The *TikZ* *babel* library temporarily changes catcodes back to normal for *TikZ*'s use. *tikz* v3.0.0 introduced the *babel* library which handles catcode changes. For older versions, *l warp* must change \$'s catcode itself.

Also see:

<https://tex.stackexchange.com/questions/16199/test-if-a-package-or-package-option-is-loaded>

2 \newbool{\LWR@tikzbabel}

```

3
4 \IfPackageAtLeastTF{tikz}{2013/12/20}%
5 {\usetikzlibrary{babel}\booltrue{\LWR@tikzbabel}}
6 {\boolfalse{\LWR@tikzbabel}}

```

Env pgfpicture

The `\pgfpicture` environment is enclosed inside a `\lateximage`. Enclose the low-level `\pgfpicture` in a `\lateximage`. This is also used by the higher-level `\tikz` and `\tikzpicture`.

```

7 \preto\pgfpicture{%
8   \begin{lateximage}[-tikz-~\PackageDiagramAltText]%
9   \ifbool{\LWR@tikzbabel}{%
10   }{}%
11   {\catcode`\$=3}% dollar sign is math shift
12 }%
13
14 \appto\endpgfpicture{\end{lateximage}}

```

TikZ is placed inside an SVG image, so use the original meanings of the following:

```

15 \LetLtxMacro\pgfutil@minipage{\LWR@print@minipage}
16 \let\pgfutil@endminipage\endLWR@print@minipage
17
18 \let\pgfutil@raggedleft\LWR@print@raggedleft
19 \let\pgfutil@raggedright\LWR@print@raggedright

20 \def\pgfutil@font@tiny{\LWR@print@tiny}
21 \def\pgfutil@font@scriptsize{\LWR@print@scriptsize}
22 \def\pgfutil@font@footnotesize{\LWR@print@footnotesize}
23 \def\pgfutil@font@small{\LWR@print@small}
24 \def\pgfutil@font@normalsize{\LWR@print@normalsize}
25 \def\pgfutil@font@large{\LWR@print@large}
26 \def\pgfutil@font@Large{\LWR@print@Large}
27 \def\pgfutil@font@huge{\LWR@print@huge}
28 \def\pgfutil@font@Huge{\LWR@print@Huge}
29
30 \def\pgfutil@font@itshape{\LWR@print@itshape}
31 \def\pgfutil@font@bfseries{\LWR@print@bfseries}
32
33 \def\pgfutil@font@normalfont{\LWR@print@normalfont}

```

File 516 l warp-tikz-imagelabels.sty

§ 625 Package **tikz-imagelabels**

(Emulates or patches code by TOBIAS PLÜSS.)

`tikz-imagelabels` (*Pkg*) `tikz-imagelabels` is patched for use by `l warp`.

for HTML output: 1 \LWR@ProvidesPackagePass{tikz-imagelabels}[2019/06/27]

```

2 \BeforeBeginEnvironment{annotationimage}{%
3   \begin{lateximage}[-tikz-imagelabels-~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{annotationimage}{\end{lateximage}}

```

File 517 **l warp-titleps.sty**

§ 626 Package **titleps**

(Emulates or patches code by JAVIER BEZOS.)

titleps (Pkg) *titleps* is loaded and used by **l warp** during **HTML** output. All user options and macros are ignored and disabled.

Discard all options for **l warp-titleps**:

for HTML output: 1 \LWR@ProvidesPackageDrop{titleps}[2016/03/15]

\pagestyle and \thispagestyle are already disabled in the **l warp** code.

\newpagestyle {*name*} [{*style*}]{*commands*}

2 \NewDocumentCommand{\newpagestyle}{m o m}{}{}

\renewpagestyle {*name*} [{*style*}]{*commands*}

3 \NewDocumentCommand{\renewpagestyle}{m o m}{}{}

\sethead [{*el*}][{*ec*}][{*er*}][{*ol*}][{*oc*}][{*or*}]

4 \NewDocumentCommand{\sethead}{o o o m m}{}{}

\setfoot [{*el*}][{*ec*}][{*er*}][{*ol*}][{*oc*}][{*or*}]

5 \NewDocumentCommand{\setfoot}{o o o m m}{}{}

\settitemarks *

6 \NewDocumentCommand{\settitemarks}{s m}{}{}

\headrule

7 \newcommand*{\headrule}{}{}

\footrule

8 \newcommand*{\footrule}{}{}

\setheadrule {*length*}

9 \newcommand*{\setheadrule}{[1]}{}{}

\setfootrule {*length*}

10 \newcommand*{\setfootrule}{[1]}{}{}

\makeheadrule

```
11 \newcommand*{\makeheadrule}{}  
  
\makefootrule  
12 \newcommand*{\makefootrule}{}  
  
\setmarkboth  
  {\langle code\rangle}  
13 \newcommand{\setmarkboth}[1]{  
  
\widenhead  
14 \NewDocumentCommand{\widenhead}{s o o m m}{  
  
\bottitlemarks  
15 \newcommand*{\bottitlemarks}{}  
  
\topleftmarks  
16 \newcommand*{\topleftmarks}{}  
  
\firstrightmarks  
17 \newcommand*{\firstrightmarks}{}  
  
\nexttopleftmarks  
18 \newcommand*{\nexttopleftmarks}{}  
  
\outertitlemarks  
19 \newcommand*{\outertitlemarks}{}  
  
\innertitlemarks  
20 \newcommand*{\innertitlemarks}{}  
  
\newtitlemark  
  * {\langle name\rangle}  
21 \NewDocumentCommand{\newtitlemark}{s m}{  
  
\pretitlemark  
  * {\langle section\rangle} {\langle text\rangle}  
22 \NewDocumentCommand{\pretitlemark}{s m m}{  
  
\ifsamemark  
  {\langle group\rangle} {\langle command\rangle} {\langle true\rangle} {\langle false\rangle}  
23 \newcommand{\ifsamemark}[4]{  
  
\setfloathead  
  * [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]  
24 \NewDocumentCommand{\setfloathead}{s o o m m m m}{  
  
\setfloatfoot  
  * [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]
```

```

25 \NewDocumentCommand{\setfloatfoot}{s o o o m m m m m}{}

\nextfloathead
    * [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]
26 \NewDocumentCommand{\nextfloathead}{s o o o m m m m m}{}

\nextfloatfoot
    * [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]
27 \NewDocumentCommand{\nextfloatfoot}{s o o o m m m m m}{}

\newmarkset
    {⟨markset⟩}
28 \newcommand{\newmarkset}[1]{}

\newextramark
    * {⟨markset⟩} {⟨macro-name⟩}
29 \NewDocumentCommand{\newextramarkset}{s m m}{}

\botextramarks
    {⟨markset⟩}
30 \newcommand{\botextramarks}[1]{}

\topextramarks
    {⟨markset⟩}
31 \newcommand{\topextramarks}[1]{}

\firsextramarks
    {⟨markset⟩}
32 \newcommand{\firsextramarks}[1]{}

\nextextramarks
    {⟨markset⟩}
33 \newcommand{\nexttopextramarks}[1]{}

\outerextramarks
    {⟨markset⟩}
34 \newcommand{\outerextramarks}[1]{}

\innerextramarks
    {⟨markset⟩}
35 \newcommand{\innerextramarks}[1]{}

```

File 518 l warp-titleref.sty

§ 627 Package **titleref**

titleref (*Pkg*) **titleref** is emulated.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{titleref}[2001/04/05]
2
3 \LetLtxMacro\titleref\nameref
4
5 \providecounter{\LWR@currenttitle}
6
7 \newcommand*\{\currenttitle}{%

```

```

8      \addtocounter{LWR@currenttitle}{1}%
9      \label{currenttitle}\arabic{LWR@currenttitle}}%
10     \nameref{currenttitle}\arabic{LWR@currenttitle}}%
11 }
12
13 \newcommand*\theTitleReference}[2]{}

```

File 519 **l warp-titlesec.sty**

§ 628 Package **titlesec**

(Emulates or patches code by JAVIER BEZOS.)

titlesec (*Pkg*) **titlesec** is emulated. All user options and macros are ignored and disabled.

Discard all options for **l warp-titlesec**:

for HTML output:

```

1 \LWR@ProvidesPackageDrop{titlesec}[2016/03/21]
2
3 \newbool{\LWR@loadtitleps}
4 \boolfalse{\LWR@loadtitleps}
5
6 \DeclareOption{pagestyles}{
7   \booltrue{\LWR@loadtitleps}
8 }
9
10 \DeclareOption*{}
11
12 \ProcessOptions\relax
13
14 \ifbool{\LWR@loadtitleps}{
15   \RequirePackage{l warp-titleps}
16 }{}

```

\titlelabel
 $\{\langle label-format \rangle\}$
17 \newcommand*\titlelabel}[1]{}

\titleformat*
 $\{\langle command \rangle\} \{\langle format \rangle\}$

\titleformat
 $\{\langle command \rangle\} [\langle shape \rangle] \{\langle format \rangle\} \{\langle label \rangle\} \{\langle sep \rangle\} \{\langle before \rangle\} [\langle after \rangle]$
18 \newcommand\titleformat{%
19 \@ifstar{\ttl@format@s}{%
20 {\ttl@format@i}}}
21 \newcommand{\ttl@format@s}[1]{}
22 \NewDocumentCommand{\ttl@format@i}{m o m m m o}{}

\chaptertitlename
23 \@ifundefined{@chapapp}{\let\@chapapp\chaptename}{}
24 \newcommand\chaptertitlename{\@chapapp}

\titlespacing
* \{\langle command \rangle\} \{\langle left \rangle\} \{\langle before \rangle\} \{\langle after \rangle\} \{\langle right \rangle\}
25 \NewDocumentCommand{\titlespacing}{s m m m o}{}

```
\filright
26 \newcommand*\{\filright\}{}

\filcenter
27 \newcommand*\{\filcenter\}{}

\filleft
28 \newcommand*\{\filleft\}{}

\fillast
29 \newcommand*\{\fillast\}{}

\filinner
30 \newcommand*\{\filinner\}{}

\filouter
31 \newcommand*\{\filouter\}{}

\wordsep
32 \newcommand\wordsep{\fontdimen\tw@\font \@plus
33   \fontdimen\thr@@\font \@minus \fontdimen4\font}

\titline
* [\langle align\rangle] {\langle material\rangle}
34 \NewDocumentCommand{\titline}{s o m} {}

\titlerule
[\langle height\rangle]
35 \providecommand*\titlerule{\@ifstar{\ttl@row}{\ttl@rule}}
36 \newcommand*\{\ttl@rule\}[1][]{}
37 \newcommand*\{\ttl@row\}[2][]{}

\iftitlemeasuring
{\langle true\rangle} {\langle false\rangle}
38 \newcommand{\iftitlemeasuring}[2]{#2}

\assgnpagestyle
{\langle command\rangle} {\langle pagestyle\rangle}
39 \newcommand{\assgnpagestyle}[2]{#2}

\titclass
{\langle name\rangle} [\langle startlevel\rangle] {\langle class\rangle} [\langle cmd\rangle]
40 \NewDocumentCommand{\titclass}{m o m o} {}
```

File 520 **l warp-titletoc.sty**

§ 629 Package **titletoc**

(Emulates or patches code by JAVIER BEZOS.)

titletoc (Pkg) **titletoc** is emulated. All user options and macros are ignored and disabled.

Discard all options for **l warp-titletoc**:

for HTML output: 1 \LWR@ProvidesPackageDrop{titletoc}[2011/12/15]

\dottedcontents
1 {\langle section\rangle} [\langle left\rangle] {\langle above\rangle} {\langle label\rangle} {\langle leader\rangle}
2 \NewDocumentCommand{\dottedcontents}{m o m m m}{}{}

\titlecontents
* {\langle section\rangle} [\langle left\rangle] {\langle above\rangle} {\langle numbered\rangle} {\langle numberless\rangle} {\langle filler\rangle} [\langle below or begin\rangle] [\langle separator\rangle] [\langle end\rangle]
3 \newcommand{\titlecontents}{\@ifstar{\ttl@tcstar}{\ttl@tcnostar}}
4 \NewDocumentCommand{\ttl@tcstar}{m o m m m m o o}{}
5 \NewDocumentCommand{\ttl@tcnostar}{m o m m m m o}{}{}

\contentsmargin
[\langle correction\rangle] {\langle right\rangle}
6 \newcommand{\contentsmargin}[2]{}{}

\thecontentslabel
7 \newcommand*{\thecontentslabel}{thecontentslabel}

\thecontentspage
8 \newcommand*{\thecontentspage}{thecontentspage}

\contentslabel
[\langle format\rangle] {\langle space\rangle}
9 \newcommand{\contentslabel}[2]{}{\thecontentslabel}

\contentspage
[\langle format\rangle]
10 \newcommand{\contentspage}[1]{}{\thecontentspage}

\contentspush
\text{ }\langle text\rangle
11 \newcommand{\contentspush}[1]{}{}

\contentsuse
\name \text{ }\langle text\rangle
12 \newcommand{\contentsuse}[2]{}{}

\startcontents
[\langle name\rangle]

```

13 \newcommand*{\startcontents}[1][]{}

\stopcontents [⟨name⟩]
14 \newcommand*{\stopcontents}[1][]{}

\resumecontents [⟨name⟩]
15 \newcommand*{\resumecontents}[1][]{}

\printcontents [⟨name⟩] {⟨prefix⟩} {⟨start⟩} {⟨code⟩}
16 \newcommand{\printcontents}[4][]{}

\startlist [⟨name⟩] {⟨list⟩}
17 \newcommand{\startlist}[2][]{}

\stoplist [⟨name⟩] {⟨list⟩}
18 \newcommand{\stoplist}[2][]{}

\resumelist [⟨name⟩] {⟨list⟩}
19 \newcommand{\resumelist}[2][]{}

\printlist [⟨name⟩] {⟨list⟩} {⟨prefix⟩} {⟨code⟩}
20 \newcommand{\printlist}[4][]{}

```

File 521 **l warp-titling.sty**

§ 630 Package **titling**

(Emulates or patches code by PETER WILSON.)

titling (*Pkg*)

package support l warp supports the native L^AT_EX titling commands, and also supports the packages **authblk** and **titling**. If both are used, **authblk** should be loaded before **titling**.

⚠ load order

\published and **\subtitle** If using the **titling** package, additional titlepage fields for **\published** and **\subtitle** may be added by using **\AddSubtitlePublished** in the preamble. See section 69.8.

The various **titling** footnote restyling commands have no effect.

Pass all options to **l warp-titling**:

for HTML output: 1 \LWR@ProvidesPackagePass{titling}[2009/09/04]

\@bsmtitleempty Patch **\@bsmtitleempty**:

```

2 \let\LWR@orig@bsmtitleempty\@bsmtitleempty
3 \renewcommand*{\@bsmtitleempty}{%
4 \LWR@orig@bsmtitleempty%
5 }

```

\keepthetitle Patch \keepthetitle:

```
6 \let\LWR@origkeepthetitle\keepthetitle
7 \renewcommand*{\keepthetitle}{%
8 \LWR@orig@keepthetitle%
9 }
```

\killtitle Patch \killtitle:

```
10 \let\LWR@origkilltitle\killtitle
11 \renewcommand*{\killtitle}{%
12 \LWR@orig@killtitle%
13 }
```

titlingpage (*env.*)

```
14 \renewenvironment*{\titlingpage}%
15 {%
```

Start an **HTML** titlepage div:

```
16 \LWR@printpendingfootnotes
17 \begin{titlepage}
```

Prepare for a custom version of \maketitle inside the titlingpage:

```
18 \LWR@maketitlesetup
19 \let\maketitle\LWR@titlingmaketitle
20 }
21 {
```

At the end of the environment, end the **HTML** titlepage div:

```
22 \end{titlepage}
23 }
```

Patch the pre/post title/author/date to add **HTML** tags, then initialize:

```
24 \AtBeginDocument{
25   \pretitle{}
26   \posttitle{}
27
28   \preauthor{}
29   \postauthor{}
30
31   \predate{}
32   \postdate{}
33 }
```

\LWR@maketitlesetup Patches \thanks macros.

```
34 \renewcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```
35 \def\@makefnmark{\textsuperscript{\@thefnmark}}%
```

`\thefootnote \Rightarrow \nameuse{arabic}{footnote}, or`
`\thefootnote \Rightarrow \nameuse{fnsymbol}{footnote}`

Redefine the footnote text:

```
36 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

37 \makethanksmark~%

\makethanksmark \Rightarrow \thanksfootmark \Rightarrow \tamark \Rightarrow
 \@thefnmark \Rightarrow \itshape a (or similar)

Print the text:

```
38 {##1}%  
39 }% \makefntext  
40 }
```

\thanksfootmark

```
41 \renewcommand{\thanksfootmark}{%
42 %   \hb@xt@\thanksmarkwidth{\hfil\normalfont%
43 %       \thanksscript{%
44 %           \thanksfootpre \tmark \thanksfootpost%
45 %       }%
46 %   }%
47 }
```

\maketitle HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

```
48 \renewcommand*\maketitle{%
```

An HTML titlepage <div> is used for all classes.

```
49 \begin{titlepage}
```

Select which kind of footnote marks to use:

50 \@bsmarkseries

Set up special patches

51 \LWR@maketitlesetup

Typeset the title, etc:

52 \maketitle

Immediately generate any \thanks footno

Close the HTML titlepage div:

```
54     \end{titlepage}
```

Reset the footnote counter:

```
55     \@bscontmark
56 }
```

\@maketitle Typesets the title, etc. Patched for HTML.

```
57 \providecommand*\@maketitle(){}
58 \renewrobustcmd{\@maketitle}{%
59     \maketitlehooka
60     {
61         \LWR@stopars\LWR@htmltag{\LWR@tagtitle}%
62         \@bspretitle \@title \@bsposttitle%
63         \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars%
64     }
65     \maketitlehookb
66     {
67         \begin{BlockClass}{author}
68         \renewcommand{\and}{%
69             \end{BlockClass}%
70             \begin{BlockClass}{oneauthor}%
71         }
72         \begin{BlockClass}{oneauthor}%
73         \@bspreauthor \@author \@bspostauthor%
74         \end{BlockClass}%
75         \end{BlockClass}%
76     }
77     \maketitlehookc
78     {
79         \begin{BlockClass}{titledate}%
80         \@bspredate \@date \@bspostdate%
81         \end{BlockClass}%
82     }
83     \maketitlehookd
84 }
```

\LWR@titlingmaketitle \maketitle for use inside an HTML titlingpage environment.

```
85 \renewcommand*\LWR@titlingmaketitle{%
```

Keep pending footnotes out of the title block:

```
86 \LWR@stopars\@thanks\LWR@startpars
```

Select which kind of footnote marks to use:

```
87 \@bsmarkseries
```

Set up special patches:

```
88 \LWR@maketitlesetup
```

Typeset the title, etc:

89 \@maketitle

Immediately generate any \thanks footnotes:

90 \LWR@stopars\@thanks\LWR@startpars

Reset the footnote counter:

91 \@bscontmark
92 }

\thanksmarkseries {\{series\}}

Sets the type of footnote marks used by \thanks, where type is ‘arabic’, ‘roman’, ‘fnsymbol’, etc.

93 \renewcommand{\thanksmarkseries}[1]{%
94 \def@\bsmarkseries{\renewcommand{\thefootnote}{\@nameuse{#1}{footnote}}}%
95 }

Set default titlepage thanks footnote marks. See section 69.7.

96 \IfClassLoadedTF{memoir}{%
97 \thanksmarkseries{arabic}
98 }{% not memoir
99 \if@titlepage
100 \thanksmarkseries{arabic}
101 \else
102 \thanksmarkseries{fnsymbol}
103 \fi
104 }% not memoir

File 522 **l warp-tocbasic.sty**

§ 631 Package **tocbasic**

(Emulates or patches code by MARKUS KOHM.)

tocbasic (*Pkg*) **tocbasic** is nullified for **l warp**.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. \DeclareDocumentCommand is used to overwrite the koma-script definitions.

for HTML output: 1 \LWR@ProvidesPackagePass{tocbasic}[2018/12/30]

2 \DeclareDocumentCommand{\usetocbasicnumberline}{o}{
3 \DeclareDocumentCommand{\DeclareTOCStyleEntry}{o m m}{
4 \DeclareDocumentCommand{\DeclareTOCStyleEntries}{o m m}{
5 \DeclareDocumentCommand{\DeclareTOCEntryStyle}{m o m}{
6 \DeclareDocumentCommand{\DefineTOCEntryOption}{m o m}{
7 \DeclareDocumentCommand{\DefineTOCEntryBooleanOption}{m o m m m}{
8 \DeclareDocumentCommand{\DefineTOCEntryCommandOption}{m o m m m}{
9 \DeclareDocumentCommand{\DefineTOCEntryIfOption}{m o m m m}{
10 \DeclareDocumentCommand{\DefineTOCEntryLengthOption}{m o m m m}{}

```

11 \DeclareDocumentCommand{\DefineTOCEntryNumberOption}{m o m m m}(){}
12 \DeclareDocumentCommand{\CloneTOCEntryStyle}{m m}={}
13 \DeclareDocumentCommand{\TOCEntryStyleInitCode}{m m}={}
14 \DeclareDocumentCommand{\TOCEntryStyleStartInitCode}{m m}={}

```

File 523 **l warp-tocbibind.sty**

§ 632 Package **tocbibind**

(Emulates or patches code by PETER WILSON.)

tocbibind (Pkg) **tocbibind** is patched for use by **l warp**.

placement and toc options An index may be placed inline with other HTML text, or on its own HTML page:

makeidx (Pkg) **Inline, with a manual toc entry:**

A commonly-used method to introduce an index in a L^AT_EX document:

```

\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname} or chapter
\printindex

```

makeidx (Pkg) **On its own HTML page, with a manual toc entry:**

```

\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname} or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex

```

tocbibind (Pkg) **Inline, with an automatic toc entry:**

The **tocbibind** package may be used to automatically place an entry in the TOC.

```

\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex

```

tocbibind (Pkg) **On its own HTML page, with an automatic toc entry:**

```

\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex

```

numindex (Opt) [tocbibind] numbered index section Use the **tocbibind numindex** option to generate a numbered index. Without this option, the index heading has no number.

Other packages, such as **imakeidx**, may also have options for including the index in the Table of Contents.

```

for HTML output: 1 \let\simplechapterdelim\relax
2
3 \LWR@ProvidesPackagePass{tocbibind}[2010/10/13]

4 \renewenvironment{theindex}%
5 {%
6     \if@bibchapter
7         \if@donumindex
8             \chapter{\indexname}
9         \else
10            \if@dotocind
11                \chapter*{\indexname}
12                \addcontentsline{toc}{chapter}{\LWR@isolate{\indexname}}
13            \else
14                \chapter*{\indexname}
15            \fi
16        \fi
17    \else
18        \if@donumindex
19            \section{\indexname}
20        \else
21            \if@dotocind
22                \section*{\indexname}
23                \addcontentsline{toc}{\@tocextra}{\LWR@isolate{\indexname}}
24            \else
25                \section*{\indexname}
26            \fi
27        \fi
28    \fi
29 \LetLtxMacro\item\LWR@indexitem%
30 \LetLtxMacro\subitem\LWR@indexsubitem%
31 \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
32 }{ }

```

The following code is shared by `anonchap`.

```

33 \DeclareDocumentCommand{\simplechapter}{O{\emptyset}}{%
34     \def\@chapcntformat##1{%
35         #1\csname the##1\endcsname\simplechapterdelim\quad%
36     }%
37 }%
38
39 \DeclareDocumentCommand{\restorechapter}{%
40 \let\@chapcntformat\@secntformat%
41 }

```

File 524 **l warp-tocdata.sty**

§ 633 Package **tocdata**

(Emulates or patches code by BRIAN DUNN.)

tocdata (Pkg) tocdata is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{tocdata}[2019/07/06]

```
2 \renewcommand*\{LWR@maybetocdata}{%
3     \ifdefempty{\TD@thistocdata}{}{%
4         \qquad \InlineClass{authorartist}{\tocdataformat{\TD@thistocdata}}{%
5             \def\TD@thistocdata{}%
6         }%
7     }%
8 \renewrobustcmd{\tocdatapartprint}[4]{%
9 {%
10     \InlineClass{authorartist}{%
11         \qquad --- %
12         \TDoctoptionalnameprint{\#1}\TDoctoptionalnameprint{\#2}\#3\#4%
13     }%
14 }%
15 %
16 @ifundefined{chapter}{}{%
17     \let\tocdatachapterprint\tocdatapartprint%
18 }%
19 \let\tocdatasectionprint\tocdatapartprint%
20 \let\tocdatasubsectionprint\tocdatapartprint%
21 %
22 \newcommand*\{LWR@TD@settextalign}[1]{%
23     \def\LWR@TD@textalign{justify}%
24     \ifcsstring{\TD@#1align}{\centering}%
25         {\def\LWR@TD@textalign{center}}%
26     {}%
27     \ifcsstring{\TD@#1align}{\raggedleft}%
28         {\def\LWR@TD@textalign{right}}%
29     {}%
30     \ifcsstring{\TD@#1align}{\raggedright}%
31         {\def\LWR@TD@textalign{left}}%
32     {}%
33 }%
34 %
35 \renewcommand{\TDartistaauthorprint}[5]{%
36     \LWR@TD@settextalign{\#1}%
37     \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
38     \InlineClass{authorartist}{\TDoctoptionalnameprint{\#2}\TDoctoptionalnameprint{\#3}\#4\#5}%
39     \end{BlockClass}%
40 }%
41 %
42 \newcommand*\{LWR@TD@setnamealign}[1]{%
43     \def\LWR@TD@textalign{justify}%
44     \ifcsstring{\TD@#1textalign}{\centering}%
45         {\def\LWR@TD@textalign{center}}%
46     {}%
47     \ifcsstring{\TD@#1textalign}{\raggedleft}%
48         {\def\LWR@TD@textalign{right}}%
49     {}%
50     \ifcsstring{\TD@#1textalign}{\raggedright}%
51         {\def\LWR@TD@textalign{left}}%
52     {}%
53 }%
54 %
55 \renewcommand{\TDartistaauthortextprint}[2]{%
56     \LWR@TD@setnamealign{\#1}%
57     \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
58     \#2%
59     \end{BlockClass}%
60 }
```

File 525 **l warp-tocenter.sty**

§ 634 Package **tocenter**

tocenter (*Pkg*) toccenter is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{tocenter}[2004/12/09]

2 \NewDocumentCommand{\ToCenter}{s o m m}{}
3 \NewDocumentCommand{\FromMargins}{s o m m m m}{}

File 526 **l warp-tocloft.sty**

§ 635 Package **tocloft**

(Emulates or patches code by PETER WILSON.)

tocloft (*Pkg*) tocloft is emulated. Most user options and macros are ignored and disabled.
\newlistof and \cftchapterprecis are supported.

tocloft (*Pkg*) If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its titles option, which tells tocloft to use standard L^AT_EX commands to create the titles, allowing other packages to work with it.

Discard all options for l warp-tocloft:

for HTML output: 1 \LWR@ProvidesPackageDrop{tocloft}[2017/08/31]

\tocloftpagestyle {<style>}
2 \newcommand{\tocloftpagestyle}[1]{}

\cftmarktoc
3 \newcommand*{\cftmarktoc}{}

\cfttoctitlefont
4 \newcommand*{\cfttoctitlefont}{}

\cftaftertoctitle
5 \newcommand*{\cftaftertoctitle}{}
6 \newlength{\cftbeforetoctitleskip}
7 \newlength{\cftaftertoctitleskip}

\cftmarklof
8 \newcommand*{\cftmarklof}{}

```
\cftloftitlefont
 9 \newcommand*\cftloftitlefont{}

\cftafterloftitle
10 \newcommand*\cftafterloftitle{}

11 \newlength{\cftbeforeloftitleskip}
12 \newlength{\cftafterloftitleskip}

\cftmarklot
13 \newcommand*\cftmarklot{}

\cftlottitlefont
14 \newcommand*\cftlottitlefont{}

\cftafterlottitle
15 \newcommand*\cftafterlottitle{}

16 \newlength{\cftbeforelottitleskip}
17 \newlength{\cftafterlottitleskip}

\cftdot
18 \providecommand*\cftdot{.}

\cftdotsep
19 \providecommand*\cftdotsep{1}

\cftnodots
20 \providecommand*\cftnodots{5000}

\cftdotfill
{⟨sep⟩}
21 \providecommand{\cftdotfill}[1] {}

\cftsetpnumwidth
{⟨length⟩}
22 \DeclareDocumentCommand{\cftsetpnumwidth}{m} {}

\cftsetrmarg
{⟨length⟩}
23 \DeclareDocumentCommand{\cftsetrmarg}{m} {}

\cftpnumalign
{⟨alignment⟩}
24 \DeclareDocumentCommand{\cftpnumalign}{m} {}

25 \LWR@providelength{\cftparskip}
```

The part-related items are also provided by memoir:

```

26 \LWR@providelength{\cftbeforepartskip}
27 \LWR@providelength{\cftpartindent}
28 \LWR@providelength{\cftpartnumwidth}
29 \providecommand*\{cftpartfont}{}}
30 \providecommand*\{cftpartpresnum}{}}
31 \providecommand*\{cftpartaftersnum}{}}
32 \providecommand*\{cftpartaftersnumb}{}}
33 \providecommand*\{cftpartleader}{}}
34 \providecommand*\{cftpartdotsep}{1}
35 \providecommand*\{cftpartpagefont}{}}
36 \providecommand*\{cftpartafterpnum}{}}

```

memoir uses the full name “chapter” instead of “chap”:

```

37 \LWR@providelength{\cftbeforechapskip}
38 \LWR@providelength{\cftchapindent}
39 \LWR@providelength{\cftchapnumwidth}
40 \newcommand*\{cftchapfont}{}}
41 \newcommand*\{cftchappresnum}{}}
42 \newcommand*\{cftchapaftersnum}{}}
43 \newcommand*\{cftchapaftersnumb}{}}
44 \newcommand*\{cftchapleader}{}}
45 \newcommand*\{cftchapdotsep}{1}
46 \newcommand*\{cftchappagefont}{}}
47 \newcommand*\{cftchapafterpnum}{}}

```

The following do not appear in **memoir**:

```

48 \LWR@providelength{\cftbeforesecskip}
49 \LWR@providelength{\cftsecindent}
50 \LWR@providelength{\cftsecnumwidth}
51 \newcommand*\{cftsecfont}{}}
52 \newcommand*\{cftsecpresnum}{}}
53 \newcommand*\{cftsecaftersnum}{}}
54 \newcommand*\{cftsecaftersnumb}{}}
55 \newcommand*\{cftsecleader}{}}
56 \newcommand*\{cftsecdotsep}{1}
57 \newcommand*\{cftsecpagefont}{}}
58 \newcommand*\{cftsecafterpnum}{}}

59 \LWR@providelength{\cftbeforesubsecskip}
60 \LWR@providelength{\cftsubsecindent}
61 \LWR@providelength{\cftsubsecnumwidth}
62 \newcommand*\{cftsubsecfont}{}}
63 \newcommand*\{cftsubsecpresnum}{}}
64 \newcommand*\{cftsubsecaftersnum}{}}
65 \newcommand*\{cftsubsecaftersnumb}{}}
66 \newcommand*\{cftsubsecleader}{}}
67 \newcommand*\{cftsubsecdotsep}{1}
68 \newcommand*\{cftsubsecpagefont}{}}
69 \newcommand*\{cftsubsecafterpnum}{}}

70 \LWR@providelength{\cftbeforesubsubsecskip}
71 \LWR@providelength{\cftsubsubsecindent}
72 \LWR@providelength{\cftsubsubsecnumwidth}
73 \newcommand*\{cftsubsubsecfont}{}}
74 \newcommand*\{cftsubsubsecpresnum}{}}

```

```
75 \newcommand*{\cftsubsubsecaftersnum}{}  
76 \newcommand*{\cftsubsubsecaftersnumb}{}  
77 \newcommand*{\cftsubsubsecleader}{}  
78 \newcommand*{\cftsubsubsecdotsep}{1}  
79 \newcommand*{\cftsubsubsecpagefont}{}  
80 \newcommand*{\cftsubsubsecafterpnum}{}  
  
81 \LWR@providelength{\cftbeforeparaskip}  
82 \LWR@providelength{\cftparrayindent}  
83 \LWR@providelength{\cftparraynumwidth}  
84 \newcommand*{\cftparrayfont}{}  
85 \newcommand*{\cftparraypresnum}{}  
86 \newcommand*{\cftparrayaftersnum}{}  
87 \newcommand*{\cftparrayaftersnumb}{}  
88 \newcommand*{\cftparrayleader}{}  
89 \newcommand*{\cftparraydotsep}{1}  
90 \newcommand*{\cftparraypagefont}{}  
91 \newcommand*{\cftparrayafterpnum}{}  
  
92 \LWR@providelength{\cftbeforesubparaskip}  
93 \LWR@providelength{\cftsubarrayindent}  
94 \LWR@providelength{\cftsubarraynumwidth}  
95 \newcommand*{\cftsubarrayfont}{}  
96 \newcommand*{\cftsubarraypresnum}{}  
97 \newcommand*{\cftsubarrayaftersnum}{}  
98 \newcommand*{\cftsubarrayaftersnumb}{}  
99 \newcommand*{\cftsubarrayleader}{}  
100 \newcommand*{\cftsubarraydotsep}{1}  
101 \newcommand*{\cftsubarraypagefont}{}  
102 \newcommand*{\cftsubarrayafterpnum}{}  
  
103 \LWR@providelength{\cftbeforefigskip}  
104 \LWR@providelength{\cftfigindent}  
105 \LWR@providelength{\cftfignumwidth}  
106 \newcommand*{\cftfigfont}{}  
107 \newcommand*{\cftfigpresnum}{}  
108 \newcommand*{\cftfigaftersnum}{}  
109 \newcommand*{\cftfigaftersnumb}{}  
110 \newcommand*{\cftfigleader}{}  
111 \newcommand*{\cftfigdotsep}{1}  
112 \newcommand*{\cftfigpagefont}{}  
113 \newcommand*{\cftfigafterpnum}{}  
  
114 \LWR@providelength{\cftbeforesubfigskip}  
115 \LWR@providelength{\cftsubfigindent}  
116 \LWR@providelength{\cftsubfignumwidth}  
117 \newcommand*{\cftsubfigfont}{}  
118 \newcommand*{\cftsubfigpresnum}{}  
119 \newcommand*{\cftsubfigaftersnum}{}  
120 \newcommand*{\cftsubfigaftersnumb}{}  
121 \newcommand*{\cftsubfigleader}{}  
122 \newcommand*{\cftsubfigdotsep}{1}  
123 \newcommand*{\cftsubfigpagefont}{}  
124 \newcommand*{\cftsubfigafterpnum}{}  
  
125 \LWR@providelength{\cftbeforetabskip}  
126 \LWR@providelength{\cfttabindent}  
127 \LWR@providelength{\cfttabnumwidth}  
128 \newcommand*{\cfttabfont}{}  

```

```

129 \newcommand*{\cfttabpresnum}{}
130 \newcommand*{\cfttabaftersnum}{}
131 \newcommand*{\cfttabaftersnumb}{}
132 \newcommand*{\cfttableader}{}
133 \newcommand*{\cftabdotsep}{1}
134 \newcommand*{\cftabpagefont}{}
135 \newcommand*{\cftabafterpnum}{}

136 \LWR@providelength{\cftbeforesubtabskip}
137 \LWR@providelength{\cftsubtabindent}
138 \LWR@providelength{\cftsubtabnumwidth}
139 \newcommand*{\cftsubtabfont}{}
140 \newcommand*{\cftsubtabpresnum}{}
141 \newcommand*{\cftsubtabaftersnum}{}
142 \newcommand*{\cftsubtabaftersnumb}{}
143 \newcommand*{\cftsubtableader}{}
144 \newcommand*{\cftsubabdotsep}{1}
145 \newcommand*{\cftsubabpagefont}{}
146 \newcommand*{\cftsubabafterpnum}{}

147 \DeclareDocumentCommand{\cftsetindents}{m m m} {}

148 \providecommand{\cftpagenumbersoff}[1]{}
149 \providecommand{\cftpagenumberson}[1]{}

```

```

\newlistentry{<within>}{<counter>}{<ext>}{<level-1>}

150 \DeclareDocumentCommand{\newlistentry}{o m m m}
151 {%
152 \LWR@traceinfo{newlistentry #2 #3 #4}%
153 \IfValueTF{#1}%
154 {%
155   \@ifundefined{c@#2}{%
156     \newcounter{#2}[#1]%
157     \expandafter\edef\csname the#2\endcsname{%
158       \expandafter\noexpand\csname the#1\endcsname.\noexpand\arabic{#2}%
159     }%
160   }{%
161 }%
162 {%
163   \@ifundefined{c@#2}{%
164     \newcounter{#2}%
165   }{%
166 }%
167 \namedef{l@#2}##1##2{%
168   \hypertocfloat{1}{#2}{#3}{##1}{##2}%
169   \def\cftwhatismyname{#2}{} from memoir
170 }%
171 \expandafter\newlength\csname cftbefore#2skip\endcsname%
172 \expandafter\newlength\csname cft#2indent\endcsname%
173 \expandafter\newlength\csname cft#2numwidth\endcsname%
174 \namedef{cft#2font}{%
175 \namedef{cft#2presnum}{%
176 \namedef{cft#2aftersnum}{%
177 \namedef{cft#2aftersnumb}{%
178 \namedef{cft#2leader}{%
179 \namedef{cft#2dotsep}{1}%
180 \namedef{cft#2pagefont}{%

```

```

181 \@namedef{cft#2afterpnum}{ }%
182 \@namedef{toclevel@#2}{#4}%
183 \@namedef{cft#2fillnum}##1{}%
184 \LWR@traceinfo{newlistentry done}%
185 }

\newlistof [⟨within⟩] {⟨type⟩} {⟨ext⟩} {⟨listofname⟩}
Emulated through the \newfloat mechanism.

186 \DeclareDocumentCommand{\newlistof}{o m m m}
187 {%
188     \IfValueTF{#1}%
189         {\newlistentry[#1]{#2}{#3}{0}}%
190         {\newlistentry[#2]{#3}{0}}%
191     \@namedef{ext@#2}{#3}%
192     \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
193     \setcounter{#3depth}{1}%
194     \@namedef{cftmark#3}{}%
195     \@namedef{listof#2}{\LWR@listof{#2}{#4}}%
196     \@namedef{@cftmake#3title}{}%
197     \expandafter\newlength\csname cftbefore#3titleskip\endcsname%
198     \expandafter\newlength\csname cftafter#3titleskip\endcsname%
199     \@namedef{cft#3titlefont}{}%
200     \@namedef{cftafter#3title}{}%
201     \@namedef{cft#3prehook}{}%
202     \@namedef{cft#3posthook}{}%
203 }

```

```

\cftchapterprecis {⟨text⟩}

204 \newcommand{\cftchapterprecis}[1]{%
205   \cftchapterprecishere{#1}%
206   \cftchapterprecistoc{#1}%
207 \newcommand{\cftchapterprecishere}[1]{%
208   \begin{quote}\textit{#1}\end{quote}%
209 \newcommand{\cftchapterprecistoc}[1]{%
210   \addtocontents{toc}{%
211   \begin{protect}\begin{quote}#1\end{protect}\end{quote}}%
212   }%
213 }
214 }
```

File 527 lwarf-tocstyle.sty

§ 636 Package **tocstyle**

tocstyle (*Pkg*) tocstyle is ignored.

⚠ Not fully tested! Please send bug reports!

for HTML output: 1 \LWR@ProvidesPackageDrop{tocstyle}[2017/02/23]

```

2 \newcommand*\usetocstyle}[2][]{}%
3 \newcommand*\deactivatetocstyle}[1][]{}%
4 \newcommand*\reactivatetocstyle}[1][]{}%
5 \NewDocumentCommand{\settocfeature}{o o m m}{}%
```

```

6 \NewDocumentCommand{\settocstylefeature}{o m m}(){}
7 \NewDocumentCommand{\newtocstyle}{o o m m}){}
8 \newcommand*\aliastoc[2](){}
9 \newcommand*\showtoc[2][]{}
10 \newcommand{\iftocchasdepth}[4]{}

```

File 528 **l warp-todo.sty**

§ 637 Package **todo**

(Emulates or patches code by FEDERICO GARCIA.)

todo (*Pkg*) todo is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{todo}[2010/03/31]

```

2 \renewcommand\todoitem[2]{%
3   \refstepcounter{todo}%
4   \item[%
5     \HTMLunicode{2610} \quad%
6     \ref{todopage:\thetodo}%
7     ] : {\todoformat\ifx#1\todomark\else\textrm{#1}\fi}#2%
8   \label{todolbl:\thetodo}%
9 }%
10
11 \renewcommand\doneitem[2]{%
12   \stepcounter{todo}%
13   \item[%
14     \HTMLunicode{2611} \quad%
15     \ref{todopage:\thetodo}%
16     ] \nameuse{@done\the\c@todo}:%
17     {\todoformat\ifx#1\todomark\else\textrm{#1}\fi}#2%
18 }

```

The following are not errors because the code will still compile and be usable if the patch is not possible.

```

19 \xpatchcmd{\@displaytodo}
20   {\todoformat #1}{\todoformat \textbf{#1}}{}
21   {\PackageWarning{l warp-todo}{Unable to patch @displaytodo.}}
22
23 \xpatchcmd{\@displayfulltodo}
24   {\todoformat #1}{\todoformat \textbf{#1}}{}
25   {\PackageWarning{l warp-todo}{Unable to patch @displayfulltodo.}}
26
27 \patchcmd{\todoenv}{\itshape see text.}{\textit{see text.}}{}
28   {\PackageWarning{l warp-todo}{Unable to patch todoenv.}}
29
30 \patchcmd{\astodos}{\todoformat #1}{\todoformat \textbf{#1}}{}
31   {\PackageWarning{l warp-todo}{Unable to patch astodos.}}

```

If cleveref is in use, name the new todo notes:

```

32 \AtBeginDocument{
33 \ifdef{\crefname}{}{
34   \crefname{todo}{todo}{todos}

```

```
35     \Crefname{todo}{Todo}{Todos}
36 }()
37 }
```

File 529 **l warp-todonotes.sty**

§ 638 Package **todonotes**

(Emulates or patches code by HENRIK SKOV MIDTIBY.)

todonotes (*Pkg*) **todonotes** is emulated.

