

Lwarp

L^AT_EX HTML⁵

The lwarp package

L^AT_EX to HTML

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Abstract

The `lwarp` package converts L^AT_EX to HTML by using L^AT_EX 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. Hundreds of L^AT_EX packages are supported, including dozens with MATHJAX emulation.

Documents may be produced by DVI or PDF L^AT_EX, LuaL^AT_EX, XeL^AT_EX; by several CJK engines, classes, and packages; or by customized systems such as `perltext` 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 M^IK_TE_X) and PERL. Detailed installation instructions are included for each of the major operating systems and T_EX 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 L^AT_EX 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.

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

For a list of supported features, see [table 2: Supported packages and features](#).

To update existing projects, see [section 1: Updates](#).

Lwarp is still in development. Changes are likely.

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T_EX and related projects:

- are mostly open-sourced and a volunteer effort;
- benefit students, academics, scientists, engineers, and businesses;
- help drive education, public and private research, and commercial activity;
- are used in the fields of mathematics, science, engineering, and humanities;
- are international in reach;
- span decades of development;
- are enduring — many older packages are still actively used and maintained;
- are largely backwards compatible;
- are portable across all the major computing platforms;
- are usable even on older computers and away from internet access;
- are continuing to maintain relevance with modern improvements;
- require no yearly subscription fees;
- and are supported by an active community of knowledgeable volunteers.

Please consider helping by joining and/or contributing to the T_EX Users Group, a United States 501(c)(3) tax-exempt charitable organization. Contributions are accepted by credit card, check, or Pay Pal, via the United Way, or by USA or European bank transfer. Membership in TUG supports the development of T_EXLive, the major T_EX distribution.

Donations may be directed towards individual projects:

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LaTeX Project: Modernizing the L^AT_EX core.

Libre Font Fund: Fonts, tools (FontForge), and distribution (the Open Font Library).

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MetaPost: Postscript graphics.

MacTeX: T_EX for Mac.

PDF Accessibility: Modern PDF standards.

Other: Additional projects may be specified.

To make a contribution: <https://www.tug.org/donate.html>

For country-specific T_EX users groups: <http://tug.org/usergroups.html>

For users of MiK_TE_X: <https://miktex.org/donations.html>

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1 Updates

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

For a detailed list of the most recent changes, see the end of the Change History on page 1171.

v0.81: MATHJAX speedup and additional emulations.

- `core`
 - Improved warning regarding SVG math sizing/baselines and `graphics/graphicsx`. See section 8.7.
- `MATHJAX`
 - Improved MATHJAX emulation processing speed.
 - Added MATHJAX emulation for `accsupp`, `accessibility`, `colonequals`, `decimal`, `dotlessi`, `econometrics`, `engtlc`, `multiobjective`, `physunits`, `Slunits`, `stackrel`, `statmath`.
- `packages`
 - `accessibility`: Updated to 2020/01/08 version.
 - `gridset`: Updated to v0.3.
 - `Slunits`: Fixed for math mode.
 - Added `DotArrow`, `nolbreaks`, `luamplib`, `returntograd`, `statex2`, `tagpdf`.
 - Verified to work as-is with `icomma`, `mathpunctspace`, `textualcomma`.

v0.80: MATHJAX, biblatex.

- `MATHJAX`
 - Added docs and warning/info messages re: avoiding slow MATHJAX compilation. See section 8.7.5, [Customizing MATHJAX](#).
 - Added MATHJAX emulation for `accessibility`, `autobreak`, `centernot`, `extrarrows`, `fouridx`, `gensymb`, `leftidx`, `mathcomp`, `mathdots`, `mathfixs`, `mismatch`, `nccmath`, `noitcrul`, `pdfcomment`, `resize`, `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`, `hline`, `mismatch`, `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.

packages

- minipage, \parbox, fminipage, \makebox, \framebox: Fix: Adjust for virtual page size.
- Uses new iftex.
- 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.
- Fix to overwrite existing support files using new filecontents environment.

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 5.17.

- MATHJAX**
- MATHJAX: Updated to v2.7.6.

- packages**
- xr: Updated to v5.05.
 - xr-hyper: Updated to v6.1.
 - Verified works as-is with xcite.

- 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 5.19.
 - 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:

**HTML alt text
changed names**

Old	New
(hard coded as “image”)	\ImageAltText
\mathimagenam	\MathImageAltText
\pacakgediagramname	\PackageDiagramAltText

- 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 *lwarp*, 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`.
- lwarpmk**
- *lwarpmk*: `lwarpmk clean` removes additional files.
 - *lwarpmk*: `lwarpmk epstopdf` and `lwarpmk 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.

packages

- 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 `qccircuit`.
- `fancyvrb`: Fix for label HTML tags.
- Added `stackengine`.
- Added `lyluatex`. (Music scores.)
- `musicography`: Updated to 2019/05/28. Added support for `lateximages`.

music

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 ⇒ **lwarpmk cleanimages**

and

Enter ⇒ **lwarpmk images**

- Docs: Color-codes package names in the table of supported packages and features, table 2, according to each package's level of support by `lwarp`.
- `\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 `nfssect-cfr`, thus supporting `cfr-lm` and several other font packages.
- Added `backnaur`, `hypbmsec`, `minibox`, `pdfcrypt`, `shapepar`.

packages

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 lwarp. See section 13.1.
- *lwarpmk*: If file `lwarpmk.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 `lwarpmk` `limages` 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 351.
 - changes: Updated to v3.1.2.
 - Added `autonum`, `changelayout`, `inputtrc`, `mathtools`, `metalogo`.

v0.69: Error handling, many fixes, improved keyfloat / tocdata.

- Fix for HTML corruption of `lateximage` displays.
- `\makebox`, `\framebox`: Fix for `(\langle width,height \rangle)` arguments.
- `fminipage`: Honors `\minipagefullwidth`.
- packages
 - `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.

- lwarpmk*
 - *lwarpmk*: Improved error handling for image generation if compile was incomplete.
 - *tabular*: Fix for `\warpprintonly`.
- packages
 - *longtable*: Improved flexibility for `\endhead`, etc. Improved error reporting if `\endhead`, etc. incorrect for *lwarp*.
 - *threeparttable*: Fix for caption type.
 - *hyperref*: Fix for options with braces.
 - *morefloats*: Fix to be loaded early for print output.
 - *listings*: Updated for v1.7.
 - Added *bigfoot*, *fnpara*, *footnotebackref*, *manyfoot*, *tablefootnote*, *threeparttablex*.
 - Added *layouts*, *niceframe*, *perpage*, *showtags*.
 - Prevented *alg*, *algorithmic*, *pdfcprot*, *fncylab*.

v0.67: Filename generation, symbol fonts.

- docs
 - Documentation fix for `<project>-images`, `<project>-images.txt`.
 - Added discussion regarding section names. See section 8.4.
- filenames
 - Added `\FilenameNullify` and `\FilenameSimplify` for filename generation. See section 8.4.
 - *Core*, *textcomp*, *xunicode*: Nullified additional symbols during filename generation.
- packages
 - *color*: Fix for version number warnings.
 - Added *academicons*, *bbding*, *dingbat*, *eurosym*, *fontawesome*, *fontawesome5*, *marvosym*, *pifont*, *typicons*.
 - Added *changes*, *easyReview*, *fitbox*, *foreign*, *gloss*, *karnaugh-map*, *multicap*, *nomencl*, *notes*, *struktex*, *umoline*, *xfakebold*.
 - Tested to work as-is with *askmaps*, *curves*, *euro*, *karnaughmap*, *tikz-karnaugh*.

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

- ⚠ 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.
- lateximage
 - Adds options `ImagesDirectory` and `ImagesName` to assign directory and name prefixes for *lateximage* images. The new defaults include the job-name, allowing the image directories for multiple projects to coexist.
- ⚠ existing projects
 - To reuse existing *lateximage* directories, add *lwarp* options


```
\usepackage[
  ImagesDirectory={lateximages},
  ImagesName={lateximage-}
]{lwarp}
```

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 `lwarp`.
- △ Possible filename changes
 - Improved filename generation when special characters or macros are used in section names.
- WINDOWS
 - Fix for `lwarpmk cleanimages` with `WINDOWS`.
- floats
 - Fixes for floats in the home page.
- lists, table notes
 - Improved css for definition lists, table notes.
- tabular
 - `tabular`: Fixes for `\par` in column specifier, `minipage` inside `tabular`.
- indexing
 - Indexing: Fix for a long line of multiple entries.
- minipage
 - `\minipagefullwidth`: Fix for global changes.
 - Added `\UseMinipageWidths` and `\IgnoreMinipageWidths`. See section 8.3.3.
- colors
 - Improved `\fbox`, `\fboxBlock`, `\fminipage` to use current text color.
- HTML
 - Improved HTML output formatting.
- docs
 - 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.
- packages
 - `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 `lwarp` 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.
 - Moved the `sideroc` to the left side, allowing improved css for margin notes.
 - Improved page layout css.
- page layout
 - Moved the `sideroc` to the left side, allowing improved css for margin notes.
 - Improved page layout css.
- image alt tags
 - `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.
- Japanese
- Added `ltj*` classes, `bounddvi`, `gentombow`, `ltxtext`, `plarydshln`, `plext`, `plextarydshln`, `plextcolortbl`, `pxatbegshi`, `pxeveryshi`, `pxftnright`, `pxjahyper`, `tasctmac`.
 - Verified to work with `plarray`, `plautopatch`, `plextarray`, `plextdelarray`, `pxgentombow`, `plsiunitx`, `pxpdfpages`, `pxpgfrcs`, `pxpgfmark`.
- packages
- Added support for `fontspec \textsi` and `\sishape`.
 - Added `multicol's \docolaction`.
 - Added `embrace`, `footnoterange`, `multicolrule`, `versionotes`.
- v0.64:** Koma-Script, Japanese, Chinese.
- Japanese
- Added `utarticle` and related classes.
 - Improved `ujarticle` and related classes.
- Chinese
- Fix for `biblatex` with `CTEX` and other classes.
- Koma-Script packages
- Fixes for `sclayer`, `sclayer-scrpage`.
 - `addlines`: Updated to v0.3.
 - Added `bsheaders`, `gmeometric`, `marginal`, `rmpage`, `scrpage2`.
- v0.63:** `mdframed`, Chinese, Japanese, Korean
- localization
- Added `\Linkhomename`: A user-definable name for the **Home** link.
 - Documented `\sidetocname`: A user-definable name for the `sidetoc`.
- fixes
- Fix: `\LinkHome` for print output.
- optimizations
- Moved package load checks to the `lwarp` core to reduce the number of `lwarp-*` files.
- packages
- `mdframed`: Fix with `amsthm`, improved titles and font control. Improved rule widths.
- Chinese
- Fixes for `xeCJK`.
 - Added `xpinyin`, `zhlineskip`.
 - Verified to work with `ckjpunct`, `upzhkinsoku`, `zhspacing`.
- Japanese
- Verified to work with `zxjatype`, `luatexja`, `luatexja-fontspec`.
 - Added `bxjsarticle` and related classes.
 - Added `ltjsarticle` and related classes.
 - Added `pLATEX`, `upLATEX`, `ujarticle` and related classes.
 - Prevented `utarticle` and related classes.
 - Prevented `bxckatype`.
- Korean
- Verified to work with `kotex`, `xetexko`, `luatexko`.

v0.62: MiKTeX docs, HTML title, CTeX, xeCJK, bitpattern.

- docs
 - Docs: Setting a UTF-8 locale. See section 9.8.
- MiKTeX
 - MiKTeX: Docs for *MiKTeX Console* and miktex-poppler-bin.
- HTML <title>
 - 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
 - Fix for package options handling.
 - Fixes for horizontal white space between fminipage, fcolorminipage, colorboxBlock, fcolorboxBlock.
 - Logos: Fix for XeTeX logo, improved css, made robust, improved search-engine optimization.
 - \[\$1]: Additional HTML
 if \$1 > 0 pt.
 - Fixes for \includgraphics filename, and with FormatWP.
 - Fix: css for \textup.
 - Fix: Added \slshape.
- Chinese
 - Added ctex package and related classes, xeCJK.
 - Prevented CJK, CJKutf8 unless xeCJK, ctex are used.
- packages
 - chemfig: Docs for new macro \polymerdelim.
 - asymptote: Docs for compilation.
 - chngpage: Fix to load lwarp-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, lateximage.
 - MathJax and siunitx: Removed inoperable extension.
 - Added bitpattern, pdfcomment, pdfmarginpar, tram, unitsdef, xexchangebar.
 - 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.
- custom compiling
 - Added options to specify the shell commands to execute for **lwarpmk print** and **lwarpmk html**, allowing the use of lwarp with perltex, pythontex, etc. If not specified, these are set automatically depending on the L^AT_EX engine, --shell-escape, and lwarp options. See section 9.

⚠ changed names

- Changed macro names to match `\displaymathother`, `\displaymathnormal`:

Old	New
<code>\StartDynamicMath</code>	<code>\inlinemathother</code>
<code>\StopDynamicMath</code>	<code>\inlinemathnormal</code>

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, thinsp, 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, drafffigure, fullminipage, grid-system, layareo.
- Added leading, widows-and-orphans.
- Added fancytabs, thumb, thumbs.

v0.59: DVI *latex*, MATHJAX, asymptote, pdftricks and pstricks, epstopdf, brqen.

⚠ 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

- Added an error if `lwarpmk.conf`'s format has changed and the document must be recompiled.
- Added a warning if the `lwarpmk.conf` configuration file appears to be for the wrong operating system, in case files are transferred between systems.
- Added

```
lwarpmk epstopdf <list-of-EPS-files>
```

to quickly convert a document's EPS images to PDF or SVG. See section 8.8.

DVI *latex*

latexmk

math

- Added support for DVI *latex*. See section 7.5.
- Fix for `--shell-escape` with *latexmk*.
- 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`.

- images
 - Fix for `\includegraphics` filename expansion.
 - `\includegraphics` now works with `.pdf` and `.eps` filename extensions.
- packages
 - Moved `amsmath` out of the `lwarp` core.
 - Fix for `chemformula \NMR`.
 - Added `asymptote`, `pdftricks`, `pstricks`, `pst-eps`.
 - Added `breqn`, `Slunits`.
 - Added `bxpapersize`, `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 `lwarp`.

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`.

index and glossary

- Docs: Extra indexing options. See section 8.6.14.
- 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.
- 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 8.6.20.

misc. fixes

- Fix for index entries with `\see`, `\seealso`, `\emph`, `\textbf`, etc.
- Replaced each `\csuse` with `\@nameuse` for improved error detection.
- Additional internal print/HTML macro selection improvements.

packages

- Fix: `\printindex` finishes pending `\index` writes first.
- Fixes for `memoir`: `makeidx`, `ccaption`, multiple indexes, `\specialindex`.
- Fixes for `komascript`: Indexing improvements.
- Added `imakeidx`, `index`, `repeatindex`, `splitidx`.
- Added `attachfile`, `attachfile2`, `intopdf`, `pdfpages`, `pdfx`.
- Added `cases`.
- Tested to work as-is: `notes2bib`, `hvinde`.

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

MathJax

math macros

dynamic math

 new name

lateximage alt tags

- Added support for MathJax equations with `\footnote`, `\footnotemark`.
- Added `\StartDefiningMath` and `\StopDefiningMath` for use when defining macros in the preamble which contain `$`. See section 8.7.7.
- 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 8.7.8.
- Renamed `\EndDefiningTabulars` to `\StopDefiningTabulars`.
- 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

packages

- Fix: Improved print/HTML macro selection.
- Fix: `\href` text catcodes.
- Fix: `\subref` text.
- Fixes: Colored `\rule` and `\boxframe`.
- `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

tabular

misc. fixes

- 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.
- 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`.
- Fix: `\thinspace`.

- Fix: paralist compact environments.
- Added parnotes, quoting, lua-check-hyphen, tocenter, 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 *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

- *lwarpmk* limages checks for the presence of the HTML version of the document and valid image references before attempting to create the lateximages.
- *lwarpmk*: Improved error message if configuration file does not exist.

BibTeX

- Added documentation for avoiding error with BibTeX and \eta\char. See section 8.6.9.

polyglossia

- Added documentation regarding polyglossia. See section 8.15.4.

macros in section names

- Added documentation regarding the use of macros in section names. See section 8.1.

document encoding

⚠ New and revised encoding options

- Renamed and added package options:

Old Package Option	New Package Option
xdyFilename	xindyStyle
IndexLanguage	xindyLanguage
–	xindyCodepage
–	pdftotextEnc

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

floats with \centering, etc.

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

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

misc. fixes

- 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`.
 - L^AT_EX 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.
- `lwarpmk`: Added a warning about corrupted images due to the need to recompile the document one more time.
 - `lwarpmk`: Added the `lwarpmk cleanimages` command.
 - Added documentation for `lwarpmk cleanimages` and `lwarpmk pdftohtml`.
- v0.52:** Improved footnotes, SVG math.
- Improved install instructions regarding `lwarp_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 X_YL^AT_EX or LuaL^AT_EX with `fontspec` and traditional font packages. See section 7.4.
 - Fix: Limit the number of background tasks when generating `lateximages`.
 - Added user-adjustable SVG math font scaling. See section 80.3.
 - Added warnings if `lwarp_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`.
 - Fix: MathJax script was not executing in some conditions.
 - Added `\CustomizeMathJax` to add custom functions. See section 8.7.
 - Fix: Footnote numbering when using `HTMLDebugComments`.
 - Fix: Footnote paragraph tags.
 - Fix: `FootnoteDepth` defaults to `\subsubsection`.
 - Fix: `\kill` in a `lateximage`.
 - Fix: `\FileDepth`, misc. others, when input encoding is not `utf8`.
 - Fix: `\texorpdfstring` in a section name.
 - `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.

v0.51: Improved svg math, added numerous chemistry packages.

documentation

- Docs: Added **Things to avoid**.
- Docs: Added to **Converting an existing document**.
- Docs: Multiple authors and affiliations with custom classes. See section **8.6.1**.
- Docs: tikz with matrices. See section **8.8.1**.

SVG math

- Improved svg math baseline.
- Improved svg math font and color.
- Faster svg math rendering.
- Improved support for display math containing complicated math objects, such as tikz-cd. See section **8.7.9**.
- Fix: `\addcontentsline` inside svg math.
- Fix: SVG math containing an embedded `lateximage`.

MathJax

misc. fixes

- MathJax now handles `\ensuremath` in expressions.
- Fix: Added `alignat` environment.
- Fix: `afterpackage` no longer required, which conflicted with `scrfile`.
- Fix: `titling` `\thanks` mark.
- Fix: `fancybox` improvements.
- Fix: `tikz` `\tikz` macro. (Previously only the `tikzpicture` environment worked.)
- Fix: `tikz` with optional argument.

packages

- Added `mhchem`, `chemfig`, `chemformula`, `chemmacros`, `chemnum`, `chemgreek`, `epstopdf-base`, `grid`, `ltxgrid`.

v0.50: Improved svg math.

svg math

- `svg math` and other `lateximages` now are converted to `svg` using parallel background tasks, utilizing all available CPU cores.
- Inline `svg math` image file names now are MD5 hashes made from their source \LaTeX code. Identical inline math expressions, such as multiple instance of `x`, now share a single image file. This reduces the number of images to store, transmit, process, and display. Each image file is only converted to `svg` a single time, and reused if it already exists. Display math and other forms of `svg` image such as `picture` and `Tikz` still use individual image files which are recreated each time `lwarpmk` `limages` is run.
- Fixes: `SVG math` and/or `\underline` in a sectioning file name.
- Improved `svg` display math and tags.
- Improved `svg math` and `siunitx` `alt` tags.

- Improved siunitx units.
 - Fix: \ensuremath with MathJax now creates a lateximage.
 - Fix: \centering, etc. in svg math, lateximage, Tikz.
 - misc. fixes
 - Fix: Made various macros robust, additionally fixing authblk.
 - Fix: ntheorem if neither standard nor amsthm selected.
 - Fix: listings: Improved column alignment.
 - Fix: Load fontspec if necessary.
 - packages
 - Added xy, epstopdf, diagbox, pbox, bytefield, axodraw2, phfjit, schemata, dbfloatfix, nonfloat, morefloats.
- v0.49:**
- tabular
 - Added xcolor \rowcolors.
 - Fix: \noalign inside a tabular.
 - math
 - Fix: \eqref in a caption.
 - misc fixes
 - Fix: Incorrect PDF font size changes caused occasional HTML corruption.
 - Fix: printlen changes are now grouped for HTML output.
 - packages
 - Added vwcol, vertbars, hyphenat, lineno, fnc_lineno, figsize, hypdestopt, pagegrid, pdfrender, luacolor, resizegather.
- v0.48:**
- documentation
 - Added some documentation regarding converting an existing document. See section 6.
 - cleveref
 - Updated compatibility for new cleveref v0.21.
 - tabular
 - Fix: Ignores optional tabular column arguments.
 - minor updates
 - Added \leftline, \centerline, \rightline.
 - Lists have improved font control via \makelabel.
 - Print-mode lateximage now boxed to the natural width of its multiline contents.
 - abstract now allows an optional name, as required by some classes.
 - math
 - Fix: Improved spacing, \mbox, and font sizes with svg math, Tikz.
 - siunitx: Improved svg math, fraction compatibility, color output.
 - misc. fixes
 - Fix: LOF/LOT links.
 - Fix: Virtual page size grouping caused excessive PDF page breaks.
 - Fix: Parsing similar package names in a single \usepackage.
 - Fix: Adapts to classes without \part.
 - Fix: \newline in \title was causing
 in window title.
 - Fix: \maketitle with \cr, \rcrcr, \noalign, for IEEEtran class.
 - Fix: xfrac neutralized BlockClass and others.
 - packages
 - Fix: todonotes and luatodonotes: Improved \todotoc.
 - Added colortbl, chapterbib, acro, acronym, hypernat, hypcap, stfloats, vmargin, fancyheadings.
 - fancyref: Now directly supported.

v0.47:

math

- Improved svg math baseline and sizing.
- Fixes: svgm_{ath} in captions, subcaptions, \nameref.
- Fixes: Line wrap at hyphen in HTML output.

packages

- Added endheads, multitoc, sectionbreak, blowup, xurl.

v0.46:

⚠ name change

misc. fixes

- \PrintStack changed to \LWRPrintStack.
- Fix: Empty lines between tabular rows.
- Fix: Stack unnesting.
- Fix: SVG math and lateximages in numerous situations.
- Fix: Spaces in \usepackage.
- Fix: Now allows MATHJAX inside verse.

v0.45:

documentation

- Improved *MiKTeX* install instructions.
- Improved graphics and epstopdf instructions.
- Updates to the **Introduction**.

memoir

- Added memoir, memhfixc. See section **8.13**.

cross-references

- Fix: Now allows underscores in labels.
- Fix: _ and \<blank> in section/file names.

math

- Fix: Now allows MATHJAX inside tabbing.

bibliography

- Fix: Bibliography \em names.
- Added cite, natbib, backref. (Also works as-is with biblatex.)

misc. fixes

- Fix: Empty lines between tabular rows.
- Fix: “Improper \prevdepth” with minipages, lists.
- Fix: Incorrect svg math and lateximages with subfig.
- Fix: Lateximages from incorrect pages with Mathjax.
- Fix: Missing sidetoc if using listings.
- Fix: Added an array emulation package.

packages

- Added subfigure, prettyref, hanging, midpage, flafter, fltrace, changebar, endfloat, continue, fwlw, turnthepage, footnpag, pagesel, textfit, titleref.

v0.44:

koma-script

- Added koma-script classes (except scr_ltr2, scr_jura).
- Added scrextend, sclayer, sclayer-notecolumn, sclayer-scrpage, scrhack, tocstyle, tocbasic.

HTML title and author

- Added \HTMLtitle. Fixed web page title if \HTMLtitle empty and no \title given and not using titling package.
- Fixed web page author if \HTMLauthor is empty and \author is not given.

- encodings
 - If using *pdf_latex*, automatically loads T1 and UTF-8 encodings. (Additional fontenc encodings may be loaded after lwarp.)
- lists
 - Added list and trivlist environments, hang.
- tabular
 - Fix: \multicolumn alignment if formatting for a word processor.
 - Added ltxtable.
- math
 - Fix: MATHJAX combined with lateximages.
 - algorithmicx: Improved comment symbol and floating.
- packages
 - Completed todonotes and luatodonotes.
 - Added todo, easy-todo, fixmetodonotes, fixme.
 - Added soulutf8, soulpos, cancel.
 - Added section, fancyref, ifoddpage.
 - Added preview, atbegshi, watermark.
 - Improved tocloft \newlistof and \newlistentry.

v0.43:

- footnotes
 - Docs: Reorganized HTML customization, added an HTML settings table. See section 7.6.
 - Added FootnoteDepth to control the placement of pending footnotes before section breaks. By default, pending footnotes are printed before each \subparagraph or higher.
- sectioning
 - Fix: Expansion in section name.
- tabular
 - Fix: Ignore spaces in tabular column specification.
 - Fix: Tabular rules at bottom or when finishing incomplete rows.
 - Fix: \multicolumn at/bang/before/after specifications, trim, and vertical rules.
 - Fix: supertabular and xtab column misalignment.
- math
 - Fix: equation*.
 - Fix: svg math in a section name.
 - Fix: \ref and \eqref in svg math.
- packages
 - Added todonotes and luatodonotes (but only disabled).
 - Added breakurl.
 - hyperref: Fix: Several macros were made robust, \Gauge added.

v0.42:

- Support **TEX!**
 - Added TEX development support page. (See page 2.)
- word-processor conversion
 - Improved assistance for word-processor conversions when boolean FormatWP is set true. See section 11.
 - The boolean FormatWordProcessor has been renamed FormatWP.
 - The boolean HTMLMarkFloats has been renamed WPMarkFloats.
 - New booleans control whether to place additional marks around mini-pages, at the table of contents, at the LOF and LOT, and whether to print math as L^AT_EX source for copy/paste into the *LibreOffice Writer TeXMaths* extension.

⚠ name change

⚠ name change

– Improved formatting for numerous objects. See section 11.

tabbing

- Add: tabbing environment.

overpic

- Add: overpic package. See section 391.

math

- Fix: Text copy/paste of \mathcal{AMS} math environment numbers and names.
- Improved `\ensuremath`.
- `MATHJAX` with `siunitx`: Updated script and documentation.

symbols

- `textcomp`: Improved `\textinterrobangdown`.
- `realscripts`: Fix for subscripts in a `lateximage`.

load order

- `morewrites`: Enforces loading before `lwarp`.

v0.41:

tabular

- Added tabular vertical rules, subject to some limitations. See the rules section of section 8.10.1.

- Improved `booktabs`: Width and trim are honored.

⚠ new syntax

- Added `\mcolrowcell` for empty cells inside a `\multicolumnrow`. **Use `\mcolrowcell` instead of `\mrowcell` for two-dimensional cells created by `\multicolumnrow`**. Continue to use `\mrowcell` for empty cells in a `\multirow`. See section 367.2 on page 882.

- Fix: Unfinished tabular rows are automatically filled.

- Fix for tabular column specifiers while using `babel-french`. (`\NoAutoSpacing` is activated then nullified inside the tabular, due to a conflict with the tabular column parsing code.)

v0.40:

graphics, graphicx

- `graphics` and `graphicx` have been moved from the `lwarp` core, and are only loaded if requested with `\usepackage`.

`\includegraphics path`

⚠ image file extensions

- Improved `graphics \graphicspath` support. Multiple image directories may now be used. **Refer to .pdf files without a file extension** to allow the HTML version to use a `.svg`, `.png`, `.jpg`, or `.gif` version instead. See section 8.8.

- `grffile` is now directly supported instead of emulated.

- Fix for `bigdelim`, and improved documentation. See section 145.

bigdelim

symbols

- Improved `LATEX` and `textcomp` symbols.

fixes

- Fix for `LATEX` logos and `\InlineClass`, etc. inside a `lateximage`.

- Fix for `xltxtra` with `XƎLATEX`.

- Fixes for `tocbibind` with `\simplechapter`, etc.

- Fixes for `\multicolumnrow` and `\nullfonts` with older versions of `multirow` and `xparse`.

- Added `\underline`.

margins

- Added `adjmulticol`.

columns

- Added `cuted`, `midfloat`.

footnotes

- Added `pfnote`, `fnpos`, `dblfnote`.

tabular

- Added `stabular`, `tabs`.

sectioning

- Added `sectsty`, `anonchap`, `quotchap`.

v0.39:

title pages

⚠ `\published and`
`\subtitle`

⚠ `load order`

tabular

multi column/row cell

⚠ `macros inside tabular`

⚠ `tabular defined inside`
`another environment`

tabular

margins

page layout

- Improved the titlepage HTML code, `\thanks` notes, and `\maketitle`. `titling` is no longer required, but is still supported. The `\published` and `\subtitle` fields are no longer provided, but `\AddSubtitlePublished` replicates them using `titling`. See section 66.8. `authblk` is added, and should be loaded before `titling`. See section 66.
- `\multirow` now supports the new optional `vpos` argument.
- Added `\multicolumnrow` for combined `\multicolumn` and `\multirow`. See section 367.2.
- Tabular special cases:
 - Added `\TabularMacro` to mark custom macros inside tabular data cells, avoiding row corruption. See section 8.10.1.
 - Added `\ResumeTabular` for use when a tabular environment is defined inside another environment. See section 8.10.1.
- Added `supertabular`, `xtab`, `bigstrut`, `bigdelim`.
- Added `fullwidth`.
- Added `addlines`, `anysize`, `a4`, `a4wide`, `a5comb`, `textarea`, `zwpagelayout`, `typearea`, `ebook`.

v0.38:

forced single-pass compile

starred sections

updated tutorial

packages

font size

page numbering

front & back matter

- Added `lwarpmk print1` and `lwarpmk html1` actions to force a compile of the project a single time. Useful when multiple passes are not needed, or changes were not detected.
- Added `\ForceHTMLPage` and `\ForceHTMLTOC` to force a starred sectional unit onto its own HTML page and with its own TOC entry. See section 8.6.2.
- Modified the tutorial to use the new `\ForceHTMLPage` and `\ForceHTMLTOC` macros.
- Added `appendix`, `tocbibind`, `fncychap`, `fix2col`.
- Added `resize`, `scaleftnt`.
- Added `realscripts`, `metalogo`, `xltxtra`.
- Added `grffile`, `romanbar`.
- Added `arabicfront`, `chappg`, `nonumonpart`, `nopageno`, `romanbarpagenumber`.
- Docs: Improved description of the use of front/back matter. See section 8.6.
- Fix: `color` requests `xcolor`.
- Fix: `\part` for article class.

v0.37:`\include` for HTML`latexmk`

accents and symbols

babel-french

- `\include` now maintains independent `.aux` files for HTML versions.
- `comment`, used by `lwarp`, now maintains independent cut files for print and HTML versions, helping `latexmk` to better know whether to recompile.
- Improved support for L^AT_EX accents, `textcomp`, `siunitx` symbols.
- Improved `babel-french` handling for `load order` and `~ tilde`.

v0.36:

- Recorganized the documentation section regarding special cases and limitations. (Section 8)
- Improved source formatting.
- boxes and frames
 - `\fbox` and related now use `\fboxsep` and `\fboxrule`.
 - `\makebox` and `\framebox` now use width and position.
 - `\fcolorbox` and related now work inside a `lateximage`.
- babel-french
 - `babel-french`: Improvements for French variants, load order, footnotes, ellipses.
- footnotes
 - Improved footnote numbering. `lateximage` footnotes now appear as regular footnotes to match the numbering of the print version. Also fixed a regression with `MATHJAX`.
- siunitx
 - Improved `siunitx` units.
 - Fix for filenames while using `MATHJAX`.
 - Fix for `\rule` when `xcolor` is not loaded.
 - Added `transparent`, `upref`.

v0.35: Fix: `\textbf` and related.

v0.34:

- △ Optional arguments
 - `BlockClass`'s optional argument has been moved in front of the mandatory argument:


```
BlockClass[style]{class} (NEW)
```

 instead of:


```
BlockClass{class}[style] (OLD)
```

 This change makes it more consistent with \LaTeX standards, and avoids problems with space between arguments.
- △ Optional arguments
 - Likewise, `\InlineClass`'s optional argument now comes before the mandatory arguments:


```
\InlineClass[style]{class}{text}
```
- spans with minipages
 - Improved compatibility between spans, minipages, lists, frames, and math. Handles minipages and lists inside an `HTML` span, such as an `\fbox` containing a minipage, although with minimal `HTML` formatting. See section 8.3.3. `\fboxBlock` is added to frame minipages, tables, and lists with full `HTML` formatting but no longer inline, and behaves as `\fbox` for print output. The `fminipage` environment is added for framed minipages, as an environment with full `HTML` formatting, and draws a framed minipage in print output. See section 8.3.5. `\fbox` and minipages now often work in `SVG` math and `lateximages`. `MATHJAX` supports `\fbox`, but not `\fboxBlock` nor `fminipage`.
- framing minipages
 - Improved compatibility between `lateximage` and `minipage`, `\parbox`, `\makebox`, `\fbox`, `\framebox`, `\raisebox`, `\scalebox`, `\reflectbox`, `tabular`, `booktabs`.
- lateximage, SVG math, tabular
 - Improved font control for `lateximage`s and `SVG` math.
- eqnarray
 - Added the `eqnarray` environments.
- verbatim packages
 - `fancyvrb` is no longer required (preloaded), but is still supported.

framing packages
list packages

- Added verbatim and moreverb.
- Added fancybox, boxedminipage2e and shadow.
- enumitem is no longer required, but is still supported.
- Added enumerate and paralist.
- titleps is no longer required, but is still supported.
- Added crop.
- Added rotfloat, marginfit, and several minor packages; see the change log.
- Adds fixed-width HTML spaces around punctuation when using babel-french. LuaTeX does not yet use the extra punctuation spacing.

babel-french

v0.33:

- Tabular @ and ! columns now have their own HTML columns.
- & catcode changes are localized, perhaps causing errors about the tab alignment character &, so any definitions of macros or environments which themselves contain tabular and & must be enclosed within \StartDefiningTabulars and \StopDefiningTabulars (previously called \EndDefiningTabulars. See section 43. This change is not required for the routine use of tables, but only when a table is defined inside another macro or environment, and while also using the & character inside the definition. This may include the use inside conditional expressions.
- Several math environments were incorrectly placed inline. Also, for amsmath with svg math, the fleqn option has been removed, resulting in improved spacing for aligned equations.
- Bug fixes; see the changelog.

v0.32: Bug fixes; no source changes needed:

- *lwarpmk* has been adjusted to work with the latest *luatex*.
- Spaces in the \usepackage and \RequirePackage package lists are now accepted and ignored.
- Fix for the glossaries package and \glo@name.

v0.31: Bug fix; no source changes needed:

- Improved compatibility with keyfloat, including the new keywrap environment.

v0.30:

⚠ lwarp-newproject

- lwarp-newproject has been removed, and its functions have been combined with lwarp.

To modify existing documents, remove from the document source:

```
\usepackage{lwarp-newproject}
```

The lwarp package now produces the configuration files during print output, and also accepts the option lwarpmk if desired.

⚠ HTML setup changes.

- A number of macros related to HTML settings have been converted to options, and other macros and options have been renamed to create a consistent syntax:

Old Macro	New Package Option
<code>\HomeHTMLFileName</code>	<code>HomeHTMLFilename</code>
<code>\HTMLFileName</code>	<code>HTMLFilename</code>
<code>\useLatexmk</code>	<code>latexmk</code>
<code>\warpOSwindows</code>	<code>OSWindows</code>

Old Package Option	New Package Option
<code>lwarpklang</code> (new)	<code>xindyLanguage</code> <code>xindyStyle</code>

Old Macro	New Macro
<code>\MetaLanguage</code>	<code>\HTMLLanguage</code>
<code>\HTMLauthor</code>	<code>\HTMLAuthor</code>
<code>\NewHTMLdescription</code>	<code>\HTMLDescription</code>
<code>\SetFirstPageTop</code>	<code>\HTMLFirstPageTop</code>
<code>\SetPageTop</code>	<code>\HTMLPageTop</code>
<code>\SetPageBottom</code>	<code>\HTMLPageBottom</code>
<code>\NewCSS</code>	<code>\CSSFilename</code>

- Per the above changes, in existing documents, modify the package load of `lwarp`, such as:

```
\usepackage[
  HomeHTMLFilename=index,
  HTMLFilename={},
  xindyLanguage=english
]{lwarp}
```

- The file `lwarp_html.xdy` has been renamed `lwarp.xdy`. To update each document's project:
 1. Make the changes shown above.
 2. Recompile the document in print mode. This updates the project's configuration files, and also generates the new file `lwarp.xdy`.
 3. The old file `lwarp_html.xdy` may be deleted.
- The new `lwarp` package option `xindyStyle` may be used to tell *lwarpmk* to use a custom `.xdy` file instead of `lwarp.xdy`. See section [8.6.21](#).
- Improvements in index processing:
 - *xindy*'s language is now used for index processing as well as glossary.
 - Print mode without *latexmk* now uses *xindy* instead of *makeindex*.
 - *texindy/xindy* usage depends on *pdflatex* vs *xelatex*, *lualatex*.
 - For *pdflatex* and *texindy*, the `-C utf8` option is used. This is supported in modern distributions, but a customized `lwarpmk.lua` may need to be created for use with older distributions.

v0.29:

- Add: `lwarpklang` option for `lwarp-newproject` and `lwarp`. Sets the language to use while processing the glossary. (As of v0.30, this has been changed to the `IndexLanguage` option.) (As of v0.54, this has been changed to the `xindyLanguage` option.)

- Fix: `\includegraphics` when no optional arguments.

v0.28:

- `\HTMLAuthor {<name>}` assigns HTML meta author if non-empty. Defaults to `\theauthor`.
- Boolean `HTMLDebugComments` controls whether HTML comments are added for closing `<div>s`, opening and closing sections, etc.
- Boolean `FormatEPUB` changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.
- Boolean `FormatWordProcessor` 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. Name changed to `FormatWP` as of v0.42.
- Boolean `HTMLMarkFloats` adds text marks around floats only if the boolean `FormatWordProcessor` is true. These make it easier to identify float boundaries, which are to be manually converted to word-processor frames. Name changed to `WPMarkFloats` as of v0.42.
- Updated for the new MATHJAX CDN repository.
- Adds tabulary.
- Supports the options syntax for graphics.
- Improved index references, now pointing exactly to their target.
- Adds glossaries. *lwarpmk* is modified to add `printglossary` and `htmlglossary` actions.

2 Introduction

The `lwarp` project aims to allow a rich \LaTeX 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 \LaTeX to provide for every `HTML`-related possibility, and `HTML` cannot exactly render every possible \LaTeX 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 \LaTeX 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 \LaTeX , `lwarp` has some advantages over other methods of `HTML` conversion. `TEX` itself is still used, allowing a wider range of `TEX` trickery to be understood. Lua expressions are still available with `LuaTeX`. Entire categories of \LaTeX 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 `lwarp` 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.

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

²`FIREFOX` 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.
option	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.
code	Program code.
\macroname	L ^A T _E X macro.
environment	L ^A T _E X environment.
counter	L ^A T _E X counter.
boolean	L ^A T _E X boolean.
<element>	HTML element.
attribute	HTML attribute.
User Interface	A user-interface item.
ACRO	Acronym.

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 also as print output in svg math or lateximage 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.

Table 2: L^AT_EX lwarp package — Supported features

Category	Status and supported features.
Engines:	DVI L ^A T _E X, pdfL ^A T _E X, X _Y L ^A T _E X, LuaL ^A T _E X, upL ^A T _E X
Compiling:	<i>latexmk</i> , <i>perltex</i> , <i>pythontex</i> , <i>make</i> , etc.
Classes:	article, book, report, scrartcl, scrbook, screprt, memoir, CJK-related as listed below.
Koma-script:	scxextend , scrhack , scrlayer . Others as listed below.
Memoir:	memhfixc
Languages:	babel , polyglossia . ckjpunct , xeCJK .
Chinese:	CTEX, ctex , upzhkinsoku , xpinyin , zhlineskip , zhspacing .
Japanese:	upL ^A T _E X, LuaT _E X-ja, gentombow , lltjext , plarray , plarydshln , plautopatch , plext , plextarray , plextarydshln , 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 .

lwarp Supported Functions — continued

Category	Status
Page layout:	2in1, 2up, a4, a4wide, a5comb, addlines, anysize, atbegshi , blowup, booklet, bophook, bounddvi, bxpapersize, canoniclayout, changelayout , changepage , chngpage, clrdblpg, continue, draftcopy, drafftfigure, draftwatermark, ebook, everyshi, fancyhdr , fancytabs, flippdf, fullminipage, fullpage, fwlw, geometry, gmeometric, grid, grid-system , gridset, layaureo, layout, layouts, leading, ltxgrid, nccfancyhdr, notespages, nowidow, pagegrid, pagesel, parallel , parcolumns , pdfcolparallel, pdfcolparcolumns, pdfcrypt, pdfprivacy, preview, ragged2e , returntograd, rmpage, sclayer-scrpage , scrpage2 , setspace , textarea, threadcol, thumb, thumbs, titleps, tocenter, 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 file names. anonchap , bsheaders, fncychap, hypbmsc , indentfirst , quotchap , section, sectionbreak , sectdot , sectsty, titlesec.
Table of contents, figures, tables:	Supported, with hyperlinks. minitoc , multitoc , shorttoc , titletoc , tocbasic , tocbibind , tocdata , tocloft , tocstyle .
Title page:	\maketitle , titlepage , authblk , titling .
Front & back matter:	abstract , appendix .
Indexing:	makeindex and xindy are supported, with hyperlinks. hvindex , idxlayout , imakeidx , index , makeidx , repeatindex , splitidx .
Glossary:	gloss , glossaries and xindy , nomencl .
Bibliography:	babelbib , backref , biblatex , bibunits , chapterbib , cite , hypernat , natbib , notes2bib , showtags .
Cross-references:	bookmark , breakurl , cleveref , fancyref , hypdestopt , hyperref , perpage , prettyref , titleref , url , varioref , xcite , xr , xr-hyper , xurl .
Margin notes:	marginal , marginfit , marginfix , sclayer-notecolumn , versonotes .

lwarp Supported Functions — continued

Category	Status
Footnotes:	Adds FootnoteDepth to print footnotes at section breaks. <code>bigfoot</code> , <code>dblfnote</code> , <code>endheads</code> , <code>endnotes</code> , <code>fixfoot</code> , <code>fnbreak</code> , <code>fnpara</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> , <code>nccfoots</code> , <code>pagenote</code> , <code>parnotes</code> , <code>pdfcolfoot</code> , <code>pfnote</code> , <code>sepfootnotes</code> , <code>sidenotes</code> , <code>tablefootnote</code> .
Math:	Converted to SVG images with HTML <code><alt></code> tags containing the L ^A T _E X source for the math expression. MATHJAX supported as an alternative. <code>amsmath</code> ^{MJ} : $\mathcal{A}\mathcal{M}\mathcal{S}$ environments are supported. User-defined macros are available during conversion, due to native L ^A T _E X processing.
Theorems:	Native L ^A T _E X theorems, <code>amsthm</code> , <code>ntheorem</code> , <code>theorem</code> .
Additional math:	Math fonts via SVG images, <code>amscd</code> , <code>autobreak</code> ^{MJ} , <code>autonum</code> , <code>backnaur</code> , <code>bm</code> ^{MJ} , <code>braket</code> ^{MJ} , <code>breqn</code> , <code>cases</code> , <code>centernot</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>extarrows</code> ^{MJ} , <code>fouridx</code> ^{MJ} , <code>guass</code> , <code>icomma</code> ^{MJ} , <code>jkmath</code> , <code>leftidx</code> ^{MJ} , <code>mathcomp</code> ^{MJ} , <code>mathdots</code> ^{MJ} , <code>mathfixs</code> ^{MJ} , <code>mathpunctspace</code> ^{MJ} , <code>mathspec</code> , <code>mathtools</code> ^{MJ} , <code>mismath</code> ^{MJ} , <code>multiobjective</code> ^{MJ} , <code>nccmath</code> ^{MJ} , <code>nicematrix</code> , <code>noitcru1</code> ^{MJ} , <code>pb-diagram</code> , <code>resizegather</code> , <code>rmathbr</code> ^{MJ} , <code>stackrel</code> ^{MJ} , <code>statex2</code> ^{MJ} , <code>statmath</code> ^{MJ} , <code>subsubscripts</code> ^{MJ} , <code>textualcomma</code> ^{MJ} , <code>unicode-math</code> ^{MJ} , <code>witharrows</code> ^{MJ} , <code>xfakebold</code> ^{MJ} , <code>xy</code> . Many others work as-is.
Display math with <code>\displaymath</code> or <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>placeins</code> , <code>rotfloat</code> , <code>stfloats</code> , <code>subcaption</code> , <code>subfig</code> , <code>subfigure</code> , <code>subfloat</code> , <code>topcapt</code> , <code>trivfloat</code> , <code>wrapfig</code> .

lwarp Supported Functions — continued

Category	Status
Tabular:	tabular environment, <code>array</code> ^{MJ} , <code>arydshln</code> ^{MJ} , <code>bigdelim</code> ^{MJ} , <code>bigstrut</code> ^{MJ} , <code>booktabs</code> ^{MJ} , <code>colortbl</code> , <code>ctable</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 <code>class</code> . 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. <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>epsfig</code> , <code>epstopdf</code> , <code>figsize</code> , <code>fitbox</code> , <code>grffile</code> , <code>luamplib</code> , <code>media9</code> , <code>movie15</code> , <code>multimedia</code> , <code>overpic</code> , <code>psfrag</code> , <code>psfragx</code> , <code>pst-eps</code> , <code>pstool</code> , <code>pstricks</code> , <code>rviewport</code> , <code>svg</code> , <code>svg-extract</code> , <code>tikz-3dplot</code> .
xcolor:	Full package color names, any color models, and mixing. <code>\textcolor</code> , <code>\colorbox</code> , <code>\fcolorbox</code> . Enhanced for HTML compatibility.
Lists:	Standard L ^A T _E X environments, <code>enumerate</code> , <code>enumitem</code> , <code>eqlist</code> , <code>hang</code> , <code>listliketab</code> , <code>paralist</code> .
Environments:	Standard L ^A T _E X environments.
<code>minipage</code> , <code>\parbox</code> :	Some HTML5-imposed limitations. Nested minipages are supported. <code>eqparbox</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>moreverb</code> , <code>shortvrb</code> , <code>verbatim</code> .
Frames:	<code>boxedminipage2e</code> , <code>fancybox</code> , <code>framed</code> , <code>mdframed</code> , <code>niceframe</code> , <code>shadow</code> , <code>vertbars</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> .

lwarp Supported Functions — continued

Category	Status
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> , <code>ellipsis</code> , <code>embrace</code> , <code>enparen</code> , <code>hyphenat</code> , <code>lettrine</code> , <code>lips</code> , <code>lua-check-hyphen</code> , <code>luacolor</code> , <code>magaz</code> , <code>nolbreaks</code> , <code>normalcolor</code> , <code>pdfcol</code> , <code>pdfcolmk</code> , <code>pdfrender</code> , <code>realscripts</code> , <code>resize^{MJ}</code> , <code>scalegnt</code> , <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>fntcount</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 <code>thin-unbreakable</code> , <code>unbreakable</code> , <code>\enskip</code> , <code>\quad</code> , <code>\qqquad</code> , <code>\hspace</code> .
Rules:	<code>\rule</code> with <code>width</code> , <code>height</code> , <code>raise</code> , <code>text color</code> .
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>nfssect-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>nfssect-cfr</code> .
Symbols:	Native L ^A T _E X diacriticals, <code>academicons</code> , <code>bbding</code> , <code>chemgreek</code> , <code>dingbat</code> , <code>euro</code> , <code>eurosym</code> , <code>fontawesome</code> , <code>fontawesome5</code> , <code>gensymb^{MJ}</code> , <code>marvosym</code> , <code>mathcomp^{MJ}</code> , <code>metalogo</code> , <code>metalogox</code> , <code>pifont</code> , <code>textalpha</code> , <code>textcomp</code> , <code>textgreek</code> , <code>typicons</code> , <code>xunicode</code> .
Files:	<code>attachfile</code> , <code>attachfile2</code> , <code>hyperxmp</code> , <code>inputtrc</code> , <code>intopdf</code> , <code>pdfpages</code> , <code>pdfx</code> , <code>xmpincl</code> .

lwarp Supported Functions — continued

Category	Status
Science and engineering:	algorithm2e , algorithmicx , ar^{MJ} , askmaps , axodraw2 , bitpattern , blochsphere , bodegraph , bohr , bytefield , chemfig , chemformula , chemgreek , chemmacros , chemnum , circuitkz , econometrics^{MJ} , elements , engtlc^{MJ} , fast-diagram , ghsystem , hepnicenames , heppennames , karnaughmap , karnaugh-map , listings , linop , mhchem^{MJ} , pgfgantt , phfqit , physics^{MJ} , physunits^{MJ} , qcircuit , register , simpler-wick , slashed^{MJ} , steinmetz^{MJ} , structmech , struktex . tikz-karnaugh , tikzcodeblocks
Arts and humanities:	foreign , forest , lyluatex , musicography , nameauth , octave , phonrule , piano , schemata , semantic-markup , tikz-dependency , vowel , xpiano
Admonitions:	awesomebox , notes .
Editorial:	changebar , changelog , changes , easy-todo , easyReview , ed , errata , fixme , fixmetodonotes , pdfcomment^{MJ} , pdfmarginpar , todo , todonotes , tram , xchangebar .
Accessibility:	accessibility^{MJ} , accsupp^{MJ} , axessibility^{MJ} , pdfcomment^{MJ} , tagpdf .
Package handling:	catoptions .
Debug:	chkfloat , cmdtrack , dprogress , lua-visual-debug , refcheck , 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 \LaTeX or other document to HTML. Where an existing \LaTeX document is to be converted to HTML, `lwarp` 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

Cls `internet` The closest to `lwarp` 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

Prog `TeX4ht` <http://tug.org/tex4ht/>
 Prog `htlatex`

This system uses native \LaTeX 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 `lwarp` 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 \LaTeX syntax into HTML. Search for each on CTAN (<http://ctan.org>).

Prog `Hevea` **H^Ev^Ea**: <http://hevea.inria.fr/> (not on CTAN)
 Prog `TtH` **T_TH**: <http://hutchinson.belmont.ma.us/tth/>
 Prog `GELLMU` **GELLMU**: <http://www.albany.edu/~hammond/gellmu/>
 Prog `LaTeXML` **\LaTeX XML**: <http://dlmf.nist.gov/LaTeXML/>
 Prog `Plastex` **PlasTeX**: <https://github.com/tiarno/plastex>
 Prog `LaTeX2HTML` **\LaTeX 2HTML**: <http://www.latex2html.org/>
 and <http://ctan.org/pkg/latex2html>.
 Prog `TeX2page` **TeX2page**: <http://ds26gte.github.io/tex2page/index.html>

Finally, `GladTeX` may be used to directly insert \LaTeX math into HTML:

Prog `GladTeX` **GladTeX**: <http://humenda.github.io/GladTeX/>

3.4 ASCII DOC 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.

Prog AsciiDoc **Asciidoctor:** <http://asciidoctor.org/> (More active.)

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

3.4.1 ASCIIDOCTOR-L^AT_EX

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

Asciidoctor-Latex:

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

Prog AsciiDoctor-LaTeX <https://github.com/asciidoctor/asciidoctor-latex>

3.5 PANDOC

Prog Pandoc 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

Prog Word It should be noted that the popular word processors have advanced through the years
 Prog LibreOffice in their abilities to represent math with a L^AT_EX-ish input syntax, unicode math fonts,
 Prog OpenOffice and high-quality output, and also generate HTML with varying success. See recent
 developments in MICROSOFT[®] *Word*[®] and LIBREOFFICE[™] *Writer*.

3.7 Commercial systems

Prog Adobe Likewise, several professional systems exist whose abilities have been advancing
 Prog FrameMaker in the areas of typesetting, cross-referencing, and HTML generation. See ADOBE[®]
 Prog InDesign *FrameMaker*[®], ADOBE *InDesign*[®], and MADCAP *Flare*[™].

Prog Flare

Prog Madcap

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, \LaTeX 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 \LaTeX is comparably easy to learn, while \LaTeX 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 \LaTeX 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 \LaTeX back end, yielding high-quality results especially when the \LaTeX template is adjusted, but they lose the ability to use \LaTeX macros and other \LaTeX source-document features.

The effort required to customize the output of each markup system varies. For print output, \LaTeX 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 `lwarp`, CSS is used, and much HTML output is adjusted through the usual \LaTeX optional macro parameters, but further customization may require patching \LaTeX 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 \LaTeX 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 T_EXLive: <http://tug.org/texlive/>.

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

The lwarp package: This package.

The *lwarpmk* 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 *lwarp* package generate a local copy of *lwarpmk* called *lwarpmk.lua*. See table 4.

***lualatex*:** Used by the *lwarpmk* program to simplify and automate document generation.

***xindy*:** The *xindy* program is used by *lwarp* 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 *lwarpmk* 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.

POPPLER 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 *miktex-poppler-bin-** packages.

From POPPLER: poppler.freedesktop.org.

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

```
Enter ⇒ brew install poppler
```

For WINDOWS, see MiK_TE_X *miktex-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 POPPLER 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 lwarp package

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

Pre-installed: Try entering into a command line:

```
Enter ⇒ kpsewhich lwarp.sty
```

If a path to lwarp.sty is shown, then lwarp 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 lwarp
```

MiKTeX:

1. For newer versions of MiKTeX, install or update lwarp using the *MiKTeX Console* program.
2. For older versions of MiKTeX, to install lwarp the first time, use the *MiKTeX Package Manager (Admin)*. To update lwarp, 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 lwarp, perhaps as part of a set of TEX-related packages.

CTAN TDS archive: lwarp may be downloaded from the Comprehensive TEX Archive:

1. See <http://ctan.org/pkg/lwarp> for the lwarp package.
2. Download the TDS archive: lwarp.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/lwarp> for the lwarp package.
2. Download the zip archive `lwarp.zip` into your own lwarp directory.
3. Unpack `lwarp.zip`.
4. Locate the contents `lwarp.dtx` and `lwarp.ins`
5. Create the `.sty` files:

```
Enter ⇒ pdflatex lwarp.ins
```

6. Create the documentation:

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

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

```
<texlocal>/tex/latex/local/lwarp
```

8. Copy `lwarp_baseline_marker.png` and `lwarp_baseline_marker.eps` to the same place as the `.sty` files.
9. Copy the documentation `lwarp.pdf` to a source directory in the local tree, such as:

```
<texlocal>/doc/local/lwarp
```

10. Renew the cache:

```
Enter ⇒ mktxlsr
```

— or —

```
Enter ⇒ texhash
```

Or, for WINDOWS M_IK_TE_X, 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 *lwarpmk*.
12. Once the local version of `lwarpmk.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 `lwarpmk.lua` files may be used as-is, so long as they are in the same directory as the document source. The files `lwarp_baseline_marker.png` and `lwarp_baseline_marker.eps` must also be copied as well. This approach is especially useful if you would like to temporarily test lwarp before deciding whether to permanently install it.

Just testing!

4.2 Installing the *lwarpmk* utility

(Note: If *lwarpmk* 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 lwarp package is installed, you may need to setup the *lwarpmk* utility:

1. At a command line, try executing `lwarpmk`. If the *lwarpmk* help message appears, then *lwarpmk* is already set up. If not, it is easiest to generate and use a local copy. See section 4.2.1.
2. For MiKTeX, try updating the miktex-misc package. This may install the *lwarpmk* 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 T_EX 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 T_EX 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 <pathto>lwarpmk.lua lwarpmk
```

- (c) Make the link executable:

```
Enter ⇒ chmod 0755 lwarpmk
```

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

- (a) Locate the T_EX 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\lwarp\lwarp.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 `lwarp` package:

```
\usepackage[lwarpmk]{lwarp}
```

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 `lwarpmk.lua` executable:

```
Enter ⇒ chmod 0755 lwarpmk.lua
```

- (b) Compile documents with

```
Enter ⇒ ./lwarpmk.lua html
```

```
Enter ⇒ ./lwarpmk.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 lwarpmk.lua html
```

```
Enter ⇒ texlua lwarpmk.lua print
```

etc.

Or:

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk 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 program's version is displayed, then that utility is already installed. See table 3 on page 78.

```
Enter ⇒ luatex --version
```

```
Enter ⇒ xindy --version
```

```
Enter ⇒ latexmk --version
```

```
Enter ⇒ perl --version
```

```
Enter ⇒ pdftocrop --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>

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 78.
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\

```

Be sure to include \bin.

9. Click **Ok** when done.

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 lwarp 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`.

File `tutorial.tex`

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 lwarp documentation directory:

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

```
Enter ⇒ texdoc -l lwarp_tutorial.tex
```

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

File `lwarp_tutorial.txt`

 **Note: .txt suffix!**

 **Bad formatting!**

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. lwarp 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 lwarp 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, L^AT_EX 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}
\fbbox{\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:** *lwarp.css*, *lwarp_formal.css*, *lwarp_sagebrush.css* These files are standard for *lwarp*, 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 *lwarp* defaults.
- lwarp.ist:** Used by *lwarp* while creating an index using *makeindex*. This file should not be modified by the user. A custom file may be used instead, if necessary.
- lwarp.xdy:** Used by *lwarp* while creating an index using *xindy*. This file should not be modified by the user. A custom file may be used instead, if necessary.
- lwarp_one_limage.txt:** For WINDOWS only. Used to process SVG images in the background. Copied to *lwarp_one_limage.cmd* when images are generated.
- lwarp_mathjax.txt:** Inserted into the HTML files when MATHJAX is used to display math. This file should not be modified by the user.
- comment.cut:** A temporary file used by *lwarp* to conditionally process blocks of text. This file may be ignored.

When the *lwarpmk* option is given to the *lwarp* 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.

1. 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.

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

3. 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.

4. 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

5. Process the index.^{6 7}

Enter ⇒ **lwarpmk printindex**

6. Recompile again to include the index.

Enter ⇒ **lwarpmk print**

7. 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 8.6.12.

⁷Also see section 8.6.15 for index options.

5.3 Compiling the HTML version with *lwarpmk*

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

1. 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

2. View the HTML page in a web browser.

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

math

Note that math is still displayed as its alt tag, which is the plain-text L^AT_EX source, until the images of the math expressions have been generated. Math may be displayed as SVG images or by a MATHJAX script, as seen in sections 5.4 and 5.5.

3. Force a recompile:

Enter ⇒ **lwarpmk again**

Enter ⇒ **lwarpmk html**

Enter ⇒ **lwarpmk print**

4. Process the HTML index and recompile:¹⁰¹¹

Enter ⇒ **lwarpmk htmlindex**

Enter ⇒ **lwarpmk html**

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

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

6. 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 8.6.12.

¹¹Also see section 8.6.15 for index options.

5.4 Generating the svg images

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

picture and Tikz `lwarp` uses the same mechanism for `picture` and `Tikz` environments.

1. Create the svg images:

Enter \Rightarrow `lwarpmk limages`

Enter \Rightarrow `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 \LaTeX 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 \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.

 **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.

 **Lots of files!** 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, `lwarp` 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.

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 lwarp:

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

2. Recompile

```
Enter ⇒ lwarpmk 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 L^AT_EX source.

While using MATHJAX has many advantages, it may not be able to represent complex expressions or spacing adjustments as well as L^AT_EX, 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{lwarp}  
...  
\CSSFilename{lwarp_formal.css}  
...  
\begin{document}
```

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

```
\CSSFilename{lwarp_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 Xe_{La}TeX or Lua_{La}TeX

Xe_{La}TeX or Lua_{La}TeX may be used instead of \LaTeX .

1. Remove the auxiliary files for the project:

```
Enter ⇒ lwarpmk 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 *lwarpmk* are modified to remember which TeX engine was used. Xe_{La}TeX or Lua_{La}TeX will be used for future runs of *lwarpmk*.

3. To recompile the document:

```
Enter ⇒ lwarpmk print
```

-and-

```
Enter ⇒ lwarpmk html
```

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

```
Enter ⇒ lwarpmk htmlindex
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk 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. *lwarpmk* may be used to convert image formats.

To convert EPS files to PDF:

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

To convert PDF files to SVG:

```
Enter ⇒ lwarpmk 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 glossary

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

5.11.1 `gloss` package

See section [8.6.11](#).

5.11.2 `glossaries` package

To process the glossary for the print version:

```
Enter ⇒ lwarpmk printglossary
```



(If `makeglossaries` is not found, see section [8.6.12](#).)

To process the glossary for the HTML version:

```
Enter ⇒ lwarpmk htmlglossary
```

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

```
Enter ⇒ lwarpmk html1
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print1
```

```
Enter ⇒ lwarpmk print
```

See section [8.6.12](#) to set options for processing glossaries.

5.12 Cleaning auxiliary files

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

```
Enter ⇒ lwarpmk clean
```

5.13 Cleaning auxiliary and output files

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

```
Enter ⇒ lwarpmk cleanall
```

5.14 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 `lateximages` directory:

```
Enter ⇒ lwarpmk cleanimages
```

5.15 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 `lwarpmk` also provides a way to convert PDF or EPS images in bulk:

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

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

Be sure to always provide SVG files for HTML output.

5.16 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 ⇒ lwarpmk pdftohtml [-p project]
```

5.17 Processing multiple projects in the same directory

 `xr`, `xr-hyper`, `xcite`

It is possible to have several projects in the same directory. `lwarpmk` 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
```

5.18 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.

5.19 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 28, [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 8.7.5, [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 lwarp:

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 `lwarp`.
- (e) Load remaining packages.

2. Modify the document:

- (a) 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`:

```
\section{A name with math
\texorpdfstring{$1+2=3$}{text description}}
```

- (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`, `xtable`, `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 8.6.15.

- (g) If using many `indexes`, `glossaries`, `.aux` files, etc., see section 8.6.15 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. `lwarpmk print` to finish the print version.

6. `lwarpmk html` to create the HTML version.

7. `lwarpmk 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.

[math in section names](#)

[scale](#)

[tabular](#)

[package options](#)

[indexes](#)

7 Additional details

7.1 Localization

Regional localization is supported by `lwarp` via the following package options and macros:

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.

`\sidedotocname`: Displayed at the head of the `sideroc`.

HTML settings: See table 6 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 5 and section 7.5.

`xindyStyle`, `xindyLanguage`, `xindyCodepage`: When using `xindy`, these options may be set according to local use. See section 8.6.21.

`pdftotextEnc`: To adjust the encoding of `pdftotext`.

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. HTML provides the `alt` text attribute for images, which is used by `lwarp` as describe below. HTML also provides the `title` attribute, which usually generates a pop-up text. `lwarp` can add this to a reference or hyperlink. `MATHJAX` also has provisions for improved accessibility as well.

`\ImageAltText`: The default HTML alt text for `\includegraphics` and `lateximages`. 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 \LaTeX math expression in the alt text, so that the \LaTeX 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`.

custom alt text **\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.

references and links

`\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

Opt `--shell-escape` 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, `lwarp` detects and remembers whether shell escape is enabled. If so, it will also be enabled when the document is recompiled with `lwarpmk`.

7.4 Font and UTF-8 support

 type 3 bitmapped fonts `lwarp` 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 `lwarp` option `pdftotextEnc` may be useful in some situations. See section 7.5.

vector fonts While using DVI `latex` or PDF `pdflatex`, if no font-related package is specified then the

Computer Modern

⚠ *pdflatex*

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.

⚠ Pkg *DVI latex*
cm-super

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

Pkg lmodern

To use Latin Modern instead, add

```
usepackage{lmodern}
```

to the preamble.

Pkg dejavu

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*, lwarp automatically loads fontenc with T1 encoding. fontenc may be loaded with an additional encoding after lwarp. 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_YL^AT_EX and Lua^AT_EX 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{lwarp}.

⚠ **package conflicts**

In some cases, a package conflict may require that a font package be loaded after lwarp, 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_YL^AT_EX or Lua^AT_EX:

Pkg fontspec

- fontspec and font choices

ligatures

lwarp 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*:

Pkg lmodern

- (a) \usepackage{lmodern}, or other font-related packages

Pkg fontenc

- (b) \usepackage[T1]{fontenc}

Pkg inputenc

- (c) \usepackage[utf8]{inputenc}, or latin1, etc. Or use inputenx.

Pkg inputenx

- (d) \usepackage{newunicodechar} along with related definitions.

Pkg newunicodechar

- (e) To assist with the PDF-HTML conversion:

- i. \input glyphtounicode.tex

File glyphtounicode.tex

⚠ **dotless j**

Pkg cmap

Pkg mmap

Pkg textcomp

- ii. `\input glyphtounicode-cmr.tex%` from the pdfx package
- iii. `\pdfgentounicode=1`
- (f) Another option to assist with the PDF-HTML conversion, such as the dotless j (`\j`):
 - `\usepackage{cmap}` — *or* —
 - `\usepackage{mmap}` — *or* —
 - `\usepackage[noTeX]{mmap}`
- (g) `\usepackage{textcomp}`

- 3. `\usepackage{lwarp}` (section 7.5) is placed after any of the above, followed by:
- 4. `\usepackage{newtxmath}` or other math-related font packages. Many of these load `amsmath`, which must be loaded after `lwarp`, so they must also be loaded after `lwarp`.

⚠ **fontspec with monospaced fonts**

- 5. `\setmonofont{TeX Gyre Cursor}` or similar may be required if using $\text{X}\text{E}\text{L}\text{A}\text{T}\text{E}\text{X}$ or $\text{L}\text{u}\text{a}\text{L}\text{A}\text{T}\text{E}\text{X}$ 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.
- 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 9.8.

7.4.1 Indexes, glossaries, and encoding

`lwarp` uses the `xindy` program to process indexes. `xelatex` and `lualatex` use `xindy` and `pdflatex` uses `texindy`.

The `lwarp` option `xindyLanguage` may be used to set the language option for `xindy`, and the `xindyCodepage` option may be used to set the codepage option for `xindy`. These are used for index generation.

7.5 lwarp package loading and options

lwarp 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 lwarp package immediately after the font and UTF-8 setup commands.

Package options may be set while loading lwarp, or later with

```
\lwarpsetup{<key=value, . . . >}
```

Pkg lwarp lwarp package options are as follows:

- | | | |
|-----|--------------------------|---|
| Opt | mathsvg | mathsvg, mathjax: For math display, select mathsvg (default) or mathjax. For more information about the math options, see section 8.7. |
| Opt | mathjax | |
| Opt | latexmk | latexmk: Tells <i>lwarpmk</i> to use <i>latexmk</i> to recompile the document several times if necessary. Otherwise, <i>lwarpmk</i> attempts to determine for itself whether to recompile. See section 7.6. |
| | Default: false | |
| | Opt dvips | dvips: Tells <i>lwarpmk</i> to use <i>dvips</i> and <i>ps2pdf</i> to convert DVI output to PDF. |
| | Default: false | |
| | Opt dvipdfm | dvipdfm: Tells <i>lwarpmk</i> to use <i>dvipdfm</i> to convert DVI output to PDF. |
| | Default: false | |
| | Opt dvipdfmx | dvipdfmx: Tells <i>lwarpmk</i> to use <i>dvipdfmx</i> to convert DVI output to PDF. |
| | Default: false | |
| Opt | HomeHTMLFilename | HomeHTMLFilename: See section 7.6. |
| | Default: {} | |
| Opt | HTMLFilename | HTMLFilename: See section 7.6. |
| | Default: {} | |
| Opt | ImagesName | ImagesName: The prefix for the images automatically generated by lwarp for objects such as svg math and lateximages. |
| | Default: image- | |
| Opt | ImagesDirectory | ImagesDirectory: The directory for the images automatically generated by lwarp 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 | |
| Opt | PrintLatexCmd | PrintLatexCmd: Sets the shell commands executed by lwarpmk print . If not specified, will automatically be set according to the detected L ^A T _E X engine and the use of <code>--shell-escape</code> . |
| | Default: <automatic> | |
| Opt | HTMLLatexCmd | HTMLLatexCmd: Sets the shell commands executed by lwarpmk html . If not specified, will automatically be set according to the detected L ^A T _E X engine and the use of <code>--shell-escape</code> . |
| | Default: <automatic> | |
| Opt | makeindex | makeindex: Sets PrintIndexCmd, HTMLIndexCmd, and LatexmkImageCmd to use <i>makeindex</i> |
| | Default: makeindex | |

Table 5: lwarp 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 8.6.15) and glossaries (section 8.6.12):	
makeindex	Use <i>makeindex</i> to generate indices.
xindy	Use <i>xindy</i> to generate indices.
makeindexStyle	Set a custom style for <i>makeindex</i> .
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.
PrintIndexCmd	Shell commands executed by lwarpmk printindex .
HTMLIndexCmd	Shell commands executed by lwarpmk htmlindex .
LatexmkIndexCmd	Shell commands executed by <i>latexmk</i> .
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 <code>lwarpmk.lua</code> .
Used internally by lwarp:	
warpprint	Generate print output, and also generate configuration files.
warpHTML	Generate HTML output.
BaseJobname	The <code>\jobname</code> to use. Set to the <code>\jobname</code> of the printed version even while generating HTML.

when generating indexes with `lwarpmk printindex`, `lwarpmk htmlindex`, or `latexmk`. If neither `makeindex` nor `xindy` is used, `makeindex` is assumed.

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

Opt `makeindexStyle` **makeindexStyle:** If you wish to use a custom `.ist` file for index generation, see section 28.
 Default: `lwarp.ist`

Opt `xindyStyle` **xindyStyle:** If you wish to use a custom `.xdy` file for index generation, see section 28.
 Default: `lwarp.xdy`

Opt `xindyLanguage` **xindyLanguage:** If using an index or glossary, see section 28.
 Default: `english`

Opt `xindyCodepage` **xindyCodepage:** If using an index, see section 28.
 Default: `utf8`

Opt `PrintIndexCmd` **PrintIndexCmd:** Sets the shell commands executed by `lwarpmk printindex`. 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 8.6.15.
 Default: `<automatic>`

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 `lwarp PrintIndexCmd` option.

Opt `HTMLIndexCmd` **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 8.6.15.
 Default: `<automatic>`

⚠ **filenames**

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

```
makeindex -s lwarp.ist projectname_html.idx (makeindex)
xindy -M lwarp.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. `lwarp`'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 `lwarp 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.

Opt LatexmkIndexCmd
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 8.6.15.

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

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

automatic setting

The use of the `makeindex` or `xindy` options sets LatexmkIndexCmd to either of the two settings show above. `lwarp`'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 `lwarp xindyLanguage` and `xindyCodepage` options are not used for the LatexmkIndexCmd option when it is set manually.

Opt GlossaryCmd
Default: `makeglossaries`

GlossaryCmd: Sets the shell command executed by `lwarpmk printglossary` and `lwarpmk htmlglossary`. The print or HTML glossary filename is appended to this command. See section 8.6.12.

Opt OSWindows

OSWindows: `lwarp` attempts to automatically sense WINDOWS, but it may be forced with this option. See section 7.8.

Opt pdftotextEnc
Default: UTF-8

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

Opt lwarpmk

lwarpmk: If you wish to have `lwarp` generate a local copy of `lwarpmk.lua` for archival or local-installation purposes, compile the print version with the `lwarpmk` option set. See section 28.

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

Opt warpprint
Opt warpHTML

warpprint and warpHTML: Usually controlled by *lwarpmk*, 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 `lwarp` 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{lwarp}` without any options to create a printed version, while `<project>_html.tex` will create an HTML version.

Opt BaseJobname **BaseJobname:** Not intended for the user. Used internally by lwarp when creating the
Default: `\jobname` `*_html.tex` file used to compile the HTML version. See section 28.

7.6 Customizing the HTML output

⚠ Placement!

Table 6 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 ⇒ `lwarpmk clearall`

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

Enter ⇒ `lwarpmk print`

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

Enter ⇒ `lwarpmk html`

Options for the lwarp package:

Use the following as options for `\usepackage[<options>]{lwarp}`:

Opt HomeHTMLFilename
Default: `\BaseJobname`

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

`HomeHTMLFilename=index`

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.

filename underscores

Opt HTMLFilename
Default: `<empty>`

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.

Opt latexmk
Default: `false`

latexmk: Controls whether *lwarp* uses *latexmk* to compile the document. This setting is written to *lwarpmk*'s configuration files.

Opt mathsvg
Default: `true`

mathsvg: Selects SVG display for math output. (The default.)

Opt mathjax
Default: `false`

mathjax: Selects `MATHJAX` for math output.

Opt makeindex
Default: `makeindex`

makeindex: Selects *makeindex* for index generation by *lwarpmk*.

Opt xindy

xindy: Selects *xindy* for index generation by *lwarpmk*.

Default: `makeindex`

Placed in the preamble before `\begin{document}`:

`\linkhomename`
Default: `Home`

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

Table 6: HTML settings

Macro/Cntr/Bool	Description
<code>\linkhomename</code>	Name of the link to the homepage.
<code>SideTOCDepth</code>	Sectioning depth of the sideroc.
<code>\sidetocname</code>	Name of the sideroc.
<code>FileDepth</code>	Sectioning depth of the file splits.
<code>CombineHigherDepths</code>	Combine higher section levels.
<code>FileSectionNames</code>	Use section names for file names, else use numbers.
<code>\FilenameLimit</code>	Maximum length of the generated filenames.
<code>FootnoteDepth</code>	Sectioning depth of footnotes.
<code>\abstractname</code>	The name of the abstract.
<code>\ImageAltText</code>	<code>\includegraphics</code> and other images' alt tag.
<code>\ThisAltText {{text}}</code>	Assigns an alt / title tag for the next image or link.
<code>\MathImageAltText</code>	The svg math image <code>lateximage</code> alt tag.
<code>\PackageDiagramAltText</code>	The suffix for a package's <code>lateximage</code> alt tags.
<code>\AltTextOpen</code>	Start an HTML alt tag.
<code>\AltTextClose</code>	End an HTML alt tag.
<code>\CSSFilename</code>	The css for the following files.
<code>\MathJaxFilename</code>	The MathJax script for the following files.
<code>\HTMLLanguage</code>	The HTML lang tag.
<code>\HTMLTitle</code>	The homepage's <code><title></code> , overriding <code>\title</code> .
<code>\HTMLTitleBeforeSection</code>	Set subpage <code><title></code> s to <code>\HTMLTitle - sectionname</code>
<code>\HTMLTitleAfterSection</code>	Set subpage <code><title></code> s to <code>sectionname - \HTMLTitle</code>
<code>\HTMLAuthor</code>	The HTML author meta tag, overriding <code>\author</code> .
<code>\HTMLDescription</code>	The HTML description meta tag.
<code>\HTMLFirstPageTop</code>	Heading for the home page.
<code>\HTMLPageTop</code>	Heading for the other pages.
<code>\HTMLPageBottom</code>	Footing for all pages.
<code>HTMLDebugComments</code>	Boolean to generate HTML comments.

Ctr `tocdepth` **tocdepth:** Sectioning depth of the table of contents. See section 16 for a list of L^AT_EX stack depths.

Ctr `SideTOCDepth` **SideTOCDepth:** Sectioning depth of the sideroc. Defaults to 1, causing the sideroc to show sections but not subsections.

Default: 1

[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

```
SideTOCDepth=FileDepth+1
```

⚠ inaccessible pages

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

`\sidedtocname`
Default: Contents

\sidedtocname: Name of the sideroc. Paragraphs are allowed. Redefine with `\renewcommand`.

Ctr `FileDepth`
Default: -5

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`

⚠

Bool `CombineHigherDepths`
Default: true

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`.

⚠ Inaccessible pages!

⚠ Lost in an old page!

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.

Bool `FileSectionNames`
Default: `true`

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 begin 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.

⚠ **Unique filename!**

`\FilenameLimit`
Default: `80`

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

Ctrl `FootnoteDepth`
Default: `3`

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.

Bool `HTMLDebugComments`
Default: `false`

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

`\abstractname`
Default: `Abstract`

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

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

`\CSSFilename`
Default: `lwarp.css`

\CSSFilename: `{\filename.css}` Sets the css file to use for the following files. May be changed before each 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 L^AT_EX output. `lwarp_sagebrush.css` is a semi-fancy colored style as shown in this tutorial. Change it to `lwarp_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: `lwarp_mathjax.txt`

\MathJaxFilename: `{\filename}` Sets the MathJax script file to use for the following files. May be changed before each 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`

\HTMLLanguage: `{\langauge}` The HTML file’s HTML lang meta tag. Defaults to en-US.

`\HTMLTitle`
Default: `\thetitle`

\HTMLTitle: `{\title}` Overrides `\title` for the HTML header’s meta title. De-

faults 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.

<code>\HTMLTitleBeforeSection</code> Default: <code>\HTMLTitleBeforeSection</code>	\HTMLTitleBeforeSection: Sets subpage <code><title></code> tags to show the website title followed by the section name.
<code>\HTMLTitleAfterSection</code>	\HTMLTitleAfterSection: Sets subpage <code><title></code> tags to show the section name followed by the website title.
<code>custom <title></code>	To customize subpage <code><title></code> s, redefine <code>\theHTMLTitleSection</code> , which defaults to: <pre> \def\theHTMLTitleSection{% \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection% } </pre>
<code>\HTMLAuthor</code> Default: <code>\theauthor</code>	\HTMLAuthor: <code>{\langle author \rangle}</code> The HTML header's meta author. Defaults to <code>\theauthor</code> , which is set by <code>\author</code> if using the titling package, but is empty otherwise. There are several ways to represent the author and affiliations, especially if using the <code>authblk</code> package, most of which do not result in a sensible <code>\theauthor</code> , so <code>\HTMLAuthor</code> is useful to create a list of authors without their affiliations.
<code>\HTMLDescription</code> Default: <code><empty></code>	\HTMLDescription: <code>{\langle description \rangle}</code> Sets the HTML description tag for the following files. May be changed before each sectioning command which would cause a file split.
<code>\HTMLFirstPageTop</code> Default: <code><empty></code>	\HTMLFirstPageTop: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the top of the home page. Useful for logos, etc. Defaults empty. Ignored in print output.
<code>\HTMLPageTop</code> Default: <code><empty></code>	\HTMLPageTop: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the top of pages other than the home page. Useful for logos, etc. Defaults empty. <code>\LinkHome</code> may be used to place a link back to the homepage. Ignored in print output.
<code>\HTMLPageBottom</code> Default: <code><empty></code>	\HTMLPageBottom: <code>{\langle contents \rangle}</code> A user-definable custom action applied to the bottom of each web page. Useful for authors, copyright notices, contact information, etc. Defaults empty. <code>\LinkHome</code> may be used to place a link back to the homepage. Ignored in print output.

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

<code>\tableofcontents</code> △ 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 <code>tocdepth</code> .
---	--

Placed in the document wherever necessary:

<code>\ImageAltText</code> Default: <code>image</code>	\ImageAltText: Redefine with <code>\renewcommand</code> . <code>\includegraphics</code> and other images are assigned an HTML alt tag according to <code>\ImageAltText</code> 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 `lateximage`, `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.

Env `warpprint`

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.

		<i>Do not place anything else on the same line as <code>\end{warpprint}</code>.</i>
Env	warpHTML	warpHTML: An environment which is only used while generating HTML output. This is useful for website logos and other items which have no purpose in printed output.
		<i>Do not place anything else on the same line as <code>\end{warpHTML}</code>.</i>
	<code>\warpprintonly</code>	\warpprintonly: <code>{<contents>}</code> A macro version of the warpprint environment.
	<code>\warpHTMLonly</code>	\warpHTMLonly: <code>{<contents>}</code> 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-}
]{lwarp}
\boolfalse{FileSectionNames}
```

Named HTML sections, no prefix:

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

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

7.7 Customizing the css

`\CSSFilename` `{<filename>}`
 Default: `lwarp.css`

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

`\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:

```
...
\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.

File `lwarp.css` 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:

File `project.css`

File `sample_project.css`

```
/* ( --- 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 Selecting the operating system

Prog	Unix	<code>lwarp</code> 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.
Prog	Mac OS	
Prog	Linux	
Prog	MS-Windows	If MS-WINDOWS is not correctly detected, use the <code>lwarp</code> option <code>OSWindows</code> .
Prog	Windows	When detected or specified, the operating-system path separator used by <code>lwarp</code> is modified, and the boolean <code>usingOSWindows</code> is set true. This boolean may be tested by the user for later use.
Opt	OSWindows	

7.9 Selecting actions for print, HTML, or MATHJAX output

The following environments and macros are used to select actions which only apply to either traditional \LaTeX 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 `lwarp` 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.

Env	<code>warpHTML</code>	Anything which is to be done only for HTML5 output is surrounded by a <code>warpHTML</code> 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.

Env	<code>warpprint</code>	Anything which is to be done only for print output is surrounded by a <code>warpprint</code> 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}`.

Env `warpall` 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}
```

As above, do not place anything else on the line with `\end{warpall}`.

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

`\warpprintonly` $\langle actions \rangle$

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

`\warpHTMLonly` $\langle actions \rangle$

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

Env `warpMathJax` 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.

7.10 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. `lwarp` 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](#).

7.11 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 66.8.

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

Env `titlepage` 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.

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

`\title` `{\title}`

⚠ **HTML corrupted** Avoid newlines in the `\title`; these will interfere with the file break and css detection.
 ⚠ **newlines** Use a `\subtitle` command instead (section 66.8). 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 `lwarp`.

`\date` `{\date}`

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

`\thanks` `{\thanks}`

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

7.12 HTML page meta descriptions

`\HTMLDescription` `{\HTMLDescription}`
 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{}
```

7.13 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.

7.14 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 `lwarp`, 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 `lwarp`:

```
\PassOptionsToPackage{font={it,small}}{caption}
```

```
...
```

```
\usepackage{lwarp}
```

```
...
```

```
\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`, `xparse`, 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 \LaTeX , but invalid HTML. An example is a tabular inside `\textbf`, since HTML does not allow a table inside a span. `lwarp` 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 convert `&`, `<`, and `>` to proper HTML entities.
 - verbatim The various verbatim-related environments do not convert `&`, `<`, and `>`, so care must be taken to avoid accidentally including valid HTML code inside these environments. Adding a space on either side may be sufficient.

8.2.2 Horizontal space

- `\hspace` `\hspace` is converted to an inline HTML span of the given width, except that `0` width is ignored, a width of `.16667em` is converted to an HTML thin breakable space (`U+2009`), and a `\fill` is converted to a `\qqquad`.
- `\,` `\~` 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`

8.2.3 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}
...
```

8.2.4 Accents

Native L^AT_EX accents such as `\` will work, but many more kinds of accents are available when using Unicode-aware X_YL^AT_EX and LuaL^AT_EX.

8.2.5 textcomp package

Pkg textcomp 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.

8.2.6 Superscripts and other non-math uses of math mode

Use `x` instead of x

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

lists Use a trailing backslash: `\item[label] \`

8.2.8 Filenames and URLs in lists or footnotes

filename underscore Escape underscores in the filenames:

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

8.2.9 relsize package

Pkg relsize 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` [*left*] {*right*} `\marginpar` may contain paragraphs, but in order to remain inline with the surrounding text `lwarp` 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.

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. `lwarp` 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`, `\qquad`, `\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, multicol** Inside a `tabular` or `multicol` 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 `lwarp` 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 `lwarp` to ignore the specified widths.
 - △ **multicol** Inside a `multicol`, `\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`
`\fboxBlock`
 Env `fminipage`

For a framed object, options include:

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.

For inline text:

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, `\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.

For inline minipage and lists:

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 \LaTeX 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.

For display `tabular`,
minipages, and lists:

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 85 for a new environment `fcolorminipage`. Also see below regarding the “Misplaced alignment tab character &.” error.

colored boxes and frames:

To create colored frames and boxes: See section 567 for `xcolor`’s `\colorbox` and `\fcolorbox`, and `lwarp`’s additional `\colorboxBlock` and `\fcolorboxBlock`.

⚠ Misplaced alignment
tab character &

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 233 for the `fancybox` package.

For fancy framed minipages: See packages `boxedminipage2e`, `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

Pkg fancybox
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 `\endLateximage` at the very end of the ending code. Unfortunately, the HTML `alt` attribute is not used here.

```

\newenvironmentFramedEqn
{
\lateximage% NEW
\setlength{\fboxsep}{15pt}
... }{...
\[\fbox{\TheSbox}\]
\endlateximage% NEW
}

```

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

framed table example The `fancybox` documentation's example framed table using an `\fbox` containing a `tabular` does not work with `lwarp`, but the `FramedTable` environment does work if `\fbox` is replaced by `\fboxBlock`. This method loses 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** `lwarp` 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}
\beginVerbatim
}{
\endVerbatim
\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.

8.3.7 mdframed package

Pkg `mdframed` Most basic functionality is supported, including frame background colors and single-border colors and thickness, title and subtitle background colors and borders and **support**

thickness, border radius, and shadow. CSS classes are created for `mdframed` environments and frame titles.

 **loading** When used, `lwarp` 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 `lwarp` 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.

8.4 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 nullfied during filename generation. Low-level macros such as `\begingroup` will cause problems when nullfied. Many macros such as `\textbf` are already nullfied. `lwarp` 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. `lwarp` 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`:

```
\section{A name with math
  \texorpdfstring{$1+2=3$}{text description}}
```

8.5 Cross-references

labels

⚠ **label characters** 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

⚠ **empty link** `\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.

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 484.

8.5.2 cleveref and varioref packages

Pkg cleveref

Pkg varioref

`cleveref` and `varioref` are supported, but printed page numbers do not map to HTML,

⚠ **cleveref page numbers**

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 558 to redefine the message which is printed for page number references.

8.5.3 Hyperlinks, hyperref, and url

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

`Pkg url`

 **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.

`lwarp` can also load `url`, but `url` should not be used at the same time as `hyperref`, since they both define the `\url` command. `lwarp` 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, `lwarp`'s emulation of `hyperref` does not automatically load `backref`, so `backref` must be loaded explicitly.

8.5.4 Footnotes and page notes

`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.

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 lwarp preloads footmisc, the stable option must be declared before lwarp is loaded:

△ memoir

```

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

```

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

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+verbatim+.}

```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when `\VerbatimFootnotes` are selected. The browser usually compensates.

pfnote

△ **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**

Verbatim footnotes are not yet supported.

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 \LaTeX . 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 Xe \LaTeX or Lua \LaTeX instead of pdf \LaTeX .

8.5.5 xr, xr-hyper, and xcite packages

See section 5.17.

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

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.

`lwarp` 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*`. `lwarp` 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.

 inaccessible HTML page

8.6.3 abstract package

Pkg abstract
 **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.

8.6.4 titling and authblk

Pkg titling
 Pkg authblk
 package support
 **load order**
 \published and \subtitle
 lwarp 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.
 If using the titling package, additional titlepage fields for \published and \subtitle may be added by using \AddSubTitlePublished in the preamble. See section 66.8.

8.6.5 tocloft package

Opt [tocloft] titles
 Pkg tocloft
 Pkg tocloft
 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

Pkg appendix
 **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

Pkg pagenote pagenote works as-is, but the page option is disabled.

8.6.8 endnotes package

Pkg endnotes
 table of contents
 To place the endnotes in the TOC, use:

```
\usepackage{endnotes}
\appto\noteheading{\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
```

8.6.9 BibTeX

`\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, `lwarp` 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 xcite package

See section 5.17.

8.6.11 gloss package

Pkg `gloss` To process the HTML glossary:

⚠ **compiling** `bibtex <projectname>_html.gls`

8.6.12 glossaries package

Pkg `glossaries` `lwarpmk` has the commands `lwarpmk printglossary` and `lwarpmk htmlglossary`, which process the glossaries created by the `glossaries` package using that package’s `makeglossaries` program.

Opt `GlossaryCmd`

Default: `makeglossaries`

Opt [`lwarpmk`] `printglossary` The shell command to execute is set by the `lwarp` option `GlossaryCmd`, which defaults to **makeglossaries**. The print or HTML glossary filename is appended to this command.

Opt [`lwarpmk`] `htmlglossary`

⚠ **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},
] {lwarp}

```

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.

8.6.13 nomencl package

`Pkg` `nomencl` To process the HTML nomenclature:

```
makeindex <project>_html.nlo -s nomencl.ist -o <project>_html.nls
```

8.6.14 Indexing overview

There are many ways to process indexes for a \LaTeX document, including native \LaTeX capabilities, a number of packages and classes, the possible availability of shell escape and *latexmk*, and the need to process print and HTML versions. `lwarp` 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 [8.6.20](#) and [8.6.21](#).

[source code](#) See section [76](#) for lwarp’s core index and glossary code, section [304](#) for index, section [484](#) for splitidx, section [303](#) for imakeidx, section [527](#) for tocbibind, and section [587.17](#) for memoir’s indexing patches.

8.6.15 Indexing with basic L^AT_EX and makeidx

[lwarpmk processing](#) The following allow the user to process indexes automatically, or using *lwarpmk*’s commands:

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

For a single index using *makeindex*:

```
\usepackage[makeindex,latexmk]{lwarp}
```

The usual .idx and .ind files will be used, along with the new lwarp.ist style file. When creating the HTML index, “_html” is automatically appended to each of the names.

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 a single index using *xindy*:

```
\usepackage[
  xindy,
  xindyLanguage=english,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk                          <optional>
]{lwarp}
```

The usual .idx and .ind files will be used, along with the new lwarp.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.

8.6.16 Indexing with index

lwarp is told how to use *makeindex* using the `PrintIndexCmd` and `HTMLIndexCmd` options. The file `lwarp.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 lwarp.ist <projectname>.idx ;
    makeindex -s lwarp.ist
      -o <projectname>.sidx <projectname>.sidx
  },
  HTMLIndexCmd={
    makeindex -s lwarp.ist <projectname>_html.idx ;
    makeindex -s lwarp.ist
      -o <projectname>_html.sind <projectname>_html.sidx
  }
]{lwarp}
\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 ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

If the `latexmk` option is selected for `lwarp`, *latexmk* will compile the document but will *not* compile the indexes. **lwarpmk printindex** and **lwarpmk htmlindex** will still be required.

8.6.17 Indexing with splitidx

lwarp is told how to use *splitindex* using the `PrintIndexCmd` and `HTMLIndexCmd` options. The file `lwarp.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 `lwarp`, *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 587.17 in the lwarp-patch-memoir package for the \@@wrspindexhyp macro as an example.

For multiple indexes using *makeindex* and *splitidx*:

```
\usepackage[
  makeindex, latexmk,
  PrintIndexCmd={
    splitindex <projectname> -- -s lwarp.ist
  },
  HTMLIndexCmd={
    splitindex <projectname>_html -- -s lwarp.ist
  }
]{lwarp}
\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 lwarp.xdy
               -L english -C utf8                      <optional>
  },
  HTMLIndexCmd={
    splitindex -m xindy <projectname>_html -- -M lwarp.xdy
               -L english -C utf8                      <optional>
  }
]{lwarp}
\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.

8.6.18 Indexing with *imakeidx*

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 *lwarp*’s special `lwarp.ist` or `lwarp.xdy` file, or a file based on them. If using a custom indexing style file, see sections 8.6.20 and 8.6.21. 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 *lwarp*’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. *lwarp*’s `PrintIndexCmd` and `HTMLIndexCmd` options are used.

For a single or multiple indexes using *makeindex* and *imakeidx*:

The index style `lwarp.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] {lwarp}
\usepackage[makeindex]{imakeidx}
...
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.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 `lwarp.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] {lwarp}
\usepackage[makeindex,splitindex]{imakeidx}
...
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.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*. `lwarp` 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 `lwarp.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*:

lwarpmk must be told how to create the indexes:

```
\usepackage[
  xindy,
  PrintIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname.idx
  },
  HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>_html.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname_html.idx
  }
]{lwarp}
\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 ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

8.6.19 Indexes with memoir

For a single index with memoir and makeindex:

```
\documentclass{memoir}
\usepackage[makeindex,latexmk]{lwarp}
...
\makeindex
```

The usual .idx and .ind files will be used, along with the lwarp.ist 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 makeindex, using *latexmk*:

lwarp's options are used, and are passed to *latexmk*.

```
\documentclass{memoir}
\usepackage[makeindex,latexmk]{lwarp}
...
\makeindex
\makeindex[secondname]
```

lwarpmk will use *latexmk* to create the indexes automatically when the user executes `lwarpmk print` and `lwarpmk 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 lwarp.ist <projectname>.idx ;
    makeindex -s lwarp.ist secondname.idx
  },
  HTMLIndexCmd={
    makeindex -s lwarp.ist <projectname>_html.idx ;
    makeindex -s lwarp.ist secondname_html.idx
  }
]{lwarp}
...
\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>
]{lwarp}
...
\xindyindex
\makeindex

```

The usual `.idx` and `.ind` files will be used, along with the `lwarp.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:

`lwarp`'s options are used, and are passed to `latexmk`.

```

\documentclass{memoir}
\usepackage[
  xindy,
  xindyLanguage=english,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk
]{lwarp}
...
\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 lwarp.xdy -L english -C utf8
    <projectname>.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname.idx
  },
  HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>_html.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname_html.idx
  }
]{lwarp}
...
\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.

8.6.20 Using a custom *makeindex* style file

Prog	makeindex	When using <i>makeindex</i> , <i>lwarpmk</i> uses the file <code>lwarp.ist</code> to process the index. This file
File	<code>lwarp.ist</code>	is over-written by <i>lwarp</i> whenever a print version of the document is processed.

To use a custom *makeindex* style file:

1. Copy `lwarp.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.

Opt	makeindexStyle	
-----	----------------	--

3. In the document source use the `makeindexStyle` option for *lwarp*:

```
\usepackage[
  ... other options ...
  \textred{makeindexStyle=projectname.ist},
]{lwarp}
```

Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

4. Recompile the print version, which causes `lwarp` to rewrite the `lwarpmk.conf` configuration file. This tells `lwarpmk` to use the custom `projectname.ist` file instead of `lwarp.ist`.

8.6.21 Using a custom *xindy* style file

Prog `xindy` When using *xindy*, `lwarpmk` uses the file `lwarp.xdy` to process the index. This file is
File `lwarp.xdy` over-written by `lwarp` whenever a print version of the document is processed.

To use a custom *xindy* style file:

1. Copy `lwarp.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`.

- Opt `xindyStyle` 3. In the document source use the `xindyStyle` option for `lwarp`:

```
\usepackage[
... other options ...
\textred{xindyStyle=projectname.xdy},
]{lwarp}
```

Likewise, refer to the custom style file if using `\PrintIndexCmd`, `\HTMLIndexCmd`, or `\LatexmkIndexCmd`.

4. 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`.

8.6.22 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 `lwarp` is

loaded:

```
\usepackage{morewrites}
\morewritessetup{allocate=10}
. . .
\usepackage{lwarp}
```

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 `lwarp.xdy` for `\textbf` and `\textit` as examples.

8.6.23 Index positions, `roc`, `tocbibind`

placement and `roc` options

An index may be placed inline with other HTML text, or on its own HTML page:

Pkg `makeidx` **Inline, with a manual `roc` entry:**

A commonly-used method to introduce an index in a L^AT_EX document:

```
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\printindex
```

Pkg `makeidx` **On its own HTML page, with a manual `roc` entry:**

```
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex
```

Pkg `tocbibind` **Inline, with an automatic `roc` entry:**

The `tocbibind` package may be used to automatically place an entry in the `roc`.

```
\usepackage[nottoc]{tocbibind}
. . .
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex
```

Pkg `tocbibind` **On its own HTML page, with an automatic TOC entry:**

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex
```

Opt [tocbibind] `numindex` Use the `tocbibind numindex` option to generate a numbered index. Without this option, the index heading has no number.

[numbered index section](#)

Other packages, such as `imakeidx`, may also have options for including the index in the Table of Contents.

Pkg `tocloft`

 [tocloft & other packages](#)

If using `tocloft` with `tocbibind`, `anonchp`, `fncychap`, or other packages which change chapter title formatting, load `tocloft` with its `titles` option, which tells `tocloft` to use standard \LaTeX 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`:

```
\section{A name with math
\texorpdfstring{\$1+2=3$}{text description}}
```

8.7.2 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.

8.7.3 SVG option

SVG math option For SVG math, math is rendered as usual by L^AT_EX 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 L^AT_EX 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 L^AT_EX code which generated the math, allowing copy/paste of the L^AT_EX 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 \LateximageFontScale, which defaults to:

```
\newcommand*{\LateximageFontScale}{.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 $\mathcal{A}MS$ 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 $\mathcal{A}MS$ 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.

8.7.4 MATHJAX option

MATHJAX math option The popular MATHJAX alternative (mathjax.org) may be used to display math.

Prog MathJax

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

¹⁴See section 572 regarding fonts and fractions.

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 cross-referencing system is ignored in favor of the L^AT_EX internal system, seamlessly integrating with the rest of the L^AT_EX code.

8.7.5 Customizing MATHJAX

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{\micro\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 344, **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.

 **starred macros** Starred macros are generally not supported by MathJax or the lwarp emulations.

8.7.6 MATHJAX limitations

MATHJAX limitations

Prog MathJax

Limitations when using MATHJAX include:

- ⚠ `\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.
- ⚠ `subequations`
 - MATHJAX does not support subequations. This may be improved by parsing the L^AT_EX math expression to manually insert tags, but this has not yet been done.
- ⚠ `footnotes in math`
 - Footnotes inside equations are not yet supported while using MATHJAX. lwarp provides a basic emulation for MATHJAX.
- ⚠ `references in math`
 - 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.
- `lateximage`
 - Math appearing inside a `lateximage`, 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 8.7.12.
- `physics`
 - For `physics`, see [physics package](#), section 8.7.14.
- `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.
- ⚠ `other macros and packages`
 - Other math-related macros and packages are not directly supported by MATHJAX, including `\ensuremath` and `\bigdelim`, and occasionally-used macros such as `\relax`. While using MATHJAX, lwarp provides emulation for footnotes, `bm`, `mathtools`, `nicefrac`, `siunitx`, and `units`.
- ⚠ `starred macros`
 - Starred macros are generally not supported by MathJax or the lwarp emulations.

8.7.7 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.

8.7.8 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 multiples instances of the same expression. In some cases, the math expression includes a counter or other object which may change between uses. [changing contents](#)

[complicated alt tag](#) Another problem is complicated contents which do not expand well in an alt tag. The macro `\inlinemathother` may be used before a dynamic math expression, and `\inlinemathnormal` after. Doing so tells `lwarp` to use an unhashed SVG math image, even if MathJax is in use. See section [44](#).

8.7.9 Complicated display math objects

`\displaymathnormal` By default, or when selecting `\displaymathnormal`, MATHJAX math display environments print their contents as text into HTML, 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.

[MathJax unsupported complicated alt tag](#)

8.7.10 ntheorem package

`Pkg ntheorem` This conversion is not total. Font control is via CSS, and the custom L^AT_EX font settings are ignored.

[Font control](#)

[Equation numbering](#) `ntheorem` has a bug with equation numbering in \mathcal{AMS} environments when the option `thref` is used. `lwarp` does not share this bug, so equations with `\split`, etc, are numbered correctly with `lwarp`’s HTML output, but not with the print output. It is recommended to use `cleveref` instead of `ntheorem`’s `thref` option.

8.7.11 mathtools package

`Pkg mathtools` `showonlyrefs` is disabled, as it conflicts with `cleveref`, which is used by `lwarp`. Equation numbers may not match the print version.

[equation numbering](#)

[italic correction](#) `mathic` is not emulated for HTML.

[MATHJAX](#) If using MATHJAX:

- Starred macros are not available. Starred environments do work.
- `mathtools disallowspace` 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.
- Due to MATHJAX limitations, the following do not render well: `\overbracket`, `\underbracket`, `\overbrace`, `\underbrace`, `rcases`, `drcases`, `\Aboxed`, and `\ArrowBetweenLines`.
- For the new cases-like environments, `\text` must be used to set the normal roman font if desired.
- `alignat` in MATHJAX requires math mode, but in L^AT_EXit doesn't. It may be required to use `warpHTML` and `warpprint` to isolate a version for each mode.
- `\DeclareParedDelimiter` and related must be in the preamble before `\begin{document}`. The starred versions of each macro are not created.

8.7.12 siunitx package

Pkg `siunitx` Due to *pdftotext* limitations, fraction output is replaced by symbol output for `per-mode` and `quotient-mode`.
fractions

⚠ **math mode required** Some units will require that the expression be placed inside math mode.

⚠ **tabular** Tabular `S` columns are rendered as simple `c` columns, and tabular `s` columns are not supported. These may be replaced by `c` columns with each cell contained in `\num` or `\si`.

For math mode with `svg display`, the original `siunitx` code is used while generating the `svg` image. For text mode, `lwarp` uses an emulation which provides a very effective HTML interpretation of `siunitx`. For math expressions while using MATHJAX, a limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. `siunitx` macros with more than one optional value cannot absorb the second optional value, and complicated parsing such as for `\ang` is not supported. The result usually looks fine, and otherwise is enough to get the meaning across.

⚠ **MathJax**

`lwarp`'s MATHJAX emulation for `siunitx` is meant to be a stop-gap measure until an extension is included in MATHJAX. As of this writing, the third-party `siunitx` extension for MATHJAX is not currently hosted at any public CDN, thus `siunitx` is not usable with this extension unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom MathJax script, but `lwarp`'s emulation would have to be disabled as well.

Document modifications required for MATHJAX:

custom units • Custom units may be added with `\CustomizeMathJax`. See the `lwarp-siunitx` code for examples.

- ⚠ **unit spacing**
 - 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.

Also see [MATHJAX option](#), section 8.7.4.

8.7.13 units and nicefrac packages

Pkg `units` `units` and `nicefrac` work with `lwarp`, but `MATHJAX` does not have an extension for `units` or `nicefrac`. These packages do work with `lwarp`'s option `svgmath`.
 Pkg `nicefrac`

8.7.14 physics package

Pkg `physics` `physics` works as-is for HTML with SVG math.

For `MATHJAX`, emulation is provided via `MATHJAX` macros. These are not the same as the third-party `MATHJAX` extension.

- The `notrig` option is honored.
- ⚠ • Starred macros are not yet detected.
- ⚠ • Most macros don't work with `\big`, etc.
- ⚠ • Macros do not auto-detect variable numbers of mandatory arguments. Provide empty `{}` arguments for those which are not used.
- ⚠ • Many of the macros do not work with auto-detected delimiters. Use the delimiter-specific versions instead. Some macros do not even consider the following arguments, so they may work as expected.
- ⚠ • For `\Re` and `\Im`, the arguments must be in braces.
- For `\functionalderivative`, for the example in the manual with $(E - TS)$, enclose the parens in braces.
- ⚠ • `\expectationvalue` requires and uses two mandatory arguments, unlike the third-party `MATHJAX` `physics` extension.
- Each of `\matrixquantity`, `\smallmatrixquantity`, and `\matrixdeterminant` work, while `\identitymatrix` and the following simply print a place-holder, and must be replaced by hand.

8.7.15 newtxmath package

Pkg newtxmath The proper load order is:

⚠ loading sequence

```

...
\usepackage{lwarp}
...
\usepackage{amsthm}
\usepackage{newtxmath}
...

```

8.8 Graphics

Pkg graphics Avoid using the `\includegraphics scale` option. Change:

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

⚠ scale

to:

```
\includegraphics[width=<yy>\linewidth]{...}
```

[\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, `lwarp` 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
```

Prog pdftocairo To convert a PDF image to SVG, use the utility *pdftocairo*:

[PDF to SVG](#)

```
Enter ⇒ pdftocairo -svg filename.pdf
```

Prog lwarpmk pdftosvg For a large number of images, use *lwarpmk*:

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)
```

Prog lwarpmk epstopdf For EPS images converted to PDF using the package *epstopdf*, use

Prog epstopdf
[epstopdf package](#)

```
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 *pdf_latex*, *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.

⚠ **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 `lwarp`—the entire image will be shown.

⚠ **viewport**

⚠ **viewport 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.

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`.

\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 \LaTeX , so expect some ugly results for scaling and rotating.

8.8.1 tikz package

Pkg `tikz` If using display math with `tikzpicture` or `\tikz`, along with matrices with the `&` character, the document must be modified as follows:

⚠ **displaymath and matrices**

```
\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

 **matching PDF and SVG** Pkg grffile 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

Pkg color color is superceded by xcolor, and lwarp requires several of the features of xcolor. When color is requested, xcolor is loaded as well.

8.8.4 xcolor package

Pkg xcolor `\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 `\colorboxBlock`s appear side-by-side in HTML, although text is placed before or after each.

Print-mode definitions for `\colorboxBlock` and `\fcolorboxBlock` are created by lwarp's core if xcolor is loaded.

background: none `\colorbox` and `\colorboxBlock` 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 tables `\rowcolors` is supported, except that the optional argument is ignored so far.

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

 **convert to .svg** Pkg epstopdf Images with an `.eps` extension will be converted to `.pdf`. The HTML output uses the `.svg` version, so use

```
Enter => lwarpmk pdftosvg <listofPDFfiles>
```

to generate `.svg` versions.

8.8.6 pstricks package

 **use pspicture** Pkg pstricks All pstricks content should be contained inside a `pspicture` environment.

8.8.7 pdftricks package

 **convert image files**

Pkg pdftricks

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 ⇒ lwarpmk pdftosvg <jobname>-fig*.pdf
```

8.8.8 psfrag package

 **use psfrags**

Pkg psfrag

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 lwarp.



Tip: Use a mono-spaced font for the tags in the EPS file.

8.8.9 pstool package

 **path and filename**

Pkg pstool

\graphicspath is ignored, and the file directory must be stated.

The filename must not have a file extension.

Use

```
Enter ⇒ lwarpmk html
```

followed by

```
Enter ⇒ lwarpmk limages
```

.

8.8.10 asymptote package

Pkg asymptote 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

Pkg overpic 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.

 scaling

8.8.12 Multimedia packages

Pkg multimedia The packages `multimedia`, `movie15`, and `media9` are supported.

Pkg movie15 HTML5 `<audio>` and `<video>` objects are created for `.mp3` and `.mp4` files.

Pkg media9 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/...`

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:

 **Misplaced alignment tab character &**

- 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
```

 **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, `lwarp`'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 % because & is used in a
definition
\newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\StopDefiningTabulars

```

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:

- `@` 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.
- ⚠ `\newcolumnntype`
 - `\newcolumnntype` is ignored; unknown column types are set to `l`.

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.
- ⚠ `\warpprintonly`
 - For `\toprule` and `\bottomrule`, when combined with a `warpprint` or `warppHTML` environment, if a “Misplaced `\noalign`” error occurs, change

```

This & That \endhead

```

to

```

\warpprintonly{This & That \endhead}

```
- ⚠ Misplaced `\noalign`

and likewise with the other `\end` headings. Keep the `\endfirsthead` row unchanged, as it is still relevant to HTML output.

Other:

longtable headings

⚠ S columns

- `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 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 \LaTeX , 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.

⚠ 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 `lwarp`, so `\warpprintonly` and `\warpHTMLonly` must be used to make versions for print and HTML.

with \multicolumn

⚠ \multicolumn & \multirow

- See section 367.2 for `\multicolumnrow`.

`lwarp` 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.

⚠ skipped cells

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.

⚠ empty cells

```

... & \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

Pkg `longtable` 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 ...
\warppHTMLonly{
[ <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

Pkg `threeparttablex` `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, `lwarp` 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

Pkg supertabular For `\tablefirsthead`, etc., enclose them as follows:

Pkg xtab

```

\StartDefiningTabulars
\tablefirsthead
. . .
\StopDefiningTabulars

```

 **Misplaced alignment tab character &**

See section 8.10.1.

 **lateximage** `supertabular` and `xtab` are not supported inside a `lateximage`.

8.10.6 colortbl package

Pkg colortbl Only use `\rowcolor` and `\cellcolor` at the start of a row, in that order.

 **row/cell color** `colortbl` ignores the overhang arguments.

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

 Pkg `bigdelim` `\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}

```

\leftarrow a b
left $\left\{ \begin{array}{l} c \\ d \\ e \\ f \\ g \\ h \end{array} \right.$
 \rightarrow 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

Pkg `float` If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section [538.1](#).

Pkg `trivfloat`

Pkg `algorithmicx`

 package conflicts

8.11.3 caption and subcaption packages

Pkg `caption`

Pkg `subcaption`

Package options may cause problems with `lwarp`, 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 lwarp:

```
\PassOptionsToPackage{font={it,small}}{caption}
...
\usepackage{lwarp}
...
\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

Pkg subfig

 **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.

In the document source, use `\hfill` and `\hspace*{subfig>inline}` 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

Pkg floatrow

 **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. lwarp 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

Pkg `keyfloat` If placing a `\keyfig[H]` inside a `keywrap`, use an absolute width for `\keyfig`, instead of
 `keywrap` `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.)

8.12 KOMA-SCRIPT classes

Cls `komascript` Many features are ignored during the HTML conversion. The goal is source-level compatibility.

`\titlehead`, `\subject`, `\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

Cls `memoir` While emulating `memoir`, `lwarp` pre-loads a number of packages (section 587.1). This
 **options clash** 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 `lwarp`:

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{lwarp}
...
\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 `lwarp` 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.

`\verbfootnote` is not supported.

`\newfootnoteseries`, etc. are not supported.

`lwarp` loads `pagenote` to perform `memoir`'s `pagenote` functions, but there are minor differences in `\pagenotesubhead` and related macros.

Poem numbering is not supported.

The `verbatim` environment does not yet support the memoir enhancements. It is currently recommended to load and use `fancyvrb` instead.

The memoir glossary system is not yet supported by `lwarpmk`. The `glossaries` package may be used instead, but does require the glossary entries be changed from the memoir syntax to the `glossaries` syntax.

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

Pkg `verse` When using `verse` or `memoir`, always place a `\\` after each line.

Cls `memoir`
\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. `lwarp` 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}
```

Len `\vleftskip` 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.

Len `\vleftmargini`

Len `\HTMLvleftskip`

Len `\HTMLleftmargini`

 **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.

8.15.2 newclude package

Pkg newclude newclude modifies `\label` in a non-adaptive way, so newclude must be loaded before lwarp is loaded:

 loading

```
\documentclass{article}
... <font setup>
\usepackage{newclude}
\usepackage[warptest]{lwarp}
...
```

8.15.3 babel package

Pkg babel When French is used, the caption separator is changed to a dash. The following may be used to restore it to a colon:

 `\CaptionSeparator`

```
\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

Pkg polyglossia lwarp uses `cleveref`, which has some limitations when using `polyglossia`, possibly resulting in the error

```
! Undefined control sequence. . . . \@begindocumenthook
```

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 `lwarp`.

8.15.5 todonotes and luatodonotes packages

Pkg todonotes The documentation for `todonotes` and `luatodonotes` have an example with a `todo`

Pkg luatodonotes

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`

Pkg `fixme` External layouts (`\fxloadlayouts`) are not supported.

external layouts

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 `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}
```

8.15.8 `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.

8.15.9 `mhchem` package

See section 351.

8.15.10 `xparse` package

Pkg `xparse` To remove from the log any warnings about redeclaring objects, place the following before `lwarp` is loaded:

```
\usepackage[log-declarations=false]{xparse}
```

8.15.11 kotex package

Pkg kotex See section 8.14 regarding *pdf_latex* and Korean section names.

 Korean section names

9 Compiling using custom shell commands

`lwarp` and `lwarpmk` try to make it easy to process print and HTML compilation tasks in most situations. Depending on the operating system, command-line options, T_EX engine, and `lwarp` options, the commands `lwarpmk print` and `lwarpmk html` are automatically set up to correctly recompile the project. These actions may be overridden using `lwarp` options, thus allowing the use of packages such as `perltex` and `pythontex`.

9.1 Command options

Opt `PrintLatexCmd` The `lwarp` options `PrintLatexCmd` and `HTMLLatexCmd` are used to set customized commands to be executed by `lwarpmk print` and `lwarpmk html`.
 Opt `HTMLLatexCmd`

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`. `lwarpmk` will then take `project_html.pdf` and automatically convert it and generate `project.html`.

9.2 Literal character macros

The `lwarp` package options are parsed by T_EX, and so some characters require the use of a special macro to represent them. See table 7. `\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 `lwarp`:

```
\usepackage{kvoptions-patch}
\usepackage[
  PrintLatexCmd={ ... } ,
  HTMLLatexCmd={ ... }
]{lwarp}
```

Table 7: 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 `\lwarpssetup` must be used to set `PrintLatexCmd` and `HTMLLatexCmd`:

```

\usepackage[...]{lwarp}
\lwarpssetup{
  PrintLatexCmd=
  {
    latex tm \LWRopseq
    dvips -o tm-pics.ps tm.dvi \LWRopseq
    ps2pdf tm-pics.ps \LWRopseq
    pdflatex tm.tex
  } ,
  HTMLLatexCmd=
  {
    latex tm_html \LWRopseq
    dvips -o tm_html-pics.ps tm_html.dvi \LWRopseq
    ps2pdf tm_html-pics.ps \LWRopseq
    pdflatex tm_html.tex
  }
}

```

9.3 *latexmk*

Prog `latexmk` 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

lwarpmk pdftohtml project_html.pdf would take `project_html.pdf` and convert it to `project.html`.

Pkg `sagetex` *latexmk* may simplify the use of packages such as `sagetex`.

9.4 `perltex` package

Pkg `perltex` The `lwarp` package option settings to use `perltex` would be similar to:

```
\usepackage[
  . . .
  PrintLatexCmd={perltex -latex=pdflatex project.tex} ,
  HTMLLatexCmd={perltex -latex=pdflatex project_html.tex} ,
  . . .
]{lwarp}
```

⚠ “impure” math Place `perltex` math expressions between `\displaymathother` and `\displaymathnormal`, or `\inlinemathother` and `\inlinemathnormal`. See section 8.7.9.

9.5 `pythontex` package

Pkg `pythontex` 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
  } ,
  . . .
]{lwarp}
```

Another possibility is to use *latexmk*, placing the `latexmk . . .` commands in the `PrintLatexCmd` and `HTMLLatexCmd` options. While using these options, the `lwarp` 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

⚠ HTML look-alike inside a `lateximage` environment to prevent `<`, `>` and similar from being interpreted by the browser as HTML entities.

9.6 Other packages

Pkg `sympytex` Other packages such as `sympytex` and `rterface` would be set up similar to `pythontex`,

Pkg `rterface`

and the same warnings would apply.

9.7 *make* program

Prog **make** To use `lwarp` with the *make* program, have the makefile take `project.tex` and generate the print version `project.pdf`, as normal. `\usepackage{lwarp}` 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`.

9.8 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 `lwarp`’s custom compilation options to add a locale change:

```
\usepackage{lwarp}[
  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
  }
]
```

Pkg **ditaa** 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^LAT^EX and *ditaa*. To use Lua^ATE^X instead, the locale change would have to be made inside the *ditaa* package where it calls the *ditaa* program.

10 EPUB conversion

lwarp 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 lwarp 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 lwarp HTML output to EPUB:

	FormatEPUB
Bool	FormatEPUB
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 lwarp HTML output to EPUB, add

```
\booltrue{FormatEPUB}
```

to the project's source preamble after `\usepackage{lwarp}`. 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 lwarp 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 lwarp 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 lwarp’s section headings, see table 9. 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 lwarp-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.

lwarp 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 lwarp 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

lwarp 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. lwarp 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 lwarp HTML output to EPUB:

	FormatWP
Bool	FormatWP
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 lwarp HTML output for easier import to a word processor, add

```
\booltrue{FormatWP}
```

formatting adjustments

to the project's source preamble after lwarp 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 `LATEX` and `TEX` 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 `LATEX` 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

Bool WPMarkFloats
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

Bool WPMarkMinipages
 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

Bool WPMarkTOC
 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

Bool WPMarkLOFT
 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](#)
 Bool WPMarkMath
 Default: false
 Prog TeXMaths

While formatting for word processors, prints math as L^AT_EX 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 $\mathcal{A}\mathcal{M}\mathcal{S}$ math environments.

Table 8: Section HTML headings for word-processor conversion

Section	HTML headings*			
	With \chapter		Without \chapter	
	WPTitleHeading true	WPTitleHeading false	WPTitleHeading true	WPTitleHeading false
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 9 on page 197.

WPTitleHeading

Bool WPTitleHeading
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**.

See table 8 on page 181.

11.3 Recommendations

TOC, LOE, LOT For use with *LibreOffice Writer*, it is recommended to:

1. Set `\booltrue{FormatWP}`
2. Set `\booltrue{WPMarkTOC}` and `\boolfalse{WPMarkLOFT}`
3. Use `lwarp` 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 `LATEX` and `HTML` versions.

Equation numbering is not automatic, but the equation numbers in `SVG` math will match the `LATEX` 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`.

`LIBREOFFICE` 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 `lwarp.dtx`, search for `*packagename`, such as `*siunitx`.
- Likewise, to quickly find the source for a file in `lwarp.dtx`, search for `*filename`, such as `*lwarp.css`.
- 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 `lateximage` then displayed with an image of the resulting L^AT_EX output. See section 88 for an example of the `picture` environment.
- css classes** To create a custom HTML block or inline CSS class, see section 51.9.
- 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 `lateximages` require `\newpage`, which will not work in a TeX box.
- index recreation** To recreate the index for the `lwarp` documentation:

```
makeindex -s gglo.ist -o lwarp.gls lwarp.glo
splitindex lwarp.idx -- -s gind.ist
```

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 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:

```
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 .
mktexlsr
```

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}
```

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 `TEX` 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 389 (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 including 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 `lwarp.dtx` in section 20.1. This causes `lwarp` to stop with an error if `packagename` is loaded before `lwarp`. Finally, add an entry in table 2, **Supported packages and features**, and also the Updates section.

12.3 Modifying a class 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 \LaTeX classes, load any required fonts, then load `lwarp`, then finally load and adjust any other required packages.

12.4 Testing `lwarp`

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.

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 `lwarp.dtx`:

1. Change the source in `lwarp.dtx`.
2. `pdflatex lwarp.ins`
3. `pdflatex lwarp.dtx`
4. If modifying `lwarpmk` the new version should now be active.
5. If modifying `css` files:
 - (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.

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`

Prog `lwarpmk`
File `lwarpmk.lua`

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 `lwarp` package.
2. Recompile the printed version of the document. The `lwarpmk` option causes `lwarp` to create a local copy of `lwarpmk.lua`
3. The `lwarpmk` option may now be removed from the `lwarp` 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 lwarp package error conditions and warnings

lwarp 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 `lwarp`. So far only Unix and Windows are supported.

Incorrect delimiter characters. Older versions of `lwarpmk` used a different delimiter.

Source name is set to lwarp: `lwarp` has recently been recompiled in this directory, which overwrote the project's configuration files. This also occurs if `lwarpmk` is executed in `lwarp`'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: `lwarp` 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: `lwarp` cannot determine which engine is being used. Supported are DVI \LaTeX , PDF \LaTeX , X \LaTeX , Lua \LaTeX , and up \LaTeX .

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. Recompile.

lwarpmk epstopdf * or lwarpmk pdftosvg *: Errors if filenames are not found.

13.1.3 Default bitmapped font

lwarp requires the use of a vector font. If lwarp 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 lwarp: Some packages and classes must be loaded before lwarp. These include input and font encoding, morewrites and newclude, and a number of CJK-related packages and classes.

Loaded after lwarp: Most packages which are modified by lwarp must be loaded after lwarp.

Loaded never: Some packages do not work with lwarp. 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: lwarp tries to patch some packages using xpatch. If the original package has been updated more recently than lwarp, a patch may not work. It may be necessary to use an older version of the package until lwarp is updated.

longtable: lwarp'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 sideroc will not be able to access all pages of the website.

Duplicate filenames: lwarp may generate file names from section names. While doing so, the filenames are simplified and special characters are removed. If this process generates a duplicate filename, an error is generated, describing the filename and which section name generated it.

- △ **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 Xe_{La}TeX 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 lwarp package

The following address problems which may occur, and possible solutions to each.

Also see:

Section 7.10: [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{warppHTML}`, `\end{warpprint}`, `\end{warpaLL}`: Each of these must be without any other characters on the same line.

Options clash: If using `memoir`, see section 8.13.

“Missing `\begin{document}`.”: Some packages require that their options be specified before `lwarp` 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{lwarp}`, 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
```

“Leaders not followed by proper glue”:

This can be caused by a missing `l@<floattype>` or `l@<sectiontype>` definition. See `lwarp`’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.

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.

If using BibTeX, see section 8.6.9.

“! Undefined control sequence. . . \@begindocumenthook”:

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`.

Complicated objects inside math: Some objects, such as `Tikz`, may not compile in `lwarp`’s normal math emulation. Insert

```
\displaymathother — or — \inlinemathother
```

before the math, and then

```
\displaymathnormal — or — \inlinemathnormal
```

when displaying “normal” math. See section 8.7.9.

Slow compilation of math objects: Complicated math objects can also cause problems with `alt` tags, resulting in very slow compilation, large `alt` tags,

⚠ macros in section, table, figure names

⚠ BibTeX

⚠ polyglossia

⚠ custom macros for environments

⚠ `\LWR@formatted`

⚠ “impure” math objects

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 8.7.9.

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 558 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 \XeTeX or \LuaTeX .

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:

labels

⚠ label characters

`\nameref`

⚠ empty link

⚠ cleveref page numbers

- Enter `lwarpmk limages` to refresh the lateximage 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.¹⁵ 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, `lwarp` 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.

△ Lots of files!

Plain-looking document:

- The document's CSS stylesheet may not be available, or may be linked incorrectly. Verify any `\CSSFi lename` 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:

- 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.

¹⁵This becomes important when dealing with a document containing thousands of images.

Un-matched conditional compiles:

- Verify the proper begin/end of `warpprint`, `warpHTML`, and `warpall` environments.

13.2.1 Debug tracing output

`\tracinglwarp` When `\tracinglwarp` is used, `lwarp` will add extra tracing messages to the `.log` file. The last several messages may help track down errors.

Place `\tracinglwarp` just after `\usepackage{lwarp}` to activate tracing.

13.3 Compiling the `lwarp.dtx` file

`lwarp_tutorial.tex`: Copy or link `lwarp_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 `lwarp.sty` file:

1. Delete the `lwarp.sty` file.
2. Enter `pdflatex lwarp.ins` to generate a new `lwarp.sty` file.
3. Enter `pdflatex lwarp.dtx` to recompile the `lwarp.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 **lwarp.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-haeks~~ 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 `lateximage` environment to preserve the graphics.

Testing has primarily been done with the Iceweasel/Firefox browser.

Table 9: Section depths and HTML headings

Section	\LaTeX depth	HTML headings *
Title of the entire website		<code><h1></code>
(none)	-5	new for this package
book	-2	<code><div class = "book"></code>
part	-1	<code><h2></code>
chapter	0	<code><h3></code>
section	1	<code><h4></code>
subsection	2	<code><h5></code>
subsubsection	3	<code><h6></code>
paragraph	4	<code></code>
subparagraph	5	<code></code>
listitem	7	new for this package, used for list items

* If `FormatWP` is true, section headings may be adjusted, depending on `WPTitleHeading`. See table 8 on page 181.