The documentation for **todonotes** and **luatodonotes** have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.

for HTML output: 1 \LWR@ProvidesPackagePass{todonotes}[2012/07/25]

```
2 \if@todonotes@disabled
3 \else
4
5 \newcommand{\ext@todo}{tdo}
6
7 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{todo}{l@do}{#1}{#2}}
8 \let\LWRTODONOTES@orig@todototoc\todototoc
9
10 \renewcommand*{\todototoc}{%
11 \LWR@phantomsection%
12 \LWRTODONOTES@orig@todototoc%
13 }
14
15 \renewcommand{\@todonotes@drawMarginNoteWithLine}{%
16 \fcolorbox
17   {\@todonotes@currentbordercolor}
18   {\@todonotes@currentbackgroundcolor}
19   {\arabic{@todonotes@numberoftodonotes}}%
20 \marginpar{\@todonotes@drawMarginNote}
21 }
22
23 \renewcommand{\@todonotes@drawInlineNote}{%
24 \fcolorboxBlock%
25   {\@todonotes@currentbordercolor}%
26   {\@todonotes@currentbackgroundcolor}%
27   {%
28     \if@todonotes@authorgiven%
29     {\@todonotes@author:\,}%
30     \fi%
31     \@todonotes@text%
32   }%
33 }
34
35 \renewcommand{\@todonotes@drawMarginNote}{%
36   \if@todonotes@authorgiven%
37     \@todonotes@author\par%
38   \fi%
39   \arabic{@todonotes@numberoftodonotes}: %
```

```

40     \fcolorbox%
41     {\@todonotes@currentbordercolor}%
42     {\@todonotes@currentbackgroundcolor}%
43     {%
44         \@todonotes@sizecommand%
45         \@todonotes@text %
46     }%
47 }%
48
49 \renewcommand{\@todonotes@drawLineToRightMargin}{}
50
51 \renewcommand{\@todonotes@drawLineToLeftMargin}{}
52
53 \renewcommand{\missingfigure}[2][]{%
54 \setkeys{todonotes}{#1}%
55 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
56 \fcolorboxBlock%
57     {\@todonotes@currentbordercolor}%
58     {\@todonotes@currentfgcolor}%
59     {%
60         \setlength{\fboxrule}{4pt}%
61         \fcolorbox{red}{white}{Missing figure} \quad #2%
62     }
63 }
64
65 \LetLtxMacro{\LWRTODONOTES@orig@todo}{\todo}
66
67 \RenewDocumentCommand{\todo}{o m}{%
68 \begin{group}%
69 \renewcommand*{\phantomsection}{}%
70 \IfValueTF{#1}{%
71     \LWRTODONOTES@orig@todo[#1]{#2}%
72 }{%
73     \LWRTODONOTES@orig@todo{#2}%
74 }
75 \endgroup%
76 }
77
78 \fi% \if@todonotes@disabled

```

File 530 **lwarf-topcapt.sty**

§ 639 Package **topcapt**

topcapt (*Pkg*) **topcapt** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{topcapt}[2004/12/11]

2 \LetLtxMacro{\topcaption}{\caption}

File 531 **lwarf-tram.sty**

§ 640 Package **tram**

tram (*Pkg*) **tram** is emulated.

- ⚠️ block only** The HTML emulation uses a <div>, which must not appear inside an HTML or an HTML paragraph. For this reason, the `tram` environment should only be used to contain paragraphs inside a `\parbox` or `minipage`. `tram` should not be used to mark up inline text.

To disable `tram`, allowing source compatibility with inline uses:

```
\begin{warpHTML}
\renewenvironment{tram}[1][]{\{}{\}}
\end{warpHTML}
```

for HTML output: 1 \LWR@ProvidesPackageDrop{tram}[2013/04/04]

```
2 \newenvironment{tram}[1][]{%
3   {\BlockClass[background:lightgray]{tram}}%
4   {\endBlockClass}}
```

File 532 **l warp-transparent.sty**

§ 641 Package **transparent**

(Emulates or patches code by HEIKO OBERDIEK.)

`transparent` (*Pkg*) `transparent` is emulated. `\texttransparent` works for inline objects. `\transparent` only works for `\includegraphics`.

⚠️ Not X_ELATEX! Note that `transparent` does not work with X_ELATEX.

for HTML output: 1 \LWR@ProvidesPackagePass{transparent}[2019/11/29]

```
2 \newcommand*{\LWR@HTML@transparent}[1]{\edef\LWR@opacity{\#1}}
3
4 \LWR@formatted{transparent}
5
6
7 \newcommand*{\LWR@HTML@texttransparent}[2]{%
8 \begingroup%
9 \transparent{\#1}%
10 \InlineClass[opacity: #1]{transparent}{\#2}%
11 \endgroup%
12 }
13
14 \LWR@formatted{texttransparent}
```

File 533 **l warp-trimclip.sty**

§ 642 Package **trimclip**

`trimclip` (*Pkg*) `trimclip` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{trimclip}[2018/04/08]

The third argument, the text, is not touched. This allows `\bgroup / \egroup`, and verbatim content.

```

2 \csdef{trimbox}{\ifstar@gobble@gobble}
3 \csletcs{trimbox*}{trimbox}
4 \def\endtrimbox{}
5 \csletcs{endtrimbox*}{endtrimbox}
6
7 \csletcs{clipbox}{trimbox}
8 \csletcs{clipbox*}{trimbox}
9 \csletcs{endclipbox}{endtrimbox}
10 \csletcs{endclipbox*}{endtrimbox}
11
12 \csletcs{marginbox}{trimbox}
13 \csletcs{marginbox*}{trimbox}
14 \csletcs{endmarginbox}{endtrimbox}
15 \csletcs{endmarginbox*}{endtrimbox}
```

File 534 **l warp-trivfloat.sty**

§ 643 Package **trivfloat**

(Emulates or patches code by JOSEPH WRIGHT.)

trivfloat (Pkg) trivfloat is forced to use the built-in l warp emulation for floats.

To create a new float type and change its name:

```

\trivfloat{example}
\renewcommand{\examplename}{Example Name}
\crefname{example}{example}{examples}
\Crefname{example}{Example}{Examples}
```

Discard all options for l warp-trivfloat. This tells trivfloat not to use floatrow or memoir.

```

1 \LWR@ProvidesPackageDrop{trivfloat}[2009/04/23]
2 \LWR@origRequirePackage{trivfloat}
```

\tfl@chapter@fix Nullified at the beginning of the document. Is used by trivfloat to correct float chapter numbers, but is not needed for l warp.

```

3 \AtBeginDocument{\DeclareDocumentCommand{\tfl@chapter@fix}{m m}{}{}}
```

§ 643.1 Combining \newfloat, \trivfloat, and algorithmicx

For both print and HTML output:

- ⚠ When using float, trivfloat, or algorithmicx at the same time, be aware of conflicting file usage. algorithmicx uses .loa. trivfloat by default starts with .loa and goes up for additional floats, skipping .lof and .lot.
- ⚠ When using \newfloat, be sure to manually assign higher letters to the \newfloat files to avoid .loa used by algorithmicx, and any files used by trivfloat. Also avoid using .lof and .lot.
- ⚠ When using \trivfloat, you may force it to avoid conflicting with algorithmicx by starting trivfloat's file extensions with .lob:

```
\makeatletter
\setcounter{tfl@float@cnt}{1} % start trivfloats with .lob
\makeatletter
```

File 535 l warp-truncate.sty

§ 644 Package **truncate**

truncate (*Pkg*) **truncate** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{truncate}[2001/08/20]

```
2 \providecommand{\TruncateMarker}{}%
3 \newcommand{\truncate}[3][\TruncateMarker]{#3}
```

File 536 l warp-turnthepage.sty

§ 645 Package **turnthepage**

turnthepage (*Pkg*) **turnthepage** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{turnthepage}[2011/03/24]

```
2 \newcommand{\turnthepage}{}%
```

File 537 l warp-twoup.sty

§ 646 Package **twoup**

twoup (*Pkg*) **twoup** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{twoup}[2007/02/26]

```
2 \newcommand{\cleartolastpage}{}

---


```

File 538 **l warp-txfonts.sty**

§ 647 Package **txfonts**

(Emulates or patches code by YOUNG RYU.)

txfonts (Pkg) **txfonts** is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{txfonts}[2008/01/22]

For MATHJAX:

```
2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{txfonts}
6
7 \LWR@mathjax@addgreek@l@up{}{up}
8 \end{warpMathJax}
```

File 539 **l warp-txgreeks.sty**

§ 648 Package **txgreeks**

(Emulates or patches code by JEAN-FRANÇOIS BURNOL.)

txgreeks (Pkg) **txgreeks** is used as-is for SVG math, and is emulated for MATHJAX.

The MATHJAX emulation honors all package options.

for HTML output: 1 \LWR@ProvidesPackagePass{txgreeks}[2011/03/16]

```
2
3 \LWR@infoprocessingmathjax{txgreeks}
```

```
4 \LWR@origRequirePackage{l warp-common-mathjax-letters}
5
6 \begin{warpMathJax}
7 \iftgs@uplower% upright lowercase Greek
8   \LWR@mathjax@addgreek@l@up{}{}
9   \LWR@mathjax@addgreek@l@it{other}{}
10 \else% italic lowercase Greek
11   \LWR@mathjax@addgreek@l@it{}{}
12   \LWR@mathjax@addgreek@l@up{other}{}
13 \fi
14
15 \iftgs@itupper % italic uppercase Greek
16   \LWR@mathjax@addgreek@u@it*{}{}
17   \LWR@mathjax@addgreek@u@up*{other}{}
18   \LWR@mathjax@addgreek@u@up*{var}{}
19 \else% upright uppercase Greek
20   \LWR@mathjax@addgreek@u@up*{}{}
21   \LWR@mathjax@addgreek@u@it*{other}{}
```

```
22     \LWR@mathjax@addgreek@u@it*{var}{}{}  
23 \fi  
24 \end{warpMathJax}
```

File 540 l warp-typearea.sty**§ 649 Package typearea**

(Emulates or patches code by MARKUS KOHM.)

typearea (*Pkg*) typearea is emulated.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. \DeclareDocumentCommand is used to overwrite the koma-script definitions.

for HTML output: 1 \LWR@ProvidesPackageDrop{typearea}[2018/03/30]

```
2 \DeclareDocumentCommand{\typearea}{o m}{}  
3 \DeclareDocumentCommand{\recalctypearea}{}{}  
4 \@ifundefined{fooheight}{\newlength\fooheight}{}  
5 \DeclareDocumentCommand{\areaset}{o m m}{}  
6 \DeclareDocumentCommand{\activateareas}{}{}  
7 \DeclareDocumentCommand{\storeareas}{m}{}  
8 \DeclareDocumentCommand{\BeforeRestoreareas}{s m}{}  
9 \DeclareDocumentCommand{\AfterRestoreareas}{s m}{}  
10 \DeclareDocumentCommand{\AfterCalculatingTypearea}{s m}{}  
11 \DeclareDocumentCommand{\AfterSettingArea}{s m}{}

---


```

File 541 l warp-typicons.sty**§ 650 Package typicons**

(Emulates or patches code by ARTHUR VIGIL, XAVIER DANAUX.)

typicons (*Pkg*) typicons is patched for use by l warp.

If \ticon is used, the name of the icon is used in the alt tag. Otherwise, for each of the individual icon macros, a generic alt tag is used.

for HTML output: 1 \LWR@ProvidesPackagePass{typicons}[2015/05/20]

```
2 \LetLtxMacro{\LWR@orig@symbol}{\symbol}  
3  
4 \let\LWR@orig@typicon@TI\TI  
5  
6 \newcommand*{\LWR@typicon@symbol}[1]{%  
7   \begin{lateximage}*[typicon][typicon#1]%
```

8 \begingroup%
9 \LWR@orig@typicon@TI%
10 \LWR@orig@symbol{#1}%
11 \endgroup%
12 \end{lateximage}%"
13 }

```

14
15 \renewcommand*{\TI}{%
16   \LetLtxMacro\symbol\LWR@typicon@symbol%
17 }
18
19 \renewcommand*{\ticon}[1]
20 {%
21   \begin{lateximage}*[#1 icon][typicon#1]%
22   \TI\csname ticon@\#1\endcsname%
23   \end{lateximage}%
24 }
```

File 542 **l warp-ulem.sty**

§ 651 Package **ulem**

(Emulates or patches code by DONALD ARSENEAU.)

ulem (*Pkg*) Patched for use by **l warp**.

for HTML output: Use the original package:

```
1 \LWR@ProvidesPackagePass{ulem}[2012/05/18]
```

Basic markup commands, using css:

```

2 \NewDocumentCommand{\LWR@HTML@uline}{+m}{%
3   \InlineClass%
4     (text-decoration:underline; text-decoration-skip: auto)%
5     {uline}{\LWR@isolate{#1}}%
6 }
7 \LWR@formatted{uline}
8
9 \NewDocumentCommand{\LWR@HTML@uuline}{+m}{%
10   \InlineClass%
11   (%
12     text-decoration:underline; text-decoration-skip: auto;%
13     text-decoration-style:double%
14   )%
15   {uuline}{\LWR@isolate{#1}}%
16 }
17 \LWR@formatted{uuline}
18
19 \NewDocumentCommand{\LWR@HTML@uwave}{+m}{%
20   \InlineClass%
21   (%
22     text-decoration:underline; text-decoration-skip: auto;%
23     text-decoration-style:wavy%
24   )%
25   {uwave}{\LWR@isolate{#1}}%
26 }
27 \LWR@formatted{uwave}
28
29 \NewDocumentCommand{\LWR@HTML@sout}{+m}{%
30   \InlineClass%
31   (text-decoration:line-through)%
32   {sout}{\LWR@isolate{#1}}%
```

```

33 }
34 \LWR@formatted{sout}
35
36 \NewDocumentCommand{\LWR@HTML@xout}{+m}{%
37     \InlineClass{%
38         (text-decoration:line-through)%
39         {xout}{\LWR@isolate{#1}}%
40     }%
41 \LWR@formatted{xout}
42
43 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
44     \InlineClass{%
45         (%
46             text-decoration:underline;%
47             text-decoration-skip: auto;%
48             text-decoration-style:dashed%
49         )%
50         {dashuline}{\LWR@isolate{#1}}%
51     }%
52 \LWR@formatted{dashuline}
53
54 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
55     \InlineClass{%
56         (%
57             text-decoration:underline;%
58             text-decoration-skip: auto;%
59             text-decoration-style: dotted%
60         )%
61         {dotuline}{\LWR@isolate{#1}}%
62     }%
63 \LWR@formatted{dotuline}

```

Nullified/emulated macros:

```

64 \NewDocumentCommand{\LWR@HTML@markoverwith}{m}{}
65 \LWR@formatted{markoverwith}
66
67 \NewDocumentCommand{\LWR@HTML@ULon}{+m}{\uline{#1}\egroup}
68 \LWR@formatted{ULon}

```

File 543 **l warp-umoline.sty**

§ 652 Package **umoline**

(Emulates or patches code by HIROSHI NAKASHIMA.)

umoline (Pkg) umoline is patched for use by l warp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{umoline}[2000/07/11]

2 \newcommand*\LWR@HTML@Underline[1]{%
3     \InlineClass{uline}{#1}%
4 }
5 \LWR@formatted{Underline}
6
7 \newcommand*\LWR@HTML@Midline[1]{%
8     \InlineClass{sout}{#1}%

```

```

9 }
10 \LWR@formatted{Midline}
11
12 \newcommand*{\LWR@HTML@Overline}[1]{%
13     \InlineClass{oline}{#1}%
14 }
15 \LWR@formatted{Overline}
16
17 \newcommand*{\LWR@HTML@UMOline}[2]{%
18     \InlineClass{uline}{#2}%
19 }
20 \LWR@formatted{UMOline}
21
22 \NewDocumentCommand{\LWR@HTML@UMOspace}{s m o}{\hspace*{#2}}
23 \LWR@formatted{UMOspace}
24
25 \NewDocumentCommand{\LWR@HTML@UMOne newline}{s}{\newline}
26 \LWR@formatted{UMOne newline}

```

File 544 **lwarf-underscore.sty**§ 653 Package **underscore**underscore (*Pkg*) underscore is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{underscore}[2006/09/13]

File 545 **lwarf-unicode-math.sty**§ 654 Package **unicode-math**

(Emulates or patches code by WILL ROBERTSON.)

unicode-math (*Pkg*) unicode-math is supported as-is for HTML with svgmath.

⚠ **MATHJAX** If the document source includes embedded Unicode characters, these may not be reproduced correctly for *pdftotext*, and thus not display correctly in MATHJAX.

Symbol font commands are emulated, but not all combinations are supported by MATHJAX, especially with the dedicated Greek macros. Symbol macros such as `\symbfsf` may not be sans or bold. For Greek, use the Unicode equivalent, if necessary.

⚠ **\mathversion** The MATHJAX emulation does not change with the use of `\mathversion`. Whatever emulation is established at the begin of the document will remain.

The option `sans-style` honors `upright` and `italic`, but `italic` will not be sans, in order to support Greek macros.

Greek macros such as `\alpha` respond to the `math-style` option. Latin symbols does not, per MATHJAX limitations, unless placed inside `\symbit` or similar.

Macros from the categories `\mathopen`, `\mathclose`, and `\mathfence` are emulated. Due to current MATHJAX limitations, not all stretch to the correct height.

Also emulated are macros from the categories `\mathpunct`, `\mathover`, `\mathunder`, `\mathaccnt`, `\mathbotaccnt`, and `\mathop`.

The individual `unicode-math` macros of categories `\mathbin`, `\mathord`, and `\mathrel` are not emulated for MATHJAX, as there are more than two thousand of them, but they may be added as needed. Place the following in the document preamble after loading `unicode-math`, including a definition for each macro which is used in the document but undefined in MATHJAX:

```
\begin{warpMathJax}
\CustomizeMathJax{\newcommand{\uplus}{\mathbin{\unicode{x0228E}}}}
...
\end{warpMathJax}
```

Use `\mathrel`, `\mathbin`, etc. depending on the category of each macro. For a list of macro names and symbols, see `texdoc unimath-symbols`.

for HTML output: 1 \LWR@ProvidesPackagePass{unicode-math}[2019/09/26]

```
2 \LWR@origRequirePackage{l warp-common-mathjax-letters}
3
4 \begin{warpMathJax}
5 \LWR@infoprocessingmathjax{unicode-math}
6
7 % Not all are possible in MathJax.
8 \CustomizeMathJax{\let\symnormal\mathit}
9 \CustomizeMathJax{\let\symliteral\mathrm}
10 \CustomizeMathJax{\let\symbb\mathbb}
11 \CustomizeMathJax{\let\sympbb\mathbb}% not italic
12 \CustomizeMathJax{\let\symcal\mathcal}
13 \CustomizeMathJax{\let\symscr\mathscr}
14 \CustomizeMathJax{\let\symfrak\mathfrak}
15
16 \CustomizeMathJax{\let\symsfup\mathsf}
17
18 \CustomizeMathJax{\let\symsfit\mathit}% not sans
19 % \CustomizeMathJax{\newcommand{\symsfit}[1]{%
20 %     \mmlToken{mi}[mathvariant="sans-serif-italic"]{#1}}% not greek
21 % }
22
23 \CustomizeMathJax{\let\symbfsf\mathbf}% not sans
24 % \CustomizeMathJax{\newcommand{\symbfsf}[1]{%
25 %     \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}% not greek
26 % }
27
28 \CustomizeMathJax{\let\symbfup\mathbf}
29 \CustomizeMathJax{\newcommand{\symbfup}[1]{\boldsymbol{#1}}}
30 \CustomizeMathJax{\let\symbfcal\mathcal}% not bold
31
32 \CustomizeMathJax{\let\symbfscr\mathscr}% not bold
33 % \CustomizeMathJax{\newcommand{\symbfscr}[1]{%
34 %     \mmlToken{mi}[mathvariant="math-bold-script"]{#1}}% not greek
35 % }
36
37 \CustomizeMathJax{\let\symbffrak\mathfrak}% not bold
38 % \CustomizeMathJax{\newcommand{\symbffrak}[1]{%
39 %     \mmlToken{mi}[mathvariant="math-bold-fraktur"]{#1}}% not greek
40 % }
```

```

41 \CustomizeMathJax{\let\symbolfsup\mathbf}{% not sans
43 % \CustomizeMathJax{\newcommand{\symbolfsup}[1]{%
44 %     \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}}{% not greek
45 % }
46 \CustomizeMathJax{\newcommand{\symbolfsfit}[1]{\boldsymbol{#1}}}{% not sans
48 % \CustomizeMathJax{\newcommand{\symbolfsfit}[1]{%
49 %     \mmlToken{mi}[mathvariant="sans-serif-bold-italic"]{#1}}}{% not greek
50 % }
51 % Duplicates below are commented out.
53 \CustomizeMathJax{\let\symup\mathrm}
54 \CustomizeMathJax{\let\symbolbf\mathbf}{% \symbolup defined above
55 \CustomizeMathJax{\let\symit\mathit}
56 % \CustomizeMathJax{\let\symbolfit\mathit}{% not bold

57 \ExplSyntaxOn
58 \AtBeginDocument{
59 \bool_if:NTF \g__um_sfliteral_bool
60     {\CustomizeMathJax{\let\symsf\symsup}}
61     {
62         \bool_if:NTF \g__um_upsans_bool
63             {\CustomizeMathJax{\let\symsf\symsup}}
64             {\CustomizeMathJax{\let\symsf\symsfit}}
65     }
66 }
67 \ExplSyntaxOff

68 % \CustomizeMathJax{\let\symbolfsup\mathbf}{% not sans
69 % \CustomizeMathJax{\let\symbolfit\mathit}{% not sans
70 % \CustomizeMathJax{\let\symbolfsfit\mathit}{% not bold nor sans
71 \CustomizeMathJax{\let\symtt\mathtt}
72 % \CustomizeMathJax{\let\symbolbb\mathbb}
73 % \CustomizeMathJax{\let\symbolbit\mathbb}{% not italic
74 % \CustomizeMathJax{\let\symscr\mathscr}
75 % \CustomizeMathJax{\let\symbolfscr\mathscr}{% not bold
76 % \CustomizeMathJax{\let\symfrak\mathfrak}
77 \CustomizeMathJax{\let\symbolffrac\mathbfrac}

```

Some symbol categories defined by `unicode-math`, in case they are used inside custom macros:

```

78 \CustomizeMathJax{\newcommand{\mathfence}[1]{\mathord{#1}}}
79 \CustomizeMathJax{\newcommand{\mathover}[1]{#1}}
80 \CustomizeMathJax{\newcommand{\mathunder}[1]{#1}}
81 \CustomizeMathJax{\newcommand{\mathaccent}[1]{#1}}
82 \CustomizeMathJax{\newcommand{\mathbotaccent}[1]{#1}}
83 \CustomizeMathJax{\newcommand{\mathalpha}[1]{\mathord{#1}}}

```

`math-style` is one of: ISO, TeX, french, upright, or literal, which set `\g__um_upGreek_bool` and `\g__um_upgreek_bool`.

```

84 \ExplSyntaxOn
85
86 \AtBeginDocument{
87 \bool_if:NTF \g__um_upGreek_bool
88     {\LWR@mathjax@addgreek@u@up*{}{}}

```

```

89      {\LWR@mathjax@addgreek@u@it*{}{}}
90
91 \bool_if:NTF \g__um_upgreek_bool
92     {\LWR@mathjax@addgreek@l@up{}{}}
93     {\LWR@mathjax@addgreek@l@it{}{}}
94 }
95
96 \LWR@mathjax@addgreek@u@up*{up}{}
97 \LWR@mathjax@addgreek@u@it*{it}{}
98 \LWR@mathjax@addgreek@l@up{up}{}
99 \LWR@mathjax@addgreek@l@it{it}{}
100
101 \ExplSyntaxOff
102
103 \CustomizeMathJax{\let\lparen{}}
104 \CustomizeMathJax{\let\rparen{}}
105 \CustomizeMathJax{\newcommand{\cubert}[1]{\,{,}^3\!\sqrt{#1}\},}}
106 \CustomizeMathJax{\newcommand{\fourthroot}[1]{\,{,}^4\!\sqrt{#1}\},}}

```

Many `\mathopen`/`\mathclose` delimiters are defined in `lwarp_mathjax.txt`, where `\left`/`\right` support is added.

```

107 \CustomizeMathJax{\newcommand{\longdivision}[1]{\mathord{\unicode{x27CC}#1}}}
108
109 \CustomizeMathJax{\newcommand{\mathcomma}{,}}
110 \CustomizeMathJax{\newcommand{\mathcolon}{:}}
111 \CustomizeMathJax{\newcommand{\mathsemicolon}{;}}
112
113 \CustomizeMathJax{\newcommand{\overbracket}[1]{\mathinner{\overline{\ulcorner{#1}\urcorner}}}}
114 \CustomizeMathJax{\newcommand{\underbracket}[1]{\mathinner{\underline{\llcorner{#1}\rlcorner}}}}
115
116 \CustomizeMathJax{\newcommand{\overbar}[1]{\mathord{\#1\unicode{x00305}}}}
117 \CustomizeMathJax{\newcommand{\ovhook}[1]{\mathord{\#1\unicode{x00309}}}}
118 \CustomizeMathJax{\newcommand{\ocirc}[1]{\mathord{\#1\unicode{x0030A}}}}
119 \CustomizeMathJax{\newcommand{\candra}[1]{\mathord{\#1\unicode{x00310}}}}
120 \CustomizeMathJax{\newcommand{\oturnedcomma}[1]{\mathord{\#1\unicode{x00312}}}}
121 \CustomizeMathJax{\newcommand{\ocommatopright}[1]{\mathord{\#1\unicode{x00315}}}}
122 \CustomizeMathJax{\newcommand{\droang}[1]{\mathord{\#1\unicode{x0031A}}}}
123 \CustomizeMathJax{\newcommand{\leftharpoonaccent}[1]{\mathord{\#1\unicode{x20D0}}}}
124 \CustomizeMathJax{\newcommand{\rightharpoonaccent}[1]{\mathord{\#1\unicode{x20D1}}}}
125 \CustomizeMathJax{\newcommand{\vertoverlay}[1]{\mathord{\#1\unicode{x20D2}}}}
126 \CustomizeMathJax{\newcommand{\leftarrowaccent}[1]{\mathord{\#1\unicode{x20D0}}}}
127 \CustomizeMathJax{\newcommand{\annuity}[1]{\mathord{\#1\unicode{x20E7}}}}
128 \CustomizeMathJax{\newcommand{\widebridgeabove}[1]{\mathord{\#1\unicode{x20E9}}}}
129 \CustomizeMathJax{\newcommand{\asteraccent}[1]{\mathord{\#1\unicode{x20F0}}}}
130 \CustomizeMathJax{\newcommand{\threeunderdot}[1]{\mathord{\#1\unicode{x20E8}}}}
131
132 \CustomizeMathJax{\newcommand{\Bbbsum}{\mathop{\unicode{x2140}}\limits}}
133 \CustomizeMathJax{\newcommand{\oint}{\mathop{\unicode{x222F}}\limits}}
134 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\unicode{x2230}}\limits}}
135 \CustomizeMathJax{\newcommand{\intclockwise}{\mathop{\unicode{x2231}}\limits}}
136 \CustomizeMathJax{\newcommand{\ointclockwise}{\mathop{\unicode{x2232}}\limits}}
137 \CustomizeMathJax{\newcommand{\ointctrlclockwise}{\mathop{\unicode{x2233}}\limits}}
138 \CustomizeMathJax{\newcommand{\varointclockwise}{\mathop{\unicode{x2232}}\limits}}
139 \CustomizeMathJax{\newcommand{\leftouterjoin}{\mathop{\unicode{x27D5}}\limits}}
140 \CustomizeMathJax{\newcommand{\rightouterjoin}{\mathop{\unicode{x27D6}}\limits}}
141 \CustomizeMathJax{\newcommand{\fullouterjoin}{\mathop{\unicode{x27D7}}\limits}}
142 \CustomizeMathJax{\newcommand{\bigbot}{\mathop{\unicode{x27D8}}\limits}}
143 \CustomizeMathJax{\newcommand{\bigtop}{\mathop{\unicode{x27D9}}\limits}}
144 \CustomizeMathJax{\newcommand{\xsol}{\mathop{\unicode{x29F8}}\limits}}

```

```

145 \CustomizeMathJax{\newcommand{\xbsol}{\mathop{\backslash\!unicode{x29F9}}\limits}}
146 \CustomizeMathJax{\newcommand{\bigcupdot}{\mathop{\backslash\!unicode{x2A03}}\limits}}
147 \CustomizeMathJax{\newcommand{\bigsqcap}{\mathop{\backslash\!unicode{x2A05}}\limits}}
148 \CustomizeMathJax{\newcommand{\conjquant}{\mathop{\backslash\!unicode{x2A07}}\limits}}
149 \CustomizeMathJax{\newcommand{\disjquant}{\mathop{\backslash\!unicode{x2A08}}\limits}}
150 \CustomizeMathJax{\newcommand{\bigtimes}{\mathop{\backslash\!unicode{x2A09}}\limits}}
151 \CustomizeMathJax{\newcommand{\modtwosum}{\mathop{\backslash\!unicode{x2A0A}}\limits}}
152 \CustomizeMathJax{\newcommand{\sumint}{\mathop{\backslash\!unicode{x2A0B}}\limits}}
153 \CustomizeMathJax{\newcommand{\intbar}{\mathop{\backslash\!unicode{x2A0D}}\limits}}
154 \CustomizeMathJax{\newcommand{\intBar}{\mathop{\backslash\!unicode{x2A0E}}\limits}}
155 \CustomizeMathJax{\newcommand{\fint}{\mathop{\backslash\!unicode{x2A0F}}\limits}}
156 \CustomizeMathJax{\newcommand{\cirfnint}{\mathop{\backslash\!unicode{x2A10}}\limits}}
157 \CustomizeMathJax{\newcommand{\awint}{\mathop{\backslash\!unicode{x2A11}}\limits}}
158 \CustomizeMathJax{\newcommand{\rppoint}{\mathop{\backslash\!unicode{x2A12}}\limits}}
159 \CustomizeMathJax{\newcommand{\scpoint}{\mathop{\backslash\!unicode{x2A13}}\limits}}
160 \CustomizeMathJax{\newcommand{\npoint}{\mathop{\backslash\!unicode{x2A14}}\limits}}
161 \CustomizeMathJax{\newcommand{\pointint}{\mathop{\backslash\!unicode{x2A15}}\limits}}
162 \CustomizeMathJax{\newcommand{\sqint}{\mathop{\backslash\!unicode{x2A16}}\limits}}
163 \CustomizeMathJax{\newcommand{\intlarhk}{\mathop{\backslash\!unicode{x2A17}}\limits}}
164 \CustomizeMathJax{\newcommand{\intx}{\mathop{\backslash\!unicode{x2A18}}\limits}}
165 \CustomizeMathJax{\newcommand{\intcap}{\mathop{\backslash\!unicode{x2A19}}\limits}}
166 \CustomizeMathJax{\newcommand{\intcup}{\mathop{\backslash\!unicode{x2A1A}}\limits}}
167 \CustomizeMathJax{\newcommand{\upint}{\mathop{\backslash\!unicode{x2A1B}}\limits}}
168 \CustomizeMathJax{\newcommand{\lowint}{\mathop{\backslash\!unicode{x2A1C}}\limits}}
169 \CustomizeMathJax{\newcommand{\bigtriangleleft}{\mathop{\backslash\!unicode{x2A1E}}\limits}}
170 \CustomizeMathJax{\newcommand{\zcmp}{\mathop{\backslash\!unicode{x2A1F}}\limits}}
171 \CustomizeMathJax{\newcommand{\zpipe}{\mathop{\backslash\!unicode{x2A20}}\limits}}
172 \CustomizeMathJax{\newcommand{\zproject}{\mathop{\backslash\!unicode{x2A21}}\limits}}
173 \CustomizeMathJax{\newcommand{\biginterleave}{\mathop{\backslash\!unicode{x2AFC}}\limits}}
174 \CustomizeMathJax{\newcommand{\bigtalloblong}{\mathop{\backslash\!unicode{x2AFF}}\limits}}
175 \CustomizeMathJax{\newcommand{\arabicmaj}{\mathop{\backslash\!unicode{x1EEF0}}\limits}}
176 \CustomizeMathJax{\newcommand{\arabichad}{\mathop{\backslash\!unicode{x1EEF1}}\limits}}
177
178 \end{warpMathJax}

```

File 546 l warp-units.sty

§ 655 Package units

(Emulates or patches code by AXEL REICHERT.)

units (*Pkg*) units is patched for use by l warp.

Values are not styled by css, and take the style of the surrounding HTML text.

Units are styled according to the print version, so they will be forced to upright roman in HTML if the print version does so. It may be necessary to adjust the document's body css to match the print version.

for HTML output: 1 \LWR@ProvidesPackagePass{units}[1998/08/04]

```

2 \DeclareRobustCommand*\LWR@HTML@unit}[2][]{{%
3 \ifblank{#1}{%
4   {\LWR@textcurrentfont{#2}}{%
5   {%
6     #1{%
7       \ifthenelse{\boolean{B@UnitsLoose}}{~}{,}}{%

```

```

8      \LWR@textcurrentfont{#2}%
9    }%
10 }
11 \LWR@formatted{unit}

12 \DeclareRobustCommand*\LWR@HTML@unitfrac}[3][]{%
13 \ifblank{#1}{%
14   {%
15     \nicefrac{#2}{#3}%
16   }%
17   {%
18     #1%
19     \ifthenelse{\boolean{B@UnitsLoose}}{\~{}{\,\,}}{%
20       \nicefrac{#2}{#3}%
21     }%
22   }%
23 }
24 \LWR@formatted{unitfrac}

```

For MATHJAX:

```

25 \begin{warpMathJax}
26 \CustomizeMathJax{\newcommand{\unit}[2][]{\mathinner{#2}}}
27 \CustomizeMathJax{\newcommand{\unitfrac}[3][]{\mathinner{\{}^{\#2}\!\!/\!\!{\}_{\#3}}}}
28 \end{warpMathJax}

```

File 547 **lwarp-unitsdef.sty**

§ 656 Package **unitsdef**

(Emulates or patches code by PATRICK HAPPEL.)

unitsdef (Pkg) unitsdef is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{unitsdef}[2005/01/04]

```

2 \newcommand{\LWR@HTML@unitvaluesep}{\,}
3 \LWR@formatted{unitvaluesep}
4
5 \newcommand{\LWR@HTML@unittimes}{\@setunitsepfalse\HTMLunicode{22c5}\cdot}
6 \LWR@formatted{unittimes}
7
8 \newunit{\LWR@HTML@arcmin}{%
9   \HTMLunicode{2032}\prime
10 }
11 \LWR@formatted{arcmin}
12
13 \newunit{\LWR@HTML@arcsec}{%
14   \HTMLunicode{2033}\prime\prime
15 }
16 \LWR@formatted{arcsec}
17
18 \newrobustcmd{\LWR@HTML@SI}[2]{%
19   \begingroup%
20   \let\unit@@xspace\relax%
21   \unitSIdef\selectfont%
22   \LWR@textcurrentfont{#1#2} lwarp

```

```
23 \endgroup%
24 }
25 \LWR@formatted{SI}
```

File 548 **l warp-upgreek.sty**§ 657 Package **upgreek**

(Emulates or patches code by WALTER SCHMIDT.)

upgreek (*Pkg*) **upgreek** is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{upgreek}[2003/02/12]

For MATHJAX:

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\require{upgreek}}
4 \end{warpMathJax}
```

File 549 **l warp-upref.sty**§ 658 Package **upref**

upref (*Pkg*) **upref** is ignored.

for HTML output: Discard all options for **l warp-upref**:

```
1 \LWR@ProvidesPackageDrop{upref}[2007/03/14]
```

File 550 **l warp-url.sty**§ 659 Package **url**

(Emulates or patches code by DONALD ARSENEAU.)

url (*Pkg*) **url** is patched for use by **l warp**.

for HTML output: 1 \LetLtxMacro\LWR@url@orig@url\LWR@url
2
3 \LWR@ProvidesPackagePass{url}[2013/09/16]

```
4 \newcommand*\LWR@HTML@Url@FormatString}{%
5     \expandafter\LWR@url@orig@url\expandafter{\Url@String}%
6 }
7 \LWR@formatted{Url@FormatString}
```

File 551 l warp-ushort.sty**§ 660 Package ushort**

(Emulates or patches code by MARTIN VÄTH.)

ushort (*Pkg*) ushort is used as-is, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{ushort}[2001/06/13]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\ushortdline}[1]{%
4   \kern{.1em}\underline{\underline{#1}}\kern{.1em}%
5 }%
6 \CustomizeMathJax{\newcommand{\ushort}[1]{\kern{.1em}\underline{#1}\kern{.1em}}%
7 \CustomizeMathJax{\newcommand{\ushortd}[1]{\ushortdline{#1}}%
8 \CustomizeMathJax{\newcommand{\ushorttw}[1]{\kern{.1em}\underline{#1}\kern{.1em}}%
9 \CustomizeMathJax{\newcommand{\ushortdw}[1]{\ushortdline{#1}}%
10 \end{warpMathJax}
```

File 552 l warp-uspace.sty**§ 661 Package uspace**

uspace (*Pkg*) uspace is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{uspace}[2016/11/06]

File 553 l warp-variorref.sty**§ 662 Package variorref**

(Emulates or patches code by FRANK MITTELBACH.)

variorref (*Pkg*) variorref is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{variorref}[2020/01/23]

Page-related output is not used for HTML output.

```
2 \def\reftextfaceafter {\unskip}%
3 \def\reftextfacebefore{\unskip}%
4 \def\reftextafter    {\unskip}%
5 \def\reftextbefore   {\unskip}%
6 \def\reftextcurrent {\unskip}%
7 \def\reftextfaraway#1{\unskip}%
8 \def\reftextpagerange#1#2{\unskip}%
```

File 554 l warp-verse.sty

§ 663 Package **verse**

(Emulates or patches code by PETER WILSON.)

verse (*Pkg*) **verse** is supported and patched by **l warp**.

for HTML output: Pass all options for **l warp-verse**:

```
1 \LWR@ProvidesPackagePass{verse}[2009/09/04]
```

When using **verse** or **memoir**, always place a `\\"` after each line.

\attrib The documentation for the **verse** and **memoir** packages suggest defining an **\attrib** command, which may already exist in current documents, but it will only work for print output. **l warp** provides **\attribution**, which works for both print and **HTML** output. To combine the two so that **\attrib** is used for print and **\attribution** is used for **HTML**:

```
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

\vleftskip (*Len*) These lengths are used by **verse** and **memoir** to control the left margin, and they may already be set by the user for print output. New lengths **\HTMLvleftskip** and **\HTMLleftmargini** are provided to control the margins in **HTML** output. These new lengths may be set by the user before any **verse** environment, and persist until they are manually changed again. One reason to change **\HTMLleftmargini** is if there is a wide **\flagverse** in use, such as the word “Chorus”, in which case the value of **\HTMLleftmargini** should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

- ⚠ spacing** Horizontal spacing relies on **pdftotext**’s ability to discern the layout (-layout option) of the text in the **HTML**-tagged PDF output. For some settings of **\HTMLleftmargini** or **\HTMLvleftskip** the horizontal alignment may not work out exactly, in which case a label may be shifted by one space. During translation to **HTML**, the stanza numbers are kept out of the left margin, which would have caused **pdftotext** to shift everything over.
- ⚠ verse margin**

verse (*env.*) The **verse** environment will be placed inside a **HTML** `<pre>`.

```
2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching verse.}
```

At the beginning of the **verse** environment:

```
4 \AtBeginEnvironment{verse}
5 {%
```

Use the original **list** environment inside a `<pre>` to attempt to preserve formatting.

```
6 \LWR@restoreoriglists%
```

verse (Pkg) The **verse** or **memoir** packages can place stanza numbers to the left with their **\flagverse** command. The following does not allow them to go into the left margin, which would cause **pdfcrop** to crop the entire page further to the left.

```
\vleftskip (Len) 7 \ifdef{\vleftskip}{%
  8 \setlength{\vleftskip}{\HTMLvleftskip}
  9 \setlength{\leftmargini}{\HTMLleftmargini}
 10 }{}{%
 11 \LWR@forcenewpage
 12 \LWR@atbeginverbatim{verse}%
 13 }
```

After the end of the **verse** environment, which places the **<pre>** tag at the regular left margin:

```
14 \AtEndEnvironment{verse}{%
 15 \leavevmode%
 16 \LWR@afterendverbatim%
 17 }
```

Patch to place poemtitle inside an HTML **** of class **poemtitle**:

```
18 \ifdef{\poemtitle}{%
 19 \DeclareDocumentCommand{\@vstypepoemtitle}{m}{%
 20   \vspace{\beforepoemtitleskip}%
 21   {\InlineClass{poemtitle}{\poemtitlefont #1}\par}%
 22   \vspace{\afterpoemtitleskip}%
 23 }
 24 }{}{%
 25
 26 \LWR@traceinfo{Finished patching verse.}
 27 }% AfterEndPreamble
```

File 555 **lwarf-versonotes.sty**

§ 664 Package **versonotes**

(Emulates or patches code by NORMAN GRAY.)

versonotes (Pkg) **versonotes** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{versonotes}[2019/07/06]

```
2 \newcommand{\versonote}[1]{\marginpar{\#1}}
3 \newdimen\versotextwidth
4 \newdimen\versoleftmargin
5 \newcommand*\versolayout{}
```

In case the user changed the page number before loading **versonotes**:

```
6 \setcounter{page}{1}
```

File 556 l warp-vertbars.sty**§ 665 Package vertbars**

(Emulates or patches code by PETER WILSON.)

vertbars (*Pkg*) vertbars is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{vertbars}[2010/11/27]

```
2 \newlength{\barwidth}
3 \setlength{\barwidth}{0.4pt}
4 \newlength{\barspace}
5 \setlength{\barspace}{1em}
6
7 \newenvironment{vertbar}{
8     \LWR@forcenewpage
9     \LWR@forceminwidth{\barwidth}
10    \begin{BlockClass}[
11        border-left: \LWR@printlength{\LWR@atleastonept} solid black ;
12        padding-left: \LWR@printlength{\barspace}%
13    ]{vertbar}
14 }{
15    \end{BlockClass}
16 }
```

File 557 l warp-vmargin.sty**§ 666 Package vmargin**

vmargin (*Pkg*) vmargin is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{vmargin}[2004/07/15]

```
2 \newcommand*{\LWRVM@customsize}[2]{}%
3 \newcommand*{\setpapersize}[2][]{\ifstreq{\#2}{custom}{\LWRVM@customsize}{}}%
4 \newcommand*{\setmargins}[8]{}%
5 \newcommand*{\setmarginsrb}[8]{}%
6 \newcommand*{\setmargnohf}[4]{}%
7 \newcommand*{\setmargnofrb}[4]{}%
8 \newcommand*{\setmarg}[4]{}%
9 \newcommand*{\setmargrb}[4]{}%
10 \newlength{\PaperWidth}
11 \setlength{\PaperWidth}{8.5in}
12 \newlength{\PaperHeight}
13 \setlength{\PaperHeight}{11in}
14 \newif\ifLandscape
```

File 558 l warp-vowel.sty**§ 667 Package vowel**

(Emulates or patches code by FUKUI REI.)

vowel (*Pkg*) vowel is patched for use by l warp.

This package has been tested with *pdflatex* and the Type 1 TIPA fonts using the following package load sequence:

```
\usepackage[T3,T1]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage[noenc]{tipa}
\usepackage{vowel}
```

for HTML output: 1 \LWR@ProvidesPackagePass{vowel}[2002/08/08]

```
2 \renewenvironment{vowel}[1][]{%
3   {%
4     \begin{lateximage}[-vowel-\~\PackageDiagramAltText]%
5     \@vowel[#1]%
6   }%
7   {%
8     \@@vowel%
9     \end{lateximage}%
10 }
```

File 559 l warp-vpe.sty**§ 668 Package vpe**

vpe (*Pkg*) vpe is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18]

File 560 l warp-vwcol.sty**§ 669 Package vwcol**

(Emulates or patches code by WILL ROBERTSON.)

vwcol (*Pkg*) vwcol is patched for use with l warp.

The width option is ignored. All vwcol environments adjust to 1–3 equal-width columns, depending on the width of the browser window.

The remaining options are supported, except for lines and maxrecursion.

for HTML output: 1 \LWR@ProvidesPackagePass{vwcol}[2015/02/10]

Factored from \vwcol. Each is given a style tag to append to the final style.

\LWR@vwcol@addrule

```
{<style tag>}

2 \newcommand*{\LWR@vwcol@addrule}[1]{%
3     \appto{\LWR@vwcolstyle}{%
4         #1: %
5         \LWR@printlength{\vwcol@rule} solid \LWR@origpound\LWR@vwcol@rulecolor ; %
6     }%
7 }
```

\LWR@vwcol@addrule

```
{<style tag>}

8 \newcommand*{\LWR@vwcol@addgap}[1]{%
9     \appto{\LWR@vwcolstyle}{%
10        #1: %
11        \LWR@printlength{\vwcol@sep} ; %
12    }%
13 }
```

Env vwcol

{<key/values>}

Redefine the environment to add a HTML style. The style is built depending on the required options.