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 9. “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 `lwarp` 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 `lwarp` package.

line numbers The small numbers at the left end of a line refer to line numbers in the `lwarp.sty` file.

subjects Blue-colored tags in the left margin aid in quickly identifying the subject of each paragraph.

objects 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 are

index entries 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 PRINT output:
for HTML & PRINT:

18 Detecting the T_EX engine — *pdf_latex*, *lua_latex*, *xel_latex*

See: <http://tex.stackexchange.com/a/47579>.

Detects X_YT_EX and LuaL_AT_EX:

```

1 \RequirePackage{iftex}[2019/11/07]
2
3 \newif\ifxetexorluatex
4
5 \ifXeTeX
6   \xetexorluatextrue
7 \else
8   \ifLuaTeX
9     \xetexorluatextrue
10  \else
11    \xetexorluatexfalse
12  \fi
13 \fi

```

19 Early package requirements

Pkg `etoolbox` Provides `\ifbool` and other functions.

Pkg `xpatch` Patches macros with optional arguments.

```

14 \RequirePackage{etoolbox}[2011/01/03]% v2.6 for \BeforeBeginEnvironment, etc.
15 \RequirePackage{xpacth}

```

Pkg `ifplatform` Provides `\ifwindows` to try to automatically detect WINDOWS OS.

```

16 \RequirePackage{ifplatform}% sense op-system platform

```

Pkg `letltxmacro`

```

17 \RequirePackage{letltxmacro}

```

20 Package load order

Several packages must never be used with `lwarp`, others should only be loaded before `lwarp`, and others should only be loaded after. The `lwarp` core checks most of these cases. In some `lwarp-*` packages, `\LWR@loadbefore` is used to trigger an error if they are loaded after `lwarp`, while additional code provides necessary patches for when they are loaded before.

Packages which must be loaded after `lwarp` 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 `lwarp`.

20.1 Tests of package load order

`\LWR@loadafter` $\langle\textit{packagename}\rangle$ Error if this package was loaded before `lwarp`.

```

18 \newcommand*\LWR@loadafter}[1]{%
19 \ifpackageloaded{#1}
20 {
21   \PackageError{lwarp}
22     {%
23       Package #1,\MessageBreak
24       or one which uses #1,\MessageBreak
25       must be loaded after lwarp
26     }
27     {Move \detokenize{\usepackage}{#1} after
28     \detokenize{\usepackage}{lwarp}.\MessageBreak
29     Package #1 may also be loaded by something else,\MessageBreak
30     which must also be moved after lwarp.}
31 }
32 {}
33 }

```

`\LWR@notmemoirloadafter` $\langle\textit{packagename}\rangle$ Error if not memoir class and this package was loaded before `lwarp`.

`memoir` emulates many packages, and pretends that they have already been loaded.

```

34 \ifclassloaded{memoir}
35 {\newcommand*\LWR@notmemoirloadafter}[1]{}
36 {\LetLtxMacro\LWR@notmemoirloadafter\LWR@loadafter}

```

`\LWR@notltjloadafter` $\langle\textit{packagename}\rangle$ Error if not a `ltjs*` class and this package was loaded before `lwarp`.

```

37 \LetLtxMacro\LWR@notltjloadafter\LWR@loadafter
38
39 \ifclassloaded{ltjarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
40 \ifclassloaded{ltjbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
41 \ifclassloaded{ltjreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
42 \ifclassloaded{ltjsarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
43 \ifclassloaded{ltjsbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
44 \ifclassloaded{ltjsreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
45 \ifclassloaded{ltjspf}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
46 \ifclassloaded{ltjskiyou}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
47 \ifclassloaded{ltjtarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
48 \ifclassloaded{ltjtbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
49 \ifclassloaded{ltjtreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}

```

`\LWR@loadbefore` $\langle\textit{packagename}\rangle$ Error if this package is loaded after lwarp.

```
50 \newcommand*\LWR@loadbefore[1]{%
51 \@ifpackageloaded{#1}
52 {}
53 {
54 \PackageError{lwarp}
55 {Package #1 must be loaded before lwarp}
56 {Move \detokenize{\usepackage}{#1} before \detokenize{\usepackage}{lwarp}.}
57 }
58 }
```

`\LWR@checkloadbefore` $\langle\textit{thispackagename}\rangle$ $\langle\textit{packagename}\rangle$

If package names match, error if it is loaded after lwarp.

```
59 \newcommand*\LWR@checkloadbefore[2]{%
60   \edef\LWR@tempone{#1}%
61   \ifdefstring{\LWR@tempone}{#2}{%
62     \LWR@loadbefore{#1}%
63   }{}%
64 }
```

`\LWR@loadnever` $\langle\textit{badpackagename}\rangle$ $\langle\textit{replacementpkgnames}\rangle$

The first packages is not supported, so tell the user to use the second instead.

```
65 \newcommand*\LWR@loadnever[2]{%
66 \PackageError{lwarp}
67 {%
68   Package #1 is not supported\MessageBreak
69   by lwarp's HTML conversion.\MessageBreak
70   Package(s) #2 may be useful instead%
71 }
72 {%
73   Package #1 might conflict with lwarp in some way,\MessageBreak
74   or is superceded by another package.\MessageBreak
75   For a possible alternative, see package(s) #2.
76 }
77 }
```

`\LWR@checkloadnever` $\langle\textit{thispackagename}\rangle$ $\langle\textit{badpackagename}\rangle$ $\langle\textit{replacementpkgnames}\rangle$

If this package name is the bad packagename, suggest the replacements instead.

```
78 \newcommand*\LWR@checkloadnever[3]{%
79   \edef\LWR@tempone{#1}%
80   \ifdefstring{\LWR@tempone}{#2}{%
81     \LWR@loadnever{#2}{#3}%
82   }{}%
83 }
```

`\LWR@earlyloadnever` $\langle\textit{badpackagename}\rangle$ $\langle\textit{replacementpkgnames}\rangle$

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 lwarp.

```

84 \newcommand*{\LWR@earlyloadnever}[2]{%
85   \ifpackageloaded{#1}{%
86     \LWR@loadnever{#1}{#2}%
87   }{}%
88 }

```

`\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 lwarp.

```

89 \newcommand*{\LWR@earlyclassloadnever}[2]{%
90 \@ifclassloaded{#1}{%
91   \PackageError{lwarp}
92   {%
93     Class #1 is not supported\MessageBreak
94     by lwarp's HTML conversion.\MessageBreak
95     Class(es) #2 may be useful instead
96   }
97   {%
98     Class #1 might conflict with lwarp in some way,\MessageBreak
99     or is superceded by another class.\MessageBreak
100    For a possible alternative, see class(es) #2.
101   }
102 }{}%
103 }

```

20.2 Error for disallowed packages and classes loaded before lwarp

```

104 \LWR@earlyclassloadnever{jarticle}{ujarticle}
105 \LWR@earlyclassloadnever{jbook}{ujbook}
106 \LWR@earlyclassloadnever{jreport}{ujreport}
107 \LWR@earlyclassloadnever{tarticle}{utarticle}
108 \LWR@earlyclassloadnever{tbook}{utbook}
109 \LWR@earlyclassloadnever{treport}{utreport}
110 \LWR@earlyloadnever{ae}{cm-super, lmodern}
111 \LWR@earlyloadnever{aeimpl}{cm-super, lmodern}
112 \LWR@earlyloadnever{aecc}{cm-super, lmodern}
113 \LWR@earlyloadnever{alg}{algorithm2e, algorithmicx}
114 \LWR@earlyloadnever{algorithmic}{algorithm2e, algorithmicx}
115 \LWR@earlyloadnever{bitfield}{bytefield}
116 \LWR@earlyloadnever{boxedminipage}{boxedminipage2e}
117 \LWR@earlyloadnever{caption2}{caption}
118 % \LWR@earlyloadnever{ccaption}{caption}% might be preloaded by memoir
119 \LWR@earlyloadnever{colortab}{colortbl}
120 \LWR@earlyloadnever{doublespace}{setspace}
121 \LWR@earlyloadnever{epsf}{graphicx}
122 \LWR@earlyloadnever{fancyheadings}{fancyhdr}
123 \LWR@earlyloadnever{fncylab}{cleveref}

```

```

124 \LWR@earlyloadnever{formula}{siunitx}
125 \LWR@earlyloadnever{glossary}{glossaries}
126 \LWR@earlyloadnever{hyper}{hyperref}
127 \LWR@earlyloadnever{newthm}{ntheorem}
128 \LWR@earlyloadnever{pdfcprot}{microtype}
129 \LWR@earlyloadnever{picinpar}{floatflt, wrapfig}
130 \LWR@earlyloadnever{picins}{floatflt, wrapfig}
131 \LWR@earlyloadnever{rplain}{fancyhdr}
132 \LWR@earlyloadnever{shadethm}{mdframed}
133 \LWR@earlyloadnever{si}{siunitx}
134 \LWR@earlyloadnever{sistyle}{siunitx}
135 \LWR@earlyloadnever{slashbox}{diagbox}
136 \LWR@earlyloadnever{statex}{statex2}
137 \LWR@earlyloadnever{tlenc}{fontenc, inputenc, inputenx}
138 \LWR@earlyloadnever{ucs}{inputenc, inputencx}
139 \LWR@earlyloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}

```

The older CJK and CJKutf8 only work with xeCJK:

```

140 \@ifpackageloaded{xeCJK}{
141   \LWR@earlyloadnever{CJK}{ctex, xeCJK}
142   \LWR@earlyloadnever{CJKutf8}{ctex, xeCJK}
143 }

```

bxckatype is based on CJK:

```

144 \LWR@earlyloadnever{bxckatype}{upLaTeX, bxjsarticle, uarticle, utarticle}

```

hangul is not in TeXLive, and is not tested:

```

145 \LWR@earlyloadnever{hangul}{kotex, xetexko, luatexko}

```

20.3 Enforcing package loading after lwarp

Packages which should only be loaded after lwarp are tested here to trip an error of they have already been loaded.

The following packages must be loaded after lwarp:

```

146 \LWR@loadafter{2in1}
147 \LWR@loadafter{2up}
148 \LWR@loadafter{a4}
149 \LWR@loadafter{a4wide}
150 \LWR@loadafter{a5comb}
151 \LWR@notmemoirloadafter{abstract}
152 \LWR@loadafter{academicons}
153 \LWR@loadafter{accessibility}
154 \LWR@loadafter{accsupp}
155 \LWR@loadafter{acro}
156 \LWR@loadafter{acronym}
157 \LWR@loadafter{adjmulticol}
158 \LWR@loadafter{addlines}
159 \LWR@loadafter{afterpage}
160 \LWR@loadafter{algorithm2e}

```

```
161 \LWR@loadafter{algorithmicx}
162 \LWR@loadafter{alltt}
163 \LWR@loadafter{amsmath}
164 \LWR@loadafter{amsthm}
165 \LWR@loadafter{anonchap}
166 \LWR@loadafter{anysize}
167 \LWR@notmemoirloadafter{appendix}
168 \LWR@loadafter{ar}
169 \LWR@loadafter{arabicfront}
170 \LWR@notmemoirloadafter{array}
171 \LWR@loadafter{arydshln}
172 \LWR@loadafter{asymptote}
173 % \LWR@loadafter{atbegshi}% used by morewrites
174 \LWR@loadafter{attachfile}
175 \LWR@loadafter{attachfile2}
176 \LWR@loadafter{authblk}
177 \LWR@loadafter{autobreak}
178 \LWR@loadafter{autonum}
179 \LWR@loadafter{awesomebox}
180 \LWR@loadafter{axessibility}
181 \LWR@loadafter{axodraw2}
182 \LWR@loadafter{backnaur}
183 \LWR@loadafter{backref}
184 \LWR@loadafter{balance}
185 \LWR@loadafter{bbding}
186 \LWR@loadafter{bigdelim}
187 \LWR@loadafter{bigfoot}
188 \LWR@loadafter{bigstrut}
189 \LWR@loadafter{bitpattern}
190 \LWR@loadafter{blowup}
191 \LWR@loadafter{bm}
192 \LWR@loadafter{booklet}
193 \LWR@loadafter{bookmark}
194 \LWR@notmemoirloadafter{booktabs}
195 \LWR@loadafter{bophook}
196 \LWR@loadafter{bounddvi}
197 \LWR@loadafter{boxedminipage2e}
198 \LWR@loadafter{braket}
199 \LWR@loadafter{breakurl}
200 \LWR@loadafter{breqn}
201 \LWR@loadafter{bsheaders}
202 \LWR@loadafter{bypapersize}
203 \LWR@loadafter{bytefield}
204 \LWR@loadafter{cancel}
205 \LWR@loadafter{canoniclayout}
206 \LWR@loadafter{caption}
207 \LWR@loadafter{caption2}
208 \LWR@loadafter{cases}
209 % catoptions is supported by the lwarp core
210 % \LWR@loadafter{ccaption}% may be preloaded by memoir
211 \LWR@loadafter{centernot}
212 \LWR@loadafter{changebar}
213 \LWR@loadafter{changelayout}
214 \LWR@notmemoirloadafter{changepage}
215 \LWR@loadafter{changes}
```

216 \LWR@loadafter{chappg}
217 \LWR@loadafter{chapterbib}
218 \LWR@loadafter{chemfig}
219 \LWR@loadafter{chemformula}
220 \LWR@loadafter{chemgreek}
221 \LWR@loadafter{chemmacros}
222 \LWR@loadafter{chemnum}
223 \LWR@loadafter{chkfloat}
224 \LWR@notmemoirloadafter{chnpage}
225 \LWR@loadafter{cite}
226 \LWR@loadafter{cmdtrack}
227 \LWR@loadafter{colonequals}
228 \LWR@loadafter{color}
229 \LWR@loadafter{colortbl}
230 \LWR@loadafter{continue}
231 \LWR@loadafter{copyrightbox}
232 \LWR@notmemoirloadafter{crop}
233 % ctex must be loaded before lwarp
234 \LWR@loadafter{ctable}
235 \LWR@loadafter{cuted}
236 \LWR@loadafter{cutwin}
237 \LWR@loadafter{dblfloatfix}
238 \LWR@loadafter{dblfnote}
239 \LWR@notmemoirloadafter{dcolumn}
240 \LWR@loadafter{decimal}
241 \LWR@loadafter{diagbox}
242 \LWR@loadafter{dingbat}
243 \LWR@loadafter{DotArrow}
244 \LWR@loadafter{dotlessi}
245 \LWR@loadafter{dprogress}
246 \LWR@loadafter{draftcopy}
247 \LWR@loadafter{draftfigure}
248 \LWR@loadafter{draftwatermark}
249 \LWR@loadafter{easy-todo}
250 \LWR@loadafter{ebook}
251 \LWR@loadafter{econometrics}
252 \LWR@loadafter{ed}
253 \LWR@loadafter{ellipsis}
254 \LWR@loadafter{embrac}
255 \LWR@loadafter{emptypage}
256 \LWR@loadafter{endfloat}
257 \LWR@loadafter{endheads}
258 \LWR@loadafter{endnotes}
259 \LWR@loadafter{engt1c}
260 \LWR@notmemoirloadafter{enumerate}
261 \LWR@loadafter{enumitem}
262 \LWR@notmemoirloadafter{epigraph}
263 \LWR@loadafter{epsfig}
264 \LWR@loadafter{epstopdf}
265 \LWR@loadafter{epstopdf-base}
266 \LWR@loadafter{eqList}
267 \LWR@loadafter{eqparbox}
268 \LWR@loadafter{errata}
269 \LWR@loadafter{eso-pic}
270 \LWR@loadafter{eurosym}

```
271 \LWR@loadafter{everypage}
272 \LWR@loadafter{everyshi}
273 \LWR@loadafter{extrarrows}
274 \LWR@loadafter{extramarks}
275 \LWR@loadafter{fancybox}
276 \LWR@loadafter{fancyhdr}
277 \LWR@loadafter{fancyref}
278 \LWR@loadafter{fancytabs}
279 \LWR@loadafter{fancyvrb}
280 \LWR@loadafter{fewerfloatpages}
281 \LWR@loadafter{figcaps}
282 \LWR@loadafter{figsize}
283 \LWR@loadafter{fitbox}
284 \LWR@loadafter{fix2col}
285 \LWR@loadafter{fixme}
286 \LWR@loadafter{fixmetodonotes}
287 \LWR@loadafter{flafter}
288 \LWR@loadafter{flippdf}
289 \LWR@loadafter{float}
290 \LWR@loadafter{floatflt}
291 \LWR@loadafter{floatpag}
292 \LWR@loadafter{floatrow}
293 \LWR@loadafter{fltrace}
294 \LWR@loadafter{flushend}
295 \LWR@loadafter{fnbreak}
296 \LWR@loadafter{fncychap}
297 \LWR@loadafter{fnlineno}
298 \LWR@loadafter{fnpara}
299 \LWR@loadafter{fnpos}
300 \LWR@loadafter{fontawesome}
301 \LWR@loadafter{fontawesome5}
302 % fontenc must be loaded before lwarp
303 % fontspec must be loaded before lwarp
304 \LWR@loadafter{footmisc}
305 \LWR@loadafter{footnote}
306 \LWR@loadafter{footnotebackref}
307 \LWR@loadafter{footnotehyper}
308 \LWR@loadafter{footnoterange}
309 \LWR@loadafter{footnpag}
310 \LWR@loadafter{foreign}
311 \LWR@loadafter{forest}
312 \LWR@loadafter{fouridx}
313 \LWR@loadafter{framed}
314 \LWR@loadafter{ftcap}
315 \LWR@loadafter{ftnright}
316 \LWR@loadafter{fullminipage}
317 \LWR@loadafter{fullpage}
318 \LWR@loadafter{fullwidth}
319 \LWR@loadafter{fwlw}
320 \LWR@loadafter{gensymb}
321 \LWR@loadafter{gentombow}
322 % geometry is always loaded by lwarp, and lwarp-geometry is AtBeginDocument
323 \LWR@loadafter{ghsystem}
324 \LWR@loadafter{glossaries}
325 \LWR@loadafter{gmeometric}
```

```
326 % \LWR@loadafter{graphics}% pre-loaded by xunicode
327 % \LWR@loadafter{graphicx}% pre-loaded by xunicode
328 \LWR@loadafter{gloss}
329 \LWR@loadafter{glossary}
330 \LWR@loadafter{grffile}
331 \LWR@loadafter{grid}
332 \LWR@loadafter{grid-system}
333 \LWR@loadafter{gridset}
334 \LWR@loadafter{hang}
335 \LWR@loadafter{hanging}
336 \LWR@loadafter{hlline}
337 \LWR@loadafter{hypbmsec}
338 \LWR@loadafter{hypcap}
339 \LWR@loadafter{hypdestopt}
340 \LWR@loadafter{hypernat}
341 \LWR@loadafter{hyperref}
342 \LWR@loadafter{hyperxmp}
343 \LWR@loadafter{hyphenat}
344 \LWR@loadafter{idxlayout}
345 \LWR@loadafter{ifoddpages}
346 \LWR@loadafter{imakeidx}
347 \LWR@notmemoirloadafter{index}
348 % inputenc must be loaded before lwarp
349 % inputenx must be loaded before lwarp
350 % inputtrc may be loaded before lwarp
351 \LWR@loadafter{intopdf}
352 \LWR@loadafter{karnaugh-map}
353 \LWR@loadafter{keyfloat}
354 \LWR@loadafter{layaureo}
355 \LWR@loadafter{layout}
356 \LWR@loadafter{layouts}
357 \LWR@loadafter{leading}
358 \LWR@loadafter{leftidx}
359 \LWR@loadafter{letterspace}
360 \LWR@loadafter{lettrine}
361 \LWR@loadafter{lineno}
362 \LWR@loadafter{lips}
363 \LWR@loadafter{listings}
364 \LWR@loadafter{listliketab}
365 \LWR@loadafter{longtable}
366 \LWR@loadafter{lscapex}
367 \LWR@loadafter{ltablex}
368 \LWR@loadafter{ltcaption}
369 \LWR@loadafter{ltxgrid}
370 \LWR@loadafter{ltxtable}
371 \LWR@loadafter{lualua-check-hyphen}
372 \LWR@loadafter{lualua-visual-debug}
373 \LWR@loadafter{luacolor}
374 \LWR@loadafter{luamplib}
375 \LWR@loadafter{luatodonotes}
376 \LWR@loadafter{lyluatex}
377 \LWR@loadafter{magaz}
378 \LWR@notmemoirloadafter{makeidx}
379 \LWR@loadafter{manyfoot}
380 \LWR@loadafter{marginfit}
```

```
381 \LWR@loadafter{marginfix}
382 \LWR@loadafter{marginnote}
383 \LWR@loadafter{marvosym}
384 \LWR@loadafter{mathcomp}
385 \LWR@loadafter{mathdots}
386 \LWR@loadafter{mathfixs}
387 \LWR@loadafter{mathtools}
388 \LWR@loadafter{mcaption}
389 \LWR@loadafter{mdframed}
390 \LWR@loadafter{media9}
391 \LWR@loadafter{memhfixc}
392 \LWR@loadafter{metalogo}
393 \LWR@loadafter{metalogoX}
394 \LWR@loadafter{mhchem}
395 \LWR@loadafter{microtype}
396 \LWR@loadafter{midfloat}
397 \LWR@loadafter{midpage}
398 \LWR@loadafter{minibox}
399 \LWR@loadafter{minitoc}
400 \LWR@loadafter{mismath}
401 % morefloats must be allowed early for print mode
402 \LWR@notmemoirloadafter{moreverb}
403 % morewrites must be loaded before lwarp
404 \LWR@notmemoirloadafter{movie15}
405 \LWR@notmemoirloadafter{mparhack}
406 \LWR@loadafter{multicap}
407 %\LWR@loadafter{multicol}% loaded by ltxdoc
408 \LWR@loadafter{multicolrule}
409 \LWR@loadafter{multimedia}
410 \LWR@loadafter{multiobjective}
411 \LWR@loadafter{multirow}
412 \LWR@loadafter{multitoc}
413 \LWR@loadafter{musicography}
414 \LWR@loadafter{nameauth}
415 \LWR@loadafter{nameref}
416 \LWR@loadafter{natbib}
417 \LWR@notmemoirloadafter{nccfancyhdr}
418 \LWR@loadafter{nccmath}
419 \LWR@notmemoirloadafter{needspace}
420 % newclude must be loaded before lwarp
421 \LWR@loadafter{newtxmath}
422 % newunicodechar must be loaded before lwarp
423 \LWR@notmemoirloadafter{nextpage}
424 \LWR@loadafter{nicefrac}
425 \LWR@loadafter{niceframe}
426 \LWR@loadafter{noitcrul}
427 \LWR@loadafter{nobreaks}
428 \LWR@loadafter{nomenc}
429 \LWR@loadafter{nonfloat}
430 \LWR@loadafter{nonumonpart}
431 \LWR@loadafter{nopageno}
432 \LWR@loadafter{notes}
433 \LWR@loadafter{notespages}
434 \LWR@loadafter{nowidow}
435 \LWR@loadafter{ntheorem}
```

436 \LWR@loadafter{octave}
437 \LWR@loadafter{overpic}
438 \LWR@loadafter{pagegrid}
439 \LWR@notmemoirloadafter{pagenote}
440 \LWR@loadafter{pagesel}
441 \LWR@loadafter{paralist}
442 \LWR@loadafter{parallel}
443 \LWR@loadafter{parcolumns}
444 \LWR@loadafter{parnotes}
445 \LWR@notmemoirloadafter{parskip}
446 \LWR@loadafter{pbox}
447 \LWR@loadafter{pdfcol}
448 \LWR@loadafter{pdfcolfoot}
449 \LWR@loadafter{pdfcolmk}
450 \LWR@loadafter{pdfcolparallel}
451 \LWR@loadafter{pdfcolparcolumns}
452 \LWR@loadafter{pdfcomment}
453 \LWR@loadafter{pdfcrypt}
454 \LWR@loadafter{pdflandscape}
455 \LWR@loadafter{pdfmarginpar}
456 \LWR@loadafter{pdfpages}
457 \LWR@loadafter{pdfprivacy}
458 \LWR@loadafter{pdfrender}
459 \LWR@loadafter{pdfsync}
460 \LWR@loadafter{pdftricks}
461 \LWR@loadafter{pdfx}
462 \LWR@loadafter{perpage}
463 \LWR@loadafter{pfnote}
464 \LWR@loadafter{phfqit}
465 \LWR@loadafter{physics}
466 \LWR@loadafter{physunits}
467 \LWR@loadafter{pifont}
468 \LWR@loadafter{placeins}
469 \LWR@loadafter{plarray}
470 \LWR@loadafter{plarydshln}
471 \LWR@loadafter{plextarray}
472 \LWR@loadafter{plextarydshln}
473 \LWR@loadafter{plcolortbl}
474 \LWR@loadafter{plextdelarray}
475 \LWR@loadafter{prelim2e}
476 \LWR@loadafter{prettyref}
477 \LWR@loadafter{preview}
478 \LWR@loadafter{psfrag}
479 \LWR@loadafter{psfragx}
480 \LWR@loadafter{pst-eps}
481 \LWR@loadafter{pstool}
482 \LWR@loadafter{pstricks}
483 % \LWR@loadafter{pxatbegshi}% may be used by morewrites
484 \LWR@loadafter{pxeveryshi}
485 \LWR@loadafter{pxftnright}
486 \LWR@loadafter{pxjahyper}
487 \LWR@loadafter{quotchap}
488 \LWR@loadafter{quoting}
489 \LWR@loadafter{ragged2e}
490 \LWR@loadafter{realscripts}

491 \LWR@loadafter{refcheck}
492 \LWR@loadafter{register}
493 \LWR@loadafter{relsize}
494 \LWR@loadafter{repeatindex}
495 \LWR@loadafter{resizgather}
496 \LWR@loadafter{returntogrid}
497 \LWR@loadafter{rmathbr}
498 \LWR@loadafter{rmpage}
499 \LWR@loadafter{romanbar}
500 \LWR@loadafter{romanbarpagenumber}
501 \LWR@loadafter{rotating}
502 \LWR@loadafter{rotfloat}
503 \LWR@loadafter{rviewport}
504 \LWR@loadafter{savetrees}
505 % scalefnt is loaded by babel-french
506 \LWR@loadafter{schemata}
507 \LWR@loadafter{scrextend}
508 \LWR@loadafter{scrhack}
509 \LWR@loadafter{scrlayer}
510 \LWR@loadafter{scrlayer-notecolumn}
511 \LWR@loadafter{scrpage}
512 \LWR@loadafter{scrpage2}
513 \LWR@loadafter{section}
514 \LWR@loadafter{sectionbreak}
515 \LWR@loadafter{sectsty}
516 \LWR@loadafter{semantic-markup}
517 \LWR@notmemoirloadafter{setspace}
518 \LWR@loadafter{shadow}
519 \LWR@loadafter{shapepar}
520 \LWR@notmemoirloadafter{showidx}
521 \LWR@loadafter{showkeys}
522 \LWR@loadafter{showtags}
523 \LWR@loadafter{sidecap}
524 \LWR@loadafter{sidenotes}
525 \LWR@loadafter{SIunits}
526 \LWR@loadafter{siunitx}
527 \LWR@loadafter{slantsc}
528 \LWR@loadafter{slashed}
529 \LWR@loadafter{soul}
530 \LWR@loadafter{soulpos}
531 \LWR@loadafter{soulutf8}
532 \LWR@loadafter{splitidx}
533 \LWR@loadafter{srcltx}
534 \LWR@loadafter{srctex}
535 \LWR@loadafter{stabular}
536 \LWR@loadafter{stackengine}
537 \LWR@loadafter{stackrel}
538 \LWR@loadafter{statex2}
539 \LWR@loadafter{statmath}
540 \LWR@loadafter{steinmetz}
541 \LWR@notltjloadafter{stfloats}
542 \LWR@loadafter{struktex}
543 \LWR@loadafter{subcaption}
544 \LWR@loadafter{subfig}
545 \LWR@loadafter{subfigure}

```
546 \LWR@loadafter{subsupscripts}
547 \LWR@loadafter{supertabular}
548 \LWR@loadafter{svg}
549 \LWR@loadafter{tlinc}
550 \LWR@loadafter{tabfigures}
551 \LWR@loadafter{tabls}
552 \LWR@loadafter{tablefootnote}
553 \LWR@notmemoirloadafter{tabularx}
554 \LWR@loadafter{tabulary}
555 \LWR@loadafter{tascmac}
556 \LWR@loadafter{tagpdf}
557 \LWR@loadafter{textarea}
558 % \LWR@loadafter{textcomp}% maybe before lwarp with font packages
559 \LWR@loadafter{textfit}
560 \LWR@loadafter{textpos}
561 \LWR@loadafter{theorem}
562 \LWR@loadafter{thinsp}
563 \LWR@loadafter{threadcol}
564 \LWR@loadafter{threparttable}
565 \LWR@loadafter{threparttablex}
566 \LWR@loadafter{thumb}
567 \LWR@loadafter{thumbs}
568 \LWR@loadafter{tikz}
569 \LWR@loadafter{titleps}
570 \LWR@loadafter{titlesec}
571 \LWR@loadafter{titletoc}
572 \LWR@notmemoirloadafter{titling}
573 % \LWR@loadafter{tocbasic}% preloaded by koma-script classes
574 \LWR@notmemoirloadafter{tocbibind}
575 \LWR@loadafter{tocdata}
576 \LWR@loadafter{tocenter}
577 \LWR@notmemoirloadafter{tocloft}
578 \LWR@loadafter{tocstyle}
579 \LWR@loadafter{todo}
580 \LWR@loadafter{todonotes}
581 \LWR@loadafter{topcapt}
582 \LWR@loadafter{tram}
583 \LWR@loadafter{transparent}
584 \LWR@loadafter{trimclip}
585 \LWR@loadafter{trivfloat}
586 \LWR@loadafter{truncate}
587 \LWR@loadafter{turnthepage}
588 \LWR@loadafter{twoup}

589 % \LWR@loadafter{typearea}% preloaded by koma-script classes
590 \LWR@loadafter{typicons}
591 % \LWR@loadafter{ulem}% preloaded by ctexart and related classes
592 \LWR@loadafter{umoline}
593 \LWR@loadafter{underscore}
594 \LWR@loadafter{unicode-math}
595 \LWR@loadafter{units}
596 \LWR@loadafter{unitsdef}
597 \LWR@loadafter{upref}
598 \LWR@loadafter{url}
599 \LWR@loadafter{uspace}
```

```

600 \LWR@loadafter{varioref}% no lwarp package provided
601 \LWR@notmemoirloadafter{verse}
602 \LWR@loadafter{versonotes}
603 \LWR@loadafter{vertbars}
604 \LWR@loadafter{vmargin}
605 \LWR@loadafter{vowel}
606 \LWR@loadafter{vpe}
607 \LWR@loadafter{vwcol}
608 \LWR@loadafter{wallpaper}
609 \LWR@loadafter{watermark}
610 \LWR@loadafter{widetable}
611 \LWR@loadafter{widows-and-orphans}
612 \LWR@loadafter{witharrows}
613 \LWR@loadafter{wrapfig}
614 \LWR@loadafter{xbmks}
615 \LWR@loadafter{xcolor}
616 \LWR@loadafter{xexchangebar}
617 \LWR@loadafter{xellipsis}
618 % xetexko-vertical must be loaded before lwarp
619 \LWR@loadafter{xfakebold}
620 \LWR@loadafter{xfrac}
621 \LWR@loadafter{xltabular}
622 \LWR@loadafter{xltextra}
623 \LWR@loadafter{xmpincl}
624 \LWR@loadafter{xpiano}
625 \LWR@loadafter{xpinyin}
626 \LWR@loadafter{xr}
627 \LWR@loadafter{xr-hyper}
628 \LWR@loadafter{xtab}
629 % xunicode must be loaded before lwarp
630 \LWR@loadafter{xurl}
631 \LWR@loadafter{xy}
632 \LWR@loadafter{zwpageLayout}

```

21 MD5 hashing

The MD5 hash is used for lateximage filenames for svg math.

```

633 \newcommand{\LWR@mdfive}[1]{%
634 \PackageError{lwarp}
635 {No MD5 macro was found}
636 {Lwarp must find the macros pdfmdfivesum or mdfivesum.}
637 }

```

The default for pdf^LTEX, dvi^LTEX, up^LTEX, etc:

```
638 \let\LWR@mdfive\pdfmdfivesum
```

For Lua^LTEX:

```

639 \ifLuaTeX
640 \RequirePackage{pdfdoccmds}

```

```
641 \let\LWR@mdfive\pdf@mdfivesum
642 \fi
```

For X_YL^AT_EX:

```
643 \ifXeTeX
644 \@ifundefined{pdfmdfivesum}{}
645   {\let\LWR@mdfive\pdfmdfivesum}
646 \@ifundefined{mdfivesum}{}
647   {\let\LWR@mdfive\mdfivesum}
648 \fi
```

22 pdf_LA_TE_X T1 and UTF-8 encoding

When using pdf_LA_TE_X, lwarp requires T1 font encoding, and recommends UTF-8 input encoding.

If some other input encoding is already defined, lwarp will try to use it instead, and hope for the best.

X_YL^AT_EX and Lua_LA_TE_X are both UTF-8 by nature.

`\LWR@pdfencoding` Sets T1, and also utf8 if not already set.

```
649 \newcommand*{\LWR@pdfencoding}{%
650   \RequirePackage[T1]{fontenc}
651
652   \ifpackageloaded{inputenc}{}{
653     \@ifpackageloaded{inputex}{}{
654       \RequirePackage[utf8]{inputenc}
655     }
656   }
657 }

658 \ifPDFTeX% pdflatex or dvi latex
659   \LWR@pdfencoding
660 \fi
661
662 \ifpTeX
663   \LWR@pdfencoding
664 \fi
```

23 Unicode input characters

for HTML & PRINT: 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 `\texttimes`.

The first arguments of `\newunicodechar` below are text ligatures in the source code, even though they are not printed in the following listing.

```

665 \ifpTeX
666 \else
667 \RequirePackage{newunicodechar}
668
669 \newunicodechar{x}{\texttimes}
670
671 \ifPDFTeX% pdflatex or dvi latex
672 \newunicodechar{ff}{ff}% Here, the first arguments are ligatures.
673 \newunicodechar{fi}{fi}
674 \newunicodechar{fl}{fl}
675 \newunicodechar{ffi}{ffi}
676 \newunicodechar{ffl}{ffl}
677 \newunicodechar{-}{---}
678 \newunicodechar{-}{--}
679 \fi
680
681 \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.

```

682 \ifxetexorluatex
683 \else
684   \ifdefstring{\f@family}{cmr}{
685     \IfFileExists{type1ec.sty}% found in cm-super
686     {}
687     {% cm-super not installed
688       \IfFileExists{lmodern.sty}{
689         \PackageInfo{lwarp}{cm-super not installed, loading lmodern}
690         \RequirePackage{lmodern}
691       }{
692         \PackageError{lwarp}
693         {%
694           Lwarp requires a vector font.\MessageBreak
695           Install and load cm-super, lmodern, or another\MessageBreak
696           Type-1 vector font before loading lwarp%
697         }
698         {%
699           Install cm-super or lmodern.\MessageBreak
700           If lmodern, load it before lwarp:\MessageBreak
701           \space\space\protect\usepackage{lmodern}\MessageBreak
702           \space\space\protect\usepackage{lwarp}%
703         }
704       }
705     }% cm-super not installed
706   }{}% f@family
707 \fi

```

25 Upright quotes

In PDFTEX, preserve upright quotes in verbatim text. `upquote` also loads `textcomp`.

```
708 \ifPDFTeX
709 \RequirePackage{upquote}
710 \fi
711
712 \ifpTeX
713   \RequirePackage{upquote}
714 \fi
```

26 Miscellaneous tools

26.1 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.

```
715 \newcommand*\LWR@providelength[1]{%
716   \ifdeflength{#1}{\newlength{#1}}%
717 }
```

`\LWR@convertto` `{\dest unit}` `{\length}`

Prints a length in the given units, without printing the unit itself.

```
718 \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.

```
719 \newcommand*\LWR@printpercentlength[2]{%
720   \setcounter{LWR@tempcountone}{100*\ratio{#1}{#2}}%
721   \arabic{LWR@tempcountone}%
722 }
```

26.2 Counters

`\defaddtocounter` `{\name}` `{\value}`

Locally add to a counter.

```

723 \providecommand*\defaddtocounter}[2]{%
724   \defcounter{#1}{\value{#1}+#2}%
725 }

```

26.3 Patching

`\LWR@patcherror` `{\langle packagename \rangle}{\langle macroname \rangle}`

Prints an error if could not patch a macro.

```

726 \newcommand*\LWR@patcherror}[2]{%
727   \PackageError{lwarp}
728 {Unable to patch package #1, macro #2}
729 {Please contact the author of the Lwarp package.}
730 }

```

26.4 Chinese text isolation

`\LWR@isolate` `{\langle text \rangle}` 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.

```

731 \newcommand{\LWR@isolate}[1]{#1}%
732
733 \ifpackageloaded{ctexpatch}{
734   \renewcommand{\LWR@isolate}[1]{\null#1\null}%
735 }{}
736
737 \ifpackageloaded{xeCJK}{
738   \renewcommand{\LWR@isolate}[1]{\null#1\null}%
739 }{}

```

26.5 Inserting vertical space

`\LWR@forceemptyline` Extra vertical space in the HTML output. Use after `\LWR@stoppars`.

```

740 \newcommand*\LWR@forceemptyline{%
741   \LWR@origrule{0pt}{1\baselineskip}%
742   \LWR@orignewline%
743 }

```

26.6 Argument selection

`\LWR@firstoffour` `{\langle first \rangle}{\langle second \rangle}{\langle third \rangle}{\langle fourth \rangle}`

`\LWR@secondoffour` `{\langle first \rangle}{\langle second \rangle}{\langle third \rangle}{\langle fourth \rangle}`

```
\LWR@thirdoffour {<first>} {<second>} {<third>} {<fourth>}
```

```
\LWR@fourthoffour {<first>} {<second>} {<third>} {<fourth>}
```

Expands to the nth of the four arguments. Used for extra cross referencing.

```
744 \long\def\LWR@firstoffour#1#2#3#4{#1}
745 \long\def\LWR@secondoffour#1#2#3#4{#2}
746 \long\def\LWR@thirdoffour#1#2#3#4{#3}
747 \long\def\LWR@fourthoffour#1#2#3#4{#4}
```

26.7 Global boxes

```
\LWR@gsavebox {<macroname>} {<contents>}
```

From <https://tex.stackexchange.com/questions/288702/savebox-forgets-its-content-across-columns-inside-align>

```
748 \DeclareRobustCommand\LWR@gsavebox[1]{%
749   \ifnextchar(%)
750     {\LWR@@gsavepicbox#1}{\ifnextchar[{\LWR@gsavebox#1}{\LWR@gsbox#1}}}%
751 \long\def\LWR@gsbox#1#2{\global\setbox#1\hbox{%
752   \color@setgroup#2\color@endgroup}}
753 \def\LWR@gsavebox#1[#2]{%
754   \ifnextchar [ {\LWR@igsavebox#1[#2]}{\LWR@igsavebox#1[#2][c]}}
755 \long\def\LWR@igsavebox#1[#2][#3]#4{%
756   \LWR@gsbox#1{\@imakebox[#2][#3]{#4}}
757 \def\LWR@gsavepicbox#1(#2,#3){%
758   \ifnextchar[%
759     {\LWR@igsavepicbox#1(#2,#3)}{\LWR@igsavepicbox#1(#2,#3)[]}}
760 \long\def\LWR@igsavepicbox#1(#2,#3)[#4]#5{%
761   \LWR@gsbox#1{\@imakepicbox(#2,#3)[#4]{#5}}}
```

```
Env LWR@glrbox {<macroname>}
```

```
762 \def\LWR@glrbox#1{%
763   \edef\reserved@a{%
764     \endgroup
765     \global\setbox#1\hbox{%
766       \begingroup\aftergroup%
767         \def\noexpand\@currentvir{\@currentvir}%
768         \def\noexpand\@currentvline{\on@line}}%
769   \reserved@a
770   \@endpfalse
771   \color@setgroup
772   \ignorespaces}
773 \let\LWR@endglrbox\LWR@endlrbox
```

26.8 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>

```
774 \newcommand*{\macrocsname}[1]{%
775   \ifcat\relax\noexpand#1%
776     \expandafter\expandafter\expandafter\@gobble\expandafter\string
777   \fi
778   #1%
779 }
```

27 Operating-System portability

Prog Unix	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.
Prog Mac OS	
Prog Linux	
Prog MS-Windows	If MS-WINDOWS is not correctly detected, use the lwarp option OSWindows.
Prog Windows	
Opt OSWindows	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.

27.1 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:

```
780 \let\LWRpercent\@percentchar
```

The literal \$ character:

```
781 \catcode'\$=12
782 \def\LWRdollar{\$}
783 \catcode'\$=3
```

The literal & character:

```
784 \catcode'\&=12
785 \def\LWRamp{\&}
786 \catcode'\&=4
```

The literal \ character. The ampersand is temporarily set to the escape character during the definition of the backslash macro.

```
787 \catcode'\&=0
788 &\catcode'\&=12
```

```

789 &def&LWRbackslash{\}
790 &catcode'\&=0
791 \catcode'\&=4

```

The literal { character. The ampersand is temporarily set to the begin group character during the definition of the leftbrace macro.

```

792 \catcode'\&=1
793 \catcode'\{=12
794 \def\LWRleftbrace&{\}
795 \catcode'\{=1
796 \catcode'\&=4

```

The literal } character. The ampersand is temporarily set to the end group character during the definition of the leftbrace macro.

```

797 \catcode'\&=2
798 \catcode'\}=12
799 \def\LWRrightbrace}&{\}
800 \catcode'\}=2
801 \catcode'\&=4

```

The literal # character:

```

802 \catcode'\#=12
803 \def\LWRhash{#}
804 \catcode'\#=6

```

`\LWRopquote` The operating system's quote mark, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```
805 \def\LWRopquote{'}
```

`\LWRopseq` The operating system's sequential execution command, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```
806 \def\LWRopseq{\space\LWRamp\LWRamp\space\space}
```

27.2 Common portability code

`Bool usingOSWindows` Set if the OSWindows option is used, or if WINDOWS is automatically detected.

```

807 \newbool{usingOSWindows}
808 \boolfalse{usingOSWindows}

```

27.3 UNIX, LINUX, and MAC OS

`\OSPathSymbol` Symbol used to separate directories in a path.

```
809 \newcommand*{\OSPathSymbol}{/}
```

27.4 MS-WINDOWS

For MS-WINDOWS:

`\LWR@setOSWindows` Set defaults for the MS-WINDOWS operating system. `lwarp` attempts to auto-detect the operating system, and the `OSWindows` option may also be used to force MS-WINDOWS compatibility.

```
810 \newcommand*{\LWR@setOSWindows}
811 {
812 \booltrue{usingOSWindows}
813 \renewcommand*{\OSPathSymbol}{\@backslashchar}
814 \def\LWRopquote{"}
815 \def\LWRopseq{\space\LWRamp\space\space}
816 }
```

Test for windows during compile. The user may also specify `OSWindows` package option in case this test fails.

```
817 \ifwindows
818 \LWR@setOSWindows
819 \fi
```

28 Package options

`Pkg kvoptions` Allows key/value package options.

```
820 \RequirePackage{kvoptions}
821 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

`\lwarpssetup` A user interface to set the keys:

```
822 \newcommand{\lwarpssetup}[1]{\setkeys{LWR}{#1}}
```

`Bool warpingprint`

`Bool warpingHTML`

`Bool mathjax`

`Bool LWR@origmathjax`

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`.

```
823 \newbool{warpingprint}
824 \newbool{warpingHTML}
825 \newbool{mathjax}
826 \newbool{LWR@origmathjax}
```

defaults The default is print output, and svg math if the user chose HTML output.

```
827 \booltrue{warpingprint}%
828 \boolfalse{warpingHTML}%
829 \boolfalse{mathjax}%
```

Opt warpprint If the warpprint option is given, boolean warpingprint is true and boolean warpingHTML is false, and may be used for \ifbool tests.

```
830 \DeclareVoidOption{warpprint}{%
831 \PackageInfo{lwarp}{Using option 'warpprint'}
832 \booltrue{warpingprint}%
833 \boolfalse{warpingHTML}%
834 }
```

Opt warpHTML Anything in the warpHTML environment will be generated for HTML output only.

Opt warpHTML If the warpHTML option is given, boolean warpingHTML is true and boolean warpingprint is false, and may be used for \ifbool tests.

```
835 \DeclareVoidOption{warpHTML}{%
836 \PackageInfo{lwarp}{Using option 'warpHTML'}
837 \booltrue{warpingHTML}%
838 \boolfalse{warpingprint}%
839 }
```

Opt mathsvg Option mathsvg selects SVG math display: If the mathsvg option is given, boolean mathjax is false, and may be used for \ifbool tests.

```
840 \DeclareVoidOption{mathsvg}{%
841 \PackageInfo{lwarp}{Using option 'mathsvg'}
842 \boolfalse{mathjax}%
843 \boolfalse{LWR@origmathjax}%
844 }
```

Opt mathjax Option mathjax selects MATHJAX math display: If the mathjax option is given, boolean mathjax is true, may be used for \ifbool tests.

```
845 \DeclareVoidOption{mathjax}{%
846 \PackageInfo{lwarp}{Using option 'mathjax'}
847 \booltrue{mathjax}%
848 \booltrue{LWR@origmathjax}%
849 }
```

Opt BaseJobname 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.

```
850 \DeclareStringOption[\jobname]{BaseJobname}
```

Opt `ImagesDirectory` Option `ImagesDirectory` sets the name of the directory to use for the `lateximage` images.
 Default: `\jobname-images`

```
851 \DeclareStringOption[\BaseJobname-images]{ImagesDirectory}
```

Opt `ImagesName` Option `ImagesName` sets the prefix to use for the `lateximage` images.
 Default: `image-`

```
852 \DeclareStringOption[image-]{ImagesName}
```

Opt `makeindexStyle` Selects a custom `.ist` file. A customized file should be based on `lwarp.ist`, and must retain the lines related to `\hyperindexref`.
 Default: `lwarp.ist`

```
853 \DeclareStringOption[lwarp.ist]{makeindexStyle}
```

Opt `xindyStyle` Selects a custom `.xdy` file. A customized file should be based on `lwarp.xdy`, and must retain the line
 Default: `lwarp.xdy`

```
(markup-locref :open "\hyperindexref{" :close "}")
```

```
854 \DeclareStringOption[lwarp.xdy]{xindyStyle}
```

Opt `xindyLanguage` Sets the `xindy` language to be assigned in `lwarpmk`'s configuration files. This is then used by `lwarpmk` while processing the index and glossary.
 Default: `english`

```
855 \DeclareStringOption[english]{xindyLanguage}
```

Opt `xindyCodepage` Sets the `xindy` codepage to be assigned in `lwarpmk`'s configuration files. This is then used by `lwarpmk` while processing the index.
 Default: `utf8`

```
856 \DeclareStringOption[utf8]{xindyCodepage}
```

Opt `pdftotextEnc` The option `pdftotextEnc` sets the encoding used by `pdftotext`. This is passed to `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.
 Default: `UTF-8`

```
857 \DeclareStringOption[UTF-8]{pdftotextEnc}
```

Opt `lwarpmk` Tells `lwarp` 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`:

```
858 \newbool{LWR@creatinglwarpmk}
859 \boolfalse{LWR@creatinglwarpmk}
860
861 \DeclareVoidOption{lwarpmk}{
862 \PackageInfo{lwarp}{Using option 'lwarpmk'}
863 \booltrue{LWR@creatinglwarpmk}
864 }
```

- Opt OSWindows 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.
- ```
865 \DeclareVoidOption{OSWindows}{
866 \PackageInfo{l warp}{Using option 'OSWindows'}
867 \LWR@setOSWindows
868 }
```
- Opt HomeHTMLFilename 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.
- Default: `\BaseJobname`
- ```
869 \DeclareStringOption[]{HomeHTMLFilename}
```
- Opt HTMLFilename 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.
- Default: `<empty>`
- ```
870 \DeclareStringOption[]{HTMLFilename}
```
- Opt PrintLatexCmd The shell commands to use to compile the print document.
- Default: `<automatic>`
- ```
871 \DeclareStringOption[]{PrintLatexCmd}
```
- Opt HTMLLatexCmd The shell commands to use to compile the HTML document.
- Default: `<automatic>`
- ```
872 \DeclareStringOption[]{HTMLLatexCmd}
```
- Opt PrintIndexCmd The shell commands to use to compile the print indexes.
- Default: `<empty>`
- ```
873 \DeclareStringOption[]{PrintIndexCmd}
```
- Opt HTMLIndexCmd The shell commands to use to compile the HTML indexes.
- Default: `<empty>`
- ```
874 \DeclareStringOption[]{HTMLIndexCmd}
```
- Opt LatexmkIndexCmd 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`.
- Default: `<empty>`
- ```
875 \DeclareStringOption[]{LatexmkIndexCmd}
```
- Opt makeindex Tells `lwarp` to use `makeindex` for index generation. When `lwarpmk.conf` and `*.lwarpmkconf` are generated, `PrintIndexCmd` and `HTMLIndexCmd` will be set for `makeindex` with a single index file.
- ```
876 \DeclareBoolOption[false]{makeindex}
```

Opt `xindy` Tells `lwarp` to use `xindy` for index generation. When `lwarpmk.conf` and `*.lwarpmkconf` are generated, `PrintIndexCmd` and `HTMLIndexCmd` will be set for `xindy` with a single index file.

```
877 \DeclareBoolOption[false]{xindy}
```

Opt `GlossaryCmd` The shell command to use to compile the glossary. The print or HTML version of the glossary filename will be appended to this command.  
Default: `makeglossaries`

```
878 \DeclareStringOption[makeglossaries]{GlossaryCmd}
```

Opt `latexmk` Option `latexmk` tells `lwarpmk` to use `latexmk` when compiling documents.

```
879 \DeclareBoolOption[false]{latexmk}
```

Opt `dvips` Option `dvips` tells `lwarpmk` to use `dvips` when compiling DVI `latex` documents.

```
880 \DeclareBoolOption[false]{dvips}
```

Opt `dvipdfm` Option `dvipdfm` tells `lwarpmk` to use `dvipdfm` when compiling DVI `latex` documents.

```
881 \DeclareBoolOption[false]{dvipdfm}
```

Opt `dvipdfmx` Option `dvipdfmx` tells `lwarpmk` to use `dvipdfmx` when compiling DVI `latex` documents.

```
882 \DeclareBoolOption[false]{dvipdfmx}
```

[Execute options](#) Execute the package options, with the defaults which have been set just above:

```
883 \ProcessKeyvalOptions*\relax
```

## 28.1 Additional options support

Assign the `\BaseJobname` if the user hasn't provided one:

```
884 \providecommand*\BaseJobname{\LWR@BaseJobname}
```

Defaults unless already over-ridden by the user:

```
885 \ifcsemtyp{LWR@HomeHTMLFilename}{
886 \newcommand*\HomeHTMLFilename{\BaseJobname}
887 }{
888 \csedef{HomeHTMLFilename}{\LWR@HomeHTMLFilename}
889 }
890
891 \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.

```
892 \newcommand*\LWR@sanitized{}
```

`\LWR@sanitize` `{<text>}`

Sanitizes the text and returns the result in `\LWR@sanitized`.

```
893 \newcommand*\LWR@sanitize}[1]{%
894 \edef\LWR@sanitized{#1}%
895 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
896 }
```

Sanitize some string options to neutralize underscores.

```
897 \LWR@sanitize{\LWR@BaseJobname}
898 \edef\LWR@BaseJobname{\LWR@sanitized}
899
900 \LWR@sanitize{\LWR@ImagesDirectory}
901 \edef\LWR@ImagesDirectory{\LWR@sanitized}
902
903 \LWR@sanitize{\LWR@ImagesName}
904 \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.

```
905 \ifdefempty{\LWR@PrintIndexCmd}{
906 \renewcommand{\LWR@PrintIndexCmd}{%
907 makeindex -s \LWR@makeindexStyle \space \jobname.idx%
908 }
909 \ifbool{LWR@xindy}{
910 \renewcommand{\LWR@PrintIndexCmd}{%
911 xindy
912 -M \LWR@xindyStyle \space
913 -L \LWR@xindyLanguage \space
914 -C \LWR@xindyCodepage \space
915 \jobname.idx%
916 }
917 }{}
918 }{}
919
920 \ifdefempty{\LWR@HTMLIndexCmd}{
921 \renewcommand{\LWR@HTMLIndexCmd}{%
922 makeindex -s \LWR@makeindexStyle \space \jobname_html.idx%
923 }
924 \ifbool{LWR@xindy}{
925 \renewcommand{\LWR@HTMLIndexCmd}{%
926 xindy
927 -M \LWR@xindyStyle \space
928 -L \LWR@xindyLanguage \space
```

```

929 -C \LWR@xindyCodepage \space
930 \jobname_html.idx%
931 }
932 }{}
933 }{}
934
935 \ifdefempty{\LWR@LatexmkIndexCmd}{
936 \renewcommand{\LWR@LatexmkIndexCmd}{%
937 makeindex -s \LWR@makeindexStyle%
938 }
939 \ifbool{LWR@xindy}{
940 \renewcommand{\LWR@LatexmkIndexCmd}{%
941 xindy
942 -M \LWR@xindyStyle \space
943 -L \LWR@xindyLanguage \space
944 -C \LWR@xindyCodepage%
945 }
946 }{}
947 }{}

```

## 28.2 Conditional compilation

`\warpprintonly` `{\langle contents \rangle}`

Only process the contents if producing printed output.

```
948 \newcommand{\warpprintonly}[1]{\ifbool{warpingprint}{#1}{}}
```

`\warpHTMLonly` `{\langle contents \rangle}`

Only process the contents if producing HTML output.

```
949 \newcommand{\warpHTMLonly}[1]{\ifbool{warpingHTML}{#1}{}}
```

`Pkg comment` 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.

```
950 \RequirePackage{comment}
```

Use `comment_print.cut` for print mode, and `comment_html.cut` for HTML mode. This helps *latexmk* to more reliably know whether to recompile.

```

951 \ifbool{warpingHTML}{
952 \def\DefaultCutFileName{\def\CommentCutFile{comment_html.cut}}
953 }{}
954
955 \ifbool{warpingprint}{
956 \def\DefaultCutFileName{\def\CommentCutFile{comment_print.cut}}
957 }{}

```

Env `warpall` Anything in the `warpall` environment will be generated for print or HTML outputs.

```
958 \includecomment{warpall}
```

Env `warpHTML` For HTML output:

```
959 \ifbool{warpingHTML}
960 {\includecomment{warpHTML}}
961 {\excludecomment{warpHTML}}%
```

Env `warpprint` Anything in the `warpprint` environment will be generated for print output only.

```
962 \ifbool{warpingprint}
963 {\includecomment{warpprint}}
964 {\excludecomment{warpprint}}
```

Env `warpMathJax` Only if `MATHJAX` is being used along with HTML.

```
965 \begin{warpprint}
966 \excludecomment{warpMathJax}
967 \end{warpprint}
968
969 \begin{warpHTML}
970 \ifbool{mathjax}
971 {\includecomment{warpMathJax}}
972 {\excludecomment{warpMathJax}}
973 \end{warpHTML}
```

Env `LWR@creatinglwarpmk` Optionally generate a local copy of *lwarpmk*. Default to no.

```
974 \ifbool{LWR@creatinglwarpmk}
975 {\includecomment{LWR@createlwarpmk}}
976 {\excludecomment{LWR@createlwarpmk}}
```

## 29 Required packages

These packages are automatically loaded by `lwarp` when generating HTML output. Some of them are also automatically loaded when generating print output, but some are not.

**for HTML output:** `977 \begin{warpHTML}`

Load `fontspec` if necessary:

```
978 \ifxetexorluatex
979 \@ifpackageloaded{fontspec}{\{
980 \usepackage[no-math]{fontspec}
981 }
```

The monospaced font is used for HTML tags, so turn off its TeX ligatures and common ligatures:

```
982 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
983 \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
984 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
985 \else
```

*pdf<sub>l</sub>atex* only: Only pre-loaded if *pdf<sub>l</sub>atex* is being used.

Pkg microtype

**ligatures** Older browsers don't display ligatures. Turn off letter ligatures, keeping L<sup>A</sup>T<sub>E</sub>X dash and quote ligatures, which may fail on older browsers but at least won't corrupt written words.

```
986 \RequirePackage {microtype}
987
988 \microtypesetup{
989 protrusion=false,
990 expansion=false,
991 tracking=false,
992 kerning=false,
993 spacing=false}
994
995 \DisableLigatures[f,q,t,T,Q]{encoding = *,family = *}

996 \fi

997 \end{warpHTML}
```

Pkg geometry 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:** 998 \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.

```
999 \@ifpackageloaded{geometry}
1000 {}{
1001 \RequirePackage[
1002 reset,
```

```

1003 paperwidth=\paperwidth,
1004 paperheight=\paperheight,
1005 textwidth=\textwidth,
1006 textheight=\textheight,
1007 left=\oddsidemargin,
1008 top=\topmargin,
1009 marginparsep=\marginparsep,
1010 marginparwidth=\marginparwidth,
1011]{geometry}
1012 }

```

Remember the original definitions for later reuse. If the `geometry` package is loaded by the user, `lwarp-geometry` will nullify the user-level originals.

```

1013 \LetLtxMacro\LWR@origgeometry\geometry
1014 \LetLtxMacro\LWR@orignewgeometry\newgeometry
1015 \LetLtxMacro\LWR@origrestoregeometry\restoregeometry
1016 \LetLtxMacro\LWR@origsavegeometry\savegeometry
1017 \LetLtxMacro\LWR@origloadgeometry\loadgeometry

```

`LWR@allowanothergeometry` Bool `geometry` may be loaded by the user before `lwarp`, after `lwarp`, or not at all. If before `lwarp`, it will have already been loaded by now and its page layout has already been saved. If `geometry` is loaded after `lwarp`, 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`, `lwarp-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.

```

1018 \newbool{LWR@allowanothergeometry}
1019 \booltrue{LWR@allowanothergeometry}

```

Use `\AtEndPreamble` to avoid class and option conflict by changing settings after other packages load, instead of using `geometry` package options:

```

1020 \AtEndPreamble{

```

Whatever `geometry` choices the user has made in the preamble, either before or after `lwarp` was loaded, are now saved for possible temporary reuse, such as by `lyluatex`.

See the `lwarp-geometry` section for what happens if `geometry` is loaded after `lwarp`.

```

1021 \LWR@origsavegeometry{LWR@usergeometry}

```

The user's paper size is saved for later reuse, such as by the `pdfpages` or `parallel` packages.

```

1022 \newlength{\LWR@userspaperwidth}
1023 \setlength{\LWR@userspaperwidth}{\paperwidth}
1024
1025 \newlength{\LWR@userspaperheight}
1026 \setlength{\LWR@userspaperheight}{\paperheight}
1027

```

```

1028 \newlength{\LWR@usersmarginparwidth}
1029 \setlength{\LWR@usersmarginparwidth}{\marginparwidth}
1030
1031 \newlength{\LWR@userstextwidth}
1032 \setlength{\LWR@userstextwidth}{\textwidth}
1033
1034 \newlength{\LWR@userstextheight}
1035 \setlength{\LWR@userstextwidth}{\textheight}

```

For `lwarp`, use a very large page and margins to help avoid letting HTML tags run off the edge:

```

1036 \LWR@origgeometry{
1037 reset,
1038 paperheight=190in,
1039 paperwidth=20in,
1040 left=2in,
1041 right=6in,
1042 top=1in,
1043 bottom=1in,
1044 heightrounded,%
1045 }

```

The `lwarp` page geometry is saved for future restore:

```
1046 \LWR@origsavegeometry{\LWR@lwarpgeometry}
```

No longer adjust the page layout when `lwarp-geometry` is loaded `\AtBeginDocument`:

```
1047 \boolfalse{\LWR@allowanothergeometry}%
```

`ljtsbook` and other classes can print vertically, and require these to be reset by `lwarp`:

```

1048 \setlength{\textheight}{0.8\paperheight}
1049 \setlength{\textwidth}{0.7\paperwidth}
1050
1051 \@twosidefalse
1052 \@mparswitchfalse
1053 }% \AtEndPreamble
1054
1055 \end{warpHTML}

```

**for HTML & PRINT:** 1056 \begin{warpall}

Pkg xparse

LT<sub>EX</sub>3 command argument parsing

```
1057 \RequirePackage{xparse}
```

Pkg calc

```
1058 \RequirePackage{calc}
```

```
1059 \end{warpall}
```

**for HTML output:** 1060 \begin{warpHTML}

Pkg expl3

L<sup>A</sup>T<sub>E</sub>X3 programming

```
1061 \RequirePackage{expl3}
```

Pkg gettitlestring

Used to emulate \nameref.

```
1062 \RequirePackage{gettitlestring}
```

Pkg everyhook

everyhook is used to patch paragraph handling.

```
1063 \@ifundefined{bxjs@everypar}{}{\let\everypar\bxjs@everypar}
```

```
1064
```

```
1065 \RequirePackage{everyhook}
```

```
1066 \end{warpHTML}
```

**for HTML & PRINT:** 1067 \begin{warpall}

Pkg filecontents

Used to write helper files while creating the print version.

Recent versions of L<sup>A</sup>T<sub>E</sub>X (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<sup>A</sup>T<sub>E</sub>X kernel is used, the original `filecontents` package is used, but it is patched to throw away the new optional argument.

```
1068 \@ifundefined{filec@ntents@opt}{% older kernel, discard optional args
```

```
1069
```

```
1070 \RequirePackage{filecontents}
```

```
1071
```

```
1072 \LetLtxMacro\LWR@orig@filec@ntents\filec@ntents
```

```
1073
```

```
1074 \@ifpackagelater{filecontents}{2011/10/08}
```

```
1075 {
```

For a newer version of the `filecontents` package, simply discard the optional argument.

```
1076 \renewcommand*{\filec@ntents}[1][\LWR@orig@filec@ntents]
```

```
1077 }
```

```
1078 {% 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](#)

```

1079 \newwrite\fcwrite
1080 \renewcommand*\filec@ntents}[1][]{%
1081 \def\chardef##1\write{\let\reserved@c\fcwrite}%
1082 \LWR@orig@filec@ntents%
1083 }
1084 }
1085
1086 }% older kernel
1087 {% newer kernel

```

For a newer kernel with a filecontents environment which accepts the optional overwrite argument, use the environment as-is.

```

1088 }% newer kernel, filecontents env accepts optional args, do not load package
1089 \end{warpall}

```

**for HTML output:** 1090 \begin{warpHTML}

Pkg xifthen

```
1091 \RequirePackage{xifthen}
```

Pkg verbatim

```
1092 \RequirePackage{verbatim}
```

Pkg refcount

Provides \setcounterref, \setcounterpageref, etc.

```
1093 \RequirePackage{refcount}
```

Pkg newfloat

```
1094 \RequirePackage{newfloat}
```

```
1095 \end{warpHTML}
```

**for HTML & PRINT:** 1096 \begin{warpall}

Pkg xstring There was a short-term bug in xstring regarding \IfInteger which affected lwarp's index generation. The updated version is requested here.

 [index](#)

```
1097 \RequirePackage{xstring}[2019/02/01]
```

Pkg environ Used to encapsulate math environments for re-use in HTML <alt> text.

```
1098 \RequirePackage{environ}
```

```
1099 \end{warppall}
```

**for HTML output:** 1100 \begin{warppHTML}

Pkg printlen Used to convert lengths for image width/height options.

```
1101 \RequirePackage{printlen}
```

\LWR@printlength  $\{<length>\}$

Prints a length using a locally-controlled unit and space. Rounding is used unless the length is small.

```
1102 \newrobustcmd*\LWR@printlength[1]{%
1103 \begingroup%
1104 \uselengthunit{PT}%
1105 \renewcommand*\unitspace{ }%
1106 \ifdimless{#1}{10pt}{%
1107 \printlength{#1}%
1108 }{%
1109 \rndprintlength{#1}%
1110 }%
1111 \endgroup%
1112 }
```

```
1113 \end{warppHTML}
```

**for PRINT output:** 1114 \begin{warpprint}

Pkg varwidth Used for print-mode lateximage.

```
1115 \RequirePackage{varwidth}
```

```
1116 \end{warpprint}
```

## 30 Loading packages

**for HTML & PRINT:** 1117 \begin{warppall}

Remember the original \RequirePackage:

```
1118 \LetLtxMacro\LWR@origRequirePackage\RequirePackage
1119 \LetLtxMacro\LWR@origRequirePackageWithOptions\RequirePackageWithOptions
```

\LWR@requirepackagenames Stores the list of required package names.

```
1120 \newcommand*\LWR@requirepackagenames{ }
```

`\LWR@parsedrequirepackagenames` Stores the parsed list of required package names after spaces are removed and `lwarp-` is prepended.

```
1121 \newcommand*{\LWR@parsedrequirepackagenames}{}

```

`\LWR@nullifycomment` Remove the preexisting comment environment. Certain packages define it for their own use.

```
1122 \newcommand*{\LWR@nullifycomment}{%
1123 \PackageInfo{lwarp}%
1124 {Nullifying the comment environment before loading \LWR@strresulttwo,}%
1125 \let\comment\relax%
1126 \let\endcomment\relax%
1127 }

```

`\LWR@findword` [*1: separator*] {*2: list*} {*3: index*} [*4: destination*]

Note that argument 4 is passed directly to `\StrBetween`.

```
1128 \newcommand*\LWR@findword[3][,]{%
1129 \StrBetween[#3,\numexpr#3+1]{#1#2#1}{#1}{#1}%
1130 }

```

`\LWR@checkloadfilename` {*filename*} Checks if this filename should be loaded after `lwarp`, or never at all.

The following should never be loaded:

```
1131 \newcommand*{\LWR@checkloadfilename}[1]{%
1132 \LWR@checkloadnever{#1}{ae}{cm-super, lmodern}
1133 \LWR@checkloadnever{#1}{aecc}{cm-super, lmodern}
1134 \LWR@checkloadnever{#1}{aeimpl}{cm-super, lmodern}
1135 \LWR@checkloadnever{#1}{alg}{algorithm2e, algorithmicx}
1136 \LWR@checkloadnever{#1}{algorithmic}{algorithm2e, algorithmicx}
1137 \LWR@checkloadnever{#1}{bitfield}{bytefield}
1138 \LWR@checkloadnever{#1}{boxedminipage}{boxedminipage2e}
1139 \LWR@checkloadnever{#1}{caption2}{caption}
1140 \LWR@checkloadnever{#1}{ccaption}{caption}% might be preloaded by memoir
1141 \LWR@checkloadnever{#1}{colortab}{colortbl}
1142 \LWR@checkloadnever{#1}{doublespace}{setspace}
1143 \LWR@checkloadnever{#1}{epsf}{graphicx}
1144 \LWR@checkloadnever{#1}{fancyheadings}{fancyhdr}
1145 \LWR@checkloadnever{#1}{fncylab}{cleveref}
1146 \LWR@checkloadnever{#1}{formula}{siunitx}
1147 \LWR@checkloadnever{#1}{glossary}{glossaries}
1148 \LWR@checkloadnever{#1}{hyper}{hyperref}
1149 \LWR@checkloadnever{#1}{newthm}{ntheorem}
1150 \LWR@checkloadnever{#1}{pdfcpot}{microtype}
1151 \LWR@checkloadnever{#1}{picinpar}{floatflt, wrapfig}
1152 \LWR@checkloadnever{#1}{picins}{floatflt, wrapfig}
1153 \LWR@checkloadnever{#1}{rplain}{fancyhdr}
1154 \LWR@checkloadnever{#1}{shadethm}{mdframed}
1155 \LWR@checkloadnever{#1}{si}{siunitx}
1156 \LWR@checkloadnever{#1}{sistyle}{siunitx}

```

```

1157 \LWR@checkloadnever{#1}{slashbox}{diagbox}
1158 \LWR@checkloadnever{#1}{statex}{statex2}
1159 \LWR@checkloadnever{#1}{tlenc}{fontenc, inputenc, inputenx}
1160 \LWR@checkloadnever{#1}{ucs}{inputenc, inputencx}
1161 \LWR@checkloadnever{#1}{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}
1162 \LWR@checkloadnever{#1}{bxcjkjatype}{upLaTeX, bxjsarticle, uarticle, utarticle}
1163 \LWR@checkloadnever{#1}{hangul}{kotex, xetexko, luatexko}

```

The following should only be loaded before lwarp:

```

1164 \LWR@checkloadbefore{#1}{ctex}
1165 \LWR@checkloadbefore{#1}{fontspec}
1166 \LWR@checkloadbefore{#1}{inputenc}
1167 \LWR@checkloadbefore{#1}{inputenx}
1168 \LWR@checkloadbefore{#1}{nfssect-cfr}
1169 \LWR@checkloadbefore{#1}{fontaxes}
1170 \LWR@checkloadbefore{#1}{kotex}
1171 \LWR@checkloadbefore{#1}{luatexja}
1172 \LWR@checkloadbefore{#1}{luatexja-fontspec}
1173 \LWR@checkloadbefore{#1}{luatexko}
1174 \LWR@checkloadbefore{#1}{morewrites}
1175 \LWR@checkloadbefore{#1}{newcluede}
1176 \LWR@checkloadbefore{#1}{newunicodechar}
1177 \LWR@checkloadbefore{#1}{plex}
1178 \LWR@checkloadbefore{#1}{xeCJK}
1179 \LWR@checkloadbefore{#1}{xetexko}
1180 \LWR@checkloadbefore{#1}{zxjatype}
1181 }

```

`\LWR@lookforpackagename` {<*index*>}

If HTML, and if this is an lwarp-supported package name, re-direct it to the lwarp version by renaming it `lwarp-` followed by the original name.

Looks `index` deep into the list of package names, `\LWR@requirepackagename`s, and builds `\LWR@parsedrequirepackagename`s which is the modified list of names.

```
1182 \newcommand*{\LWR@lookforpackagename}[1]{%
```

Find the `index`'th package name from the list:

```
1183 \LWR@findword{\LWR@requirepackagename}{#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`.

```
1184 \StrSubstitute[100]{\LWR@strresult}{ }{ }[\LWR@strresulttwo]%
```

See if the package name was found:

```

1185 \IfStrEq{\LWR@strresulttwo}{}%
1186 {}% no filename
1187 {% 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.

```
1188 \ifdefstring{\LWR@strresulttwo}{easyReview}{\LWR@nullifycomment}{}%
1189 \ifdefstring{\LWR@strresulttwo}{changes}{\LWR@nullifycomment}{}%
```

If HTML, check if the package should be loaded before lwarp, or never at all:

```
1190 \ifbool{warpingHTML}{\LWR@checkloadfilename{\LWR@strresulttwo}}{%}
```

If HTML, and if found, and if an lwarp-equivalent name exists, use lwarp-\* instead.

```
1191 \ifboolexpr{
1192 bool{warpingHTML} and
1193 test{\IfFileExists{lwarp-\LWR@strresulttwo.sty}}
1194 }{%
1195 {% lwarp-* file found
1196 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1197 \edef\LWR@parsedrequirepackagenames{lwarp-\LWR@strresulttwo}%
1198 }{%
1199 \edef\LWR@parsedrequirepackagenames{%
1200 \LWR@parsedrequirepackagenames, lwarp-\LWR@strresulttwo%
1201 }%
1202 }%
1203 }%
1204 }
```

Otherwise, use the current package name.

```
1205 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1206 \edef\LWR@parsedrequirepackagenames{\LWR@strresulttwo}%
1207 }{%
1208 \edef\LWR@parsedrequirepackagenames{%
1209 \LWR@parsedrequirepackagenames, \LWR@strresulttwo%
1210 }%
1211 }%
1212 }% no lwarp-* file
1213 }% yes filename
1214 }
```

`\RequirePackage` [*<1: options>*] [*<2: package names>*] [*<3: version>*]

For each of many package names in a comma-separated list, if an lwarp version of a package exists, select it instead of the L<sup>A</sup>T<sub>E</sub>X version.

```
1215 \RenewDocumentCommand{\RequirePackage}{o m o}{%
```

Redirect up to twenty names:<sup>16</sup>

```
1216 \renewcommand*{\LWR@requirepackagenames}{#2}%
1217 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
```

<sup>16</sup>This was originally nine names, but then I came across a package which used twelve...

```

1218 \LWR@lookforpackagename{1}%
1219 \LWR@lookforpackagename{2}%
1220 \LWR@lookforpackagename{3}%
1221 \LWR@lookforpackagename{4}%
1222 \LWR@lookforpackagename{5}%
1223 \LWR@lookforpackagename{6}%
1224 \LWR@lookforpackagename{7}%
1225 \LWR@lookforpackagename{8}%
1226 \LWR@lookforpackagename{9}%
1227 \LWR@lookforpackagename{10}%
1228 \LWR@lookforpackagename{11}%
1229 \LWR@lookforpackagename{12}%
1230 \LWR@lookforpackagename{13}%
1231 \LWR@lookforpackagename{14}%
1232 \LWR@lookforpackagename{15}%
1233 \LWR@lookforpackagename{16}%
1234 \LWR@lookforpackagename{17}%
1235 \LWR@lookforpackagename{18}%
1236 \LWR@lookforpackagename{19}%
1237 \LWR@lookforpackagename{20}%

```

\RequirePackage depending on the options and version:

```

1238 \IfValueTF{#1}%
1239 {% options given
1240 \IfValueTF{#3}% version given?
1241 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagename}[#3]}%
1242 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagename}}%
1243 }%
1244 {% no options given
1245 \IfValueTF{#3}% version given?
1246 {\LWR@origRequirePackage{\LWR@parsedrequirepackagename}[#3]}%
1247 {\LWR@origRequirePackage{\LWR@parsedrequirepackagename}}%
1248 }%
1249 }
1250 \LetLtxMacro\usepackage\RequirePackage

1251 \end{warpall}

```

**for HTML output:** 1252 \begin{warpHTML}

\LWR@ProvidesPackagePass {<pkgname>} [<version>]

Uses the original package, including options.

```

1253 \NewDocumentCommand{\LWR@ProvidesPackagePass}{m o}{
1254 \PackageInfo{lwarp}{%
1255 Using package ‘#1’ and adding lwarp modifications,\MessageBreak
1256 including options,}%
1257 \IfValueTF{#2}%
1258 {\ProvidesPackage{lwarp-#1}[#2]}%
1259 {\ProvidesPackage{lwarp-#1}}%
1260 \DeclareOption*{%
1261 \PassOptionsToPackage{\CurrentOption}{#1}%

```

```
1262 }%
1263 \ProcessOptions\relax%
```

If using `catoptions`, an error occurs if a package is loaded with an option then loaded again with no options. `lwarp` 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.

```
1264 \ifpackageloaded{#1}{%
1265 \edef\LWR@tempone{\csuse{opt@#1.sty}}%
1266 \IfValueTF{#2}%
1267 {%
1268 \expandafter\LWR@origRequirePackage%
1269 \expandafter[\LWR@tempone]{#1}[#2]%
1270 }%
1271 {%
1272 \expandafter\LWR@origRequirePackage%
1273 \expandafter[\LWR@tempone]{#1}%
1274 }%
1275 }{%
1276 \IfValueTF{#2}%
1277 {\LWR@origRequirePackage{#1}[#2]}%
1278 {\LWR@origRequirePackage{#1}}%
1279 }%
```

In some cases, the following seems to be required to avoid an “unknown option” error, such as when loading `xcolor` with options.

```
1280 \DeclareOption*{%
1281 \ProcessOptions\relax%
1282 }
```

`\LWR@ProvidesPackageDropA` `{⟨name⟩}{⟨date or -NoValue-⟩}`

Declares the package. Factored for reuse.

```
1283 \newcommand*\LWR@ProvidesPackageDropA[2]{%
1284 \PackageInfo{lwarp}{%
1285 Replacing package ‘#1’ with the lwarp version,\MessageBreak
1286 and discarding options,%
1287 }%
1288 \IfValueTF{#2}
1289 {\ProvidesPackage{lwarp-#1}[#2]}
1290 {\ProvidesPackage{lwarp-#1}}
1291 }
```

`\LWR@ProvidesPackageDropB` Nullifies then processes the options.

Seems to be required when options contain curly braces, which were causing “Missing `\begin{document}`”.

```
1292 \newcommand*\LWR@ProvidesPackageDropB{%
1293 % \ProcessOptions\relax% original LaTeX code
```

```

1294 \let\ds@\empty% from the original \ProcessOptions
1295 \edef\@curroptions{}% lwarp modification to \ProcessOptions
1296 \@processoptions\relax% from the original \ProcessOptions
1297 }

```

`\LWR@ProvidesPackageDrop`  $\{ \langle pkgname \rangle \} [ \langle version \rangle ]$

Ignores the original package and uses lwarp's version instead. Drops/discards all options.

```

1298 \NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{

```

Declare the package:

```

1299 \LWR@ProvidesPackageDropA{#1}{#2}

```

Ignore all options:

```

1300 \DeclareOption*{}

```

Process the options:

```

1301 \LWR@ProvidesPackageDropB
1302 }

```

```

1303 \end{warpHTML}

```

## 31 Additional required packages

**for HTML output:** 1304 `\begin{warpHTML}`

Pkg caption

```

1305 \LWR@origRequirePackage{caption}
1306 \AtBeginDocument{\RequirePackage{lwarp-caption}}%

```

```

1307 \end{warpHTML}

```

## 32 File handles

Defines file handles for writes.

**for HTML & PRINT:** 1308 `\begin{warpall}`

`\LWR@quickfile` For quick temporary use only. This is reused in several places.

```

1309 \newwrite\LWR@quickfile%

```

```
1310 \end{warpall}
```

**for HTML output:** 1311 \begin{warpHTML}

\LWR@lateximagesfile For <project>-images.txt:

```
1312 \newwrite\LWR@lateximagesfile
```

```
1313 \end{warpHTML}
```

### 33 Include a file

During HTML output, `\include{<filename>}` causes the following to occur:

1. `lwarp` 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<sup>A</sup>T<sub>E</sub>X.

**for HTML output:** 1314 \begin{warpHTML}

`\@include {<filename>}` Modified to load `_html_inc` files.

(Below, `\clearpage` caused missing text, and was changed to `\newpage`.)

```
1315 \def\@include#1 {%
1316 \immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp
1317 \immediate\write\LWR@quickfile{\string\input{#1.tex}}% lwarp
1318 \immediate\closeout\LWR@quickfile% lwarp
1319 \LWR@orignewpage% changed from clearpage
1320 \if@filesw
1321 \immediate\write\@mainaux{\string\@input{#1_html_inc.aux}}% changed
1322 \fi
1323 \@tempswatruw
1324 \if@partsw
1325 \@tempswafalse
1326 \edef\reserved@a{#1}%
1327 \@for\reserved@a:=\@partlist\do
1328 {\ifx\reserved@a\reserved@b\@tempswatruw\fi}%
1329 \fi
1330 \if@tempswa
1331 \let\@auxout\@partaux
1332 \if@filesw
1333 \immediate\openout\@partaux #1_html_inc.aux % changed
1334 \immediate\write\@partaux{\relax}%
1335 \fi
1336 \@input@{#1_html_inc.tex}% changed
```

```

1337 \LWR@orignewpage% changed from clearpage
1338 \@writeckpt{#1}%
1339 \if@filesw
1340 \immediate\closeout\@partaux
1341 \fi
1342 \else
1343 \deadcycles\z@
1344 \@nameuse{cp@#1}%
1345 \fi
1346 \let\@auxout\@mainaux%
1347 }

1348 \end{warpHTML}

```

## 34 Copying a file

**for HTML output:** 1349 \begin{warpHTML}

\LWR@copyfile {<source filename>} {<destination filename>}

Used to copy the .toc file to .sidetoc to re-print the toc in the sideroc navigation pane.

```

1350 \newwrite\LWR@copyoutfile % open the file to write to
1351 \newread\LWR@copyinfile % open the file to read from
1352
1353 \newcommand*{\LWR@copyfile}[2]{%
1354 \LWR@traceinfo{\LWR@copyfile: copying #1 to #2}
1355
1356 \immediate\openout\LWR@copyoutfile=#2
1357 \openin\LWR@copyinfile=#1
1358 \begingroup\endlinechar=-1
1359 \makeatletter
1360
1361 \LWR@traceinfo{\LWR@copyfile: about to loop}
1362
1363 \loop\unless\ifeof\LWR@copyinfile
1364 \LWR@traceinfo{\LWR@copyfile: one line}
1365 \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline
1366 % \LWR@fileline\par % print the content into the pdf
1367 % print the content:
1368 \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
1369 \repeat
1370 \immediate\closeout\LWR@copyoutfile
1371 \LWR@traceinfo{\LWR@copyfile: done}
1372 \endgroup
1373 }

1374 \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:** 1375 \begin{warpall}

Bool LWR@tracinglwarp True if tracing is turned on.

```
1376 \newbool{LWR@tracinglwarp}
```

`\tracinglwarp` Turns on the debug tracing messages.

```
1377 \newcommand{\tracinglwarp}{\booltrue{LWR@tracinglwarp}}
```

`\LWR@traceinfo` `{<text>}` If tracing is turned on, writes the text to the `.log` file.

```
1378 \newcommand{\LWR@traceinfo}[1]{%
1379 \ifbool{LWR@tracinglwarp}%
1380 {%
1381 \typeout{*** lwarp: #1}%
1382 }%
1383 {}%
1384 }
```

Bool HTMLDebugComments Add comments in HTML about closing `<div>`s, sections, etc.

Default: false

```
1385 \newbool{HTMLDebugComments}
1386 \boolfalse{HTMLDebugComments}
```

If `\tracinglwarp`, show where preamble hooks occur:

```
1387 \AfterEndPreamble{
1388 \LWR@traceinfo{AfterEndPreamble}
1389 }
1390
1391 \AtBeginDocument{
1392 \LWR@traceinfo{AtBeginDocument}
1393 }

1394 \end{warpall}
```

## 36 Defining print and HTML versions of macros and environments

The following refers to defining objects inside `lwarp`, and 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  $\LaTeX$  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 copies of the print versions may also be used by the HTML versions, such as when the HTML version merely encloses the print version inside HTML tags.

The general structure for providing print and HTML versions of a macro or environment is as follows:

**For a preexisting macro, not defined with `xparse`:** 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}{...}% may also use xparse

\LWR@formatted{name}
\end{warpHTML}
```

---

`\LWR@formatted{name}` copies the original print version, then redefines `\name` to use either the print or HTML version depending on which mode `lwarp` is using. `xparse` may be used to define the new HTML version, even if the original did not use `xparse`.

**For a preexisting environment, not defined with `xparse`:** The process is similar. Note the use of `\LWR@formattedenv` instead of `\LWR@formatted`.

---

```
\begin{warpHTML}
\newenvironment{\LWR@HTML@name}{...}% may also use xparse

\LWR@formattedenv{name}
\end{warpHTML}
```

---

**If the original used `xparse`:** A copy must be made using a new name:

---

```
\begin{warpHTML}
\NewDocumentCommand{\LWR@print@name}{..}{..}% copy the original
```

---

```
\NewDocumentCommand{\LWR@HTML@name}{..}{..}% or use \newcommand
```

```
\LWR@formatted{name}
\end{warpHTML}
```

---

Similar for an environment, using `\LWR@formattedenv`. (`\LWR@formatted` and `\LWR@formattedenv` use `\LetLtxMacro` to copy the original print definition, which may not work with macros and environments created by `xparse`, so the print version must be manually recreated in the `lwarp` source.)

**For a new macro or environment, not using `xparse` for the print version:**

---

```
\begin{warpall}
\newcommand{\name}{...}% NOT xparse!
\end{warpall}

\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}% may use xparse for HTML

\LWR@formatted{name}
\end{warpHTML}
```

---

Similar for an environment. The plain `\name` or environment name is used for the printed version, and is placed inside `warpall`. `xparse` may be used for the `\LWR@HTML@<name>` version.

**For a new macro or environment, using `xparse`:** It is possible to use `xparse` for an entirely new macro or environment by defining the `\LWR@print@<name>` version with `xparse`, along with `\name` defined without `xparse` to refer directly to the `\LWR@print` version:

---

```
\begin{warpall}
\NewDocumentCommand{\LWR@print@name}{...} {...}% -or-
\NewDocumentEnvironment{\LWR@print@name}{...} {...} {...}

% Simply a call to \LWR@print@name:
\newcommand{\name}{\LWR@print@name}% -or-
\newenvironment{name}{\LWR@print@name}{\endLWR@print@name}
\end{warpall}

\begin{warpHTML}
\NewDocumentCommand{\LWR@HTML@name}{...} {...}% -or-
\NewDocumentEnvironment{\LWR@HTML@name}{...} {...} {...}

\LWR@formatted{name}% -or-
\LWR@formattedenv{name}
\end{warpHTML}
```

---

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 `lwarp` is producing a print document, the original definitions are used, as well as any new definitions defined in `warpall` above.
- When `lwarp` is generating HTML output, `\LWR@formatting` is set to “HTML”, and `\name` is directed to `\LWR@HTML@<name>`.
- When `lwarp` 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 arguments are not handled by the new `\name`, any star and other arguments are processed by the print or HTML version.

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.

⚠ Misplaced `\omit` error

```
\LWR@expandableformatted
\LWR@expandableformattedenv
```

(Older versions of `lwarp` used `\LetLtxMacro` for everything, but this could fail when using macros defined by `xparse`. This older system is still in use for many definitions.)

**for HTML output:** 1395 `\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”.

```
1396 \newcommand*{\LWR@formatting}{HTML}
```

`\LWR@formatted` `{\langle macroname \rangle}` 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.

```
1397 \newcommand*{\LWR@formatted}[1]{%
1398 \ifcsundef{\LWR@print@#1}{%
1399 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1400 \csname#1\endcsname%
1401 }{ }%
1402 \ifcsundef{#1}{%

```

```

1403 \expandafter\newrobustcmd\csname #1\endcsname{%
1404 \@nameuse{LWR@LWR@formatting @#1}%
1405 }%
1406 }{%
1407 \expandafter\renewrobustcmd\csname #1\endcsname{%
1408 \@nameuse{LWR@LWR@formatting @#1}%
1409 }%
1410 }%
1411 }

```

`\LWR@expandableformatted` {*<macroname>*} No backslash in the macro name.

An expandable version of `\LWR@formatted`.

```

1412 \newcommand*{\LWR@expandableformatted}[1]{%
1413 \ifcsundef{LWR@print@#1}{%
1414 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1415 \csname#1\endcsname%
1416 }{%
1417 \ifcsundef{#1}{%
1418 \expandafter\newcommand\csname #1\endcsname{%
1419 \@nameuse{LWR@LWR@formatting @#1}%
1420 }%
1421 }{%
1422 \expandafter\renewcommand\csname #1\endcsname{%
1423 \@nameuse{LWR@LWR@formatting @#1}%
1424 }%
1425 }%
1426 }

```

`\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`.

```

1427 \newcommand*{\LWR@formattedenv}[1]{%
1428 \ifcsundef{LWR@print@#1}{%
1429 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1430 \csname#1\endcsname%
1431 \csletcs{endLWR@print@#1}{end#1}%
1432 }{%
1433 \DeclareDocumentEnvironment{#1}{%
1434 {%
1435 \@nameuse{LWR@LWR@formatting @#1}%
1436 }%
1437 {%
1438 \@nameuse{endLWR@LWR@formatting @#1}%
1439 }%
1440 }

```

`\LWR@expandableformattedenv` {*<environmentname>*}

An expandable version of LWR@formattedenv.

```

1441 \newcommand*{\LWR@expandableformattedenv}[1]{%
1442 \ifcsundef\LWR@print@#1}{%
1443 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1444 \csname#1\endcsname%
1445 \csletcs{endLWR@print@#1}{end#1}%
1446 }{)%
1447 \DeclareExpandableDocumentEnvironment{#1}{}%
1448 {%
1449 \@nameuse{\LWR@\LWR@formatting @#1}%
1450 }%
1451 {%
1452 \@nameuse{endLWR@\LWR@formatting @#1}%
1453 }%
1454 }

1455 \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:** 1456 \begin{warpall}

### 37.1 User-level controls

**Bool** `FormatEPUB` 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`

```

1457 \newbool{FormatEPUB}
1458 \boolfalse{FormatEPUB}

```

**Bool** `FormatWP` 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`

```

1459 \newbool{FormatWP}
1460 \boolfalse{FormatWP}

```

**Bool** `WPMarkFloats` 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.<sup>17</sup>

```

1461 \newbool{WPMarkFloats}
1462 \boolfalse{WPMarkFloats}

```

Bool WPMarkMinipages 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.

```

1463 \newbool{WPMarkMinipages}
1464 \boolfalse{WPMarkMinipages}

```

Bool WPMarkTOC While formatting for word processors, adds

Default: true

```

=== 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.*

```

1465 \newbool{WPMarkTOC}
1466 \booltrue{WPMarkTOC}

```

Bool WPMarkLOFT 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.*

```

1467 \newbool{WPMarkLOFT}
1468 \boolfalse{WPMarkLOFT}

```

Bool WPMarkMath While formatting for word processors, prints math as  $\LaTeX$  code instead of creating SVG images or  $\text{MATHJAX}$ . This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

<sup>17</sup>Perhaps some day word processors will have HTML import options for identifying `<figure>` and caption tags for figures and tables.

```
1469 \newbool{WPMarkMath}
1470 \boolfalse{WPMarkMath}
```

Bool WPTitleHeading 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**.

Default: false

See table 8 on page 181.

```
1471 \newbool{WPTitleHeading}
1472 \boolfalse{WPTitleHeading}
```

```
1473 \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: 1474 \begin{warpHTML}

```
1475 \AtBeginDocument{
1476 \ifbool{FormatWP}{
1477 \@ifundefined{chapter}{
1478 \ifbool{WPTitleHeading}{% part and section starting at h2
1479 \renewcommand*\LWR@tagtitle}{h1}
1480 \renewcommand*\LWR@tagtitleend}{/h1}
1481 \renewcommand*\LWR@tagpart}{h2}
1482 \renewcommand*\LWR@tagpartend}{/h2}
1483 \renewcommand*\LWR@tagsection}{h3}
1484 \renewcommand*\LWR@tagsectionend}{/h3}
1485 \renewcommand*\LWR@tagsubsection}{h4}
1486 \renewcommand*\LWR@tagsubsectionend}{/h4}
1487 \renewcommand*\LWR@tagsubsubsection}{h5}
1488 \renewcommand*\LWR@tagsubsubsectionend}{/h5}
1489 \renewcommand*\LWR@tagparagraph}{h6}
1490 \renewcommand*\LWR@tagparagraphend}{/h6}
1491 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
1492 \renewcommand*\LWR@tagsubparagraphend}{/span}
1493 }% WPTitleHeading
1494 {% not WPTitleHeading, part and section starting at h1
1495 \renewcommand*\LWR@tagtitle}{div class="title"}
1496 \renewcommand*\LWR@tagtitleend}{/div}
1497 \renewcommand*\LWR@tagpart}{h1}
1498 \renewcommand*\LWR@tagpartend}{/h1}
1499 \renewcommand*\LWR@tagsection}{h2}
1500 \renewcommand*\LWR@tagsectionend}{/h2}
1501 \renewcommand*\LWR@tagsubsection}{h3}
1502 \renewcommand*\LWR@tagsubsectionend}{/h3}
```

```

1503 \renewcommand*\LWR@tagssubsubsection}{h4}
1504 \renewcommand*\LWR@tagssubsubsectionend}{/h4}
1505 \renewcommand*\LWR@tagparagraph}{h5}
1506 \renewcommand*\LWR@tagparagraphend}{/h5}
1507 \renewcommand*\LWR@tagsubparagraph}{h6}
1508 \renewcommand*\LWR@tagsubparagraphend}{/h6}
1509 }% not WPTitleHeading
1510 }% chapter undefined
1511 {% chapter defined
1512 \ifbool{WPTitleHeading}{
1513 {% not WPTitleHeading, part and chapter starting at h1
1514 \renewcommand*\LWR@tagtitle}{div class="title"}
1515 \renewcommand*\LWR@tagtitleend}{/div}
1516 \renewcommand*\LWR@tagpart}{h1}
1517 \renewcommand*\LWR@tagpartend}{/h1}
1518 \renewcommand*\LWR@tagchapter}{h2}
1519 \renewcommand*\LWR@tagchapterend}{/h2}
1520 \renewcommand*\LWR@tagsection}{h3}
1521 \renewcommand*\LWR@tagsectionend}{/h3}
1522 \renewcommand*\LWR@tagsubsection}{h4}
1523 \renewcommand*\LWR@tagsubsectionend}{/h4}
1524 \renewcommand*\LWR@tagssubsubsection}{h5}
1525 \renewcommand*\LWR@tagssubsubsectionend}{/h5}
1526 \renewcommand*\LWR@tagparagraph}{h6}
1527 \renewcommand*\LWR@tagparagraphend}{/h6}
1528 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
1529 \renewcommand*\LWR@tagsubparagraphend}{/span}
1530 }% not WPTitleHeading
1531 }% chapter defined
1532 }{}% FormatWP
1533 }% AtBeginDocument

1534 \end{warpHTML}

```

## 38 Remembering original formatting macros

**for HTML output:** 1535 \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 lateximage environment. Also nullify unused commands.

Some packages redefine \#, which is used to generate HTML, so the original must be remembered here.

```

1536 \chardef\LWR@origpound='\#

1537 \let\LWR@origcomma\,
1538 \let\LWR@origthinspace\thinspace
1539 \let\LWR@orignegthinspace\negthinspace
1540 \let\LWR@origtilde~
1541 \let\LWR@origenskip\enskip

```

```
1542 \let\LWR@origquad\quad
1543 \let\LWR@origqquad\qquad
1544 \let\LWR@origfil\hfil
1545 \let\LWR@orighss\hss
1546 \let\LWR@origllap\llap
1547 \let\LWR@origrlap\rlap
1548 \let\LWR@origfilneg\hfilneg
1549 \let\LWR@origspace\hspace
1550
1551 \let\LWR@origrule\rule
1552
1553 \let\LWR@origmedskip\medskip
1554 \let\LWR@origbigskip\bigskip
1555
1556 \let\LWR@origtextellipsis\textellipsis
1557 \let\LWR@orig@textquotedbl\textquotedbl
1558
1559 \LetLtxMacro\LWR@origttfamily\ttfamily
1560
1561 \LetLtxMacro\LWR@origem\em
1562
1563 \LetLtxMacro\LWR@orignormalfont\normalfont
1564
1565 \let\LWR@origonecolumn\onecolumn
1566
1567 \let\LWR@origsp\sp
1568 \let\LWR@origsb\sb
1569 \LetLtxMacro\LWR@origtextsuperscript\textsuperscript
1570 \LetLtxMacro\LWR@orig@textsuperscript\@textsuperscript
1571
1572 \AtBeginDocument{
1573 \LetLtxMacro\LWR@origtextsubscript\textsubscript
1574 \LetLtxMacro\LWR@orig@textsubscript\@textsubscript
1575 }
1576
1577 \LetLtxMacro\LWR@origunderline\underline

1578 \let\LWR@orignewpage\newpage
1579
1580 \let\LWR@origpagestyle\pagestyle
1581 \let\LWR@origthispagestyle\thispagestyle
1582 \LetLtxMacro\LWR@origpagenumbering\pagenumbering
1583
1584 \let\LWR@orignewline\newline
1585
1586
1587 \AtBeginDocument{% in case packages change definition
1588 \let\LWR@orig@trivlist\@trivlist
1589 \let\LWR@origtrivlist\trivlist
1590 \let\LWR@origendtrivlist\endtrivlist
1591 \LetLtxMacro\LWR@origitem\item
1592 \LetLtxMacro\LWR@origitemize\itemize
1593 \LetLtxMacro\LWR@endorigitemize\enditemize
1594 \LetLtxMacro\LWR@origenumerate\enumerate
1595 \LetLtxMacro\LWR@endorigenumerate\endenumerate
```

```

1596 \LetLtxMacro\LWR@origdescription\description
1597 \LetLtxMacro\LWR@endorigdescription\enddescription
1598 \let\LWR@orig@mklab@mklab
1599 \let\LWR@origmakelabel\makelabel
1600 \let\LWR@orig@donoparitem\@donoparitem
1601 \LetLtxMacro\LWR@orig@item\@item
1602 \let\LWR@orig@nbitem\@nbitem
1603 }
1604
1605 \let\LWR@origpar\par
1606
1607 \LetLtxMacro\LWR@origfootnote\footnote
1608 \let\LWR@orig@mpfootnotetext\@mpfootnotetext
1609
1610
1611 \AtBeginDocument{% in case packages change definition
1612 \LetLtxMacro\LWR@orighline\hline%
1613 \LetLtxMacro\LWR@origcline\cline%
1614 }

1615 \end{warpHTML}

```

## 39 Accents

Native  $\LaTeX$  accents such as `\'` will work, but many more kinds of accents are available when using Unicode-aware  $X\LaTeX$  and  $\text{Lua}\LaTeX$ .

**for HTML output:** 1616 `\begin{warpHTML}`

Without `\AtBeginDocument`, `\t` was being re-defined somewhere.

```
1617 \AtBeginDocument{
```

The following are restored for print when inside a `lateximage`.

For Unicode engines, only `\t` needs to be redefined:

```
1618 \LetLtxMacro\LWR@origt\t
```

For  $\text{pdf}\LaTeX$ , additional work is required:

```

1619 \ifPDFTeX% pdflatex or dvi latex
1620 \LetLtxMacro\LWR@origequalaccent\=
1621 \LetLtxMacro\LWR@origdotaccent\..
1622 \LetLtxMacro\LWR@origu\u
1623 \LetLtxMacro\LWR@origv\v
1624 \LetLtxMacro\LWR@origc\c
1625 \LetLtxMacro\LWR@origd\d
1626 \LetLtxMacro\LWR@origb\b

```

The `HTML` redefinitions follow.

For pdfL<sup>A</sup>T<sub>E</sub>X, Unicode diacritical marks are used:

```
1627 \renewcommand*{\=} [1]{#1\HTMLUnicode{0305}}
1628 \renewcommand*{\.} [1]{#1\HTMLUnicode{0307}}
1629 \renewcommand*{\u} [1]{#1\HTMLUnicode{0306}}
1630 \renewcommand*{\v} [1]{#1\HTMLUnicode{030C}}
1631 \renewcommand*{\c} [1]{#1\HTMLUnicode{0327}}
1632 \renewcommand*{\d} [1]{#1\HTMLUnicode{0323}}
1633 \renewcommand*{\b} [1]{#1\HTMLUnicode{0331}}
1634 \fi
```

For all engines, a Unicode diacritical tie is used:

```
1635 \def\LWR@t#1#2{#1\HTMLUnicode{0361}#2}
1636 \renewcommand*{\t} [1]{\LWR@t#1}
```

`\LWR@restoreorigaccents` Called from `\restoreoriginalformatting` when a `lateximage` is begun.

```
1637 \ifPDFTeX% pdflatex or dvi latex
1638 \newcommand*\LWR@restoreorigaccents}{%
1639 \LetLtxMacro=\LWR@origequalaccent%
1640 \LetLtxMacro\.\LWR@origdotaccent%
1641 \LetLtxMacro\u\LWR@origu%
1642 \LetLtxMacro\v\LWR@origv%
1643 \LetLtxMacro\t\LWR@origt%
1644 \LetLtxMacro\c\LWR@origc%
1645 \LetLtxMacro\d\LWR@origd%
1646 \LetLtxMacro\b\LWR@origb%
1647 }%
1648 \else% XeLaTeX, LuaLaTeX:
1649 \newcommand*\LWR@restoreorigaccents}{%
1650 \LetLtxMacro\t\LWR@origt%
1651 }%
1652 \fi%
1653 }% AtBeginDocument

1654 \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 `lwarp`, so the `lwarp` configuration files are turned off if `-pstool` is part of the `\jobname`.

Default to no configuration files:

```
1655 \excludecomment{LWRwriteconf}
```

Generate configuration files if print mode and not `-pstool`:

```

for PRINT output: 1656 \begin{warpprint}
1657 \fullexpandarg%
1658 \IfSubStr*{\jobname}{-pstool}
1659 {
1660 \PackageInfo{lwarp}{%
1661 Jobname with -pstool is found.\MessageBreak
1662 Not generating lwarp configuration files,%
1663 }
1664 }
1665 {
1666 \PackageInfo{lwarp}{Generating lwarp configuration files,}%
1667 \includecomment{LWRwriteconf}
1668 }
1669 \end{warpprint}

```

## 40.2 <project>\_html.tex

File `*_html.tex` Used to allow an HTML version of the document to exist alongside the print version.

```

Config file: 1670 \begin{LWRwriteconf}
1671 \immediate\openout\LWR@quickfile=\jobname_html.tex
1672 \immediate\write\LWR@quickfile{%
1673 \detokenize{\PassOptionsToPackage}%
1674 {warpHTML,BaseJobname=\jobname}{lwarp}%
1675 }
1676 \immediate\write\LWR@quickfile{%
1677 \detokenize{\input}\string{\jobname.tex}\string }%
1678 }
1679 \immediate\closeout\LWR@quickfile
1680 \end{LWRwriteconf}

```

## 40.3 *lwarpmk* configuration files

```

Config file: 1681 \begin{LWRwriteconf}

```

`\LWR@lwarpcnfversion` 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 *lwarp* version number.)

```

1682 \newcommand*{\LWR@lwarpcnfversion}{2}% also in lwarpmk.lua

```

### 40.3.1 Helper macros

`\LWR@shellescapecmd` The LaTeX compile option for shell escape, if used.

```

1683 \ifshellescape
1684 \def\LWR@shellescapecmd{--shell-escape }

```

```

1685 \else
1686 \def\LWR@shellescapecmd{}
1687 \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 *pdf<sub>l</sub>atex*, etc. Suffix is empty or `_html`

```

1688 \newcommand*\LWR@compilecmd[2]{%
1689 #1 \LWR@shellescapecmd \jobname#2%
1690 }

```

`\LWR@addcompilecmd`  $\{\langle cmd \rangle\} \{\langle suffix \rangle\}$

Adds to the compilation command.

Cmd is *dvipdfmx*, etc. Suffix is empty or `_html`

```

1691 \newcommand*\LWR@addcompilecmd[2]{%
1692 \LWRopseq
1693 #1 \jobname#2%
1694 }

```

`\LWR@unknownengine` Error message if not sure which L<sup>A</sup>T<sub>E</sub>X engine is being used.

```

1695 \newcommand*\LWR@unknownengine{%
1696 \PackageError{lwarp}
1697 {Unknown LaTeX engine.}
1698 {Lwarp only knows about pdflatex, dvilatex, xelatex, lualatex, and uplatex.}
1699 }

```

`\LWR@latexmkvar`  $\{\langle varname \rangle\} \{\langle value \rangle\}$

Adds a *latexmk* variable assignment.

```

1700 \newcommand*\LWR@latexmkvar[2]{%
1701 -e
1702 \LWRopquote%
1703 \LWRdollar #1=q/#2/%
1704 \LWRopquote
1705 }

```

`\LWR@latexmkcmd`  $\{\langle latexmk options \rangle\}$

Sets a call to *latexmk* with the given options, possibly adding `--shell-escape`, and also adding the indexing program.

```

1706 \newcommand*\LWR@latexmkcmd[1]{%
1707 latexmk \space \LWR@shellescapecmd \space #1 \space

```

```

1708 -recorder \space
1709 \LWR@latexmkvar{makeindex}{\LWR@LatexmkIndexCmd}
1710 }

```

`\LWR@latexmkdvipdfm` `{(dvipdfm or dvipdfmx)}`

Adds the options settings for *dvipdfm* or *dvipdfmx*.

```

1711 \newcommand*\LWR@latexmkdvipdfm[1]{%
1712 -pdfdvi \space
1713 \LWR@latexmkvar{dvipdf}{%
1714 #1
1715 \@percentchar 0
1716 -o \@percentchar D
1717 \@percentchar S%
1718 }
1719 }

```

`\LWR@compileuplatex` Sets compile options for up $\LaTeX$  with `ujarticle` or related classes.

```

1720 \newcommand*\LWR@compileuplatex{
1721 \def\LWR@tempprintlatexcmd{%
1722 \LWR@compilecmd{uplatex}{}}
1723 \LWR@addcompilecmd{dvipdfmx}{}
1724 }
1725 \def\LWR@tempHTMLlatexcmd{%
1726 \LWR@compilecmd{uplatex}{_html}
1727 \LWR@addcompilecmd{dvipdfmx}{_html}
1728 }
1729 }

```

`\LWR@PrintLatexCmd` If not set by the user, the following sets the command to use to compile the source to PDF form.  
`\LWR@HTMLLatexCmd`

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 lwarp.ist/' <jobname>_html]]
```

---

For *dvipdfmx*:

---

```
[[latexmk -pdfdvi -e '$dvipdf=q/dvipdfmx %0 -o %D %S/'
-recorder
-e '$makeindex=q/makeindex -s lwarp.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.

```
1730 \ifbool{LWR@latexmk}{
```

For *latexmk* with *pdflatex* or *lualatex*:

```
1731 \ifpdf
```

For *latexmk* with *pdflatex*:

```
1732 \ifPDFTeX
1733 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}}
1734 \else
```

For *latexmk* with *lualatex*:

```
1735 \ifLuaTeX
1736 \def\LWR@latexcmd{\LWR@latexmkcmd{-lualatex}}
1737 \else
1738 \LWR@unknownengine
1739 \fi
1740 \fi
1741 \else% \ifpdf
```

For *latexmk* with *xelatex* or DVI *latex*:

```
1742 \ifXeTeX
```

For *latexmk* with *xelatex*:

```
1743 \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}}
1744 \else% \ifXeTeX
```

For *latexmk* with DVI *latex*:

```
1745 \ifbool{LWR@dvipdfm}{
1746 \def\LWR@latexcmd{%
1747 \LWR@latexmkcmd{%
1748 \LWR@latexmkdvipdfm{dvipdfm}%
1749 }
1750 }
1751 }{
1752 \ifbool{LWR@dvipdfmx}{
1753 \def\LWR@latexcmd{%
1754 \LWR@latexmkcmd{%
1755 \LWR@latexmkdvipdfm{dvipdfmx}%
1756 }
1757 }
1758 }{
1759 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdfps}}
1760 }
1761 }
1762 \fi
```

```
1763 \fi% \ifpdf
```

The final assignment if *latexmk*:

```
1764 \def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
1765 \def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
1766 }% latexmk
```

Without *latexmk*, the compiling command is simply the compiler name and the optional shell escape:

```
1767 {% not latexmk
1768 \ifpdf
```

For *pdflatex* or *lualatex*:

```
1769 \ifPDFTeX
```

For *pdflatex*:

```
1770 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdflatex}{}}
1771 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdflatex}{_html}}
1772 \else
1773 \ifLuaTeX
```

For *lualatex*:

```
1774 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{lualatex}{}}
1775 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{lualatex}{_html}}
1776 \else
1777 \LWR@unknownengine
1778 \fi
1779 \fi
1780 \else% \ifpdf
```

For DVI *latex* or *xelatex*:

```
1781 \ifXeTeX
```

For *xelatex*:

```
1782 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{xelatex}{}}
1783 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{xelatex}{_html}}
1784 \else
```

For DVI *latex*. Default to *dvips*, unless told to use *dvipdfm* or *dvipdfmx*:

```
1785 \ifbool{LWR@dvipdfm}{
```

For DVI *latex* with *dvipdfm*:

```
1786 \def\LWR@tempprintlatexcmd{%
1787 \LWR@compilecmd{latex}{}}
```

```

1788 \LWR@addcompilecmd{dvipdfm}{}
1789 }
1790 \def\LWR@tempHTMLlatexcmd{%
1791 \LWR@compilecmd{latex}{_html}
1792 \LWR@addcompilecmd{dvipdfm}{_html}
1793 }
1794 }{
1795 \ifbool{LWR@dvipdfmx}{

```

For DVI *latex* with *dvipdfmx*:

```

1796 \def\LWR@tempprintlatexcmd{%
1797 \LWR@compilecmd{latex}{}
1798 \LWR@addcompilecmd{dvipdfmx}{}
1799 }
1800 \def\LWR@tempHTMLlatexcmd{%
1801 \LWR@compilecmd{latex}{_html}
1802 \LWR@addcompilecmd{dvipdfmx}{_html}
1803 }
1804 }{% dvips

```

For DVI *latex* with *dvips* and *ps2pdf*:

```

1805 \def\LWR@tempprintlatexcmd{%
1806 \LWR@compilecmd{latex}{}
1807 \LWR@addcompilecmd{dvips}{}
1808 \LWR@addcompilecmd{ps2pdf}{} .ps
1809 }
1810 \def\LWR@tempHTMLlatexcmd{%
1811 \LWR@compilecmd{latex}{_html}
1812 \LWR@addcompilecmd{dvips}{_html}
1813 \LWR@addcompilecmd{ps2pdf}{_html}.ps
1814 }
1815 }
1816 }
1817 \fi% \ifXeTeX
1818 \fi% \ifpdf
1819 }% latexmk

```

For *ujarticle*, *utarticle*, and related, using up $\LaTeX$  and *dvipdfmx*:

```

1820 \@ifclassloaded{ujarticle}{\LWR@compileuplatex}{}
1821 \@ifclassloaded{ujbook}{\LWR@compileuplatex}{}
1822 \@ifclassloaded{ujreport}{\LWR@compileuplatex}{}
1823 \@ifclassloaded{utarticle}{\LWR@compileuplatex}{}
1824 \@ifclassloaded{utbook}{\LWR@compileuplatex}{}
1825 \@ifclassloaded{utreport}{\LWR@compileuplatex}{}

```

Only make the setting permanent if the original was empty:

```

1826 \ifdefempty{\LWR@PrintLatexCmd}{
1827 \def\LWR@PrintLatexCmd{\LWR@tempprintlatexcmd}
1828 }{}
1829 \ifdefempty{\LWR@HTMLLatexCmd}{
1830 \def\LWR@HTMLLatexCmd{\LWR@tempHTMLlatexcmd}

```

```
1831 }{}
```

```
\LWR@writeconf {{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.

```
1832 \newcommand{\LWR@writeconf}[1]{
1833 \ifcsdef{\LWR@quickfile}{\newwrite{\LWR@quickfile}}
1834 \immediate\openout\LWR@quickfile=#1
1835 \immediate\write\LWR@quickfile{confversion = [[\LWR@lwarpcnfversion]]}
1836 \ifbool{usingOSWindows}{
1837 \immediate\write\LWR@quickfile{opsystem = [[Windows]]}
1838 }{
1839 \immediate\write\LWR@quickfile{opsystem = [[Unix]]}
1840 }
1841 \immediate\write\LWR@quickfile{sourcename = [[\jobname]]}
1842 \immediate\write\LWR@quickfile{homehtmlfilename = [[\HomeHTMLFilename]]}
1843 \immediate\write\LWR@quickfile{htmlfilename = [[HTMLFilename]]}
1844 \immediate\write\LWR@quickfile{imagesdirectory = [[\LWR@ImagesDirectory]]}
1845 \immediate\write\LWR@quickfile{imagesname = [[\LWR@ImagesName]]}
1846 \immediate\write\LWR@quickfile{latexmk = [[\ifbool{\LWR@latexmk}{true}{false}]]}
1847 \immediate\write\LWR@quickfile{printlatexcmd = [[\LWR@PrintLatexCmd]]}
1848 \immediate\write\LWR@quickfile{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}
1849 \immediate\write\LWR@quickfile{printindexcmd = [[\LWR@PrintIndexCmd]]}
1850 \immediate\write\LWR@quickfile{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}
1851 \immediate\write\LWR@quickfile{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}
1852 \immediate\write\LWR@quickfile{glossarycmd = [[\LWR@GlossaryCmd]]}
1853 \immediate\write\LWR@quickfile{pdftotextenc = [[\LWR@pdftotextEnc]]}
1854 \immediate\closeout\LWR@quickfile
1855 }
1856

1857 \end{\LWRwriteconf}
```

### 40.3.2 lwarpmk.conf

File `lwarpmk.conf` `lwarpmk.conf` is automatically (re-)created by the `lwarp` package when executing `pdf\latex <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:** 1858 \begin{\LWRwriteconf}  
1859  
1860 \AtBeginDocument{\LWR@writeconf{lwarpmk.conf}}  
1861  
1862 \end{\LWRwriteconf}

### 40.3.3 <project>.lwarpmkconf

File `project.lwarpmkconf` A project-specific configuration file for *lwarpmk*.

The `makeindex` and `xindy` options have already been handled for `lwarp.conf`.

**Config file:**

```

1863 \begin{LWRwriteconf}
1864
1865 \AtBeginDocument{\LWR@writeconf{\jobname.lwarpmkconf}}
1866
1867 \end{LWRwriteconf}

```

## 40.4 lwarp.css

File `lwarp.css` This is the base CSS layer used by *lwarp*.

This must be present both when compiling the project and also when distributing the HTML files.

**Config file:**

```

1868 \begin{LWRwriteconf}
1869 \begin{filecontents*}[overwrite]{lwarp.css}
1870 /*
1871 CSS stylesheet for the LaTeX Lwarp package
1872 Copyright 2016-2020 Brian Dunn - BD Tech Concepts LLC
1873 */
1874
1875
1876 /* a fix for older browsers: */
1877 header, section, footer, aside, nav, main,
1878 article, figure { display: block; }
1879
1880
1881 A:link {color:#000080 ; text-decoration: none ; }
1882 A:visited {color:#800000 ; }
1883 A:hover {color:#000080 ; text-decoration: underline ;}
1884 A:active {color:#800000 ; }
1885
1886 a.tocbook {display: inline-block ; margin-left: 0em ;
1887 font-weight: bold ; margin-top: 1ex ; margin-bottom: 1ex ; }
1888 a.tocpart {display: inline-block ; margin-left: 0em ;
1889 font-weight: bold ;}
1890 a.tocchapter {display: inline-block ; margin-left: 0em ;
1891 font-weight: bold ;}
1892 a.tocsection {display: inline-block ; margin-left: 1em ;
1893 text-indent: -.5em ; font-weight: bold ; }
1894 a.tocsubsection {display: inline-block ; margin-left: 2em ;
1895 text-indent: -.5em ; }
1896 a.tocsubsubsection {display: inline-block ; margin-left: 3em ;
1897 text-indent: -.5em ; }
1898 a.tocparagraph {display: inline-block ; margin-left: 4em ;
1899 text-indent: -.5em ; }
1900 a.tocsubparagraph {display: inline-block ; margin-left: 5em ;
1901 text-indent: -.5em ; }
1902 a.tocfigure {margin-left: 0em}