14 \renewenvironment*{\vwcol}[1][]{%

New paragraph, and process the options:

15 \LWR@stoppars%

16 \vwcolsetup{#1}%

Begin with no style:

17 \newcommand*{\LWR@vwcolstyle}{}{}

presep and postsep are created with HTML margins:

18 \if@vwcol@presep

19 \appto{\LWR@vwcolstyle}{margin-left: 1em ; padding-left: .5em ; }

20 \fi

21 \if@vwcol@postsep

22 \appto{\LWR@vwcolstyle}{margin-right: 1em ; padding-right: .5em ; }

23 \fi

sep becomes column-gap:

24 \ifdimgreater{\vwcol@sep}{1sp}{

25 \LWR@vwcol@addgap{column-gap}

26 \LWR@vwcol@addgap{-moz-column-gap}

27 \LWR@vwcol@addgap{-webkit-column-gap}

28 }{}

rule become column-rule, while prerule and postrule become HTML borders:

29 \convertcolorspec{named}{\vwcol@rulecol}{HTML}\LWR@vwcol@rulecolor%

30 \ifdimgreater{\vwcol@rule}{0pt}{

31 \ifdimless{\vwcol@rule}{1pt}{

32 \setlength{\vwcol@rule}{1pt}

33 }{}

34 \LWR@vwcol@addrule{column-rule}

35 \LWR@vwcol@addrule{-moz-column-rule}

36 \LWR@vwcol@addrule{-webkit-column-rule}

37 \if@vwcol@prerule\LWR@vwcol@addrule{border-left}\fi

```
38     \if@vwcol@postrule\LWR@vwcol@addrule{border-right}\fi  
39 }{}
```

Each of the justify options becomes a text-align. Indentation is added where appropriate.

```
40 \ifdefequal{\vwcol@justify}{\RaggedRight}{  
41     \appto{\LWR@vwcolstyle}{text-align: left ; }  
42     \ifdimgreater{\vwcol@parindent}{0pt}{  
43         \appto{\LWR@vwcolstyle}{%  
44             text-indent: \LWR@printlength{\vwcol@parindent} ; %  
45     }  
46 }{}  
47 }{}  
  
48 \ifdefequal{\vwcol@justify}{\RaggedLeft}{  
49     \appto{\LWR@vwcolstyle}{text-align: right ; }  
50 }{}  
  
51 \ifdefequal{\vwcol@justify}{\Centering}{  
52     \appto{\LWR@vwcolstyle}{text-align: center ; }  
53 }{}  
  
54 \ifdefequal{\vwcol@justify}{\justifying}{  
55     \appto{\LWR@vwcolstyle}{text-align: justify ; }  
56     \ifdimgreater{\vwcol@parindent}{0pt}{  
57         \appto{\LWR@vwcolstyle}{%  
58             text-indent: \LWR@printlength{\vwcol@parindent} ; %  
59     }  
60 }{}  
61 }{}}
```

Create the `<div>` with the assembled style:

```
62 \BlockClass[\LWR@vwcolstyle]{multicols}
63 }
```

When the environment ends:

```
64 {  
65     \endBlockClass  
66     \LWR@startpars  
67 }
```

File 561 **lwarf-wallpaper.sty**

§ 670 Package **wallpaper**

(Emulates or patches code by MICHAEL H.F. WILKINSON.)

wallpaper (*Pkg*) wallpaper is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{wallpaper}[2005/01/18]

```

9 \newcommand*\{\\ThisULCornerWallPaper}{2}{}}
10 \newcommand*\{\\LLCornerWallPaper}{2}{}}
11 \newcommand*\{\\ThisLLCornerWallPaper}{2}{}}
12 \newcommand*\{\\URCornerWallPaper}{2}{}}
13 \newcommand*\{\\ThisURCornerWallPaper}{2}{}}
14 \newcommand*\{\\LRCornerWallPaper}{2}{}}
15 \newcommand*\{\\ThisLRCornerWallPaper}{2}{}}
16 \newcommand*\{\\ClearWallPaper}{}}
17 \newlength{\wpXoffset}
18 \newlength{\wpYoffset}

```

File 562 **l warp-watermark.sty**

§ 671 Package **watermark**

(Emulates or patches code by ALEXANDER I. ROZHENKO.)

watermark (*Pkg*) **watermark** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{watermark}[2004/12/09]

```

2 \newcommand{\watermark}{1}{}}
3 \newcommand{\leftwatermark}{1}{}}
4 \newcommand{\rightwatermark}{1}{}}
5 \newcommand{\thiswatermark}{1}{}}
6 \newcommand{\thispageheading}{1}{}}

```

File 563 **l warp-widetable.sty**

§ 672 Package **widetable**

(Emulates or patches code by CLAUDIO BECCARI.)

widetable (*Pkg*) **widetable** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{widetable}[2019-06-25]

```
2 \newenvironment{widetable}{\begin{tabular*}}{\end{tabular*}}
```

File 564 **l warp-widows-and-orphans.sty**

§ 673 Package **widows-and-orphans**

widows-and-orphans (*Pkg*) **widows-and-orphans** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{widows-and-orphans}[2018/09/01]

```

2 \NewDocumentCommand\WaOsetup{m}{}}
3 \NewDocumentCommand\WaOparameters{}{}}
4 \NewDocumentCommand\WaIgnorenext{}{}}

```

File 565 **l warp-witharrows.sty**

§ 674 Package **witharrows**

(Emulates or patches code by F. PANTIGNY.)

witharrows (*Pkg*) witharrows is patched for use by l warp. Emulation is provided for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{witharrows}[2019/12/27]

```
2 \ifbool{mathjax}{  
3     % For the hidden print version in the HTML:  
4     \newcommand{\Arrow}[2][]{  
5     \newcommand{\unicode}[1]{  
6         \NewDocumentEnvironment { DispWithArrows } { ! d < > ! O { } +b }  
7             {  
8                 \IfValueTF{#1}{  
9                     \begin{displaymath}  
10                     #1 \left\{  
11                     \begin{aligned}  
12                         #3  
13                         \end{aligned}  
14                         .  
15                     \end{displaymath}  
16                 }{  
17                     \begin{displaymath}  
18                     \begin{aligned}  
19                         #3  
20                         \end{aligned}  
21                     \end{displaymath}  
22                 }  
23             }  
24         {}  
25     \NewDocumentEnvironment { DispWithArrows* } { ! d < > ! O { } +b }  
26         {  
27             \IfValueTF{#1}{  
28                 \begin{displaymath}  
29                 #1 \left\{  
30                 \begin{aligned*}  
31                     #3  
32                     \end{aligned*}  
33                     .  
34                     \end{displaymath}  
35                 }{  
36                     \begin{displaymath}  
37                     \begin{aligned*}  
38                         #3  
39                         \end{aligned*}  
40                     \end{displaymath}  
41                 }  
42             }  
43         {}  
44 }{  
45     % If not MathJax, use SVG images.  
46     \BeforeBeginEnvironment{WithArrows}{\global\booltrue{\LWR@unkownmathsize}}  
47     \BeforeBeginEnvironment{DispWithArrows}{%
```

```

48      \begin{BlockClass}{displaymathnumbered}%
49      \begin{lateximage}%
50  }
51  \AfterEndEnvironment{DispWithArrows}{\end{lateximage}\end{BlockClass}}%
52  \BeforeBeginEnvironment{DispWithArrows*}{%
53      \begin{BlockClass}{displaymath}%
54      \begin{lateximage}%
55  }
56  \AfterEndEnvironment{DispWithArrows*}{\end{lateximage}\end{BlockClass}}%
57 }%
58
59 \begin{warpMathJax}%
60 \CustomizeMathJax{\newenvironment{WithArrows}[1][]{\begin{aligned}}{\end{aligned}}}%
61 % Unable to make a sized box.
62 \CustomizeMathJax{\newcommand{\Arrow}[2][]{\&{\Large\unicode{x2938}}\textit{\#2}}}%
63 \end{warpMathJax}

```

File 566 **l warp-wrapfig.sty**

§ 675 Package **wrapfig**

(Emulates or patches code by DONALD ARSENEAU.)

wrapfig (Pkg) **wrapfig** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{wrapfig}[2003/01/31]

```

2 \newcommand*\LWR@wrapposition{}%
3
4 \newcommand{\LWR@wrapfig@printHTMLwidth}{\LWR@printlength{\LWR@templengthone}}%
5
6 \AtBeginDocument{%
7   \IfPackageLoadedTF{keyfloat}{%
8     \renewcommand{\LWR@wrapfig@printHTMLwidth}{%
9       \ifboolexpr{%
10         test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}}\or%
11         \bool{KFLT@inkeys floats}%
12       }{%
13         \LWR@printpercentlength{\LWR@templengthone}{\linewidth}\%; }%
14         \LWR@printlength{\LWR@templengthone}%
15       }%
16     }{}%
17 }%
18
19 \newcommand*\LWR@subwrapfigure[2]{%
20   \renewcommand*\LWR@wrapposition{}%
21   \ifthenelse{%
22     \equal{\#1}{r}\OR\equal{\#1}{R}\OR%
23     \equal{\#1}{o}\OR\equal{\#1}{O}%
24   }{%
25     {\renewcommand*\LWR@wrapposition{float:right}}%
26     {\renewcommand*\LWR@wrapposition{float:left}}%
27     \setlength{\LWR@templengthone}{\#2}%
28     \LWR@BlockClassWP{%
29       width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
30       margin:10pt%
31     }%

```

```

32      {%
33          width:\LWR@wrapfig@printHTMLwidth; %
34          \LWR@wrapposition; %
35      }%
36      (note)%
37      {marginblock}%

38      \setlength{\linewidth}{\LWR@templengthone}%
39 }
40
41
42 \NewDocumentEnvironment{wrapfigure}{o m o m}
43 {%
44     \begin{\LWR@setvirtualpage}*%
45     \LWR@subwrapfigure{#2}{#4}%
46     \renewcommand*\{@capttype}{figure}%
47 }
48 {%
49     \end{\LWR@BlockClassWP}%
50     \end{\LWR@setvirtualpage}%
51 }
52
53
54 \NewDocumentEnvironment{wraptable}{o m o m}
55 {%
56     \begin{\LWR@setvirtualpage}*%
57     \LWR@subwrapfigure{#2}{#4}%
58     \renewcommand*\{@capttype}{table}%
59 }
60 {%
61     \end{\LWR@BlockClassWP}%
62     \end{\LWR@setvirtualpage}%
63 }
64
65
66 \NewDocumentEnvironment{wrapfloat}{m o m o m}
67 {%
68     \begin{\LWR@setvirtualpage}*%
69     \LWR@subwrapfigure{#3}{#5}%
70     \renewcommand*\{@capttype}{#1}%
71 }
72 {%
73     \end{\LWR@BlockClassWP}%
74     \end{\LWR@setvirtualpage}%
75 }
76
77 \newlength{\wrapoverhang}

```

File 567 **l warp-wrapfig2.sty**§ 676 Package **wrapfig2**

(Emulates or patches code by DONALD ARSENEAU, CLAUDIO BECCARI.)

wrapfig2 (*Pkg*) wrapfig2 is emulated via a modified version of the wrapfig emulation.

for HTML output: 1 \@ifpackageloaded{color}{}{%

```
2   \@ifpackageloaded{xcolor}{}{\LWR@origRequirePackage{xcolor}}%
3 }
4
5 \RequirePackage{float}
6
7 \IfPackageLoadedWithOptionsTF{wrapfig2}{WFold}
8 {}% v4.0
9 {% v5+
10  \floatstyle{plain}
11  \ifcsname chapter\endcsname
12    \newfloat{text}{tbp}{lotx}[chapter]
13  \else
14    \newfloat{text}{tbp}{lotx}
15  \fi
16  \floatname{text}{Text}
17 %  \let\WF@text@caption\float@caption
18 }
19
20
21 \LWR@ProvidesPackageDrop{wrapfig2}[2022-02-16]
22
23 \LWR@origRequirePackage{lwarf-wrapfig}

24 \RenewDocumentEnvironment{wrapfigure}{o m o G{0pt} s}% original
25  {\wrapfloat{figure}[\#1][\#2][\#3][\#4]}%
26  {\endwrapfloat}
27
28 \RenewDocumentEnvironment{wraptable}{o m o G{0pt} s}% original
29  {\wrapfloat{table}[\#1][\#2][\#3][\#4]}%
30  {\endwrapfloat}
31
32 \RenewDocumentEnvironment{wrapfloat}{m o m o G{0pt}}% lwarf
33 {%
34   \begin{LWR@setvirtualpage}%
35   \LWR@subwrapfigure{\#3}{\#5}%
36   \renewcommand*{\@capttype}{\#1}%
37 }
38 {%
39   \endLWR@BlockClassWP%
40   \end{LWR@setvirtualpage}%
41 }

42 \IfPackageLoadedWithOptionsTF{wrapfig2}{WFold}
43 {% v4.0:
44   \NewDocumentEnvironment{wraptext}%
45     {O{l} D||{0.5\columnwidth} D<>{0} D(){}{figure}}%
46   {%
47     \wrapfloat[\#4][\#1][\#2]%
48     \tcolorbox%
49   }
50   {%
51     \endtcolorbox%
52     \endwrapfloat%
53     \ignorespaces%
54   }
55 }{%
56   \IfPackageLoadedWithOptionsTF{wrapfig2}{WFFive}%
57   {%
58     {% v5
```

```
59  \definecolor{WFbackground}{rgb}{0.95,0.95,0.95}
60  \definecolor{WFframe}{rgb}{0.1,0.1,0.1}
61  \colorlet{WFtext}{black}
62  \def\SetWFbgd#1{\colorlet{WFbackground}{#1}}
63  \def\SetWFfrm#1{\colorlet{WFframe}{#1}}
64  \def\SetWFTxt#1{\colorlet{WFtext}{#1}}
65  \def\WFsplitdimens#1,#2!{\fboxrule=#1\relax\fboxsep=#2\relax}
66
67  \NewDocumentEnvironment{wraptext}{O{0} m O{0pt} G{0.5\columnwidth}}
68  {%
69      \wrapfloat{text}[][#2][]{#4}%
70  }
71  {%
72      \endwrapfloat%
73      \ignorespaces%
74  }
75
76  \NewDocumentCommand\includeframedtext{O{\insertwidth} m O{1pt,1ex} o}{%
77  {%
78      \WFsplitdimens #3!
79      \convertcolorspec[named]{WFtext}{HTML}\LWR@tempcolor%
80      \LWR@HTML@fcolorboxBlock%
81          [named]{WFframe}[named]{WFbackground}{#2}%
82          (%
83              color:\ \LWR@origpound\LWR@tempcolor ; %
84              border-radius:\ 1ex%
85          )%
86  }
87 }{%
88     \RequirePackage{xkeyval}
89
90     \definecolor{WFbackground}{rgb}{0.95,0.95,0.95}
91     \definecolor{WFframe}{rgb}{0.1,0.1,0.1}
92     \colorlet{WFtext}{black}
93     \def\SetWFbgd#1{\colorlet{WFbackground}{#1}}
94     \def\SetWFfrm#1{\colorlet{WFframe}{#1}}
95     \def\SetWFTxt#1{\colorlet{WFtext}{#1}}
96     \def\WFsplitdimens#1,#2!{\fboxrule=#1\relax\fboxsep=#2\relax}
97
98     \newlength{\LWR@wrapfigtwo@radius}
99     \setlength{\LWR@wrapfigtwo@radius}{1ex}
100
101    \DeclareOptionX<wraptext>[scalefactor][0.8]{%
102        \def\WFscalefactor{#1}%
103    }
104    \DeclareOptionX<wraptext>[fboxrule][1pt]{\fboxrule=#1}
105    \DeclareOptionX<wraptext>[fboxsep][1ex]{\fboxsep=#1}
106    \DeclareOptionX<wraptext>[framecolor][WFframe]{\SetWFfrm{#1}}
107    \DeclareOptionX<wraptext>[backgroundcolor][WFbackground]{\SetWFbgd{#1}}
108    \DeclareOptionX<wraptext>[textcolor][WFtext]{\SetWFTxt{#1}}
109    \DeclareOptionX<wraptext>[fontstyle][\normalfont]{\SetWFfont{#1}}
110    \DeclareOptionX<wraptext>[radius][\fboxsep]{%
111        \setlength{\LWR@wrapfigtwo@radius}{#1}%
112    }
113    \DeclareOptionX<wraptext>[insertionwidth][0.5\columnwidth]{%
114        \insertwidth=#1%
115    }
116
117    \DeclareOptionX*{\PackageWarning{wrapfig2}{`CurrentOption' ignored}}%
118
```

```

119   \ExecuteOptionsX<wraptext>{scalefactor, fboxrule, fboxsep, framecolor,
120   backgroundcolor, textcolor, fontstyle, radius, insertionwidth}
121
122   \ProcessOptionsX*
123
124   \NewDocumentEnvironment{wraptext}{O{0} m O{0pt} G{0.5\columnwidth}}
125   {%
126     \wrapfloat{text}[][#2][]{#4}%
127   }
128   {%
129     \endwrapfloat%
130     \ignorespaces%
131   }
132
133   \NewDocumentCommand\includeframedtext{O{\insertwidth} m O{} o}
134   {%
135     \ExecuteOptionsX<wraptext>{#3}%    executes possible key=value options
136     \convertcolorspec{named}{WFtext}{HTML}\LWR@tempcolor%
137     \LWR@HTML@fcolorboxBlock%
138     [named]{WFframe}[named]{WFbackground}%
139     {\LWR@textcurrentfont{#2}}%
140     (%
141       color:\LWR@origpound\LWR@tempcolor ; %
142       border-radius:\LWR@printlength{\LWR@wrapfigtwo@radius}%
143     )%
144   }
145 }
```

File 568 l warp-xbmks.sty

§ 677 Package **xbmks**

xbmks (*Pkg*) *xbmks* is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{xbmks}[2018/07/04]

```

2 \newcommand{\xbmksetup}[1]{}
3 \NewDocumentCommand{\pdfbookmarkx}{o m o m}{}%
4 \NewDocumentCommand{\currentpdfbookmarkx}{m o m}{}%
5 \NewDocumentCommand{\subpdfbookmarkx}{m o m}{}%
6 \NewDocumentCommand{\belowpdfbookmarkx}{m o m}{}%
```

File 569 l warp-xcolor.sty

§ 678 Package **xcolor**

(*Emulates or patches code by DR. UWE KERN.*)

xcolor (*Pkg*) *xcolor* is supported by l warp.

§ 678.1 Limitations

\colorboxBlock and \fcolorboxBlock	\colorboxBlock and \fcolorboxBlock are provided for increased HTML compatibility, and they are identical to \colorbox and \fcolorbox in print mode. In HTML mode they place their contents into a <div> instead of a . These <div>s are set to display: inline-block so adjacent \colorboxBlocks appear side-by-side in HTML, although text is placed before or after each.
	Print-mode definitions for \colorboxBlock and \fcolorboxBlock are created by l warp's core if xcolor is loaded.
background: none	\fcolorbox and \fcolorboxBlock allow a background color of none, in which case only the frame is drawn, which can be useful for HTML.
color support	Color definitions, models, and mixing are fully supported without any changes required.
colored text and boxes	\textcolor, \colorbox, and \fcolorbox are supported.
\color and \pagecolor	\color and \pagecolor are ignored. Use css or \textcolor where possible.

§ 678.2 xcolor definitions: location and timing

The l warp core and its l warp-xcolor package are tightly integrated to allow comparable results for print, HTML, and print inside an HTML `lateximage`. This requires a number of definitions and redefinitions depending on whether each of xcolor and `lateximage` is being used, and whether print or HTML is being generated. Some of these actions are one-time when xcolor is loaded, and others are temporary as `lateximage` is used.

When xcolor is loaded in print mode: No special actions are taken at the time that xcolor is loaded in print mode, but see \AtBeginDocument below.

When l warp-xcolor is loaded in HTML mode: xcolor's original definitions are saved for later restoration. \LWR@restoreorigformatting is appended to restore these definitions for use inside a `lateximage`. New HTML-mode definitions are created for \textcolor, \pagecolor, \nopagecolor, \colorbox, \colorboxBlock, \fcolorbox, \fcolorboxBlock, and fcolorminipage.

\AtBeginDocument in print or HTML mode: See Section 89. If xcolor has been loaded, the print-mode \fcolorbox is modified to accept a background color of none, and additional definitions are created for l warp's new macros print-mode macros \colorboxBlock, \fcolorboxBlock, and fcolorminipage. The HTML versions of these macros will already have been created by l warp-xcolor if it has been loaded.

For use inside an HTML `lateximage`, \LWR@restoreorigformatting is appended to temporarily set these functions to their print-mode versions.

In a lateximage in HTML mode: \LWR@restoreorigformatting temporarily restores the print-mode definitions of xcolor's functions. See \LWR@restoreorigformatting on page 537.

\color:

Print: Used as-is.

HTML: Ignored by `pdftotext`, and will not appear.

HTML Lateximage: Colors will appear in a `lateximage`.

\textcolor:

Print: Used as-is.

HTML: Redefined by lwarf-xcolor, page 1248.

HTML Lateximage: Remembers and reuses the print version.

\pagecolor:

Print: Used as-is.

HTML: Ignored.

HTML Lateximage: Colors will be picked up in a `lateximage`.

\nopagecolor:

Print: Used as-is.

HTML: Ignored.

HTML Lateximage: Colors will be picked up in a `lateximage`.

\colorbox:

Print: Used as-is.

HTML: Redefined by lwarf-xcolor, page 1248.

HTML Lateximage: Remembers and reuses the print version.

\colorboxBlock:

Print: Becomes `\colorbox`.

HTML: Newly defined by lwarf-xcolor to use a `<div>`, page 1249.

HTML Lateximage: Remembers and reuses the print version `\colorbox`.

\fcolorbox:

Print: Modified to allow a background of none.

`\LWR@print@fcolorbox` at section 89

HTML: Redefined by lwarf-xcolor, page 1249.

HTML Lateximage: Remembers and reuses the print version.

\fcolorboxBlock:

Print: Becomes `\fcolorbox`. Section 89

HTML: Newly defined by lwarf-xcolor to use a `<div>`, page 1250.

HTML Lateximage: Remembers and reuses the print version `\fcolorbox`.

fcolorminipage:

Print: Newly defined in the lwarf core.

`\LWR@print@fcolorminipage` at section 89

HTML: Newly defined by lwarf-xcolor, page 1250.

HTML Lateximage: Uses the print version.

\boxframe:

Print: Used as-is.

HTML: Redefined by lwarf-xcolor, page 1251.

HTML Lateximage: Remembers and reuses the print version.

§ 678.3 Package loading

for HTML output: 1 \LWR@ProvidesPackagePass{xcolor}[2016/05/11]

\color@endgroup's \endgraf was conflicting with l warp's paragraph handling.

2 \let\color@endgroup\endgroup

§ 678.4 Remembering and restoring original definitions

Remember the following print-mode actions to be restored when inside a `\teximage` environment:

3 \LetLtxMacro{\LWR@print@pagecolor}{\pagecolor}
4 \LetLtxMacro{\LWR@print@nopagecolor}{\nopagecolor}

`\LWR@restoreorigformatting` Inside a `\teximage` the following gets restored to their print-mode actions:

5 \appto{\LWR@restoreorigformatting}{%
6 \LetLtxMacro{\pagecolor}{\LWR@print@pagecolor}%
7 \LetLtxMacro{\nopagecolor}{\LWR@print@nopagecolor}%
8 }

§ 678.5 \normalcolor

`\normalcolor`

9 \DeclareRobustCommand{\LWR@HTML@normalcolor}{\color{black}}%
10
11 \LWR@formatted{normalcolor}

§ 678.6 HTML color style

`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

12 \renewcommand*{\LWR@findcurrenttextcolor}{%
13 \LWR@traceinfo{\LWR@findcurrenttextcolor}-%
14 \protect\colorlet{\LWR@current@color}{.}-%
15 \LWR@traceinfo{\LWR@findcurrenttextcolor B}-%
16 \protect\convertcolorspec[named]{\LWR@current@color}{HTML}\LWR@tempcolor\relax-%
17 \LWR@traceinfo{\LWR@findcurrenttextcolor: done}-%
18 }

Prints a color style for the current color.

19 \newcommand*{\LWR@currenttextcolorstyle}{%
20 \LWR@findcurrenttextcolor%
21 \ifdefstring{\LWR@tempcolor}{000000}{%
22 {}%
23 {color: \LWR@origpound\LWR@tempcolor ; }%
24 }

`\LWR@textcurrentcolor {<text>}` Like `\textcolor` but uses the current `\color` instead.

25 \DeclareDocumentCommand{\LWR@textcurrentcolor}{m}{%
26 \begingroup%
27 \LWR@hook@processingtags%
28 \LWR@findcurrenttextcolor%

```

29   \InLineClass[color:\LWR@origpound\LWR@tempcolor]{textcolor}{%
30     \renewcommand*\{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
31     #1%
32   }%
33   \endgroup%
34 }

```

\LWR@colorstyle {\langle 1: model \rangle} {\langle 2: color \rangle}

For a color style, prints the color converted to HTML colors.

```

35 \NewDocumentCommand{\LWR@colorstyle}{m m}{%
36   \begingroup%
37   \LWR@hook@processingtags%

```

Use the `xcolor` package to convert to an HTML color space:

```
38   \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
```

Print the converted color:

```

39   \LWR@origpound\LWR@tempcolor%
40   \endgroup%
41 }

```

\LWR@backgroundcolor [{\langle model \rangle}] {\langle color \rangle} {\langle text \rangle}

Similar to `\textcolor`, but prints black text against a color background.

Converted into an HTML hex color span.

```

42 \NewDocumentCommand{\LWR@backgroundcolor}{O{named} m m}{%
43   \begingroup%
44   \LWR@hook@processingtags%
45   \InLineClass[background:\LWR@colorstyle{#1}{#2}]{backgroundcolor}{%
46     #3%
47   }%
48   \endgroup%
49 }

```

§ 678.7 HTML border

\LWR@borderpadding {\langle colorstyle \rangle} {\langle color \rangle} Prints the HTML attributes for a color border and padding.

\LWR@forceminwidth must be used first in order to set the border width.

```

50 \newcommand*\{\LWR@borderpadding}[2]{%
51   border:\LWR@printlength{\LWR@atleastonept} solid \LWR@colorstyle{#1}{#2} ; %
52   padding:\LWR@printlength{\fboxsep}%
53 }

```

§ 678.8 High-level macros

`\color [<model>] {<color>}`

⚠ The current `\color` is used by HTML rules and frames, but does not affect the current HTML text output, due to the lack of HTML states and scoping limitations. Use `\textcolor` if possible.

```
54 \NewDocumentCommand{\LWR@HTML@color}{o m}{%
55   \IfValueTF{#1}{%
56     \LWR@print@color[#1]{#2}%
57     \convertcolorspec[#1]{#2}{HTML}\LWR@tempcolor%
58   }{%
59     \LWR@print@color{#2}%
60     \convertcolorspec[named]{#2}{HTML}\LWR@tempcolor%
61   }%
62   \edef\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
63 }%
64
65 \LWR@formatted{color}
```

`\textcolor [<model>] {<color>} {<text>}`

Converted into an HTML hex color span.

```
66 \NewDocumentCommand{\LWR@HTML@textcolor}{o m m}{%
67   \begingroup%
68   \LWR@hook@processingtags%
69   \IfValueTF{#1}{%
70     \color[#1]{#2}%
71   }{%
72     \color{#2}%
73   }%
74   \InlineClass[color:\LWR@currenttextcolor]{textcolor}{#3}%
75   \endgroup%
76 }%
77
78 \LWR@formatted{textcolor}
```

`\pagecolor [<model>] {<color>}`

Ignored. Use css instead.

```
79 \renewcommand*{\pagecolor}[2][named]{}
```

`\nopagecolor` Ignored.

```
80 \renewcommand*{\nopagecolor}{}{}
```

`\colorbox [<model>] {<color>} {<text>}`

Converted into an HTML hex background color .

```
81 \NewDocumentCommand{\LWR@HTML@colorbox}{O{named} m +m}{%
82   \begingroup%
```

```

83   \LWR@hook@processingtags%
84   \InlineClass[%  

85   background:\LWR@colorstyle{\#1}{\#2} ; %
86   padding:\LWR@printlength{\fboxsep}%
87   ]{\colorbox}{\#3}%
88   \endgroup%
89 }
```

\colorboxBlock [*<model>*] {*<color>*} {*<text>*}

Converted into an HTML hex background color <div>.

```

90 \NewDocumentCommand{\LWR@HTML@colorboxBlock}{O{named} m +m}{%
91   \begingroup%
92   \LWR@hook@processingtags%  

  

93   \LWR@stopars%
  

94   \begin{BlockClass}[%  

95     background:\LWR@colorstyle{\#1}{\#2} ; %
96     padding:\LWR@printlength{\fboxsep}%
97   ]{\colorboxBlock}
98   #3
99   \end{BlockClass}%
100  \endgroup%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

101  \global\booltrue{\LWR@minipagethispar}%
102 }
```

\fcolorbox [*<framemodel>*] {*<framecolor>*} [*<boxmodel>*] {*<boxcolor>*} {*<text>*}

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```

103 \NewDocumentCommand{\LWR@HTML\fcolorbox}{O{named} m O{\#1} m +m}{%
104   \LWR@traceinfo{HTML fcolorbox #2 \#4}%
105   \begingroup%
106   \LWR@hook@processingtags%
107   \LWR@forceminwidth{\fboxrule}%
108   \ifthenelse{\equal{\#4}{none}}{%
109     \% no background color
110     \InlineClass[%  

111       \LWR@borderpadding{\#1}{\#2}%
112       ]{\fcolorbox}{\#5}%
113     }%
114     \% yes background color
115     \InlineClass[%  

116       \LWR@borderpadding{\#1}{\#2} ; %
117       background:\LWR@colorstyle{\#3}{\#4}%
118       ]{\fcolorbox}{\#5}%
119     }%
120   \endgroup%
121 }
```

```
\fcolorboxBlock [(framemodel)] {[framecolor]} [(boxmodel)] {[boxcolor]} {[text]} ((add'l html style))
```

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```
122 \NewDocumentCommand{\LWR@HTML\fcolorboxBlock}{O{named} m O{#1} m +m d()}{%
123   \LWR@traceinfo{HTML fcolorboxBlock #2 #4}%
124   \begingroup%
125   \LWR@hook@processingtags%
126   \LWR@forceminwidth{\fboxrule}%

127   \LWR@stoppars%

128   \ifthenelse{\equal{#4}{none}}{%
129     \% no background color
130     \begin{BlockClass}[%]
131       \LWR@borderpadding{#1}{#2}%
132       \IfValueT{#6}{ ; #6}%
133       ]\fcolorboxBlock
134       #5
135       \end{BlockClass}%
136     }%
137     \% yes background color
138     \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
139     \begin{BlockClass}[%]
140       background:\LWR@origpound\LWR@tempcolortwo\ ; %
141       \LWR@borderpadding{#1}{#2}%
142       \IfValueT{#6}{ ; #6}%
143       ]\fcolorboxBlock
144       #5
145       \end{BlockClass}%
146     }%
147   \endgroup%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
148   \global\booltrue{\LWR@minipagethispar}%
149   \LWR@traceinfo{HTML fcolorboxBlock done}%
150 }
```

Creates a framed HTML <div> around its contents.

A print-output version is defined in the lwarf core: section 89

```
\LWR@subfcolorminipage { (framemode) } { (framecolor) } { (background tag) } { (height) }
151 \NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%
152   \LWR@stoppars%
153   \begin{BlockClass}[%#
154   \LWR@borderpadding{#1}{#2} ; %
155   \IfValueT{#4}{height:\LWR@printlength{\LWR@tempheight} ; }%
156   width:\LWR@printlength{\LWR@tempwidth}%
157 }
```

```

158     ]{fcolorminipage}%
159 }

fcolorminipage (env) [⟨1:framemode⟩] {⟨2:framecolor⟩} [⟨3:boxmodel⟩] {⟨4:boxcolor⟩} [⟨5:align⟩]
[⟨6:height⟩] [⟨7:inner-align⟩] {⟨8:width⟩}

160 \NewDocumentEnvironment{\LWR@HTML@fcolorminipage}{O{named} m O{#1} m O{c} o o m}
161 {%
162     \LWR@hook@processingtags%
163     \setlength{\LWR@tempwidth}{#8}%
164     \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}}%
165     \LWR@forceminwidth{\fboxrule}%
166     \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
167     \ifthenelse{\equal{#4}{none}}%
168         {\LWR@subfcolorminipage{#1}{#2}{}}{#6}%
169     {%
170         \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
171         \LWR@subfcolorminipage{#1}{#2}%
172             {background:\LWR@origpound\LWR@tempcolortwo\ ; }%
173             {#6}%
174     }%
175 }%
176 {%
177     \end{BlockClass}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

178     \global\booltrue{\LWR@minipagethispar}%
179 }

```

\boxframe {⟨width⟩} {⟨height⟩} {⟨depth⟩}

The depth is added to the height, but the box is not descended below by the depth. \textcolor is honored.

```

180 \newcommand*{\LWR@HTML@boxframe}[3]{%
181     {%
182         \setlength{\LWR@tempwidth}{#1}%
183         \setlength{\LWR@tempheight}{#2}%
184         \addtolength{\LWR@tempheight}{#3}%
185         \LWR@forceminwidth{\fboxrule}%
186         \LWR@findcurrenttextcolor%
187         \InlineClass[%
188             display:inline-block ; %
189             border:%
190                 \LWR@printlength{\LWR@atleastonept} % space
191                 solid % space
192                 \LWR@currenttextcolor{} ; % space
193                 width:\LWR@printlength{\LWR@tempwidth} ; %
194                 height:\LWR@printlength{\LWR@tempheight}%
195         ]{boxframe}{}%
196     }%
197 }%
198
199 \LWR@formatted{boxframe}

```

File 570 **l warp-xexchangebar.sty**

§ 679 Package **xexchangebar**

xexchangebar (*Pkg*) xexchangebar is ignored

for HTML output: 1 \LWR@ProvidesPackageDrop{xexchangebar}[2017/08/03]
2 \LWR@origRequirePackage{l warp-changebar}

File 571 **l warp-xellipsis.sty**

§ 680 Package **xellipsis**

(Emulates or patches code by DONALD P. GOODMAN III.)

xellipsis (*Pkg*) xellipsis is patched for use by l warp.

When non-zero, each of the spaces is converted to an HTML thin unbreakable space.

for HTML output: 1 \LWR@ProvidesPackagePass{xellipsis}[2015/11/01]

```
2 \newcommand*{\LWR@xellipsespace}[1]{%
3 \ifdim#1=0pt\else%
4   \ifdim#1<\fontdimen2\font%
5     ,%
6   \else%
7     ~%
8   \fi%
9 \fi%
10 }%
11 %
12 \def\xelip{%
13 \mbox{%
14   \LWR@xellipsespace{\xeliprebef}%
15   \xeliprechar%
16   \LWR@xellipsespace{\xelippreatf}%
17   \LWR@xellipsespace{\xelipbef}%
18   \xelipchar%
19   \xel@loopi = 1%
20   \loop\ifnum\xelipnum>\xel@loopi%
21     \advance\xel@loopi by1%
22     \LWR@xellipsespace{\xelipgap}%
23     \xelipchar%
24   \repeat%
25   \LWR@xellipsespace{\xelipaft}%
26   \LWR@xellipsespace{\xelippostbef}%
27   \xelippostchar%
28   \LWR@xellipsespace{\xelipposttaft}%
29 }%
30 }%
```

File 572 l warp-xetexko.sty**§ 681 Package xetexko**

(Emulates or patches code by DOHYUN KIM.)

xetexko (Pkg) xetexko is patched for use by l warp.

for HTML output:

```
1 \LWR@loadbefore{xetexko}
2
3 \LWR@ProvidesPackagePass{xetexko}[2021/09/06]

4 \protected\def\typesetvertical{}
5 \protected\def\typesethorizontal{}
6
7 \def\verticallytypesetting{\BlockClass{verticalrl}}
8 \def\beginverticallytypesetting{\BlockClass{verticalrl}}
9 \def\endverticallytypesetting{\endBlockClass}
10
11 \protected\def\vertical#1{\BlockClass{verticalrl}}
12 \protected\def\endvertical{\endBlockClass}
13 \protected\def\horizontal#1{\BlockClass{horizontaltb}}
14 \protected\def\endhorizontal{\endBlockClass}
15 \DeclareDocumentCommand{\vertlatin}{m}{#1}
```

File 573 l warp-xevlna.sty**§ 682 Package xevlna**

(Emulates or patches code by ZDENĚK WAGNER.)

xevlna (Pkg) xevlna is patched for use by l warp.

Non-breakable spaces are inserted into HTML.

for HTML output:

```
1 \LWR@ProvidesPackagePass{xevlna}[2016/09/05]

2 \def\ProcessCSpreposition{\ifx\next\xevlnaXeTeXspace\HTMLentity{nbsp}\fi}
3
4 \appto{\LWR@hook@processingtags}{\xevlnaDisable}%
```

File 574 l warp-xfakebold.sty**§ 683 Package xfakebold**

(Emulates or patches code by HERBERT VOSS.)

xfakebold (Pkg) xfakebold is patched for use by l warp, and additional underlying support is found in the l warp core.

⚠ text mode `xfakebold` is only used in SVG math and `\textrm`. Text mode is not set bold, but `\setBold` in text will be applied to any following SVG math.

for HTML output: 1 \LWR@ProvidesPackagePass{xfakebold}[2020/06/24]

```

2 \newcommand*\LWR@HTML@setBold{\booltrue{LWR@xfakebold}}
3 \LWR@formatted{setBold}
4
5 \newcommand*\LWR@HTML@unsetBold{\boolfalse{LWR@xfakebold}}
6 \LWR@formatted{unsetBold}
7
8 \renewcommand*\LWR@applyxfakebold{%
9   \ifbool{LWR@xfakebold}{\LWR@print@setBold}{\LWR@print@unsetBold}%
10 }

```

For MATHJAX, `xfakebold` is ignored.

```

11 \begin{warpMathJax}
12 \CustomizeMathJax{\newcommand{\setBold}[1][]{\LWR@setBold{#1}}}
13 \CustomizeMathJax{\newcommand{\unsetBold}{}}
14 \end{warpMathJax}

```

File 575 **l warp-xfrac.sty**

§ 684 Package **xfrac**

(Emulates or patches code by THE LATEX3 PROJECT.)

xfrac (Pkg) Supported by adding `xfrac` instances, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{xfrac}[2018-08-23]

⚠ font size In the user's document preamble, `l warp` should be loaded after font-related setup. During HTML conversion, this font is used by `l warp` to generate its initial PDF output containing HTML tags, later to be converted by `pdftotext` to a plain text file. While the text may be in any font which `pdftotext` can read, the math is directly converted into SVG images using this same user-selected font. `xfrac` below is set for the Latin Modern (lmr) font. If another font is used, it may be desirable to redefine `\xfracHTMLfontsize` with a different em size.

`\sfrac` $[\langle instance \rangle] \{ \langle num \rangle \} [\langle sep \rangle] \{ \langle denom \rangle \}$

A text-mode instance for the default font is provided below. The numerator and denominator formats are adjusted to encase everything in HTML tags. `\scalebox` is made null inside the numerator and denominator, since the HTML tags should not be scaled, and we do not want to introduce additional HTML tags for scaling.

In math mode, which will appear inside a `\textrm`, no adjustments are necessary.

`\xfracHTMLfontsize` User-redefinable macro which controls the font size of the fraction.

2 \newcommand*\xfracHTMLfontsize{.6em}

instances Instances of `xfrac` for various font choices:

Produce css for a small raised numerator and a small denominator.

Scaling is turned off so that *pdftotext* correctly reads the result.

```

3 \DeclareInstance{xfrac}{default}{text}{
4   numerator-format = {%
5     \begingroup%
6     \RenewDocumentCommand{\scalebox}{m o m}{##3}%
7     \InlineClass{numerator}{#1}\,,
8     \endgroup%
9   },
10  denominator-format = {%
11    \begingroup%
12    \RenewDocumentCommand{\scalebox}{m o m}{##3}%
13    \InlineClass{denominator}{#1}%
14    \endgroup%
15  },

```

For *pdftotext*, do not scale the text:

```

16    scaling = false
17 }
18
19 \DeclareInstance{xfrac}{lmr}{text}{
20   numerator-format = {%
21     \begingroup%
22     \RenewDocumentCommand{\scalebox}{m o m}{##3}%
23     \InlineClass{numerator}{#1}\,,
24     \endgroup%
25   },
26   denominator-format = {%
27     \begingroup%
28     \RenewDocumentCommand{\scalebox}{m o m}{##3}%
29     \InlineClass{denominator}{#1}%
30     \endgroup%
31   },

```

For *pdftotext*, do not scale the text:

```

32    scaling = false
33 }
34
35 \DeclareInstance{xfrac}{lmss}{text}{
36   numerator-format = {%
37     \begingroup%
38     \RenewDocumentCommand{\scalebox}{m o m}{##3}%
39     \InlineClass{numerator}{#1}\,,
40     \endgroup%
41   },
42   denominator-format = {%
43     \begingroup%
44     \RenewDocumentCommand{\scalebox}{m o m}{##3}%
45     \InlineClass{denominator}{#1}%
46     \endgroup%
47   },

```

For *pdftotext*, do not scale the text:

```

48    scaling = false

```

```

49 }
50
51 \DeclareInstance{xfrac}{lmtt}{text}{
52     numerator-format = {%
53         \begingroup%
54         \RenewDocumentCommand{\scalebox}{m o m}{##3}%
55         \InlineClass{numerator}{#1},%
56         \endgroup%
57     },
58     denominator-format = {%
59         \begingroup%
60         \RenewDocumentCommand{\scalebox}{m o m}{##3}%
61         \InlineClass{denominator}{#1}%
62         \endgroup%
63     },

```

For *pdftotext*, do not scale the text:

```

64     scaling = false
65 }

```

For MATHJAX:

```

66 \begin{warpMathJax}
67 \CustomizeMathJax{\newcommand{\LWRsfrac}[2][]{\{}^{\LWRsfracnumerator\!#1\!\!\!}\!\!\!-\!\!\!{\}^{\LWRsfracdenominator\!#2\!\!\!}\!\!\!}}
68 \CustomizeMathJax{\newcommand{\sfrac}[2][]{\def\LWRsfracnumerator{#2}\LWRsfrac}}
69 \end{warpMathJax}

```

File 576 **l warp-xltabular.sty**

§ 685 Package **xltabular**

(Emulates or patches code by ROLF NIEPRASCHK, HERBERT VOSS.)

xltabular (Pkg) xltabular is emulated by l warp.

for HTML output: Relies on tabularx.