```

```
1903 a.tocsubfigure {margin-left: 2em}
1904 a.toctable {margin-left: 0em}
1905 a.tocsubtable {margin-left: 2em}
1906 a.toctheorem {margin-left: 0em}
1907 a.toclstlisting {margin-left: 0em}
1908
1909 body {
1910 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1911 "Lucida Bright", Georgia, serif;
1912 background: #FAF7F4 ;
1913 color: black ;
1914 margin:0em ;
1915 padding:0em ;
1916 font-size: 100% ;
1917 line-height: 1.2 ;
1918 }
1919
1920 p {margin: 1.5ex 0em 1.5ex 0em ;}
1921 table p {margin: .5ex 0em .5ex 0em ;}
1922
1923 /* Holds a section number */
1924 span.sectionnumber { margin-right: 0em }
1925
1926 /* Inserted in front of index lines */
1927 span.indexitem {margin-left: 0em}
1928 span.indexsubitem {margin-left: 2em}
1929 span.indexsubsubitem {margin-left: 4em}
1930
1931 div.hidden, span.hidden { display: none ; }
1932
1933 kbd, span.texttt {
1934 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1935 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1936 "Courier New", monospace;
1937 font-size: 100% ;
1938 }
1939
1940 pre { padding: 3pt ; }
1941
1942 span.strong, span.textbf, div.strong, div.textbf { font-weight: bold; }
1943
1944 span.textit, div.textit { font-style: italic; }
1945
1946 span.textmd, div.textmd { font-weight: normal; }
1947
1948 span.texteb { font-weight: bolder; }
1949
1950 span.textlg { font-weight: lighter; }
1951
1952 span.textup, div.textup {
1953 font-style: normal;
1954 font-variant: normal;
1955 font-variant-numeric: normal ;
1956 }
1957
```

```
1958 span.textsc, div.textsc {
1959 font-variant: small-caps;
1960 font-variant-numeric: oldstyle-nums ;
1961 }
1962
1963 span.textulc, div.textulc {
1964 font-variant: normal ;
1965 font-variant-numeric: normal ;
1966 }
1967
1968 span.textsl, div.textsl { font-style: oblique; }
1969
1970 span.textrm, div.textrm {
1971 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1972 "Lucida Bright", Georgia, serif;
1973 }
1974
1975 span.textsf, div.textsf {
1976 font-family: "DejaVu Sans", "Bitstream Vera Sans",
1977 Geneva, Verdana, sans-serif ;
1978 }
1979
1980 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
1981
1982 span.underline {
1983 text-decoration: underline ;
1984 text-decoration-skip: auto ;
1985 }
1986
1987 span.overline {
1988 text-decoration: overline ;
1989 text-decoration-skip: auto ;
1990 }
1991
1992
1993 /* for vertical text: */
1994 div.verticalrl { writing-mode: vertical-rl }
1995 div.horizontalTB { writing-mode: horizontal-tb }
1996
1997
1998 /* for diagbox */
1999 div.diagboxtitleN { border-bottom: 1px solid gray }
2000 div.diagboxtitleS { border-top: 1px solid gray }
2001
2002 div.diagboxE {
2003 padding-left: 2em ;
2004 text-align: right ;
2005 }
2006
2007 div.diagboxW {
2008 padding-right: 2em ;
2009 text-align: left ;
2010 }
2011
2012
```

```
2013
2014 /* For realscripts */
2015 .supsubscript {
2016 display: inline-block;
2017 text-align:left ;
2018 }
2019
2020 .supsubscript sup,
2021 .supsubscript sub {
2022 position: relative;
2023 display: block;
2024 font-size: .5em;
2025 line-height: 1;
2026 }
2027
2028 .supsubscript sup {
2029 top: .5em;
2030 }
2031
2032 .supsubscript sub {
2033 top: .5em;
2034 }
2035
2036 div.attribution p {
2037 text-align: right ;
2038 font-size: 80%
2039 }
2040
2041 span.poemtitle {
2042 font-size: 120% ; font-weight: bold;
2043 }
2044
2045 pre.tabbing {
2046 font-family: "Linux Libertine Mono O", "Lucida Console",
2047 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2048 "Liberation Mono", "FreeMono", "Andale Mono",
2049 "Nimbus Mono L", "Courier New", monospace;
2050 }
2051
2052 blockquote {
2053 display: block ;
2054 margin-left: 2em ;
2055 margin-right: 2em ;
2056 }
2057
2058 /* quotchap is for the quotchap package */
2059 div.quotchap {
2060 display: block ;
2061 font-style: oblique ;
2062 overflow-x: auto ;
2063 margin-left: 2em ;
2064 margin-right: 2em ;
2065 }
2066
2067 blockquote p, div.quotchap p {
```

```
2068 line-height: 1.5;
2069 text-align: left ;
2070 font-size: .85em ;
2071 }
2072
2073 /* qauthor is for the quotchap package */
2074 div.qauthor {
2075 display: block ;
2076 text-align: right ;
2077 margin-left: auto ;
2078 margin-right: 2em ;
2079 font-size: 80% ;
2080 font-variant: small-caps;
2081 }
2082
2083 div.qauthor p {
2084 text-align: right ;
2085 }
2086
2087 div.epigraph, div.dictum {
2088 line-height: 1.2;
2089 text-align: left ;
2090 padding: 3ex 1em 0ex 1em ;
2091 /* margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
2092 margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
2093 /* margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
2094 font-size: .85em ;
2095 max-width: 27em ;
2096 }
2097
2098 div.epigraphsource, div.dictumauthor {
2099 text-align:right ;
2100 margin-left:auto ;
2101 /* max-width: 50% ; */
2102 border-top: 1px solid #A0A0A0 ;
2103 padding-bottom: 3ex ;
2104 line-height: 1.2;
2105 }
2106
2107 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ; }
2108 div.epigraphsource p, div.dictumauthor p { padding: .5ex 0ex 0ex 0ex ; margin: 0ex ; }
2109 div.dictumauthor { font-style:italic }
2110
2111
2112 /* copyrightbox package */
2113 div.copyrightbox { margin: .5ex .5em }
2114 div.copyrightbox p {margin: 0px .5em ; padding: 0px}
2115 div.copyrightboxnote {text-align: left ; font-size: 60%}
2116
2117
2118 /* lettrine package: */
2119 span.lettrine { font-size: 4ex ; float: left ; }
2120 span.lettrinetext { font-variant: small-caps ; }
2121
2122 /* ulem, soul, umoline packages: */
```

```
2123 span.uline {
2124 text-decoration: underline ;
2125 text-decoration-skip: auto ;
2126 }
2127
2128 span.uuline {
2129 text-decoration: underline ;
2130 text-decoration-skip: auto ;
2131 text-decoration-style: double ;
2132 }
2133
2134 span.uwave {
2135 text-decoration: underline ;
2136 text-decoration-skip: auto ;
2137 text-decoration-style: wavy ;
2138 }
2139
2140 span.sout {
2141 text-decoration: line-through ;
2142 }
2143
2144 span.oline {
2145 text-decoration: overline ;
2146 text-decoration-skip: auto ;
2147 }
2148
2149 span.xout {
2150 text-decoration: line-through ;
2151 }
2152
2153 span.dashuline {
2154 text-decoration: underline ;
2155 text-decoration-skip: auto ;
2156 text-decoration-style: dashed ;
2157 }
2158
2159 span.dotuline {
2160 text-decoration: underline ;
2161 text-decoration-skip: auto ;
2162 text-decoration-style: dotted ;
2163 }
2164
2165 span.letterspacing { letter-spacing: .2ex ; }
2166
2167 span.capsspacing {
2168 font-variant: small-caps ;
2169 letter-spacing: .1ex ;
2170 }
2171
2172 span.highlight { background: #F8E800 ; }
2173
2174
2175
2176
2177 html body {
```

```
2178 margin: 0 ;
2179 line-height: 1.2;
2180 }
2181
2182
2183 body div {
2184 margin: 0ex;
2185 }
2186
2187
2188 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2189 {
2190 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2191 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2192 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2193 "Times New Roman", serif;
2194 font-style: normal ;
2195 font-weight: bold ;
2196 text-align: left ;
2197 }
2198
2199 h1 { /* title of the entire website, used on each page */
2200 text-align: center ;
2201 font-size: 2.5em ;
2202 padding: .4ex 0em 0ex 0em ;
2203 }
2204
2205 div.book {
2206 text-align: center ;
2207 font-size: 2.325em ;
2208 padding: .4ex 0em 0ex 0em ;
2209 }
2210
2211 h2 { font-size: 2.25em }
2212 h3 { font-size: 2em }
2213 h4 { font-size: 1.75em }
2214 h5 { font-size: 1.5em }
2215 h6 { font-size: 1.25em }
2216 span.paragraph {font-size: 1em ; font-variant: normal ;
2217 margin-right: 1em ; }
2218 span.subparagraph {font-size: 1em ; font-variant: normal ;
2219 margin-right: 1em ; }
2220
2221 div.minisec {
2222 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2223 Geneva, Verdana, sans-serif ;
2224 font-style: normal ;
2225 font-weight: bold ;
2226 text-align: left ;
2227 }
2228
2229 h1 {
2230 margin: 0ex 0em 0ex 0em ;
2231 line-height: 1.3;
2232 text-align: center ;
```

```
2233 }
2234
2235 h2 {
2236 margin: 1ex 0em 1ex 0em ;
2237 line-height: 1.3;
2238 text-align: center ;
2239 }
2240
2241 h3 {
2242 margin: 3ex 0em 1ex 0em ;
2243 line-height: 1.3;
2244 }
2245
2246 h4 {
2247 margin: 3ex 0em 1ex 0em ;
2248 line-height: 1.3;
2249 }
2250
2251 h5 {
2252 margin: 3ex 0em 1ex 0em ;
2253 line-height: 1.3;
2254 }
2255
2256 h6 {
2257 margin: 3ex 0em 1ex 0em ;
2258 line-height: 1.3;
2259 }
2260
2261
2262 div.titlepage {
2263 text-align: center ;
2264 }
2265
2266 .footnotes {
2267 text-align: left ;
2268 font-size: .85em ;
2269 margin: 3ex 2em 0ex 2em ;
2270 border-top: 1px solid silver ;
2271 }
2272
2273 .marginpar, .marginparblock {
2274 max-width: 50%;
2275 float: right ;
2276 clear: both ;
2277 text-align: left ;
2278 margin: 1ex 0.5em 1ex 1em ;
2279 padding: 1ex 0.5em 1ex 0.5em ;
2280 font-size: 85% ;
2281 border-top: 1px solid silver ;
2282 border-bottom: 1px solid silver ;
2283 overflow-x: auto ;
2284 }
2285
2286 .marginpar br { margin-bottom: 2ex ; }
2287
```

```
2288 div.marginblock, div.marginparblock {
2289 max-width:50%;
2290 min-width: 10em; /* room for caption */
2291 float:right;
2292 text-align:left;
2293 margin: 1ex 0.5em 1ex 1em ;
2294 padding: 1ex 0.5em 1ex 0.5em ;
2295 overflow-x: auto;
2296 }
2297
2298 div.marginblock div.minipage,
2299 div.marginparblock div.minipage {
2300 display: inline-block ;
2301 margin: 0pt auto 0pt auto ;
2302 }
2303
2304 div.marginblock div.minipage p ,
2305 div.marginparblock div.minipage p
2306 { font-size: 85%}
2307
2308 div.marginblock br ,
2309 div.marginparblock br
2310 { margin-bottom: 2ex ; }
2311
2312 div.bodycontainer {
2313 float: left ;
2314 width: 80% ;
2315 }
2316
2317 div.bodywithoutsidetoc div.bodycontainer {
2318 float: none ;
2319 width: 100% ;
2320 }
2321
2322 section.textbody div.footnotes{
2323 margin: 3ex 2em 0ex 2em ;
2324 border-bottom: 2px solid silver ;
2325 }
2326
2327 .footnoteheader {
2328 border-top: 2px solid silver ;
2329 margin-top: 3ex ;
2330 padding-top: 1ex ;
2331 font-weight: bold ;
2332 }
2333
2334 .mpfootnotes {
2335 text-align: left ;
2336 font-size: .85em ;
2337 margin-left: 1em ;
2338 border-top: 1px solid silver ;
2339 }
2340
2341 /* Remove footnote top border in the title page. */
2342 div.titlepage div.mpfootnotes {
```

```
2343 border-top: none ;
2344 }
2345
2346
2347
2348 ul, ol {
2349 margin: 1ex 1em 1ex 0em;
2350 line-height: 1.2;
2351 }
2352
2353 body dir, body menu {
2354 margin: 3ex 1em 3ex 0em;
2355 line-height: 1.2;
2356 }
2357
2358 li { margin: 0ex 0em 1ex 0em; }
2359
2360 html {
2361 margin: 0;
2362 padding: 0;
2363 }
2364
2365 .programlisting {
2366 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2367 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2368 "Courier New", monospace;
2369 margin: 1ex 0ex 1ex 0ex ;
2370 padding: .5ex 0pt .5ex 0pt ;
2371 overflow-x: auto;
2372 }
2373
2374 section.textbody>pre.programlisting {
2375 border-top: 1px solid silver ;
2376 border-bottom: 1px solid silver ;
2377 }
2378
2379
2380 div.displaymath {
2381 text-align: center ;
2382 }
2383
2384 div.displaymathnumbered {
2385 text-align: right ;
2386 margin-left: 5% ;
2387 margin-right: 5% ;
2388 min-width: 2.5in ;
2389 }
2390
2391 @media all and (min-width: 400px) {
2392 div.displaymathnumbered {
2393 margin-left: 10% ;
2394 margin-right: 10% ;
2395 }
2396 }
2397
```

```
2398 @media all and (min-width: 800px) {
2399 div.displaymathnumbered {
2400 margin-right: 20% ;
2401 }
2402 }
2403
2404 @media all and (min-width: 1200px) {
2405 div.displaymathnumbered {
2406 margin-right: 30% ;
2407 }
2408 }
2409
2410
2411 .inlineprogramlisting {
2412 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2413 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2414 "Courier New", monospace;
2415 overflow-x: auto;
2416 }
2417
2418 span.listinglabel {
2419 display: inline-block ;
2420 font-size: 70% ;
2421 width: 4em ;
2422 text-align: right ;
2423 margin-right: 2em ;
2424 }
2425
2426 div.abstract {
2427 margin: 2em 5% 2em 5% ;
2428 padding: 1ex 1em 1ex 1em ;
2429 /* font-weight: bold ; */
2430 font-size: 90% ;
2431 text-align: left ;
2432 }
2433
2434 div.abstract dl {line-height:1.5;}
2435 div.abstract dt {color:#304070;}
2436
2437 div.abstracttitle{
2438 font-family: "URW Classico", Optima, "Linux Biolinum O",
2439 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2440 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2441 font-weight:bold;
2442 font-size:1.25em;
2443 text-align: center ;
2444 }
2445
2446 span.abstracruntintitle{
2447 font-family: "URW Classico", Optima, "Linux Biolinum O",
2448 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2449 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2450 font-weight:bold;
2451 }
2452
```

```
2453
2454 .verbatim {
2455 overflow-x: auto ;
2456 }
2457
2458 .alltt {
2459 overflow-x: auto ;
2460 }
2461
2462
2463 .bverbatim {
2464 margin: 1ex 0pt 1ex 0pt ;
2465 padding: .5ex 0pt .5ex 0pt ;
2466 overflow-x: auto ;
2467 }
2468
2469 .lverbatim {
2470 margin: 1ex 0pt 1ex 0pt ;
2471 padding: .5ex 0pt .5ex 0pt ;
2472 overflow-x: auto ;
2473 }
2474
2475 .fancyvrb {
2476 font-size:.85em ;
2477 margin: 3ex 0pt 3ex 0pt
2478 }
2479
2480 .fancyvrblabel {
2481 font-size: .85em ;
2482 text-align: center ;
2483 font-weight: bold ;
2484 margin-top: 1ex ;
2485 margin-bottom: 1ex ;
2486 }
2487
2488
2489 .verse {
2490 font-family: "Linux Libertine Mono O", "Lucida Console",
2491 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2492 "Liberation Mono", "FreeMono", "Andale Mono",
2493 "Nimbus Mono L", "Courier New", monospace;
2494 margin-left: 1em ;
2495 }
2496
2497
2498 div.singlespace { line-height: 1.2 ; }
2499 div.onehalfspace { line-height: 1.5 ; }
2500 div.doublespace { line-height: 2 ; }
2501
2502
2503 /* Word processor format output: */
2504 div.wpfigure { border: 1px solid red ; margin: .5ex ; padding: .5ex ; }
2505 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
2506 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ; }
2507
```

```
2508
2509
2510
2511 /* Minipage environments, vertically aligned to top, center, bottom: */
2512 .minipage, .fminipage, .fcolorminipage {
2513 /* display: inline-block ; */
2514 /* Mini pages which follow each other will be tiled. */
2515 margin: .25em .25em .25em .25em;
2516 padding: .25em .25em .25em .25em;
2517 display: inline-flex;
2518 flex-direction: column ;
2519 overflow: auto;
2520 }
2521
2522 .inlineminipage {
2523 display: inline-block ;
2524 text-align: left
2525 }
2526
2527 /* Paragraphs in the flexbox did not collapse their margins. */
2528 /* Have not yet researched this. */
2529 .minipage p {margin: .75ex 0em .75ex 0em ;}
2530
2531 .fboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
2532 .fcolorbox .minipage, .fcolorboxBlock .minipage
2533 {border: none ; background: none;}
2534
2535 .fbox, .fboxBlock { border: 1px solid black ; }
2536
2537 .fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
2538 .fminipage, .fcolorminipage
2539 {display: inline-block}
2540
2541 .shadowbox, .shabox {
2542 border: 1px solid black;
2543 box-shadow: 3px 3px 3px #808080 ;
2544 border-radius: 0px ;
2545 padding: .4ex .3em .4ex .3em ;
2546 margin: 0pt .3ex 0pt .3ex ;
2547 display: inline-block ;
2548 }
2549
2550 .doublebox {
2551 border: 3px double black;
2552 border-radius: 0px ;
2553 padding: .4ex .3em .4ex .3em ;
2554 margin: 0pt .3ex 0pt .3ex ;
2555 display: inline-block ;
2556 }
2557
2558 .ovalbox, .Ovalbox {
2559 border: 1px solid black;
2560 border-radius: 1ex ;
2561 padding: .4ex .3em .4ex .3em ;
2562 margin: 0pt .3ex 0pt .3ex ;
```

```
2563 display: inline-block ;
2564 }
2565
2566 .Ovalbox { border-width: 2px ; }
2567
2568 .framebox {
2569 border: 1px solid black;
2570 border-radius: 0px ;
2571 padding: .3ex .2em 0ex .2em ;
2572 margin: 0pt .1ex 0pt .1ex ;
2573 display: inline-block ;
2574 }
2575
2576
2577 .mdframed {
2578 padding: 0ex ;
2579 margin: 2ex 0em 2ex 0em ;
2580 }
2581
2582 .mdframed p { padding: 0ex .5em 0ex .5em ; }
2583
2584 .mdframed dl { padding: 1ex .5em 0ex .5em ; }
2585
2586 .mdframedtitle {
2587 padding: .5ex 0pt 0pt 0pt ;
2588 border-radius: 10pt 10pt 0pt 0pt ;
2589 display: block ;
2590 margin-bottom: 1ex ;
2591 }
2592
2593 .mdframedsubtitle {
2594 display: block ;
2595 }
2596
2597 .mdframedsubsubtitle {
2598 display: block ;
2599 }
2600
2601 .mdtheorem {
2602 padding: 0ex .5em 0ex .5em ;
2603 margin: 3ex 5% 3ex 5% ;
2604 }
2605
2606
2607 /* framed package */
2608 .framed, pre.boxedverbatim, fcolorbox {
2609 margin: 3ex 0em 3ex 0em ;
2610 border: 1px solid black;
2611 border-radius: 0px ;
2612 padding: .3ex 1em 0ex 1em ;
2613 display: block ;
2614 }
2615
2616 .shaded {
2617 margin: 3ex 0em 3ex 0em ;
```

```
2618 padding: .3ex 1em .3ex 1em ;
2619 display: block ;
2620 }
2621
2622 .snugframed {
2623 margin: 3ex 0em 3ex 0em ;
2624 border: 1px solid black;
2625 border-radius: 0px ;
2626 display: block ;
2627 }
2628
2629 .framedleftbar {
2630 margin: 3ex 0em 3ex 0em ;
2631 border-left: 3pt solid black;
2632 border-radius: 0px ;
2633 padding: .3ex .2em .3ex 1em ;
2634 display: block ;
2635 }
2636
2637 .framedtitle {
2638 margin: 0em ;
2639 padding: 0em ;
2640 font-size: 130%
2641 }
2642
2643 .framedtitle p { padding: .3em }
2644
2645
2646 /* For the niceframe package: */
2647
2648 div.niceframe, div.curlyframe, div.artdecoframe, div.generalframe {
2649 padding: 1ex ;
2650 margin: 2ex auto ;
2651 border-radius: 2ex ;
2652 }
2653
2654 div.niceframe {
2655 border: 6px groove black ;
2656 }
2657
2658 div.curlyframe {
2659 border-left: 3px dotted black ;
2660 border-right: 3px dotted black ;
2661 border-radius: 6ex ;
2662 }
2663
2664 div.artdecoframe {
2665 border-left: 10px double black ;
2666 border-right: 10px double black ;
2667 border-radius: 6ex ;
2668 }
2669
2670 div.generalframe {
2671 border: 6px groove black ;
2672 }
```

```
2673
2674
2675
2676 dl {
2677 margin: 1ex 2em 1ex 0em;
2678 line-height: 1.3;
2679 }
2680
2681 dl dt {
2682 display: block ;
2683 float:left ;
2684 font-weight: bold;
2685 padding-right: 1em ;
2686 }
2687
2688 dl dd { display: block ; }
2689
2690 dl dd:after { content: "" ; display: block ; clear: both }
2691
2692 dl dd p { margin-top: 0em; }
2693
2694 dd ul, dd ol, dd dl { clear: both ; padding-top: 1ex }
2695
2696
2697 nav {
2698 font-family: "URW Classico", Optima, "Linux Biolinum 0",
2699 "DejaVu Sans", "Bitstream Vera Sans",
2700 Geneva, Verdana, sans-serif ;
2701 margin-bottom: 4ex ;
2702 }
2703
2704 nav p {
2705 line-height: 1.2 ;
2706 margin-top:.5ex ;
2707 margin-bottom:.5ex;
2708 font-size: .9em ;
2709 }
2710
2711
2712
2713 img, img.hyperimage, img.borderimage {
2714 max-width: 600px;
2715 border: 1px solid silver;
2716 box-shadow: 3px 3px 3px #808080 ;
2717 padding: .5% ;
2718 margin: .5% ;
2719 background: none ;
2720 }
2721
2722 img.inlineimage{
2723 padding: 0px ;
2724 box-shadow: none ;
2725 border: none ;
2726 background: none ;
2727 margin: 0px ;
```

```
2728 display: inline-block ;
2729 border-radius: 0px ;
2730 }
2731
2732 img.logoimage{
2733 max-width: 300px ;
2734 box-shadow: 3px 3px 3px #808080 ;
2735 border: 1px solid black ;
2736 background:none ;
2737 padding:0 ;
2738 margin:.5ex ;
2739 border-radius: 10px ;
2740 }
2741
2742
2743 .section {
2744 /*
2745 To have each section float relative to each other:
2746 */
2747 /*
2748 display: block ;
2749 float: left ;
2750 position: relative ;
2751 background: white ;
2752 border: 1px solid silver ;
2753 padding: .5em ;
2754 */
2755 margin: 0ex .5em 0ex .5em ;
2756 padding: 0 ;
2757 }
2758
2759
2760 figure {
2761 margin: 5ex auto 5ex auto ;
2762 padding: 1ex 1em 1ex 1em ;
2763 overflow-x: auto ;
2764 }
2765
2766
2767 /* To automatically center images in figures: */
2768 /*
2769 figure img.inlineimage {
2770 margin: 0ex auto 0ex auto ;
2771 display: block ;
2772 }
2773 */
2774
2775 /* To automatically center minipages in figures: */
2776 /*
2777 figure div.minipage, figure div.minipage div.minipage {
2778 margin: 1ex auto 1ex auto ;
2779 display: block ;
2780 }
2781 */
2782
```

```
2783 figure figure { margin: 0pt }
2784
2785 figure div.minipage p { font-size: 85% ; }
2786
2787 figure.subfigure, figure.subtable {
2788 display: inline-block ; margin: 3ex 1em 3ex 1em ;
2789 }
2790
2791 div.figurecaption .minipage { margin:0 ; padding: 0 }
2792
2793 div.minipage figure { border: none ; box-shadow: none ; }
2794 div.minipage figure.table { margin: 0ex }
2795 div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }
2796
2797 div.floatrow { text-align: center; }
2798
2799 div.floatrow figure { display: inline-block ; margin: 1ex 2% ; }
2800
2801 div.floatfoot { font-size: .85em ;
2802 border-top: 1px solid silver ; line-height: 1.2 ; }
2803
2804 div.figurecaption , .lstlistingtitle {
2805 font-size: .85em ;
2806 text-align: center ;
2807 font-weight: bold ;
2808 margin-top: 1ex ;
2809 margin-bottom: 1ex ;
2810 }
2811
2812 figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
2813 border-bottom: none ; background: none ;
2814 }
2815
2816 div.nonfloatcaption {
2817 margin: 1ex auto 1ex auto ;
2818 font-size: .85em ;
2819 text-align: center ;
2820 font-weight: bold ;
2821 }
2822
2823 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
2824 figure div.floatrow div.minipage div.figurecaption {
2825 border: none ;
2826 background: none ;
2827 }
2828
2829
2830 /* For packages such as float, rotfloat, and algorithm2e: */
2831
2832 figure.boxed, figure.boxruled {
2833 border: 1px solid black ;
2834 }
2835
2836 figure.ruled {
2837 border-top: 1px solid black ;
```

```
2838 border-bottom: 1px solid black ;
2839 border-left: 0px ;
2840 border-right: 0px ;
2841 border-radius: 0px ;
2842 background: none ;
2843 box-shadow: none ;
2844 }
2845
2846 figure.ruled div.figurecaption, figure.boxruled div.figurecaption {
2847 border-top: 1px solid silver ;
2848 border-bottom: 1px solid silver ;
2849 }
2850
2851
2852 table {
2853 margin: 1ex auto 1ex auto ;
2854 border-collapse: separate ;
2855 border-spacing: 0px ;
2856 line-height: 1.3 ;
2857 }
2858
2859 table > tbody > tr.hline > td {border-top: 1px solid #808080 ; margin-top: 0ex ;
2860 margin-bottom: 0ex ; } /* for \hline */
2861
2862 tr.tbrule td {border-top: 1px solid black ; margin-top: 0ex ;
2863 margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
2864
2865 td {padding: .5ex .5em .5ex .5em ;}
2866
2867 table td.tdl { text-align: left ; vertical-align: middle ; }
2868 table td.tdc { text-align: center ; vertical-align: middle ; }
2869 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
2870 table td.tdbang { text-align: center ; vertical-align: middle ; }
2871 table td.tdr { text-align: right ; vertical-align: middle ; }
2872 table td.tdp { text-align: left ; vertical-align: bottom ; }
2873 table td.tdm { text-align: left ; vertical-align: middle ; }
2874 table td.tdb { text-align: left ; vertical-align: top ; }
2875 table td.tdP { text-align: center ; vertical-align: bottom ; }
2876 table td.tdM { text-align: center ; vertical-align: middle ; }
2877 table td.tdB { text-align: center ; vertical-align: top ; }
2878
2879 table td.tvertbarl { border-left: 1px solid black }
2880 table td.tvertbardouble { border-left: 4px double black }
2881 table td.tvertbarr { border-right: 1px solid black }
2882 table td.tvertbarrdouble { border-right: 4px double black }
2883
2884 table td.tvertbardash { border-left: 1px dashed black }
2885 table td.tvertbardoubledash { border-left: 2px dashed black }
2886 table td.tvertbarrdash { border-right: 1px dashed black }
2887 table td.tvertbarrdoubledash { border-right: 2px dashed black }
2888
2889
2890 /* for cmidrules: */
2891 table td.tdrule {
2892 border-top: 1px solid #A0A0A0 ;
```

```
2893 }
2894
2895 table td.tdrulel {
2896 border-top-left-radius:.5em ;
2897 border-top: 1px solid #A0A0A0 ;
2898 }
2899
2900 table td.tdruler {
2901 border-top-right-radius:.5em ;
2902 border-top: 1px solid #A0A0A0 ;
2903 }
2904
2905 table td.tdrulelr {
2906 border-top-left-radius:.5em ;
2907 border-top-right-radius:.5em ;
2908 border-top: 1px solid #A0A0A0 ;
2909 }
2910
2911
2912 /* Margins of paragraphs inside table cells: */
2913 td.tdp p , td.tdprule p , td.tdP p , td.tdPrule p { padding-top: 1ex ;
2914 padding-bottom: 1ex ; margin: 0ex ; }
2915 td.tdm p , td.tdmrule p , td.tdM p , td.tdMrule p { padding-top: 1ex ;
2916 padding-bottom: 1ex ; margin: 0ex ; }
2917 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
2918 padding-bottom: 1ex ; margin: 0ex ; }
2919
2920 td.tdp , td.tdprule , td.tdP , td.tdPrule
2921 { padding: 0ex .5em 0ex .5em ; }
2922 td.tdm , td.tdmrule , td.tdM , td.tdMrule
2923 { padding: 0ex .5em 0ex .5em ; }
2924 td.tdb , td.tdbrule , td.tdB , td.tdBrule
2925 { padding: 0ex .5em 0ex .5em ; }
2926
2927
2928 /* table notes: */
2929 .tnotes {
2930 margin: 0ex 5% 1ex 5% ;
2931 padding: 0.5ex 1em 0.5ex 1em;
2932 font-size:.80em;
2933 text-align: left ;
2934 }
2935
2936 .minipage .tnotes {
2937 margin: 0pt ;
2938 padding: 0pt ;
2939 }
2940
2941 .tnotes dl dt p {margin-bottom:0px;}
2942
2943 .tnoteitemheader {margin-right: 1em;}
2944
2945
2946 /* for colortbl and cell color */
2947 div.cellcolor {
```

```
2948 width: 100% ;
2949 padding: .5ex .5em .5ex .5em ;
2950 margin: -.5ex -.5em -.5ex -.5em ;
2951 }
2952
2953
2954 /* for lyluatex */
2955 span.lyluatex {
2956 display: inline-block ;
2957 }
2958
2959 div.lyluatex p span.lateximagesource img {
2960 display: block ;
2961 margin-top: 3ex ;
2962 margin-bottom: 3ex ;
2963 }
2964
2965
2966 /* for bigdelim */
2967 .ldelim, .rdelim { font-size: 200% }
2968
2969
2970 /* center, flushleft, flushright environments */
2971 div.center{text-align:center;}
2972 div.center table {margin-left:auto;margin-right:auto;}
2973 div.flushleft{text-align:left;}
2974 div.flushleft table {margin-left:0em ; margin-right:auto;}
2975 div.flushright{text-align:right;}
2976 div.flushright table {margin-left:auto ; margin-right: 0em ;}
2977
2978
2979 /* Fancybox */
2980 div.Btrivlist table tr td {
2981 padding: .2ex 0em ;
2982 }
2983
2984
2985 /* program listing callouts: */
2986 span.callout {
2987 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2988 Geneva, Verdana, sans-serif ;
2989 border-radius: .5em;
2990 background-color:black;
2991 color:white;
2992 padding:0px .25em 0px .25em;
2993 margin: 0 ;
2994 font-weight: bold;
2995 font-size:.72em ;
2996 }
2997
2998 div.programlisting pre.verbatim span.callout{
2999 font-size: .85em ;
3000 }
3001
3002 span.verbatim {
```

```
3003 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
3004 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
3005 "Courier New", monospace;
3006 }
3007
3008
3009
3010 div.published
3011 {
3012 text-align: center ;
3013 font-variant: normal ;
3014 font-style: italic ;
3015 font-size: 1em ;
3016 margin: 1ex 0em 1ex 0em ;
3017 }
3018
3019 div.subtitle
3020 {
3021 text-align: center ;
3022 font-variant: normal ;
3023 font-style: italic ;
3024 font-size: 1.25em ;
3025 margin: 1ex 0em 1ex 0em ;
3026 }
3027
3028 div.subtitle p { margin: 1ex ; }
3029
3030 div.author
3031 {
3032 font-variant: normal ;
3033 font-style: normal ;
3034 font-size: 1em ;
3035 margin: 1ex 0em 1ex 0em ;
3036 }
3037
3038 div.oneauthor {
3039 display: inline-block ;
3040 margin: 0ex 1em 0ex 1em ;
3041 }
3042
3043 /*
3044 div.author table {
3045 margin: 1ex auto 0ex auto ;
3046 background: none ;
3047 }
3048
3049 div.author table tbody tr td { padding: .25ex ; }
3050 */
3051
3052 span.affiliation {font-size: .85em ; font-variant: small-caps ; }
3053
3054 div.titledate {
3055 text-align: center ;
3056 font-size: .85em ;
3057 font-style: italic;
```

```
3058 margin: 1ex 0em 1ex 0em ;
3059 }
3060
3061
3062 nav.topnavigation{
3063 text-align: left ;
3064 padding: 0.5ex 1em 0.5ex 1em ;
3065 /* margin: 2ex 0em 3ex 0em ; */
3066 margin: 0 ;
3067 border-bottom: 1px solid silver ;
3068 border-top: 1px solid silver ;
3069 clear:both ;
3070 }
3071
3072 nav.botnavigation{
3073 text-align: left ;
3074 padding: 0.5ex 1em 0.5ex 1em ;
3075 /* margin: 3ex 0em 2ex 0em ; */
3076 margin: 0 ;
3077 border-top: 1px solid silver ;
3078 border-bottom: 1px solid silver ;
3079 clear:both ;
3080 }
3081
3082
3083 header {
3084 line-height: 1.2 ;
3085 font-size: 1em ;
3086 border-bottom: 1px solid silver ;
3087 margin: 0px ;
3088 padding: 2ex 1em 2ex 1em ;
3089 text-align:left ;
3090 }
3091
3092
3093 footer {
3094 font-size: .85em ;
3095 line-height: 1.2 ;
3096 margin-top: 1ex ;
3097 border-top: 1px solid silver ;
3098 padding: 2ex 1em 2ex 1em ;
3099 clear:both ;
3100 text-align:left ;
3101 }
3102
3103
3104 a.linkhome { font-weight:bold ; font-size: 1em ;}
3105
3106
3107 div.lateximagesource { padding: 0px ; margin: 0px ; display: none; }
3108
3109 img.lateximage{
3110 padding: 0pt ;
3111 margin: 0pt ;
3112 box-shadow: none ;
```

```
3113 border: none ;
3114 background: none ;
3115 max-width: 100% ;
3116 border-radius: 0ex ;
3117 border: none ;
3118 }
3119
3120
3121 /* The -1px right margin compensates for the 1px right border. */
3122 /* Without this -1px margin, the body container appears below instead */
3123 /* of floating to the side. */
3124 div.sidetoccontainer {
3125 font-family: "DejaVu Serif", "Bitstream Vera Serif",
3126 "Lucida Bright", Georgia, serif;
3127 float: left ;
3128 width: 20%;
3129 margin: 0pt -1px 3ex 0pt ;
3130 border-right: 1px solid silver;
3131 border-bottom: 1px solid silver;
3132 background: #FAF7F4 ;
3133 font-size:.9em ;
3134 border-radius: 0px 0px 20px 0px ;
3135 }
3136
3137 div.sidetoccontents {
3138 overflow-y: auto ;
3139 width: 100% ;
3140 text-align: left ;
3141 }
3142
3143
3144 nav.sidetoc p {line-height:1.2 ; margin: 1ex .5em 1ex .5em ;
3145 text-indent: 0 ; }
3146
3147 nav.sidetoc p a {color:black ; font-size: .7em ;}
3148
3149 div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
3150 border-bottom: 1px solid silver ; }
3151
3152 nav.sidetoc a:hover {text-decoration: underline ; }
3153
3154
3155
3156 section.textbody { margin: 0ex 1em 0ex 1em ;}
3157
3158
3159 div.multicolshheading { -webkit-column-span: all;
3160 -moz-column-span: all; column-span: all; }
3161 div.multicols { -webkit-columns: 3 380px ;
3162 -moz-columns: 3 380px ; columns: 3 380px ; }
3163 div.multicols p {margin-top: 0ex}
3164
3165
3166 /* Used for xfrac and nicefrac: */
3167 span.numerator {
```

```
3168 font-size: 60% ;
3169 vertical-align: .4em ;
3170 }
3171
3172 span.denominator {
3173 font-size: 60%
3174 }
3175
3176
3177 /* Used for algorithm2e: */
3178 div.alg2evline{
3179 margin-left: 1em ;
3180 padding-left: 1em ;
3181 border-left: 1px solid black ;
3182 border-radius: 0px 0px 0px 1ex ;
3183 }
3184
3185 div.alg2evsline{
3186 margin-left: 1em ;
3187 padding-left: 1em ;
3188 border-left: 1px solid black ;
3189 }
3190
3191 div.alg2enoline{
3192 margin-left: 1em ;
3193 padding-left: 1em ;
3194 }
3195
3196 span.alg2elinenumber{
3197 margin-right: .5em ;
3198 font-size: 50% ;
3199 color: red ;
3200 }
3201
3202
3203 /* Used for algorithmicx: */
3204 span.floatright { float: right ; }
3205
3206
3207 /* keyfloat and tocdata: */
3208 .floatnotes {
3209 margin: 0ex 5% 0ex 5% ;
3210 padding: 0ex 1em 0ex 1em ;
3211 font-size:.80em ;
3212 text-align: left ;
3213 }
3214
3215 .authorartist{
3216 display:block ;
3217 font-size:.70em ;
3218 font-style: italic;
3219 }
3220
3221 nav .authorartist{ display:inline; }
3222
```

```
3223
3224
3225 /* Native LaTeX theorems: */
3226
3227 .theoremcontents { font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ; }
3228 .theoremlabel { font-style: normal; font-weight: bold ; margin-right: .5em ; }
3229
3230
3231 /* theorem, amsthm, and ntheorem packages */
3232
3233 span.theoremheader,
3234 span.theoremheaderplain,
3235 span.theoremheaderdefinition,
3236 span.theoremheaderbreak,
3237 span.theoremheadermarginbreak,
3238 span.theoremheaderchangebreak,
3239 span.theoremheaderchange,
3240 span.theoremheadermargin
3241 {
3242 font-style:normal ; font-weight: bold ; margin-right: 1em ;
3243 }
3244
3245 span.amsthmnameplain,
3246 span.amsthmnamedefinition,
3247 span.amsthmnumberplain,
3248 span.amsthmnumberdefinition
3249 {
3250 font-style:normal ; font-weight: bold ;
3251 }
3252
3253
3254 span.amsthmnameremark,
3255 span.amsthmnumberremark
3256 {font-style:italic ; font-weight: normal ; }
3257
3258
3259 span.amsthmnoteplain,
3260 span.amsthmnotedefinition
3261 {font-style:normal ;}
3262
3263
3264 span.theoremheaderremark,
3265 span.theoremheaderproof,
3266 span.amsthmproofname
3267 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
3268
3269 span.theoremheadersc
3270 {
3271 font-style:normal ;
3272 font-variant: small-caps ;
3273 font-weight: normal ;
3274 margin-right: 1em ;
3275 }
3276
3277 .theoremdemark {float:right}
```

```
3278
3279 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
3280 div.theorembodybreak, div.theorembodynonumberbreak,
3281 div.theorembodymarginbreak,
3282 div.theorembodychangebreak,
3283 div.theorembodychange,
3284 div.theorembodymargin
3285 {
3286 font-style:italic;
3287 margin-top: 3ex ; margin-bottom: 3ex ;
3288 }
3289
3290 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
3291 div.theorembodyplainupright, nonumberplainuprightsc,
3292 div.amsthmbodydefinition, div.amsthmbodyremark,
3293 div.amsthmproof
3294 {
3295 font-style: normal ;
3296 margin-top: 3ex ; margin-bottom: 3ex ;
3297 }
3298
3299 span.amsthmnoteremark {}
3300
3301
3302 /* For the backnaur package: */
3303 div.backnaur {
3304 display: block ;
3305 margin: 2ex 2em 2ex 2em ;
3306 }
3307
3308 div.backnaur p {
3309 margin: .25ex 0ex .25ex 0ex ;
3310 }
3311
3312 div.backnaurprod {
3313 display: inline-block ;
3314 min-width: 8em ;
3315 text-align:right ;
3316 }
3317
3318 div.backnaurdsc {
3319 display: inline-block ;
3320 }
3321
3322
3323 /* For the notes package: */
3324 div.notesimportantnote, div.noteswarningnote, div.notesinformationnote {
3325 clear: both ;
3326 margin: 2ex 2em 2ex 2em ;
3327 border: 1px solid silver ;
3328 }
3329
3330 div.notesicon {
3331 float:left ;
3332 display: inline-block ;
```

```
3333 background: gold ;
3334 padding: 0ex 1em 0ex 1em ;
3335 margin-right: 1em ;
3336 font-weight: bold ;
3337 }
3338
3339 div.notescontents { font-style: italic }
3340
3341
3342 /* nolbreaks package: */
3343 span.nolbreaks { white-space: nowrap ; }
3344
3345
3346 /*
3347 For CSS LaTeX and related logos:
3348 Based on spacing demonstrated by the metafont package.
3349 */
3350
3351 .latexlogofont {
3352 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3353 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3354 font-variant: normal ;
3355 }
3356
3357 .latexlogo {
3358 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3359 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3360 font-size: 1.1em;
3361 }
3362
3363 .latexlogosup {
3364 text-transform: uppercase;
3365 letter-spacing: .03em ;
3366 font-size: 0.7em;
3367 vertical-align: 0.25em;
3368 margin-left: -0.4em;
3369 margin-right: -0.15em;
3370 }
3371
3372 .latexlogosub {
3373 text-transform: uppercase;
3374 vertical-align: -0.27ex;
3375 margin-left: -0.08em;
3376 margin-right: -0.07em;
3377 font-size: 1em;
3378 }
3379
3380 .latexlogotwoe {
3381 text-transform: none ;
3382 font-variant-numeric: oldstyle-nums ;
3383 }
3384
3385 .latexlogotwoesub {
3386 font-style: italic ;
3387 vertical-align: -0.27ex;
```

```
3388 margin-left: -0.11em;
3389 margin-right: -0.1em;
3390 font-size: 1em;
3391 }
3392
3393 .xelatexlogo {
3394 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3395 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3396 letter-spacing: .03em ;
3397 font-size: 1.1em;
3398 }
3399
3400 .xelatexlogosub {
3401 vertical-align: -0.27ex;
3402 margin-left: -0.0667em;
3403 margin-right: -.05em;
3404 font-size: 1em;
3405 letter-spacing: .03em ;
3406 }
3407
3408 .amslogo {
3409 font-family: "TeXGyreChorus", "URW Chancery L",
3410 "Apple Chancery", "ITC Zapf Chancery", "Monotype Corsiva",
3411 "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
3412 "Hoefler Text", Times, "Times New Roman", serif ;
3413 font-style: italic ;
3414 }
3415
3416 .lyxlogo {
3417 font-family: "URW Classico", Optima, "Linux Biolinum O",
3418 "DejaVu Sans", "Bitstream Vera Sans", Geneva,
3419 Verdana, sans-serif ;
3420 }
3421
3422
3423 /* Only display top and bottom navigation if a small screen: */
3424 /* Hide the sidetoc if a small screen: */
3425 nav.topnavigation { display:none; }
3426 nav.botnavigation { display:none; }
3427
3428 /* Only display the sidetoc's webpage title if a small screen */
3429 span.sidetocthetitle { display: none }
3430
3431 @media screen and (max-width: 50em) {
3432 div.sidetoccontainer {
3433 float: none ;
3434 width: 100% ;
3435 padding: 0 ;
3436 border-radius: 0 ;
3437 border-bottom: 1px solid black ;
3438 border-top: 1px solid black ;
3439 box-shadow: none ;
3440 }
3441 span.sidetocthetitle { display: inline }
3442 nav.botnavigation { display:block }
```

```

3443 div.bodycontainer { width: 100% }
3444 .marginpar {
3445 max-width: 100%;
3446 float: none;
3447 display:block ;
3448 margin: 1ex 1em 1ex 1em ;
3449 }
3450 }
3451
3452 @media print {
3453 body {
3454 font-family: "Linux Libertine O",
3455 "DejaVu Serif", "Bitstream Vera Serif",
3456 "Liberation Serif", "Nimbus Roman No 9 L",
3457 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3458 }
3459 div.sidetoccontainer { display:none; }
3460 nav.topnavigation { display: none; }
3461 nav.botnavigation { display: none; }
3462 div.bodycontainer { width: 100% }
3463 }
3464
3465 @media handheld {
3466 div.sidetoccontainer { display:none; }
3467 nav.topnavigation { display:block }
3468 nav.botnavigation { display:block }
3469 div.bodycontainer { width: 100% }
3470 }
3471
3472 @media projection {
3473 div.sidetoccontainer { display:none; }
3474 nav.topnavigation { display:block }
3475 nav.botnavigation { display:block }
3476 div.bodycontainer { width: 100% }
3477 }
3478 \end{filecontents*}
3479 % \end{Verbatim}% for syntax highlighting
3480 \end{LWRwriteconf}

```

## 40.5 lwarp\_sagebrush.css

File `lwarp_sagebrush.css` 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: 3481 \begin{LWRwriteconf}
3482 \begin{filecontents*}[overwrite]{lwarp_sagebrush.css}
3483 @import url("lwarp.css") ;
3484
3485
3486 A:link {color:#105030 ; text-decoration: none ; }
3487 A:visited {color:#705030 ; text-shadow:1px 1px 2px #a0a0a0;}
3488 A:hover {color:#006000 ; text-decoration: underline ; text-shadow:0px 0px 2px #a0a0a0;}

```

```
3489 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
3490
3491
3492
3493 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3494 {
3495 font-family: "URW Classico", Optima, "Linux Biolinum 0",
3496 "Linux Libertine 0", "Liberation Serif",
3497 "Nimbus Roman No 9 L", "FreeSerif",
3498 "Hoefler Text", Times, "Times New Roman", serif;
3499 font-variant: small-caps ;
3500 font-weight: normal ;
3501 color: #304070 ;
3502 text-shadow: 2px 2px 3px #808080;
3503 }
3504
3505 h1 { /* title of the entire website, used on each page */
3506 font-variant: small-caps ;
3507 color: #304070 ;
3508 text-shadow: 2px 2px 3px #808080;
3509 background-color: #F7F7F0 ;
3510 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
3511 }
3512
3513 h1 {
3514 border-bottom: 1px solid #304070;
3515 /* border-top: 2px solid #304070; */
3516 }
3517
3518 h2 {
3519 border-bottom: 1px solid #304070;
3520 /* border-top: 2px solid #304070; */
3521 background-color: #F7F7F0 ;
3522 background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
3523 }
3524
3525
3526
3527 div.abstract {
3528 background: #f5f5eb ;
3529 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3530
3531 border: 1px solid silver;
3532 border-radius: 1em ;
3533 }
3534
3535 div.abstract dl {line-height:1.5;}
3536 div.abstract dt {color:#304070;}
3537
3538 div.abstracttitle{
3539 font-family: "URW Classico", Optima, "Linux Biolinum 0",
3540 "Linux Libertine 0", "Liberation Serif", "Nimbus Roman No 9 L",
3541 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3542 font-weight:bold;
3543 font-variant: small-caps ;
```

```
3544 font-size:1.5em;
3545 border-bottom: 1px solid silver ;
3546 color: #304070 ;
3547 text-align: center ;
3548 text-shadow: 1px 1px 2px #808080;
3549 }
3550
3551 span.abstractrunintitle{
3552 font-family: "URW Classico", Optima, "Linux Biolinum O",
3553 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3554 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3555 font-weight:bold;
3556 }
3557
3558
3559 div.epigraph, div.dictum {
3560 background: #f5f5eb ;
3561 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3562
3563 border: 1px solid silver ;
3564 border-radius: 1ex ;
3565 box-shadow: 3px 3px 3px #808080 ;
3566 }
3567
3568
3569 .example {
3570 background-color: #f5f5eb ;
3571 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3572
3573 }
3574
3575 div.exampletitle{
3576 font-family: "URW Classico", Optima, "Linux Biolinum O",
3577 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3578 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3579 font-weight:bold;
3580 font-variant: small-caps ;
3581 border-bottom: 1px solid silver ;
3582 color: #304070 ;
3583 text-align: center ;
3584 text-shadow: 1px 1px 2px #808080;
3585 }
3586
3587
3588 .sidebar {
3589 background-color: #f5f5eb ;
3590 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3591
3592 }
3593
3594 div.sidebartitle{
3595 font-family: "URW Classico", Optima, "Linux Biolinum O",
3596 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3597 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3598 font-weight:bold;
```

```
3599 font-variant: small-caps ;
3600 border-bottom: 1px solid silver ;
3601 color: #304070 ;
3602 text-align: center ;
3603 text-shadow: 1px 1px 2px #808080;
3604 }
3605
3606
3607 .fancyvrblabel {
3608 font-family: "URW Classico", Optima, "Linux Biolinum O",
3609 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3610 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3611 font-weight:bold;
3612 font-variant: small-caps ;
3613 font-size: 1.5em ;
3614 color: #304070 ;
3615 text-align: center ;
3616 text-shadow: 1px 1px 2px #808080;
3617 }
3618
3619 div.minipage {
3620 background-color: #eeeeee7 ;
3621 border: 1px solid silver ;
3622 border-radius: 1ex ;
3623 }
3624
3625 table div.minipage { background: none ; border: none ; }
3626
3627 div.framebox div.minipage {border:none ; background:none}
3628
3629 section.textbody > div.minipage {
3630 box-shadow: 3px 3px 3px #808080 ;
3631 }
3632
3633 div.fboxBlock div.minipage { box-shadow: none ; }
3634
3635 .framed .minipage , .framedleftbar .minipage {
3636 border: none ;
3637 background: none ;
3638 padding: 0ex ;
3639 margin: 0ex ;
3640 }
3641
3642 figure.figure .minipage, div.figurecaption .minipage { border: none; }
3643
3644 div.marginblock div.minipage ,
3645 div.marginparblock div.minipage
3646 { border: none; }
3647
3648 figure , div.marginblock {
3649 background-color: #eeeeee7 ;
3650 border: 1px solid silver ;
3651 border-radius: 1ex ;
3652 box-shadow: 3px 3px 3px #808080 ;
3653 }
```

```
3654
3655 figure figure {
3656 border: 1px solid silver ;
3657 margin: 0em ;
3658 box-shadow: none ;
3659 }
3660
3661 /*
3662 div.figurecaption {
3663 border-top: 1px solid silver ;
3664 border-bottom: 1px solid silver ;
3665 background-color: #e8e8e8 ;
3666 }
3667 */
3668
3669
3670 div.table {
3671 box-shadow: 3px 3px 3px #808080 ;
3672 }
3673
3674 /*
3675 .tnotes {
3676 background: #e8e8e8;
3677 border: 1px solid silver;
3678 }
3679 */
3680
3681
3682 nav.topnavigation{
3683 background-color: #b0b8b0 ;
3684 background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0) ;
3685 }
3686
3687 nav.botnavigation{
3688 background-color: #b0b8b0 ;
3689 background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
3690 }
3691
3692
3693
3694 header{
3695 background-color: #F7F7F0 ;
3696 background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
3697 }
3698
3699 footer{
3700 background-color: #F7F7F0 ;
3701 background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
3702 }
3703
3704
3705
3706 div.sidetoccontainer {
3707 background-color: #F7F7F0 ;
3708 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
```

```

3709 box-shadow: 3px 3px 3px #808080 ;
3710 }
3711
3712 div.sidetocitle {color: #304070 ; }
3713
3714 nav.sidetoc a:hover {
3715 color:#006000 ;
3716 text-decoration: none ;
3717 text-shadow:0px 0px 2px #a0a0a0;
3718 }
3719
3720
3721 @media screen and (max-width: 45em) {
3722 div.sidetoccontainer { border-radius: 0 ; }
3723 }
3724
3725
3726 \end{filecontents*}
3727 % \end{Verbatim}% for syntax highlighting
3728 \end{LWRwriteconf}

```

## 40.6 lwarp\_formal.css

File `lwarp_formal.css` 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:**

```

3729 \begin{LWRwriteconf}
3730 \begin{filecontents*}[overwrite]{lwarp_formal.css}
3731 @import url("lwarp.css") ;
3732
3733
3734
3735 A:link {color:#802020 ; text-decoration:none; }
3736 A:visited {color:#802020 ; text-shadow:none ;}
3737 A:hover {color:#400000 ; text-shadow:none ;}
3738 A:active {color:#C00000 ; text-shadow:none ;}
3739
3740
3741 body {
3742 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3743 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3744 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3745 "Times New Roman", serif;
3746 background: #fffcf5;
3747 }
3748
3749 span.textrm {
3750 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3751 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3752 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3753 "Times New Roman", serif;
3754 }

```

```
3755
3756 span.textsf {
3757 font-family: "DejaVu Sans", "Bitstream Vera Sans",
3758 Geneva, Verdana, sans-serif ;
3759 }
3760
3761
3762
3763 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3764 {
3765 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3766 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3767 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3768 "Times New Roman", serif;
3769 color: #800000 ;
3770 text-shadow: none ;
3771 }
3772
3773 h1, h2 {
3774 background-color: #fffcf5 ;
3775 background-image: none ;
3776 border-bottom: 1px solid #808080;
3777 /* border-top: 2px solid #808080; */
3778 }
3779
3780 div.abstracttitle {
3781 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3782 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3783 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3784 "Times New Roman", serif;
3785 color: black ;
3786 text-shadow: none ;
3787 }
3788
3789 span.abstracruntintitle {
3790 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3791 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3792 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3793 "Times New Roman", serif;
3794 color: black ;
3795 text-shadow: none ;
3796 }
3797
3798 div.abstract { font-size: 100% }
3799
3800 .sidebar {
3801 background: #fffcf5;
3802 background-image: none ;
3803 margin: 2em 5% 2em 5%;
3804 padding: 0.5em 1em;
3805 border: none ;
3806 border-top : 1px solid silver;
3807 border-bottom : 1px solid silver;
3808 font-size: 90% ;
3809 }
```

```
3810
3811 div.sidebar{
3812 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3813 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3814 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3815 "Times New Roman", serif;
3816 color: #800000 ;
3817 text-shadow: none ;
3818 border: none ;
3819 }
3820
3821 .example {
3822 background: #ffffcf;
3823 background-image: none ;
3824 margin: 2em 5% 2em 5%;
3825 padding: 0.5em 1em;
3826 border: none ;
3827 border-top : 1px solid silver;
3828 border-bottom : 1px solid silver;
3829 }
3830
3831 div.exampletitle{
3832 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3833 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3834 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3835 "Times New Roman", serif;
3836 color: #800000 ;
3837 text-shadow: none ;
3838 border: none ;
3839 }
3840
3841 div.fancyvrblabel{
3842 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3843 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3844 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3845 "Times New Roman", serif;
3846 color: #800000 ;
3847 text-shadow: none ;
3848 border: none ;
3849 }
3850
3851
3852
3853 figure {
3854 margin: 5ex 5% 5ex 5% ;
3855 padding: 1ex 1em 1ex 1em ;
3856 background-color: #ffffcf5 ;
3857 overflow-x: auto ;
3858 border: none ;
3859 /* border-top: 1px solid silver; */
3860 /* border-bottom: 1px solid silver; */
3861 }
3862
3863
3864 div.figurecaption , .lstlisting {
```

```
3865 border: none ;
3866 /* border-top: 1px solid silver ; */
3867 /* border-bottom: 1px solid silver ; */
3868 background-color: #fffcf5 ;
3869 }
3870
3871 .tnotes {
3872 background: #fffcf5 ;
3873 border-top: 1px solid silver ;
3874 border-bottom: 1px solid silver ;
3875 }
3876
3877 .theorem {
3878 background: none ;
3879 }
3880
3881 .minipage {
3882 background-color: #fffcf5 ;
3883 border: none ;
3884 }
3885
3886 div.floatrow figure { border: none ; }
3887
3888 figure figure { border: none ; }
3889
3890
3891 nav.toc, nav.lof, nav.lot, nav.lol {
3892 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3893 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3894 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3895 "Times New Roman", serif;
3896 }
3897
3898 div.sidetoccontainer {
3899 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3900 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3901 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3902 "Times New Roman", serif;
3903 background-image: linear-gradient(to bottom, #fffcf5, #C0C0C0);
3904 }
3905
3906 div.sidetoctitle{
3907 color: #800000 ;
3908 }
3909
3910 header{
3911 background-color: #e0e0e0 ;
3912 background-image: linear-gradient(to top, #fffcf5, #b0b0b0);
3913 text-align:center ;
3914 }
3915
3916 footer{
3917 background-color: #e0e0e0 ;
3918 background-image: linear-gradient(to bottom, #fffcf5, #b0b0b0);
3919 padding: 2ex 1em 2ex 1em ;
```

```

3920 text-align:left ;
3921 }
3922
3923 nav.botnavigation {
3924 background: #dedcd5 ;
3925 border-top: 1px solid black ;
3926 }
3927 \end{filecontents*}
3928 % \end{Verbatim}% for syntax highlighting
3929 \end{LWRwriteconf}

```

## 40.7 sample\_project.css

File `sample_project.css` The project-specific css file. Use with `\CSSFilename`.

If used, this must be present both when compiling the project and also when distributing the HTML files.

**Config file:**

```

3930 \begin{LWRwriteconf}
3931 \begin{filecontents*}[overwrite]{sample_project.css}
3932 /* (--- Start of project.css ---) */
3933 /* (--- A sample project-specific CSS file for lwarp ---) */
3934
3935 /* Uncomment one of the following: */
3936 @import url("lwarp.css") ;
3937 /* @import url("lwarp_formal.css") ; */
3938 /* @import url("lwarp_sagebrush.css") ; */
3939
3940 /* Project-specific CSS setting follow here. */
3941 /* . . . */
3942
3943 /* (--- End of project.css ---) */
3944 \end{filecontents*}
3945 % \end{Verbatim}% for syntax highlighting
3946 \end{LWRwriteconf}

```

## 40.8 lwarp.ist

File `lwarp.ist` Used to modify the index for `lwarp`.

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:**

```

3947 \begin{LWRwriteconf}
3948 \begin{filecontents*}[overwrite]{lwarp.ist}
3949 preamble
3950 "\begin{theindex}
3951 \providecommand*\lettergroupDefault[1]{}
3952 \providecommand*\lettergroup[1]{%
3953 \par\textbf{#1}\par

```

```

3954 \nopagebreak
3955 }
3956 "
3957 headings_flag 1
3958 heading_prefix "
3959 \lettergroup{"
3960 heading_suffix "}"
3961 delim_0 " , \hyperindexref{"
3962 delim_1 " , \hyperindexref{"
3963 delim_2 " , \hyperindexref{"
3964 delim_n "}, \hyperindexref{"
3965 delim_r "} -- \hyperindexref{"
3966 delim_t "}"
3967 page_compositor "."
3968 \end{filecontents*}
3969 % \end{Verbatim}% for syntax highlighting
3970 \end{LWRwriteconf}

```

## 40.9 lwarp.xdy

File lwarp.xdy Used to modify the index for lwarp.

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>

**Config file:**

```

3971 \begin{LWRwriteconf}
3972 \begin{filecontents*}[overwrite]{lwarp.xdy}
3973 (require "tex/inputenc/latin.xdy")
3974 (merge-rule "\PS *" "Postscript")
3975 (require "texindy.xdy")
3976 (require "page-ranges.xdy")
3977 (require "book-order.xdy")
3978 (define-location-class "arabic-page-numbers"
3979 ("arabic-numbers") :min-range-length 1)
3980 (require "makeindex.xdy")
3981 (define-attributes (("hyperindexref")))
3982 (markup-locref :open "\hyperindexref{" :close "}" :attr "hyperpage")
3983 (markup-locref :open "\hyperindexref{" :close "}" :attr "hyperpage")
3984 (markup-locref :open "\textbf{\hyperindexref{" :close "}" :attr "textbf")
3985 (markup-locref :open "\textit{\hyperindexref{" :close "}" :attr "textit")
3986 (define-location-class-order ("roman-page-numbers"
3987 "arabic-page-numbers"
3988 "alpha-page-numbers"
3989 "Roman-page-numbers"
3990 "Alpha-page-numbers"
3991 "see"
3992 "seealso"))
3993 \end{filecontents*}
3994 % \end{Verbatim}% for syntax highlighting
3995 \end{LWRwriteconf}

```

## 40.10 lwarp\_one\_limage.cmd

File `lwarp_one_limage.cmd` Used by `lwarp` 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 `lwarp_one_limage.cmd` to be created directly by `lwarpmk`, so `lwarp_one_limage.txt` is created instead, then copied to `lwarp_one_limage.cmd` by `lwarpmk`. This occurs each time `lwarpmk` used to create `lateximages`.

**Config file:**

```

3996 \begin{LWRwriteconf}
3997 \immediate\openout\LWR@quickfile=lwarp_one_limage.txt
3998 \immediate\write\LWR@quickfile{%
3999 pdfseparate -f \LWRpercent 1 -l \LWRpercent 1 \LWRpercent 4_html.pdf %
4000 \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent\LWRpercent d.pdf%
4001 }
4002 \immediate\write\LWR@quickfile{%
4003 pdfcrop --hires \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf %
4004 \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
4005 }
4006 \immediate\write\LWR@quickfile{%
4007 pdftocairo -svg -noshrink \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf %
4008 \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.svg%
4009 }
4010 \immediate\write\LWR@quickfile{%
4011 del \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
4012 }
4013 \immediate\write\LWR@quickfile{%
4014 del \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf%
4015 }
4016 \immediate\write\LWR@quickfile{exit}
4017 \immediate\closeout\LWR@quickfile
4018 \end{LWRwriteconf}

```

## 40.11 lwarp\_mathjax.txt

File `lwarp_mathjax.txt` 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.

`\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 use `\MathJaxFilename` to select new filename.

**Config file:**

```

4019 \begin{LWRwriteconf}

```

```

4020 \begin{filecontents*}[overwrite]{lwarp_mathjax.txt}
4021 <!-- https://groups.google.com/forum/#!topic/
4022 mathjax-users/jUtewUcE2bY -->
4023 <script type="text/x-mathjax-config">
4024 MathJax.Hub.Register.StartupHook("TeX AMSmath Ready",function () {
4025 var seteqsectionDefault = {name: "", num: 0};
4026 var seteqsections = {}, seteqsection = seteqsectionDefault;
4027 var TEX = MathJax.InputJax.TeX, PARSE = TEX.Parse;
4028 var AMS = MathJax.Extension["TeX/AMSmath"];
4029 TEX.Definitions.Add({
4030 macros: {
4031 seteqsection: "mySection",
4032 seteqnumber: "mySetEqNumber"
4033 }
4034 });
4035
4036 PARSE.Augment({
4037 mySection: function (name) {
4038 seteqsection.num = AMS.number;
4039 var n = this.GetArgument(name);
4040 if (n === "") {
4041 seteqsection = seteqsectionDefault;
4042 } else {
4043 if (!seteqsections["_"+n])
4044 seteqsections["_"+n] = {name:n, num:0};
4045 seteqsection = seteqsections["_"+n];
4046 }
4047 AMS.number = seteqsection.num;
4048 },
4049 mySetEqNumber: function (name) {
4050 var n = this.GetArgument(name);
4051 if (!n || !n.match(/^ *[0-9]+ *$/))
4052 n = "";
4053 else
4054 n = parseInt(n)-1;
4055 <!-- $ syntax highlighting -->
4056 if (n === "" || n < 1)
4057 TEX.Error
4058 ("Argument to "+name+" should be a positive integer");
4059 AMS.number = n;
4060 }
4061 });
4062 MathJax.Hub.Config({
4063 TeX: {
4064 equationNumbers: {
4065 formatTag: function (n) {
4066 <!-- if not numeric, don't include the chapter -->
4067 if (!n.match(/^ *[0-9]+ *$/))
4068 <!-- $ syntax highlighting -->
4069 return "("+(n).replace(/\./,"")+)" " ;
4070 else
4071 return "("+(seteqsection.name+"."+n).replace(/\./,"")+)" " ;
4072 },
4073 formatID: function (n) {
4074 n = (seteqsection.name+'.'+n).replace

```

```

4075 (/[:"<>&]/g, "").replace(/^\./, "");
4076 return 'mjx-eqn-' + n;
4077 }
4078 }
4079 }
4080 });
4081 });
4082 </script>
4083
4084 <!-- http://docs.mathjax.org/en/latest/options/ThirdParty.html -->
4085 <script type="text/x-mathjax-config">
4086 MathJax.Ajax.config.path["Contrib"] =
4087 "https://cdn.mathjax.org/mathjax/contrib";
4088 </script>
4089
4090 <script type="text/x-mathjax-config">
4091 MathJax.Hub.Config({
4092 TeX: {
4093 extensions: ["autoload-all.js"] ,
4094 equationNumbers: {
4095 autoNumber: "AMS"
4096 }
4097 }
4098 });
4099 </script>
4100
4101 <!-- Alternative CDN provider: -->
4102 <script type="text/javascript" async
4103 src="https://cdnjs.cloudflare.com/ajax/libs/mathjax/2.7.6/MathJax.js?config=TeX-AMS_HTML-full">
4104 </script>
4105
4106 <!-- No longer supported after April 30, 2017: -->
4107 <!--
4108 <script
4109 src="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=TeX-AMS_HTML-full">
4110 </script>
4111 -->
4112
4113 \end{filecontents*}
4114 % \end{Verbatim}% for syntax highlighting
4115 \end{LWRwriteconf}

```

## 40.12 lwarpmk.lua — lwarpmk option

Opt lwarpmk Creates a local copy of *lwarpmk*.

Prog lwarpmk Command-line utility to process lwarp 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 `lwarp`.