⚠ table numbering At present, an xltabular without a caption or with only a \caption* may be misnumbered in HTML, so it may be necessary to place at the end of the table:

```
\warpHTMLonly{\addtocounter{table}{-1}}
```

```

1 \RequirePackage{tabularx}
2 \RequirePackage{ltablex}
3
4 \LWR@ProvidesPackageDrop{xltabular}[2018/05/23]
5
6 \DeclareDocumentEnvironment{xltabular}{o m m}
7 {\longtable{#3}}
8 {\endlongtable}

```

File 577 l warp-xltxtxtra.sty

§ 686 Package **xltxtxtra**

(Emulates or patches code by WILL ROBERTSON, JONATHAN KEW.)

xltxtxtra (*Pkg*) xltxtxtra is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{xltxtxtra}[2016/01/21]

```
2 \RequirePackage{realscripts}
3 \RequirePackage{metalogo}
4 \newcommand*\TeX@logo@spacing[6]{}
5
6 \newcommand*{\vfrac}[2]{%
7 \textsuperscript{\#1}/\textsubscript{\#2}%
8 }
9
10 \newcommand\namedglyph[1]{%
11   \@tempcnta=\XeTeXglyphindex "#1"\relax
12   \ifnum\@tempcnta>0
13     \XeTeXglyph\@tempcnta
14   \else
15     \xxt@namedglyph@fallback{\#1}%
16   \fi}
17
18 \newcommand\xxt@namedglyph@fallback[1]{[#1]}
19
20 \DeclareDocumentCommand{\showhyphens}{m}{}
```

File 578 l warp-xmpincl.sty

§ 687 Package **xmpincl**

(Emulates or patches code by MAARTEN SNEEP.)

xmpincl (*Pkg*) xmpincl is ignored.

for HTML output: Discard all options for l warp-xmpincl:

```
1 \LWR@ProvidesPackageDrop{xmpincl}[2008/05/10]
2 \newcommand*{\includexmp}[1]{}
```

File 579 l warp-xpiano.sty

§ 688 Package **xpiano**

(Emulates or patches code by ENRICO GREGORIO.)

xpiano (*Pkg*) xpiano is patched for use by l warp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{xpiano}

2 \ExplSyntaxOn
3 \NewDocumentCommand{\LWR@print@keyboard}{ O{}m }
4 {
5 \xpiano_keyboard:nn { #1 } { #2 }
6 }
7
8 \NewDocumentCommand{\LWR@HTML@keyboard}{ O{}m }
9 {
10 \begin{lateximage}*
11     [
12         -xpiano-\~\PackageDiagramAltText{}: \detokenize\expandafter{\#2}%
13     ]
14     [\detokenize\expandafter{\#1}]
15 \xpiano_keyboard:nn { #1 } { #2 }
16 \end{lateximage}
17 }
18 \ExplSyntaxOff
19
20 \LWR@formatted{keyboard}
```

File 580 l warp-xpinyin.sty

§ 689 Package xpinyin

(Emulates or patches code by SOBEN LEE.)

xpinyin (*Pkg*) xpinyin is supported.

Pinyin is disabled for file names, the sidetoc, and regular footnotes, but is left enabled for minipage footnotes, as per the print mode.

for HTML output:

The original's boxes are not used, instead the contents are used with <ruby>, <rt>, and <rp> tags per modern HTML. Color is detected. ratio is ignored for *pdftotext* to work correctly. Extra spaces are placed inside the tags to allow line breaks in the HTML text.

```

2 \ExplSyntaxOn
3 \cs_new_protected_nopar:Npn \LWR@HTML@_xpinyin_make_pinyin_box:nnn #1#2#3
4 {
5     \color_group_begin: \color_ensure_current:
6     \l_xpinyin_pinyin_box_hook_tl
7     \renewcommand*\l_xpinyin_ratio_tl{1}% for pdftotext
8     \__xpinyin_select_font:
9     \clist_if_exist:cTF { c_xpinyin_multiple_ #1 _clist }
10    { \l_xpinyin_multiple_tl \l_xpinyin_format_tl }
11    { \l_xpinyin_format_tl }
12    \ifdefempty{\l_xpinyin_format_tl}
13        {#3}
14        {\LWR@textcurrentcolor{#3}}
15    \color_group_end:
```

```

16 }
17 \LWR@formatted{__xpinyin_make_pinyin_box:nnn}

18 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_CJKsymbol:nn #1#2
19 {
20   __xpinyin_leavevmode:
21   \LWR@htmltagc{ruby}
22   __xpinyin_save_CJKsymbol:n {#2}\null% \null removes extra space
23   \LWR@htmltagc{rp}(\LWR@htmltagc{/rp\space}
24   \LWR@htmltagc{rt}
25   __xpinyin_make_pinyin_box:nnn {#1} {#2} { \use:c { c__xpinyin_ #1 _tl } }
26   \LWR@htmltagc{/rt\space}
27   \LWR@htmltagc{rp})\LWR@htmltagc{/rp\space}
28   \LWR@htmltagc{/ruby\space}\null
29 }
30 \LWR@formatted{__xpinyin_CJKsymbol:nn}

31 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_single_CJKsymbol:nn #1#2
32 {
33   __xpinyin_leavevmode:
34   \LWR@htmltagc{ruby}
35   __xpinyin_save_CJKsymbol:n {#1}\null% \null removes extra space
36   \LWR@htmltagc{rp}(\LWR@htmltagc{/rp\space}
37   \LWR@htmltagc{rt}
38   __xpinyin_make_pinyin_box:xnn
39   { __xpinyin_to_unicode:n {#1} } {#1} { __xpinyin_pinyin:n {#2} }
40   \LWR@htmltagc{/rt\space}
41   \LWR@htmltagc{rp})\LWR@htmltagc{/rp\space}
42   \LWR@htmltagc{/ruby\space}\null
43 }
44 \LWR@formatted{__xpinyin_single_CJKsymbol:nn}
45
46 \ExplSyntaxOff

```

The **l warp** core uses the following to disable CJK xpinyin for filenames, sidetoc, and footnotes.

```

47 \renewcommand*{\LWR@disablepinyin}{\disablepinyin}
48
49 \FilenameNullify{\LWR@disablepinyin}

```

File 581 **l warp-xr.sty**

§ 690 Package **Xr**

(*Emulates or patches code by JEAN-PIERRE DRUCBERT, DAVID CARLISLE.*)

xr (Pkg) xr is patched for use by **l warp**. The *_html.aux file is used. \externaldocument is modified to also accept the optional arguments for xr-hyper, which currently uses xr for HTML output.

See section [5.18](#).

for HTML output: 1 \LWR@ProvidesPackagePass{xr}[2019/07/22]%

```

2 \LetLtxMacro{\LWR@orig@externaldocument}{\externaldocument}
3
4 \RenewDocumentCommand{\externaldocument}{O{} O{} m O{}}{%
5   \ifblank{#1}{%
6     \LWR@orig@externaldocument{#3_html}%
7   }{%
8     \LWR@orig@externaldocument[#1]{#3_html}%
9   }%
10 }

```

File 582 **l warp-xr-hyper.sty**§ 691 Package **xr-hyper***(Emulates or patches code by DAVID CARLISLE.)*

xr-hyper (Pkg) **xr-hyper** is replaced by **xr**, which is modified to accept the optional arguments for `\externaldocument`. So far, no hyperlinks are provided for citations.

See section 5.18.

for HTML output: 1 \LWR@ProvidesPackageDrop{xr-hyper}[2019/10/03]%
2
3 \LWR@origRequirePackage{l warp-xr}

File 583 **l warp-xtab.sty**§ 692 Package **x tab***(Emulates or patches code by PETER WILSON.)*

x tab (Pkg) **x tab** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{x tab}[2011/07/31]

⚠ **Misplaced alignment tab character &** For `\tablefirsthead`, etc., enclose them as follows:

```

\StartDefiningTabulars
\tablefirsthead
...
\StopDefiningTabulars

```

See section 8.10.1.

⚠ **latexitimage** **supertabular** and **x tab** are not supported inside a **latexitimage**.

```

2 \newcommand{\LWRXT@firsthead}{}
3
4 \newcommand{\tablefirsthead}[1]{%
5   \long\gdef\LWRXT@firsthead{#1}%
6 }
7
8 \newcommand{\tablehead}[1]{}
9
10 \newcommand{\tablelasthead}[1]{}

```

```
11
12 \newcommand{\notablelasthead}{}
13
14 \newcommand{\tabletail}[1]{}
15
16 \newcommand{\LWRXT@lasttail}{}
17
18 \newcommand{\tablelasttail}[1]{%
19     \long\gdef\LWRXT@lasttail{\#1}%
20 }

21 \newcommand{\tablecaption}[2][]{%
22     \long\gdef\LWRXT@caption{%
23         \ifblank{\#1}{%
24             {\caption{\#2}}%
25             {\caption[\#1]{\#2}}%
26         }%
27     }%
28 }
29 \let\topcaption\tablecaption
30 \let\bottomcaption\tablecaption

31 \newcommand*\LWRXT@caption{}
32
33 \newcommand*\shrinkheight[1]{}
34
35 \newcommand*\xentrystretch[1]{}
36
37 \NewDocumentEnvironment{xtabular}{s o m}
38 {%
39 \LWR@traceinfo{xtabular}%
40 \table%
41 \LWRXT@caption%
42 \begin{tabular}{#3}%
43 \TabularMacro\ifdefvoid{\LWRXT@firsthead}{%
44 {\LWR@getmynexttoken}%
45 {\expandafter\LWR@getmynexttoken\LWRXT@firsthead}%
46 }%
47 {%
48 \ifdefvoid{\LWRXT@lasttail}{%
49 { }%
50 {%
51 \TabularMacro\ResumeTabular%
52 \LWRXT@lasttail%
53 }%
54 \end{tabular}%
55 \endtable%

56 \gdef\LWRXT@caption{}%

57 \LWR@traceinfo{xtabular done}%
58 }
59
60 \NewDocumentEnvironment{mpxtabular}{s o m}
61 {\minipage{\linewidth}\xtabular{\#3}%
62 {\endxtabular\endminipage}
```

File 584 **l warp-xunicode.sty**

§ 693 Package **xunicode**

xunicode (*Pkg*) Error if xunicode is loaded after l warp.

Patch l warp-xunicode, but also verify that it was loaded before l warp:

for HTML output:

```

1 \LWR@loadbefore{xunicode}%
2
3 \LWR@ProvidesPackagePass{xunicode}[2011/09/09]
```

\textcircled becomes a span with a rounded border. \providecommand is used to avoid conflict with **textcomp**.

```

4 \providecommand*\LWR@HTML@textcircled}[1]{%
5   \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
6 }
7
8 \LWR@formatted{textcircled}
```

Nullify xunicode macros when generating filenames:

```

9 \FilenameNullify{%
10   \renewcommand*\textdegree{}%
11   \renewcommand*\textcelsius{}%
12   \renewcommand*\textohm{}%
13   \renewcommand*\textmu{}%
14   \renewcommand*\textlquill{}%
15   \renewcommand*\textrquill{}%
16   \renewcommand*\textcircledP{}%
17   \renewcommand*\texttwelveudash{}%
18   \renewcommand*\textthreequartersemdash{}%
19   \renewcommand*\textmho{}%
20   \renewcommand*\textnaira{}%
21   \renewcommand*\textpeso{}%
22   \renewcommand*\textrecipe{}%
23   \renewcommand*\textinterrobang{}%
24   \renewcommand*\textinterrobangdown{}%
25   \renewcommand*\textperthousand{}%
26   \renewcommand*\textpertenthousand{}%
27   \renewcommand*\textbaht{}%
28   \renewcommand*\textdiscount{}%
29   \renewcommand*\textservicemark{}%
30   \renewcommand*\textcircled}[1]{#1}%
31   \renewcommand*\capitalcedilla}[1]{#1}%
32   \renewcommand*\capitalogonek}[1]{#1}%
33   \renewcommand*\capitalgrave}[1]{#1}%
34   \renewcommand*\capitalacute}[1]{#1}%
35   \renewcommand*\capitalcircumflex}[1]{#1}%
36   \renewcommand*\capitaltilde}[1]{#1}%
37   \renewcommand*\capitaldieresis}[1]{#1}%
38   \renewcommand*\capitalhungarumlaut}[1]{#1}%
39   \renewcommand*\capitalring}[1]{#1}%
40   \renewcommand*\capitalcaron}[1]{#1}%

```

```

41      \renewcommand*\{\capitalbreve}[1]{#1}%
42      \renewcommand*\{\capitalmacron}[1]{#1}%
43      \renewcommand*\{\capitaldotaccent}[1]{#1}%
44 }% FilenameNullify

```

File 585 **l warp-xurl.sty**

§ 694 Package **xurl**

xurl (*Pkg*) xurl is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{xurl}[2020/01/14]
2
3 \def\useOriginalUrlSetting{}

File 586 **l warp-xy.sty**

§ 695 Package **xy**

(Emulates or patches code by KRISTOFFER H. ROSE, ROSS MOORE.)

xy (*Pkg*) xy is patched for use by l warp.

for HTML output: 1 \LWR@ProvidesPackagePass{xy}[2013/10/06]

After xy modules have been loaded:

2 \AtBeginDocument{

The original definitions without a lateximage:

```

3 \LetLtxMacro\LWR@orig@xy\xy
4 \LetLtxMacro\LWR@orig@endxy\endxy

```

The outer-most xy environment is placed in a lateximage, but not more than one level deep, which would conflict with xy:

```

5 \renewcommand*\{\xy}{%
6   \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}{%
7     \addtocounter{\LWR@lateximagedepth}{1}%
8     {\begin{ lateximage }[-xy-\~\PackageDiagramAltText] }%
9     \LWR@orig@xy%
10 }%
11 \renewcommand*\{\endxy}{%
12   \LWR@orig@endxy%
13   \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{1}{%
14     \addtocounter{\LWR@lateximagedepth}{-1}%
15     {\end{ lateximage }}%
16   }%
17 }

```

The \xybox must use the original definitions of \xy, \endxy:

```

18 \def\xybox#1{%
19   \LWR@orig@xy#1\LWR@orig@endxy%
20   \Edge@c={\rectangleEdge}\computeLeftUpness@%
21 }

```

If `\xygraph` is used, it is placed inside a `lateXimage`:

```

22 \@ifundefined{xygraph}{}{%
23
24 \LetLtxMacro{\LWR@origxygraph}{\xygraph}
25
26 \renewcommand{\xygraph}[1]{%
27   \begin{lateXimage}[-xy- xygraph \PackageDiagramAltText]
28     \LWR@origxygraph{#1}
29   \end{lateXimage}
30 }
31
32 }% xygraph defined
33
34 }% AtBeginDocument

```

File 587 **l warp-zhlineskip.sty**

§ 696 Package **zhlineskip**

`zhlineskip` (*Pkg*) `zhlineskip` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{zhlineskip}[2019/05/15]

```

2 \newcommand*\SetTextEnvironmentSinglespace[1]{}%
3 \newcommand*\RestoreTextEnvironmentLeading[1]{}%
4 \newcommand*\SetMathEnvironmentSinglespace[1]{}%
5 \newcommand*\RestoreMathEnvironmentLeading[1]{}%

```

File 588 **l warp-zwpagelayout.sty**

§ 697 Package **zwpagelayout**

(*Emulates or patches code by ZDENĚK WAGNER.*)

`zwpagelayout` (*Pkg*) `zwpagelayout` is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{zwpagelayout}[2013/01/13]

```

2 \def\noBboxes(){}
3 \@onlypreamble\noBboxes
4
5 \expandafter\ifx\csname definecolor\endcsname\relax \else
6   \definecolor{cmykblack}{cmyk}{0,0,0,1}
7   \definecolor{grblack}{gray}{0}
8 %   \ifzwpl@redefineblack
9 %     \definecolor{black}{cmyk}{0,0,0,1}\color{black}
10 %   \fi
11   \definecolor{cmykred}{cmyk}{0,1,1,0}

```

```

12 \definecolor{cmykgreen}{cmyk}{1,0,1,0}
13 \definecolor{cmykblue}{cmyk}{1,1,0,0}
14 \definecolor{rgbred}{rgb}{1,0,0}
15 \definecolor{rgbgreen}{rgb}{0,1,0}
16 \definecolor{rgbblue}{rgb}{0,0,1}
17 % \ifzwpl@redefinetocmyk
18 %   \definecolor{red}{cmyk}{0,1,1,0}
19 %   \definecolor{green}{cmyk}{1,0,1,0}
20 %   \definecolor{blue}{cmyk}{1,1,0,0}
21 % \fi
22 \fi
23
24 \let\OverprintTeXTeXtGState\relax
25
26 \DeclareRobustCommand\SetOverprint{\ignorespaces}
27 \DeclareRobustCommand\SetKnockout{\ignorespaces}
28 \DeclareRobustCommand\textoverprint[1]{{\SetOverprint#1}}
29 \DeclareRobustCommand\textknockout[1]{{\SetKnockout#1}}
30
31 \def\SetPDFminorversion#1{}
32 \onlypreamble\SetPDFminorversion
33
34 \newcommand*\Vcorr{}
35
36 \DeclareRobustCommand\vb[1][]{}
37 \NewDocumentCommand{\NewOddPage}{* o}{}
38 \NewDocumentCommand{\NewEvenPage}{* o}{}
39 \def\SetOddPageMessage#1{\gdef\ZW@oddwarning}
40 \def\SetEvenPageMessage#1{\gdef\Z@evenwarning}
41 \def\ZW@oddwarning{Empty page inserted}\let\ZW@evenwarning\ZW@oddwarning
42
43 \def\clap#1{#1}
44
45 \def\CropFlap{2in}
46 \def\CropSpine{1in}
47 \def\CropXSpine{1in}
48 \def\CropXtrim{.25in}
49 \def\CropYtrim{.25in}
50 \def\UserWidth{5in}
51 \def\UserLeftMargin{1in}
52 \def\UserRightMargin{1in}
53 \def\UserTopMargin{1in}
54 \def\UserBotMargin{1in}
55 \def\thePageNumber{\LWR@origpound\,\arabic{page}}
56 \ifXeTeX
57 \def\ifcaseZWdriver{\ifcase2}
58 \else
59 \def\ifcaseZWdriver{\ifcase1}
60 \fi
61 \DeclareRobustCommand\ZWifdriver[2]{}

```

File 589 **lwarf-patch-komascript.sty**

§ 698 Package **patch-komascript**

lwarf-patch-komascript (Pkg) Patches for komascript classes.

lwarf loads this package when **scrbook**, **scrartcl**, or **scrreprt** classes are detected.

Many features are ignored during the HTML conversion. The goal is source-level compatibility.

\captionformat, \figureformat, and \tableformat are not yet emulated.

 **Not fully tested!** [Please send bug reports!](#)

Some features have not yet been tested. Please contact the author with any bug reports.

for HTML output: 1 \ProvidesPackage{lwarf-patch-komascript}

typearea is emulated.

2 \RequirePackage{lwarf-typearea}

tocbasic is emulated.

3 \RequirePackage{lwarf-tocbasic}

scrextend patches most of the new macros.

4 \RequirePackage{lwarf-scrextend}

Indexing macros, simplified for lwarf:

```
5 \AtBeginDocument{
6
7 \renewcommand*\idx@heading{%
8   \idx@heading{\indexname}%
9 }
10
11 \renewenvironment{theindex}{%
12   \idx@heading%
13   \index@preamble\par\nobreak
14   \LetLtxMacro\item\LWR@indexitem%
15   \LetLtxMacro\subitem\LWR@indexsubitem%
16   \LetLtxMacro\subsubitem\LWR@indexsubsubitem%
17 }
18 {}
19
20 \renewcommand*\indexspace{}
21
22 }% AtBeginDocument
```

The \minisec is placed inside a <div> of class minisec.

```
23 \renewcommand*\minisec[1]{
24   \begin{BlockClass}{minisec}
25   #1
26   \end{BlockClass}
27 }
```

The part and chapter preambles are placed as plain text just after each heading.

```
28 \@ifundefined{setpartpreamble}{}{
29 \RenewDocumentCommand{\setpartpreamble}{o o +m}{%
30   \renewcommand{\part@preamble}{#3}%
```

```

31 }
32 }
33
34 \@ifundefined{setchapterpreamble}{}{
35 \RenewDocumentCommand{\setchapterpreamble}{o o +m}{%
36   \renewcommand{\chapter@preamble}{#3}%
37 }%
38 }

```

Do not use `\chaptername`:

```
39 \renewcommand*{\LWR@printchaptername}{}%
```

Simple captions are used in all cases.

```

40 \AtBeginDocument{%
41 \AtBeginDocument{%
42   \LetLtxMacro{\captionbelow}{\caption}
43   \LetLtxMacro{\captionabove}{\caption}
44
45   \LetLtxMacro{\captionofbelow}{\captionof}
46   \LetLtxMacro{\captionofabove}{\captionof}
47 }%
48 }%
49
50 \RenewDocumentEnvironment{captionbeside}{o m o o o s}
51 {}%
52 {%
53   \IfValueTF{#1}{%
54     {\caption[#1]{#2}}%
55     {\caption{#2}}%
56   }%
57
58 \RenewDocumentEnvironment{captionofbeside}{m o m o o o s}
59 {}%
60 {%
61   \IfValueTF{#2}{%
62     {\captionof{#1}[#2]{#3}}%
63     {\captionof{#1}{#3}}%
64   }%
65
66 \RenewDocumentCommand{\setcapindent}{s m}{}
67 \renewcommand*{\setcaphanging}{}%
68 \renewcommand*{\setcapwidth}[2][]{}
69 \renewcommand*{\setcapdynwidth}[2][]{}
70 \RenewDocumentCommand{\setcapmargin}{s o m}{}

```

File 590 **lwarf-patch-memoir.sty**

§ 699 Package **patch-memoir**

(Emulates or patches code by PETER WILSON.)

lwarf-patch-memoir (Pkg) Patches for **memoir** class.

⚠ Not fully tested! Please send bug reports!

`\warp` loads this package when the `memoir` class is detected.

 `\captions` `\warp` uses `\caption`, which causes a warning from `memoir`. This is normal. Adjust `\captions` via `\caption`, instead of `memoir`.

While emulating `memoir`, `\warp` pre-loads a number of packages (section 699.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading `\warp`:

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{\warp}
...
\usepackage{package_name}
```

 `\versionnumbers` `memoir` emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since `\warp` is intended to support the freestanding packages, which are often newer than the date declared by `memoir`, it is hoped that `memoir` will update and change its emulated version numbers to match.

`\label(bookmark){tag}` `\label` accepts an optional (`bookmark`) argument, but this is ignored in `HTML`.

 `\comment` The `\comment` environment is from the `comment` package, and thus requires that the `\begin` and `\end` each be on its own line:

```
\begin{comment}
This is a comment.
\end{comment}
```

`\newcomment` Comments defined with `\newcomment` use `memoir`'s definitions, and behave as expected, where the `\begin` and `\end` do have to each be on its own line.

 `\verbatimfootnotes` `\verbfootnote` is not supported.

 `\newfootnoteseries` `\newfootnoteseries`, etc. are not supported.

 `\page notes` `\warp` loads `pagenote` to perform `memoir`'s `pagenote` functions, but there are minor differences in `\pagenotesubhead` and related macros.

`page notes with cleveref` To add support for `pagenotes` with `cleveref`, add:

```
\crefname{pagenote}{page note}{page notes}
\Crefname{pagenote}{Page note}{Page notes}
```

`page note \nameref` Note that for print mode, `\nameref` prints the section name where the page notes are declared in the text, but for `HTML` it prints the name where the page notes are printed.

 `\poems` Poem numbering is not supported.

 `\verbatim` The `\verbatim` environment does not yet support the `memoir` enhancements. It is currently recommended to load and use `fancyvrb` instead.

 `\glossaries` The `memoir` glossary system is not yet supported by `\warpmk`. The `glossaries` pack-

age may be used instead, but does require the glossary entries be changed from the `memoir` syntax to the `glossaries` syntax.

for HTML output: 1 \ProvidesPackage{l warp-patch-memoir}

§ 699.1 Packages

These are pre-loaded to provide emulation for many of `memoir`'s functions. `memoir` pretends that `abstract`, etc. are already loaded, via its “emulated” package mechanism, but `l warp` is directly loading the “`l warp-`” version of each, which happens to avoid `memoir`'s emulation system.

```
2 \RequirePackage{l warp-abstract}% req'd
3 % \RequirePackage{l warp-array}% no longer req'd
4 \RequirePackage{l warp-booktabs}% req'd
5 % \RequirePackage{l warp-ccaption}% emulated below
6 \RequirePackage{l warp-changepage}% req'd
7 \RequirePackage{l warp-crop}
8 % \RequirePackage{l warp-dcolumn}% no longer req'd
9 \RequirePackage{l warp-enumerate}% req'd
10 \RequirePackage{l warp-epigraph}% req'd
11 \RequirePackage{l warp-fancyvrb}% req'd
12 \RequirePackage{l warp-footmisc}% req'd

13 \let\framed\relax \let\endframed\relax
14 \let\shaded\relax \let\endshaded\relax
15 \let\leftbar\relax \let\endleftbar\relax
16 \let\snugshade\relax \let\endsnugshade\relax
17 \RequirePackage{l warp-framed}% req'd
18
19 \RequirePackage{l warp-hanging}% req'd
20 \RequirePackage{l warp-makeidx}% req'd
21 \DisemulatePackage{moreverb}
22 \RequirePackage{l warp-moreverb}
23 \RequirePackage{l warp-mparhack}
24 \RequirePackage{l warp-needspace}% req'd
25 \RequirePackage{l warp-nextpage}% req'd
26 \RequirePackage{l warp-pagenote}% req'd
27 \RequirePackage{l warp-parskip}
28 \RequirePackage{l warp-setspace}% req'd
29 \RequirePackage{l warp-showidx}

30 \makeindex

31 % \RequirePackage{l warp-tabularx}% no longer req'd
32 \RequirePackage{l warp-titling}% req'd
33 % \RequirePackage{l warp-tocbibind}% not emulated by memoir
34 \RequirePackage{l warp-tocloft}% req'd
35 \RequirePackage{l warp-verse}% req'd
```

§ 699.2 Label handling

Insert the l warp label mechanism into the memoir package mechanism:

- \LWR@orig@label is the kernel version, or nameref version if loaded before l warp.
- l warp's \LWR@new@label uses \LWR@orig@label.
- cleveref then encapsulates all the above with \cref@old@label.
- For a subcaption, cleveref modifies memoir's \sf@memsub@label, but that change is undone by l warp.
- memoir uses the final \label for subcaptions.

Patches for subfloats to support additional l warp labels. This is the non-hyperref version from memoir.

```

36 \AtBeginDocument{
37     \renewcommand*\{\sf@memsub@label}[1]{%
38         \@bsphack
39 %         \@mem@kernel@label{#1}%
40         \cref@label{#1}%                                l warp
41         \LWR@label@createtag{sub@#1}%                l warp
42         \protected@write\@auxout{}{%
43             \string\newlabel{sub@#1}%
44             {%
45                 \nameuse{@thesub@\capttype}%
46                 \thepage%
47                 \detokenize\expandafter{\@currentlabelname}%
48                 #1% Href
49                 {}% reserved
50             }%
51         }%
52         \LWR@write@lwarplabel{sub@#1}%                l warp
53         \@esphack
54     }
55 }
```

§ 699.3 Page layout

memoir already set the page size to a default, so it must be forced large for l warp's use, to avoid tag overflows off the page.

```

56 \setstocksize{190in}{20in}
57 \setlrmarginsandblock{2in}{2in}{*}
58 \setulmarginsandblock{1in}{1in}{*}

59 \renewcommand*\{\stockavi}{}%
60 \renewcommand*\{\stockav}{}%
61 \renewcommand*\{\stockaiv}{}%
62 \renewcommand*\{\stockaiii}{}%
63 \renewcommand*\{\stockavii}{}%
64 \renewcommand*\{\stockbvi}{}%
65 \renewcommand*\{\stockbv}{}%
66 \renewcommand*\{\stockbiv}{}%
67 \renewcommand*\{\stockbiii}{}%
```



```
128 \renewcommand*\{\pageroyalvo\}{}  
129 \renewcommand*\{\pagesuperroyalvo\}{}  
130 \renewcommand*\{\pageimperialvo\}{}  
131  
132 \renewcommand*\{\memfontfamily\}{}  
133 \renewcommand*\{\memfontenc\}{}  
134 \renewcommand*\{\memfontpack\}{}  
135  
136 \renewcommand*\{\anyptfilebase\}{}  
137 \renewcommand*\{\anyptsize\}{10}  
138  
139 \renewcommand*\{\setstocksize\}[2]{}  
140 \renewcommand*\{\settrimmedsize\}[3]{}  
141 \renewcommand*\{\settrims\}[2]{}  
142  
143 % \newlength{\lxvchars}  
144 % \setlength{\lxvchars}{305pt}  
145 % \newlength{\lvchars}  
146 % \setlength{\lvchars}{190pt}  
147 \renewcommand*\{\setlxvchars\}[1]{}  
148 \renewcommand*\{\setlxvchars\}[1]{}  
149  
150 \renewcommand*\{\settypeblocksize\}[3]{}  
151 \renewcommand*\{\setlrmargins\}[3]{}  
152 \renewcommand*\{\setlrmarginsandblock\}[3]{}  
153 \renewcommand*\{\setbinding\}[1]{}  
154 \renewcommand*\{\setulmargins\}[3]{}  
155 \renewcommand*\{\setulmarginsandblock\}[3]{}  
156 \renewcommand*\{\setcolsepandrue\}[2]{}  
157  
158 \renewcommand*\{\setheadfoot\}[2]{}  
159 \renewcommand*\{\setheaderspaces\}[3]{}  
160 \renewcommand*\{\setmargininnotes\}[3]{}  
161 \renewcommand*\{\setfootins\}[2]{}  
162 \renewcommand*\{\checkandfixthelayout\}[1]{}  
163 \renewcommand*\{\checkthelayout\}[1]{}  
164 \renewcommand*\{\fixthelayout\}{}  
165 %  
166 % \newlength{\stockheight}  
167 % \newlength{\trimtop}  
168 % \newlength{\trimedge}  
169 % \newlength{\stockwidth}  
170 % \newlength{\spinemargin}  
171 % \newlength{\foremargin}  
172 % \newlength{\uppermargin}  
173 % \newlength{\headmargin}  
174 %  
175 \renewcommand*\{\typeoutlayout\}{}  
176 \renewcommand*\{\typeoutstandardlayout\}{}  
177 \renewcommand*\{\settypeoutlayoutunit\}[1]{}  
178 \renewcommand*\{\fixpdflayout\}{}  
179 \renewcommand*\{\fixdvipslayout\}{}  
180  
181 \renewcommand*\{\medievalpage\}[1]{}  
182 \renewcommand*\{\isopage\}[1]{}  
183 \renewcommand*\{\semiisopage\}[1]{}  
184  
185 \renewcommand{\setpagebl\}[3]{}  
186 \renewcommand{\setpageml\}[3]{}  
187 \renewcommand{\setpagetl\}[3]{}  
188
```

```

188 \renewcommand{\setpagetm}[3]{}
189 \renewcommand{\setpagetr}[3]{}
190 \renewcommand{\setpagemr}[3]{}
191 \renewcommand{\setpagebr}[3]{}
192 \renewcommand{\setpagebm}[3]{}
193 \renewcommand{\setpagecc}[3]{}

```

§ 699.4 Text and fonts

```

194 \let\miniscule\tiny
195 \let\HUGE\Huge
196
197 \renewcommand*\abnormalparskip[1]{}
198 \renewcommand*\nonzeroparskip(){}
199 \renewcommand*\traditionalparskip(){}
200
201 \let\onelineskip\baselineskip
202
203 \let\OnehalfSpacing\onehalfspacing
204 \let\DoubleSpacing\doublespacing
205 \renewcommand*\setPagenoteSpacing[1]{}
206 \renewcommand*\setFloatSpacing[1]{}

207 \renewcommand{\SingleSpacing}{\@ifstar\singlespacing\singlespacing}
208 \let\setSingleSpace\SetSinglespace
209 \let\SingleSpace\singlespace
210 \let\endSingleSpace\endsinglespace
211 \let\Spacing\spacing
212 \let\endSpacing\endspacing
213 \let\OnehalfSpace\onehalfspace
214 \let\endOnehalfSpace\endonehalfspace
215 \csletcs{OnehalfSpace*}{onehalfspace}
216 \csletcs{endOnehalfSpace*}{endonehalfspace}
217 \let\DoubleSpace\doublespace
218 \let\endDoubleSpace\enddoublespace
219 \csletcs{DoubleSpace*}{doublespace}
220 \csletcs{endDoubleSpace*}{enddoublespace}
221 \renewcommand*\setDisplayskipStretch[1]{}
222 \renewcommand*\memdskipstretch(){}
223 \renewcommand*\noDisplayskipStretch(){}
224 \renewcommand*\memdskips(){}
225
226 \renewcommand*\midsloppy(){}
227 \renewenvironment*\midsloppypar{}{}
228
229 \renewcommand*\sloppybottom(){}

```

§ 699.5 Titles

```

230 \csletcs{titlingpage*}{titlingpage}
231 \csletcs{endtitlingpage*}{endtitlingpage}
232 \let\titlingpageend\relax
233 \newcommand{\titlingpageend}[2]{}
234 \let\andnext\and
235 \renewcommand*\thanksmarkstyle[1]{}
236
237 \renewcommand{\thanksfootmark}{%
238   \thanksscript{\tmark}%
239 }

```

```

240
241 % \newlength{\thanksmarksep} already provided by memoir
242 \renewcommand\titlingpageend[2]{}

```

§ 699.6 Abstracts

```

243 % \newlength{\absindent}
244 % \newlength{\absparsep}
245 \renewcommand*\abstractcol(){}
246 \renewcommand*\abstractintoc(){}
247 \renewcommand*\abstractnum(){}
248 \renewcommand*\abstractrunin(){}

```

§ 699.7 Document divisions

\book

* (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}

```

249 \DeclareDocumentCommand{\book}{s d() o o d() m}{%
250     \LWR@section{#1}{#3}{#6}{book}%
251 }

252 \def\@apppage{%
253     \part*\{ \appendixpagename \}
254 }
255 \renewcommand\mempreaddapppagetotohook{}
256 \renewcommand\mempostaddapppagetotohook{}
257
258 \def\@sapppage{%
259     \part*\{ \appendixpagename \}
260 }

```

```

261 \DeclareDocumentCommand{\mainmatter}{s}{%
262     \booltrue{\LWR@mainmatter}%
263 }
264
265 \DeclareDocumentCommand{\frontmatter}{s}{%
266     \boolfalse{\LWR@mainmatter}%
267 }

```

```

268 \renewcommand*\raggedbottomsection(){}
269 \renewcommand*\normalbottomsection(){}
270 \renewcommand*\bottomsectionskip(){}
271 \renewcommand*\bottomsectionpenalty(){}
272 \csletcs{\appendixpage}{\appendixpage}
273 \renewcommand*\namedsubappendices){}
274 \renewcommand*\unnamedsubappendices){}
275 \renewcommand*\beforebookskip(){}
276 \renewcommand*\afterbookskip(){}
277 \renewcommand*\beforerepartskip(){}
278 \renewcommand*\afterrepartskip(){}
279 \renewcommand*\midbookskip(){}
280 \renewcommand*\midpartskip(){}
281 \renewcommand*\printbookname(){}
282 \renewcommand*\booknamefont(){}
283 \renewcommand*\booknamenum(){}
284 \renewcommand*\printbooknum(){}

```

```
285 \renewcommand*\{\booknumfont}{}
286 \renewcommand*\{\printpartname}{}
287 \renewcommand*\{\partnamefont}{}
288 \renewcommand*\{\partnamenum}{}
289 \renewcommand*\{\printpartnum}{}
290 \renewcommand*\{\partnumfont}{}
291 \renewcommand*\{\printbooktitle}[1]{}
292 \renewcommand*\{\booktitlefont}{}
293 \renewcommand{\printparttitle}[1]{}
294 \renewcommand*\{\parttitlefont}{}
295 \renewcommand*\{\bookpageend}{}
296 \renewcommand*\{\bookblankpage}{}
297 \renewcommand*\{\nobookblankpage}{}
298 \renewcommand*\{\partpageend}{}
299 \renewcommand*\{\partblankpage}{}
300 \renewcommand*\{\nopartblankpage}{}
301 \RenewDocumentCommand{\newleadpage}{s o m m}{\% todo}
302 \RenewDocumentCommand{\renewleadpage}{s o m m}{\% todo}
303 \renewcommand*\{\leadpagetoclevel}{chapter}
304
305 \renewcommand*\{\openright}{}
306 \renewcommand*\{\openleft}{}
307 \renewcommand*\{\openany}{}
308 \renewcommand*\{\clearforchapter}{}
309 \renewcommand*\{\memendofchapterhook}{}
310 \renewcommand*\{\chapterheadstart}{}
311 % \newlength{\beforechapskip}
312 \renewcommand*\{\afterchapternum}{}
313 % \newlength{\midchapskip}
314 \renewcommand*\{\afterchaptertitle}{}
315 % \newlength{\afterchapskip}
316 \renewcommand*\{\printchaptername}{}
317 \renewcommand*\{\chapnamefont}{}
318 \renewcommand*\{\chapernamenum}{}
319 \renewcommand*\{\printchapternum}{}
320 \renewcommand*\{\chapnumfont}{}
321 \renewcommand{\printchaptertitle}[1]{}
322 \renewcommand*\{\chaptilefont}{}
323 \renewcommand*\{\printchapternonum}{}
324 \renewcommand*\{\indentafterchapter}{}
325 \renewcommand*\{\noindentafterchapter}{}
326 \renewcommand*\{\insertchapterspace}{}
327
328 \renewcommand*\{\chapterstyle}[1]{}
329 \renewcommand{\makechapterstyle}[2]{}
330 \renewcommand*\{\chapindent}{}
331 \let\chapterprecis\cftchapterprecis
332 \let\chapterprecishere\cftchapterprecishere
333 \let\chapterprecistoc\cftchapterprecistoc
334 \renewcommand*\{\precisfont}{}
335 \renewcommand*\{\prechapterprecis}{}
336 \renewcommand*\{\postchapterprecis}{}
337 \renewcommand{\precistotext}[1]{}
338 \renewcommand*\{\precistocfont}{}
339 \renewcommand*\{\precistocformat}{}
340 % \newlength{\prechapterprecisshift}
341
342 \renewcommand*\{\setbeforesecskip}[1]{}
343 \renewcommand*\{\setaftersecskip}[1]{}
344 \renewcommand*\{\setsecindent}[1]{}
```

```
345 \renewcommand*{\setseheadstyle}[1]{}
346 \renewcommand*{\setbeforesubsecskip}[1]{}
347 \renewcommand*{\setaftersubsecskip}[1]{}
348 \renewcommand*{\setsubsecindent}[1]{}
349 \renewcommand*{\setsuseheadstyle}[1]{}
350 \renewcommand*{\setbeforesubsubsecskip}[1]{}
351 \renewcommand*{\setaftersubsubsecskip}[1]{}
352 \renewcommand*{\setsusubsecindent}[1]{}
353 \renewcommand*{\setsusubseheadstyle}[1]{}
354 \renewcommand*{\setbeforeparaskip}[1]{}
355 \renewcommand*{\setafterskip}[1]{}
356 \renewcommand*{\setparaindent}[1]{}
357 \renewcommand*{\setparaheadstyle}[1]{}
358 \renewcommand*{\setbeforesubparaskip}[1]{}
359 \renewcommand*{\setaftersubparaskip}[1]{}
360 \renewcommand*{\setsupparaindent}[1]{}
361 \renewcommand*{\setsupparaheadstyle}[1]{}
362 \renewcommand{\@hangfrom}[1]{#1}
363 \renewcommand{\sethangfrom}[1]{}
364 \renewcommand{\setsecnumformat}[1]{}
365
366 \renewcommand*{\hangsecnum}{}
367 \renewcommand*{\defaultsecnum}{}
368
369 \renewcommand*{\sechook}{}
370 \renewcommand{\setsechook}[1]{}
371 \renewcommand*{\subsechook}{}
372 \renewcommand{\setsusechook}[1]{}
373 \renewcommand*{\susubsechook}{}
374 \renewcommand{\setsusubsechook}[1]{}
375 \renewcommand*{\parahook}{}
376 \renewcommand{\setparahook}[1]{}
377 \renewcommand*{\subparahook}{}
378 \renewcommand{\setsupparahook}[1]{}
379
380 \RenewDocumentCommand{\plainbreak}{s m}{\begin{center}~\end{center}}
381
382 \RenewDocumentCommand{\fancybreak}{s +m}{%
383     \begin{center}#2\end{center}%
384 }
385
386 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
387     \begin{center}#4\end{center}%
388 }
389
390 \RenewDocumentCommand{\pfbreak}{s}{%
391     \begin{center}%
392         \pfbreakdisplay
393     \end{center}%
394 }
395
396 % \newlength{\pfbreakskip}
397 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
398
399 \renewcommand{\makeheadstyles}[2]{}
400 \renewcommand*{\headstyles}[1]{}
```

§ 699.8 Pagination and headers

```
401 \renewcommand*{\savepagenumber}{}  
402 \renewcommand*{\restorepagenumber}{}  
403 \renewcommand*{\uppercaseheads}{}  
404 \renewcommand*{\nouppercaseheads}{}  
405  
406 \renewcommand*{\bookpagemark}[1]{}  
407 \renewcommand*{\partmark}[1]{}  
408 \renewcommand*{\bibmark}{}  
409 \renewcommand*{\indexmark}{}  
410 \renewcommand*{\glossarymark}{}  
411  
412 \LWR@origpagestyle{empty}  
413 \renewcommand*{\ps@empty}{}  
414 \renewcommand*{\makepagestyle}[1]{}  
415 \renewcommand*{\emptypshook}{}%  
416 % \renewcommand*{\empty@oddhead}{}  
417 % \renewcommand*{\empty@oddfoot}{}  
418 % \renewcommand*{\empty@evenhead}{}  
419 % \renewcommand*{\empty@evenfoot}{}  
420 \renewcommand*{\@oddhead}{}  
421 \renewcommand*{\@oddfoot}{}  
422 \renewcommand*{\@evenhead}{}  
423 \renewcommand*{\@evenfoot}{}  
424 \renewcommand*{\aliaspagestyle}[2]{}  
425 \renewcommand*{\copypagestyle}[2]{}  
426  
427 \renewcommand*{\makeevenhead}[4]{}  
428 \renewcommand*{\makeoddhead}[4]{}  
429 \renewcommand*{\makeevenfoot}[4]{}  
430 \renewcommand*{\makeoddfoot}[4]{}  
431 \renewcommand*{\makerunningwidth}[3]{}  
432 % \newlength{\headwidth}  
433 \renewcommand*{\makeheadrule}[3]{}  
434 \renewcommand*{\makefootrule}[3]{}  
435 \renewcommand*{\makeheadfootruleprefix}[3]{}  
436 % \newlength{\normalrulethickness}  
437 % \setlength{\normalrulethickness}{.4pt}  
438 % \newlength{\footruleheight}  
439 % \newlength{\footruleskip}  
440 \renewcommand*{\makeheadposition}[5]{}  
441 \renewcommand{\makepsmarks}[2]{}  
442 \renewcommand*{\makeheadfootstrut}[3]{}  
  
443 \renewcommand{\createmark}[5]{\csdef{#1mark}[1]{}}  
444 \renewcommand{\createplainmark}[3]{\csdef{#1mark}{}}  
  
445 \renewcommand{\memUhead}[1]{}  
446 \renewcommand*{\clearplainmark}[1]{}  
447 \renewcommand*{\clearmark}[1]{}  
448 \renewcommand{\addtopsmarks}[3]{}  
449 \renewcommand{\ifonlyfloats}[2]{#2}  
450 \renewcommand*{\mergepagefloatstyle}[3]{}  
451  
452 \renewcommand*{\framepichead}{}  
453 \renewcommand*{\framepictextfoot}{}  
454 \renewcommand*{\framepichook}{}  
455 \renewcommand*{\showheadfootlocoff}{}  
456 \renewcommand*{\showtextblocklocoff}{}  
457
```