```
4116 \begin{LWR@createlwarpmk}

4117 \begin{filecontents*}[overwrite]{lwarpmk.lua}
4118 #!/usr/bin/env texlua
4119
4120 -- Copyright 2016-2020 Brian Dunn
4121
4122
4123 printversion = "v0.81"
4124 requiredconfversion = "2" -- also at *lwarpmk.conf
4125
4126 function printhelp ()
4127 print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.") ;
4128 end
4129
4130
4131 function printusage ()
4132 --
4133 -- Print the usage of the lwarpmk command:
4134 --
4135 print ([[
4136
4137 lwarpmk print [-p project]: Compile the print version if necessary.
4138 lwarpmk print1 [-p project]: Forced single compile of the print version.
4139 lwarpmk printindex [-p project]: Process print indexes.
4140 lwarpmk printglossary [-p project]: Process the glossary for the print version.
4141 lwarpmk html [-p project]: Compile the HTML version if necessary.
4142 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
4143 lwarpmk htmlindex [-p project]: Process HTML indexes.
4144 lwarpmk htmlglossary [-p project]: Process the glossary for the html version.
4145 lwarpmk again [-p project]: Touch the source code to trigger recompiles.
4146 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
4147 lwarpmk pdftohtml [-p project]:
4148 For use with latexmk or a Makefile:
4149 Converts project_html.pdf to project_html.html and individual HTML files.
4150 Finishes the HTML conversion even if there was a compile error.
4151 lwarpmk pdftosvg <list of file names>: Converts each PDF file to SVG.
4152 lwarpmk epstopdf <list of file names>: Converts each EPS file to PDF.
4153 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
4154 *.idx, *.ind, *.log, *_html_inc.*, .gl*,
4155 *_html.pdf, *_html.html, *_html.sidetoc
4156 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
4157 lwarpmk cleanlimages: Removes all images from the "lateximages" directory.
4158 lwarpmk -h: Print this help message.
4159 lwarpmk --help: Print this help message.
4160
4161]])
4162 -- printconf ()
4163 end
```

```

4164
4165
4166 function splitfilename (pathandfilename)
4167 --
4168 -- Separates out the path and extension from a filename.
4169 -- Returns path, filename with extension, and extension.
4170 -- Ex: thispath, thisfilename, thisextension = splitfilename ("path/to/filename.ext")
4171 --
4172 -- https://www.fhug.org.uk/wiki/wiki/doku.php?id=plugins:code_snippets:
4173 -- split_filename_in_to_path_filename_and_extension
4174 --
4175 if lfs.attributes(pathandfilename,"mode") == "directory" then
4176 local strPath = pathandfilename:gsub("[\\/]$", "") -- $(syntax highlighting)
4177 return strPath.."\\", "", ""
4178 end
4179 pathandfilename = pathandfilename.."."
4180 return pathandfilename:match("^(-)([\\\/]-)%.(^[\\\/%.]-)?.$")
4181 end
4182
4183
4184 function splitfile (destfile,sourcefile)
4185 --
4186 -- Split one large sourcefile into a number of files,
4187 -- starting with destfile.
4188 -- The file is split at each occurrence of <!--|Start file|newfilename|*
4189 --
4190 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
4191 local sfile = io.open(sourcefile)
4192 io.output(destfile)
4193 for line in sfile:lines() do
4194 i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*|)") ;
4195 if ((i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
4196 -- split the file
4197 io.output(newfilename) ;
4198 else
4199 -- not a splitpoint
4200 io.write (line .. "\n") ;
4201 end
4202 end -- do
4203 io.close(sfile)
4204 end -- function
4205
4206
4207 function cvalueerror (line, linenum , cvalue)
4208 --
4209 -- Incorrect value, so print an error and exit.
4210 --
4211 print ("lwarpmk: ===")
4212 print ("lwarpmk: " .. linenum .. " : " .. line) ;
4213 print (
4214 "lwarpmk: incorrect variable value \"" .. cvalue ..
4215 "\" in lwarpmk.conf.\n"
4216) ;
4217 print ("lwarpmk: ===")
4218 -- printconf () ;

```

```
4219 os.exit(1) ;
4220 end
4221
4222
4223 function printhowtorecompile ()
4224 -- Tells the user how to recompile to regenerate the configuration files.
4225 print ("lwarpmk: The configuration files lwarpmk.conf and "..sourcename..".lwarpmkconf")
4226 print ("lwarpmk: must be updated. To do so, recompile")
4227 print ("lwarpmk: " , sourcename..".tex")
4228 if (printlatexcmd == "") then
4229 print ("lwarpmk: using xe/luatex/pdflatex,")
4230 else
4231 print ("lwarpmk: using the command:")
4232 print ("lwarpmk: " , printlatexcmd)
4233 end
4234 print ("lwarpmk: then use lwarpmk again.")
4235 end -- printhowtorecompile
4236
4237
4238 function ignoreconf ()
4239 -- Global argument index
4240 argindex = 2
4241 end
4242
4243 function loadconf ()
4244 --
4245 -- Load settings from the project's "lwarpmk.conf" file:
4246 --
4247 -- Default configuration filename:
4248 local conffile = "lwarpmk.conf"
4249 local confroot = "lwarpmk"
4250 -- Global argument index
4251 argindex = 2
4252 -- Optional configuration filename:
4253 if (arg[argindex] == "-p") then
4254 argindex = argindex + 1
4255 confroot = arg[argindex]
4256 conffile = confroot..".lwarpmkconf"
4257 argindex = argindex + 1
4258 end
4259 -- Additional defaults:
4260 confversion = "0"
4261 opsystem = "Unix"
4262 imagesdirectory = "lateximages"
4263 imagesname = "image-"
4264 latexmk = "false"
4265 printlatexcmd = ""
4266 HTMLlatexcmd = ""
4267 printindexcmd = ""
4268 HTMLindexcmd = ""
4269 latexmkindexcmd = ""
4270 -- to be removed:
4271 -- indexprog = "makeindex"
4272 -- makeindexstyle = "lwarp.ist"
4273 -- xindylanguage = "english"
```

```
4274 -- xindycodepage = "utf8"
4275 -- xindystyle = "lwarp.xdy"
4276 -- pdftotextenc = "UTF-8"
4277 glossarycmd = "makeglossaries"
4278 -- Verify the file exists:
4279 if (lfs.attributes(conffile,"mode")==nil) then
4280 -- file not exists
4281 print ("lwarpmk: ===")
4282 print ("lwarpmk: File \"\" .. conffile ..\"\" does not exist.")
4283 print ("lwarpmk: Move to the project's source directory,")
4284 print ("lwarpmk: recompile using pdflatex, xelatex, or luatex,")
4285 print ("lwarpmk: then try using lwarpmk again.")
4286 if (arg[argindex] ~= nil) then
4287 print (
4288 "lwarpmk: (\"\" .. confroot ..
4289 "\"" does not appear to be a project name.)"
4290)
4291 end
4292 print ("lwarpmk: ===")
4293 printhelp () ;
4294 os.exit(1) -- exit the entire lwarpmk script
4295 else -- file exists
4296 -- Read the file:
4297 print ("lwarpmk: Reading " .. conffile ..".")
4298 local cfile = io.open(conffile)
4299 -- Scan each line, parsing each line as: name = [[string]]
4300 local linenum = 0
4301 for line in cfile:lines() do -- scan lines
4302 linenum = linenum + 1
4303 i,j,cvarname,cvalue = string.find (line,"([%w-_]*)%s*=%s*%[[^%]]*)%]") ;
4304 -- Error if incorrect enclosing characters:
4305 if (i == nil) then
4306 print ("lwarpmk: ===")
4307 print ("lwarpmk: " .. linenum .. " : " .. line) ;
4308 print ("lwarpmk: Incorrect entry in " .. conffile ..".\n") ;
4309 print ("lwarpmk: ===")
4310 -- printconf () ;
4311 os.exit(1) ;
4312 end -- nil
4313 if (cvarname == "confversion") then
4314 confversion = cvalue
4315 elseif (cvarname == "opssystem") then
4316 -- Verify choice of opssystem:
4317 if ((cvalue == "Unix") or (cvalue == "Windows")) then
4318 opssystem = cvalue
4319 else
4320 cvalueerror (line, linenum , cvalue)
4321 end
4322 elseif (cvarname == "sourcename") then sourcename = cvalue
4323 elseif (cvarname == "homehtmlfilename") then homehtmlfilename = cvalue
4324 elseif (cvarname == "htmlfilename") then htmlfilename = cvalue
4325 elseif (cvarname == "imagesdirectory") then imagesdirectory = cvalue
4326 elseif (cvarname == "imagesname") then imagesname = cvalue
4327 elseif (cvarname == "latexmk") then latexmk = cvalue
4328 elseif (cvarname == "printlatexcmd") then printlatexcmd = cvalue
```

```

4329 elseif (cvarname == "HTMLlatexcmd") then HTMLlatexcmd = cvalue
4330 elseif (cvarname == "printindexcmd") then printindexcmd = cvalue
4331 elseif (cvarname == "HTMLindexcmd") then HTMLindexcmd = cvalue
4332 elseif (cvarname == "latexmkindexcmd") then latexmkindexcmd = cvalue
4333 elseif (cvarname == "glossarycmd") then glossarycmd = cvalue
4334 elseif (cvarname == "pdftotextenc") then pdftotextenc = cvalue
4335 else
4336 print ("lwarpmk: ===")
4337 print ("lwarpmk: " .. linenum .. " : " .. line);
4338 print (
4339 "lwarpmk: Incorrect variable name \"\" .. cvarname .. "\" in " ..
4340 conffile .. ".\n"
4341);
4342 print ("lwarpmk: ===")
4343 -- printconf ();
4344 os.exit(1) ;
4345 end -- cvarname
4346 end -- do scan lines
4347 io.close(cfile)
4348 end -- file exists
4349 -- Error if sourcename is "lwarp".
4350 -- This could happen if a local copy of lwarp has recently been recompiled.
4351 if sourcename=="lwarp" then
4352 print ("lwarpmk: ===")
4353 print ("lwarpmk: lwarp.sty has recently been recompiled in this directory,")
4354 print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
4355 print ("lwarpmk: (Perhaps you are not in your project's directory?)")
4356 print ("lwarpmk: In your project directory, recompile your project")
4357 print ("lwarpmk: using pdf/lua/xelatex <projectname>.")
4358 print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
4359 print ("lwarpmk: and you may again use lwarpmk.")
4360 print ("lwarpmk: ===")
4361 os.exit(1)
4362 end -- sourcename of "lwarp"
4363 -- Select some operating-system commands:
4364 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:
4365 rmname = "rm"
4366 mvname = "mv"
4367 cpname = "cp"
4368 touchnamepre = "touch"
4369 touchnamepost = ""
4370 newtouchname = "touch"
4371 dirslash = "/"
4372 opquote= "\""
4373 cmdgroupopenname = " ("
4374 cmdgroupclosename = ") "
4375 seqname = " && "
4376 bgname = " &"
4377 elseif opsystem=="Windows" then -- For Windows
4378 rmname = "DEL"
4379 mvname = "MOVE"
4380 cpname = "COPY"
4381 touchnamepre = "COPY /b"
4382 touchnamepost = "+,,"
4383 newtouchname = "echo empty >"

```

```
4384 dirslash = "\\\"
4385 opquote= "\"
4386 cmdgroupopenname = ""
4387 cmdgroupclosename = ""
4388 seqname = " & "
4389 bgname = ""
4390 else
4391 print ("lwarpmk: ===")
4392 print ("lwarpmk: Select Unix or Windows for opsystem.")
4393 print ("lwarpmk: ===")
4394 os.exit(1)
4395 end --- for Windows
4396 -- Warning if the operating system does not appear to be correct,
4397 -- in case files were transferred to another system.
4398 if ((package.config:sub(1,1)) ~= dirslash) then
4399 print ("lwarpmk: ===")
4400 print ("lwarpmk: It appears that lwarpmk.conf is for a different operating system.")
4401 printhowtorecompile ()
4402 print ("lwarpmk: ===")
4403 os.exit(1)
4404 end
4405 -- Error if the configuration file's version is not current:
4406 if (confversion ~= requiredconfversion) then
4407 print ("lwarpmk: ===")
4408 printhowtorecompile ()
4409 print ("lwarpmk: ===")
4410 os.exit(1)
4411 end
4412 end -- loadconf
4413
4414
4415 function executecheckerror (executecommands , errormessage)
4416 --
4417 -- Execute an operating system call,
4418 -- and maybe exit with an error message.
4419 --
4420 local err
4421 err = os.execute (executecommands)
4422 if (err ~= 0) then
4423 print ("lwarpmk: ===")
4424 print ("lwarpmk: " .. errormessage)
4425 print ("lwarpmk: ===")
4426 os.exit(1)
4427 end
4428 end -- executecheckerror
4429
4430
4431 function refreshdate ()
4432 os.execute(touchnamepre .. " " .. sourcename .. ".tex " .. touchnamepost)
4433 end
4434
4435
4436
4437 function reruntoget (filesource)
4438 --
```

```
4439 -- Scan the LaTeX log file for the phrase "Rerun to get",
4440 -- indicating that the file should be compiled again.
4441 -- Return true if found.
4442 --
4443 local fsource = io.open(filesource)
4444 for line in fsource:lines() do
4445 if (string.find(line,"Rerun to get") ~= nil) then
4446 io.close(fsource)
4447 return true
4448 end -- if
4449 end -- do
4450 io.close(fsource)
4451 return false
4452 end
4453
4454
4455
4456 function onetime (latexcmd, fsuffix)
4457 --
4458 -- Compile one time, return true if should compile again.
4459 -- fsuffix is "" for print, "_html" for HTML output.
4460 --
4461 print("lwarpmk: Compiling with: " .. latexcmd)
4462 executecheckerror (
4463 latexcmd ,
4464 "Compile error."
4465)
4466 return (reruntoget(sourcename .. fsuffix .. ".log")) ;
4467 end
4468
4469
4470 function manytimes (latexcmd, fsuffix)
4471 --
4472 -- Compile up to five times.
4473 -- fsuffix is "" for print, "_html" for HTML output
4474 --
4475 if onetime(latexcmd, fsuffix) == true then
4476 if onetime(latexcmd, fsuffix) == true then
4477 if onetime(latexcmd, fsuffix) == true then
4478 if onetime(latexcmd, fsuffix) == true then
4479 if onetime(latexcmd, fsuffix) == true then
4480 end end end end end
4481 end
4482
4483
4484 function verifyfileexists (filename)
4485 --
4486 -- Exit if the given file does not exist.
4487 --
4488 if (lfs.attributes (filename , "modification") == nil) then
4489 print ("lwarpmk: ===")
4490 print ("lwarpmk: " .. filename .. " not found.") ;
4491 print ("lwarpmk: ===")
4492 os.exit (1) ;
4493 end
```

```
4494 end
4495
4496
4497
4498 function pdftohtml ()
4499 --
4500 -- Convert <project>_html.pdf into HTML files:
4501 --
4502 -- Convert to text:
4503 print ("lwarpmk: Converting " .. sourcename
4504 .. "_html.pdf to " .. sourcename .. "_html.html")
4505 os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
4506 .. sourcename .. "_html.pdf " .. sourcename .. "_html.html")
4507 -- Split the result into individual HTML files:
4508 splitfile (homehtmlfilename .. ".html" , sourcename .. "_html.html")
4509 end
4510
4511
4512 function removeaux ()
4513 --
4514 -- Remove auxiliary files:
4515 -- All .aux files are removed since there may be many bbl*.aux files.
4516 -- Also removes sourcename_html.pdf, sourcename_html.html,
4517 -- and sourcename_html.sidetoc.
4518 --
4519 os.execute (rmname .. " *.aux " ..
4520 sourcename .. ".toc " .. sourcename .. "_html.toc " ..
4521 sourcename .. ".lof " .. sourcename .. "_html.lof " ..
4522 sourcename .. ".lot " .. sourcename .. "_html.lot " ..
4523 " *.idx " ..
4524 " *.ind " ..
4525 sourcename .. ".ps " .. sourcename .. "_html.ps " ..
4526 sourcename .. ".log " .. sourcename .. "_html.log " ..
4527 sourcename .. ".gl*" .. sourcename .. "_html.gl*" ..
4528 sourcename .. "_html.pdf " ..
4529 sourcename .. "_html.html " ..
4530 sourcename .. "_html.sidetoc " ..
4531 " *_html_inc.* "
4532)
4533 end
4534
4535 function checkhtmlpdfexists ()
4536 --
4537 -- Error if the HTML document does not exist.
4538 -- The lateximages are drawn from the HTML PDF version of the document,
4539 -- so "lwarpmk html" must be done before "lwarpmk limages".
4540 --
4541 local htmlpdffile = io.open(sourcename .. "_html.pdf", "r")
4542 if (htmlpdffile == nil) then
4543 print ("")
4544 print ("lwarpmk: ===")
4545 print ("lwarpmk: The HTML version of the document does not exist.")
4546 print ("lwarpmk: Enter \"lwarpmk html\" to compile the HTML version.")
4547 print ("lwarpmk: ===")
4548 os.exit(1)
```

```
4549 end
4550 io.close (htmlpdffile)
4551 end -- checkhtmlpdfexists
4552
4553
4554 function warnlimages ()
4555 --
4556 -- Warning of a missing <sourcename>-images.txt file:
4557 print ("lwarpmk: ===")
4558 print ("lwarpmk: \"" .. sourcename .. "-images.txt\" does not exist.")
4559 print ("lwarpmk: Your project does not use SVG math or other lateximages,")
4560 print ("lwarpmk: or the file has been deleted somehow.")
4561 print ("lwarpmk: Use \"lwarpmk html1\" to recompile your project")
4562 print ("lwarpmk: and recreate \"" .. sourcename .. "-images.txt\".")
4563 print ("lwarpmk: If your project does not use SVG math or other lateximages,")
4564 print ("lwarpmk: then \"" .. sourcename .. "-images.txt\" will never exist, and")
4565 print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
4566 print ("lwarpmk: ===")
4567 end -- warnlimages
4568
4569
4570 function warnlimagesrecompile ()
4571 -- Warning if must recompile before creating limages:
4572 print ("")
4573 print ("lwarpmk: ===")
4574 print ("lwarpmk: Cross-references are not yet correct.")
4575 print ("lwarpmk: The document must be recompiled before creating the lateximages.")
4576 print ("lwarpmk: Enter \"lwarpmk html1\" again, then try \"lwarpmk limages\" again.")
4577 print ("lwarpmk: ===")
4578 end --warnlimagesrecompile
4579
4580
4581 function checklimages ()
4582 --
4583 -- Check <sourcename>.txt to see if need to recompile first.
4584 -- If any entry has a page number of zero, then there were incorrect images.
4585 --
4586 print ("lwarpmk: Checking for a valid " .. sourcename .. "-images.txt file.")
4587 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4588 if (limagesfile == nil) then
4589 warnlimages ()
4590 os.exit(1)
4591 end
4592 -- Track warning to recompile if find a page 0
4593 local pagezerowarning = false
4594 -- Scan <sourcename>.txt
4595 for line in limagesfile:lines() do
4596 -- lwimgpage is the page number in the PDF which has the image
4597 -- lwimghash is true if this filename is a hash
4598 -- lwimgname is the lateximage filename root to assign for the image
4599 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4600 -- For each entry:
4601 if ((i~=nil)) then
4602 -- If the page number is 0, image references are incorrect
4603 -- and must recompile the source document:
```

```
4604 if (lwimpage == "0") then
4605 pagezerowarning = true
4606 end
4607 end -- if i~=nil
4608 end -- do
4609 -- The last line should be |end|end|end|.
4610 -- If not, the compile must have aborted, and the images are incomplete.
4611 if (lwimpage ~= "end") then
4612 warnimagesrecompile()
4613 os.exit(1) ;
4614 end
4615 if (pagezerowarning) then
4616 warnimagesrecompile()
4617 os.exit(1) ;
4618 end -- pagezerowarning
4619 end -- checklimages
4620
4621
4622 function createuniximage (lwimgfullname)
4623 --
4624 -- Create one lateximage for Unix / Linux / Mac OS.
4625 --
4626 executecheckerror (
4627 cmdgroupopenname ..
4628 "pdfseparate -f " .. lwimpage .. " -l " .. lwimpage .. " " ..
4629 sourcename .. "_html.pdf" " ..
4630 imagesdirectory .. dirslash .. "lateximagetemp-%d" .. ".pdf" ..
4631 seqname ..
4632 -- Crop the image:
4633 "pdfcrop --hires " .. imagesdirectory .. dirslash .. "lateximagetemp-" ..
4634 lwimpage .. ".pdf" " ..
4635 imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4636 seqname ..
4637 -- Convert the image to svg:
4638 "pdftocairo -svg -noshrink " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" " ..
4639 imagesdirectory .. dirslash .. lwimgname .. ".svg" ..
4640 seqname ..
4641 -- Remove the temporary files:
4642 rmname .. " " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" .. seqname ..
4643 rmname .. " " .. imagesdirectory .. dirslash .. "lateximagetemp-" .. lwimpage .. ".pdf" ..
4644 cmdgroupclosename .. " >/dev/null " .. bgnam
4645 ,
4646 "File error trying to convert " .. lwimgfullname
4647)
4648 -- Every 32 images, wait for completion at below normal priority,
4649 -- allowing other image tasks to catch up.
4650 numimageprocesses = numimageprocesses + 1
4651 if (numimageprocesses > 32) then
4652 numimageprocesses = 0
4653 print ("lwarpmk: waiting")
4654 executecheckerror ("wait" , "File error trying to wait.")
4655 end
4656 end -- createuniximage
4657
4658
```

```

4659 function createwindowsimage (lwimgfullname)
4660 --
4661 -- Create one lateximage for Windows.
4662 --
4663 -- Every 32 images, wait for completion at below normal priority,
4664 -- allowing other image tasks to catch up.
4665 numimageprocesses = numimageprocesses + 1
4666 if (numimageprocesses > 32) then
4667 numimageprocesses = 0
4668 thiswaitcommand = "/WAIT /BELOWNORMAL"
4669 print ("lwarpmk: waiting")
4670 else
4671 thiswaitcommand = ""
4672 end
4673 -- Execute the image generation command
4674 executecheckerror (
4675 "start /B " .. thiswaitcommand .. " \\" .. lwarp_one_limage " ..
4676 lwimgpage .. " " ..
4677 lwimghash .. " " ..
4678 lwimgname .. " " ..
4679 sourcename .. " <nul >nul"
4680 ,
4681 "File error trying to create image."
4682)
4683 end -- createwindowsimage
4684
4685
4686 function createonelateximage (line)
4687 --
4688 -- Given the next line of <sourcename>.txt, convert a single image.
4689 --
4690 -- lwimgpage is the page number in the PDF which has the image
4691 -- lwimghash is true if this filename is a hash
4692 -- lwimgname is the lateximage filename root to assign for the image
4693 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4694 -- For each entry:
4695 if (i~=nil) then
4696 -- Skip if the page number is 0:
4697 if (lwimgpage == "0") then
4698 pagezerowarning = true
4699 -- Skip if the page number is "end":
4700 else if (lwimgpage == "end") then
4701 else
4702 -- Skip is this image is hashed and already exists:
4703 local lwimgfullname = imagesdirectory .. dirslash .. lwimgname .. ".svg"
4704 if (
4705 (lwimghash ~= "true") or
4706 (lfs.attributes(lwimgfullname,"mode")==nil) -- file not exists
4707)
4708 then -- not hashed or not exists:
4709 -- Print the name of the file being generated:
4710 print ("lwarpmk: " .. lwimgname)
4711 -- Touch/create the dest so that only once instance tries to build it:
4712 executecheckerror (
4713 newtouchname .. " " .. lwimgfullname ,

```

```
4714 "File error trying to touch " .. lwimgfullname
4715)
4716 -- Separate out the image into its own single-page pdf:
4717 if opsystem=="Unix" then
4718 createuniximage (lwimgfullname)
4719 elseif opsystem=="Windows" then
4720 createwindowsimage (lwimgfullname)
4721 end
4722 end -- not hashed or not exists
4723 end -- not page "end"
4724 end -- not page 0
4725 end -- not nil
4726 end -- createonelateximage
4727
4728
4729 function createlateximages ()
4730 --
4731 -- Create lateximages based on <sourcename>-images.txt:
4732 --
4733 -- See if the document must be recompiled first:
4734 checklimages ()
4735 -- See if the HTML version exists:
4736 checkhtmlpdfexists ()
4737 -- Attempt to create the lateximages:
4738 print ("lwarpmk: Creating lateximages.")
4739 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4740 if (limagesfile == nil) then
4741 warnlimages ()
4742 os.exit(1)
4743 end
4744 -- Create the lateximages directory, ignore error if already exists
4745 err = os.execute("mkdir " .. imagesdirectory)
4746 -- For Windows, create lwarp_one_limage.cmd from lwarp_one_limage.txt:
4747 if opsystem=="Windows" then
4748 executecheckerror (
4749 cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd" ,
4750 "File error trying to copy lwarp_one_limage.txt to lwarp_one_limage.cmd"
4751)
4752 end -- create lwarp_one_limage.cmd
4753 -- Track the number of parallel processes
4754 numimageprocesses = 0
4755 -- Track warning to recompile if find a page 0
4756 pagezerowarning = false
4757 -- Scan <sourcename>.txt
4758 for line in limagesfile:lines() do
4759 createonelateximage (line)
4760 end -- do
4761 io.close(limagesfile)
4762 print ("lwarpmk limages: ===")
4763 print ("lwarpmk limages: Wait a moment for the images to complete")
4764 print ("lwarpmk limages: before reloading the page.")
4765 print ("lwarpmk limages: ===")
4766 print ("lwarpmk limages: Done.")
4767 if (pagezerowarning == true) then
4768 print ("lwarpmk limages: WARNING: Images will be incorrect.")
```

```
4769 print ("lwarpmk limages: Enter \"lwarpmk cleanlimages\", then")
4770 print ("lwarpmk limages: recompile the document one more time, then")
4771 print ("lwarpmk limages: repeat \"lwarpmk images\" again.")
4772 end -- pagezerowarning
4773 end -- function
4774
4775
4776 function convertepstopdf ()
4777 --
4778 -- Converts EPS files to PDF files.
4779 -- The filenames are arg[argindex] and up.
4780 -- arg[1] is the command "epstopdf".
4781 --
4782 ignoreconf ()
4783 for i = argindex , #arg do
4784 if (lfs.attributes(arg[i],"mode")==nil) then
4785 print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4786 else
4787 print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4788 thispath, thisfilename, thisextension = splitfilename(arg[i])
4789 if (thispath == nil) then
4790 os.execute ("epstopdf " .. arg[i])
4791 else
4792 os.execute (
4793 "epstopdf " ..
4794 thispath .. thisfilename .. "." .. thisextension .. " " ..
4795 thispath .. thisfilename .. ".pdf"
4796)
4797 end
4798 end -- if
4799 end -- do
4800 end --function
4801
4802
4803 function convertpdfptosvg ()
4804 --
4805 -- Converts PDF files to SVG files.
4806 -- The filenames are arg[argindex] and up.
4807 -- arg[1] is the command "pdftosvg".
4808 --
4809 ignoreconf ()
4810 for i = argindex , #arg do
4811 if (lfs.attributes(arg[i],"mode")==nil) then
4812 print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4813 else
4814 print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4815 thispath, thisfilename, thisextension = splitfilename(arg[i])
4816 if (thispath == nil) then
4817 os.execute ("pdftocairo -svg " .. arg[i])
4818 else
4819 os.execute (
4820 "pdftocairo -svg " ..
4821 thispath .. thisfilename .. "." .. thisextension .. " " ..
4822 thispath .. thisfilename .. ".svg"
4823)
4824 end
4825 end
4826 end -- do
4827 end --function
```

```
4824 end
4825 end -- if
4826 end -- do
4827 end --function
4828
4829
4830 -- Force an update and conclude processing:
4831 function updateanddone ()
4832 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
4833 refreshdate ()
4834 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
4835 print ("lwarpmk: Done.")
4836 end -- function
4837
4838
4839 -- Start of the main code: --
4840
4841
4842 -- lwarpmk --version :
4843
4844 if (arg[1] == "--version") then
4845 print ("lwarpmk: " .. printversion)
4846
4847 else -- not --version
4848
4849
4850 -- print intro:
4851
4852 print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX Lwarp package.")
4853
4854
4855 -- lwarpmk print:
4856
4857 if arg[1] == "print" then
4858 loadconf ()
4859 if (latexmk == "true") then
4860 print ("lwarpmk: Compiling with: " .. printlatexcmd)
4861 executecheckerror (
4862 printlatexcmd ,
4863 "Compile error."
4864)
4865 print ("lwarpmk: Done.")
4866 else -- not latexmk
4867 verifyfileexists (sourcename .. ".tex") ;
4868 -- See if up to date:
4869 if (
4870 (lfs.attributes (sourcename .. ".pdf" , "modification") == nil) or
4871 (
4872 lfs.attributes (sourcename .. ".tex" , "modification") >
4873 lfs.attributes (sourcename .. ".pdf" , "modification")
4874)
4875) then
4876 -- Recompile if not yet up to date:
4877 manytimes(printlatexcmd, "")
4878 print ("lwarpmk: Done.") ;
```

```
4879 else
4880 print ("lwarpmk: " .. sourcename .. ".pdf is up to date.");
4881 end
4882 end -- not latexmk
4883
4884
4885 -- lwarpmk print1:
4886
4887 elseif arg[1] == "print1" then
4888 loadconf ()
4889 verifyfileexists (sourcename .. ".tex");
4890 onetime(printlatexcmd, "")
4891 print ("lwarpmk: Done.");
4892
4893
4894 -- lwarpmk printindex:
4895 -- Compile the index then touch the source
4896 -- to trigger a recompile of the document:
4897
4898 elseif arg[1] == "printindex" then
4899 loadconf ()
4900 os.execute (printindexcmd)
4901 print ("lwarpmk: -----")
4902 updateanddone ()
4903
4904
4905 -- lwarpmk printglossary:
4906 -- Compile the glossary then touch the source
4907 -- to trigger a recompile of the document:
4908
4909 elseif arg[1] == "printglossary" then
4910 loadconf ()
4911 print ("lwarpmk: Processing the glossary.")
4912
4913 os.execute(glossarycmd .. " " .. sourcename)
4914 updateanddone ()
4915
4916
4917 -- lwarpmk html:
4918
4919 elseif arg[1] == "html" then
4920 loadconf ()
4921 if (latexmk == "true") then
4922 print ("lwarpmk: Compiling with: " .. HTMLlatexcmd)
4923 executecheckerror (
4924 HTMLlatexcmd ,
4925 "Compile error."
4926)
4927 pdftohtml ()
4928 print ("lwarpmk: Done.")
4929 else -- not latexmk
4930 verifyfileexists (sourcename .. ".tex");
4931 -- See if exists and is up to date:
4932 if (
4933 (lfs.attributes (homehtmlfilename .. ".html" , "modification") == nil) or
```

```
4934 (
4935 lfs.attributes (sourcename .. ".tex" , "modification") >
4936 lfs.attributes (homehtmlfilename .. ".html" , "modification")
4937)
4938) then
4939 -- Recompile if not yet up to date:
4940 manytimes(HTMLlatexcmd, "_html")
4941 pdftohtml ()
4942 print ("lwarpmk: Done.")
4943 else
4944 print ("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
4945 end
4946 end -- not latexmk
4947
4948
4949 -- lwarpmk html1:
4950
4951 elseif arg[1] == "html1" then
4952 loadconf ()
4953 verifyfileexists (sourcename .. ".tex") ;
4954 onetime(HTMLlatexcmd, "_html")
4955 pdftohtml ()
4956 print ("lwarpmk: Done.")
4957
4958
4959 -- lwarpmk pdftohtml:
4960 elseif arg[1] == "pdftohtml" then
4961 loadconf ()
4962 pdftohtml ()
4963
4964
4965 -- lwarpmk htmlindex:
4966 -- Compile the index then touch the source
4967 -- to trigger a recompile of the document:
4968
4969 elseif arg[1] == "htmlindex" then
4970 loadconf ()
4971 os.execute (HTMLindexcmd)
4972 print ("lwarpmk: -----")
4973 updateanddone ()
4974
4975
4976 -- lwarpmk htmlglossary:
4977 -- Compile the glossary then touch the source
4978 -- to trigger a recompile of the document.
4979 -- The <sourcename>.xdy file is created by the glossaries package.
4980
4981 elseif arg[1] == "htmlglossary" then
4982 loadconf ()
4983 print ("lwarpmk: Processing the glossary.")
4984 os.execute(glossarycmd .. " " .. sourcename .. "_html")
4985 updateanddone ()
4986
4987
4988 -- lwarpmk limages:
```

```
4989 -- Scan the <sourcename>.txt file to create lateximages.
4990
4991 elseif arg[1] == "limages" then
4992 loadconf ()
4993 print ("lwarpmk: Processing images.")
4994 createlateximages ()
4995 print ("lwarpmk: Done.")
4996
4997
4998 -- lwarpmk again:
4999 -- Touch the source to trigger a recompile.
5000
5001 elseif arg[1] == "again" then
5002 loadconf ()
5003 updateanddone ()
5004
5005
5006 -- lwarpmk clean:
5007 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
5008
5009 elseif arg[1] == "clean" then
5010 loadconf ()
5011 removeaux ()
5012 print ("lwarpmk: Done.")
5013
5014
5015 -- lwarpmk cleanall
5016 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
5017 -- and also project.pdf, project.dvi, *.html
5018
5019 elseif arg[1] == "cleanall" then
5020 loadconf ()
5021 removeaux ()
5022 os.execute (rmname .. " " ..
5023 sourcename .. ".pdf " .. sourcename .. "_html.pdf " ..
5024 sourcename .. ".dvi " .. sourcename .. "_html.dvi " ..
5025 "*.html"
5026)
5027 print ("lwarpmk: Done.")
5028
5029
5030 -- lwarpmk cleanlimages
5031 -- Remove images from the imagesdirectory.
5032
5033 elseif arg[1] == "cleanlimages" then
5034 loadconf ()
5035 os.execute (rmname .. " " .. imagesdirectory .. dirslash .. "*")
5036 print ("lwarpmk: Done.")
5037
5038 -- lwarpmk epstopdf <list of file names>
5039 -- Convert EPS files to PDF using epstopdf
5040 elseif arg[1] == "epstopdf" then
5041 convertepstopdf ()
5042 print ("lwarpmk: Done.")
5043
```

```

5044
5045 -- lwarpmk pdftosvg <list of file names>
5046 -- Convert PDF files to SVG using pdftocairo
5047 elseif arg[1] == "pdftosvg" then
5048 convertpdftosvg ()
5049 print ("lwarpmk: Done.")
5050
5051
5052 -- lwarpmk with no argument :
5053
5054 elseif (arg[1] == nil) then
5055 printhelp ()
5056
5057
5058 -- lwarpmk -h or lwarpmk --help :
5059
5060 elseif (arg[1] == "-h") or (arg[1] == "--help") then
5061 printusage ()
5062
5063
5064 -- Unknown command:
5065
5066 else
5067 printhelp ()
5068 print ("\nlwarpmk: ***** Unknown command \""..arg[1].."\". *****\n")
5069 end
5070
5071 end -- not --version
5072 \end{filecontents*}
5073 % \end{Verbatim}% for syntax highlighting

5074 \end{LWR@createlwarpmk}

```

## 41 Stacks

**for HTML output:** 5075 \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:

```
5076 \newcommand*\LWR@depthnone}{-5}
```

All sectioning depths are deeper than LWR@depthfinished:

```
5077 \newcommand*\LWR@depthfinished}{-4}
5078 \newcommand*\LWR@depthbook}{-2}
5079 \newcommand*\LWR@depthpart}{-1}
5080 \newcommand*\LWR@depthchapter}{0}
5081 \newcommand*\LWR@depthsection}{1}
5082 \newcommand*\LWR@depthsubsection}{2}
5083 \newcommand*\LWR@depthsubsubsection}{3}
5084 \newcommand*\LWR@depthparagraph}{4}
5085 \newcommand*\LWR@depthsubparagraph}{5}
```

Used by \itemize, \enumerate, \description:

```
5086 \newcommand*\LWR@depthlist}{6}
```

Used by \item:

```
5087 \newcommand*\LWR@depthlistitem}{7}
5088 \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.

```
5089 \newcommand*\LWR@closeone}{% top of the stack
5090 \newcommand*\LWR@closetwo}{
5091 \newcommand*\LWR@closethree}{
5092 \newcommand*\LWR@closefour}{
5093 \newcommand*\LWR@closefive}{
5094 \newcommand*\LWR@closesix}{
5095 \newcommand*\LWR@closeseven}{
5096 \newcommand*\LWR@closeeight}{
5097 \newcommand*\LWR@closenine}{
5098 \newcommand*\LWR@closeten}{
5099 \newcommand*\LWR@closeeleven}{
5100 \newcommand*\LWR@closetwelve}{
```

## 41.3 Closing depths

A stack to record the depth of each level:



Note that nested L<sup>A</sup>T<sub>E</sub>X structures may push depths which are non-sequential.

*Ex:*

---

```

\begin{itemize}
 \item{A}
 \begin{description}
 \item{B}
 \end{description}
\end{itemize}

```

---

```

5101 \newcommand*\LWR@closedepthone{\LWR@depthnone}% top of the stack
5102 \newcommand*\LWR@closedepthtwo{\LWR@depthnone}
5103 \newcommand*\LWR@closedepththree{\LWR@depthnone}
5104 \newcommand*\LWR@closedepthfour{\LWR@depthnone}
5105 \newcommand*\LWR@closedepthfive{\LWR@depthnone}
5106 \newcommand*\LWR@closedepthsix{\LWR@depthnone}
5107 \newcommand*\LWR@closedepthseven{\LWR@depthnone}
5108 \newcommand*\LWR@closedeptheight{\LWR@depthnone}
5109 \newcommand*\LWR@closedepthnine{\LWR@depthnone}
5110 \newcommand*\LWR@closedephten{\LWR@depthnone}
5111 \newcommand*\LWR@closedeptheleven{\LWR@depthnone}
5112 \newcommand*\LWR@closedephtwelve{\LWR@depthnone}

```

## 41.4 Pushing and popping the stack

`\LWR@pushclose` {<*sectiontype*>}

Pushes one return action and its L<sup>A</sup>T<sub>E</sub>X depth onto the stacks.

```

5113 \NewDocumentCommand{\LWR@pushclose}{m}
5114 {%
5115 \global\let\LWR@closetwelve\LWR@closeeeleven%
5116 \global\let\LWR@closeeeleven\LWR@closeeten%
5117 \global\let\LWR@closeeten\LWR@closeenine%
5118 \global\let\LWR@closeenine\LWR@closeeeight%
5119 \global\let\LWR@closeeeight\LWR@closeeseven%
5120 \global\let\LWR@closeeseven\LWR@closesix%
5121 \global\let\LWR@closesix\LWR@closefive%
5122 \global\let\LWR@closefive\LWR@closefour%
5123 \global\let\LWR@closefour\LWR@closeethree%
5124 \global\let\LWR@closeethree\LWR@closetwo%
5125 \global\let\LWR@closetwo\LWR@closeone%
5126 \global\csletcs{LWR@closeone}{LWR@printclose#1}%
5127 \global\let\LWR@closedepthtwelve\LWR@closedeptheleven%
5128 \global\let\LWR@closedeptheleven\LWR@closedephten%
5129 \global\let\LWR@closedephten\LWR@closedepthnine%
5130 \global\let\LWR@closedepthnine\LWR@closedeptheight%
5131 \global\let\LWR@closedeptheight\LWR@closedepthseven%
5132 \global\let\LWR@closedepthseven\LWR@closedepthsix%
5133 \global\let\LWR@closedepthsix\LWR@closedepthfive%
5134 \global\let\LWR@closedepthfive\LWR@closedepthfour%
5135 \global\let\LWR@closedepthfour\LWR@closedepththree%

```

```

5136 \global\let\LWR@closedepththree\LWR@closedepthtwo%
5137 \global\let\LWR@closedepthtwo\LWR@closedepthone%
5138 \global\csletcs{LWR@closedepthone}{LWR@depth#1}%
5139 }

```

`\LWR@popclose` Pops one action and its depth off the stacks.

```

5140 \newcommand*{\LWR@popclose}
5141 {%
5142 \global\let\LWR@closeone\LWR@closetwo%
5143 \global\let\LWR@closetwo\LWR@closethree%
5144 \global\let\LWR@closethree\LWR@closefour%
5145 \global\let\LWR@closefour\LWR@closefive%
5146 \global\let\LWR@closefive\LWR@closesix%
5147 \global\let\LWR@closesix\LWR@closeseven%
5148 \global\let\LWR@closeseven\LWR@closeeight%
5149 \global\let\LWR@closeeight\LWR@closenine%
5150 \global\let\LWR@closenine\LWR@closeten%
5151 \global\let\LWR@closeten\LWR@closeeleven%
5152 \global\let\LWR@closeeleven\LWR@closetwelve%
5153 \global\let\LWR@closedepthone\LWR@closedepthtwo%
5154 \global\let\LWR@closedepthtwo\LWR@closedepththree%
5155 \global\let\LWR@closedepththree\LWR@closedepthfour%
5156 \global\let\LWR@closedepthfour\LWR@closedepthfive%
5157 \global\let\LWR@closedepthfive\LWR@closedepthsix%
5158 \global\let\LWR@closedepthsix\LWR@closedepthseven%
5159 \global\let\LWR@closedepthseven\LWR@closedeptheight%
5160 \global\let\LWR@closedeptheight\LWR@closedepthnine%
5161 \global\let\LWR@closedepthnine\LWR@closedephten%
5162 \global\let\LWR@closedephten\LWR@closedeptheleven%
5163 \global\let\LWR@closedeptheleven\LWR@closedephtwelve%
5164 }

5165 \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@setexparray{name}{index}{}
```

**for HTML output:** 5166 `\begin{warpHTML}`

```
\LWR@setexparray {<name>} {<index>} {<contents>}
```

```

5167 \NewDocumentCommand{\LWR@setexparray}{m m m}{%
5168 \let\LWR@temp@par\par%
5169 \let\par\relax%
5170 \edef\LWR@thisexparrayname{#1#2}%
5171 \ifstrempy{#3}%
5172 {\csdef{\LWR@thisexparrayname}{}}%
5173 {\csedef{\LWR@thisexparrayname}{#3}}%
5174 \let\par\LWR@temp@par%
5175 }

```

`\LWR@getexparray`  $\langle name \rangle$   $\langle index \rangle$

```

5176 \newcommand*{\LWR@getexparray}[2]{%
5177 \@nameuse{#1#2}%
5178 }

5179 \end{warpHTML}

```

## 43 Localizing catcodes

**for HTML & PRINT:** 5180 `\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.

```

5181 \newcommand{\StartDefiningTabulars}{%
5182 \LWR@traceinfo{StartDefiningTabulars}%
5183 \warpHTMLonly{\catcode'\&=\active}%
5184 }

```

`\StopDefiningTabulars` Place after defining something with & in it.

```

5185 \newcommand{\StopDefiningTabulars}{%
5186 \LWR@traceinfo{StopDefiningTabulars}%
5187 \warpHTMLonly{\catcode'\&=4}%
5188 }

```

**Bool** `LWR@mathmacro` 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.

```

5189 \newbool{LWR@mathmacro}
5190 \boolfalse{LWR@mathmacro}

```

`\StartDefiningMath` Place before defining something with  $\$$  in it.

```
5191 \newcommand{\StartDefiningMath}{%
5192 \LWR@traceinfo{StartDefiningMath}%
5193 \warpHTMLOnly{\catcode'\$=\active}%
5194 }
```

`\StopDefiningMath` Place after defining something with  $\$$  in it.

```
5195 \newcommand{\StopDefiningMath}{%
5196 \LWR@traceinfo{StopDefiningMath}%
5197 \warpHTMLOnly{\catcode'\$=3}% math shift
5198 }
```

```
5199 \end{warpall}
```

## 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 `lwarp`:

---

```
\xpatchcmd{\macroname}
 {$math expression$}
 {\inlinemathother$math expression$\inlinemathnormal}
 {}
 {\typeout{Error patching macroname.}}
```

---

**for HTML & PRINT:** 5200 `\begin{warpall}`

Bool `LWR@dynamicmath` True to mark inline math which is dynamic in nature, thus should not be hashed for reuse.  
 Default: `false`

```
5201 \newbool{LWR@dynamicmath}
5202 \boolfalse{LWR@dynamicmath}
```

`\inlinemathother` Place before using  $\$ \dots \$$  or  $\langle \dots \rangle$  if the contents of the math are not static, depending on counters or dynamic macros.

```

5203 \newcommand{\inlinemathother}{%
5204 \LWR@traceinfo{inlinemathother}%
5205 \booltrue{LWR@dynamicmath}%
5206 }

```

`\inlinemathnormal` Place after using `$ ... $` or `\( ... \)` with dynamic contents.

```

5207 \newcommand{\inlinemathnormal}{%
5208 \LWR@traceinfo{inlinemathnormal}%
5209 \boolfalse{LWR@dynamicmath}%
5210 }

5211 \end{warpall}

```

## 45 HTML entities

**for HTML output:** 5212 `\begin{warpHTML}`

HTML Unicode entities:

```
5213 \let\LWR@origampersand\&
```

`\HTMLentity`  $\{\langle entitytag \rangle\}$

```

5214 \newcommand*{\HTMLentity}[1]{%
5215 % \LWR@traceinfo{HTMLentity \detokenize{#1}}%
5216 \begingroup%
5217 \LWR@FBcancel%
5218 \LWR@origampersand#1;%
5219 \endgroup%
5220 % \LWR@traceinfo{HTMLentity done}%
5221 }

```

`\HTMLunicode`  $\{\langle hex\_unicode \rangle\}$

```
5222 \newcommand*{\HTMLunicode}[1]{\HTMLentity{\LWR@origpound{#1}}
```

`\&`

```
5223 \renewrobustcmd*{\&}{\HTMLentity{amp}}
```

`\textless`

```

5224 \let\LWR@origtextless\textless
5225 \renewrobustcmd*{\textless}{\HTMLentity{lt}}

```

`\textgreater`

```

5226 \let\LWR@origtextgreater\textgreater
5227 \renewrobustcmd*{\textgreater}{\HTMLentity{gt}}

5228 \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:** 5229 `\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.

```
5230 \providecommand*{\BaseJobname}{\jobname}
```

`\HTMLFilename` The prefix for all generated HTML files other than the home page, defaulting to empty. See section 7.6.1.

```
5231 \providecommand*{\HTMLFilename}{}

```

`\HomeHTMLFilename` The filename of the home page, defaulting to the `\BaseJobname`. See section 7.6.1.

```
5232 \providecommand*{\HomeHTMLFilename}{\BaseJobname}

```

`\SetHTMLFileNumber` `{\langle number \rangle}`

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.

```

5233 \newcommand*{\SetHTMLFileNumber}[1]{%
5234 \setcounter{LWR@htmlfilenumber}{#1}%
5235 }

```

`Bool FileSectionNames` Selects how to create HTML file names.

Defaults to use section names in the filenames.

```

5236 \newbool{FileSectionNames}
5237 \booltrue{FileSectionNames}

```

```
5238 \end{warpall}
```

**for HTML output:** 5239 `\begin{warpHTML}`

Ctrl LWR@htmlfilenumber Records the number of each HTML file as it is being created. Number 0 is the home page.

```
5240 \newcounter{LWR@htmlfilenumber}
5241 \setcounter{LWR@htmlfilenumber}{0}
```

`\LWR@htmlsectionfilename`  $\{ \langle \textit{htmlfilenumber or name} \rangle \}$

Prints the filename for a given section: `\HTMLFilename{}filenumber/name.html`

```
5242 \newcommand*{\LWR@htmlsectionfilename}[1]{%
5243 \LWR@traceinfo{LWR@htmlsectionfilename A !\detokenize{#1}!}%
```

Section 0 or empty is given the home filename. The filename must be detokenized for underscores.

```
5244 % \LWR@traceinfo{about to assign temp}%
5245 \LWR@sanitize{#1}%
5246 \LWR@traceinfo{about to compare with ??}%
5247 \ifthenelse{\equal{\LWR@sanitized}{??}}{%
5248 {\LWR@traceinfo{found ??}}%
5249 {\LWR@traceinfo{not found ??}}%
5250 \LWR@traceinfo{about to compare with zero or empty}%
5251 \ifthenelse{%
5252 \equal{\LWR@sanitized}{0}%
5253 \OR \equal{\LWR@sanitized}{}%
5254 \OR \equal{\LWR@sanitized}{??}}%
5255 }%
5256 {%
5257 \LWR@traceinfo{LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
5258 \HomeHTMLFilename.html%
5259 }%
```

For a L<sup>A</sup>T<sub>E</sub>X section named “Index” or “index” without a prefix, create a filename with a leading underscore to avoid colliding with the HTML filename `index.html`:

```
5260 {%
5261 \LWR@traceinfo{LWR@htmlsectionfilename C \LWR@sanitized}%
5262 \ifthenelse{%
5263 \equal{\HTMLFilename}{ } \AND
5264 \equal{\LWR@sanitized}{Index} \OR
5265 \equal{\LWR@sanitized}{index}}%
5266 }%
5267 {%
5268 \LWR@traceinfo{Prefixing the index name with an underscore.}%
5269 _\LWR@sanitized.html%
5270 }%
```

Otherwise, create a filename with the chosen prefix:

```
5271 {%
5272 \HTMLFilename\LWR@isolate{\LWR@sanitized}.html%
```

```

5273 }%
5274 }%
5275 \LWR@traceinfo{LWR@htmlsectionfilename Z}%
5276 }

```

`\LWR@htmlrefsectionfilename`  $\{ \langle label \rangle \}$

Prints the filename for the given label

```

5277 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
5278 \LWR@traceinfo{LWR@htmlrefsectionfilename: !\detokenize{#1}!}%

```

`\LWR@nullfonts` to allow math in a section name.

```

5279 \begingroup%
5280 \LWR@nullfonts%
5281 \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
5282 \endgroup%
5283 \LWR@traceinfo{LWR@htmlrefsectionfilename: done}%
5284 }

5285 \end{warpHTML}

```

## 47 Homepage link

**for HTML & PRINT:** 5286 `\begin{warpall}`

`\linkhomename` Holds the default name for the home link.

```

5287 \newcommand{\linkhomename}{Home}

5288 \end{warpall}

```

**for HTML output:** 5289 `\begin{warpHTML}`

`\LinkHome` May be used wherever you wish to place a link back to the homepage. The filename must be detokenized for underscores.

```

5290 \newcommand*\LinkHome{%
5291 \LWR@subhyperrefclass{\HomeHTMLFilename.html}{\linkhomename}{\linkhome}%
5292 }

5293 \end{warpHTML}

```

**for PRINT output:** 5294 `\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.

```

5295 \AtBeginDocument{
5296 \ifundefined{hyperref}{
5297 \newcommand*\LinkHome{%
5298 \linkhomename\ --- page \pageref{\BaseJobname-page-LWRfirstpage}%
5299 }
5300 }{
5301 \newcommand*\LinkHome{%
5302 \hyperref[\BaseJobname-page-LWRfirstpage]{\linkhomename}%
5303 }
5304 }
5305 }
5306
5307 \AfterEndPreamble{\label{\BaseJobname-page-LWRfirstpage}}

5308 \end{warpprint}

```

**for HTML output:** 5309 `\begin{warppHTML}`

`\LWR@topnavigation` Creates a link to the homepage at the top of the page for use when the window is too narrow for the sideroc.

```

5310 \newcommand*\LWR@topnavigation{
5311 \LWR@htmlElementclassline{nav}{topnavigation}{\LinkHome}
5312 }

```

`\LWR@botnavigation` Creates a link to the homepage at the bottom of the page for use when the window is too narrow for the sideroc.

```

5313 \newcommand*\LWR@botnavigation{
5314 \LWR@htmlElementclassline{nav}{botnavigation}{\LinkHome}
5315 }

```

```

5316 \end{warppHTML}

```

## 48 `\LWRPrintStack` diagnostic tool



Diagnostics tool: Prints the  $\LaTeX$  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:** 5317 `\begin{warppHTML}`

`\LWRPrintStack` Prints the closedepth stack.

```

5318 \newcommand*{\LWR@subprintstack}{
5319 \LWR@closedepthone\ \LWR@closedepthtwo\ \LWR@closedepththree\
5320 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\
5321 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\
5322 \LWR@closedephten\ \LWR@closedeptheleven\ \LWR@closedephtwelve\
5323 }
5324
5325 \newcommand*{\LWRPrintStack}{
5326 \LWR@startpars
5327 \LWR@subprintstack
5328 }

5329 \end{warpHTML}

```

**for PRINT output:** 5330 `\begin{warpprint}`

```

5331 \newcommand*{\LWRPrintStack}{}

5332 \end{warpprint}

```

## 49 Closing stack levels

**for HTML output:** 5333 `\begin{warpHTML}`

Close one nested level:

```

5334 \newcommand*{\LWR@closeoneprevious}{%
5335
5336 \LWR@closeone
5337
5338 \LWR@popclose
5339 }

```

`\LWR@closeprevious` `{\sectintype}` Close everything up to the given depth:

```

5340 \newcommand*{\LWR@closeprevious}[1]{
5341 \LWR@traceinfo{%
5342 \LWR@closeprevious to depth \csuse{\LWR@depth#1}, %
5343 depths are \LWR@subprintstack%
5344 }%

```

Close any pending paragraph:

```

5345 \LWR@stoppars%

```

Close anything nested deeper than the desired depth. First close anything deeper, then at most one of the same level.

```

5346 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{>}{\csuse{LWR@depth#1}}}}%
5347 {%
5348 \LWR@traceinfo{LWR@closeprevious: closing out depth \LWR@closedepthone}%
5349 \LWR@closeoneprevious%
5350 }%
5351 \ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}{\csuse{LWR@depth#1}}}}%
5352 {%
5353 \LWR@traceinfo{LWR@closeprevious: closing out depth \LWR@closedepthone}%
5354 \LWR@closeoneprevious%
5355 }{}%
5356 \LWR@traceinfo{LWR@closeprevious: done, depths are \LWR@subprintstack}%
5357 }

5358 \end{warpHTML}

```

## 50 PDF pages and styles

**for HTML output:** 5359 \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.

```

5360 \newcommand{\LWR@forcenewpage}{%
5361 \LWR@traceinfo{LWR@forcenewpage}%
5362 \ifinner\else%
5363 \LWR@stoppars\LWR@orignewpage\LWR@startpars%
5364 \fi%
5365 }

```

\pagestyle, etc. are nullified for HTML output.

\pagestyle {<style>}

```
5366 \renewcommand*{\pagestyle}[1]{}
```

\thispagestyle {<style>}

```
5367 \renewcommand*{\thispagestyle}[1]{}
```

\markboth {<left>} {<right>}

```
5368 \renewcommand*{\markboth}[2]{}
```

\markright {<right>}

```
5369 \renewcommand*{\markright}[1]{}
```

`\raggedbottom`

5370 `\renewcommand*{\raggedbottom}{}`

`\flushbottom`

5371 `\renewcommand*{\flushbottom}{}`

`\sloppy`

5372 `\renewcommand*{\sloppy}{}`

`\fussy`

5373 `\renewcommand*{\fussy}{}`

`\pagenumbering` \* `{<commands>}`

5374 `\RenewDocumentCommand{\pagenumbering}{s m}{}`

5375 `\end{warpHTML}`

## 51 HTML tags, spans, divs, elements

**for HTML output:** 5376 `\begin{warpHTML}`

### 51.1 Mapping L<sup>A</sup>T<sub>E</sub>X sections to HTML sections

```

5377 \newcommand*{\LWR@tagtitle}{h1}
5378 \newcommand*{\LWR@tagtitleend}{/h1}
5379 \newcommand*{\LWR@tagbook}{div class="book"}
5380 \newcommand*{\LWR@tagbookend}{/div}
5381 \newcommand*{\LWR@tagpart}{h2}
5382 \newcommand*{\LWR@tagpartend}{/h2}
5383 \newcommand*{\LWR@tagchapter}{h3}
5384 \newcommand*{\LWR@tagchapterend}{/h3}
5385 \newcommand*{\LWR@tagsection}{h4}
5386 \newcommand*{\LWR@tagsectionend}{/h4}
5387 \newcommand*{\LWR@tagsubsection}{h5}
5388 \newcommand*{\LWR@tagsubsectionend}{/h5}
5389 \newcommand*{\LWR@tagsubsubsection}{h6}
5390 \newcommand*{\LWR@tagsubsubsectionend}{/h6}
5391 \newcommand*{\LWR@tagparagraph}{span class="paragraph"}
5392 \newcommand*{\LWR@tagparagraphend}{/span}
5393 \newcommand*{\LWR@tagsubparagraph}{span class="subparagraph"}
5394 \newcommand*{\LWR@tagsubparagraphend}{/span}
5395

```

```
5396 \newcommand*{\LWR@tagregularparagraph}{p}
```

## 51.2 Babel-French tag modifications

Adjust babel-french for HTML spaces. So far, this only works for *pdf<sub>l</sub>atex* and *xelatex*.

*(Emulates or patches code by DANIEL FLIPO.)*

```
5397 \providecommand*{\LWR@FBcancel}{}
5398
5399 \AtBeginDocument{%
```

In some circumstances, `\NoAutoSpacing` may be defined when `\frenchbsetup` is not.

```
5400 \@ifundefined{NoAutoSpacing}%
5401 {}%
5402 {%
5403 \LetLtxMacro\LWR@FBcancel\NoAutoSpacing%
5404 }%
5405
5406 \@ifundefined{frenchbsetup}%
5407 {}%
5408 {%
5409 \frenchbsetup{FrenchFootnotes=false}%
5410 %
5411 \renewrobustcmd*{\FBcolonspace}{%
5412 \begingroup%
5413 \LWR@FBcancel%
5414 \LWR@origampersand{}nbsp;%
5415 \endgroup%
5416 }%
5417 \renewrobustcmd*{\FBthinspace}{%
5418 \begingroup%
5419 \LWR@FBcancel%
5420 \LWR@origampersand\LWR@origpound{x202f;% \,
5421 \endgroup%
5422 }%
5423 \renewrobustcmd*{\FBguillspace}{%
5424 \begingroup%
5425 \LWR@FBcancel%
5426 \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}
5427 \endgroup%
5428 }%
5429 \DeclareDocumentCommand{\FBmedkern}{}{}%
5430 \begingroup%
5431 \LWR@FBcancel%
5432 \LWR@origampersand\LWR@origpound{x202f;% \,
5433 \endgroup%
5434 }%
5435 \DeclareDocumentCommand{\FBthickkern}{}{}%
5436 \begingroup%
5437 \LWR@FBcancel%
```

```

5438 \LWR@origampersand{}nbsp;% ~
5439 \endgroup%
5440 }%
5441 \renewrobustcmd*{~}{\HTMLentity{nbsp}}% was overwritten by babel-french
5442 \iffBunicode%
5443 \else%
5444 \DeclareTextSymbol{\FBtextellipsis}{LY1}{133}%
5445 \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
5446 \fi%
5447 }%
5448 }

```

### 51.3 HTML output formatting

Helps format the output HTML code for human readability.

`\LWR@indentHTML` Newline and indent the output HTML code.

```

5449 \newcommand*\LWR@indentHTML{%
5450 \LWR@orignewline\LWR@origrule{2em}{0pt}%
5451 }

```

`\LWR@indentHTMLtwo` Newline and indent the output HTML code.

```

5452 \newcommand*\LWR@indentHTMLtwo{%
5453 \LWR@orignewline\LWR@origrule{4em}{0pt}%
5454 }

```

### 51.4 HTML tags

`\LWR@htmltagc` `{<tag>}` Break ligatures and use upright apostrophes in HTML tags.

`\protect` is in case the tag appears in TOC, LOF, LOT.

```

5455 \newcommand*\LWR@htmltagc[1]{%
5456 \LWR@traceinfo{\LWR@htmltagc !\detokenize{#1}!}%
5457 \begingroup%
5458 \LWR@FBcancel%
5459 \ifmmode\else\protect\LWR@origttfamily\fi%
5460 \protect\LWR@origtextless%
5461 \LWR@isolate{#1}%
5462 \protect\LWR@origtextgreater%
5463 \endgroup%
5464 }

```

Env `\LWR@nestspan` Disable minipage, `\parbox`, and HTML `<div>`s inside a `<span>`.



`\begin{\LWR@nestspan}` must follow the opening `<span>` tag to allow a paragraph to start if the span is at the beginning of a new paragraph.

 `\end{LWR@nestspan}` must follow the `</span>` or a `<p>` may appear inside the span.

```

5465 \newcommand*{\LWR@nestspanitem}{%
5466 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
5467 \LWR@origitem%
5468 }
5469
5470 \newenvironment*{LWR@nestspan}
5471 {%
5472 \LWR@traceinfo{LWR@nestspan starting}%
5473 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5474 {%
5475 \LWR@traceinfo{LWR@nestspan: inside a lateximage}%
5476 }%
5477 {% not in a lateximage
5478 \LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
5479 \addtocounter{LWR@spandepth}{1}%
5480 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}%
5481 {\LWR@subhtmlElementclass{span}{inlineminipage}}%
5482 {\LWR@htmltagc{/span}}%
5483 \RenewDocumentEnvironment{BlockClass}{o m}{}{}%
5484 \renewcommand{\BlockClassSingle}[2]{##2}%
5485 \renewcommand{\LWR@forcenewpage}{}%
5486 \renewcommand{\LWR@liststart}{}%
5487 \let\item\LWR@nestspanitem%
5488 }%
5489 \renewcommand{\LWR@listend}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
5490 \renewenvironment{quote}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
5491 \renewenvironment{quotation}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
5492}% not in a lateximage
5493 \LWR@traceinfo{LWR@nestspan starting: done}%
5494}% starting env
5495}% ending env
5496 \LWR@traceinfo{LWR@nestspan ending}%
5497 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5498 {}%
5499 {\addtocounter{LWR@spandepth}{-1}}%
5500 \LWR@traceinfo{LWR@nestspan ending: done}%
5501 }
5502
5503 \AfterEndEnvironment{LWR@nestspan}{\global\let\par\LWR@closeparagraph}

```

`\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.

```

5504 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
5505 \LWR@ensuredoingapar%
5506 \LWR@htmltagc{#1}%
5507 \begin{LWR@nestspan}%
5508 #2%
5509 \LWR@htmltagc{/#1}%

```

```
5510 \end{LWR@nestspan}%
5511 }
```

```
\LWR@htmlspanclass [<style>] {<class>} {<text>}
```

```
5512 \NewDocumentCommand{\LWR@htmlspanclass}{o m +m}{%
5513 \LWR@traceinfo{\LWR@htmlspanclass |#1|#2|}%
5514 \LWR@ensuredoingapar%
5515 \LWR@subhtmlmlelementclass{span}[#1][#2]%
5516 \begin{LWR@nestspan}%
5517 #3%
5518 \LWR@htmltagc{/span}%
5519 \LWR@traceinfo{\LWR@htmlspanclass done}%
5520 \end{LWR@nestspan}%
5521 }
```

```
\LWR@htmltag {<tag>}
```

Print an HTML tag: <tag>

```
5522 \newcommand*{\LWR@htmltag}[1]{%
5523 % \LWR@traceinfo{\LWR@htmltagb !\detokenize{#1}!}%
5524 \LWR@htmltagc{#1}%
5525 % \LWR@traceinfo{\LWR@htmltagb: done}%
5526 }
```

## 51.5 Block tags and comments

In the following, `\origttfamily` breaks ligatures, which may not be used for HTML codes:

```
\LWR@htmlopencomment
\LWR@htmlclosecomment
```

```
5527 \newcommand*{\LWR@htmlopencomment}{%
5528 {%
5529 % \LWR@traceinfo{\LWR@htmlopencomment}%
5530 \beginingroup%
5531 \LWR@FBcancel%
5532 \ifmmode\else\protect\LWR@origttfamily\fi%
5533 \LWR@print@mbox{\LWR@origtextless{}!-\/-}%
5534 \endgroup%
5535 }%
5536 }
5537
5538 \newcommand*{\LWR@htmlclosecomment}{%
5539 {%
5540 % \LWR@traceinfo{\LWR@htmlclosecomment}%
5541 \beginingroup%
5542 \LWR@FBcancel%
5543 \ifmmode\else\protect\LWR@origttfamily\fi%
5544 \LWR@print@mbox{-\/-\LWR@origtextgreater}%
5545 }
```

```
5545 \endgroup%
5546 }%
5547 }
```

`\LWR@htmlcomment` {*<comment>*}

```
5548 \newcommand{\LWR@htmlcomment}[1]{%
5549 \LWR@htmlcomment{}}%
5550 {%
5551 \LWR@origttfamily% break ligatures
5552 #1%
5553 }%
5554 \LWR@htmlclosecomment{}}
```

`\LWR@htmlblockcomment` {*<comment>*}

```
5555 \newcommand{\LWR@htmlblockcomment}[1]
5556 {\LWR@stoppars\LWR@htmlcomment{#1}\LWR@startpars}
```

`\LWR@htmlblocktag` {*<tag>*} print a stand-alone HTML tag

```
5557 \newcommand*\LWR@htmlblocktag}[1]{%
5558 \LWR@stoppars%
5559 \LWR@htmltag{#1}%
5560 \LWR@startpars%
5561 }
```

## 51.6 Div class and element class

`\LWR@subhtmlclass` {*<element>*} [*<style>*] {*<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.