§ 699.9 Paragraphs and lists

```

457 \renewcommand{\hangfrom}[1]{#1}
458 \let\centerfloat\centering
459 \renewcommand*{\raggedright}[1][]{}
460 % \newlength{\ragrparindent}
461 \renewcommand{\sourceatright}[2][]{\attribution{#2}}
462 \let\memorigdbs\LWR@endofline

463 \renewcommand*{\memorigpar}{\par}

464 \let\atcentercr\LWR@endofline
465
466 \renewcommand*{\linenottooshort}[1][]{}
467 \renewcommand*{\russianpar}(){}
468 \renewcommand*{\lastlinerulefill}(){}
469 \renewcommand*{\lastlineparrule}){}
470 \renewcommand*{\justlastraggedleft}){}
471 \renewcommand*{\raggedrightthenleft}){}
472 \renewcommand*{\leftcenterright}{}}

473
474 \renewcommand{\leftspringright}[4]{%
475   \begin{minipage}{#1\linewidth}\#3\end{minipage}\qquad%
476   \begin{minipage}{#2\linewidth}\begin{flushright}\#4\end{flushright}\end{minipage}%
477 }
478
479 \renewenvironment*{\blockdescription}
480 {\LWR@descriptionstart\LWR@origdescription}
481 {\enddescription}
482
483 \renewcommand*{\blockdescriptionlabel}[1]{\textbf{#1}}
484 \renewenvironment*{\labelled}[1]{\begin{description}}{\end{description}}
485 \renewenvironment*{\flexlabelled}[6]{\begin{description}}{\end{description}}
486 \renewcommand*{\tightlists}(){}
487 \renewcommand*{\defaultlists}(){}
488 \RenewDocumentCommand{\firmlists}{s}{}
489 \renewcommand*{\firmlist}(){}
490 \renewcommand*{\tightlist}){}
491 \renewcommand*{\zerotrivseps}){}
492 \renewcommand*{\savetrivseps}){}
493 \renewcommand*{\restoretrevseps}{}}

```

§ 699.10 Contents lists

```

494 \csletcs{tableofcontents*}{tableofcontents}
495 \csletcs{listoffigures*}{listoffigures}
496 \csletcs{listoftables*}{listoftables}
497 \renewenvironment{KeepFromToc}{}{}
498 \renewcommand*{\onecoltocetc}(){}
499 \renewcommand*{\twocoltocetc}){}
500 \renewcommand*{\ensureonecol}){}
501 \renewcommand*{\restorefromonecol}){}
502 \renewcommand*{\doccoltocetc}{}}

503
504 \renewcommand{\tocheadstart} {}
505 \renewcommand{\printtoctitle}[1] {}
506 \renewcommand{\tocmark} {}
507 \renewcommand{\aftertoctitle} {}
508 \renewcommand{\lofheadstart} {}
509 \renewcommand{\printloftitle}[1] {}

```

```

510 \renewcommand{\lofmark}{}
511 \renewcommand{\afterloftitle}{}
512 \renewcommand{\lotheadstart}{}
513 \renewcommand{\printlottitle}[1]{}
514 \renewcommand{\lotmark}{}
515 \renewcommand{\afterlottitle}{}
516
517 \renewcommand*{\setpnumwidth}[1]{}
518 \renewcommand*{\setrmarg}[1]{}%
519 \renewcommand*{\cftbookbreak}{}%
520 \renewcommand*{\cftpabreak}{}%
521 \renewcommand*{\cftchapterbreak}{}%

522 % \newlength{\cftbeforebookskip}
523 % \newlength{\cftbookindent}
524 % \newlength{\cftbooknumwidth}
525 \renewcommand*{\cftbookfont}{}%
526 \renewcommand*{\cftbookname}{}%
527 \renewcommand*{\cftbookpresnum}{}%
528 \renewcommand*{\cftbookaftersnum}{}%
529 \renewcommand*{\cftbookaftersnumb}{}%
530 \renewcommand*{\cftbookleader}{}%
531 \renewcommand*{\cftbookdotsep}{1}
532 \renewcommand*{\cftbookpagefont}{}%
533 \renewcommand*{\cftbookafterpnum}{}%
534 \renewcommand*{\cftbookformatpnum}[1]{}%
535 \renewcommand*{\cftbookformatpnumhook}[1]{}%

```

Part is already defined by tocloft.

```

536 % \newlength{\cftbeforechapterskip}
537 % \newlength{\cftchapterindent}
538 % \newlength{\cftchapternumwidth}
539 \renewcommand*{\cftchapterfont}{}%
540 \renewcommand*{\cftchaptername}{}%
541 \renewcommand*{\cftchapterpresnum}{}%
542 \renewcommand*{\cftchapteraftersnum}{}%
543 \renewcommand*{\cftchapteraftersnumb}{}%
544 \renewcommand*{\cftchapterleader}{}%
545 \renewcommand*{\cftchapterdotsep}{1}
546 \renewcommand*{\cftchapterpagefont}{}%
547 \renewcommand*{\cftchapterafterpnum}{}%
548 \renewcommand*{\cftchapterformatpnum}[1]{}%
549 \renewcommand*{\cftchapterformatpnumhook}[1]{}%

550 % \newlength{\cftbeforesections skip}
551 % \newlength{\cftsectionindent}
552 % \newlength{\cftsectionnumwidth}
553 \renewcommand*{\cftsectionfont}{}%
554 \renewcommand*{\cftsectionname}{}%
555 \renewcommand*{\cftsectionpresnum}{}%
556 \renewcommand*{\cftsectionaftersnum}{}%
557 \renewcommand*{\cftsectionaftersnumb}{}%
558 \renewcommand*{\cftsectionleader}{}%
559 \renewcommand*{\cftsectiondotsep}{1}
560 \renewcommand*{\cftsectionpagefont}{}%
561 \renewcommand*{\cftsectionafterpnum}{}%
562 \renewcommand*{\cftsectionformatpnum}[1]{}%
563 \renewcommand*{\cftsectionformatpnumhook}[1]{}%

```

```
564 % \newlength{\cftbeforesubsectionskip}
565 % \newlength{\cftsubsectionindent}
566 % \newlength{\cftsubsectionnumwidth}
567 \renewcommand*{\cftsubsectionfont}{}
568 \renewcommand*{\cftsubsectionname}{}
569 \renewcommand*{\cftsubsectionpresnum}{}
570 \renewcommand*{\cftsubsectionaftersnum}{}
571 \renewcommand*{\cftsubsectionaftersnumb}{}
572 \renewcommand*{\cftsubsectionleader}{}
573 \renewcommand*{\cftsubsectiondotsep}{1}
574 \renewcommand*{\cftsubsectionpagefont}{}
575 \renewcommand*{\cftsubsectionafterpnum}{}
576 \renewcommand*{\cftsubsectionformatpnum}[1]{}
577 \renewcommand*{\cftsubsectionformatpnumhook}[1]{}

578 % \newlength{\cftbeforesubsubsectionskip}
579 % \newlength{\cftsubsubsectionindent}
580 % \newlength{\cftsubsubsubsectionnumwidth}
581 \renewcommand*{\cftsubsubsectionfont}{}
582 \renewcommand*{\cftsubsubsubsectionname}{}
583 \renewcommand*{\cftsubsubsubsectionpresnum}{}
584 \renewcommand*{\cftsubsubsubsectionaftersnum}{}
585 \renewcommand*{\cftsubsubsubsectionaftersnumb}{}
586 \renewcommand*{\cftsubsubsubsectionleader}{}
587 \renewcommand*{\cftsubsubsubsectiondotsep}{1}
588 \renewcommand*{\cftsubsubsubsectionpagefont}{}
589 \renewcommand*{\cftsubsubsubsectionafterpnum}{}
590 \renewcommand*{\cftsubsubsubsectionformatpnum}[1]{}
591 \renewcommand*{\cftsubsubsubsectionformatpnumhook}[1]{}

592 % \newlength{\cftbeforeparagraphskip}
593 % \newlength{\cftpparagraphindent}
594 % \newlength{\cftpparagraphnumwidth}
595 \renewcommand*{\cftpparagraphfont}{}
596 \renewcommand*{\cftpparagraphname}{}
597 \renewcommand*{\cftpparagraphpresnum}{}
598 \renewcommand*{\cftpparagraphaftersnum}{}
599 \renewcommand*{\cftpparagraphaftersnumb}{}
600 \renewcommand*{\cftpparagraphleader}{}
601 \renewcommand*{\cftpparagraphdotsep}{1}
602 \renewcommand*{\cftpparagraphpagefont}{}
603 \renewcommand*{\cftpparagraphafterpnum}{}
604 \renewcommand*{\cftpparagraphformatpnum}[1]{}
605 \renewcommand*{\cftpparagraphformatpnumhook}[1]{}

606 % \newlength{\cftbeforesubparagraphskip}
607 % \newlength{\cftsubparagraphindent}
608 % \newlength{\cftsubparagraphnumwidth}
609 \renewcommand*{\cftsubparagraphfont}{}
610 \renewcommand*{\cftsubparagraphname}{}
611 \renewcommand*{\cftsubparagraphpresnum}{}
612 \renewcommand*{\cftsubparagraphaftersnum}{}
613 \renewcommand*{\cftsubparagraphaftersnumb}{}
614 \renewcommand*{\cftsubparagraphleader}{}
615 \renewcommand*{\cftsubparagraphdotsep}{1}
616 \renewcommand*{\cftsubparagraphpagefont}{}
617 \renewcommand*{\cftsubparagraphafterpnum}{}
618 \renewcommand*{\cftsubparagraphformatpnum}[1]{}
619 \renewcommand*{\cftsubparagraphformatpnumhook}[1]{}

620 % \newlength{\cftbeforefigureskip}
```

```
621 % \newlength{\cftfigureindent}
622 % \newlength{\cftfigurenumwidth}
623 \renewcommand*{\cftfigurefont}{}
624 \renewcommand*{\cftfigurename}{}
625 \renewcommand*{\cftfigurepresnum}{}
626 \renewcommand*{\cftfigureaftersnum}{}
627 \renewcommand*{\cftfigureaftersnumb}{}
628 \renewcommand*{\cftfigureleader}{}
629 \renewcommand*{\cftfiguredotsep}{1}
630 \renewcommand*{\cftfigurepagefont}{}
631 \renewcommand*{\cftfigureafterpnum}{}
632 \renewcommand*{\cftfigureformatpnum}[1]{}
633 \renewcommand*{\cftfigureformatpnumhook}[1]{}

634 % \newlength{\cftbeforesubfigureskip}
635 % \newlength{\cftsubfigureindent}
636 % \newlength{\cftsubfigurenumwidth}
637 \newcommand*{\cftsubfigurefont}{}
638 \newcommand*{\cftsubfigurename}{}
639 \newcommand*{\cftsubfigurepresnum}{}
640 \newcommand*{\cftsubfigureaftersnum}{}
641 \newcommand*{\cftsubfigureaftersnumb}{}
642 \newcommand*{\cftsubfigureleader}{}
643 \newcommand*{\cftsubfiguredotsep}{1}
644 \newcommand*{\cftsubfigurepagefont}{}
645 \newcommand*{\cftsubfigureafterpnum}{}
646 \newcommand*{\cftsubfigureformatpnum}[1]{}
647 \newcommand*{\cftsubfigureformatpnumhook}[1]{}

648 % \newlength{\cftbeforetablesip}
649 % \newlength{\cfttableindent}
650 % \newlength{\cfttablenumwidth}
651 \renewcommand*{\cfttablefont}{}
652 \renewcommand*{\cfttablename}{}
653 \renewcommand*{\cfttablepresnum}{}
654 \renewcommand*{\cfttableaftersnum}{}
655 \renewcommand*{\cfttableaftersnumb}{}
656 \renewcommand*{\cfttableleader}{}
657 \renewcommand*{\cfttabledotsep}{1}
658 \renewcommand*{\cfttablepagefont}{}
659 \renewcommand*{\cfttableafterpnum}{}
660 \renewcommand*{\cfttableformatpnum}[1]{}
661 \renewcommand*{\cfttableformatpnumhook}[1]{}

662 % \newlength{\cftbeforesubtablesip}
663 % \newlength{\cftsubtableindent}
664 % \newlength{\cftsubtablenumwidth}
665 \newcommand*{\cftsubtablefont}{}
666 \newcommand*{\cftsubtablename}{}
667 \newcommand*{\cftsubtablepresnum}{}
668 \newcommand*{\cftsubtableaftersnum}{}
669 \newcommand*{\cftsubtableaftersnumb}{}
670 \newcommand*{\cftsubtableleader}{}
671 \newcommand*{\cftsubtabledotsep}{1}
672 \newcommand*{\cftsubtablepagefont}{}
673 \newcommand*{\cftsubtableafterpnum}{}
674 \newcommand*{\cftsubtableformatpnum}[1]{}
675 \newcommand*{\cftsubtableformatpnumhook}[1]{}

676 \renewcommand*{\booknumberline}[1]{}
677 \renewcommand*{\partnumberline}[1]{}
```

```

678 \renewcommand*\{\\chapternumberline}[1]{}
679 \renewcommand*\{\\numberlinehook}[1]{}
680 % \renewcommand*\{\\cftwhatismyname}{}
681 \renewcommand*\{\\booknumberlinehook}[1]{}
682 \renewcommand*\{\\partnumberlinehook}[1]{}
683 \renewcommand*\{\\chapternumberlinehook}[1]{}
684 \renewcommand*\{\\numberlinebox}[2]{}
685 \renewcommand*\{\\booknumberlinebox}[2]{}
686 \renewcommand*\{\\partnumberlinebox}[2]{}
687 \renewcommand*\{\\chapternumberlinebox}[2]{}
688 %
689 % \newlength{\cftparskip}
690 \renewcommand*\{\\cftpagenumbersoff}[1]{}
691 \renewcommand*\{\\cftpagenumberson}[1]{}
692 \renewcommand*\{\\cftlocalchange}[3]{}
693 \renewcommand*\{\\cftaddtitleline}[4]{}
694 \renewcommand*\{\\cftaddnumtitleline}[4]{}
695 \renewcommand*\{\\cftinsertcode}[2]{}
696 \renewcommand*\{\\cftinserthook}[2]{}
697 \renewcommand*\{\\settocpreprocessor}[2]{}
698 \DeclareRobustCommand*\{\\cftpagenumbersoff}[1]{}
699 \DeclareRobustCommand*\{\\cftpagenumberson}[1]{}

```

§ 699.11 Floats and captions

\@xfloat
\@dblfloat

Reestablish lwarf's takeover the float handing, which memoir tried to grab:

```

700 \AtBeginDocument{
701 \def\@xfloat #1[#2]{%
702     \LWR@floatbegin{#1}[#2]
703     \normalsize
704     \@nameuse{#1adjustment}%
705     \LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment%
706 }
707 \def\@dblfloat #1[#2]{%
708     \LWR@floatbegin{#1}[#2]
709     \normalsize
710     \@nameuse{#1adjustment}%
711     \LWR@futurenonspacelet\LWR@mynexttoken\LWR@floatalignment%
712 }
713 }

```

\newfloat

```

[<1: within>] [<2: type>] [<3: ext>] [<4: capname>]

714 \RenewDocumentCommand*\{\\newfloat}{o m m m}{%
715     \def\@LWR@tempone{#4}%
716     \def\@LWR@temptwo{\@nameuse{#2name}}%
717     \ifdefined\@LWR@tempone{\@LWR@temptwo}{% recursive name, already defined
718         \IfValueTF{#1}{%
719             {\@DeclareFloatingEnvironment[fileext=#3,within=#1]{#2}}%
720             {\@DeclareFloatingEnvironment[fileext=#3]{#2}}%
721         }{%
722             \IfValueTF{#1}{%
723                 {\@DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
724                 {\@DeclareFloatingEnvironment[fileext=#3,name={#4}]{#2}}%
725             }%
726         }%
727     }%
728 }

```

newfloat package automatically creates the \listof command for new floats, but float does not, so remove \listof here in case it is manually created later.

```

726     \cslet{listof#2s}\relax%
727     \cslet{listof#2es}\relax%
728 }

```

`\newlistof` [*<within>*] {*<type>*} {*<ext>*} {*<listofname>*}

Emulated through the `\newfloat` mechanism. Note that `memoir` uses a different syntax than `tocloft` for the name.

```

729 \RenewDocumentCommand{\newlistof}{o m m m}
730 {%
731     \IfValueTF{#1}%
732         {\newlistentry[#1]{#2}{#3}{0}}%
733         {\newlistentry[#2]{#3}{0}}%
734     \@namedef{ext@#2}{#3}%
735     \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
736     \setcounter{#3depth}{1}%
737     \@namedef{#3mark}{}
738     \@namedef{#2}{\LWR@listof{#2}{#4}}%
739     \@namedef{@cftmake#3title}{}
740     \@ifundefined{cftbefore#3titleskip}{%
741         \expandafter\newlength\csname cftbefore#3titleskip\endcsname%
742         \expandafter\newlength\csname cftafter#3titleskip\endcsname%
743     }{}%
744     \@namedef{cft#3titlefont}{}
745     \@namedef{cftafter#3title}{}
746     \@namedef{cft#3prehook}{}
747     \@namedef{cft#3posthook}{}
748 }

```

```
749 \renewcommand{\setfloatadjustment}[2]{}
```

Borrowed from the `l warp` version of `keyfloat`:

```

750 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{O{-1.2ex} m}
751 {%
752     \start
753     \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}(note){marginblock}%
754     \renewcommand*{\@capttype}{#2}%
755 }
756     \endLWR@BlockClassWP%
757 }
758
759 \DeclareDocumentEnvironment{marginfigure}{o}
760   {\begin{KFLTmemoir@marginfloat}{figure}}
761   {\end{KFLTmemoir@marginfloat}}
762
763 \DeclareDocumentEnvironment{marginable}{o}
764   {\begin{KFLTmemoir@marginfloat}{table}}
765   {\end{KFLTmemoir@marginfloat}}
766
766 \renewcommand{\setmarginfloatcaptionadjustment}[2]{}
767 \renewcommand{\setmpjustification}[2]{}
768 \renewcommand*{\mpjustification}{}%
769 \renewcommand*{\setfloatlocations}[2]{}
770 \DeclareDocumentCommand{\suppressfloats}{o}{}%
771 \renewcommand*{\FloatBlock}{}%
772 \renewcommand*{\FloatBlockAllowAbove}{}%
773 \renewcommand*{\FloatBlockAllowBelow}{}%
774 \renewcommand*{\setFloatBlockFor}{}%

```

```

775
776 \renewcommand{\captiontitlefinal}[1]{}

\fleitable, \flegfigure, \flegtatable, \flegtocfigure are defined by memoir
using \newfloat. These are defined with an @ in ccaption.

777 \renewcommand{\fleitable}{\tablename}
778 \renewcommand{\flegfigure}{\figurename}
779 \renewcommand{\flegtatable}{}
780 \renewcommand{\flegtocfigure}{}

781 \renewcommand{\@makesubfloatcaption}[2]{%
782     \minipagefullwidth
783     \begin{minipage}{\linewidth}%
784     #1 \ignorespaces #2 \unskip%
785     \end{minipage}
786 }
787
788 \renewcommand*{\tightsubcaptions}{}
789 \renewcommand*{\loosesubcaptions}{}
790
791 \renewcommand*{\subcaptionsize}[1]{}
792 \renewcommand*{\subcaptionlabelfont}[1]{}
793 \renewcommand*{\subcaptionfont}[1]{}
794 \renewcommand*{\subcaptionstyle}[1]{}
795
796 \renewcommand*{\hangsubcaption}{}
797 \renewcommand*{\shortsubcaption}{}
798 \renewcommand*{\normalsubcaption}{}

```

\AfterEndPreamble now required for sidecaption.

```

799 \AfterEndPreamble{%
800 \RenewDocumentEnvironment{sidecaption}{o m o}
801 {}%
802 {%
803     \IfValueTF{#1}{\caption[#1]{#2}}{\caption{#2}}%
804     \IfValueT{#3}{\label{#3}}%
805 }
806 }
807
808 % \newlength{\sidecapwidth}
809 % \newlength{\sidecapsep}
810 \renewcommand*{\setsidecaps}[2]{}
811 \renewcommand*{\sidecapmargin}[1]{}
812 % \newif\ifscapmargleft
813 \scapmargleftfalse
814 \renewcommand*{\setsidecappos}[1]{}

```

Env sidecontcaption

```

815 \RenewDocumentEnvironment{sidecontcaption}{m o}
816 {}
817 {%
818     \ifdef{\ContinuedFloat}{%
819         {\ContinuedFloat}%
820         {\addtocounter{@capttype}{-1}}%
821         \caption{#1}%

```

Without `\@capttype`, the section is referred to instead.

```

822     \IfValueT{#2}{\label[\@capttype]{#2}}%
823 }

\sidenamedlegend does not appear to use the toc argument.

824 \renewenvironment{sidenamedlegend}[2][]{
825     \begin{center}
826     \@nameuse{\@capttype name}\CaptionSeparator#2
827     \end{center}
828 }
829 {}
830
831 \renewenvironment{sidelegend}[1]
832 {\begin{center}
833     #1
834
835 }
836 {\end{center}}
837
838 \renewcommand*{\sidecapstyle}{}%
839 \renewcommand*{\overridescapmargin}[1]{}%
840 % \newlength{\sidecapraise}
841 \renewcommand*{\sidecapfloatwidth}{\linewidth}
842
843 \LetLtxMacro\ctabular\tabular
844 \LetLtxMacro\endctabular\endtabular
845
846 \renewcommand{\autorows}[5][]{%
847     #5%
848 }
849
850 \renewcommand{\autocols}[5][]{%
851     #5%
852 }
```

§ 699.12 Footnotes and page notes

```

853 \renewcommand*{\feetabovefloat}{}%
854 \renewcommand*{\feetbelowfloat}{}%
855 \renewcommand*{\feetatbottom}{}%
856
857 \renewcommand*{\verbfootnote}[2][]{%
858     \PackageError{lwarf,memoir}%
859     {Verbatim footnotes are not yet supported by lwarf}%
860     {This may be improved some day.}%
861 }
862
863 \renewcommand*{\plainfootnotes}{}%
864 \renewcommand*{\twocolumnfootnotes}{}%
865 \renewcommand*{\threecolumnfootnotes}{}%
866 \renewcommand*{\paragraphfootnotes}{}%
867 \renewcommand*{\footfudgefiddle}{}%
868
869 \renewcommand*{\newfootnoteseries}[1]{%
870     \PackageError{lwarf,memoir}%
871     {Memoir footnote series are not yet supported by lwarf}%
872     {This may be improved some day.}%
873 }
874
```

```
875 \renewcommand*{\plainfootstyle}[1]{}
876 \renewcommand*{\twocolumnfootstyle}[1]{}
877 \renewcommand*{\threecolumnfootstyle}[1]{}
878 \renewcommand*{\paragraphfootstyle}[1]{}
879
880 \renewcommand*{\footfootmark}{}
881 \renewcommand*{\footmarkstyle}[1]{}
882
883 % \newlength{\footmarkwidth}
884 % \newlength{\footmarksep}
885 % \newlength{\footparindent}
886
887 \renewcommand*{\foottextfont}{}
888
889 \renewcommand*{\marginparmargin}[1]{}
890 \renewcommand*{\sideparmargin}[1]{}
891
892 \LetLtxMacro{\sidepar}{\marginpar}
893 \renewcommand*{\sideparfont}{}
894 \renewcommand*{\sideparform}{}
895 \LWR@providelength{\sideparvshift}
896
897 \renewcommand*{\parnopar}{}
898
899 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
900 \renewcommand*{\sidebarmargin}[1]{}
901 \renewcommand*{\sidebarfont}{}
902 \renewcommand*{\sidebarform}{}
903 % \newlength{\sidebarhsep}
904 % \newlength{\sidebarvsep}
905 % \newlength{\sidebarwidth}
906 % \newlength{\sidebartopsep}
907 \renewcommand{\setsidebarheight}[1]{}
908 \renewcommand*{\setsidebars}[6]{}
909 \renewcommand*{\footnotesatfoot}{}
910 \renewcommand*{\footnotesinmargin}{}
911
912 \LetLtxMacro{\sidefootnote}{\footnote}
913 \LetLtxMacro{\sidefootnotemark}{\footnotemark}
914 \LetLtxMacro{\sidefootnotetext}{\footnotetext}
915
916 \renewcommand*{\sidefootmargin}[1]{}
917 % \newlength{\sidefoothsep}
918 % \newlength{\sidefootvsep}
919 % \newlength{\sidefootwidth}
920 % \newlength{\sidefootadjust}
921 % \newlength{\sidefootheight}
922 \renewcommand*{\setsidefootheight}[1]{}
923 % \renewcommand*{\sidefootfont}{% in docs but not in the package
924 \renewcommand*{\setsidefeet}[6]{}
925 \renewcommand*{\sidefootmarkstyle}[1]{}
926 \renewcommand*{\sidefoottextfont}{}
927 \renewcommand*{\sidefootform}{}
928 \renewcommand*{\continuousnotenums}{\pncontopttrue}% from pagenote
929 \renewcommand*{\notepageref}{}
930 \renewcommand*{\prenotetext}{}
931 \renewcommand*{\postnotetext}{}
932 \LetLtxMacro{\printpageinnoteshyperref}{\printpageinnotes}
933 \renewcommand*{\foottopagenote}{}
```

```
934 \renewcommand*\pagetofootnote{}
```

\m@m@wrpnote

\startnoteentrystart

To have `cleveref` work with page note labels, the following patch writes `\thepagenote` and also adds `\arabic{pagenote}` to the first argument written to the `.ent` file:

```
\startnoteentry{{\thepagenote}{\arabic{pagenote}}} ...
```

The arabic value is required for `cleveref`. `\thepagenote` becomes `\@firstoftwo#1` and the arabic value becomes `\@secondoftwo#1`.

-  `\nameref` Note that for print mode, `\nameref` print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

```
935 \VerifyCommand[l warp][l warp-patch-memoir]{\m@m@wrpnote}{D2AE41FE9A265B639F7074AB2AF29976}
936
937 \xpatchcmd{\m@m@wrpnote}
938   {\string\startnoteentry{\thepagenote}}
939   {\string\startnoteentry{{\thepagenote}{\arabic{pagenote}}}}
940   {}
941   {\LWR@patcherror{memoir}{m@m@wrpnote}}
942
943 \VerifyCommand[l warp][l warp-patch-memoir]{\startnoteentrystart}{2A595EA1DC483451337C33072604EDD6}
944
945 \renewcommand\startnoteentrystart[4]{%
946   \prenoteinnotes%
947   \noteidinnotes{\@firstoftwo#1}{#2}%
948   \@ifmtarg{#2}{%
949     \phantomsection\def\currentlabel{#1}% original
950     \def\currentlabel{\@firstoftwo#1}% l warp
951     \def\cref\currentlabel{%
952       [pagenote][\@secondoftwo#1[]]\@firstoftwo#1% l warp
953     }%
954   }{}%
955   \pagenoteanchor{#4}%
956   \pageinnotes{#3}%
957   \prenotetext%
958 }
```

§ 699.13 Decorative text

```
959 \renewcommand*\epigraphposition[1]{}%
960 \renewcommand*\epigraphtextposition[1]{}%
961 \renewcommand*\epigraphsourceposition[1]{}%
962 \renewcommand*\epigraphfontsize[1]{}%
963 \renewcommand*\epigraphforheader[2]{}%
964 \renewcommand*\epigraphpicture{}
```

§ 699.14 Poetry

```
965 \renewcommand*\vinphantom{}%
966 \renewcommand*\vleftofline[1]{#1}%
967 % \let\linenumberfrequency\poemlines
968 % \renewcommand*\linenumberfont[1]{}%
969
970 \DeclareDocumentCommand{\PoemTitle}{s o o m}{%
971   \IfValueTF{#2}{%
972     {\poemtitle[#2]{#4}}%
973     {\poemtitle{#4}}%
974   }}
```

```

975
976 \renewcommand*{\NumberPoemTitle}{}
977 \renewcommand*{\PlainPoemTitle}{}
978 \renewcommand*{\poemtitlepstyle}{}
979 \renewcommand*{\poemtitlestarmark}[1]{}
980 \renewcommand*{\poemtitlesarpstyle}{}
981 \renewcommand*{\PoemTitleheadstart}{}
982 \renewcommand*{\printPoemTitlenonum}{}
983 \renewcommand*{\printPoemTitlenum}{}
984 \renewcommand*{\afterPoemTitlenum}{}
985 \renewcommand*{\printPoemTitletitle}[1]{}
986 \renewcommand*{\afterPoemTitle}{}
987 \newlength{\midpoemtitleskip}
988 \renewcommand*{\PoemTitlenumfont}{}
989 \renewcommand*{\PoemTitlefont}{}

```

§ 699.15 Boxes, verbatims and files

```

990 \renewenvironment{qframe}{\framed}{\endframed}
991 \renewenvironment{qshade}{\shaded}{\endshaded}

992 \renewcommand*{\setverbatimfont}[1]{}
993 \renewcommand*{\tabson}[1]{}
994 \renewcommand*{\tabsoff}{}
995 \renewcommand*{\wrappingon}{}
996 \renewcommand*{\wrappingoff}{}
997 \renewcommand*{\verbatimindent}{}
998 \renewcommand*{\verbatimbreakchar}[1]{}

999 \DefineVerbatimEnvironment{fboxverbatim}{Verbatim}{frame=single}

```

`boxedverbatim` is already defined by `moreverb`. `boxedverbatim*` does not appear to work at all, even in a minimal print `memoir` document.

```

1000 \renewcommand*{\bvbox}{}
1001 \renewcommand*{\bvtopandtail}{}
1002 \renewcommand*{\bvsides}{}
1003 \renewcommand*{\nobvbox}{}
1004 % \newlength\bvboxsep
1005 \renewcommand*{\bvtoprulehook}{}
1006 \renewcommand*{\bvtopmidhook}{}
1007 \renewcommand*{\bvendrulehook}{}
1008 \renewcommand*{\bvleftsidehook}{}
1009 \renewcommand*{\bvrightrightsidehook}{}
1010 \renewcommand*{\bvperpagetrue}{}
1011 \renewcommand*{\bvperpagefalse}{}
1012 \renewcommand{\bvtopofpage}[1]{}
1013 \renewcommand{\bvendofpage}[1]{}
1014 \renewcommand*{\linenumberfrequency}[1]{}
1015 \renewcommand*{\resetbvlinenumber}{}
1016 \renewcommand*{\setbvlinenums}[2]{}
1017 \renewcommand*{\linenumberfont}[1]{}
1018 \renewcommand*{\bvnumbersinside}{}
1019 \renewcommand*{\bvnumbersoutside}{}

```

§ 699.16 Cross referencing

```

1020 \renewcommand*{\fref}[1]{\cref{#1}}
1021 \renewcommand*{\tref}[1]{\cref{#1}}

```

```

1022 \renewcommand*{\pref}[1]{\cpageref{#1}}
1023 \renewcommand*{\Aref}[1]{\cref{#1}}
1024 \renewcommand*{\Bref}[1]{\cref{#1}}
1025 \renewcommand*{\Pref}[1]{\cref{#1}}
1026 \renewcommand*{\Sref}[1]{\cref{#1}}
1027 \renewcommand*{\figurerefname}{Figure}
1028 \renewcommand*{\tablerefname}{Table}
1029 \renewcommand*{\pagerefname}{page}
1030 \renewcommand*{\bookrefname}{Book~}
1031 \renewcommand*{\partrefname}{Part~}
1032 \renewcommand*{\chapterrefname}{Chapter~}
1033 \renewcommand*{\sectionrefname}{\S}
1034 \renewcommand*{\appendixrefname}{Appendix~}
1035 \LetLtxMacro\titleref\nameref
1036 \renewcommand*{\headnameref}={}
1037 \renewcommand*{\tocnameref}={}

```

\currenttitle has been removed from memoir.

```

1038 \renewcommand*{\theTitleReference}[2]{}
1039 \renewcommand*{\namerefon}{}
1040 \renewcommand*{\namerefoff}{}

```

§ 699.17 Back matter

Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.

```

1041 \AtBeginDocument{
1042
1043 \VerifyCommand[l warp][l warp-patch-memoir]{\@@wrindexhyp}{8DA7E3C8BE7A830442D98EA033147F63}
1044
1045 \def\@@wrindexhyp#1|||\%
1046   \addtocounter{LWR@autoindex}{1}%           l warp
1047 %   \ifshowindexmark\@showidx{#1}\fi
1048   \protected@write\@auxout{}%
1049 %   {\string\@@wrindexm@m{\@idxfile}{#1}{\thepage}}%
1050   {\string\@@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}% l warp

```

The label is assigned after the file write to avoid conflict with cleveref.

```

1051   \label{LWRindex-\arabic{LWR@autoindex}}%     l warp
1052   \endgroup
1053   \@esphack%

```

\specialindex behaves like a regular \index, pointing to where \specialindex is used. If \specialindex is used inside a figure or table after the \caption, then the hyperlink will be given the name of that particular figure or table.

```

1054 \def\@@wrspindexhyp#1|||\%
1055   \addtocounter{LWR@autoindex}{1}%
1056 %   \ifshowindexmark\@showidx{#1}\fi
1057   \protected@write\@auxout{}%
1058 %   {\string\@@wrindexm@m{\@idxfile}{#1}{\nameuse{the\@sptheadidx}}}%
1059   {\string\@@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%

```

The label is assigned after the file write to avoid conflict with cleveref.

```

1060   \label{LWRindex-\arabic{LWR@autoindex}}%
1061   \endgroup
1062   \@esphack%
1063

```

```
1064 }% \AtBeginDocument
```

\@spindex

Patched to append _html to the file:

```
1065 \renewcommand{\@spindex}[2]{%
1066   \@ifundefined{#1@idxfile}{%
1067     {\ifreportnoidxfile
1068       \@memwarn{Undefined index file #1}%
1069     \fi
1070     \begingroup
1071     \@sanitize
1072     \@nowrindex}%
1073   {\def\@idxfile{#1_html}%
1074     \def\@sptheidx{#2}%
1075     \begingroup
1076     \@sanitize
1077     \@wrspindex}}
```

\makeindex

Patched to use _html filename and \BaseJobname:

```
1078 \catcode`\_=12%
1079 \renewcommand*{\makeindex}[1][\BaseJobname]{%
1080   \if@filesw
1081     \def\gindex{\@bsphack%
1082       \@ifnextchar [{\@index}{\@index[\BaseJobname]}}%
1083     \def\specialindex{\@bsphack\@spindex}%
1084     \makememindexhook
1085     \expandafter\newwrite\csname #1@idxfile\endcsname
1086     \expandafter\immediate\openout \csname #1@idxfile\endcsname #1_html.idx\relax
1087     \typeout{Writing index file #1_html.idx }%
1088   \fi}
1089 \catcode`\_=8%
```

\printindex

Patched to use _html filename and \BaseJobname. This will later be patched by the `lwarp` core.

```
1090 \catcode`\_=12%
1091 \renewcommand{\printindex}[1][\BaseJobname]{\@input{#1_html.ind}}
1092 \catcode`\_=8%

1093 \DeclareDocumentCommand{\newblock}{}{%
1094 %
1095 \renewcommand*{\showindexmarks}{}%
1096 \renewcommand*{\hideindexmarks}{}%
1097 %
1098 \renewcommand*{\xindyindex}{}%
```

§ 699.18 Miscellaneous

```
1099 \renewcommand*{\changemarks}{}%
1100 \renewcommand*{\nochangemarks}{}%
1101 \renewcommand*{\added}[1]{}%
1102 \renewcommand*{\deleted}[1]{}%
1103 \renewcommand*{\changed}[1]{}%
1104 %
1105 \renewcommand*{\showtrimsoff}{}%
1106 \renewcommand*{\showtrimson}{}%
1107 \renewcommand*{\trimXmarks}{}%
1108 \renewcommand*{\trimLmarks}{}%
```

```

1109 \renewcommand*\{\\trimFrame}{}
1110 \renewcommand*\{\\trimNone}{}
1111 \renewcommand*\{\\trimmarkscolor}{}
1112 \renewcommand*\{\\trimmarks}{}
1113 \renewcommand*\{\\tmarktl}{}
1114 \renewcommand*\{\\tmarktr}{}
1115 \renewcommand*\{\\tmarkbr}{}
1116 \renewcommand*\{\\tmarkbl}{}
1117 \renewcommand*\{\\tmarktm}{}
1118 \renewcommand*\{\\tmarkmr}{}
1119 \renewcommand*\{\\tmarkbm}{}
1120 \renewcommand*\{\\tmarkml}{}
1121 \renewcommand*\{\\trimmark}{}
1122 \renewcommand*\{\\quarkmarks}{}
1123 \renewcommand*\{\\registrationColour}{1}{}
1124
1125 \renewcommand*\{\\leavespergathering}{1}{}
1126
1127 \renewcommand*\{\\noprelistbreak}{}
1128
1129 \renewcommand*\{\\cleartorecto}{}
1130 \renewcommand*\{\\cleartoverso}{}
1131
1132 \renewenvironment{\\vplace}{1}[]{}{}
```

§ 699.19 **ccaption emulation**

```

1133 \renewcommand*\{\\captiondelim}{1}{\renewcommand*\{\\CaptionSeparator}{#1}}
1134 \renewcommand*\{\\captionnamefont}{1}{}
1135 \renewcommand*\{\\captiontitlefont}{1}{}
1136 \renewcommand*\{\\flushleftright}{}
1137 \renewcommand*\{\\centerlastline}{}
1138 \renewcommand*\{\\captionstyle}{2}[]{}
1139 \DeclareDocumentCommand{\\captionwidth}{m}{}
1140 \renewcommand*\{\\changecaptionwidth}{}
1141 \renewcommand*\{\\normalcaptionwidth}{}
1142 \renewcommand*\{\\hangcaption}{}
1143 \renewcommand*\{\\indentcaption}{1}{}
1144 \renewcommand*\{\\normalcaption}{}
1145 \renewcommand*\{\\precaption}{1}{}
1146 \renewcommand*\{\\postcaption}{1}{}
1147 \renewcommand*\{\\midbicaption}{1}{}
1148 \renewcommand*\{\\contcaption}{1}{%
1149 %    \\ContinuedFloat%
1150 %    \\caption{#1}%
1151     \\begin{LWR@figcaption}% later becomes \\caption*
1152     \\LWR@isolate{@nameuse{@capttype name}}~%
1153     \\thechapter.\\the\\value{@capttype}\\CaptionSeparator\\LWR@isolate{#1}%
1154     \\end{LWR@figcaption}%
1155 }

1156 \\newlength{\\abovelegendskip}
1157 \\setlength{\\abovelegendskip}{0.5\\baselineskip}
1158 \\newlength{\\belowlegendskip}
1159 \\setlength{\\belowlegendskip}{\\abovelegendskip}
```

The extra \\ here forces a
 in HTML when \\legend is used in a \\marginpar.

```

1160 \renewcommand*\{\\legend}{1}{\\begin{center}#1\\\\end{center}}
1161
```

```

1162 \renewcommand{\namedlegend}[2][]{%
1163   \begin{center}%
1164     @nameuse{fleg\@capttype}\CaptionSeparator#2\\
1165   \end{center}%
1166   @nameuse{flegtoc\@capttype}{#1}%
1167 }

```

\fleitable, \flegfigure, \flegtoctable, \flegtocfigure are defined by memoir using \newfloat. These are defined with an @ in \caption.

```

1168 \renewcommand{\newfixedcaption}[3][\caption]{%
1169   \renewcommand{\def\@capttype}{#3}#1}%
1170 \renewcommand{\renewfixedcaption}[3][\caption]{%
1171   \renewcommand{\def\@capttype}{#3}#1}%
1172 \renewcommand{\providefixedcaption}[3][\caption]{%
1173   \providecommand{\def\@capttype}{#3}#1}%
1174
1175 \renewcommand{\bitwonumcaption}[6][]{%
1176   \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1177   \addtocounter{@capttype}{-1}%
1178   \begingroup%
1179   \csdef{@capttype name}{#4}%
1180   \ifblank{#5}{\caption{#6}}{\caption[#5]{#6}}%
1181   \endgroup%
1182   \ifblank{#1}{}{\label{#1}}%
1183 }
1184
1185 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo
1186
1187 \renewcommand{\bicaption}[5][]{%
1188   \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1189   \begin{LWR@figcaption}% later becomes \caption*
1190   \LWR@isolate{#4} % space
1191   \thechapter.\the\value{@capttype}\CaptionSeparator\LWR@isolate{#5}%
1192   \end{LWR@figcaption}%
1193   \ifblank{#1}{}{\label{#1}}%
1194 }
1195
1196 \renewcommand{\bicontcaption}[3]{%
1197   \contcaption{#1}%
1198   \begingroup%
1199   \csdef{@capttype name}{#2}%
1200   \contcaption{#3}%
1201   \endgroup%
1202 }

```

Only in \caption, not in memoir:

```

1203 % \LetLtxMacro\longbitwonumcaption\bitwonumcaption%
1204 % \LetLtxMacro\longbionenumcaption\bitwonumcaption%
1205 % \LetLtxMacro\longbicaption\bicaption%

```

Patches for subfloats to support additional \warp labels:

```

1206 \renewcommand{@memsubbody}{%
1207   \bgroup
1208   \let\label=\memsub@label
1209   \ifdonemaincaption\else
1210     \advance\csname c@\@capttype\endcsname\@ne
1211   \fi

```

```
1212 % \refstepcounter{sub@\capttype}@\contkeep%
1213 %   \leavevmode%           lwarp
1214 \@ifnextchar [%%
1215   {\@memsubfig}%
1216   {\@memsubfig[\@empty]}}%
1217
1218 \renewcommand{\@memcontsubbody}{%
1219   \bgroup
1220   \let\label=\memsub@label
1221   \contset
1222   % \refstepcounter{sub@\capttype}@\contkeep%
1223 %   \leavevmode%           lwarp
1224 \ifnextchar [%%
1225   {\@memsubfig}%
1226   {\@memsubfig[\@empty]}}%
1227
1228
1229 \long\def\@memsubfloat#1[#2][#3]#4{%
1230 %   @tempcnta=\@ne
1231 %   \if@tightsubcap
1232 %     \if@minipage
1233 %       \@tempcnta=\z@
1234 %     \else
1235 %       \ifdim\lastskip=\z@
1236 %         \@tempcnta=\@ne
1237 %       \else
1238 %         \@tempcnta=\tw@
1239 %       \fi
1240 %     \fi
1241 %   \fi
1242 %   \if@contbotsub
1243 %     \def\subfig@top{\subfloat@topskip}%
1244 %     \def\subfig@bottom{\subfloat@bottomskip}%
1245 %   \else
1246 %     \def\subfig@top{\subfloat@bottomskip}%
1247 %     \def\subfig@bottom{\subfloat@topskip}%
1248 %   \fi
1249 %   \setbox\@tempboxa \hbox{#4}%
1250 %   \tempdima=\wd\@tempboxa
1251 %   \vbox
1252   \bgroup%
1253   \mem@step@subcounter%
1254 %   \vbox
1255 %   \LWR@stoppars%
1256 %   \minipagefullwidth%           lwarp
1257 %   \begin{minipage}{\linewidth}%
1258   \bgroup
1259 %   \ifcase\@tempcnta
1260 %     \minipagetrue
1261 %   \or
1262 %     \vspace{\subfig@top}
1263 %   \or
1264 %     \ifdim\lastskip=\z@ \else
1265 %       \tempskipb\subfig@top\@xaddvskip
1266 %     \fi
1267 %   \fi
1268   \if@contbotsub
1269     #4% \box\@tempboxa
1270   \egroup
1271   \ifx\@empty#3\relax \else
```

```

1272 %           \vskip\subfloatcapskip
1273           \@memsubcaption{\#1}{\#2}{\#3}%
1274           \fi
1275           \else
1276           \ifx \empty\relax \else
1277           \@memsubcaption{\#1}{\#2}{\#3}%
1278 %           \vskip\subfloatcapskip
1279 %           \vskip\subfloatcaptopadj
1280           \fi\egroup
1281           #4% \box@\tempboxa
1282           \fi
1283 %           \vspace{\subfig@bottom}
1284           \end{minipage}%
1285           \LWR@startpars%           lwarp
1286           \egroup
1287 \egroup
1288 }
```

§ 699.20 Final patchwork

```

1289 \newlistof{tableofcontents}{toc}{\contentsname}
1290 \newlistof{listoffigures}{lof}{\listfigurename}
1291 \newlistof{listoftables}{lot}{\listtablename}
```

File 591 **lwarp-common-multimedia.sty**

§ 700 Package **common-multimedia**

lwarp-common-multimedia (*Pkg*) Common code for multimedia, **movie15**, and **media9**.