```
5562 \NewDocumentCommand{\LWR@subhtmlclass}{m O{} m}{%
5563 \LWR@traceinfo{\LWR@subhtmlclass !#1!#2!#3!}%
5564 \ifblank{#2}%
5565 {% empty option
5566 \LWR@htmltag{%
5567 #1 % space
5568 class=\textquotedbl#3\textquotedbl\ % space
5569 }}%
5570 }%
5571 {% non-empty option
5572 \LWR@htmltag{%
5573 #1\LWR@indentHTML%
5574 class=\textquotedbl#3\textquotedbl\LWR@indentHTML%
5575 style=\textquotedbl#2\textquotedbl\LWR@orignewline%
```

```

5576 }%
5577 }%
5578 \LWR@traceinfo{LWR@subhtmllementclass done}%
5579 }

```

`\LWR@htmllementclass` {<*element*>} {<*class*>} [<*style*>]

```

5580 \NewDocumentCommand{\LWR@htmllementclass}{m o m}{%
5581 \LWR@stoppars%
5582 \LWR@forceemptyline%
5583 \LWR@subhtmllementclass{#1}[#2]{#3}%
5584 \LWR@startpars%
5585 }

```

`\LWR@htmllementclassend` {<*element*>} {<*class*>}

```

5586 \newcommand*{\LWR@htmllementclassend}[2]{%
5587 \LWR@stoppars%
5588 \LWR@htmltag{/#1}%
5589 \ifbool{HTMLDebugComments}{%
5590 \LWR@htmlcomment{End of #1 ‘#2’}%
5591 }{}%
5592 \LWR@startpars%
5593 }

```

`\LWR@htmldivclass` [<*style*>] {<*class*>}

```

5594 \NewDocumentCommand{\LWR@htmldivclass}{o m}{%
5595 \LWR@htmllementclass{div}[#1]{#2}%
5596 }

```

`\LWR@htmldivclassend` {<*class*>}

```

5597 \newcommand*{\LWR@htmldivclassend}[1]{%
5598 \LWR@htmllementclassend{div}{#1}%
5599 }

```

## 51.7 Single-line elements

A single-line element, without a paragraph tag for the line of text:

`\LWR@htmllementclassline` {<*element*>} [<*style*>] {<*class*>} {<*text*>}

```

5600 \NewDocumentCommand{\LWR@htmllementclassline}{m o m +m}{%
5601 \LWR@stoppars
5602 \LWR@forceemptyline%
5603 \LWR@subhtmllementclass{#1}[#2]{#3}%
5604 #4%
5605 \LWR@htmltag{/#1}
5606 \LWR@startpars
5607 }

```

## 51.8 HTML5 semantic elements

`\LWR@htmlElement`  $\{\langle element \rangle\}$

```
5608 \newcommand*\LWR@htmlElement}[1]{%
5609 \LWR@htmlblocktag{#1}
5610 }
```

`\LWR@htmlElementend`  $\{\langle element \rangle\}$

```
5611 \newcommand*\LWR@htmlElementend}[1]{%
5612 \LWR@stoppars
5613 \LWR@htmltag{/#1}
5614 \LWR@startpars
5615 }
5616
5617 \end{warpHTML}
```

## 51.9 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 [90](#).

Env `BlockClass`  $[\langle style \rangle] \{\langle class \rangle\}$  High-level interface for `<div>` classes.

Ex: `\begin{BlockClass}{class} text \end{BlockClass}`

**for PRINT output:**

```
5618 \begin{warpprint}
5619 \NewDocumentEnvironment{BlockClass}{o m}{}{}%
5620 \end{warpprint}
```

**for HTML output:**

```
5621 \begin{warpHTML}
5622 \NewDocumentEnvironment{LWR@print@BlockClass}{o m}{}{}%
5623 \NewDocumentEnvironment{LWR@HTML@BlockClass}{o m}%
5624 {%
5625 \LWR@htmldivclass[#1]{#2}%
5626 }
5627 {\LWR@htmldivclassend{#2}}
5628
5629 \LWR@formattedenv{BlockClass}
5630 \end{warpHTML}
```

`\BlockClassSingle`  $\{\langle class \rangle\} \{\langle text \rangle\}$  A single-line `<div>`, without a paragraph tag for the line of text.

**for HTML & PRINT:**

```
5631 \begin{warpall}
5632 \newcommand{\BlockClassSingle}[2]{#2}
5633 \end{warpall}
```

**for HTML output:** 5634 `\begin{warpHTML}`  
 5635 `\newcommand{\LWR@HTML@BlockClassSingle}[2]{%`  
 5636 `\LWR@html@element@classline{div}{#1}{#2}%`  
 5637 `}`  
 5638  
 5639 `\LWR@formatted{BlockClassSingle}`  
 5640 `\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 PRINT output:** 5641 `\begin{warpprint}`  
 5642 `\NewDocumentCommand{\InlineClass}{D{()}{}}{ o m +m}{#4}%`  
 5643 `\end{warpprint}`

**for HTML output:** 5644 `\begin{warpHTML}`  
 5645 `\NewDocumentCommand{\LWR@print@InlineClass}{D{()}{}}{ o m +m}{#4}%`  
 5646  
 5647 `\NewDocumentCommand{\LWR@HTML@InlineClass}{D{()}{}}{ o m +m}{%`  
 5648 `\ifbool{FormatWP}{%`  
 5649 `\LWR@html@span@class[#1]{#3}{#4}%`  
 5650 `}{%`  
 5651 `\LWR@html@span@class[#2]{#3}{#4}%`  
 5652 `}%`  
 5653 `}`  
 5654  
 5655 `\LWR@formatted{InlineClass}`  
 5656 `\end{warpHTML}`

Env `LWR@BlockClassWP` {*<WPstyle>*} {*<HTMLstyle>*} {*<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 PRINT output:** 5657 `\begin{warpprint}`  
 5658 `\NewDocumentEnvironment{LWR@BlockClassWP}{m m m}{}}{%`  
 5659 `\end{warpprint}`

**for HTML output:** 5660 `\begin{warpHTML}`  
 5661 `\NewDocumentEnvironment{LWR@print@LWR@BlockClassWP}{m m m}{}}{%`  
 5662 `\NewDocumentEnvironment{LWR@HTML@LWR@BlockClassWP}{m m m}{%`  
 5663 `{%`  
 5664 `\LWR@stoppars%`  
 5665 `\ifbool{FormatWP}{%`  
 5666 `{%`  
 5667 `\addtocounter{LWR@thisautoidWP}{1}%`  
 5668  
 5668 `\LWR@html@tag{%`

```

5669 div class=\textquotedbl#3\textquotedbl\ % space
5670 id=\textquotedbl%
5671 \LWR@print@mbbox{autoidWP-\arabic{LWR@thisautoidWP}}%
5672 \textquotedbl%
5673 \ifblank{#1}{\style=\textquotedbl#1\textquotedbl}%
5674 }%
5675 }% FormatWP
5676 {% not FormatWP
5677 \LWR@htmltag{%
5678 div class=\textquotedbl#3\textquotedbl%
5679 \ifblank{#2}{\style=\textquotedbl#2\textquotedbl}%
5680 }%
5681 }% not FormatWP
5682 \LWR@startpars%
5683 }
5684 {\LWR@htmldivclassend{#3}}
5685
5686 \LWR@formattedenv{LWR@BlockClassWP}
5687 \end{warpHTML}

```

## 51.10 Closing HTML tags

for HTML output: 5688 \begin{warpHTML}

Sections H1, H2, etc. do not need a closing HTML tag, but we add a comment for readability:

```

5689 \newcommand*{\LWR@printclosebook}
5690 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing book}}{}}
5691 \newcommand*{\LWR@printclosepart}
5692 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{}}
5693 \newcommand*{\LWR@printclosechapter}
5694 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
5695 \newcommand*{\LWR@printclosesection}
5696 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
5697 \newcommand*{\LWR@printclosesubsection}
5698 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
5699 \newcommand*{\LWR@printclosesubsection}
5700 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
5701 \newcommand*{\LWR@printcloseparagraph}
5702 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
5703 \newcommand*{\LWR@printclose subparagraph}
5704 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}

```

Lists require closing HTML tags:

```

5705 \newcommand*{\LWR@printcloselistitem}
5706 {\LWR@htmltag{/li}}
5707 \newcommand*{\LWR@printclosedescitem}
5708 {\LWR@htmltag{/dd}}
5709 \newcommand*{\LWR@printcloseitemize}
5710 {\LWR@htmltag{/ul}}
5711 \newcommand*{\LWR@printcloseenumerate}

```

```

5712 {\LWR@htmltag{/ol}}
5713 \newcommand*{\LWR@printclosedescription}
5714 {\LWR@htmltag{/dl}}

5715 \end{warpHTML}

```

## 52 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 53 has high-level commands which allow paragraph-tag generation to start/stop. Even when allowed (`\LWR@doingstartpars`), tags are not generated until a  $\LaTeX$  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.

**for HTML output:** 5716 `\begin{warpHTML}`

Ctrl `LWR@spandepth` Do not create paragraph tags inside of an HTML span.

```

5717 \newcounter{LWR@spandepth}
5718 \setcounter{LWR@spandepth}{0}

```

Bool `LWR@doingstartpars` Tells whether paragraphs may be generated.

```

5719 \newbool{LWR@doingstartpars}
5720 \boolfalse{LWR@doingstartpars}

```

Bool `LWR@doingapar` Tells whether have actually generated and are currently processing paragraph text.

```

5721 \newbool{LWR@doingapar}
5722 \global\boolfalse{LWR@doingapar}

```

`\LWR@ensuredoingapar` If are about to print something visible, and if allowed to start a new paragraph, ensure that are `LWR@doingapar`, so that paragraph tags are placed:

```

5723 \newcommand*{\LWR@ensuredoingapar}{%
5724 \ifbool{LWR@doingstartpars}%
5725 {\global\booltrue{LWR@doingapar}}%
5726 }%
5727 }

```

`\PN@parnotes@auto` Redefined by `parnotes` to print paragraph notes at the end of each paragraph.

```

5728 \def\PN@parnotes@auto{}%

```

`\LWR@openparagraph`

```
5729 \newcommand*{\LWR@openparagraph}
5730 {%
```

See if paragraph handling is enabled:

```
5731 \ifbool{\LWR@doingstartpars}%
5732 {% handling pars
```

See if have already started a lateximage or a <span>. If so, do not generate nested paragraph tags.

```
5733 \ifboolexpr{
5734 test {\ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}} or
5735 test {\ifnumcomp{\value{\LWR@spandepth}}{>}{0}}
5736 }{% nested par tags?
```

If so: Do nothing if already started a lateximage page. Cannot nest a lateximage. Also do nothing if already inside a <span>. Do not nest paragraph tags inside a <span>.

```
5737 }{% no nested par tags
```

Else: No lateximage or <span> has been started yet, so it's OK to generate paragraph tags.

```
5738 {% yes nest par tags
```

If parnotes is used, paragraph notes are inserted before starting the next paragraph:

```
5739 \PN@parnotes@auto%
```

The opening paragraph tag:

```
5740 \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@originewline%
```

Now have started a paragraph.

```
5741 \global\booltrue{\LWR@doingapar}%
```

At the endof each paragraph, generate closing tag and do regular /par stuff. (Attempting to use the everyhook cr hook for \LWR@closeparagraph does not work well.)

```
5742 \let\par\LWR@closeparagraph%
5743 }% end of yes nest par tags
5744 }% end of handling pars
5745 {}% not handling pars
5746 }
```

\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.

```
5747 \newcommand*{\LWR@closeparagraph@br}
5748 {%
```

```

5749 \ifboolexpr{
5750 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
5751 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} and
5752 not bool {LWR@intabularmetadata}
5753 }%
5754 {\unskip\LWR@htmltagc{br /}}%
5755 {}%
5756 }

```

\LWR@closeparagraph

```

5757 \newcommand*{\LWR@closeparagraph}
5758 {%
5759 % \LWR@traceinfo{LWR@closeparagraph}%

```

See if paragraph handling is enabled:

```
5760 \ifbool{LWR@doingapar}%
```

If currently in paragraph mode:

```
5761 {% handling pars
```

See if already started a lateximage or a <span>:

```

5762 \ifboolexpr{
5763 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5764 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5765 }%

```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```

5766 {% no nested par tags
5767 \LWR@closeparagraph@br%
5768 }% no nested par tags

```

If have not already started a lateximage or a <span>:

```
5769 {% yes nest par tags
```

Print a closing tag and some extra vertical space.

(The fill seems to be required to force the caption package to create flush left caption text in the HTML.)

```

5770 \@hspacer{\fill}% \hspace*{\fill}
5771 \leavevmode\LWR@orignewline%
5772 \LWR@htmltagc{/\LWR@tagregularparagraph}%

```

No longer doing a paragraph:

```
5773 \global\boolfalse{LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
5774 \global\boolfalse{LWR@minipagethispar}%
```

If parnotes is used, paragraph notes are inserted after ending the previous paragraph:

```
5775 \PN@parnotes@auto%
5776 }% end of yes nest par tags
5777 }% end of handling pars
```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```
5778 {% not handling pars
5779 \LWR@closeparagraph@br%
5780 }% not handling pars
```

In most cases, finish with a  $\LaTeX$  `\par`, but in the case of paragraphs between lines in a tabular fetch the next token instead:

```
5781 \ifboolexpr{%
5782 not bool {LWR@doingapar} and
5783 test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
5784 test {
5785 \ifnumcomp{\value{LWR@tabulardepth}}{=}{\value{LWR@tabularpardepth}}
5786 } and
5787 bool {LWR@intabularmetadata} and
5788 not bool {LWR@tableparcell} and
5789 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}}
5790 }%
5791 {%
5792 \LWR@getmynexttoken%
5793 }{%
5794 \LWR@origpar%
5795 }%
5796 }

5797 \end{warpHTML}
```

## 53 Paragraph start/stop handling

These commands allow/disallow the generation of HTML paragraph tags.

Section 52 has the commands which actually generate the tags.

The everyhook package is used to generate the opening paragraph tags. The closing tags are generated by `\par`.

**for HTML output:** 5798 `\begin{warpHTML}`

`\LWR@startpars` Begin handling HTML paragraphs. This allows an HTML paragraph to start, but one has not yet begun.

```
5799 \newcommand*{\LWR@startpars}%
5800 {%
5801 % \LWR@traceinfo{\LWR@startpars}%
```

Ignore if inside a span:

```
5802 \ifnumcomp{\value{\LWR@spandepth}}{>}{0}%
5803 }%
5804 {%
```

See if currently handling HTML paragraphs:

```
5805 \ifbool{\LWR@doingstartpars}%
```

If already in paragraph mode, do nothing.

```
5806 }%
```

If not currently in paragraph mode:

```
5807 {%
```

At the start of each paragraph, generate an opening tag:

```
5808 \PushPreHook{par}{\LWR@openparagraph}%
```

At the end of each paragraph, generate closing tag then do regular /par actions:

```
5809 \let\par\LWR@closeparagraph
5810
5811 }% an intentionally blank line
```

Are now handling paragraphs, but have not yet actually started one:

```
5812 \global\setbool{\LWR@doingstartpars}{true}%
```

No <par> tag yet to undo:

```
5813 \global\boolfalse{\LWR@doingapar}%
5814 }% nestspan
5815 % \LWR@traceinfo{\LWR@startpars: done}%
5816 }
```

`\LWR@stoppars` Stop handling HTML paragraphs. Any currently open HTML paragraph is closed, and no more will be opened.

```
5817 \newcommand*{\LWR@stoppars}%
5818 {%
```

Ignore if inside a span:

```
5819 \ifnumcomp{\value{\LWR@spandepth}}{>}{0}%
```

5820 {}%

5821 {%

See if currently handling HTML paragraphs:

5822 \ifbool{LWR@doingapar}%

if currently in an HTML paragraph:

5823 {%

Print a closing tag:

5824 \leavevmode\LWR@orignewline%

5825 \LWR@htmltagc{/LWR@tagregularparagraph}%

5826 \LWR@orignewline%

No longer have an open HTML paragraph:

5827 \global\boolfalse{LWR@doingapar}%

Disable the special minipage & \hspace interaction until a new minipage is found:

5828 \global\boolfalse{LWR@minipagethispar}

5829 }%

If was not in an HTML paragraph:

5830 {}%

See if currently allowing HTML paragraphs:

5831 \ifbool{LWR@doingstartpars}%

If so: clear the par hook to no longer catch paragraphs:

5832 {\ClearPreHook{par}}%

Else: Do nothing:

5833 {}%

No longer in paragraph mode:

5834 \global\setbool{LWR@doingstartpars}{false}%

No <p> tag to undo:

5835 \global\boolfalse{LWR@doingapar}%

5836 }% nestspan

5837 }

5838 \end{warpHTML}

## 54 Indentfirst

Pkg indentfirst indentfirst redefines \@afterindentfalse to be \@afterindenttrue. This is reversed \@AtBeginDocument here.

```
for HTML output: 5839 \begin{warpHTML}

5840 \AtBeginDocument{
5841 \def\@afterindentfalse{\let\if@afterindent\iffalse}
5842 \@afterindentfalse
5843 }
5844 \let\LWR@afterindent@syntaxhighlight\fi% syntax highlighting

5845 \end{warpHTML}
```

## 55 Page headers and footers

for HTML & PRINT: 5846 \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.

```
5847 \newcommand{\LWR@firstpagetop}{} % for the home page alone
5848 \newcommand{\LWR@pagetop}{} % for all other pages
5849 \newcommand{\LWR@pagebottom}{}

```

\HTMLFirstPageTop {*<text and logos>*}

```
5850 \newcommand{\HTMLFirstPageTop}[1]{%
5851 \renewcommand{\LWR@firstpagetop}{#1}%
5852 }
```

\HTMLPageTop {*<text and logos>*}

```
5853 \newcommand{\HTMLPageTop}[1]{%
5854 \renewcommand{\LWR@pagetop}{#1}%
5855 }
```

\HTMLPageBottom {*<text and logos>*}

```
5856 \newcommand{\HTMLPageBottom}[1]{%
5857 \renewcommand{\LWR@pagebottom}{#1}%
5858 }
```

```
5859 \end{warpall}
```

## 56 CSS

**for HTML output:** 5860 `\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.

```
5861 \newcommand*{\LWR@currentcss}{lwarp.css}
```

`\CSSFilename` `{(new-css-filename.css)}` Assigns the css file to be used by the following HTML pages.

```
5862 \newcommand*{\CSSFilename}[1]{%
5863 \renewcommand*{\LWR@currentcss}{#1}%
5864 \@onelevel@sanitize\LWR@currentcss%
5865 }
5866
5867 \end{warpHTML}
```

**for PRINT output:** 5868 `\begin{warpprint}`  
5869 `\newcommand*{\CSSFilename}[1]{}`  
5870 `\end{warpprint}`

## 57 MathJax script

**for HTML output:** 5871 `\begin{warpHTML}`  
Default: `lwarp_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.

```
5872 \newcommand*{\LWR@mathjaxfilename}{lwarp_mathjax.txt}
```

`\MathJaxFilename` `{(filename)}` Assigns the MathJax script file to be used by the following HTML pages.

```
5873 \newcommand*{\MathJaxFilename}[1]{%
5874 \renewcommand*{\LWR@mathjaxfilename}{#1}%
5875 \@onelevel@sanitize\LWR@mathjaxfilename%
5876 }
5877
5878 \end{warpHTML}
```

**for PRINT output:** 5879 `\begin{warpprint}`  
5880 `\newcommand*{\MathJaxFilename}[1]{}`  
5881 `\end{warpprint}`

## 58 Title, HTML meta author, HTML meta description

**for HTML output:** 5882 \begin{warpHTML}

\title {<*title*>} Modified to remember \thetitle, which is used to set the HTML page titles.

```
5883 \let\LWR@origtitle\title
5884
5885 \renewcommand*{\title}[1]{%
5886 \LWR@origtitle{#1}%
5887 \begingroup%
5888 \renewcommand{\thanks}[1]{%
5889 \protected@xdef\thetitle{#1}%
5890 \endgroup%
5891 }
```

```
5892 \end{warpHTML}
```

**for HTML & PRINT:** 5893 \begin{warpall}

\HTMLTitle {<*Titlename*>} The Title to place into an HTML meta tag. The default is to use the document \title's setting.

```
5894 \providecommand{\thetitle}{\BaseJobname}
5895
5896 \newcommand{\theHTMLTitle}{\thetitle}
5897
5898 \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.

```
5899 \providecommand{\theauthor}{}
5900
5901 \newcommand{\theHTMLAuthor}{\theauthor}
5902
5903 \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.

```
5904 \newcommand{\LWR@currentHTMLDescription}{}
5905
5906 \newcommand{\HTMLDescription}[1]{%
```

```

5907 \renewcommand{\LWR@currentHTMLDescription}{#1}
5908 }
5909
5910 \end{warpall}

```

## 59 Footnotes

lwarp uses native L<sup>A</sup>T<sub>E</sub>X footnote code, although with its own `\box` to avoid the L<sup>A</sup>T<sub>E</sub>X 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.

**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 `lwarp` preloads `footmisc`, the `stable` option must be declared before `lwarp` is loaded:

 **memoir**

```

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

```

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 handle differently.

## 59.1 Regular page footnotes

In HTML documents, footnotes are placed at the bottom of the web page or the section, depending on `FootnoteDepth`, using the L<sup>A</sup>T<sub>E</sub>X 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 59.4 for the implementation.

## 59.2 Minipage footnotes

See section 59.5 for how minipage footnotes are gathered. See section 89.4 for how minipage footnotes are placed into the document.

## 59.3 Titlepage thanks

See section 66.7 for titlepage footnotes.

## 59.4 Regular page footnote implementation

**for HTML & PRINT:** 5911 `\begin{warpall}`

**Ctrl** `FootnoteDepth` Determines how deeply to place footnotes in the HTML files, similar to `tocdepth`. The **Default:** 3 default of 3 places footnotes before each `\subsubsection` or higher. See table 9 for a table of L<sup>A</sup>T<sub>E</sub>X section headings.

```
5912 \newcounter{FootnoteDepth}
5913 \setcounter{FootnoteDepth}{3}
```

**Ctrl** `footnoteReset` 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 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.)

```
5914 \newcounter{footnoteReset}
5915 \setcounter{footnoteReset}{0}
```

```
5916 \end{warpall}
```

**for HTML output:** 5917 `\begin{warphTML}`

`\LWR@footnotebox` Patch L<sup>A</sup>T<sub>E</sub>X footnotes to use a new `\box` instead of an insert for `lwarp` footnotes. This avoids having the original `\footins` appear at the bottom of a `lateximage`, which is on its own new page.

```
5918 \newbox\LWR@footnotebox
```

Much of the following has unneeded print-mode formatting removed.

`\@makefntext` `{\langle text \rangle}`

```
5919 \long\def\@makefntext#1{\@thefnmark~#1}
```

`\@makefnmark`

```
5920 \def\@makefnmark{%
5921 \@thefnmark%
5922 }
```

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` `{\langle text \rangle} {\langle footnote box name \rangle}`

Factored to allow multiple footnote boxes for `manyfoot`.

```
5923 \long\def\LWR@@footnotetext#1#2{%
5924 \LWR@traceinfo{LWR@footnotetext}%
5925 \global\setbox\csname #2\endcsname=\vbox{%
```

Add to any current footnotes:

```
5926 \unvbox\csname #2\endcsname%
```

Remember the footnote number for `\ref`:

```
5927 \protected@edef\@currentlabel{%
5928 \csname p@footnote\endcsname\@thefnmark%
5929 }% @currentlabel
```

Open a group:

```
5930 \color@begingroup%
```

Use HTML superscripts in the footnote even inside a lateximage:

```
5931 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a lateximage:

```
5932 \ifthenelse{%
5933 \boolean{LWR@doingstartpars} \AND%
5934 \cnttest{\value{LWR@Lateximagedepth}}{=}{0}%
5935 }%
5936 {%}
5937 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%
```

Append the footnote to the list:

```
5938 \@makefntext{#1}%
```

Closing paragraph tag:

```
5939 \ifthenelse{%
5940 \boolean{LWR@doingstartpars} \AND%
5941 \cnttest{\value{LWR@Lateximagedepth}}{=}{0}%
5942 }%
5943 {\par}%
5944 {%
5945 \LWR@htmltagc{/\LWR@tagregularparagraph}%
5946 \LWR@orignewLine%
5947 }%
```

Close the group:

```
5948 \color@endgroup%
5949 }% \vbox
```

Paragraph handling:

```
5950 \LWR@ensuredoingapar%
5951 }%
```

```
\LWR@footnotetext {<text>}
```

```
5952 \long\def\LWR@footnotetext#1{\LWR@@footnotetext{#1}{\LWR@footnotebox}}
```

```
\@footnotetext {<text>}
```

```
5953 \LetLtxMacro\@footnotetext\LWR@footnotetext
```

## 59.5 Minipage footnote implementation

Patch L<sup>A</sup>T<sub>E</sub>X 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.

```
5954 \newbox\LWR@mpfootnotes
```

```
\@mpfootnotetext {<text>}
```

```
5955 \long\def\@mpfootnotetext#1{%
5956 \LWR@traceinfo{\@mpfootnotetext}%
5957 \global\setbox\LWR@mpfootnotes\vbox{%
5958 \unvbox\LWR@mpfootnotes%
5959 \reset@font\footnotesize%
5960 \hsize\columnwidth%
5961 \@parboxrestore%
5962 \protected@edef\@currentlabel%
5963 {\csname p@mpfootnote\endcsname\@thefnmark}%
5964 \color@begingroup%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
5965 \ifthenelse{%
5966 \boolean{LWR@doingstartpars} \AND%
5967 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
5968 }%
5969 {}%
5970 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

5971 \@makefnstext{%
5972 \ignorespaces#1%
5973 }%
```

Don't add the closing paragraph tag if are inside a `lateximage`:

```
5974 \ifthenelse{\cnttest{\value{LWR@lateximagedepth}}{>}{0}}%
5975 {}%
5976 {%
5977 \leavevmode\LWR@orignewline%
5978 \LWR@htmltagc{/\LWR@tagregularparagraph}%
5979 \LWR@origpar%
5980 }%
5981 \color@endgroup%
5982 }% vbox
```

Paragraph handling:

```
5983 \LWR@ensuredoingapar%
5984 \LWR@traceinfo{\@mpfootnotetext: done}%
5985 }
```

`\thempfootnote` Redefined to remove the `\itshape`, which caused an obscure compiling error in some situations.

```
5986 \AtBeginDocument{
5987 \def\thempfootnote{\@alph\c@mpfootnote}
5988 }
```

## 59.6 Printing pending footnotes

`\LWR@printpendingfootnotes`  $\langle footnote\ counter\ name \rangle$

```
5989 \newcommand*\LWR@printpendingfootnotes[1]{%
5990 \expandafter\ifvoid\csname LWR@#1box\endcsname\else
5991 \LWR@forcenewpage
5992 \begin{BlockClass}{footnotes}
5993 \null
5994 \unvbox\csuse{LWR@#1box}
5995 \setbox\csuse{LWR@#1box}=\vbox{}
5996 \end{BlockClass}
5997 \ifltxcounter{#1Reset}{%
5998 \ifnumgreater{\value{#1Reset}}{0}{%
5999 \setcounter{#1}{\value{#1Reset}}%
6000 \addtocounter{#1}{-1}%
6001 }{}%
6002 }{}%
6003 \fi
6004 }
```

`\LWR@printpendingfootnotes` Enclose the footnotes in a class, print, then clear. For `manynotes`, new footnotes may be added via `\appto`.

```
6005 \newcommand*\LWR@printpendingfootnotes{%
6006 \LWR@printpendingfootnotes{footnote}%
6007 }
```

`LWR@maybeprintpendingfootnotes`  $\langle depth \rangle$  Used to print footnotes before sections only if formatting for an EPUB or word processor:

```
6008 \newcommand*\LWR@maybeprintpendingfootnotes[1]{%
6009 \ifboolexpr{
6010 not test{\ifnumcomp{#1}{>}{\value{FootnoteDepth}}} or
6011 bool{FormatEPUB} or
6012 bool{FormatWP}
6013 }%
6014 {\LWR@printpendingfootnotes}%
6015 {}%
6016 }
```

`\LWR@printpendingmpfootnotes` Enclose the minipage footnotes in a class, print, then clear.

```

6017 \newcommand*{\LWR@printpendingmpfootnotes}{%
6018 \ifvoid\LWR@mpfootnotes\else
6019 \LWR@forcenewpage
6020 \begin{BlockClass}{footnotes}
6021 \null
6022 \unvbox\LWR@mpfootnotes
6023 \setbox\LWR@mpfootnotes=\vbox{}
6024 \end{BlockClass}
6025 \fi
6026 }

6027 \end{warpHTML}

```

## 60 Marginpars

`\marginpar` [*left*] [*right*] `\marginpar` may contains paragraphs, but in order to remain inline with the surrounding text `lwarp` nullifies block-related macros inside the `\marginpar`. Paragraph breaks are converted to `<br />` tags.

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

**for HTML output:** 6028 `\begin{warpHTML}`

`\marginpar` [*left*] [*right*]

```

6029 \renewcommand{\marginpar}[2][]{%
6030 \ifbool{FormatWP}%
6031 {%
6032 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
6033 #2
6034 \end{LWR@BlockClassWP}
6035 }%
6036 {%
6037 \LWR@htmlspanclass{marginpar}{#2}%
6038 }%
6039 }

```

`\marginparBlock` [*left*] [*right*]

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

HTML version.

```

6040 \newcommand{\marginparBlock}[2][]{%
6041 \LWR@stoppars%
6042 \ifbool{FormatWP}%
6043 {%

```

```

6044 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{{marginblock}
6045 #2
6046 \end{LWR@BlockClassWP}
6047 }{%
6048 \begin{BlockClass}[width:2in; float:right; margin:10pt]{marginparblock}
6049 #2
6050 \end{BlockClass}
6051 }%
6052 \LWR@startpars%
6053 }

```

`\reversemarginpar`

```
6054 \renewcommand*{\reversemarginpar}{}

```

`\normalmarginpar`

```
6055 \renewcommand*{\normalmarginpar}{}

```

```
6056 \end{warpHTML}

```

**for PRINT output:** `6057 \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.

```
6058 \LetLtxMacro\marginparBlock\marginpar

```

```
6059 \end{warpprint}

```

## 61 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:** `6060 \begin{warppall}`

`Ctr FileDepth` [*section depth*] determines how deeply to break into new HTML files, similar to `tocdepth`. The default of `-5` produces one large HTML file.

```
6061 \newcounter{FileDepth}

```

```
6062 \setcounter{FileDepth}{-5}

```

Bool CombineHigherDepths Combile higher-level sections together into one file?

```
6063 \newbool{CombineHigherDepths}
6064 \booltrue{CombineHigherDepths}
```

\FilenameLimit Maximum length of the generated filenames.

```
6065 \newcommand*{\FilenameLimit}{80}

6066 \end{warpall}
```

**for HTML output:** 6067 \begin{warpHTML}

\LWR@thisfilename The currently-active filename or number. At first, this is the homepage.

```
6068 \AtBeginDocument{
6069 \ifbool{FileSectionNames}%
6070 {\newcommand*{\LWR@thisfilename}{\HomeHTMLFilename}}
6071 {\newcommand*{\LWR@thisfilename}{0}}
6072 }
```

\LWR@thisnewfilename The filename being sanitized.

```
6073 \newcommand*{\LWR@thisnewfilename}{}
```

\LWR@simplifiname \*{\langle*expression*\rangle} Simplify \LWR@thisnewfilename.

If starred, detokenizes the input expression. If found, changes the expression to a single detokenized dash.

```
6074 \NewDocumentCommand{\LWR@simplifiname}{s m}{%
6075 \IfBooleanTF{#1}{%
6076 \StrSubstitute{\LWR@thisnewfilename}%
6077 {\detokenize{#2}}%
6078 {\detokenize{-}}[\LWR@thisnewfilename]%
6079 }{%
6080 \StrSubstitute{\LWR@thisnewfilename}%
6081 {#2}%
6082 {\detokenize{-}}[\LWR@thisnewfilename]%
6083 }
6084 }
```

\LWR@simplifycustom User-defined filename simplifications. Redefine with \newcommand.

```
6085 \newcommand*{\LWR@simplifycustom}{}
```

\FilenameSimplify \*{\langle*phrase*\rangle} Assign a user-defined filename simplification. Appends to \LWR@simplifycustom.

```
6086 \NewDocumentCommand{\FilenameSimplify}{s m}{%
```

```

6087 \IfBooleanTF{#1}{%
6088 \appto{\LWR@simplifycustom}{%
6089 \LWR@simplifiname*{#2}%
6090 }%
6091 }{%
6092 \appto{\LWR@simplifycustom}{%
6093 \LWR@simplifiname*{#2}%
6094 }%
6095 }%
6096 }

```

\LWR@filenamenoblanks {(*filename*)}

Convert blanks into dashes, removes short words, store result in \LWR@thisfilename.

Also see \LWR@nullfonts for nullified macros.

```

6097 \newcommand*\LWR@filenamenoblanks[1]{%
6098 \begingroup

```

Locally temporarily disable direct-formatting commands, not used in filenames:

```

6099 \LWR@nullfonts%
6100 \renewcommand*\LWR@htmltagc[1]{%

```

```

6101 \edef\LWR@thisnewfilename{#1}%

```

Replaces common macros with hyphens. (& is done by \LWR@nullfonts.)

```

6102 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
6103 \LWR@simplifiname{_}
6104 \LWR@simplifiname{\#}
6105 \LWR@simplifiname{\textbackslash}
6106 \LWR@simplifiname{\protect}
6107 \LWR@simplifiname{\ }
6108 \LWR@simplifiname{\textless}
6109 \LWR@simplifiname{\textgreater}

```

```

6110 \edef\LWR@thisnewfilename{\detokenize\expandafter{\LWR@thisnewfilename}}%

```

```

6111 \LWR@traceinfo{\LWR@filenamenoblanks edef: !\LWR@thisnewfilename!}%
6112 \fullexpandarg%

```

Convert spaces into hyphens:

```

6113 \LWR@simplifiname*{ }

```

Convert punctutation into hyphens:

```

6114 \LWR@simplifiname*{!}
6115 \LWR@simplifiname*{,}

```

```

6116 \LWR@simplifiname*{'}
6117 \LWR@simplifiname*{+}
6118 \LWR@simplifiname*{,}
6119 \LWR@simplifiname*{/}
6120 \LWR@simplifiname*{:}
6121 \LWR@simplifiname*{;}
6122 \LWR@simplifiname*{=}
6123 \LWR@simplifiname*{?}
6124 \LWR@simplifiname*{@}
6125 \LWR@simplifiname*{^}
6126 \LWR@simplifiname*{&}
6127 \LWR@simplifiname*{"}
6128 \LWR@simplifiname*{<}
6129 \LWR@simplifiname*{>}

6130 \LWR@simplifiname{\LWRbackslash}

```

Braces are removed entirely to avoid extra dashes in the result.

```

6131 \StrSubstitute{\LWR@thisnewfilename}%
6132 {\LWRleftbrace}{\LWR@thisnewfilename}%
6133 \StrSubstitute{\LWR@thisnewfilename}%
6134 {\LWRrightbrace}{\LWR@thisnewfilename}%

6135 \LWR@simplifiname{\LWRpercent}
6136 \LWR@simplifiname{\LWRdollar}

6137 \LWR@simplifiname*{|}
6138 \LWR@simplifiname*{^}
6139 \LWR@simplifiname*{~}
6140 \LWR@simplifiname*{[}
6141 \LWR@simplifiname*{]}
6142 \LWR@simplifiname*{'}

```

Convert short words:

```

6143 \LWR@simplifiname*{-s-}
6144 \LWR@simplifiname*{-S-}
6145 \LWR@simplifiname*{-a-}
6146 \LWR@simplifiname*{-A-}
6147 \LWR@simplifiname*{-an-}
6148 \LWR@simplifiname*{-AN-}
6149 \LWR@simplifiname*{-to-}
6150 \LWR@simplifiname*{-TO-}
6151 \LWR@simplifiname*{-by-}
6152 \LWR@simplifiname*{-BY-}
6153 \LWR@simplifiname*{-of-}
6154 \LWR@simplifiname*{-OF-}
6155 \LWR@simplifiname*{-and-}
6156 \LWR@simplifiname*{-AND-}
6157 \LWR@simplifiname*{-for-}
6158 \LWR@simplifiname*{-FOR-}
6159 \LWR@simplifiname*{-the-}
6160 \LWR@simplifiname*{-THE-}

```

Convert custom words:

```
6161 \LWR@simplifycustom%
```

Convert multiple hyphens:

```
6162 \LWR@simplifynam*{-----}
6163 \LWR@simplifynam*{----}
6164 \LWR@simplifynam*{---}
6165 \LWR@simplifynam*{--}
```

If pdfL<sup>A</sup>T<sub>E</sub>X and not utf8 encoding, don't try to convert emdash, endash:

```
6166 \ifPDFTeX% pdflatex or dvi latex
6167 \ifdefstring{\inputencodingname}{utf8}{%
6168 \LWR@simplifynam*{-}
6169 % emdash
6170 \LWR@simplifynam*{-}
6171 % endash
6172 }{}%
6173 \else% not PDFTeX
6174 \LWR@simplifynam*{-}
6175 \LWR@simplifynam*{-}
6176 \fi%
```

If starts with a dash, remove the leading dash:

```
6177 \IfBeginWith{\LWR@thisnewfilename}{\detokenize{-}}{%
6178 \StrGobbleLeft{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
6179 }{}%
```

If ends with a dash, remove the trailing dash:

```
6180 \IfEndWith{\LWR@thisnewfilename}{\detokenize{-}}{%
6181 \StrGobbleRight{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
6182 }{}%
```

Limits the length of the filename:

```
6183 \StrLeft{\LWR@thisnewfilename}{\FilenameLimit}[\LWR@thisnewfilename]%
```

Return the global result:

```
6184 \global\let\LWR@thisfilename\LWR@thisnewfilename%
6185 \endgroup%
6186 \LWR@traceinfo{LWR@filenamoblanks: result is \LWR@thisfilename}%
6187 }
```

Ctrl Remembers which autopage label was most recently generated. Used to avoid duplicates.

```
6188 \newcounter{LWR@previousautopagelabel}
6189 \setcounter{LWR@previousautopagelabel}{-1}
```

File \*\_html.aux A new entry in the \*\_html.aux file is used to help cross-references:

```
\NewLabel{autopage-<nnn>}{<x>}{<y>}}
```

\LWR@newautopagelabel {<pagenumber counter>}

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
6190 \newcommand*\LWR@newautopagelabel}[1]{%
6191 \ifnumequal{\value{LWR@previousautopagelabel}}{\value{page}}%
6192 {}% no action if this autopage label has already been defined
6193 {%
6194 \label{\BaseJobname-autopage-\arabic{#1}}%
6195 \setcounter{LWR@previousautopagelabel}{\value{page}}
6196 }%
6197 }
```

## 61.1 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 {<search>} {<replace>}

Replaces strings inside \tmpb.

Modified from the original by PETR OLSAK, from the opmac package.

```
6198 \bgroup
6199 \catcode'\!=3 \catcode'\?=3
6200
6201 \long\gdef\LWR@replacestrings@addto#1#2{%
6202 \expandafter\def\expandafter#1\expandafter{#1#2}%
6203 }
6204
6205 \gdef\LWR@replacestrings#1#2{%
6206 \long\def\LWR@replacestringsA##1#1{\def\tmpb{##1}\LWR@replacestringsB}%
6207 \long\def\LWR@replacestringsB##1#1{%
6208 \ifx!##1\relax \else\LWR@replacestrings@addto\tmpb{#2##1}%
6209 \expandafter\LWR@replacestringsB\fi
6210 }%
6211 \expandafter\LWR@replacestringsA\tmpb?#1!#1% from pysyntax.tex by Petr Krajnik
6212 \long\def\LWR@replacestringsA##1?{%
6213 \def\tmpb{##1}%
6214 }\expandafter\LWR@replacestringsA\tmpb%
6215 }
6216 \egroup
```

\LWR@subHTMLsanitize \LWR@strresult must first be set by \LWR@HTMLsanitize, \LWR@HTMLsanitizeexpand, or \CustomizeMathJax.

```
6217 \catcode'\#=12
6218 \catcode'\&=12
6219 \newcommand{\LWR@subHTMLsanitize}{%
```

The &, <, and > may be interpreted by the browser:

```
6220 \edef\tmpb{\detokenize\expandafter{\LWR@strresult}}%
6221 \LWR@replacestrings{&}{&}%
6222 \LWR@replacestrings{<}{<}%
6223 \LWR@replacestrings{>}{>}%
```

The double quote occasionally causes problems.

```
6224 \LWR@replacestrings{"}{"}%
```

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.

```
6225 \LWR@replacestrings{##}{#}%
6226 \edef\LWR@strresult{\detokenize\expandafter{\tmpb}}%
6227 }
6228 \catcode'\#=6
6229 \catcode'\&=4
```

`\LWR@HTMLsanitize`  $\{ \langle text \rangle \}$

```
6230 \newrobustcmd{\LWR@HTMLsanitize}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
6231 \begingroup%
6232 \LWR@FBcancel%
6233 \fullexpandarg%
6234 \protect\StrSubstitute{\detokenize{#1}}%
6235 {\detokenize{\&}}{\detokenize{\&}}[\LWR@strresult]%
6236 \LWR@subHTMLsanitize%
6237 \LWR@strresult%
6238 \endgroup%
6239 }
```

`\LWR@HTMLsanitizeexpand`  $\{ \langle text \rangle \}$

This version expands the argument before sanitizing it.

```
6240 \newrobustcmd{\LWR@HTMLsanitizeexpand}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
6241 \begingroup%
6242 \LWR@FBcancel%
6243 \fullexpandarg%
```

The difference between this and `\LWR@HTMLsanitize` (without “expand”) is the following `\expandafter`:

```
6244 \protect\StrSubstitute{\detokenize\expandafter{#1}}%
6245 {\detokenize{\&}}{\detokenize{&}}[\LWR@strresult]%
6246 \LWR@subHTMLsanitize%
6247 \LWR@strresult%
6248 \endgroup%
6249 }
```

## 61.2 Customizing MATHJAX

`\LWR@customizedMathJax` Additional MATHJAX definitions to be added to the start of each HTML page.

```
6250 \newcommand*{\LWR@customizedMathJax}{}
```

Bool Used to issue only one warning about using a `\CustomizeMathJax` per macro.

`\LWR@warnedcustomizemathjax`

```
6251 \newbool{\LWR@warnedcustomizemathjax}
6252 \boolfalse{\LWR@warnedcustomizemathjax}
```

`\LWR@subcustomizedmathjax` {*macro definition*}

```
6253 \newcommand*{\LWR@subcustomizedmathjax}[1]{%
6254 \begingroup%
6255 \LWR@FBcancel%
6256 \fullexpandarg%
6257 \protect\StrSubstitute{\detokenize{#1}}%
6258 {\detokenize{\&}}{\detokenize{&}}[\LWR@strresult]%
6259 \LWR@subHTMLsanitize%
6260 \xdef\LWR@customizedMathJax{%
6261 \LWR@customizedMathJax%
6262 \LWR@strresult%
6263 }%
6264 \endgroup%
6265 }
6266 \@onlypreamble\LWR@subcustomizedmathjax
```

`\CustomizeMathJax` {*macro definition*}

A warning is issued if a very long argument is given.

```
6267 \newcommand*{\CustomizeMathJax}[1]{%
6268 \ifbool{\LWR@warnedcustomizemathjax}{}{%
6269 \StrLen{\detokenize{#1}}[\LWR@tempone]%
6270 \ifnumgreater{\LWR@tempone}{200}{%
6271 \AtBeginDocument{%
6272 \PackageWarningNoLine{lwarp}{%
6273 To ensure faster MathJax compilation, place each\MessageBreak
6274 custom macro in its own \protect\CustomizeMathJax.\MessageBreak
6275 See the Lwarp documentation regarding customizing\MessageBreak
```

```

6276 MathJax%
6277 }%
6278 }%
6279 \booltrue{LWR@warnedcustomizemathjax}%
6280 }{}%
6281 }%
6282 \appto\LWR@customizedMathJax{\LWRbackslash}%
6283 \LWR@subcustomizedmathjax{#1}%
6284 \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
6285 }
6286 \@onlypreamble\CustomizeMathJax

```

`\LWR@infoprocessingmathjax`  $\{ \langle package name \rangle \}$

```

6287 \newcommand*{\LWR@infoprocessingmathjax}[1]{%
6288 \typeout{---}
6289 \typeout{Package lwarp: Processing MathJax customizations for #1.}
6290 \typeout{\space\space This may take a moment.}
6291 \typeout{---}
6292 }

```

#### Default customizations:

```

6293 \begin{warpMathJax}
6294 \CustomizeMathJax{\newcommand\ensuremath[1]{#1}}
6295 \CustomizeMathJax{\newcommand\footnote[2][\text{(Footnote #1)}]}
6296 \CustomizeMathJax{\newcommand\footnotemark[1][\text{(Footnote #1)}]}
6297 \CustomizeMathJax{% absorb two optional arguments
6298 \newcommand{\LWRframebox}[2][\fbox{#2}]
6299 \newcommand{\framebox}[1][\LWRframebox]
6300 }
6301 \CustomizeMathJax{\newcommand{\setlength}[2]{}}
6302 \CustomizeMathJax{\newcommand{\addtolength}[2]{}}
6303 \CustomizeMathJax{\newcommand{\setcounter}[2]{}}
6304 \CustomizeMathJax{\newcommand{\addtocounter}[2]{}}
6305 \CustomizeMathJax{\newcommand{\ccline}[1]{}}
6306 \CustomizeMathJax{\newcommand{\directlua}[1]{\text{(directlua)}}}
6307 \CustomizeMathJax{\newcommand{\luatexdirectlua}[1]{\text{(directlua)}}}
6308 \end{warpMathJax}

```

`\LWR@customizeMathJax` Prints MathJax commands to the HTML output.

```

6309 \newcommand{\LWR@customizeMathJax}{%
6310 \ifbool{mathjax}{

6311 \LWR@stoppars
6312 \LWR@htmlcomment{MathJax customizations:}
6313
6314 \typeout{---}
6315 \typeout{Package lwarp:}
6316 \typeout{Processing MathJax customizations. If this takes too long,}
6317 \typeout{see the Lwarp manual regarding customizing MathJax.}
6318 \begin{BlockClass}{hidden}

```

```

6319 \LWR@stoppars
6320 \LWR@customizedMathJax
6321 \LWR@startpars
6322 \end{BlockClass}
6323 \typeout{---}
6324
6325 \LWR@startpars
6326 }{}
6327 }

6328 \end{warpHTML}

```

**for PRINT output:** 6329 \begin{warpprint}

\CustomizeMathJax The print-mode version:

```
6330 \newcommand*{\CustomizeMathJax}[1]{}

```

\FilenameSimplify \* {*<expression>*}

```
6331 \NewDocumentCommand{\FilenameSimplify}{s m}{}

```

```
6332 \end{warpprint}

```

**for HTML output:** 6333 \begin{warpHTML}

\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.

```

6334 \newcommand*{\LWR@newhtmlfile}[1]{
6335 \LWR@traceinfo{\LWR@newhtmlfile}

```

At the bottom of the ending file:

```

6336 \LWR@htmlElementclassend{section}{textbody}
6337 \LWR@htmlElementclassend{div}{bodycontainer}
6338 \LWR@htmlElementclassend{div}{bodyandsidetoc}
6339
6340 \LWR@printpendingfootnotes
6341

```

No footer between files if EPUB:

```

6342 \ifbool{FormatEPUB}
6343 {}
6344 {

```

```

6345 \ifdefempty{\LWR@pagebottom}{}%
6346 \LWR@htmlElement{footer}
6347
6348 \LWR@pagebottom
6349
6350 \LWR@htmlElementend{footer}
6351 }
6352 }

```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```

6353 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6354 {}
6355 {\ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}}

```

End of this HTML file:

```

6356 \LWR@stoppars
6357 \LWR@htmltag{/body}\LWR@orignewline
6358 \LWR@htmltag{/html}\LWR@orignewline
6359 \LWR@traceinfo{LWR@newhtmlfile: about to LWR@orignewpage}
6360 \LWR@orignewpage
6361
6362 \addtocounter{LWR@htmlfilenumber}{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.

```

6363 \ifbool{FileSectionNames}%
6364 {%

```

Convert the section name to a filename with blanks and common words removed. The resulting filename is in \LWR@thisfilename.

```

6365 \LWR@filenamenoblanks{#1}%

```

Create a macro name from the MD5 hash of the file name, to detect duplicates:

```

6366 \edef\LWR@hashedname{\LWR@mdfive{\LWR@thisfilename}}%

```

If the macro name is not yet defined, this filename is unique.

```

6367 \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.

```

6368 \csdef{LWR@filename\LWR@hashedname}{}%
6369 }{%

```

If the filename is not unique, create an error.

```

6370 \PackageError{lwarp}
6371 {%
6372 Section name\MessageBreak
6373 ‘‘#1’’,\MessageBreak
6374 at the line number listed below,\MessageBreak
6375 generates the filename\MessageBreak
6376 ‘‘\LWR@thisfilename’’,\MessageBreak
6377 which appears to be a duplicate.\MessageBreak
6378 There is a previous section with an\MessageBreak
6379 identical or similar name%
6380 }
6381 {%
6382 Lwarp sanitizes most symbols and a few common short words
6383 when generating file names, and this may cause a conflict.
6384 }
6385 }
6386 }

```

If using file numbers instead of names, the name is set to the next file number.

```
6387 {\renewcommand*{\LWR@thisfilename}{\arabic{LWR@htmlfilenumber}}}
```

Include an HTML comment to instruct lwarpmk 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.

```
6388 \LWR@traceinfo{LWR@newhtmlfile: about to print start file}%
```

`\LWR@nullfonts` to allow math in a section name.

```

6389 \begingroup%
6390 \LWR@nullfonts%
6391 \LWR@htmlblockcomment{%
6392 |Start file|%
6393 \LWR@htmlsectionfilename{\LWR@thisfilename}|%
6394 }
6395 \endgroup%

```

At the top of the starting file:

```

6396 \LWR@stoppars
6397

```

Start a new file with the given section name:

```

6398 \LWR@filestart[#1]
6399

```

Track the page numbers:

```

6400 \setcounter{LWR@latestautopage}{\value{page}}%
6401 \LWR@newautopagelabel{LWR@latestautopage}%

```

No navigation between files if formatting for an EPUB or word processor:

```
6402 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6403 {}
6404 {\LWR@topnavigation}
6405
```

No header if between files if formatting for an EPUB or word processor:

```
6406 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6407 {}
6408 {
6409 \ifdefempty{\LWR@pagetop}{}{
6410 \LWR@htmlElement{header}
6411
6412 \LWR@pagetop
6413
6414 \LWR@htmlElementend{header}
6415 }
6416 }
6417
```

The container for the sidetoc and text body:

```
6418 \LWR@htmlElementclass{div}{bodyandsidetoc}
```

No sideroc if formatting for an EPUB or word processor:

```
6419 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6420 {}
6421 {\LWR@sidetoc}
6422
```

Start of the <textbody>:

```
6423 \LWR@htmlElementclass{div}{bodycontainer}
6424 \LWR@htmlElementclass{section}{textbody}
6425
```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```
6426 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}%
6427 {}%
6428 {%
6429 \ifcvoid{thetitle}{}{%
6430 \LWR@printthetitle%
6431 }%
6432 }%
```

Keep paragraph tags disabled for now:

```
6433 \LWR@stoppars
6434
```

If using MATHJAX, print the customizations here.

```
6435 \LWR@customizeMathJax

6436 \LWR@traceinfo{LWR@newhtmlfile: done}
6437 }

6438 \end{warpHTML}
```

## 62 Sectioning

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing L<sup>A</sup>T<sub>E</sub>X code and packages. Formatting is handled by css, so the emulated code has much less work to do than the print versions.

**Unicode accents in filenames** Section names and the resulting filenames with accented characters are partially supported, depending on the ability of *pdflatex* to generate characters and *pdftotext* to read them. If extra symbols appear in the text, it may be that *pdflatex* is actually producing a symbol over or under a character, resulting in *pdftotext* picking up the accent symbol separately.

X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X and Lua<sup>A</sup>T<sub>E</sub>X directly support accented section and file names.

**for HTML output:** 6439 \begin{warpHTML}

### 62.1 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.

```
6440 \newbool{LWR@forcinghtmlpage}
6441 \boolfalse{LWR@forcinghtmlpage}
6442
6443 \newcommand*{\ForceHTMLPage}{%
6444 \global\booltrue{LWR@forcinghtmlpage}%
6445 }
```

`\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.

```
6446 \newbool{LWR@forcinghtmltoc}
```

```

6447 \boolfalse{LWR@forcinghtmltoc}
6448
6449 \newcommand*{\ForceHTMLTOC}{%
6450 \global\booltrue{LWR@forcinghtmltoc}%
6451 }

```

```

6452 \end{warpHTML}

```

**for PRINT output:**

```

6453 \begin{warpprint}
6454 \newcommand*{\ForceHTMLPage}{}
6455 \newcommand*{\ForceHTMLTOC}{}
6456 \end{warpprint}

```

**for HTML output:**

```

6457 \begin{warpHTML}

```

## 62.2 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.

```

6458 \newbool{LWR@mainmatter}
6459 \DeclareDocumentCommand{\mainmatter}{}{%
6460 \booltrue{LWR@mainmatter}%
6461 }

```

`\frontmatter` Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```

6462 \DeclareDocumentCommand{\frontmatter}{}{%
6463 \boolfalse{LWR@mainmatter}%
6464 }

```

`\backmatter` Declare the back matter section of the document. Does not reset the page number.

```

6465 \DeclareDocumentCommand{\backmatter}{}{%
6466 \boolfalse{LWR@mainmatter}
6467 }

```

## 62.3 Sectioning support macros

`\LWR@sectionnumber`  $\langle section\ type \rangle$

Typeset a section number and its trailing space with css formatting:

```

6468 \newcommand*{\LWR@sectionnumber}[1]{%
6469 \InlineClass{sectionnumber}{#1}%
6470 }

```

`autosec` A tag used by the toc and index.

`\LWR@createautosec` {<*section type*>}

Create an autosection tag.

```
6471 \newcommand*\LWR@createautosec}[1]{%
6472 \LWR@htmltag{%
6473 #1 % space
6474 id=\textquotedbl\LWR@print@mbox{autosec-\arabic{page}}\textquotedbl%
6475 }%
6476 }
```

`\LWR@pushoneclose` {<*sectiontype*>} Stacks the new sectioning level's closing tag, to be used when this section is closed some time later.

 `\LWR@stoppars` must be executed first.

```
6477 \NewDocumentCommand{\LWR@pushoneclose}{m}{%
6478 \LWR@traceinfo{\LWR@pushoneclose #1}%
6479 \LWR@pushclose{#1}%
6480 }
```

`\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@stoppars` must be executed first.

```
6481 \NewDocumentCommand{\LWR@startnewdepth}{m}{%
```

Close any stacked sections up to this new one.

```
6482 \LWR@closeprevious{#1}%
```

Push a new section depth:

```
6483 \LWR@pushoneclose{#1}%
6484 }
```

`\LWR@prevFileDepth` Remembers the previous `\LWR@FileDepth`.

Initialized to a deep level so that any section will trigger a new HTML page after the home page.

```
6485 \newcounter{\LWR@prevFileDepth}
6486 \setcounter{\LWR@prevFileDepth}{\LWR@depthsubparagraph}
```

`\@secntformat` {<*sectiontype*>}

```
6487 \def\@secntformat#1{\csname the#1\endcsname\quad}
```

`\simplechapterdelim` Used by `tocbibind` and `anonchap`.

```
6488 \newcommand*\simplechapterdelim{}
```

`\@chapcntformat`  $\{\langle sectiontype \rangle\}$

`\let` to `\@secntformat` by default, but may be redefined by `\simplechapter` and `\restorechapter` from `tocbibind` or `anonchap`.

```
6489 \let\@chapcntformat\@secntformat
```

`\@partcntformat`  $\{\langle sectiontype \rangle\}$

`\let` to `\@secntformat` by default, but may be redefined by `ctex`.

```
6490 \let\@partcntformat\@secntformat
```

`\@partnameformat` Prints “Part” for part sections.

Nullified by `ctex`.

```
6491 \newcommand*\@partnameformat{\LWR@isolate{\partname}~}%
```

Ctrl `LWR@currentautosec` 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.

```
6492 \newcounter{LWR@currentautosec}
```

```
6493 \setcounter{LWR@currentautosec}{1}
```

`\LWR@section` \*  $[\langle TOC name \rangle] \{\langle name \rangle\} \{\langle sectiontype \rangle\}$

The common actions for the high-level sectioning commands.

```
6494 \DeclareDocumentCommand{\LWR@section}{m m m m}{%
```

```
6495 \IfValueTF{#2}{%
```

```
6496 {\LWR@traceinfo{LWR@section: starting #4 #2}}%
```

```
6497 {\LWR@traceinfo{LWR@section: starting #4 #3}}%
```

```
6498 \LWR@maybeprintpendingfootnotes{\csuse{LWR@depth#4}}%
```

```
6499 \LWR@stoppars%
```

```
6500 \LWR@startnewdepth{#4}%
```

Cancel special `minipage` horizontal space interaction:

```
6501 \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 L<sup>A</sup>T<sub>E</sub>X page so that toc and index page number points to the section:

```

6502 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}%
6503 \IfBooleanT{#1}{\LWR@traceinfo{LWR@section: starred}}%
6504 \ifbool{LWR@forcinghtmlpage}{\LWR@traceinfo{LWR@section: forcinghtmlpage}}{}%
6505 \ifthenelse{%
6506 \(%
6507 \(\NOT\equal{#1}{\BooleanTrue})\)\OR%
6508 \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart})\)\OR%
6509 \(\boolean{LWR@forcinghtmlpage})\)%
6510 \)%
6511 \AND%
6512 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{FileDepth}}%
6513 \AND%
6514 \(%
6515 \NOT\boolean{CombineHigherDepths}\OR%
6516 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{LWR@prevFileDepth}}%
6517 \)%
6518 \AND%

6519 \(% phantomsection
6520 \NOT\isempty{#3}%
6521 \OR%
6522 \(\NOT\equal{#1}{\BooleanTrue})\)%
6523 \)%
6524 }%

```

If so: start a new HTML file:

```

6525 {% new file
6526 \LWR@traceinfo{LWR@section: new HTML file}%

```

See if there was an optional toc name entry:

```

6527 \IfNoValueTF{#2}%

```

If no optional entry

```

6528 {\LWR@newhtmlfile{#3}}%

```

If yes an optional entry

```

6529 {\LWR@newhtmlfile{#2}}%
6530 }% new file

```

Else: No new HTML file:

```

6531 {% not new file

```

Generate a new L<sup>A</sup>T<sub>E</sub>X page so that toc and index page number points to the section:

```

6532 \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
6533 \LWR@orignewpage%

```

6534 }% not new file  
6535

Remember this section's name for \nameref:

```
6536 \IfValueT{#3}{%
6537 \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
6538 \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
6539 }%
```

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.

```
6540 \ifbool{HTMLDebugComments}{%
6541 \begingroup%
6542 \LWR@nullfonts%
6543 \IfBooleanTF{#1}% starred
6544 {\LWR@htmlcomment{Opening #4*}}%
6545 {%
6546 \IfNoValueTF{#2}% short TOC
6547 {\LWR@htmlcomment{Opening #4 '#3'}}%
6548 {\LWR@htmlcomment{Opening #4 '#2'}}%
6549 }\LWR@orignewLine%
6550 \endgroup%
6551 }{}
```

For inline sections paragraph and subparagraph, start a new paragraph now:

```
6552 \ifthenelse{%
6553 \cnttest{\@nameuse{LWR@depth#4}}{>=}{\LWR@depthparagraph}%
6554 }%
6555 {\LWR@startpars}%
6556 }%
```

Create the opening tag with an autosec:

```
6557 \LWR@traceinfo{LWR@section: about to LWR@createautosec}%
6558 \LWR@createautosec{\@nameuse{LWR>tag#4}}%
```

```
6559 \setcounter{LWR@currentautosec}{\value{page}}%
```

Check if starred:

```
6560 \IfBooleanTF{#1}%
6561 {%
6562 \LWR@traceinfo{LWR@section: starred}}%
```

Starred, but also forcing a toc entry, so add unnumbered toc name or regular name:

```
6563 \ifbool{LWR@forcinghtmltoc}%
6564 {%
```

```

6565 \addcontentsline{toc}{#4}{%
6566 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6567 }%
6568 }%
6569 {}%
6570 }% starred

```

Not starred, so step counter and add to toc:

```
6571 {% not starred
```

Only add a numbered toc entry if section number is not too deep:

```

6572 \ifthenelse{%
6573 \cnttest{\@nameuse{LWR@depth#4}}{<=} {\value{secnumdepth}}%
6574 }%
6575 {% if secnumdepth

```

If in the main matter, step the counter and add the toc entry. For article class, lwarp assumes that all is mainmatter.