The packages **multimedia**, **movie15**, and **media9** are supported.

HTML5 `<audio>` and `<video>` objects are created for `.mp3` and `.mp4` files.

HTML5 `<embed>` objects are created for `http` and `ftp` links.

`\href` links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by **HTML5**.)

For **media9**, a multimedia object is inserted for each `addresource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each **HTML** multimedia object includes the poster text, except for `<embed>` objects. For **movie15**, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The **HTML** object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 `\addmediapath` is supported. It is assumed that the same path structure will exist for the **HTML** document.

HTML5 media controls are always specified for each <audio> and <video> object.

media9 slideshows are not supported.

\hyperlinkmovie, \movieref, and \mediabutton are not supported.

3D objects are not supported.

If using a YouTube™ video, use an “embedded” URL with .../embed/... instead of .../v/...

for HTML output: 1 \ProvidesPackage{l warp-common-multimedia}[2019/04/22]

```

2 \RequirePackage{xkeyval}
3
4 \define@key{LWR@multimedia}{width}{\setlength{\LWR@multimedia@width}{#1}}
5 \define@key{LWR@multimedia}{height}{\setlength{\LWR@multimedia@height}{#1}}
6 \define@key{LWR@multimedia}{totalheight}{\setlength{\LWR@multimedia@height}{#1}}

7 \newlength{\LWR@multimedia@width}
8 \newlength{\LWR@multimedia@height}
9 \newlength{\LWR@multimedia@maxdimension}
```

\LWR@multimedia@printsize

Proportional to \linewidth and the viewport’s smaller dimension. This scales each object such that it will always fit on the screen, even if a tall or wide object inside a tall or wide viewport.

```

10 \newcommand*\LWR@multimedia@printsize{%
11   \setlength{\LWR@multimedia@maxdimension}{%
12     \maxof{%
13       {\linewidth}%
14       {\maxof{\LWR@multimedia@width}{\LWR@multimedia@height}}%
15     }%
16   \setlength{\LWR@multimedia@maxdimension}{1.1\LWR@multimedia@maxdimension}%
17   \ifdimgreater{\LWR@multimedia@width}{0pt}{%
18     width:%
19     \LWR@printpercentlength%
20     {\LWR@multimedia@width}%
21     {\LWR@multimedia@maxdimension}vmin ; % space
22   }{}%
23   \ifdimgreater{\LWR@multimedia@height}{0pt}{%
24     height:%
25     \LWR@printpercentlength%
26     {\LWR@multimedia@height}%
27     {\LWR@multimedia@maxdimension}vmin ; % space
28   }{}%
29 }
```

\LWR@multimedia@fileAV

{<poster text>} {<filename>} {<audio/video>} {<mimetype>}

Creates a video or audio from a file. The 2019/10 update of the LATEX kernel may cause extra quotes to be added in the filenames. They are removed here.

```

30 \newcommand*\LWR@multimedia@fileAV[4]{%
31 \IfFileExists{#2}{% also sets \@filef@und
32 \StrSubstitute[100]{\@filef@und}{""}{\LWR@parsedfilename}%
33 }
```

The container <div> is sized as desired.

```
33   \ifstreq{#3}{audio}{%
```

```

34      \begin{BlockClass}{AVviewport}
35  }{%
36      \begin{BlockClass}[\LWR@multimedia@printsize\ margin:auto]{AVviewport}
37  }

```

Paragraph tags are unnecessary for the A/v tags.

```
38  \LWR@stopars
```

The A/v element is 100% of the container.

```

39  \LWR@htmltag{%
40      #3\ % space
41      \ifstreq{\#3}{audio}{%
42          width=\textquotedbl{}100\%\textquotedbl\ % space
43          height=\textquotedbl{}100\%\textquotedbl\ % space
44      }%
45      controls%
46  }\LWR@newline

```

The file source and type:

```

47  \LWR@htmltag{%
48      source % space
49      src=\textquotedbl%
50      \LWR@parsedfilename\unskip\textquotedbl\ % space
51      type=\textquotedbl{}\#4\textquotedbl}

```

The poster text inside paragraph tags, along with a reference to the file.

```

52  \LWR@startpars
53  \LWR@href{\LWR@parsedfilename}{#1}
54  \LWR@stopars

```

Finish.

```

55  \LWR@htmltag{/#3}\LWR@newline
56  \end{BlockClass}
57 }{%
58  \PackageError{lwarp-common-multimedia}{%
59      {File '#2' not found}
60      {Perhaps an incorrect path?}}
61 }%
62 }

```

\LWR@multimedia@httpAV {⟨poster text⟩} {⟨filename⟩} {⟨audio/video⟩} {⟨mimetype⟩}

Creates a video or audio from a URL link.

```
63 \newcommand*{\LWR@multimedia@httpAV}[4]{%
```

The container <div> is sized as desired.

```

64  \ifstreq{\#3}{audio}{%
65      \begin{BlockClass}{AVviewport}
66  }{%
67      \begin{BlockClass}[\LWR@multimedia@printsize\ margin:auto]{AVviewport}
68  }

```

Paragraph tags are unnecessary for the A/v tags.

```
69  \LWR@stopars
```

The A/v element is 100% of the container.

```

70  \LWR@htmltag{%
71      #3\ % space

```

```

72      \ifstrelqual{\#3}{audio}{}{%
73          width=\textquotedbl{}100\%\textquotedbl\ % space
74          height=\textquotedbl{}100\%\textquotedbl\ controls%
75      }%
76  }\LWR@newline

```

The file source and type:

```

77  \LWR@htmltag{%
78      source % space
79      src=\textquotedbl#2\textquotedbl\ % space
80      type=\textquotedbl#4\textquotedbl}

```

The poster text inside paragraph tags, along with a reference to the URL.

```

81  \LWR@startpars
82  \LWR@href{\#2}{\#1}
83  \LWR@stoppars

```

Finish.

```

84  \LWR@htmltag{/3}\LWR@newline
85  \end{BlockClass}
86 }

```

\LWR@multimedia@AV {⟨poster text⟩} {⟨filename⟩} {⟨audio/video⟩} {⟨mimetype⟩}

Creates an audio or video from a file or a URL.

```

87 \newcommand*{\LWR@multimedia@AV}[4]{%
88     \IfBeginWith{\#2}{http}{%
89         {\LWR@multimedia@httpAV{\#1}{\#2}{\#3}{\#4}}%
90     }%
91     \IfBeginWith{\#2}{HTTP}{%
92         {\LWR@multimedia@httpAV{\#1}{\#2}{\#3}{\#4}}%
93         {\LWR@multimedia@fileAV{\#1}{\#2}{\#3}{\#4}}%
94     }%
95 }

```

\LWR@multimedia@embed {⟨poster text⟩} {⟨URL or filename⟩} {⟨mime type⟩}

Embeds multimedia of an arbitrary type. The poster text is not used, as it would appear along with the video if the <embed> element is supported.

```

96 \newcommand*{\LWR@multimedia@embed}[3]{%
97     \begin{BlockClass}[width:100\%]{AVviewport}%
98     \LWR@stoppars
99     \LWR@htmltag{%
100         embed % space
101         \ifblank{\#3}{\type=\textquotedbl#3\textquotedbl\ }%
102         style=\textquotedbl\LWR@multimedia@printsize\ margin:auto\textquotedbl\ % space
103         src=\textquotedbl#2\textquotedbl\ % space
104     }%
105     \LWR@startpars
106     \end{BlockClass}
107 }

```

Error message if the comment character is used among the arguments of

\LWR@multimedia@percenterror \LWR@multimediab.

```

108 \newcommand*{\LWR@multimedia@percenterror}{%
109     \PackageError{lwarp-media}{%
110     {%

```

```

111      Do not use a percent comment between\MessageBreak
112      \protect\includemedia\space arguments%
113  }
114  {%
115      Percent is changed to a regular character\MessageBreak
116      to allow its use inside a URL.%
117  }
118 }
```

\LWR@multimediac

[<options>] {<poster text>} {<filename>}

Creates multimedia. Examines the file extension to determine the type. If not a supported type, creates an embedded object if it has a URL. If neither, create a link to the unsupported object.

```
119 \newcommand*{\LWR@multimediac}[3][]{%
```

Error if the percent character appears among the arguments. This could happen since the comment character has been temporarily disabled, for use in a URL.

```

120  \if#1@percentchar\LWR@multimedia@percenterror\fi%
121  \if#2@percentchar\LWR@multimedia@percenterror\fi%
122  \if#3@percentchar\LWR@multimedia@percenterror\fi%
```

Paragraph handling:

```
123  \LWR@stoppars%
```

Record the desired size.

```

124  \setlength{\LWR@multimedia@width}{0pt}%
125  \setlength{\LWR@multimedia@height}{0pt}%
126  \setkeys*{\LWR@multimedia}{#1}%
```

If a known A/V type, create an HTML5 <video> or <audio>.

```

127  \IfEndWith{#3}{.mp4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
128  \IfEndWith{#3}{.MP4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
129  \IfEndWith{#3}{.mp3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%
130  \IfEndWith{#3}{.MP3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%
```

If an arbitrary URL, embed it.

```

131  \IfBeginWith{#3}{http}{\LWR@multimedia@embed{#2}{#3}{}}{%
132  \IfBeginWith{#3}{HTTP}{\LWR@multimedia@embed{#2}{#3}{}}{%
133  \IfBeginWith{#3}{ftp}{\LWR@multimedia@embed{#2}{#3}{}}{%
134  \IfBeginWith{#3}{FTP}{\LWR@multimedia@embed{#2}{#3}{}}{%
```

If unknown, create a link to it.

```

135  \LWR@href{#3}{#2}%
136  }}}}{}%}}
```

Paragraph handling:

```

137  \LWR@startpars%
138  \endgroup%
139 }
```

Catcodes which may appear in a URL.

```

140 \newrobustcmd*{\LWR@multimedia}{%
141  \begingroup%
142  \LWR@linkmediacatcodes%
143  \LWR@multimediacb%
144 }
```

File 592 **l warp-common-mathjax-letters.sty**

§ 701 Package **common-mathjax-letters**

l warp-common-mathjax-letters Common code used by a number of packages to generate Greek math characters
 (Pkg) for MATHJAX.

for HTML output: 1 \ProvidesPackage{l warp-common-mathjax-letters}[2020/08/10]

\LWR@mathjax@addletter * {⟨2: capitalize name?⟩} {⟨3: prefix⟩} {⟨4: postfix⟩} {⟨5: name⟩} {⟨6: unicode⟩}
 Star to italicize the result, used when the unicode character does not exist.

```

2 \begin{warpMathJax}
3
4 \NewDocumentCommand{\LWR@mathjax@addletter}{s m m m m m}{
5   \IfBooleanTF{#2}{%
6     \edef\LWR@tempone{\LWRtexttitlecase{#5}}%
7     \edef\LWR@tempone{#5}%
8     \xdef\LWR@customizedMathJax{%
9       \LWR@customizedMathJax%
10      \LWRbackslash{%
11        \LWRbackslash def\LWRbackslash{%
12          #3% prefix
13          \LWR@tempone%name
14          #4% postfix
15          \LWRleftbrace{%
16            }%
17          \IfBooleanTF{#1}{%
18            \xdef\LWR@customizedMathJax{%
19              \LWR@customizedMathJax%
20              \LWRbackslash mathit\LWRleftbrace{%
21                \LWRbackslash unicode\LWRleftbrace x\#6\LWRrightbrace{%
22                  \LWRrightbrace{%
23                    }%
24                  }{%
25                    \xdef\LWR@customizedMathJax{%
26                      \LWR@customizedMathJax%
27                      \LWRbackslash unicode\LWRleftbrace x\#6\LWRrightbrace{%
28                        }%
29                      }%
30                    \xdef\LWR@customizedMathJax{%
31                      \LWR@customizedMathJax%
32                      \LWRrightbrace\LWRbackslash}\par%
33                    }%
34                  }%
35
36 \NewDocumentCommand{\LWR@mathjax@addgreek@l@up}{s m m}{%
37   \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{03B1}}
```

* {⟨2: prefix⟩} {⟨3: postfix⟩}

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, lowercase upright.

```

35 \NewDocumentCommand{\LWR@mathjax@addgreek@l@up}{s m m}{%
36   \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{03B1}}
```

```

37  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{beta}{03B2}
38  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varbeta}{03D0}
39  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{gamma}{03B3}
40  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{digamma}{03DD}
41  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{delta}{03B4}
42  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{epsilon}{03F5}
43  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varepsilon}{03B5}
44  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{zeta}{03B6}
45  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{eta}{03B7}
46  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{theta}{03B8}
47  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{vartheta}{03D1}
48  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{iota}{03B9}
49  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{kappa}{03BA}
50  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varkappa}{03F0}
51  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{lambda}{03BB}
52  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{mu}{03BC}
53  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{nu}{03BD}
54  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{xi}{03BE}
55  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omicron}{03BF}
56  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{pi}{03C0}
57  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varpi}{03D6}
58  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{rho}{03C1}
59  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varrho}{03F1}
60  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{sigma}{03C3}
61  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varsigma}{03C2}
62  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{tau}{03C4}
63  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{upsilon}{03C5}
64  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{phi}{03D5}
65  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varphi}{03C6}
66  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{chi}{03C7}
67  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{psi}{03C8}
68  \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omega}{03C9}
69 }

```

* {<2: prefix>} {<3: postfix>}

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, uppercase upright.

```

70 \NewDocumentCommand{\LWR@mathjax@addgreek@u@up}{s m m}{%
71   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{alpha}{0391}
72   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{beta}{0392}
73   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{gamma}{0393}
74   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{digamma}{03DC}
75   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{delta}{0394}
76   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{epsilon}{0395}
77   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{zeta}{0396}
78   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{eta}{0397}
79   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{theta}{0398}
80   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{vartheta}{03F4}
81   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{iota}{0399}
82   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{kappa}{039A}
83   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{lambda}{039B}
84   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{mu}{039C}
85   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{nu}{039D}
86   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{xi}{039E}
87   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omicron}{039F}
88   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{pi}{03A0}
89   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varpi}{03D6}

```

\LWR@mathjax@addgreek@u@up

```

90   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{rho}{03A1}
91   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{sigma}{03A3}
92   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{tau}{03A4}
93   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{upsilon}{03A5}
94   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{phi}{03A6}
95   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{chi}{03A7}
96   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{psi}{03A8}
97   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omega}{03A9}
98 }

```

* { $\langle 2: prefix \rangle$ } { $\langle 3: postfix \rangle$ }

Star to capitalize the macro names.

Adds `\CustomizeMathjax` expressions to define a set of macros for Greek letters, lowercase italic.

```

99 \NewDocumentCommand{\LWR@mathjax@addgreek@l@it}{s m m}{
100   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{alpha}{1D6FC}
101   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{beta}{1D6FD}
102   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varbeta}{03D0}
103   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{gamma}{1D6FE}
104   \LWR@mathjax@addletter*{\#1}{\#2}{\#3}{digamma}{03DD}
105   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{delta}{1D6FF}
106   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{epsilon}{1D716}
107   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varepsilon}{1D700}
108   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{zeta}{1D701}
109   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{eta}{1D702}
110   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{theta}{1D703}
111   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{vartheta}{1D717}
112   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{iota}{1D704}
113   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{kappa}{1D705}
114   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varkappa}{1D718}
115   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{lambda}{1D706}
116   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{mu}{1D707}
117   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{nu}{1D708}
118   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{xi}{1D709}
119   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omicron}{1D70A}
120   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{pi}{1D70B}
121   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varpi}{1D71B}
122   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{rho}{1D70C}
123   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varrho}{1D71A}
124   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{sigma}{1D70E}
125   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varsigma}{1D70D}
126   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{tau}{1D70F}
127   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{upsilon}{1D710}
128   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{phi}{1D719}
129   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varphi}{1D711}
130   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{chi}{1D712}
131   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{psi}{1D713}
132   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omega}{1D714}
133 }

```

* { $\langle 2: prefix \rangle$ } { $\langle 3: postfix \rangle$ }

Star to capitalize the macro names.

Adds `\CustomizeMathjax` expressions to define a set of macros for Greek letters, uppercase italic.

```

134 \NewDocumentCommand{\LWR@mathjax@addgreek@u@it}{s m m}{
135   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{alpha}{1D6E2}

```

```

136   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{beta}{1D6E3}
137   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{gamma}{1D6E4}
138   \LWR@mathjax@addletter*\{\#1}{\#2}{\#3}{digamma}{03DC}
139   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{delta}{1D6E5}
140   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{epsilon}{1D6E6}
141   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{zeta}{1D6E7}
142   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{eta}{1D6E8}
143   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{theta}{1D6E9}
144   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{vartheta}{1D6F3}
145   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{iota}{1D6EA}
146   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{kappa}{1D6EB}
147   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{lambda}{1D6EC}
148   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{mu}{1D6ED}
149   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{nu}{1D6EE}
150   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{xi}{1D6EF}
151   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omicron}{1D6F0}
152   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{pi}{1D6F1}
153   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{rho}{1D6F2}
154   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{sigma}{1D6F4}
155   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{tau}{1D6F5}
156   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{upsilon}{1D6F6}
157   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{phi}{1D6F7}
158   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{chi}{1D6F8}
159   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{psi}{1D6F9}
160   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omega}{1D6FA}
161 }

```

* {<2: prefix>} {<3: postfix>}

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, lowercase boldface italic.

```

162 \NewDocumentCommand{\LWR@mathjax@addgreek@l@bfit}{s m m}{%
163   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{alpha}{1D736}
164   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{beta}{1D737}
165   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varbeta}{03D0}
166   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{gamma}{1D738}
167   \LWR@mathjax@addletter*\{\#1}{\#2}{\#3}{digamma}{03DD}
168   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{delta}{1D739}
169   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{epsilon}{1D750}
170   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varepsilon}{1D73A}
171   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{zeta}{1D73B}
172   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{eta}{1D73C}
173   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{theta}{1D73D}
174   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{vartheta}{1D751}
175   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{iota}{1D73E}
176   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{kappa}{1D73F}
177   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varkappa}{1D752}
178   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{lambda}{1D740}
179   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{mu}{1D741}
180   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{nu}{1D742}
181   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{xi}{1D743}
182   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omicron}{1D744}
183   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{pi}{1D745}
184   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varpi}{1D755}
185   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{rho}{1D746}
186   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varrho}{1D754}
187   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{sigma}{1D748}
188   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{varsigma}{1D747}

```

```

189  \LWR@mathjax@addletter{#1}{#2}{#3}{tau}{1D749}
190  \LWR@mathjax@addletter{#1}{#2}{#3}{upsilon}{1D74A}
191  \LWR@mathjax@addletter{#1}{#2}{#3}{phi}{1D753}
192  \LWR@mathjax@addletter{#1}{#2}{#3}{varphi}{1D74B}
193  \LWR@mathjax@addletter{#1}{#2}{#3}{chi}{1D74C}
194  \LWR@mathjax@addletter{#1}{#2}{#3}{psi}{1D74D}
195  \LWR@mathjax@addletter{#1}{#2}{#3}{omega}{1D74E}
196 }

```

* {<2: prefix>} {<3: postfix>}

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, uppercase boldface italic.

```

197 \NewDocumentCommand{\LWR@mathjax@addgreek@u@bf}{s m m}{%
198  \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{1D71C}
199  \LWR@mathjax@addletter{#1}{#2}{#3}{beta}{1D71D}
200  \LWR@mathjax@addletter{#1}{#2}{#3}{gamma}{1D71E}
201  \LWR@mathjax@addletter*{#1}{#2}{#3}{digamma}{03DC}
202  \LWR@mathjax@addletter{#1}{#2}{#3}{delta}{1D71F}
203  \LWR@mathjax@addletter{#1}{#2}{#3}{epsilon}{1D720}
204  \LWR@mathjax@addletter{#1}{#2}{#3}{zeta}{1D721}
205  \LWR@mathjax@addletter{#1}{#2}{#3}{eta}{1D722}
206  \LWR@mathjax@addletter{#1}{#2}{#3}{theta}{1D723}
207  \LWR@mathjax@addletter{#1}{#2}{#3}{vartheta}{1D72D}
208  \LWR@mathjax@addletter{#1}{#2}{#3}{iota}{1D724}
209  \LWR@mathjax@addletter{#1}{#2}{#3}{kappa}{1D725}
210  \LWR@mathjax@addletter{#1}{#2}{#3}{lambda}{1D726}
211  \LWR@mathjax@addletter{#1}{#2}{#3}{mu}{1D727}
212  \LWR@mathjax@addletter{#1}{#2}{#3}{nu}{1D728}
213  \LWR@mathjax@addletter{#1}{#2}{#3}{xi}{1D729}
214  \LWR@mathjax@addletter{#1}{#2}{#3}{omicron}{1D72A}
215  \LWR@mathjax@addletter{#1}{#2}{#3}{pi}{1D72B}
216  \LWR@mathjax@addletter{#1}{#2}{#3}{rho}{1D72C}
217  \LWR@mathjax@addletter{#1}{#2}{#3}{sigma}{1D72E}
218  \LWR@mathjax@addletter{#1}{#2}{#3}{tau}{1D72F}
219  \LWR@mathjax@addletter{#1}{#2}{#3}{upsilon}{1D730}
220  \LWR@mathjax@addletter{#1}{#2}{#3}{phi}{1D731}
221  \LWR@mathjax@addletter{#1}{#2}{#3}{chi}{1D732}
222  \LWR@mathjax@addletter{#1}{#2}{#3}{psi}{1D733}
223  \LWR@mathjax@addletter{#1}{#2}{#3}{omega}{1D734}
224 }

```

\LWR@mathjax@addgreek@u@bfup is not needed.

* {<2: prefix>} {<3: postfix>}

Star to capitalize the macro names.

Adds \CustomizeMathjax expressions to define a set of macros for Greek letters, uppercase boldface upright.

```

225 \NewDocumentCommand{\LWR@mathjax@addgreek@u@bfup}{s m m}{%
226  \LWR@mathjax@addletter{#1}{#2}{#3}{alpha}{1D6A8}
227  \LWR@mathjax@addletter{#1}{#2}{#3}{beta}{1D6A9}
228  \LWR@mathjax@addletter{#1}{#2}{#3}{gamma}{1D6AA}
229  \LWR@mathjax@addletter*{#1}{#2}{#3}{digamma}{03DC}
230  \LWR@mathjax@addletter{#1}{#2}{#3}{delta}{1D6AB}
231  \LWR@mathjax@addletter{#1}{#2}{#3}{epsilon}{1D6AC}
232  \LWR@mathjax@addletter{#1}{#2}{#3}{zeta}{1D6AD}

```

```

233   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{eta}{1D6AE}
234   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{theta}{1D6AF}
235   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{vartheta}{1D6B9}
236   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{iota}{1D6B0}
237   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{kappa}{1D6B1}
238   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{lambda}{1D6B2}
239   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{mu}{1D6B3}
240   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{nu}{1D6B4}
241   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{xi}{1D6B5}
242   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omicron}{1D6B6}
243   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{pi}{1D6B7}
244   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{rho}{1D6B8}
245   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{sigma}{1D6BA}
246   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{tau}{1D6BB}
247   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{upsilon}{1D6BC}
248   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{phi}{1D6BD}
249   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{chi}{1D6BE}
250   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{psi}{1D6BF}
251   \LWR@mathjax@addletter{\#1}{\#2}{\#3}{omega}{1D6C0}
252 }

```

{*prefix*}

\LWR@mathjax@addlatin@u@bfit Adds \CustomizeMathjax expressions to define a set of macros for bold-face italic Latin letters, uppercase and lowercase.

```

253 \NewDocumentCommand{\LWR@mathjax@addlatin@u@bfit}{m}{
254   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{A}{1D468}
255   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{B}{1D469}
256   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{C}{1D46A}
257   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{D}{1D46B}
258   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{E}{1D46C}
259   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{F}{1D46D}
260   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{G}{1D46E}
261   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{H}{1D46F}
262   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{I}{1D470}
263   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{J}{1D471}
264   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{K}{1D472}
265   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{L}{1D473}
266   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{M}{1D474}
267   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{N}{1D475}
268   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{O}{1D476}
269   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{P}{1D477}
270   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{Q}{1D478}
271   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{R}{1D479}
272   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{S}{1D47A}
273   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{T}{1D47B}
274   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{U}{1D47C}
275   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{V}{1D47D}
276   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{W}{1D47E}
277   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{X}{1D47F}
278   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{Y}{1D480}
279   \LWR@mathjax@addletter{\BooleanFalse}{\#1}{}{Z}{1D481}
280 }

```

{*prefix*}

\LWR@mathjax@addlatin@l@bfit Adds \CustomizeMathjax expressions to define a set of macros for bold-face italic Latin letters, uppercase and lowercase.

```
281 \NewDocumentCommand{\LWR@mathjax@addlatin@l@bfit}{m}{
```

```

282   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{a}{1D482}
283   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{b}{1D483}
284   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{c}{1D484}
285   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{d}{1D485}
286   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{e}{1D486}
287   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{f}{1D487}
288   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{g}{1D488}
289   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{h}{1D489}
290   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{i}{1D48A}
291   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{j}{1D48B}
292   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{k}{1D48C}
293   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{l}{1D48D}
294   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{m}{1D48E}
295   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{n}{1D48F}
296   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{o}{1D490}
297   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{p}{1D491}
298   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{q}{1D492}
299   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{r}{1D493}
300   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{s}{1D494}
301   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{t}{1D495}
302   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{u}{1D496}
303   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{v}{1D497}
304   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{w}{1D498}
305   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{x}{1D499}
306   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{y}{1D49A}
307   \LWR@mathjax@addletter{\BooleanFalse}{#1}{}{z}{1D49B}
308 }

309 \end{warpMathJax}

```

File 593 **lwarp-common-mathjax-newpxtxmath.sty**

§ 702 Package **common-mathjax-newpxtxmath**

(Emulates or patches code by MICHAEL SHARPE.)

lwarp-common-mathjax-newpxtxmath Common code used by newpxmath, newtxmath, and newtxsf for MATHJAX.

(Pkg)

for HTML output: 1 \ProvidesPackage{lwarp-common-mathjax-newpxtxmath}[2020/09/20]

For MATHJAX:

```

2 \LWR@origRequirePackage{lwarp-common-mathjax-nonunicode}
3 \LWR@origRequirePackage{lwarp-common-mathjax-overlaysymbols}
4
5 \begin{warpMathJax}
6 \CustomizeMathJax{\newcommand{\fAlt}{f}}
7 \CustomizeMathJax{\newcommand{\rhoAlt}{\rho}}
8
9 \CustomizeMathJax{\newcommand{\imathscr}{\mathord{\mathscr{i}}}}
10 \CustomizeMathJax{\newcommand{\jmathscr}{\mathord{\mathscr{j}}}}

```

lwarp_mathjax.txt adds \left/\right support for delimiters.

```

11 \CustomizeMathJax{\let\llbracket\lBrack}
12 \CustomizeMathJax{\let\rrbracket\rBrack}

```

```
13
14 \CustomizeMathJax{\let\smbrace{\{}}
15 \CustomizeMathJax{\let\smrbrace{\}}
16 \CustomizeMathJax{\newcommand{\Perp}{\mathrel{\!\!unicode{x02AEB}}}}
17 \CustomizeMathJax{\newcommand{\nPerp}{\mathrel{\!\not{!}\!unicode{x02AEB}}}}
18 \CustomizeMathJax{\newcommand{\Zbar}{\mathord{\!\!unicode{x01B5}}}}
19 \CustomizeMathJax{\newcommand{\Angstrom}{\mathord{\!\!unicode{x212B}}}}
20 \CustomizeMathJax{\newcommand{\Euler}{\mathord{\!\!unicode{x2107}}}}
21 \CustomizeMathJax{\newcommand{\transp}{\mathord{\!\!unicode{xFF34}}}}
22 \CustomizeMathJax{\newcommand{\hermtransp}{\mathord{\!\!unicode{xFF28}}}}
23 \CustomizeMathJax{\let\htransp=\hermtransp}
24 \CustomizeMathJax{\newcommand{\circledplus}{\mathbin{\!\!unicode{x2295}}}}
25 \CustomizeMathJax{\newcommand{\circledminus}{\mathbin{\!\!unicode{x2296}}}}
26 \CustomizeMathJax{\newcommand{\circledtimes}{\mathbin{\!\!unicode{x2297}}}}

27 \CustomizeMathJax{\newcommand{\circledslash}{\mathbin{\!\!unicode{x2298}}}}
28 %
29 \CustomizeMathJax{\newcommand{\circleddot}{\mathbin{\!\!unicode{x2299}}}}
30 \CustomizeMathJax{\let\overgroup\overparen}
31 \CustomizeMathJax{\let\overgroupra\overrightarrow}
32 \CustomizeMathJax{\let\undergroup\underparen}
33 \CustomizeMathJax{\let\undergroupla\underleftarrow}
34 \CustomizeMathJax{\newcommand{\widering}[1]{%
35   \stackrel{\!\!unicode{x2218}}{\overgroup{#1}}%
36 }%
37 \CustomizeMathJax{\let\widearc\overparen}
38 \CustomizeMathJax{\let\wideOarc\overrightarrow}
39 \CustomizeMathJax{\newcommand{\LWRvstar}[2]{\overrightarrow{\ifstar{\LWRvstar}{}}{#1}{#2}}}
40 \CustomizeMathJax{\newcommand{\vv}{\ifstar{\LWRvstar}{\overrightarrow{}}}}
41 %
42 \CustomizeMathJax{\let\smallintsl\smallint}
43 \CustomizeMathJax{\newcommand{\smallintsl}{\mathop{\!\!unicode{x222C}}\limits}}
44 \CustomizeMathJax{\newcommand{\smalliiintsl}{\mathop{\!\!unicode{x222D}}\limits}}
45 \CustomizeMathJax{\newcommand{\smalliiiintsl}{\mathop{\!\!unicode{x2A0C}}\limits}}
46 \CustomizeMathJax{\newcommand{\smallointsl}{\mathop{\!\!unicode{x222E}}\limits}}
47 \CustomizeMathJax{\newcommand{\smalloiintsl}{\mathop{\!\!unicode{x222F}}\limits}}
48 \CustomizeMathJax{\newcommand{\smalloiintsl}{\mathop{\!\!unicode{x2230}}\limits}}
49 \CustomizeMathJax{\newcommand{\smallvarointclockwisesl}{%
50   \mathop{\!\!unicode{x2232}}\limits%
51 }%
52 \CustomizeMathJax{\newcommand{\smallointctrclockwisesl}{%
53   \mathop{\!\!unicode{x2233}}\limits%
54 }%
55 \CustomizeMathJax{\newcommand{\smallsumintsl}{\mathop{\!\!unicode{x2A0B}}\limits}}
56 \CustomizeMathJax{\newcommand{\smallfintsl}{\mathop{\!\!unicode{x2A0F}}\limits}}
57 \CustomizeMathJax{\newcommand{\smallsqintsl}{\mathop{\!\!unicode{x2A16}}\limits}}
58 %
59 \CustomizeMathJax{\let\smallintup\smallint}
60 \CustomizeMathJax{\newcommand{\smalliintup}{\mathop{\!\!unicode{x222C}}\limits}}
61 \CustomizeMathJax{\newcommand{\smalliiintup}{\mathop{\!\!unicode{x222D}}\limits}}
62 \CustomizeMathJax{\newcommand{\smalliiiintup}{\mathop{\!\!unicode{x2A0C}}\limits}}
63 \CustomizeMathJax{\newcommand{\smallointup}{\mathop{\!\!unicode{x222E}}\limits}}
64 \CustomizeMathJax{\newcommand{\smalloiintup}{\mathop{\!\!unicode{x222F}}\limits}}
65 \CustomizeMathJax{\newcommand{\smalloiintup}{\mathop{\!\!unicode{x2230}}\limits}}
66 \CustomizeMathJax{\newcommand{\smallvarointclockwiseup}{%
67   \mathop{\!\!unicode{x2232}}\limits%
68 }%
69 \CustomizeMathJax{\newcommand{\smallointctr-clockwiseup}{%
70   \mathop{\!\!unicode{x2233}}\limits%
71 }}}
```

```
72 \CustomizeMathJax{\newcommand{\smallsumintup}{\mathop{\text{\scriptsize\texttt{unicode{x2A0B}}}}\limits}}
73 \CustomizeMathJax{\newcommand{\smallfintup}{\mathop{\text{\scriptsize\texttt{unicode{x2A0F}}}}\limits}}
74 \CustomizeMathJax{\newcommand{\smallsqintup}{\mathop{\text{\scriptsize\texttt{unicode{x2A16}}}}\limits}}
75 %
76 \CustomizeMathJax{\newcommand{\aint}{\mathop{\text{\scriptsize\texttt{unicode{x222C}}}}\limits}}
77 \CustomizeMathJax{\newcommand{\iiint}{\mathop{\text{\scriptsize\texttt{unicode{x222D}}}}\limits}}
78 \CustomizeMathJax{\newcommand{\iiiiint}{\mathop{\text{\scriptsize\texttt{unicode{x2A0C}}}}\limits}}
79 \CustomizeMathJax{\newcommand{\oiint}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
80 \CustomizeMathJax{\newcommand{\oiiiint}{\mathop{\text{\scriptsize\texttt{unicode{x2230}}}}\limits}}
81 \CustomizeMathJax{\newcommand{\varointclockwise}{\mathop{\text{\scriptsize\texttt{unicode{x2232}}}}\limits}}
82 \CustomizeMathJax{\newcommand{\ointctrlclockwise}{\mathop{\text{\scriptsize\texttt{unicode{x2233}}}}\limits}}
83 \CustomizeMathJax{\newcommand{\sumint}{\mathop{\text{\scriptsize\texttt{unicode{x2A0B}}}}\limits}}
84 \CustomizeMathJax{\newcommand{\fint}{\mathop{\text{\scriptsize\texttt{unicode{x2A0F}}}}\limits}}
85 \CustomizeMathJax{\newcommand{\sqint}{\mathop{\text{\scriptsize\texttt{unicode{x2A16}}}}\limits}}
86 %
87 \CustomizeMathJax{\let\intsl\int}
88 \CustomizeMathJax{\newcommand{\intsl}{\mathop{\text{\scriptsize\texttt{unicode{x222C}}}}\limits}}
89 \CustomizeMathJax{\newcommand{\iiintsl}{\mathop{\text{\scriptsize\texttt{unicode{x222D}}}}\limits}}
90 \CustomizeMathJax{\newcommand{\iiiiintsl}{\mathop{\text{\scriptsize\texttt{unicode{x2A0C}}}}\limits}}
91 \CustomizeMathJax{\let\ointsl\oint}
92 \CustomizeMathJax{\newcommand{\oiintsl}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
93 \CustomizeMathJax{\newcommand{\oiiiintsl}{\mathop{\text{\scriptsize\texttt{unicode{x2230}}}}\limits}}
94 \CustomizeMathJax{\newcommand{\varointclockwisesl}{\mathop{\text{\scriptsize\texttt{unicode{x2232}}}}\limits}}
95 \CustomizeMathJax{\newcommand{\ointctrlclockwisesl}{\mathop{\text{\scriptsize\texttt{unicode{x2233}}}}\limits}}
96 \CustomizeMathJax{\newcommand{\sumintsl}{\mathop{\text{\scriptsize\texttt{unicode{x2A0B}}}}\limits}}
97 \CustomizeMathJax{\newcommand{\fintsl}{\mathop{\text{\scriptsize\texttt{unicode{x2A0F}}}}\limits}}
98 \CustomizeMathJax{\newcommand{\sqintsl}{\mathop{\text{\scriptsize\texttt{unicode{x2A16}}}}\limits}}
99 %
100 \CustomizeMathJax{\let\intup\int}
101 \CustomizeMathJax{\newcommand{\intup}{\mathop{\text{\scriptsize\texttt{unicode{x222C}}}}\limits}}
102 \CustomizeMathJax{\newcommand{\iiintup}{\mathop{\text{\scriptsize\texttt{unicode{x222D}}}}\limits}}
103 \CustomizeMathJax{\newcommand{\iiiiintup}{\mathop{\text{\scriptsize\texttt{unicode{x2A0C}}}}\limits}}
104 \CustomizeMathJax{\let\ointup\oint}
105 \CustomizeMathJax{\newcommand{\oiintup}{\mathop{\text{\scriptsize\texttt{unicode{x222F}}}}\limits}}
106 \CustomizeMathJax{\newcommand{\oiiiintup}{\mathop{\text{\scriptsize\texttt{unicode{x2230}}}}\limits}}
107 \CustomizeMathJax{\newcommand{\varointclockwiseup}{%
108   \mathop{\text{\scriptsize\texttt{unicode{x2232}}}}\limits%
109 }}
110 \CustomizeMathJax{\newcommand{\ointctrlclockwiseup}{%
111   \mathop{\text{\scriptsize\texttt{unicode{x2233}}}}\limits%
112 }}
113 \CustomizeMathJax{\newcommand{\sumintup}{\mathop{\text{\scriptsize\texttt{unicode{x2A0B}}}}\limits}}
114 \CustomizeMathJax{\newcommand{\fintup}{\mathop{\text{\scriptsize\texttt{unicode{x2A0F}}}}\limits}}
115 \CustomizeMathJax{\newcommand{\sqintup}{\mathop{\text{\scriptsize\texttt{unicode{x2A16}}}}\limits}}
116 %
117 \CustomizeMathJax{\newcommand{\bigcupdot}{\mathop{\text{\scriptsize\texttt{unicode{x2A03}}}}\limits}}
118 \CustomizeMathJax{\newcommand{\bigcupplus}{\mathop{\text{\scriptsize\texttt{unicode{x2A04}}}}\limits}}
119 \CustomizeMathJax{\newcommand{\bigsqcap}{\mathop{\text{\scriptsize\texttt{unicode{x2A05}}}}\limits}}
120 %

121 %
122 \CustomizeMathJax{\newcommand{\bigtimes}{\mathop{\text{\scriptsize\texttt{unicode{x2A09}}}}\limits}}
123 \CustomizeMathJax{\let\varprod\bigtimes}
124 %

125 \CustomizeMathJax{\newcommand{\mappedfrom}{\mathrel{\text{\scriptsize\texttt{unicode{x021A4}}}}\limits}}
126 \CustomizeMathJax{\let\mappedfromchar\mappedfrom}
127 \CustomizeMathJax{\newcommand{\mapsfrom}{\mathrel{\text{\scriptsize\texttt{unicode{x021A4}}}}\limits}}
128 \CustomizeMathJax{\newcommand{\longmappedfrom}{\mathrel{\text{\scriptsize\texttt{unicode{x027FB}}}}\limits}}
```



```
182 \CustomizeMathJax{\newcommand{\nsucccurlyeq}{%
183     \mathrel{\LWRoverlaysymbols{/}{\unicode{x0227D}}}}%
184 }%
185 \CustomizeMathJax{\newcommand{\ngtrless}{\mathrel{\unicode{x02279}}}}%
186 \CustomizeMathJax{\newcommand{\nlessgtr}{\mathrel{\unicode{x2278}}}}%
187 \CustomizeMathJax{\newcommand{\nbumpeq}{%
188     \mathrel{\LWRoverlaysymbols{/}{\unicode{x0224F}}}}%
189 }%
190 \CustomizeMathJax{\newcommand{\nBumpeq}{%
191     \mathrel{\LWRoverlaysymbols{/}{\unicode{x0224E}}}}%
192 }%
193 %
194 \CustomizeMathJax{\newcommand{\nbacksim}{%
195     \mathrel{\LWRoverlaysymbols{/}{\unicode{x0223D}}}}%
196 }%
197 \CustomizeMathJax{\newcommand{\nbacksimeq}{%
198     \mathrel{\LWRoverlaysymbols{/}{\unicode{x022CD}}}}%
199 }%
200 \CustomizeMathJax{\newcommand{\nasym}{\mathrel{\unicode{x226D}}}}%
201 \CustomizeMathJax{\newcommand{\nequiv}{\mathrel{\unicode{x2262}}}}%
202 \CustomizeMathJax{\newcommand{\napprox}{\mathrel{\unicode{x2249}}}}%
203 %
204 \CustomizeMathJax{\newcommand{\nll}{%
205     \mathrel{\LWRoverlaysymbols{/}{\unicode{x0226A}}}}%
206 }%
207 \CustomizeMathJax{\newcommand{\ngg}{%
208     \mathrel{\LWRoverlaysymbols{/}{\unicode{x0226B}}}}%
209 }%
210 \CustomizeMathJax{\newcommand{\nthickapprox}{%
211     \mathrel{\LWRoverlaysymbols{/}{\mathbf{\unicode{x02248}}}}}}%
212 }%
213 \CustomizeMathJax{\newcommand{\napproxeq}{%
214     \mathrel{\LWRoverlaysymbols{/}{\unicode{x0224A}}}}%
215 }%
216 \CustomizeMathJax{\newcommand{\nprecapprox}{%
217     \mathrel{\LWRoverlaysymbols{/}{\unicode{x02AB7}}}}%
218 }%
219 \CustomizeMathJax{\newcommand{\nsuccapprox}{%
220     \mathrel{\LWRoverlaysymbols{/}{\unicode{x02AB8}}}}%
221 }%
222 \CustomizeMathJax{\newcommand{\npreceqq}{%
223     \mathrel{\LWRoverlaysymbols{/}{\unicode{x02AB3}}}}%
224 }%
225 \CustomizeMathJax{\newcommand{\nsucceqq}{%
226     \mathrel{\LWRoverlaysymbols{/}{\unicode{x02AB4}}}}%
227 }%
228 \CustomizeMathJax{\newcommand{\nsimeq}{\mathrel{\unicode{x02244}}}}%
229 %
230 \CustomizeMathJax{\newcommand{\nSubset}{%
231     \mathrel{\LWRoverlaysymbols{/}{\unicode{x022D0}}}}%
232 }%
233 \CustomizeMathJax{\newcommand{\nSupset}{%
234     \mathrel{\LWRoverlaysymbols{/}{\unicode{x022D1}}}}%
235 }%
236 \CustomizeMathJax{\newcommand{\nsqsubseteq}{\mathrel{\unicode{x022E2}}}}%
237 \CustomizeMathJax{\newcommand{\nsqsupseteq}{\mathrel{\unicode{x022E3}}}}%
238 %
239 \CustomizeMathJax{\newcommand{\coloneqq}{\mathrel{\unicode{x02254}}}}%
240 \CustomizeMathJax{\newcommand{\eqqcolon}{\mathrel{\unicode{x02255}}}}%
241 \CustomizeMathJax{\newcommand{\Coloneqq}{\mathrel{\unicode{x02A74}}}}
```

```

242 \CustomizeMathJax{\newcommand{\Coloneq}{\mathrel{\unicode{x2237}-}}}
243 \CustomizeMathJax{\newcommand{\Eqcolon}{\mathrel{-\unicode{x2237}}}}
244 %
245 \CustomizeMathJax{\newcommand{\lvec}[1]{%
246   \mathord{\overset{\unicode{x02190}}{#1}}%
247 }%
248 \CustomizeMathJax{\newcommand{\lrvec}[1]{%
249   \mathord{\overset{\unicode{x2194}}{#1}}%
250 }%
251 \CustomizeMathJax{\newcommand{\harpoonacc}[1]{%
252   \mathord{\overset{\unicode{x021C0}}{#1}}%
253 }%
254 \CustomizeMathJax{\newcommand{\lharpoonacc}[1]{%
255   \mathord{\overset{\unicode{x021BC}}{#1}}%
256 }%
257 \CustomizeMathJax{\newcommand{\lrharpoonacc}[1]{%
258   \mathord{\overset{\unicode{x0294E}}{#1}}%
259 }%
260 \CustomizeMathJax{\newcommand{\barbar}[1]{\mathord{\overset{=}{#1}}}}
261 \CustomizeMathJax{\newcommand{\bartilde}[1]{\mathord{\overset{\simeq}{#1}}}}
262 \CustomizeMathJax{\newcommand{\barhat}[1]{\mathord{\hat{\bar{#1}}}}}
263 \CustomizeMathJax{\newcommand{\tildebar}[1]{\mathord{\overset{\eqsim}{#1}}}}
264 \CustomizeMathJax{\newcommand{\tildetilde}[1]{\mathord{\overset{\approx}{#1}}}}
265 \CustomizeMathJax{\newcommand{\tildehat}[1]{\mathord{\hat{\tilde{#1}}}}}
266 \CustomizeMathJax{\newcommand{\hatbar}[1]{\mathord{\bar{\hat{#1}}}}}
267 \CustomizeMathJax{\newcommand{\hattilde}[1]{\mathord{\tilde{\hat{#1}}}}}
268 \CustomizeMathJax{\newcommand{\hathat}[1]{\mathord{\hat{\hat{#1}}}}}
269
270 \CustomizeMathJax{\newcommand{\cdotB}{\mathord{\boldsymbol{\cdot}}}}
271 \CustomizeMathJax{\newcommand{\cdotBB}{\mathord{\text{\scriptsize{\texttt{x2022}}}}}}
272 \CustomizeMathJax{\newcommand{\circrS}{\mathord{\boldsymbol{\circ}}}}
273 \CustomizeMathJax{\newcommand{\bulletSSS}{\mathord{\bullet}}}
274 \CustomizeMathJax{\newcommand{\bulletSS}{\mathord{\text{\scriptsize{\texttt{x025CF}}}}}}
275 \CustomizeMathJax{\newcommand{\bulletS}{\mathord{\text{\scriptsize{\texttt{x02B24}}}}}}
276 \CustomizeMathJax{\newcommand{\primeS}{\mathord{\prime}}}
277
278 \CustomizeMathJax{\newcommand{\invamp}{\mathbin{\text{\scriptsize{\texttt{x0214B}}}}}}

```

`lwarp_mathjax.txt` adds `\left/`/`\right.` support for delimiters.

```

279 \CustomizeMathJax{\newcommand{\Lbag}{\mathopen{\large\text{\scriptsize{\texttt{x027C5}}}}}}
280 \CustomizeMathJax{\newcommand{\Rbag}{\mathclose{\large\text{\scriptsize{\texttt{x027C6}}}}}}
281 \CustomizeMathJax{\newcommand{\circledless}{\mathrel{\text{\scriptsize{\texttt{x029C0}}}}}}
282 \CustomizeMathJax{\newcommand{\circledgtr}{\mathrel{\text{\scriptsize{\texttt{x029C1}}}}}}
283 \CustomizeMathJax{\newcommand{\circledbslash}{\mathbin{\text{\scriptsize{\texttt{x029B8}}}}}}
284
285 \CustomizeMathJax{\newcommand{\lJoin}{\mathrel{\text{\scriptsize{\texttt{x22C9}}}}}}
286 \CustomizeMathJax{\newcommand{\rJoin}{\mathrel{\text{\scriptsize{\texttt{x22CA}}}}}}
287
288 \CustomizeMathJax{\newcommand{\lRtimes}{\mathrel{\text{\scriptsize{\texttt{x2A1D}}}}}}
289 \CustomizeMathJax{\newcommand{\Diamondblack}{\mathord{\text{\scriptsize{\texttt{x025C6}}}}}}
290 \CustomizeMathJax{\newcommand{\nplus}{%
291   \mathrel{\text{\scriptsize{\texttt{LWRoverlaysymbols{+}}}}\text{\scriptsize{\texttt{x02229}}}}%
292 }%
293 \CustomizeMathJax{\newcommand{\nsqsubset}{%
294   \mathrel{\text{\scriptsize{\texttt{LWRoverlaysymbols{/}}}}\text{\scriptsize{\texttt{x0228F}}}}%
295 }%
296 \CustomizeMathJax{\newcommand{\nsqsupset}{%

```

```
297     \mathrel{\LWRoverlaysymbols{/}{\unicode{x02290}}}}%  
298 }]  
299 \CustomizeMathJax{\newcommand{\dasharrow}{\mathrel{\unicode{x021E2}}}}}  
300 \CustomizeMathJax{\newcommand{\leftsquigarrow}{\mathrel{\unicode{x021DC}}}}}  
301 \CustomizeMathJax{\newcommand{\ntwoheadrightarrow}{\mathrel{\unicode{x02900}}}}}  
302 \CustomizeMathJax{\newcommand{\ntwoheadleftarrow}{\mathrel{\unicode{x02B34}}}}}  
303 \CustomizeMathJax{\newcommand{\boxast}{\mathbin{\unicode{x029C6}}}}}  
304 \CustomizeMathJax{\newcommand{\boxbslash}{\mathbin{\unicode{x29C5}}}}}  
305 \CustomizeMathJax{\newcommand{\boxbar}{\mathbin{\unicode{x025EB}}}}}  
306 \CustomizeMathJax{\newcommand{\boxslash}{\mathbin{\unicode{x029C4}}}}}  
307  
308 \CustomizeMathJax{\newcommand{\varclubsuit}{\mathord{\unicode{x02667}}}}}  
309 \CustomizeMathJax{\newcommand{\vardiamondsuit}{\mathord{\unicode{x02666}}}}}  
310 \CustomizeMathJax{\newcommand{\varheartsuit}{\mathord{\unicode{x02665}}}}}  
311 \CustomizeMathJax{\newcommand{\varsparadesuit}{\mathord{\unicode{x02664}}}}}  
312  
313 \CustomizeMathJax{\newcommand{\Nnearrow}{\mathrel{\unicode{x021D7}}}}}  
314 \CustomizeMathJax{\newcommand{\Searrow}{\mathrel{\unicode{x021D8}}}}}  
315 \CustomizeMathJax{\newcommand{\Nwarrow}{\mathrel{\unicode{x021D6}}}}}  
316 \CustomizeMathJax{\newcommand{\Swarrow}{\mathrel{\unicode{x021D9}}}}}  
317 \CustomizeMathJax{\newcommand{\Top}{\mathord{\unicode{x02AEA}}}}}  
318 \CustomizeMathJax{\newcommand{\Bot}{\mathord{\unicode{x02AEB}}}}}  
319  
320 \CustomizeMathJax{\newcommand{\leadstoext}{\mathrel{\unicode{xFF5E}}}}}  
321  
322 \CustomizeMathJax{\newcommand{\sqcupplus}{%  
323     \mathbin{\LWRoverlaysymbols{+}{\unicode{x02294}}}}%  
324 }}  
325 \CustomizeMathJax{\newcommand{\sqcapplus}{%  
326     \mathbin{\LWRoverlaysymbols{+}{\unicode{x02293}}}}%  
327 }}  
328  
329 \CustomizeMathJax{\newcommand{\dlb}{\mathopen{\unicode{x027E6}}}}}  
330 \CustomizeMathJax{\newcommand{\drb}{\mathopen{\unicode{x027E7}}}}}  
331  
332 \CustomizeMathJax{\newcommand{\varg}{g}}}  
333 \CustomizeMathJax{\newcommand{\vary}{y}}}  
334 \CustomizeMathJax{\newcommand{\varv}{v}}}  
335 \CustomizeMathJax{\newcommand{\varw}{w}}}  
336  
337 \CustomizeMathJax{\newcommand{\nexistsAlt}{\mathord{\unicode{x02204}}}}}  
338 \CustomizeMathJax{\newcommand{\existsAlt}{\mathord{\unicode{x02203}}}}}  
339 \CustomizeMathJax{\newcommand{\forallAlt}{\mathord{\unicode{x02200}}}}}  
340 \CustomizeMathJax{\newcommand{\emptysetAlt}{\mathord{\unicode{x02205}}}}}  
341  
342 \CustomizeMathJax{\newcommand{\uppartial}{%  
343     \mathord{\unicode{x02202}}}}%  
344 }}% not upright  
345  
346 \CustomizeMathJax{\let\varmathbb\mathbb}  
347 \CustomizeMathJax{\let\vmathbb\mathbb}  
348 \CustomizeMathJax{\let\vvmathbb\mathbb}  
349  
350 \CustomizeMathJax{\let\smallprod\prod}  
351 \CustomizeMathJax{\let\smallsum\sum}  
352 \CustomizeMathJax{\let\smallcoprod\coprod}  
353  
354 \CustomizeMathJax{\newcommand{\openbox}{\mathord{\unicode{x25FD}}}}}  
355 \CustomizeMathJax{\let\textsquare\openbox}
```

```

356 \CustomizeMathJax{\let\vareemptyset\emptyset}
357 %
358 % for newpxmath:
359 \CustomizeMathJax{\newcommand{\mathsterling}{\mathord{\text{\scriptsize{\texttt{\>}}}}}}
360 \CustomizeMathJax{\newcommand{\mathcent}{\mathord{\text{\scriptsize{\texttt{\>}}}}}}
361
362 \end{warpMathJax}
```

File 594 **l warp-common-mathjax-nonunicode.sty**

§ 703 Package **common-mathjax-nonunicode**

(Emulates or patches code by DANIEL FLIPO, MICHAEL SHARPE.)

l warp-common-mathjax-nonunicode Common code used by **newpxmath**, **newtxmath**, **newtxsf**, **kpfonts-otf** for MATH-JAX. These are symbols not found in UNICODE.

Factored from **l warp-common-mathjax-newpmtxmath**.

for HTML output: 1 \ProvidesPackage{l warp-common-mathjax-nonunicode}[2020/09/20]

For MATHJAX:

```

2 \LWR@origRequirePackage{l warp-common-mathjax-overlaysymbols}
3
4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\mmapsto}{\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
6 \CustomizeMathJax{\let\mmapstochar\mmapsto}
7 \CustomizeMathJax{\newcommand{\longmmapsto}{\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
8 \CustomizeMathJax{\newcommand{\mmappedfrom}{\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
9 \CustomizeMathJax{\let\mmappedfromchar\mmappedfrom}
10 \CustomizeMathJax{\newcommand{\longmmappedfrom}{\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
11 \CustomizeMathJax{\let\mmapsfrom\mmappedfrom} from kpfonts-otf
12 \CustomizeMathJax{\let\longmmapsfrom\longmmappedfrom} from kpfonts-otf
13
14 \CustomizeMathJax{\newcommand{\Mmapsto}{\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
15 \CustomizeMathJax{\let\!Mmapstochar\!Mmapsto}
16 \CustomizeMathJax{\newcommand{\Longmmapsto}{\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
17 \CustomizeMathJax{\newcommand{\Mmappedfrom}{\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
18 \CustomizeMathJax{\let\!Mmappedfromchar\!Mmappedfrom}
19 \CustomizeMathJax{\newcommand{\Longmmappedfrom}{\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
20 \CustomizeMathJax{\let\!Mmapsfrom\!Mmappedfrom} from kpfonts-otf
21 \CustomizeMathJax{\let\!Longmmapsfrom\!Longmmappedfrom} from kpfonts-otf
22 %
23 \CustomizeMathJax{\newcommand{\boxright}{%
24   \mathrel{\text{\scriptsize{\texttt{\>}}}}!\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
25 }
26 \CustomizeMathJax{\newcommand{\boxleft}{%
27   \mathrel{\text{\scriptsize{\texttt{\>}}}}!\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
28 }
29 \CustomizeMathJax{\newcommand{\boxdotright}{%
30   \mathrel{\text{\scriptsize{\texttt{\>}}}}!\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
31 }
32 \CustomizeMathJax{\newcommand{\boxdotleft}{%
33   \mathrel{\text{\scriptsize{\texttt{\>}}}}!\mathrel{\text{\scriptsize{\texttt{\>}}}}}}
34 }
35
```

```
36 \CustomizeMathJax{\newcommand{\Diamondright}{%
37   \mathrel{\!unicode{x025C7}\!\!unicode{x02192}}\!%
38 }%
39 \CustomizeMathJax{\newcommand{\Diamondleft}{%
40   \mathrel{\!unicode{x02190}\!\!unicode{x025C7}}\!%
41 }%
42 \CustomizeMathJax{\newcommand{\Diamonddotright}{%
43   \mathrel{\!unicode{x027D0}\!\!unicode{x02192}}\!%
44 }%
45 \CustomizeMathJax{\newcommand{\Diamonddotleft}{%
46   \mathrel{\!unicode{x02190}\!\!unicode{x027D0}}\!%
47 }%
48 %
49 \CustomizeMathJax{\newcommand{\boxRight}{%
50   \mathrel{\!unicode{x025A1}\!\!unicode{x021D2}}\!%
51 }%
52 \CustomizeMathJax{\newcommand{\boxLeft}{%
53   \mathrel{\!unicode{x021D0}\!\!unicode{x025A1}}\!%
54 }%
55 \CustomizeMathJax{\newcommand{\boxdotRight}{%
56   \mathrel{\!unicode{x022A1}\!\!unicode{x021D2}}\!%
57 }%
58 \CustomizeMathJax{\newcommand{\boxdotLeft}{%
59   \mathrel{\!unicode{x021D0}\!\!unicode{x022A1}}\!%
60 }%
61 %
62 \CustomizeMathJax{\newcommand{\DiamondRight}{%
63   \mathrel{\!unicode{x025C7}\!\!unicode{x021D2}}\!%
64 }%
65 \CustomizeMathJax{\newcommand{\DiamondLeft}{%
66   \mathrel{\!unicode{x021D0}\!\!unicode{x025C7}}\!%
67 }%
68 \CustomizeMathJax{\newcommand{\DiamonddotRight}{%
69   \mathrel{\!unicode{x027D0}\!\!unicode{x021D2}}\!%
70 }%
71 \CustomizeMathJax{\newcommand{\DiamonddotLeft}{%
72   \mathrel{\!unicode{x021D0}\!\!unicode{x027D0}}\!%
73 }%
74 \CustomizeMathJax{\newcommand{\Diamonddot}{\mathrel{\!unicode{x027D0}}\!%
75 %
76 \CustomizeMathJax{\newcommand{\circleright}{%
77   \mathrel{\!unicode{x025CB}\!\!unicode{x02192}}\!%
78 }%
79 \CustomizeMathJax{\newcommand{\circleleft}{%
80   \mathrel{\!unicode{x02190}\!\!unicode{x025CB}}\!%
81 }%
82 \CustomizeMathJax{\newcommand{\circledotright}{%
83   \mathrel{\!unicode{x02299}\!\!unicode{x02192}}\!%
84 }%
85 \CustomizeMathJax{\newcommand{\circledotleft}{%
86   \mathrel{\!unicode{x02190}\!\!unicode{x02299}}\!%
87 }%
88 \CustomizeMathJax{\let\circleddotright\circledotright}%
89 \CustomizeMathJax{\let\circleddotleft\circledotleft}%
90 %
91 \CustomizeMathJax{\newcommand{\multimapinv}{\mathrel{\!unicode{x027DC}}\!%
92 \CustomizeMathJax{\newcommand{\multimapboth}{\mathrel{\!unicode{x029DF}}\!%
93 \CustomizeMathJax{\newcommand{\multimapdot}{\mathrel{-\!bullet}}\!%
94 \CustomizeMathJax{\newcommand{\multimapdotinv}{\mathrel{\!bullet}-\!}}\!%
95 \CustomizeMathJax{\newcommand{\multimapdotboth}{\!%
```

```
96      \mathrel{\{\bullet\!\!-\!\!\!\!\!\bullet\}}%
97  }%
98 \CustomizeMathJax{\newcommand{\multimapdotbothA}{\mathrel{\{\!unicode{x022B6}\!}\}}}
99 \CustomizeMathJax{\newcommand{\multimapdotbothB}{\mathrel{\{\!unicode{x22B7}\!}\}}}
100
101 \CustomizeMathJax{\newcommand{\multimapbothvert}{%
102   \mathrel{\overset{\{\!unicode{x025CB}\}}{\underset{\{\!unicode{x025CB}\}}{|}}}}%
103 }%
104 \CustomizeMathJax{\newcommand{\multimapdotbothvert}{%
105   \mathrel{\overset{\{\!unicode{x025CF}\}}{\underset{\{\!unicode{x025CF}\}}{|}}}}%
106 }%
107 \CustomizeMathJax{\newcommand{\multimapdotbothBvert}{% bug in kpfonts-otf
108   \mathrel{\overset{\{\!unicode{x025CF}\}}{\underset{\{\!unicode{x025CB}\}}{|}}}}%
109 }%
110 \CustomizeMathJax{\newcommand{\multimapdotbothAvert}{% bug in kpfonts-otf
111   \mathrel{\overset{\{\!unicode{x025CB}\}}{\underset{\{\!unicode{x025CF}\}}{|}}}}%
112 }%
113
114 \CustomizeMathJax{\newcommand{\bignplus}{%
115   \mathop{\LWRoverlaysymbols{\{\!unicode{xFF0B}\}}{\{\!unicode{x22C2}\}}}}%
116 }%
117 \CustomizeMathJax{\let\bigcapplus\bignplus}
118 \CustomizeMathJax{\let\capplus\bignplus}% from kpfonts-otf
119
120 \CustomizeMathJax{\newcommand{\bigsqcapplus}{%
121   \mathop{\LWRoverlaysymbols{\{\!unicode{xFF0B}\}}{\{\!unicode{x2A05}\}}}}%
122 }%
123 \CustomizeMathJax{\let\sqcapplus\bigsqcapplus}% from kpfonts-otf
124
125 \CustomizeMathJax{\newcommand{\bigsqcupplus}{%
126   \mathop{\LWRoverlaysymbols{\{\!unicode{xFF0B}\}}{\{\!unicode{x2A06}\}}}}%
127 }%
128 \CustomizeMathJax{\let\sqcupplus\bigsqcupplus}% from kpfonts-otf
129
130 \CustomizeMathJax{\newcommand{\parallelslant}{\mathrel{\{\!unicode{x02AFD}\!}\}}}
131 \CustomizeMathJax{\newcommand{\parallelbackslant}{%
132   \mathrel{\{\!unicode{x0005C}\!\!-\!\!\{\!unicode{x0005C}\!}\}}%
133 }%
134
135 \CustomizeMathJax{\newcommand{\Eqqcolon}{\mathrel{=\!\{\!unicode{x2237}\!}\}}}
136 \CustomizeMathJax{\let\eqqColon\Eqqcolon}% for kpfonts-otf
137 \CustomizeMathJax{\newcommand{\dashColon}{\mathrel{-\{\!unicode{x2237}\!}\}}}
138 \CustomizeMathJax{\newcommand{\Colondash}{\mathrel{\{\!unicode{x2237}\!-\!}\}}}
139
140 \CustomizeMathJax{\newcommand{\colonapprox}{\mathrel{:\approx}}}
141 \CustomizeMathJax{\newcommand{\colonsim}{\mathrel{:\sim}}}
142 \CustomizeMathJax{\newcommand{\Colonapprox}{%
143   \mathrel{\{\!unicode{x2237}\!\!-\!\!\approx\!}\}}}
144 }%
145 \CustomizeMathJax{\newcommand{\Colonsim}{\mathrel{\{\!unicode{x2237}\!\!-\!\!\sim\!}\}}}
146
147 \CustomizeMathJax{\newcommand{\strictif}{%
148   \mathrel{\{\!unicode{x0297D}\!}\}}%
149 }% right fish tail
150 \CustomizeMathJax{\newcommand{\strictfi}{%
151   \mathrel{\{\!unicode{x0297C}\!}\}}%
152 }% left fish tail
153 \CustomizeMathJax{\newcommand{\strictiff}{%
154   \mathrel{\{\!unicode{x0297C}\!\!-\!\!\{\!unicode{x0297D}\!}\}}%
155 }% left/right fish tails
```

File 595 lwarpm-common-mathjax-overlaysymbols.sty

§ 704 Package **common-mathjax-overlaysymbols**

`\ProvidesPackage[lwarp-common-mathjax-overlaysymbols][2020/08/17]`

```
\LWRoverlaysymbols  
{symbol} {symbol}  
Overlays one symbol over another.  
2 \begin{warpMathJax}  
3  
4 \CustomizeMathJax{\newcommand{\LWRoverlaysymbols}{%  
5   \mathord{  
6     \smash{  
7       \mathop{\#2\strut} %  
8       \limits^{\smash{\lower3ex{\#1}}} %  
9     }%  
10    \strut  
11  }%
```

```
12 } }  
13  
14 \end{warpMathJax}
```

Change History

§ 705 Chg Hist

For the most recent changes, see page [1359](#).

v0.013	\LWR@restoreorigformatting: Added \nobreakspace.	538	v0.15	\LWR@htmlsectionfilename: Fix: Links to home page.	341
v0.10	General: 2016/03/08 Initial version	1		General: 2016/04/06	1
v0.11	General: 2016/03/11	1		Added.	823
	Added section: Operating-System portability.	228		Ampersand (&): Fixed handling when passed as an argument.	444
	Added section: Selecting the operating system.	116		Docs: Added warning icons for items needing special attention.	203
	Test Suite: MS-WINDOWS in README.txt	1		Docs: Clarify print/HTML output.	116
	Test Suite: images and index in README.txt	1		Docs: Moved the supported features table to the introduction.	67
v0.12	General: 2016/03/14	1		Files: l warp_formal.css added.	1
	Global: Uses \p@(type) in float captions.	1		Fix: steps counter	823
	Test Suite: Sub-figures	1		Fixed & handling.	821
	\LWR@newhtmlfile: Bugfix: toc with numbered files.	389		Test Suite: test_suite_formal.css file added.	1
v0.13	General: 2016/03/24	1	v0.16	General: 2016/04/11	1
	Fix dollar-redefined bug for newer package.	1192		\titlingpage: Improved print-output spacing.	416
	Removed package: subfig	1		xfrac: Adjusted for the use of any font.	1255
	Test Suite: Ordinals, Subcaption	1		Added XeLaTeX, LuaLaTeX support.	204
	\CaptionSeparator: Fix for newer babel package.	516		Docs: Font and UTF-8 support.	101
	\LWR@LwarpStart: \up and \fup .	407		Docs: Moved location of \usepackage{lwarp}.	103
v0.14	General: 2016/03/31	1		Docs: Text not converting.	195
	floatrow: Added.	819		Lwarp no longer selects fonts.	101, 239
	Docs: Commands for a successful HTML conversion.	120		Removed package: suffix	1
	Docs: Commands into a warpprint environment.	117		Test Suite: Improved titlingpage.	416
	Docs: Newclude limitations.	173		Test Suite: Lwarp no longer selects fonts.	1
	Docs: Table: Cross-referencing data structures.	497		Test Suite: Supports XeLaTeX, LuaLaTeX.	1
	Docs: Table: Float data structures.	512	v0.17	General: 2016/04/14	1
	Docs: Trademarks section.	200		mdframed: Added.	959
	Docs: Troubleshooting cross-references.	195		Test Suite: Fix: Print-version front-matter page numbers.	1
	Test Suite: Assigned cleveref name for Test Float.	1		Test Suite: Mdframed	1
	Test Suite: Floatrow	1		\LWR@htmlsectionfilename: Fix: Links when entire doc is one HTML page.	341
			v0.18	General: 2016/05/19	1

graphics: Add: svg file extension.	861
graphics: Fix: \linewidth, \textwidth, \textheight inside a minipage.	861
graphics: Improved HTML output linebreaks.	861
graphics: em, ex, %, px dimensions preserved.	861
File: l warp.css: Improved toc outline display.	1
Files: l warp.css and l warp_formal.css: Improved responsive design.	1
Microtype disabled during HTML generation	239
PDF Unicode input characters.	221
Test Suite: Verse package	1
\hspace: \hspace supported.	614
\textheight: pdfcrop: --hires added.	572
Reorganize \HomeHTMLFilename logic.	572
Suppress extra space.	572
\LWR@myshorttoc: Reorganize \HomeHTMLFilename logic.	520
\LWR@newhtmlfile: sideroc after title, improving responsive design.	388
\LWR@requeststoc: Reorganize \HomeHTMLFilename logic.	409
\LWR@subhyperref: Improved HTML output linebreaks.	508
\LWR@subhyperrefclass: Improved HTML output linebreaks.	508
\LWR@subinlineimage: Suppress extra space.	510
minipage: Fix: \linewidth, \textwidth, \textheight inside a minipage.	592
verse: Supports verse, memoir packages.	1231
v0.19	
General: 2016/06/08	1
css for table note item.	1189
MATHJAX support added.	556, 564
multirow: Added optional args.	991
xcolor: Supports colored \rule.	1247
Adopts to tikz version.	1192
Avoids MATHJAX.	544
cleveref: Loaded \AtEndPreamble.	588
Docs: Math options.	103
Docs: Table: Cross-referencing data structures, updated.	497
File: l warp.css: tnoteitemheader added.	1
File: l warp_mathjax.txt added.	1
Introduction: MATHJAX support mentioned.	64
Options: maths and mathjax	231
titlesp: null \pagestyle and \thispagestyle for HTML.	1193
\HomeHTMLFilename: Docs: Escape filename underscores.	340
\hspace: Fix: \hspace length computations.	614
\HTMLFilename: Docs: Escape filename underscores.	340
\LateximageFontSizeName: Add: User-adjustable math/lateximage font size.	569
\LWR@doequation: MATHJAX support.	559
\LWR@doubledollar: MATHJAX support.	552
\LWR@filestart: l warp_mathjax.txt loaded.	403
\LWR@LwarpStart: Enabled \\ equal to \newline.	406
\LWR@minipagestartpars: Suppresses paragraph tags between minipages.	613
\LWR@subsingledollar: MATHJAX support.	550
\minipagefullwidth: Added: No width tag for the next minipage in HTML.	592
\warpHTMLonly: Added.	237
\warpprintonly: Replaces \rowprintedonly.	237
\xfractHTMLfontsize: Added.	1254
v0.20	
General: 2017/02/09	1
afterpage: Added.	643
alltt: Added.	648
bookmark: Added.	689
caption and subcaption supported.	1
cleveref and referencing patches: Applied \AfterEndPreamble.	743
draftwatermark: Added.	763
eso-pic: Added.	784
everypage: Added.	787
extramarks: Added.	788
fancyhdr: Added.	795
float: Improved float caption type handling.	816
graphics: Fix: Expands filename.	861
graphics: Fix: \linewidth in a floatrow.	861
hyperref: Additional user macros.	873
keyfloat: Added.	898
letterspace: User-interface emulated.	911
listings: Added.	921
ltcaption: Added.	933
l warp-newproject: Added.	264
microtype: User-interface emulated.	975

needspace: Added	1001
nowidow: Added	1017
placeins: Added	1053
ragged2e: Added	1061
setspace: Improved support	1084
sympytex: Added	1162
textpos: Added	1181
titleps: Added	1193
titlesec: Added	1196
titletoc: Added	1198
titling: Improved compatibility	1199
tocloft: Added	1207
wallpaper: Added	1236
wrapfig: Added	1239
xetexko: Added	1253
Added @, <, > columns	438
Added single-expansion data arrays	336
Code factored into independent <i>l warp_html</i> files	630
Docs: Examples for generating HTML file names	114
Docs: Improved index	1
Enhanced titling support	415
File: <i>l warp.css</i> : Minor fixes for validation	1
File: <i>l warpmk</i> used to compile print, HTML, indexes, and <i>lateximages</i>	1
Fix: \ linewidth in a floatrow	822
Moved sidebar and example code to test suite	1
Page geometry set to 6in wide with large margins	240
Parallel versions of aux files for print/HTML	1
Removed reliance on make, grep, gawk	1
Tabular: \unskip extra spaces	438
Test Suite: HTML meta descriptions	1
BlockClass: Added optional style	355
Renamed from "blockclass"	355
\BlockClassSingle: Renamed from "LWR@htmldivclassline"	356
\cpagerefFor: User-redefinable word for page references	744
\dotfill: Inserts an ellipsis	613
\hfill: Inserts a \qquad	612
\HomeHTMLFilename: No longer escape underscores	340
\rulefill: Inserts a short rule	612
\hspace: Add: Supports HTML thin breakable space	614
\HTMLDescription: Added \NewHTMLdescription (Renamed in v0.30)	367
\HTMLFilename: No longer escape underscores	340
\InlineClass: Renamed from "inlineclass"	356
\LWR@closeparagraph: \unskip extra spaces	360
No break tags in the start/end of a tabular	360
\LWR@endofline: Fix: \\	613
\LWR@filestart: Adds meta description	403
\LWR@htmldivclass: Added optional style	354
\LWR@htmlelementclass: Added optional style	354
\LWR@htmlsectionfilename: HTMLFilename: removed additional trailing '-', and may be empty	341
Sections called "Index" or "index" have an underscore prepended to their filenames if no prefix	341
\LWR@hyperindexrefsubtwo: Print mode provided in case hyperref not used	535
\LWR@longtabledatacaptiontag: Fix: Pars in captions	481
\LWR@nestspan: Fix: Minipages inside a span	351
\LWR@section: Combined higher-level sections together into files	395
\LWR@setOSWindows: Auto-detects operating system	230
\LWR@subhtmlelementclass: Factored code	353
\pageref: Added	506
\SetHTMLFileName: Add: Control file numbers	340
\tracingl warp: Added	252
verbatim: Added	427
v0.21	
General: 2017/02/23	1
fontenc: Added	830
<i>l warpmk</i> : Fix: <i>l warpmk again</i> for WINDOWS	315
<i>l warpmk</i> : Fix: <i>l warpmk l images</i> for WINDOWS	315
<i>l warpmk</i> : Fix: <i>l warpmk</i> uses <i>lateximages</i> text file instead of shell script	315
Add: Errors for misplaced packages	205
Docs: Added <i>internet</i> class	73
Docs: Added <i>TeX2page</i> , <i>GladTeX</i>	73
Docs: Installing on WINDOWS	79
File: <i>l warp_tutorial.txt</i> added	83
\LWR@filestart: Skip title if not given	403
\LWR@l warpStart: Changed <i>lateximages</i> to a .txt file	406

\LWR@newhtmlfile: Skip title if not given.	388
\marginpar: Fixed source listing.	373
\marginparBlock: Fixed source listing.	374
v0.22	
General: 2017/03/02	1
abstract: Added.	632
changepage: Added.	704
dcolumn: Added.	757
ftnright: Added.	840
geometry: Nullified commands.	849
layout: Added.	908
lscape: Added.	932
mcaption: Added.	959
nameref: Added.	998
nextpage: Added.	1004
parskip: Added.	1038
showkeys: Added.	1086
sidecap: Added.	1088
tabularx: Added.	1164
variorref: Supported.	129
verse: Added.	1231
\LWR@parsebangcolumn: Added tabular ! column.	449
\LWR@parsetablecols: Unknown table column types become l. Added tabular D, !, X columns.	458
\LWR@printmccoldata: Added tabular D, !, and X columns.	476
v0.23	
General: 2017/03/02	1
\LWR@parsetablecols: Fix for vert bar column type.	458
\LWR@printmccoldata: Fix for vert bar column type.	476
v0.24	
General: 2017/03/15	1
floatrow: Support for subfig.	819
subfig: Added.	1154
tikz: For tikz v3.0.0 or later, auto-loads tikz babel library if necessary.	1191
Docs: Filename underscore.	103, 123
Fix for inline images.	1192
No longer preloads subcaption; conflicted with subfig.	244
\hspace: Add: \hspace \fill converts to 2em	614
\hypertocfloat: List of floats responds to lofdepth, lotdepth.	527
\LWR@htmlfileref: Fix: Index links while \tracingl warp.	500
\picture: Fix for inline images.	589
v0.25	
General: 2016/03/22	1
amsthm: Added.	653
ellipsis: Added.	768
emptypage: Added.	769
framed: Added.	837
lips: Added.	920
mdframed: Help avoid hyphenation.	961
ntheorem: Added.	1017
showidx: Added.	1086
theorem: Added.	1182
Basic L ^A T _E X theorems: improved css.	428
Docs: Adds credits for patched code.	1
Docs: Testing l warp.	191
Fix: Allows XeL ^A T _E X and LuaL ^A T _E X to preload graphics and graphicx.	210
\addcontentsline: Handles theorems.	519
\LWR@loadnever: Added the ability to prevent conflicting packages.	206
v0.26	
General: 2017/03/31	1
l warp.css: Improved responsive marginpar and marginblock.	271
cutwin: Added.	755
endnotes: Added.	770
floatflt: Added.	818
footmisc: Added.	831
footnotehyper: Added.	834
footnote: Added.	832
marginfix: Added.	944
marginnote: Added.	945
mparhack: Added.	986
pagenote: Supported as-is.	1031
sidenotes: Added.	1088
Docs: Improved MiK _T E _X install instructions.	78, 79
Dollar span avoided in a lateximage.	544
Footnotes now are L ^A T _E X boxes instead of pagenotes.	368
\lateximage: Labels track page numbers of lateximages.	572
Print mode now uses a minipage of \ linewidth.	572
\picture: Fix for \makebox in picture.	589
v0.27	
General: 2017/04/04	1
lettere: Added.	912
microtype: Fix with XeL ^A T _E X, LuaL ^A T _E X.	975
soul: Added.	1133
ulem: Added.	1221
Docs: Installing utilities for MACOS.	81
Docs: Limitations of saveboxes.	123
Page geometry modified to reduce line overflow.	240
\LWR@footnotetext: Fix for table footnote par tags.	370

v0.28	
General: 2017/04/14	1
glossaries: Added.	852
graphics: Adapts to graphics	
syntax.	861
graphics: Added.	854
tabularx: Fix for optional pos. .	1164
tabulary: Added.	1164
<i>lwarpmk</i> : Add: printglossary	
and htmlglossary commands.	315
Added boolean FormatEPUB. .	258
Added boolean FormatWP.	258
Added boolean	
HTMLDebugComments.	253
Added boolean HTMLMarkFloats,	
changed to WPMarkFloats as of	
v0.42.	258
Docs: Modfyng <i>lwarpmk</i> and	
index processing.	192
File: <i>lwarpmathjax.txt</i> :	
Updated CDN repository.	311
Forced oneside to maintain large	
right margin.	240
\@wrindex: Improved indexing. .	530
\chapter: If EPUB, prints footnotes	
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\HTMLTitle: Added.	366	textfit: Added.
list: Added list and trivlist.	432	titleref: Added.
\LWR@addformatwpalignment: Fix for multicolumn alignment if FormatWP.	471	turnthe page: Added.
\LWR@backgroundcolor: xcolor: Added		Allows memoir's preloaded packages.
\LWR@backgroundcolor.	1247	Docs: Fix for double hyphens.
\LWR@filestart: Add \HTMLTitle.	405	Docs: Improved install instructions.
Fix \HTMLAuthor.	404	Docs: Improved MiKTeX install instructions.
\LWR@listitem: Added list and trivlist.	432	

Docs: Moved table so doesn't interfere with install docs.	77
File: <code>l warp_mathjax.txt</code> : Allow MATHJAX inside tabbing.	311
File: <code>l warp_mathjax.txt</code> : Allow MATHJAX inside verse.	311
Fix: Empty sidetoc.	522
Improved: Robust \,, \, and \textellipsis commands.	611
Separate LWR@thisautooidWP for word processor <div>s.	515
\@currentHref: Added.	507
\@donoparitem: Modified for HTML.	430
\@item: Modified for HTML.	430
\@mklab: Modified for HTML.	430
\chapter: Add optional heading title for memoir.	401
\CSSFilename: Improved filenames with underscores.	365
\LWR@label@createtag: Fix: Labels with underscores.	501
\LWR@LwarpStart: Fix: Lateximages on incorrect pages with MATHJAX.	408
\LWR@newautoanchor: Fix: No anchor if frozen autoid.	515
\LWR@nolinkurl: Fix: Underscore in URL.	510
\LWR@notmemoirloadafter: Added.	205
\LWR@printpendingmpfootnotes: Added.	373
\LWR@startref: Fix: Labels with underscores.	504
\LWR@subhyperref: Improved URLs with underscores.	508
\LWR@subhyperrefclass: Improved URLs with underscores.	508
\LWR@tabledatacolumntag: Fix: Empty line between rows.	489
\LWR@url: Improved URLs with underscores.	510
minipage: Fix: Improper \prevdepth.	595
\newpage: Added.	613
\normalmarginpar: Added.	374
\reversemarginpar: Added.	374
\section: Add optional heading title for memoir.	402
\tableofcontents: Fix: Empty sidetoc.	522
Fix: Patch \AtBeginDocument.	522
thebibliography: Patched to emphasize titles.	537
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General: 2018/01/23	1
LWR@tabularpardepth added.	441
amsthm: Adapted to trivlist changes.	655
mdframed: Fixes for svg math or lateximage in title.	962
mdframed: Fixes for footnotes.	963
ntheorem: Adapted to trivlist changes.	1017
theorem: Adapt to trivlist changes.	1184, 1185
list: Fix: Stack unnesting.	432
\LWR@closeparagraph: Fix: Tabular empty lines.	361
\LWR@closeprevious: Fix: Stack unnesting.	346
\LWR@forcenewpage: Fix: Improper \prevdepth.	347
\LWR@lookforpackagename: Fix: Spaces in \usepackage.	247
\LWR@popclose: Fix: Stack unnesting.	335
\LWR@providelength: Added.	224
\LWR@pushclose: Fix: Stack unnesting.	334
\LWRPrintStack: Name changed from \PrintStack.	345
tabular: Fix: Tabular empty lines.	495
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General: 2018/01/30	1
adjmulticol: Fix: Line wrap at HTML hyphen.	642
blowup: Added.	688
caption: Added.	697
changepage: Fix for pagecheck macros.	705
endheads: Added.	769
epigraph: Fix: Line wrap at HTML hyphen.	779
hanging: Fix: Line wrap at HTML hyphen.	869
hang: Fix: Line wrap at HTML hyphen.	867
keyfloat: Fix for svg math in captions.	899
midpage: Fix: Line wrap at HTML hyphen.	976
multirow: Fix: Line wrap at HTML hyphen.	991
multitoc: Added.	993
ntheorem: Fix: Line wrap at HTML hyphen.	1021
realscripts: Fix: Line wrap at HTML hyphen.	1062
scrextend: Fix: Line wrap at HTML hyphen.	1072
sectionbreak: Added.	1080
sidenotes: Fix for svg math in captions.	1089
subfig: Fix for svg math in captions.	1155
subfig: Fix: Support \nameref.	1154
xurl: Added.	1263
<i>l warpmk: pdfcrop</i> : Removed hires option for improved crop accuracy.	315

\captionlistentry: Fix: Line wrap at HTML hyphen.	519
center: Fix: Line wrap at HTML hyphen.	577
enumerate: Fix: Line wrap at HTML hyphen.	433
flushleft: Fix: Line wrap at HTML hyphen.	577
flushright: Fix: Line wrap at HTML hyphen.	577
\hypertoc: Fix: Line wrap at HTML hyphen.	526
\hypertocfloat: Fix: Line wrap at HTML hyphen.	527
itemize: Fix: Line wrap at HTML hyphen.	433
lateximage: Added css style option.	572
Fix: Line wrap at HTML hyphen.	576
\LWR@BlockClassWP: Fix: Line wrap at HTML hyphen.	356
\LWR@createautosec: Fix: Line wrap at HTML hyphen.	393
\LWR@domulticolumn: Fix: Line wrap at HTML hyphen.	480
\LWR@fFloatbegin: Fix: Line wrap at HTML hyphen.	513
\LWR@HTML@caption@begin: Fix: Argument passed to \LWR@origcaption@begin.	518
\LWR@htmlclosecomment: Add \mbox to prevent line breaks.	352
\LWR@label@createtag: Fix: Line wrap at HTML hyphen.	501
\LWR@LwarpStart: Fix for svg math in \nameref.	409
\LWR@newautoidanchor: Fix: Line wrap at HTML hyphen.	515
\LWR@printopenlist: Fix: Line wrap at HTML hyphen.	429
\LWR@startref: Fix: Line wrap at HTML hyphen.	503
\LWR@subsingledollar: Added svg math image baseline adjust and em sizing.	550
\LWR@subsingledollarsvg: Fix: Line wrap at HTML hyphen.	548
\LWR@WPcell: Fix: Line wrap at HTML hyphen.	471
minipage: Fix: Line wrap at HTML hyphen.	593
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General: 2018/02/14	1
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acro: Added.	637
chapterbib: Added.	710
colortbl: Added.	460, 471, 748
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graphics: Fix: Virtual page size limited to a group.	861, 862
hypcap: Added.	872
hypernat: Added.	872
hyperref: \texorpdfstring now uses the TeX string.	881
luatodonotes: Improved \todotoc.	937
siunitx-v2: Changes fraction to symbol.	1113
siunitx-v2: Improved svg math.	1110, 1111
siunitx-v2: Improved color output.	1110
stfloats: Added.	1152
todonotes: Improved \todotoc.	1214
vmargin: Added.	1233
xfrac: Fix: Added groups around super/subscripts to localize LWR@nestspan changes.	1255
Docs: Converting an existing document.	98
Improved font control.	605, 606
\@@setcpageref: Fix for new v0.21 of cleveref.	744
\@@setcref: Fix for new v0.21 of cleveref.	743
\@@setcrefrange: Fix for new v0.21 of cleveref.	744
\@biblabel: Improved bibliography label.	536
\@item: Honors \makelabel.	430
\@maketitle: Fix: Errors with IEEEtran class.	419
abstract: Allow optional name.	421
\centerline: Added.	578
\l@part: Adapts to classes without \part.	527
\leftline: Added.	578
\LWR@addtabularhrulecolor: colortbl: Added.	471
\LWR@addtabularrulecolors: colortbl: Added.	472
\LWR@closetabledatcell: colortbl: Added.	444
\LWR@lookforpackagename: Fix: Parsing similar package names.	246
\LWR@LwarpStart: Adjusted space around captions.	407
\LWR@newautopagelabel: Fix: toc, LOF, LOI links.	375
\LWR@newhtmlfile: Fix: TOC, LOF, LOI links.	390
\LWR@nullfonts: Fix: \newline in title.	539
\LWR@parsedrequirepackagenames: Fix: Parsing similar package names.	245

\LWR@parsetablecols:	Fix: Ignore optional tabular column arguments.	459
\LWR@ProvidesPackageDropB:	Fix: Options with braces.	249
\LWR@restoreorigformatting:	Fix: Spacing in SVG math, <i>lateximage, TikZ</i> .	538
\LWR@section:	Fix: <i>toc, LOF, LOT</i> links.	399
\LWR@tabledatasinglecolumntag:		
<code>colortbl</code> :	Added.	466
\LWR@textcurrentfont:	Added: Improves font control.	605
\mbox:	Nullified for <i>HTML</i> .	596
\rightline:	Added.	578
\tabular:	<i>colortbl</i> : Added.	494
\thempfootnote:	Removed	
<code>\itshape</code> .		372
v0.49		
General:	2018/02/19	1
<code>amsmath</code> :	Fix: Patches for <i>\eqref</i> .	649
<code>eso-pic</code> :	Fix for <i>\AddToShipoutPicture</i> .	784
<code>figsize</code> :	Added.	812
<code>fnlineno</code> :	Added.	825
<code>hypdestopt</code> :	Added.	872
<code>hyphenat</code> :	Added.	883
<code>lineno</code> :	Added.	918
<code>luacolor</code> :	Added.	934
<code>pagegrid</code> :	Added.	1031
<code>pdfrender</code> :	Added.	1045
<code>resizegather</code> :	Added.	1066
<code>verbbars</code> :	Added.	1233
<code>vwcol</code> :	Added.	1234
<code>xcolor</code> :	Added tabular row colors.	460
Fix: Adapt to classes.		612
<code>\affiliation</code> :	Fix: Adapts to classes which already provide.	414
\LWR@addtabularcellcolor:	<i>xcolor</i> : Added tabular row colors.	474
\LWR@domulticolumn:	<i>xcolor</i> : Added tabular row colors.	480
\LWR@href:	Fix: Adapt to classes.	509
\LWR@href@partsanitized:	Fix: Adapt to classes.	509
\LWR@printlength:	Fix: Group <i>printlen</i> changes.	244
\LWR@url:	Fix: Adapt to classes.	510
<code>\noalign</code> :	Fix: <i>\noalign</i> inside <i>tabular</i> .	490
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General:	2018/03/03	1
<code>\lwarpcss</code> :	Improved SVG display math centering.	271
<code>\lwarpone_limage.txt</code> :	Added.	310
<code>amsmath</code> :	Fix: Upright tags for <i>SVGmath</i> .	649
<code>axodraw2</code> :	Added.	672
<code>bytefield</code> :	Added.	696
<code>dblfloatfix</code> :	Added.	756
<code>diagbox</code> :	Added.	758
<code>epstopdf</code> :	Added.	780
<code>listings</code> :	Force flexible columns.	921
<code>morefloats</code> :	Added.	983
<code>nonfloat</code> :	Added.	1015
<code>ntheorem</code> :	Fix: Not standard nor <i>amsthm</i> selected.	1024
<code>pbox</code> :	Added.	1038
<code>phfqt</code> :	Added.	1048
<code>schemata</code> :	Added.	1071
<code>siunitx-v2</code> :	Improved SVG math <i>alt</i> tags.	1111
<code>siunitx-v2</code> :	Improved units.	1109, 1113
<code>siunitx</code> :	Fix: Loads <i>xcolor</i> .	1109
<code>siunitx</code> :	Improved units.	582
<code>xy</code> :	Added.	1263
<code>\lwarpmk</code> :	Error if <i>lateximages.txt</i> does not exist.	315
<code>\lwarpmk</code> :	Error if <i>lwarpmk.conf</i> points to <i>lwarf</i> .	315
<code>\lwarpmk</code> :	Improved error messages.	315
<code>\lwarpmk</code> :	MD5 hash avoids duplicate SVG math.	315
<code>\lwarpmk</code> :	Multiprocess support making <i>lateximages</i> .	315
<code>AMS environments</code> :	Improved SVG math display.	649
Fix: Load <i>fontspec</i> if necessary.		239
Robustify macros.		606
<code>\@ensuredmath</code> :	Fix: Use <i>lateximage</i> even if <i>MATHJAX</i> .	554
Improved SVG math <i>alt</i> tags.		554
<code>\eqnarray</code> :	Improved SVG math display.	566
<code>\lateimage</code> :	Fix: SVG math in a section name.	575
MD5 hash avoids duplicate SVG math.		573, 576
\lWR@footnotetext:	Robustify macros.	370
\lWR@atbeginverbatim:	Improved column alignment.	425
\lWR@dequation:	Improved SVG math display.	560
\lWR@doubledollar:	Improved SVG math alt tags.	553
Improved SVG math display.		553
\lWR@htmlrefsectionfilename:	Fix: SVG math in a section name.	342
\lWR@newhtmlfile:	Fix: SVG math in a section name.	390
\lWR@nullfonts:	Fix: <i>\underline</i> in sectioning file name.	541
\lWR@overline:	Added.	610

\LWR@subsingle dollar: Fix: Use <i>lateximage</i> even if MATHJAX.	550	alignat: <i>amsmath</i> : Fix: Added.	652
Improved SVG math alt tags.	550	\displaymathnormal: Processing for complicated display math.	563
\LWR@subsingle dollarsvg: MD5 hash avoids duplicate SVG math.	549	\displaymathother: Processing for complicated display math.	563
\LWR@vspace: Robustify macros.	616	\eqnarray: Fix: \addcontentsline inside SVG math. Provides an autoid anchor.	566
\newline: Robustify macros.	613	\textheader: Added additional hashing option.	572
\textsubscript: Robustify macros.	609	Fix: <i>lateximage</i> inside <i>AMS</i>	
\textsuperscript: Robustify macros.	609	\text:	572
v0.51		Processing for complicated display math.	575
General: 2018/03/24	1	\LWR@addbaseline marker: Improved SVG math baseline.	544
MATHJAX: Nullifies \ensuremath.	385	\LWR@atbeginverbatim: Adds vertical offset.	425
\lwarpmk_one_limage.txt: <i>pdftocairo -noshrink</i> added.	310	\LWR@displaymathother: Processing for complicated display math.	556
afterpackage: No longer required.	242	\LWR@dequation: Fix: \addcontentsline inside SVG math. Provides an autoid anchor.	560
chemfig: Added.	710	\LWR@doubledollar: Fix: \addcontentsline inside SVG math. Provides an autoid anchor.	553
chemformula: Added.	712	\LWR@equationother: Processing for complicated display math.	556
chemgreek: Added.	718	\LWR@findcurrenttextcolor: Added \LWR@findcurrenttextcolor when no <i>xcolor</i> .	610
chemmacros: Added.	718	\LWR@HTMLsanitizeexpanded: Fix: Escapes double quotes.	384
chemnum: Added.	739	\LWR@LwarpStart: MathJax: Nullifies \ensuremath.	409
epstopdf-base: Added.	780	\LWR@newautoidanchor: Fix: No autoid is inside a <i>lateximage</i> .	515
fancybox: Fix: Optional tag for \item in a span.	793	\LWR@singledollarmeasure: Fix: <i>lateximage</i> inside <i>AMS</i>	
grid: Added.	866	\text:	546
listings: Forces cleared options.	922	Fix: Honors text font around SVG math.	546
\ltxgrid: Added.	933	Improved SVG math baseline.	547
mhchem: Added.	973	Typeset SVG math only once during measurement.	546
tikz: Fix for \tikz macro.	1192	\LWR@subHTMLsanitize: Fix: Escapes double quotes.	383
tikz: Fix for tikz with optional argument.	1192	\LWR@subsingle dollar: Fix: \ensuremath inside SVG image.	551
titling: Fix for \thanks mark.	1201	\LWR@subsingle dollarsvg: Fix: SVG math with enclosed <i>lateximage</i> .	548
\lwarpmk: <i>pdftocairo -noshrink</i> added.	315	SVG math baseline improved with invisible rule at corner.	549
AMS environments: Fix: \addcontentsline inside SVG math. Provides an autoid anchor.	649		
Docs: tikz limitations.	160		
Docs: Multiple authors and affiliations.	131		
Docs: Things to avoid.	120		
Docs: Updated Converting an existing document.	98		
Fix: Remember original \# in case is redefined.	261		
Named HTML entity used for text dollar.	544		
\@ensuredmath: Hashes \ensuremath.	554		
\@item: Restored list label space.	431		
\addcontentsline: Add missing support for float mechanism if necessary.	519		
No anchor ID if inside SVG image.	519		

\LWR@textcurrentcolor: xcolor: \textcolor{black}{\LWR@textcurrentcolor if xcolor not loaded.}	610	\LWR@nullfonts: Fix: \texorpdfstring in section names.	541
v0.52		\LWR@section: Fix: Footnote numbering: Limited HTML comment if starred.	396
General: 2018/04/01	1	Fix: Footnote numbering: Use short toc entry for HTMLDebug comments.	396
breakurl: Fix: #, %, &, ~, _ in URL.	693	\LWR@singledollarmeasure: Added user-adjustable svg math font scaling.	547
endfloat: Updated for v2.6.	769	\LWR@url: Fix: #, %, &, ~, _ in URL. .	510
fancybox: Initial support for \VerbatimFootnotes.	790	tabbing: Fix to allow inside \latextimage.	427
fancyverb: Initial support for \VerbatimFootnotes.	798	\theHTMLTitleSeparator: Fix: \FileDepth with non-utf8 encoding.	403
graphics: Added defaults.	856	v0.53	
graphics: Updated for v1.1a.	857	General: 2018/04/01	1
graphics: Updated for v1.1b.	857	lwarpmk: Added \lwarpmk cleanimages.	315
hyperref: Fix: #, %, &, ~, _ in URL.	877-879	lwarpmk: Added warning for corrupted images.	315
nicefrac: Added.	1010	Docs: \lwarpmk cleanimages. .	95
url: Added.	1229	Docs: \lwarpmk pdftohtml. . .	95
lwarpmk: Fix: Memory overflow when spawning tasks.	315	v0.54	
lwarpmk: Fix: Skip image generation if from page 0.	315	General: 2018/04/22	1
Changed FootnoteDepth default to \subsubsection.	368	*.lwarpmkconf: Option IndexLanguage changed to xindyLanguage.	270
Docs: Improved install instructions.	79	*.lwarpmkconf: Option pdftotextEnc added.	270
Fix: MATHJAX script line wraps. Reduced right margin.	240	*.lwarpmkconf: Option xdyFilename changed to xindyStyle.	270
If pdfLaTeX, allow other input encoding.	221	*.lwarpmkconf: Option xindyCodepage added.	270
Restore \kill in a \latextimage. .	931	lwarpcss: Fix: Text-decoration-skip: auto. . .	271
\censuredmath: Improved hashing expansion.	554	lwarpmk.conf: Option IndexLanguage changed to xindyLanguage.	270
\@mpfootnotetext: Fix: Paragraph handling.	372	lwarpmk.conf: Option pdftotextEnc added.	270
\CustomizeMathJax: Added.	385	lwarpmk.conf: Option xdyFilename changed to xindyStyle.	270
\latextimage: Fix for hash expansion.	573	lwarpmk.conf: Option xindyCodepage added.	270
\LatextimageFontSize: Added user-adjustable svg math font scaling.	569	lwarpcss: Fix: Text-decoration-skip: auto. . .	271
\LWR@addbaselinemarker: Warnings if lwarpcss is not present or if graphicx/s not loaded.	544	lwarpmk.conf: Option IndexLanguage changed to xindyLanguage.	270
\LWR@customizedMathJax: Added. .	384	lwarpmk.conf: Option pdftotextEnc added.	270
\LWR@doequation: Fix: equation*		lwarpmk.conf: Option xdyFilename changed to xindyStyle.	270
now based on equation instead of displaymath.	560	lwarpmk.conf: Option xindyCodepage added.	270
Fix: equation* with split. . .	559	bibunits: Added.	685
\LWR@filenamenoblanks: Fix: \FileDepth with non-utf8 encoding.	380	chngpage: Added.	741
\LWR@href: Fix: #, %, &, ~, _ in URL.	509	forest: Added.	835
\LWR@href@partsanitized: Fix: #, %, &, ~, _ in URL.	509	glossaries: Fix when not using babel or polyglossia.	853
\LWR@nolinkurl: Fix: #, %, &, ~, _ in URL.	510	gridset: Added.	867

<i>hyperref</i> : Fix: \ref in \hyperref and \hyperlink caused nested link.	879	<i>verse</i> : Fix: Line spacing.	423
<i>l warp-patch-memoir</i> : Update for v3.7g.	1273	v0.55	
<i>magaz</i> : Added.	941	General: 2018/04/26	1
<i>ragged2e</i> : Fix: \centering, etc. .	1061	<i>clrdblpg</i> : Added.	746
<i>textcomp</i> : Fix for \textperthousand.	1178	Fix: \centering, etc. for <i>koma-script</i>	513
<i>tikz</i> : Fixes for \pgfpicture, minipages, fit, align, font. . .	1192	Fix: QED symbols in <i>latextimage</i>	656, 1028
<i>l warpmk</i> : Added pdftotextenc. .	315	\@xdlbfloat: Fix: Float optional args.	514
<i>l warpmk</i> : Added xindycodepage. .	315	\LWR@LwarpStart: Fix: Overfull boxes in <i>latextimages</i>	407
<i>l warpmk</i> : Changed language to xindylanguage.	315	\LWR@nullfonts: Removed extraneous space which appeared in file links.	541
<i>l warpmk</i> : Changed xdyfile to xindystyle.	315	\LWR@phantomsection: Fix: \ForceHTMLTOC with \phantomsection.	618
<i>l warpmk</i> : Improved error if configuration file does not exist.	315	v0.56	
<i>l warpmk</i> : Increased prominence for error for an unknown command.	315	General: 2018/05/12	1
<i>l warpmk</i> : Verifies HTML version exists before l warpmk limages. .	315	*.l warpmkconf: Records --shell-escape.	270
<i>l warpmk</i> : Verifies image references before l warpmk limages.	315	<i>l warpm.css</i> : Added div.textbf, etc.	271
Add: pdftotextEnc.	232	<i>l warpm.css</i> : Added span.textbf, etc.	271
Add: xindyCodepage.	232	<i>l warpmk.conf</i> : Records --shell-escape.	270
Added early check for disallowed packages.	208	<i>arydshln</i> : Added.	438, 662
Docs: BibTeX.	133	<i>lua-check-hyphen</i> : Added.	934
Docs: Macros in sectioning names.	120	<i>paralist</i> : Fixes for compactenum, compactitem, compactdesc. .	1032
Never load aecompl.	208	<i>parnotes</i> : Added.	1036
Option IndexLanguage changed to xindyLanguage.	232	<i>quoting</i> : Added.	1061
Option xdyFilename changed to xindyStyle.	232	<i>tocenter</i> : Added.	1207
\@xdlbfloat: Honor \centering, etc. in floats.	514	<i>underscore</i> : Added.	1223
\centering: Added debug comment.	578	<i>l warpmk</i> : Added l warpmk pdftosvg.	315
\LateximageFontSizeName: Defaults to normalsize.	569	<i>l warpmk</i> : Supports --shell-escape.	315
\LWR@afterendverbatim: Added vspace argument.	426	Added \thinspace.	611
\LWR@atbeginverbatim: Improved column alignment.	425	Docs: l warpmk pdftosvg.	95
\LWR@endfloatalignment: Honor \centering, etc. in floats. . .	516	\LWR@addcdashline: arydshln: Added.	470
\LWR@floatalignment: Honor \centering, etc. in floats. . .	515	\LWR@addmulticolverrulecolor: Adds support for dashed vertical rules.	477
\LWR@floatend: Honor \centering, etc. in floats.	514	Adds support for double vertical rules.	477
\raggedleft: Added debug comment.	578	\LWR@addtabularhrulecolor: Adds support for arydshln dashed rules.	471
\raggedright: Added debug comment.	578	Adds support for double \hlines and \midrules.	471

\LWR@blocktextcurrentfont: Added	
<div.textbf,<="" etc.="" td=""> <td>606</td> </div.textbf,>	606
\LWR@closeparagraph: Added	
support for parnotes.	361
\LWR@domulticolumn: Adds support	
for dashed vertical rules.	480
Adds support for double vertical	
rules.	480
\LWR@floatbegin: Adds a <class>	
per float package style.	513
\LWR@openparagraph: Added	
support for parnotes.	359
\LWR@parsebarcolumn: Adds	
support for double vertical	
rules.	452
\LWR@parsecoloncolumn: arydshln:	
Added.	452
\LWR@paressemicoloncolumn:	
arydshln: Added.	453
\LWR@tabledatacolumntag: Fix:	
\morecmidrules	488
\LWR@textcurrentfont: Added	
span.textbf, etc.	605
v0.57	
General: 2018/06/06	1
MATHJAX: Supports \footnote,	
\footnotemark.	385
lwarpmk.css: Added ruled, boxed,	
boxruled floats.	271
lwarpmk.css: Increased float	
vertical margins.	271
algorithm2e: Added.	643
bigdelim: Improved print/HTML	
output selection.	685
breakurl: Fix: Text catcodes.	693
colortbl: New system for	
switching print and HTML	
outputs.	748, 749
ellipsis: Added	
\midwordellipsis.	768
errata: Added.	783
float: Added float styles.	817
float: Fix: Do not pre-define	
\l@name.	817
ltablex: Added.	932
marginnote: Fix: Long optional	
argument.	945
multirow: Improved print/HTML	
output selection.	991
register: Added.	1063
subcaption: Fix: \subref.	878
trimclip: Added.	1216
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\scalebox control.	1255
xtabular: Added.	1256
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system for switching print and	
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\fboxBlock: Improved print/HTML	
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\fcolorbox: xcolor: New system for	
switching print and HTML	
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\framebox: Improved print/HTML	
output selection.	597
\InLineClass: Improved	
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\LWR@BlockClassWP: Improved	
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\LWR@href: Fix: Text catcodes.	509
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\LWR@listof: Fix: Provide \l@name	
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\LWR@singledollarmeasure: Fix:	
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\LWR@subhyperref: Fix: Text	
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\LWR@subsingledollarsvg: Fix:	
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\LWR@vspace: Improved print/HTML	
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\makebox: Improved print/HTML	
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\mbox: Improved print/HTML output selection.	596
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\multicolumnrow: multirow: Improved print/HTML output selection.	992
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\newfloat: rotfloat: Added float styles.	1070
rotfloat: Fix for listof sideways floats.	1070
\PackageDiagramAltText: Added.	543
\parbox: Improved print/HTML output selection.	595
\raisebox: Improved print/HTML output selection.	600
\reflectbox: Improved print/HTML output selection.	865
\resizebox: Improved print/HTML output selection.	865
\rotatebox: Improved print/HTML output selection.	864
\rule: Fix: Colored rules.	617
\scalebox: Improved print/HTML output selection.	864
\StartDefiningMath: Added.	337
\textcolor: xcolor: New system for switching print and HTML outputs.	1248
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*.lwarpmkconf: Added option makeindexstyle.	270
*.lwarpmkconf: Added options makeindex and xindy.	270
*.lwarpmkconf: Generated \AtBeginDocument.	270
lwarp.xdy: Requires makeindex.xdy.	310
lwarp.xdy: Supports bold, italic.	310
lwarp_html.list: Added.	309
lwarpmk.conf: Added option makeindexstyle.	270
lwarpmk.conf: Added options makeindex and xindy.	270
lwarpmk.conf: Generated \AtBeginDocument.	270
array: Improved print/HTML output selection.	661
attachfile2: Added.	666
attachfile: Added.	665
cases: Added.	702
imakeidx: Added.	885
index: Added.	889
intopdf: Added.	891
lwarp-patch-komascript: Modified indexing.	1266
lwarp-patch-memoir: Fix for \specialindex.	1289
lwarp-patch-memoir: Fix for multiple indexes.	1290
makeidx: Added. Moved from lwarp core.	942
memoir: Fix for \firsthline, \lasthline.	486
memoir: Fix for booktabs.	490
pdfpages: Added.	1042
pdfx: Added.	1046
repeatingindex: Added.	1066
splitidx: Added.	1137
textcomp: Improved print/HTML output selection.	1178
lwarpmk: Added makeindex and xindy options.	315
lwarpmk: Added -p option for project name.	315
lwarpmk: Added optional list of names for lwarpmk printindex and /cmdslwarpmk htmlindex.	315
lwarpmk: Glossary generation now uses <i>makeglossaries</i>	315
lwarpmk: lwarpmk clean removes all *.ind and *.idx files.	315
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\dotfill: Improved print/HTML output selection.	613
\hfill: Improved print/HTML output selection.	612
\hrulefill: Improved print/HTML output selection.	612
\LWR@doindexentrysubsub: Adds support for \see, \seealso, \emph, \textbf, etc.	533
\LWR@HTML@caption@begin: Improved print/HTML output selection.	518
\LWR@HTML@caption@end: Improved print/HTML output selection.	518
\LWR@HTML@ref: Improved print/HTML output selection.	504
\LWR@hyperindexrefnullified: Adds support for \see, \seealso, \emph, \textbf, etc.	534

\LWR@hyperindexrefsubtwo: Adds support for \see, \seealso, \emph, \textbf, etc.	535	\LWR@latexmkkcmd: Fix: --shell-escape with <i>latextmk</i>	266
\LWR@indexitem: Accepts optional arg for repeatindex	529	\LWR@writeconf: Compilation commands now preassigned by <i>l warp</i> instead of being computed by <i>lwarpmk</i>	270
\printindex: Fix: Extra \newpage to flush pending \index writes.	942	picture: Added an alt tag.	589
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Slunits: Added.	1091	tabular: Improved memory management: Not using <i>xstring</i>	441
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asymptote: Added.	664	bophook: Added.	691
axessibility: Added.	671	diagbox: Fix for par tags.	759
breqn: Added.	693	draftfigure: Added.	762
bxpapersize: Added.	695	fancytabs: Added.	797
canoniclayout: Added.	697	fullminipage: Added.	841
chemformula: Fix for \NMR.	736	grid-system: Added.	867
draftcopy: Added.	762	layaureo: Added.	908
epstopdf-base: Improved.	780	leading: Added.	911
epstopdf: Improved.	780	listings: Fix for HTML entities.	922
fnbreak: Added.	824	listings: Fix if inside a list.	924, 926
graphics: Fix: Expand filename.	862	multirow: tabular: Improved memory management: Not using <i>xstring</i>	991
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nccfancyhdr: Added.	999	thumb: Added.	1190
pdftricks: Added.	1045	widows-and-orphans: Added.	1237
pst-eps: Added.	1057	\LWR@clearmidrules: tabular: Fix for midrules.	467
pstricks: Added.	1058	\LWR@parsenormalcolumn: tabular: Improved memory management: Not using <i>xstring</i>	453
units: Added support for MathJax.	1227	\LWR@tabledatasinglecolumntag: tabular: Improved memory management: Not using <i>xstring</i>	465, 466
xunicode: Added.	1262	\LWR@tabularendofline: Fix: Slowdown for long tables.	448
<i>lwarpmk</i> : Added		v0.61	
<i>lwarpmk epstopdf</i>	315	General: 2018/10/13	1
<i>lwarpmk</i> : Consolidated compiling options into printlatexcmd and HTML latexcmd.	315	<i>lwarp.css</i> : Footnotes text align left.	271
<i>lwarpmk</i> : Double instead of single-dashed --shell-escape option.	315	<i>lwarp.css</i> : Minipage table and footnotes: tighter margin.	271
<i>lwarpmk</i> : Error if <i>lwarpmk.conf</i> format changed.	315	<i>chkfloat</i> : Added.	740
<i>lwarpmk</i> : Warning if operating system changed.	315	<i>cmdtrack</i> : Added.	747
Added option dvipdfmx.	234	<i>copyrightbox</i> : Added.	752
Added option dvipdfm.	234	<i>dprogress</i> : Added.	762
Added option dvips.	234	<i>epsfig</i> : Added.	779
Docs: lwarpmk epstopdf	95	<i>graphics</i> : Fix: EPS for DVI LATEX.	858
File: <i>lwarp_mathjax.txt</i> : Fix: Removed chapter number from tagged non-numeric MATHJAX equations.	311	<i>graphics</i> : Set keys before using filename, for <i>epsfig</i>	862
File: <i>lwarp_mathjax.txt</i> : Updated to MATHJAX v2.7.4.	311	<i>lua-visual-debug</i> : Added.	934
\L: Fix with \displaymathnormal.	554	<i>pdfprivacy</i> : Added.	1044
\LWR@addbaselinemarker: Uses .eps if DVI <i>latex</i>	544		

psfragx: Added.	1056
psfrag: Added.	1056
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refcheck: Added.	1063
srcltx: Added.	1138
srctex: Added.	1138
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uspace: Added.	1230
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Spaces redefined	
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\DeclareGraphicsExtensions: Fix: EPS for DVI LATEX.	854
\inlinemathnormal: Changed name from \StopDynamicMath to \inlinemathnormal.	338
\inlinemathother: Changed name from \StartDynamicMath to \inlinemathother.	338
\l warpsetup: Added.	230
\LWR@addcompilecmd: Removed spaces.	265
\LWR@closetabledatacell: Fix: Par tags in tabular.	443
\LWR@HTMLLatexCmd: Added HTMLLatexCmd option.	269
Added PrintLatexCmd option.	269
\LWR@hyperindexrefnullified: Made robust,	534
\LWR@listof: Fix: newfloat lists.	523
\LWRopseq: Added spaces.	229
\RequirePackage: Support up to 20 packages.	247
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\textbf and related: Improved font detection.	601
\l warp.css: Added css for xfrac, nicefrac.	271
\l warp.css: Fixed css for \textup.	271
\l warp.css: Reduced margins in titlepage.	271
\l warp_formal.css: Fix: Font for verse.	305
2in1: Added.	631
CJKutf8: Prevented unless xeCJK.	742
CJK: Prevented unless xeCJK.	742
asymptote: Improved alt tags.	664
bitpattern: Added.	687
calc: Fix: Required for print version.	242
chngpage: Fix: Loads \l warp-chngpage.	741
ctexpatch: Added patch.	625
flippdf: Added.	816
graphics: Fix: Filename expansion.	860
graphics: Fix: FormatWP.	858
musicography: Added.	994
nicefrac: Improved font control and css, honors nice, ugly.	1010
notespages: Added.	1016
octave: Added.	1028
pdfcomment: Added.	1041
pdfmarginpar: Added.	1042
register: Updated to v1.8.	1063
rviewport: Added.	1070
semantic-markup: Added.	1082
textcomp: Fix conflict with xunicode.	1179
tram: Added.	1216
twoup: Added.	1218
ulem: Improved compatibility with CJKlem.	1221
ulem: Now works in a lateximage.	1221
unitsdef: Added.	1228
units: Improved font control and css, honors loose, tight.	1227
xcolor: Fix: Horiz white space.	1250
xchangebar: Added.	1252
xfrac: Improved css.	1255
xunicode: Fix conflict with textcomp.	1262
Added early checks for CJK, CJKutf8.	208
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Logos: Made robust.	619
\@partcntformat: Added for ctex.	394
\@partnameformat: Added for ctex.	395
\colorboxBlock: xcolor: Fix: Horiz white space.	1249
\fcolorbox: Fix: No longer requires xifthen.	586
\fcolorboxBlock: xcolor: Fix: Horiz white space.	1250
fcolorminipage: xcolor: Fix: Horiz white space.	1251
Fix: No longer requires xifthen.	587
fminipage: Fix: Horiz white space.	600
\InlineClass: Added optional word-processing style. Replaces \LWR@HTMLtextstyle.	356
\l@chapter: Don't define if no \chapter. Fix for algorithm2e.	528
\LWR@blocktextcurrentfont: Added print version.	610
\LWR@endofline: Extra space if optional arg.	613
\LWR@filestart: Refactored.	405
\LWR@isolate: Added.	225
\LWR@PreloadedPackage: Added.	579
\LWR@ProvidesPackagePass: Fix: Unknown option error.	249
\LWR@textcurrentfont: Added print version.	610
Tracks depth to avoid nesting repeated font changes.	605
\sllshape: Added.	608
\textup: Fixed WP span class.	603
\theHTMLSection: Added.	403
\theHTMLTitleSection: Added.	403
\theHTMLTitleSeparator: Refactored.	403
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\l warp.css: Added css for vertical writing.	271
\l warp.css: Improved css for mdframed.	271
amsthm, mdframed: Fix for enforced load order.	653
emumitem: v3.6: Nullify \DrawEnumitemLabel.	778
geometry: Fix for bxjs* classes.	241
mdframed: Avoid thin rules.	961
mdframed: Improved font control.	964, 965
stfloats: Adapted to ltj* classes.	1152
xpinyin: Added.	1258
zhlineskip: Added.	1264
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ujarticle and related: Improved \today.	624
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\enskip: Made robust.	614
\LWR@checkloadfilename: Prevented bitfield, doublespace, newthm, rplain, si.	245
\LWR@HTMLLatexCmd: utarticle and related: Added.	269
\LWR@section: Support for ujarticle and related.	398
\qquad: Made robust.	614
\quad: Made robust.	614
\theHTMLTitleSeparator: Added utarticle and related.	403
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\l warp.css: Added \sllshape, \textsi.	271
\l warp.css: Improved css for page layout.	271

\l warp.css: Improved css for quotations.	271
\l warp.css: Siderocto left for improved \marginpars.	271
\l warp_formal.css: Siderocto left for improved \marginpars.	305
\l warp_sagebrush.css: Siderocto left for improved \marginpars.	301
\bounddvi: Added.	691
\embrac: Added.	768
\footnoterange: Added.	834
\gentombow: Added.	848
\geometry: Fix for <i>bxjs*</i> classes. .	241
\graphics: Added	
\includegraphics alt key.	584, 855, 856, 858, 861
\lltjtext: Added.	927
\multicolrule: Added.	988
\multicol: Added \docolaction.	988
\plardyshln: Added.	1053
\plexarydshln: Added.	1054
\plexcolortbl: Added.	1054
\plexit: Added.	1053
\pxatbegshi: Added.	1058
\pxeveryshi: Added.	1058
\pxftnright: Added.	1059
\pxjahyper: Added.	1059
\tascmac: Added.	1168
\versonotes: Added.	1232
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Fix for \rensuji.	624
Fix space between class and id.	357
\venskip: Changed to Unicode EN SPACE.	614
\LWR@figcaption: Uses <figurecaption> instead of <figcaption>.	517
\LWR@hyperindexrefnullified: Added \textsi.	534
\LWR@LwarpEnd: Improved css for page layout.	410
\LWR@LwarpStart: Improved css for page layout.	408
\LWR@newhtmlfile: Error if duplicate file name.	389
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\LWR@nullfonts: Added \textsi. .	539
\LWR@PreloadedPackage: \AtBeginDocument to avoid option clashes.	579
\LWR@restoreorigformatting: Fix: tabular*.	538
\minipage: Refactored to later allow Japanese <t/y> argument. .	592
\quad: Changed to Unicode EM SPACE.	614
\sishape: Added \sishape.	608
\tabular: Added support for plect.	492
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\textsi: Added.	604
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\l warp.css: Added niceframe.	271
\l warp.css: Improved css for definition lists.	271
\l warp_formal.css: Improved css for table notes.	305
\l warp_one_limage.txt: Image directory and prefix.	310
\acronym: Fix for acronym in caption.	641
\acronym: No longer uses zref. .	641
\ar: Added.	659
\ed: Added.	767
\extramarks: Updated to v3.10. .	788
\fancybox: Improved HTML formatting.	791
\fancyhdr: Updated to v3.10.	795
\fancyverb: Improved HTML formatting.	803
\graphics: Improved HTML formatting.	861
\kotexutf: Patch for references. .	626
\memoir: Docs re: version numbers.	170
\multicolrule: Updated for v1.2. .	988
\nameauth: Added.	997
\register: Verified for v1.9.	1063
\subcaption: Added.	1153
\tocbasic: Updated to v3.26a. .	1203
\truncate: Added.	1218
\zref: No longer used.	244
\l warpmk: Added	
ImagesDirectory and ImagesName.	315
\l warpmk: Fix for cleanimages . .	315
Added early checks for colortab, epsf, hyper, picinpar, picins, sistyle, ucs.	208
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\fbox: Fix: Removed extra space. .	598
\IgnoreMinipageWidths: Added, .	592
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\LinkHome: Fix: Document	
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\LWR@footnotetext: Improved	
HTML formatting.	370
\LWR@checkloadfilename:	
Prevented colortab, epsf, hyper,	
picinpar, picins, sistyle, ucs. . .	245
\LWR@closeparagraph: Fix:	
Combined span, tabular, and	
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Improved HTML formatting. . . .	361
\LWR@closeparagraph@br:	
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\LWR@fboxstyle: Use current text	
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\LWR@filenamenoblanks: Fix:	
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\LWR@findcurrenttextcolor: Fix:	
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\LWR@htmlfileref: No longer use	
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\LWR@htmlsectionfilename:	
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\LWR@hyperindexrefsubtwo: Fix:	
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\LWR@indentHTML: Added.	350
\LWR@lateximagedepthref: No	
longer use zref.	500
\LWR@lateximagenumberref: No	
longer use zref.	500
\LWR@LwarpStart: Fix: toc, LOF,	
LOT links.	409
\LWR@nameref: No longer use zref.	499
\LWR@nullfonts: Logos.	541
\LWR@openparagraph: Improved	
HTML formatting.	360
\LWR@section: Fix: toc, LOF, LOT	
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Improved HTML formatting. . . .	399
\LWR@setexparray: Fix with \par.	336
\LWR@setref: No longer use zref. .	499
\LWR@simplifyname: Added.	377
\LWR@startref: No longer use zref.	503
\LWR@stopars: Improved HTML	
formatting.	363
\LWR@subhtmllementclass:	
Improved HTML formatting. .	353
\LWR@subhyperrefclass: Improved	
HTML formatting.	508
\LWR@subinlineimage: Improved	
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\LWR@write@lwarplabel: No longer	
use zref.	500
\LWR@writeconf: Added	
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\LWR@forceminipagefullwidth.	
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\minipagefullwidth: Made	
\global.	592
\rotatebox: Improved HTML	
formatting.	864
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\scalebox: Improved HTML	
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tabular: Fix: Minipages inside	
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\textgreater: Made robust. . . .	340
\textless: Made robust.	340
\UseMinipageWidths: Added, . .	592
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karnaugh-map: Added.	895
marvosym: Added.	945
multicap: Added.	986
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pifont: Added.	1052
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textcomp: Nullify in filenames.	1180
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umoline: Added.	1222
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xfakebold: Added.	1254
xunicode: Nullify in filenames.	1262
AMS environments: Added	
xfakebold support.	649
eqnarray: xfakebold: Added	
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\LWR@doequation: xfakebold:	
Added support.	561
\LWR@doubledollar: xfakebold:	
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\LWR@filenamenoblanks: Improved	
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\LWR@lookforpackagename:	
easyReview: Supported. . . .	246
\LWR@nullfonts: Add'l symbols. .	539
\LWR@simplifycustom: Added. . .	377

\LWR@subsingle dollar: <i>xfakebold</i> :	
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\LWR@subsingle dollarsvg:	
<i>xfakebold</i> : Added support.	549, 550
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<i>fnpara</i> : Added.	825
<i>footnotebackref</i> : Added.	834
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<i>longtable</i> : Improved error handling.	931
<i>manyfoot</i> : Added.	942
<i>niceframe</i> : Added.	1011
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<i>showtags</i> : Added.	1087
<i>tablefootnote</i> : Added.	1163
<i>threeparttable</i> : Added.	1190
<i>threeparttable</i> : Fix for caption type.	1189
<i>lwarpmk</i> : Improved error handling if incomplete compile.	315
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\lWR@ <i>printpendingfootnotes</i> : Factored for multiple footnote boxes.	372
\lWR@ <i>tabular@warpprintonly</i> : Added.	491
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<i>ftcap</i> : Added.	840
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<i>keyfloat</i> : Updated for v2.00.	898
<i>listliketab</i> : Added.	927
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<i>multirow</i> : Error if \multirow without \mrowcell.	991
<i>rotating</i> : Requires <i>graphicx</i>	1068
<i>supertabular</i> : Fix: Clear caption after use.	1161
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<i>tocdata</i> : Added.	1205
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<i>xtab</i> : Fix: Clear caption after use.	1261
\fminipage: Honors \minipagewidth.	599
\framebox: Fix: Handle paren arg.	597
\hypertoc: Added support for <i>tocdata</i>	526
\hypertocfloat: Added support for <i>tocdata</i>	527
\lateximage: Fix for <i>pdftotext</i> errors from font size change.	576
\lWR@ <i>maybetocdata</i> : Added support for <i>tocdata</i>	525
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<i>changelayout</i> : Added.	704
<i>changes</i> : Updated to v3.1.2.	705
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\lWR@ <i>lookforpackagename</i> : changes: Updated to v3.1.2.	246
\lWR@ <i>mathjaxfilename</i> : Added.	365
\lWR@ <i>nestspan</i> : Improved <i>minipage</i> , \parbox inside a span.	351
\lWR@ <i>restoreorigformatting</i> : Fix: \& in a <i>latexitimage</i>	538
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	\hypertocfloat: Fix: References for <i>xr</i> , <i>xr-hyper</i>	527
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	\paragraph: Added support for \hypbmsec.	402
	\part: Added support for \hypbmsec.	401
	\section: Added support for \hypbmsec.	402
	\subparagraph: Added support for \hypbmsec.	402
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	\textluc: <i>fontaxes</i> : Added.	603
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v0.73	General: 2019/07/11	1
	\l warp.css: Added \book for <i>memoir</i>	271
	\l warp.css: Improved \pgtodata formatting.	271
	\l warp_formal.css: Added \book for <i>memoir</i>	301, 305
	\boxedminipage2e: Fix: Paragraph tags.	692
	\epigraph: Fix: Paragraph tags. .	778
	\fancybox: \trivlist: Fixed paragraph tags.	792
	\fancyvrb: Fix: Nested <div>/<pre>.	804, 808
	\intopdf: Updated to v0.2.1. . .	891
	\listings: Fix: Paragraph tags. . .	926
	\l warp-common-multimedia: Fix: No size for audio file. .	1295, 1296
	\l warp-common-multimedia: Fix: Paragraph tags.	1298
	\l warp-patch-komascript: Fix for captions.	1267
	\l warp-patch-memoir: Added \book.	1274
	\l warp-patch-memoir: Fix for \frontmatter* and \mainmatter*.	1274
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	\musicography: Updated to 2019/05/28. Now supports \latextimages.	994
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\chemfig: Updated to v1.4. . .	710	
\endfloat: Updated for v2.7. . .	769	
\l warp-common-multimedia: Added.	1295	
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\l warpmk: If wrong \warpmk.conf version, or wrong OS, displays the print command to recompile.	315	
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\LWR@stoppars: Reduced underfull \hbox warnings.	363	
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\l warp.css: Added \backnaur. .	271	
\l warp.css: Removed unneeded support for \sishape, \textsi. .	271	
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\boxedminipage2e: Added support for \textrimages. . .	692	
\changes: Fix references for <i>xr</i> , <i>xr-hyper</i>	705	
\fontaxes: Added.	605, 830	
\gloss: Fix references for <i>xr</i> , <i>xr-hyper</i>	851	
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\minibox: Added.	976	
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\nomenc: Fix references for <i>xr</i> , <i>xr-hyper</i>	1015	
\pdfcrypt: Added.	1041	
\shapepar: Added.	1085	
\slantsc: Added.	1133	
\soulutf8: Fix: Loads \soul. . .	1135	
\tabfigures: Added.	1163	
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\HTMLTitle: Added default title if none specified.	366
\l@book: Added \book for memoir.	527
\LWR@addbaselinemarker: Improved warning messages.	544
\LWR@blocktextcurrentfont: Fix: Paragraph tags.	606
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\LWR@ThisAltText:	Add \ThisAltText.	542
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l warp.css:	Improved marginblock.	271
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wrapfig:	Fix for width.	1239
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l warp.css:	Fix for small caps.	271
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ltxtable: Fix: Required packages.	933
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siunitx-v2: Fix: \square,	
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\LWR@checkloadfilename: Prevented formula, shadethm, slashbox.	245
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Prevented statex.	208
\LWR@addbaselinemarker: Improved warning messages.	544
\LWR@checkloadfilename: Prevented statex.	245
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\l warp-patch-memoir: Supports tocvsec2.	1274, 1278
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l warp-patch-memoir: Fixed:	
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l warp-patch-memoir: No longer	
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l warp-patch-memoir: Updated	
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l warp.css: Fix: Top nav if narrow	
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l warp.css: Improved	
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l warp-patch-memoir: Fixed	
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\LWR@HTML@ref:	Added MATHJAX.	506
\LWR@hyperindexrefsubtwo:	Adds support for a range, for <i>xindex</i> .	535
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\LWR@restoreorigFormatting:	Support for MATHJAX.	538
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\LWR@xindex@modifyentry:	Added support for <i>xindex</i> .	530
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\l warp-common-mathjax-letters.	765	
everyshi:	Adapt to LATEXkernel changes.	788
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hepunits:	Added.	869
\l warp-common-mathjax-letters:	Added.	1299
\l warp-common-mathjax-newpxmath:	Added.	1305
\l warp-common-mathjax-overlaysymbols:	Added.	1315
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\l warp-common-mathjax-letters.		
thm-listof:	Updated to v0.72.	1186
thm-restate:	Updated to v0.72, no changes needed.	1187
thmtools:	Added.	1188
txfonts:	Added.	1219
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\l warpmk:	clean also removes	
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Allow preload of amsmath, amsthm, centernot.		
AMS environments:	Fix: <ALT> text env name.	650
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\LWR@HTMLsanitizeexpanded:	Fix: Nested MATHJAX environments.	384
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listings:	Improved spacing around ampersand.	922
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\l warp-common-mathjax-newpxmath:	Factored non-UNICODE.	1307, 1308, 1310
\l warp-common-mathjax-nonunicode:	Added.	1312
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mathdesign:	Added \mathop.	949
mathdesign:	Added \mathrel, \mathord.	948
mathdesign:	Honors greekuppercase, greeklowercase.	948
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mathfixs:	Added \mathinner.	950
mathpazo:	Honors slantedGreek.	950
mathptmx:	Honors slantedGreek.	951
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newtxmath:	Honors uprightGreek, slantedGreek.	1002
nicefrac:	Added \mathinner, improved fraction.	1011
scalerel:	Added.	1071
shuffle:	Added \mathbin, improved bar.	1088
txgreeks:	Added.	1219
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\LWR@atbeginverbatim:	Fix for verbatim, allt with lists	425
\LWR@checkloadfilename:	Prevented libgreek.	245
\LWR@excludecomment:	Error if nested comment.	237
\LWR@HTMLsanitize@tmpb:	Neutralized quotes.	382
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libertinust1math:	Added \left/ \right support in \l warp_mathjax.txt.	913
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\l warp-common-mathjax-newpxmath:	Added \left/\right support in \l warp_mathjax.txt.	1305, 1310
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\fcolorboxBlock:	xcolor: Fixed second optional arg.	1250
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epstopdf:	Updated date to v2.11.	780
esvect:	Added.	784
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menukeys: Added.	970
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\cmidrule trim arg.	691
colortbl: Added MATHJAX	
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nicematrix: Added.	1011
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MATHJAX warnings.	628
\LWR@mathjaxwarn: Improved	
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amscdx: Added.	648
amsmath: Added \hat, etc.	652
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fancyhdr: Updated to v4.0.	795
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Allowed epsf.	208
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\LWR@addlinktitle: Improved	
HTML quotes.	503
\LWR@checkloadfilename: kpfonts	
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Allowed epsf.	245
\LWR@domulticolumn: Improved	
HTML quotes.	479, 480
\LWR@floatbegin: Improved HTML	
quotes.	513
\LWR@forcenewautoidanchor:	
Improved HTML quotes.	515
\LWR@forceSVGmessage: Improved	
MATHJAX warning.	628
\LWR@hook@processingtags:	
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\LWR@label@subcreatetag:	
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autoaligne, boldtensors,	
liberitinustmath, tensind.	628
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\LWR@subhyperref: Improved HTML	
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\LWR@subinlineimage: Improved	
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\LWR@tdaddstyle: Improved HTML	
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\rule: Improved HTML quotes.	617, 618
\scalebox: Improved HTML quotes.	865
\verb: Improved HTML quotes. . .	424
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General: 2021/04/08	1
\warp.css: Added <main>,	
adjusted <sidetoccontainer>	
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amsthm: Improved back	
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backref: Improved backrefs. . .	673
biblatex: Fix: Back references. .	682
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biblatex: Improved refs: \ref to	
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bigdelim: Updated to v2.8. . . .	685
ccicons: Added.	702
chemfig: Updated to v1.6a. .	710, 711
citeref: Improved refs: \ref to	
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classicthesis: Added.	742
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cleveref: Undo subfig changes. .	746
enotez: Added.	775
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floatflt: Added ARIA role.	818
hyperref: Fix: Added	
*autorefname macros.	880
hyperref: Fix: No \hyperlink in	
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keyfloat: Added ARIA role. .	902, 903
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l warp-patch-memoir: Added	
ARIA role.	1283
natbib: Fix: Citation references..	998
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orcidlink: Added.	1029
parnotes: Added ARIA role. . .	1036
pdfscape: Fix: Added	
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picinpar: Added ARIA role. . .	1050
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scrlayer-scrpage: Added	
\headmark, \pagemark. . .	1078
theorem: Intersperse footnotes.	1185
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This is an index of instructions and concepts. Look here when wondering how to do something, and check the Troubleshooting Index when something goes wrong.

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Troubleshooting Index

This index is a sorted reference of problems and solutions. In order to make it easier to locate a solution, the same issue may be addressed by more than one entry.

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