```

6576 \LWR@traceinfo{LWR@section: about to test main matter}%
6577 \ifbool{LWR@mainmatter}%
6578 {%
6579 \LWR@traceinfo{LWR@section: yes mainmatter}%
6580 \refstepcounter{#4}%

```

Add main matter numbered toc entry with the toc name or the regular name:

```

6581 \LWR@traceinfo{LWR@section: about to addcontentsline}%
6582 \addcontentsline{toc}{#4}{%
6583 {%
6584 \protect\numberline{%
6585 \@nameuse{pre#4name}%
6586 \@nameuse{the#4}%
6587 \@nameuse{post#4name}%
6588 }%
6589 {%
6590 \ignorespaces%
6591 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}\protect\relax%
6592 }%
6593 }%
6594 \LWR@traceinfo{LWR@section: finished addcontentsline}%
6595 }% end of if main matter

```

If not main matter, add unnumbered toc name or regular name:

```

6596 {% not main matter
6597 \LWR@traceinfo{LWR@section: no main matter}%
6598 \addcontentsline{toc}{#4}{%
6599 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6600 }%
6601 }% end of not main matter
6602 }% end of secnumdepth

```

Deeper than secnumdepth, so add an unnumbered toc entry:

```
6603 {%
6604 \addcontentsline{toc}{#4}{%
6605 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6606 }%
6607 }%
```

For part, print “Part”:

```
6608 \ifbool{LWR@mainmatter}%
6609 {%
6610 \ifthenelse{%
6611 \(\cnttest{\@nameuse{LWR@depth#4}}{<=}%
6612 {\value{secnumdepth}}\)\ \AND%
6613 \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}\)%
6614 }%
6615 {\@partnameformat}%
6616 {}%
```

Print the section number:

```
6617 \LWR@traceinfo{LWR@section: about to print section number}%
6618 \ifthenelse{%
6619 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
6620 }%
6621 {%
6622 \ifstrequal{#4}{part}%
6623 {\protect\LWR@sectionnumber{\@partcntformat{#4}}}%
6624 {%
6625 \ifstrequal{#4}{chapter}%
6626 {\protect\LWR@sectionnumber{\@chapcntformat{#4}}}%
6627 {\protect\LWR@sectionnumber{\@secntformat{#4}}}%
6628 }%
6629 }%
6630 {}%
6631 \LWR@traceinfo{LWR@section: finished print section number}%
6632 }{}%
6633 }% end of not starred
```

Print the section name:

```
6634 \LWR@traceinfo{LWR@section: about to print the section name}%
6635 \LWR@isolate{#3}%
```

Close the heading tag, such as /H2:

```
6636 \LWR@traceinfo{LWR@section: about to close the heading tag}%
6637 \LWR@htmltag{\@nameuse{LWR@tag#4end}}%
6638 \LWR@orignewline%
```

Generate a L<sup>A</sup>T<sub>E</sub>X label:

```
6639 \LWR@traceinfo{LWR@section: about to create the LaTeX label}%
```

```
6640 \setcounter{LWR@latestautopage}{\value{page}}%
6641 \LWR@newautopagelabel{LWR@currentautosec}\LWR@orignewline%
```

Start paragraph handing unless is an inline paragraph or subparagraph:

```
6642 \ifthenelse{%
6643 \cntttest{\@nameuse{LWR@depth#4}}{<}{\LWR@depthparagraph}%
6644 }%
6645 {\LWR@startpars}%
6646 {}%
```

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.

```
6647 \ifthenelse{%
6648 \NOT\equal{#1}{\BooleanTrue}\OR%
6649 \cntttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}%
6650 }%
6651 {% not starred
6652 \setcounter{LWR@prevFileDepth}{\@nameuse{LWR@depth#4}}%
6653 }% not starred
6654 {}%
```

Reset to defaults if not a phantomsection:

```
6655 \ifstrempy{#3}%
6656 {}%
6657 {%
6658 \global\boolfalse{LWR@forcinghtmlpage}%
6659 \global\boolfalse{LWR@forcinghtmltoc}%
6660 }%
6661 %
6662 \LWR@traceinfo{LWR@section: done}%
6663 }
```

## 62.4 Pre- and post- sectioning names

`\prebookname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postbookname`

```
6664 \providecommand*\prebookname{}
6665 \providecommand*\postbookname{}
```

`\prepartname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postpartname`

```
6666 \providecommand*\prepartname{}
6667 \providecommand*\postpartname{}
```

```

\prechaptername Usually null, but is used by uj* and ut* Japanese classes.
\postchaptername
6668 \providecommand*\prechaptername{}
6669 \providecommand*\postchaptername{}

\presectionname Always null, but provided here for algorithmic simplicity in \LWR@section.
\postsectionname
6670 \providecommand*\presectionname{}
6671 \let\postsectionname\presectionname
6672
6673 \let\presubsectionname\presectionname
6674 \let\postsubsectionname\postsectionname
6675
6676 \let\presubsubsectionname\presectionname
6677 \let\postsubsubsectionname\postsectionname
6678
6679 \let\preparagraphname\presectionname
6680 \let\postparagraphname\postsectionname
6681
6682 \let\presubparagraphname\presectionname
6683 \let\postsubparagraphname\postsectionname

```

## 62.5 \section and friends

For memoir, a second optional argument is allowed.

For hypbmsc, 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>}

```

```

6684 \newcommand{\part@preamble}{}% for koma-script
6685
6686 \DeclareDocumentCommand{\part}{s d() o o d() m}{%
6687 \LWR@section{#1}{#3}{#6}{part}%
6688
6689 \part@preamble% for koma-script
6690 \renewcommand{\part@preamble}{}%
6691 }

```

```

\chapter * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {\<6:name>}

```

```

6692 \let\@printcites\relax% for quotchap package
6693
6694 \newcommand{\chapter@preamble}{}% for koma-script
6695
6696 \@ifundefined{chapter}
6697 {}
6698 {}%

```

```

6699 \DeclareDocumentCommand{\chapter}{s d() o o d() m}{%
6700 \LWR@section{#1}{#3}{#6}{chapter}%
6701
6702 \@printcites% for quotchap package
6703
6704 \chapter@preamble% for koma-script
6705 \renewcommand{\chapter@preamble}{}%
6706 }
6707 }

```

`\section` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6708 \DeclareDocumentCommand{\section}{s d() o o d() m}{%
6709 \LWR@section{#1}{#3}{#6}{section}%
6710 }

```

`\subsection` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6711 \DeclareDocumentCommand{\subsection}{s d() o o d() m}{%
6712 \LWR@section{#1}{#3}{#6}{subsection}%
6713 }

```

`\subsubsection` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6714 \DeclareDocumentCommand{\subsubsection}{s d() o o d() m}{%
6715 \LWR@section{#1}{#3}{#6}{subsubsection}%
6716 }

```

`\paragraph` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6717 \DeclareDocumentCommand{\paragraph}{s d() o o d() m}{%
6718 \LWR@section{#1}{#3}{#6}{paragraph}%
6719 }

```

`\subparagraph` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6720 \DeclareDocumentCommand{\subparagraph}{s d() o o d() m}{%
6721 \LWR@section{#1}{#3}{#6}{subparagraph}%
6722 }

```

```

6723 \end{warpHTML}

```

## 63 Starting a new file

**for HTML & PRINT:** 6724 `\begin{warpall}`

`\HTMLLanguage` Default language for the `HTML lang` tag.

```

6725 \newcommand*{\LWR@currentHTMLLanguage}{en-US}
6726
6727 \newcommand*{\HTMLLanguage}[1]{%
6728 \renewcommand*{\LWR@currentHTMLLanguage}{#1}%
6729 }

```

`\theHTMLTitleSeparator` May be used inside `\theHTMLTitleSection` to separate the website's overall HTML title and the particular page's section name.

```

6730 \ifPDFTeX% pdflatex or dvi latex
6731 \ifdefstring{\inputencodingname}{utf8}{%
6732 \newcommand*{\theHTMLTitleSeparator}{ - }% EMDash
6733 }{%
6734 \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
6735 }%
6736 \else%
6737 \ifpTeX
6738 \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
6739 \else
6740 \newcommand*{\theHTMLTitleSeparator}{ - }% EMDash
6741 \fi%
6742 \fi%

```

`\HTMLTitleBeforeSection` Sets the HTML page's meta title tag to show the website title before the section name.

```

6743 \newcommand*{\HTMLTitleBeforeSection}{%
6744 \def\theHTMLTitleSection{%
6745 \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
6746 }%
6747 }

```

`\HTMLTitleAfterSection` Sets the HTML page's meta title tag to show the section name before the website title.

```

6748 \newcommand*{\HTMLTitleAfterSection}{%
6749 \def\theHTMLTitleSection{%
6750 \theHTMLSection\theHTMLTitleSeparator\theHTMLTitle%
6751 }%
6752 }

```

`\theHTMLTitleSection` Forms the HTML page's meta title tag. The default is to show the website title before the section name.

```
6753 \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.

```

6754 \newcommand*{\theHTMLSection}{}
6755 \end{warpall}

```

**for HTML output:** 6756 \begin{warpHTML}

\LWR@filestart [*<sectionname>*] Creates the opening HTML tags.

```
6757 \newcommand*\LWR@filestart[1][\LWR@filestart]{%
6758 \LWR@traceinfo{\LWR@filestart !#1!}%
```

Locally temporarily disable direct-formatting commands:

```
6759 \begingroup%
6760 \LWR@nullfonts%
```

Save the section name for use while creating the HTML meta title tag:

```
6761 \edef\theHTMLSection{#1}%
```

Create the page's HTML header:

```
6762 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline
```

The language is user-adjustable:

```
6763 \LWR@htmltag{%
6764 html lang=\LWR@orig@textquotedbl\LWR@currentHTMLLanguage\LWR@orig@textquotedbl%
6765 }\LWR@orignewline
```

Start of the meta data:

```
6766 \LWR@htmltag{head}\LWR@orignewline
```

Charset is fixed at UTF-8:

```
6767 \LWR@htmltag{%
6768 meta charset=\LWR@orig@textquotedbl{ }UTF-8\LWR@orig@textquotedbl \ /%
6769 }\LWR@orignewline
```

Author:

```
6770 \ifthenelse{\equal{\theHTMLAuthor}{}}%
6771 {}%
6772 {%
6773 \LWR@htmltag{%
6774 meta name=\LWR@orig@textquotedbl{ }author\LWR@orig@textquotedbl \ % space
6775 content=\LWR@orig@textquotedbl\theHTMLAuthor\LWR@orig@textquotedbl \ /%
6776 }\LWR@orignewline%
6777 }%
```

lwarp is the generator:

```
6778 \LWR@htmltag{%
6779 meta % space
6780 name=\LWR@orig@textquotedbl{ }generator\LWR@orig@textquotedbl \ % space
```

```
6781 content=\LWR@orig@textquotedbl{}LaTeX Lwarp package\LWR@orig@textquotedbl\ /%
6782 }\LWR@orignewline%
```

If there is a description, add it now:

```
6783 \ifdefempty{\LWR@currentHTMLDescription}{}%
6784 \LWR@htmltag{%
6785 meta name=\LWR@orig@textquotedbl{}description\LWR@orig@textquotedbl\ % space
6786 content=\LWR@orig@textquotedbl\LWR@currentHTMLDescription\LWR@orig@textquotedbl\ /%
6787 }\LWR@orignewline
6788 }%
```

Mobile-friendly viewport:

```
6789 \LWR@htmltag{%
6790 meta % space
6791 name=\LWR@orig@textquotedbl{}viewport\LWR@orig@textquotedbl\ % space
6792 content=\LWR@orig@textquotedbl{}width=device-width, initial-scale=1.0\LWR@orig@textquotedbl\ /%
6793 }\LWR@orignewline
```

IE patch:

```
6794 \LWR@htmltag{!-\/-[if lt IE 9]}\LWR@orignewline
6795 \LWR@htmltag{%
6796 script % space
6797 src=\LWR@orig@textquotedbl{}%
6798 http://html5shiv.googlecode.com/svn/trunk/html5.js%
6799 \LWR@orig@textquotedbl%
6800 }%
6801 \LWR@htmltag{/script}\LWR@orignewline
6802 \LWR@htmltag{![endif]-\/-}\LWR@orignewline
```

The page's title, if there is one. A section name is also added if given.

```
6803 \ifthenelse{\equal{\theHTMLTitle}{}}%
6804 {}%
6805 {%
6806 \LWR@htmltag{title}%
6807 \ifdefempty{\theHTMLSection}%
6808 {\theHTMLTitle}%
6809 {\theHTMLTitleSection}%
6810 \LWR@htmltag{/title}\LWR@orignewline%
6811 }%
```

The page's stylesheet:

```
6812 \LWR@htmltag{%
6813 link % space
6814 rel=\LWR@orig@textquotedbl{}stylesheet\LWR@orig@textquotedbl\ % space
6815 type=\LWR@orig@textquotedbl{}text/css\LWR@orig@textquotedbl\ % space
6816 href=\LWR@orig@textquotedbl\LWR@currentcss\LWR@orig@textquotedbl\ /%
6817 }%
6818 \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.

```
6819 \ifbool{mathjax}%
6820 {%
6821 \begingroup%
6822 \LWR@restoreoriglists%
6823 \boolfalse{LWR@verbtags}%

6824 \verbatiminput{\LWR@mathjaxfilename}%

6825 \booltrue{LWR@verbtags}%
6826 \endgroup%
6827 \LWR@stoppars%
6828 }% end of mathjax
6829 }%
```

End of the header:

```
6830 \LWR@htmltag{/head}\LWR@orignewline
```

Start of the body:

```
6831 \LWR@htmltag{body}\LWR@orignewline
6832 \endgroup
6833 \LWR@traceinfo{LWR@filestart: done}
6834 }

6835 \end{warpHTML}
```

## 64 Starting HTML output

**for HTML output:** 6836 \begin{warpHTML}

\LWR@LwarpStart Executed at the beginning of the entire document.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```
6837 \catcode'\$=\active
6838 \newcommand*{\LWR@LwarpStart}
6839 {%
6840 \LWR@traceinfo{LWR@lwarpStart}
```

If formatting for a word processor, force filedepth to single-file only, force HTML debug comments off.

```
6841 \ifbool{FormatWP}{%
6842 \setcounter{FileDepth}{-5}%
6843 \boolfalse{HTMLDebugComments}%
6844 }{}
```

Expand and detokenize `\HomeHTMLFilename` and `\HTMLFilename`:

```
6845 \edef\LWR@strresult{\HomeHTMLFilename}
6846 \edef\HomeHTMLFilename{\detokenize\expandafter{\LWR@strresult}}
6847 \edef\LWR@strresult{\HTMLFilename}
6848 \edef\HTMLFilename{\detokenize\expandafter{\LWR@strresult}}
```

Force onecolumn and empty page style:

```
6849 \LWR@origonecolumn%
6850 \LWR@origpagestyle{empty}%
```

No black box for overfull lines:

```
6851 \overfullrule=0pt
```

Reduce chance of line overflow when HTML tags are added:

```
6852 \LWR@print@footnotesize%
```

In PDF output, don't allow line breaks to interfere with HTML tags:

```
6853 \LWR@print@raggedright%
6854 \LetLtxMacro{\}{\LWR@endofline}%
```

Spread the lines for *pdftotext* to read them well:

```
6855 \linespread{1.3}%
```

For *pdftotext* to reliably identify paragraph splits:

```
6856 \setlength{\parindent}{0pt}
6857 \setlength{\parskip}{2ex}
```

For the `lateximage` record file:

```
6858 \immediate\openout\LWR@lateximagesfile=\BaseJobname-images.txt
```

Removes space around the caption in the HTML:

```
6859 \setlength{\belowcaptionskip}{0ex}
6860 \setlength{\abovecaptionskip}{0ex}
```

Redefine the plain page style to be empty when used by index pages:

```
6861 \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:

```
6862 \let\LWR@origcaption\caption
```

Labels: `\ltx@label` is used in `amsmath` environments and is also patched by `cleveref`.

### Label in HTML

```
6863 \let\LWR@origltx@label\ltx@label
6864 \let\ltx@label\LWR@htmlmathlabel
```

Not yet started any paragraph handling:

```
6865 \global\boolfalse{LWR@doingapar}
6866 \global\boolfalse{LWR@doingstartpars}
```

Document and page settings:

```
6867 \mainmatter
6868 \LWR@origpagenumbering{arabic}
```

Start a new HTML file and a header:

```
6869 \LWR@traceinfo{LWR@lwarpStart: Starting new file.}
6870 \LWR@filestart
6871 \LWR@traceinfo{LWR@lwarpStart: Generating first header.}
```

```
6872 \ifdefempty{\LWR@firstpagetop}{}%
6873 \LWR@htmltag{header}\LWR@orignewline
6874 \LWR@startpars
6875 \LWR@firstpagetop
6876 \LWR@stoppars
6877 \LWR@htmltag{/header}\LWR@orignewline
6878 }%
```

```
6879 \LWR@htmlclass{div}{bodywithoutsidetoc}
6880 \LWR@htmlclass{div}{bodycontainer}
6881 \LWR@traceinfo{LWR@lwarpStart: Generating textbody.}
6882 \LWR@htmlclass{section}{textbody}
```

Patch the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native `LATEX` environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```
6883 \LWR@patchlists
```

Ensure that math mode is active to call `lwarp`'s patches:

```
6884 \catcode'\$=\active
```

Required for `\nameref` to work with SVG math:

```
6885 \immediate\write\@mainaux{\catcode'\string\$\active}%
6886 \let\ltxMacro\LWR@syntaxhighlightone balance for editor syntax highlighting
```

Allow HTML paragraphs to begin:

```
6887 \LWR@startpars
```

If using `MATHJAX`, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
6888 \LWR@customizeMathJax
```

First autopage label in case a figure occurs early.

```
6889 \setcounter{LWR@latestautopage}{\value{page}}%
6890 \LWR@newautopagelabel{LWR@currentautosec}%
```

```
6891 \LWR@traceinfo{LWR@lwarpStart: done}
6892 }
6893 \catcode'\$=3% math shift until lwarp starts
```

```
6894 \end{warpHTML}
```

## 65 Ending HTML output

**for HTML output:** 6895 `\begin{warpHTML}`

`\LWR@requesttoc` `{\boolean}` `{\suffix}` Requests that a TOC, LOF, or LOT be generated.

```
6896 \newcommand*{\LWR@requesttoc}[2]{%
6897 \ifbool{#1}
6898 {
6899 \expandafter\newwrite\@nameuse{tf@#2}
6900 \immediate\openout \@nameuse{tf@#2} \jobname.#2\relax
6901 }{}
6902 }
```

`\LWR@LwarpEnd` Final stop of all HTML output:

```
6903 \newcommand*{\LWR@LwarpEnd}
6904 {
6905 \LWR@stoppars
6906 \LWR@closeprevious{finished}
```

At the bottom of the ending file:

Close the textbody:

```
6907 \LWR@htmlElementclassend{section}{textbody}
6908 \LWR@htmlElementclassend{div}{bodycontainer}
6909 \LWR@htmlElementclassend{div}{bodyandsidetoc}
```

Print any pending footnotes:

```
6910 \LWR@printpendingfootnotes
```

Create the footer:

```
6911 \ifdefempty{\LWR@pagebottom}{}{%
6912 \LWR@htmlElement{footer}
6913
6914 \LWR@pagebottom
6915
6916 \LWR@htmlElementend{footer}
6917 }
```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```
6918 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6919 {}
6920 {
6921 \ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{
6922 }
```

```
6923 \LWR@stoppars% final stop of all paragraphs
```

Finish the HTML file:

```
6924 \LWR@htmltag{/body}\LWR@orignewline
6925 \LWR@htmltag{/html}\LWR@orignewline
```

Seems to be required sometimes:

```
6926 \LWR@orignewpage
6927 }
```

`\enddocument` If labels have not changed, mark successful completion of the `lateximages` file. Executed as everything is being shut down.

```
6928 \xpatchcmd{\enddocument}
6929 {%
6930 \if@tempswa
6931 \@latex@warning@no@line{Label(s) may have changed.
6932 Rerun to get cross-references right}%
6933 \fi
6934 }
6935 {%
6936 \if@tempswa
6937 \@latex@warning@no@line{Label(s) may have changed.
6938 Rerun to get cross-references right}%
6939 \else
6940 \immediate\write\LWR@lateximagesfile{%
6941 |end|end|end|
6942 }%
6943 \fi
6944 }
```

```

6945 {}
6946 {
6947 \PackageWarningNoLine{lwarp}
6948 {%
6949 Could not patch \protect\enddocument.\MessageBreak
6950 If labels have changed, be sure to recompile before\MessageBreak
6951 creating lateximages with\MessageBreak
6952 \space\space lwarpmk limages,\MessageBreak
6953 or the images may be corrupt%
6954 }
6955 }

6956 \end{warpHTML}

```

## 66 Title page

**package support** `lwarp` supports the native L<sup>A</sup>T<sub>E</sub>X 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 66.8.

**affiliation** `lwarp` 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<sup>A</sup>T<sub>E</sub>X 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`.

`\printthanks` `\printthanks` 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.

### 66.1 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

`\and`

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 `\thedata` 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<sup>A</sup>T<sub>E</sub>X syntax for `\author`, optionally with `lwarp'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.

## 66.2 \if@titlepage

for HTML & PRINT: `6957 \begin{warpall}`

`\if@titlepage` Some classes do not provide `\if@titlepage`. In this case, provide it and force it false.

```

6958 \ifcsvoid{@titlepagefalse}{
6959 \newif\if@titlepage
6960 \@titlepagefalse
6961 }{}

6962 \end{warpall}

```

### 66.3 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:**

```

6963 \begin{warpall}
6964 \providerobustcmd{\affiliation}[1]{}
6965 \end{warpall}

```

**for PRINT output:**

```

6966 \begin{warpprint}

6967 \AtBeginEnvironment{titlepage}{
6968 \renewrobustcmd{\affiliation}[1]{\ \textsc{\small#1}}
6969 }
6970
6971 \AtBeginDocument{
6972 \@ifpackageloaded{titling}{
6973 \AtBeginEnvironment{titlingpage}{
6974 \renewrobustcmd{\affiliation}[1]{\ \textsc{\small#1}}
6975 }
6976 }{}% titling loaded
6977 }% AtBeginDocument

6978 \end{warpprint}

```

**for HTML output:**

```

6979 \begin{warpHTML}

```

`Env titlepage` Sets up a `<div>` of class `titlepage`. Provided even for memoir class, since it is used by `\maketitle`.

```

6980 \DeclareDocumentEnvironment{titlepage}{}
6981 {
6982 \renewrobustcmd{\affiliation}[1]{\ \InlineClass{affiliation}{##1}}
6983 \LWR@printpendingfootnotes
6984 \LWR@forcenewpage
6985 \BlockClass{titlepage}
6986 }
6987 {
6988 \endBlockClass
6989 \LWR@printpendingfootnotes
6990 }

6991 \end{warpHTML}

```

## 66.4 Printing the thanks

**for HTML & PRINT:** 6992 \begin{warpall}

\printthanks Forces the \thanks to be printed.

This is necessary in a titlingpage environment when \maketitle was not used.

```
6993 \newcommand*{\printthanks}{\LWR@stoppars\@thanks\LWR@startpars}
```

```
6994 \end{warpall}
```

## 66.5 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:** 6995 \begin{warpHTML}

\printtitle

```
6996 \newcommand*{\printtitle}
6997 {%
6998 \LWR@stoppars%
6999 \LWR@htmltag{\LWR@tagtitle}%
7000 \@title%
7001 \LWR@htmltag{\LWR@tagtitleend}%
7002 \LWR@startpars%
7003 }
```

\LWR@printthetitle A private version which prints the title without footnotes, used to title each HTML page.

```
7004 \newcommand*{\LWR@printthetitle}
7005 {%
7006 \LWR@stoppars%
7007 \LWR@htmltag{\LWR@tagtitle}%
7008 \thetitle%
7009 \LWR@htmltag{\LWR@tagtitleend}%
7010 \LWR@startpars%
7011 }
```

\printauthor HTML version.

```
7012 \newcommand*{\printauthor}{
```

The entire author block is contained in a <div> named author:

```
7013 \begin{BlockClass}{author}
```

\and finishes one author and starts the next:

```

7014 \renewcommand{\and}{%
7015 \end{BlockClass}
7016 \begin{BlockClass}{oneauthor}
7017 }

```

Individual authors are contained in a <div> named oneauthor:

```

7018 \begin{BlockClass}{oneauthor}
7019 \@author
7020 \end{BlockClass}
7021 \end{BlockClass}
7022 }

```

\printdate

```

7023 \newcommand*\printdate{%
7024 \begin{BlockClass}{titledate}
7025 \@date
7026 \end{BlockClass}
7027 }

```

```
7028 \end{warpHTML}
```

## 66.6 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:** 7029 \begin{warpprint}

\printtitle

```
7030 \newcommand*\printtitle{{\Huge\@title}}
```

\printauthor **Print mode.**

```

7031 \newcommand*\printauthor
7032 {{\large\begin{tabular}[t]{c}\@author\end{tabular}}}

```

\printdate

```
7033 \newcommand*\printdate{{\small\textit{\@date}}}
```

```
7034 \end{warpprint}
```

## 66.7 \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 59 for other kinds of footnotes.

See `\thanksmarkseries{series}`, below, to set the style of the footnote marks.

**for HTML output:**

```

7035 \begin{warpHTML}

7036 \@ifclassloaded{memoir}
7037 {
7038 \newcommand{\LWR@setfootnoteseries}{%
7039 \renewcommand\thefootnote{\@arabic\c@footnote}%
7040 }
7041 }{% not memoir
7042 \if@titlepage
7043 \newcommand{\LWR@setfootnoteseries}{%
7044 \renewcommand\thefootnote{\@arabic\c@footnote}%
7045 }
7046 \else
7047 \newcommand{\LWR@setfootnoteseries}{%
7048 \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
7049 }
7050 \fi
7051 }% not memoir

```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```
7052 \newcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```

7053 \LWR@setfootnoteseries%
7054 \def\@makefnmark{\thefootnote}

```

`\thefootnote` ⇒ `\nameuse{arabic}{footnote}`, or  
`\thefootnote` ⇒ `\nameuse{fnsymbol}{footnote}`

Redefine the footnote text:

```
7055 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
7056 \@thefnmark~%
```

`\makethanksmark` ⇒ `\thanksfootmark` ⇒ `\tamark` ⇒  
`\@thefnmark` ⇒ `\itshape a` (or similar)

Print the text:

```

7057 ##1%
7058 }%
7059 }

```

`\@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*.

```
7060 \def\@fnsymbol#1{\ifcase#1\or * \or \HTMLentity{dagger}\or \HTMLentity{Dagger}\or
7061 \HTMLentity{sect}\or \HTMLentity{para}\or \text{\HTMLUnicode{2016}}\or
7062 ** \or \HTMLentity{dagger}\HTMLentity{dagger} \or
7063 \HTMLentity{Dagger}\HTMLentity{Dagger} \else\@ctrerr\fi}
```

`\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.

```
7064 \renewcommand*\maketitle}{%
```

An HTML titlepage <div> is used for all classes.

```
7065 \begin{titlepage}
```

Set up special patches:

```
7066 \LWR@maketitlesetup
```

Typeset the title, etc:

```
7067 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
7068 \LWR@stoppars\@thanks\LWR@startpars
```

Close the HTML titlepage div and cleanup:

```
7069 \end{titlepage}
7070 \setcounter{footnote}{0}%
7071 \global\let\thanks\relax
7072 \global\let\maketitle\relax
7073 \global\let\@maketitle\relax
7074 \global\let\@thanks\@empty
7075 \global\let\@author\@empty
7076 \global\let\@date\@empty
7077 \global\let\@title\@empty
7078 \global\let\title\relax
7079 \global\let\author\relax
7080 \global\let\date\relax
7081 \global\let\and\relax
7082 }
```

`\@maketitle` HTML mode. Typesets the title, etc.:

```
7083 \DeclareDocumentCommand{\@maketitle}{}{%
```

```

7084 \LWR@stoppars%
7085 \LWR@htmltag{\LWR@tagtitle}%
7086 \@title%
7087 \LWR@htmltag{\LWR@tagtitleend}%
7088 \LWR@startpars%
7089 \begin{BlockClass}{author}%

```

For IEEEtran class:

```

7090 \renewcommand*\cr{}%
7091 \renewcommand*\crrc{}%
7092 \renewcommand*\noalign{}%

7093 \renewcommand{\and}{%
7094 \end{BlockClass}%
7095 \begin{BlockClass}{oneauthor}%
7096 }%
7097 \begin{BlockClass}{oneauthor}%
7098 \@author%
7099 \end{BlockClass}%
7100 \end{BlockClass}%
7101 \begin{BlockClass}{titledate}%
7102 \@date%
7103 \end{BlockClass}%
7104 }

```

`\LWR@titlingmaketitle` `\maketitle` for use inside an HTML titlingpage environment.

```
7105 \newcommand*\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
7106 \LWR@stoppars\@thanks\LWR@startpars
```

Set up special patches:

```
7107 \LWR@maketitlesetup
```

Typeset the title, etc:

```
7108 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
7109 \LWR@stoppars\@thanks\LWR@startpars
7110 }
```

```
7111 \end{warpHTML}
```

## 66.8 `\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 `lwarp.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:** 7112 `\begin{warpall}`

`\AddSubtitlePublished` Adds `\published` and `\subtitle`, and related.

```

7113 \newcommand*{\AddSubtitlePublished}{%
7114 \@ifpackageloaded{titling}{% yes titling package
7115 \newcommand{\@published}{}%
7116 \newcommand{\published}[1]{\gdef\@published{##1}}%
7117 \renewcommand*\maketitlehooka{\printpublished}%
7118 \newcommand*\printpublished{%
7119 \warpprintonly{\begin{center}\unskip}%
7120 \begin{BlockClass}{published}%
7121 \warpprintonly{\Large\itshape}%
7122 \@published%
7123 \end{BlockClass}%
7124 \warpprintonly{\end{center}}%
7125 }%
7126 \newcommand{\@subtitle}{}%
7127 \newcommand{\subtitle}[1]{\gdef\@subtitle{##1}}%
7128 \renewcommand*\maketitlehookb{\printsubtitle}%
7129 \newcommand*\printsubtitle{%
7130 \warpprintonly{\begin{center}\unskip}%
7131 \begin{BlockClass}{subtitle}%
7132 \warpprintonly{\Large\itshape}%
7133 \@subtitle%
7134 \end{BlockClass}%
7135 \warpprintonly{\end{center}}%
7136 }%
7137 }% yes titling package
7138 {% no titling package
7139 \newcommand{\published}[1]{}%
7140 \newcommand*\printpublished{}%
7141 \newcommand{\subtitle}{}%
7142 \newcommand*\printsubtitle{}%
7143 }% no titling package
7144 }% \AddSubtitlePublished

7145 \end{warpall}

```

## 67 Abstract

The following code replaces the L<sup>A</sup>T<sub>E</sub>X default, and will itself be replaced later if the abstract package is loaded.

**for HTML output:** 7146 \begin{warpHTML}

\abstractname User-redefinable title for the abstract.

Also over-written by the babel package.

7147 \providecommand\*{\abstractname}{Abstract}

Some classes allow an optional name, so it is allowed here.

Env abstract

```
7148 \DeclareDocumentEnvironment{abstract}{0{\abstractname}}
7149 {
7150 \LWR@forcenewpage
7151 \BlockClass{abstract}
7152 \BlockClassSingle{abstracttitle}{#1}
7153 }
7154 {
7155 \endBlockClass
7156 }

7157 \end{warpHTML}
```

## 68 Quote and verse

### 68.1 Attributions

\attribution {<name>}

For use with quote, quotation, verse:

Ex: "A quotation." \attribution{\textsc{Author Name}}\textsl{Book Title}}

**for HTML output:** 7158 \begin{warpHTML}

```
7159 \newcommand{\attribution}[1]{%
7160 \LWR@stoppars%
7161 \begin{BlockClass}{attribution}
7162 #1
7163 \end{BlockClass}
7164 \LWR@startpars%
7165 }
7166 \end{warpHTML}
```

```

for PRINT output: 7167 \begin{warpprint}
 7168 \newcommand{\attribution}[1]{
 7169 \begin{flushright}
 7170 \unskip
 7171 #1
 7172 \end{flushright}}%
 7173 }
 7174 \end{warpprint}

```

## 68.2 Quotes, quotations

```

for HTML output: 7175 \begin{warpHTML}

```

Env quote

```

7176 \renewenvironment*{quote}
7177 {
7178 \LWR@forcenewpage
7179 \LWR@htmlblocktag{blockquote}
7180 }
7181 {\LWR@htmlblocktag{/blockquote}}

```

Env quotation

```

7182 \renewenvironment*{quotation}
7183 {
7184 \LWR@forcenewpage
7185 \LWR@htmlblocktag{blockquote}
7186 }
7187 {\LWR@htmlblocktag{/blockquote}}

7188 \end{warpHTML}

```

## 68.3 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. `lwarp` 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}

```

Len `\vleftskip` 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 `\HTML\vleftskip` and

Len `\vleftmargini`

Len `\HTML\vleftskip`

Len `\HTMLleftmargini`

`\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.

### 68.3.1 L<sup>A</sup>T<sub>E</sub>X core verse environment

**for HTML output:** 7189 `\begin{warpHTML}`

Env `verse`

```

7190 \renewenvironment{verse}
7191 {\let\\newline% lwarp
7192 \list{}{\itemsep \z@
7193 \itemindent -1.5em%
7194 \listparindent\itemindent
7195 \rightmargin \leftmargin
7196 \advance\leftmargin 1.5em}%
7197 \item\relax}
7198 {\endlist}

7199 \end{warpHTML}

```

**for HTML & PRINT:** 7200 `\begin{warpall}`

### 68.3.2 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 `\leftskip` and `\leftmargini` for print output, and optionally select different values for HTML.

Len `\HTMLvleftskip` Sets `\vleftskip` inside a `verse` environment in HTML.

```

7201 \newlength{\HTMLvleftskip}
7202 \setlength{\HTMLvleftskip}{1em}

```

Len `\HTMLleftmargini` Sets `\leftmargini` inside a `verse` environment in HTML.

```

7203 \newlength{\HTMLleftmargini}
7204 \setlength{\HTMLleftmargini}{4.5em}

7205 \end{warpall}

```

## 69 Verbatim and tabbing

**for HTML & PRINT:** 7206 \begin{warpall}

Len \VerbatimHTMLWidth Width to use in HTML Verbatim environment.

This width is used when placing line numbers to the right. Ignored during print output.

```
7207 \newlength{\VerbatimHTMLWidth}
7208 \setlength{\VerbatimHTMLWidth}{4in}
7209 \end{warpall}
```

**for HTML output:** 7210 \begin{warpHTML}

Bool LWR@verbtags Used to temporarily turn off verbatim tags while doing \verbatiminput in the HTML head.

```
7211 \newbool{LWR@verbtags}
7212 \booltrue{LWR@verbtags}
```

\LWR@atbeginverbatim [*1: style*] [*2: negative \baselineskip \vspace*] [*3: class*]

Encloses a verbatim environment with the given css class.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```
7213 \newcommand*\LWR@atbeginverbatim}[3]{}
7214 {%
```

Avoid excessive space between lines:

```
7215 \setlength{\parskip}{0ex}%
```

Stop generating HTML paragraph tags:

```
7216 \LWR@stoppars%
```

Create a new pre of the given class. The tags may temporarily be turned off for internal use, such as loading the MATHJAX script.

```
7217 \ifbool{LWR@verbtags}{%
7218 \LWR@htmltag{pre class=\textquotedbl#3\textquotedbl%
7219 \ifthenelse{\equal{#1}{}}{ style=\textquotedbl#1\textquotedbl}%
7220 }%
7221 \LWR@orignewline% pre
7222 \leavevmode\unskip\LWR@print@vspace*{-#2\baselineskip}%
7223 }{%}
```

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.

```
7224 \begingroup%
```

```
7225 % \LWR@print@normalsize%
7226 \LWR@origttfamily%
7227 \LWR@print@small%
```

Since inside a <pre>, restore the original list processing:

```
7228 \LWR@restoreoriglists%
```

Turn off **babel-french** extra space before punctuation:

```
7229 \LWR@FBcancel%
```

Do not produce HTML tags for \hspace inside a verse par. Restore plain L<sup>A</sup>T<sub>E</sub>X \hspace functionality:

```
7230 \LWR@select@print@hspace%
7231 }
```

```
\LWR@afterendverbatim {(negative \baselineskip \vspace)}
```

Finishes enclosing a verbatim environment.

```
7232 \newcommand*\LWR@afterendverbatim[1]{%
7233 \endgroup%
7234 \par%
```

At the end of the environment, close the pre:

```
7235 \ifbool{LWR@verbtags}{%
7236 \LWR@print@vspace*{-#1\baselineskip}%
7237 \noindent\LWR@htmltag{/pre}\LWR@originewline% pre
7238 }{}}%
```

Resume regular paragraph handling:

```
7239 \LWR@startpars%
7240 }
```

```
\verbatiminput {(filename)}
```

Patch \verbatiminput to add HTML tags:

```
7241 \let\LWRV@origverbatim@input\verbatim@input
7242
7243 \renewcommand{\verbatim@input}[2]{%
7244 \ifbool{LWR@verbtags}{\LWR@forcenewpage}{}%
7245 \LWR@atbeginverbatim{2.5}{Verbatim}%
7246 \LWRV@origverbatim@input{#1}{#2}%
7247 \LWR@afterendverbatim{1.5}%
7248 }
```

Env `verbatim`

```
7249 \AfterEndPreamble{
7250 \LWR@traceinfo{Patching verbatim.}
7251 \AtBeginEnvironment{verbatim}{%
7252 \LWR@forcenewpage%
7253 \LWR@atbeginverbatim{2.5}{verbatim}%
7254 }
7255 \AfterEndEnvironment{verbatim}{%
7256 \LWR@afterendverbatim{1}%
7257 }
7258 }
```

Env `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.

```
7259 \newcommand*\LWR@HTML@tabbing{%
7260 \LWR@forcenewpage%
7261 \LWR@atbeginverbatim{3}{tabbing}%
7262 \LWR@print@tabbing%
7263 }
7264
7265 \newcommand*\LWR@HTML@endtabbing{%
7266 \LWR@print@endtabbing%
7267 \LWR@afterendverbatim{1}%
7268 }
7269
7270 \LWR@formatted{tabbing}
7271 \LWR@formatted{endtabbing}

7272 \end{warpHTML}
```

## 70 Theorems

`\newtheorem`  $\{\langle text \rangle\} [\langle counter \rangle] \text{--- or ---} [\langle oldname \rangle] \{\langle text \rangle\}$

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 `<span>` of class `theoremlabel`.
- The contents are placed inside a `<div>` of class `theoremcontents`.

**for HTML output:** `7273 \begin{warpHTML}`

```
\@begintheorem {<name>} {<number>}

7274 \renewcommand{\@begintheorem}[2]{%
7275 \LWR@forcenewpage
7276 \BlockClass{theoremcontents}
7277 \trivlist
7278 \item[\InlineClass{theoremlabel}{#1\ #2\ }]\itshape
7279 }
```

```
\@opargbegintheorem {<name>} {<number>} {<oparg>}

7280 \renewcommand{\@opargbegintheorem}[3]{%
7281 \LWR@forcenewpage
7282 \BlockClass{theoremcontents}
7283 \trivlist
7284 \item[\InlineClass{theoremlabel}{#1\ #2\ (#3)\ }]\itshape
7285 }
```

```
\@endtheorem

7286 \renewcommand*\@endtheorem}{%
7287 \endtrivlist
7288 \endBlockClass% theoremcontents
7289 }

7290 \end{warpHTML}
```

## 71 Lists

The environments `itemize`, `enumerate`, and `description` are patched when `lwarp` is started. These patches support the standard L<sup>A</sup>T<sub>E</sub>X 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<sup>A</sup>T<sub>E</sub>X 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<sub>E</sub>X 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`.

## 71.1 List environment

**for HTML output:** 7291 `\begin{warpHTML}`

`\LWR@printclose` May be locally redefined by `enumerate` or `description`.

```
7292 \newcommand*\LWR@printcloselist}{\LWR@printcloseitemize}
```

`\LWR@printopen` May be locally redefined by `enumerate` or `description`.

```
7293 \newcommand*\LWR@printopenlist}{ul style="\LWR@print@mbbox{list-style-type:none}"}
```

`\@mklab` Removes PDF spacing.

```
7294 \AtBeginDocument{
7295 \def\@mklab#1{%
7296 % \hfil %
7297 #1}
7298 \let\makelabel\@mklab
7299 }
```

`\@donoparitem` Modified for HTML output by replacing T<sub>E</sub>X boxes with plain text. Also removes PDF spacing.

```
7300 \def\@donoparitem{%
7301 \@noparitemfalse
7302 % \global\setbox\@labels\hbox{\hskip -\leftmargin
7303 % \unhbox\@labels
7304 % \hskip \leftmargin}%
7305 % \if@minipage\else
7306 % \@tempskipa\lastskip
7307 % \vskip -\lastskip
7308 % \advance\@tempskipa\@outerparskip
7309 % \advance\@tempskipa -\parskip
7310 % \vskip\@tempskipa
7311 % \fi
7312 }
```

`\@item` Modified for HTML output by replacing T<sub>E</sub>X boxes with plain text. Also removes PDF spacing.

```
7313 \def\LWR@HTML@item[#1]{%
```

```
7314 \LWR@traceinfo{@item}
7315 \if@noparitem
7316 \@donoparitem
7317 \else
7318 % \if@inlabel
7319 % \indent
7320 % \par
7321 % \fi
7322 \ifhmode
7323 % \unskip\unskip
7324 % \par
7325 \fi
7326 \if@newlist
7327 \if@nobreak
7328 \@nbitem
7329 \else
7330 % \addpenalty\@beginparpenalty
7331 % \addvspace\@topsep
7332 % \addvspace{-\parskip}%
7333 \fi
7334 \else
7335 % \addpenalty\@itempenalty
7336 % \addvspace\itemsep
7337 \fi
7338 \global\@inlabeltrue
7339 \fi
7340 % \everypar{%
7341 % \@minipagefalse
7342 % \global\@newlistfalse

7343 % \if@inlabel
7344 % \global\@inlabelfalse

7345 % {\setbox\z@\lastbox
7346 % \ifvoid\z@
7347 % \kern-\itemindent
7348 % \fi}%

7349 % \box\@labels
7350 % \penalty\z@
7351 % \fi

7352 % \if@nobreak
7353 % \@nobreakfalse
7354 % \clubpenalty \@M
7355 % \else
7356 % \clubpenalty \@clubpenalty
7357 % \everypar{}%
7358 % \fi}%

7359 \if@noitemarg
7360 \@noitemargfalse
7361 \if@nmbulist
```

```

7362 \refstepcounter\@listctr
7363 \fi
7364 \fi

7365 \makelabel{#1} % extra space
7366 % \sbox\@tempboxa{\makelabel{#1}}%
7367 % \global\setbox\@labels\hbox{%
7368 % \unhbox\@labels
7369 % \hskip \itemindent
7370 % \hskip -\labelwidth
7371 % \hskip -\labelsep
7372 % \ifdim \wd\@tempboxa >\labelwidth
7373 % \box\@tempboxa

7374 % \else
7375 % \hbox to\labelwidth {\unhbox\@tempboxa}%
7376 % \fi
7377 % \hskip \labelsep}%
7378 \ignorespaces%
7379 }

```

**\@nbitem**

```

7380 \def\@nbitem{%
7381 % \@tempskipa\@outerparskip
7382 % \advance\@tempskipa -\parskip
7383 % \addvspace\@tempskipa
7384 }

```

**\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.

```

7385 \newcommand*\LWR@listitem{%
7386 \LWR@stoppars%
7387 \LWR@startnewdepth{listitem}%
7388 \LWR@htmltag{li}%
7389 \LWR@startpars%
7390 \LWR@origitem%
7391 }

```

**\LWR@nulllistfills** Nullifies various TeX fill commands, in case they are used inside `\makeLabel`. Problems are caused when these are nullified all the time.

```

7392 \newcommand*\LWR@nulllistfills{%
7393 \renewcommand*\hss{%
7394 \renewcommand*\llap}[1]{##1}%
7395 \renewcommand*\rlap}[1]{##1}%
7396 \renewcommand*\hfil{%

```

```

7397 \renewcommand*{\hfilneg}{}%
7398 \renewcommand*{\hfill}{}%
7399 }

```

Env `list` [*⟨label⟩*] {*⟨commands⟩*}

```

7400 \newcommand*{\LWR@liststart}{%
7401 \LWR@traceinfo{\LWR@liststart}%
7402 \LWR@stoppars%
7403 \LWR@pushoneclose{list}%
7404 \LWR@htmltag{\LWR@printopenlist}\LWR@originewline%
7405 \LWR@startpars%
7406 \setlength{\topsep}{0pt}%
7407 \setlength{\partopsep}{0pt}%
7408 \setlength{\itemsep}{0pt}%
7409 \setlength{\parsep}{0pt}%
7410 \setlength{\leftmargin}{0pt}%
7411 \setlength{\rightmargin}{0pt}%
7412 \setlength{\listparindent}{0pt}%
7413 \setlength{\itemindent}{0pt}%
7414 \setlength{\labelsep}{1em}%
7415 \LWR@nulllistfills%
7416 }

7417 \newcommand*{\LWR@listend}{%
7418 \LWR@traceinfo{\LWR@listend}%
7419 \LWR@stoppars%
7420 \LWR@closeprevious{list}%
7421 \LWR@startpars%
7422 }

```

## 71.2 Itemize

`\LWR@itemizeitem` [*⟨label⟩*]

Handles `\item` inside an `itemize` or `enumerate`.

See `\LWR@openparagraph` where extra `\hspace` is used to leave room for the label while inside a list during paragraph construction.

```

7423 \newcommand*{\LWR@itemizeitem}{%
7424 \LWR@stoppars%
7425 \LWR@startnewdepth{listitem}%
7426 \LWR@htmltag{li}%
7427 \LWR@startpars%
7428 \LWR@origitem%
7429 }

```

Env `itemize` [*⟨options⟩*]

```

7430 \newcommand*{\LWR@itemizestart}{%

```

```

7431 \renewcommand*\LWR@printcloselist{\LWR@printcloseitemize}
7432 \renewcommand*\LWR@printopenlist{\ul style="\LWR@print@box{list-style-type:none}}
7433 \let\item\LWR@itemizeitem%
7434 \LWR@nulllistfills%
7435 }

```

### 71.3 Enumerate

An HTML unordered list is used with customized L<sup>A</sup>T<sub>E</sub>X-generated labels.

Env `enumerate` [*(options)*]

```

7436 \newcommand*\LWR@enumeratestart{%
7437 \renewcommand*\LWR@printcloselist{\LWR@printcloseitemize}
7438 \renewcommand*\LWR@printopenlist{\ul style="\LWR@print@box{list-style-type:none}}
7439 \let\item\LWR@itemizeitem%
7440 \LWR@nulllistfills%
7441 }

```

### 71.4 Description

`\LWR@descitem` [*(label)*] Handles an `\item` inside a description.

```

7442 \newcommand*\LWR@descitem[1][{}]%
7443 {%
7444 \LWR@stoppars%
7445 \LWR@setlatestname{#1}%
7446 \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.

```

7447 \begingroup%
7448 \let\LWR@orig@desc@makeLabel\makeLabel
7449 \renewcommand*\makeLabel[1]{%
7450 \LWR@htmltag{dt}%
7451 \LWR@orig@desc@makeLabel{#1}%
7452 \LWR@htmltag{/dt}%
7453 }
7454 \LWR@select@html@nohspace%
7455 \LWR@origitem[1]%
7456 \endgroup%
7457 \LWR@orignewline%
7458 \LWR@htmltag{dd}%
7459 \LWR@startpars%
7460 }

```

Env `description` [*(options)*]

```

7461 \newcommand*\LWR@descriptionstart}{%
7462 \renewcommand*\LWR@printcloselist}{\LWR@printclosedescription}
7463 \renewcommand*\LWR@printopenlist}{dl}
7464 \let\item\LWR@descitem%
7465 \LWR@nulllistfills%
7466 }

```

## 71.5 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  $\LaTeX$  environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```

7467 \newcommand*\LWR@patchlists}{%
7468 \LetLtxMacro\item\LWR@listitem%
7469 \LetLtxMacro\@item\LWR@HTML@item%
7470 \renewcommand*\@trivlist}{%
7471 \LWR@traceinfo{@trivlist start}%
7472 \LWR@liststart%
7473 \LWR@orig@trivlist%
7474 \LWR@traceinfo{@trivlist done}%
7475 }%
7476 \renewcommand*\trivlist}{%
7477 \LWR@traceinfo{trivlist}%
7478 \LWR@origtrivlist%
7479 }%
7480 \renewcommand*\endtrivlist}{%
7481 \LWR@traceinfo{endtrivlist start}%
7482 \LWR@origendtrivlist\LWR@listend%
7483 \LWR@traceinfo{endtrivlist done}%
7484 }%
7485 \renewcommand*\itemize}{%
7486 \LWR@itemizestart\LWR@origitemize%
7487 }%
7488 \renewcommand*\enumerate}{%
7489 \LWR@enumeratestart\LWR@origenumerate%
7490 }%
7491 \renewcommand*\description}{%
7492 \LWR@descriptionstart\LWR@origdescription%
7493 }%
7494 }

```

`\LWR@restoreoriglists` Restores the original `trivlist` environment.

```

7495 \newcommand*\LWR@restoreoriglists}{%
7496 \LWR@traceinfo{\LWR@restoreoriglists}%
7497 \LetLtxMacro\item\LWR@origitem%
7498 \LetLtxMacro\@item\LWR@orig@item%
7499 \let\@trivlist\LWR@orig@trivlist%

```

```

7500 \let\trivlist\LWR@origtrivlist%
7501 \let\endtrivlist\LWR@origendtrivlist%
7502 \LetLtxMacro\itemize\LWR@origitemize%
7503 \LetLtxMacro\enditemize\LWR@endorigitemize%
7504 \LetLtxMacro\enumerate\LWR@origenumerate%
7505 \LetLtxMacro\endenumerate\LWR@endorigenumerate%
7506 \LetLtxMacro\description\LWR@origdescription%
7507 \LetLtxMacro\enddescription\LWR@endorigdescription%
7508 \let\@mklab\LWR@orig@mklab%
7509 \let\makeLabel\LWR@origmakeLabel%
7510 \let\@donoparitem\LWR@orig@donoparitem%
7511 \let\@nbitem\LWR@orig@nbitem%
7512 }

7513 \end{warpHTML}

```

## 72 Tabular

This is arguably the most complicated part of the entire package. Numerous tricks are employed to handle the syntax of the L<sup>A</sup>T<sub>E</sub>X core and the various tabular-related packages.

### 72.1 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:

⚠ Misplaced alignment  
tab character &

- 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

```

⚠ 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, lwarp'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 % because & is used in a
definition
\newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\StopDefiningTabulars

```

**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:

- `@` 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.
-  `\newcolumnntype`
- `\newcolumnntype` is ignored; unknown column types are set to `l`.

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.
-  `\warpprintonly`
-  **Misplaced `\noalign`**
- For `\toprule` and `\bottomrule`, when combined with a `warpprint` or `warppHTML` 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

⚠ S columns

- `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 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 \\}
\warppHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\}
```

- In \LaTeX , 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.

⚠ tabular inside a

for HTML output: `7514 \begin{warppHTML}`

72.2 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.

72.2.1 `arydshln`

Emulated by the original \LaTeX non-dashed versions.

```
7515 \LetLtxMacro\hdashline\hline
7516 \LetLtxMacro\cdashline\cline
7517 \LetLtxMacro\firsthdashline\hline
7518 \LetLtxMacro\lasthdashline\hline
```

72.3 Token lookahead

Used by `\LWR@futurenonSPACElet` to look at the next token.

`\LWR@mynexttoken`

```
7519 \newcommand\LWR@mynexttoken\relax
```

`\futurelet` copies the next token then executes a function to analyze it.

`\LWR@futurenonospacelet` does the same, but ignores intervening white space

Based on the `booktabs` style:

`\LWR@futurenonospacelet`

```
7520 \def\LWR@futurenonospacelet#1{\def\LWR@cs{#1}%
7521 \afterassignment\LWR@fnslone\let\nexttoken= }
7522
7523 \def\LWR@fnslone{\expandafter\futurelet\LWR@cs\LWR@fnsltwo}
7524
7525 \def\LWR@fnsltwo{%
7526 \expandafter\ifx\LWR@cs@sptoken\let\next=\LWR@fnslthree%
7527 \else\let\next=\nexttoken\fi\next}
7528
7529 \def\LWR@fnslthree{\afterassignment\LWR@fnslone\let\next= }
```

`\LWR@getmynexttoken` Looks ahead and copies the next token into `\LWR@mynexttoken`.

```
7530 \newcommand*\LWR@getmynexttoken}{%
7531   \LWR@traceinfo{LWR@getmynexttoken}%
7532 % nothing must follow this next line
7533   \LWR@futurenonospacelet\LWR@mynexttoken\LWR@tabledatacolumn tag
7534 }
```

72.4 Tabular variables

In order to support nested tabulars, each of these is used locally. For local counters, `etoolbox`'s `\defcounter` and `lwarp`'s new `\defaddtocounter` are used.

Bool `LWR@startedrow` True if should print a row tag before this column.

```
7535 \newbool{LWR@startedrow}
7536 \boolfalse{LWR@startedrow}
```

Bool `LWR@tabularcelladded` True if have added a data cell for this position.

```
7537 \newbool{LWR@tabularcelladded}
7538 \boolfalse{LWR@tabularcelladded}
```

Ctr `LWR@hlines` Number of `\hlines` or `\midrules` above the next row.

```
7539 \newcounter{LWR@hlines}
```

Ctr `LWR@hdashedlines` Number of `\arydshln` dashed lines above the next row.

```
7540 \newcounter{LWR@hdashedlines}
```

Bool `LWR@doingtbrule` True if the next row will have a top/bottom rule above it.

7541 \newbool{LWR@doingtbrule}
 7542 \boolfalse{LWR@doingtbrule}

Bool LWR@doingcmidrule 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.

7543 \newbool{LWR@doingcmidrule}
 7544 \boolfalse{LWR@doingcmidrule}

Bool LWR@tableparcell True if are handling a paragraph inside a table cell, so must close the paragraph tag before moving on.

7545 \newbool{LWR@tableparcell}

Bool LWR@skippingmrowcell True if are doing an empty \multirow cell, and thus there is no data tag to close.

7546 \newbool{LWR@skippingmrowcell}

Bool LWR@skippingmcolrowcell True if are doing an empty \multicolumnrow cell, and thus there is no data tag to close, and do not print @ and ! columns.

7547 \newbool{LWR@skippingmcolrowcell}

Bool LWR@usedmultirow Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

7548 \newbool{LWR@usedmultirow}

Bool LWR@foundmrowcell Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

7549 \newbool{LWR@foundmrowcell}

Bool LWR@skipatbang True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.

7550 \newbool{LWR@skipatbang}

Bool LWR@emptyatbang True if finishing a row and should print empty @ or ! column table data cells.

7551 \newbool{LWR@emptyatbang}

Bool LWR@intabularmetadata True if are in a tabular but not in a data cell. Used to prevent extra HTML breaks if not inside table data.

7552 \newbool{LWR@intabularmetadata}
 7553 \boolfalse{LWR@intabularmetadata}

Bool LWR@exitingtabular When \end is found, turns off the next opening data tag.

7554 \newbool{LWR@exitingtabular}

- Bool** `LWR@tabularmutemods` Mutes HTML output for @, !, < and >.
- This is used while printing the final row to generate `\bottomrules`.
- ```
7555 \newbool{LWR@tabularmutemods}
```
- Bool** `LWR@validtablecol` True if found a valid table column type.
- ```
7556 \newbool{LWR@validtablecol}
```
- Bool** `LWR@opttablecol` True if found a table column optional argument.
- ```
7557 \newbool{LWR@opttablecol}
```
- Used to add a style to a table data cell:
- ```
7558 \newbool{LWR@tdhavecellstyle}
```
- Ctr** `LWR@tabularDepth` Tracks whether & is being used inside a tabular.
- ```
7559 \newcounter{LWR@tabulardepth}
7560 \setcounter{LWR@tabulardepth}{0}
```
- Ctr** `LWR@tabularpardepth` 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 `lwarp` has started looking at the contents of the tabular, and thus any `\pars` encountered must be followed by another token lookahead.
- ```
7561 \newcounter{LWR@tabularpardepth}
7562 \setcounter{LWR@tabularpardepth}{0}
```
- ```
7563 \newcommand*{\LWR@colsresult}{}%temp storage for column format results
7564 \newcommand*{\LWR@pposition}{}
7565 \newcommand*{\LWR@pleft}{}
7566 \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 `LATEX` table column, without @, !, >, <, or the vertical bar.
- \LWR@strresult** Holds the result of `Str` functions.
- ```
7567 \providecommand*{\LWR@strresult}{}
7568 \providecommand*{\LWR@strresulttwo}{}

```
- \LWR@origcolspec** Holds the original column specs given to tabular.
- ```
7569 \newcommand*{\LWR@origcolspec}{}

```

- Ctrl `LWR@tablecolspecwidth` Holds the number of tokens in the table columns specification.
- This 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<sup>A</sup>T<sub>E</sub>X columns in the table.)
- ```
7570 \newcounter{LWR@tablecolspecwidth}
```
- Ctrl `LWR@tablecolspecindex` While parsing the L^AT_EX table column specification, starts at 1 and is incremented per token of the specification.
- ```
7571 \newcounter{LWR@tablecolspecindex}
```
- Ctrl `LWR@tableLaTeXcolindex` 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.
- ```
7572 \newcounter{LWR@tableLaTeXcolindex}
```
- Ctrl `LWR@tabletotalLaTeXcols` While parsing a table column specification, begins at 0 and increments by 1 per L^AT_EX table column. Eventually holds the final number of L^AT_EX table columns in each row, not counting @ and ! columns. (In HTML, @ and ! cells become their own columns, but are not included in LWR@tabletotalLaTeXcols.)
- ```
7573 \newcounter{LWR@tabletotalLaTeXcols}
```
- Ctrl `LWR@tabletotalLaTeXcolsnext` Holds the next L<sup>A</sup>T<sub>E</sub>X table column index while parsing, equal to one more than LWR@tabletotalLaTeXcols.
- ```
7574 \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.
- Ctrl `LWR@cellcolordepth` Counts how many cell color <div>s were added to the current tabular data cell.
- ```
7575 \newcounter{LWR@cellcolordepth}
```

#### 72.4.1 Multicolumn variables

```
7576 \newcounter{LWR@tablemulticolwidth}
```

Indexes into the multicolumn specification:

```
7577 \newcounter{LWR@tablemulticolspos}
```

Remembers multicolumn vertical rules if found in the column spec.

```
7578 \newcounter{LWR@mccolvertbarsl}
7579 \newcounter{LWR@mccolvertbarsr}
7580 \newcounter{LWR@mccolvertbarsldash}
7581 \newcounter{LWR@mccolvertbarsrdash}
7582 \newbool{LWR@mccolvertbaronleft}
```

### 72.4.2 Longtable variables

Bool LWR@starredlongtable Per the caption package, step the counter if longtable\*.

```
7583 \newbool{LWR@starredlongtable}
7584 \boolfalse{LWR@starredlongtable}
```

### 72.4.3 Midrule variables

Ctr LWR@midrulecounter Indexes across the LWR@midrules and LWR@trim<l/r>rules data arrays.

```
7585 \newcounter{LWR@midrulecounter}
```

## 72.5 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](http://tex.stackexchange.com/questions/11638/where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860)

\LWR@instertatbangcols

```
7586 \newcommand*{\LWR@insertatbangcols}{%
7587 \ifbool{LWR@skipatbang}%
7588 {}%
7589 {%
7590 \LWR@printatbang{at}{\arabic{LWR@tableLaTeXcolindex}}%
7591 \LWR@printatbang{bang}{\arabic{LWR@tableLaTeXcolindex}}%
7592 }%
7593 }
```

\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.

```
7594 \newcommand*{\LWR@closetabledatacell}{%
7595 \booltrue{LWR@intabularmetadata}%
7596 \ifbool{LWR@exitingtabular}%
7597 {%
```

```

7598 \LWR@stoppars%
7599 }%
7600 {% not exiting tabular
7601 \ifboolexpr{bool{LWR@skippingmrowcell} or bool{LWR@skippingmcolrowcell}}%
7602 {%

```

```

7603 \LWR@stoppars%

```

If not skipping a `\multicolumnrow` cell, insert the @ and ! columns after this non-existent column.

```

7604 \ifbool{LWR@skippingmcolrowcell}%
7605 {}%
7606 {\LWR@insertatbangcols}%
7607 }%
7608 {% not skippingmrowcell

```

Insert any < then any @ and ! column contents, unless muted for the `\bottomrule` or a `\multicolumn`:

```

7609 \unskip%
7610 \ifboolexpr{%
7611 bool{LWR@tabularmutemods} or
7612 bool{LWR@skipatbang} or
7613 bool{LWR@emptyatbang}
7614 }%
7615 {}%
7616 {%
7617 \LWR@getexparray{LWR@colafterspec}%
7618 {\arabic{LWR@tableLaTeXcolindex}}%
7619 }%

```

Close paragraphs:

```

7620 \LWR@stoppars%
7621 \boolfalse{LWR@tableparcell}%

```

Close the table data cell.

Close any color `<div>s`.

```

7622 \whileboolexpr{test {\ifnumcomp{\value{LWR@cellcolordepth}}{>}{0}}}{%
7623 \LWR@htmltag{/div}\LWR@orignewline%
7624 \defaddtocounter{LWR@cellcolordepth}{-1}%
7625 }%

```

Skip the @ and ! cells if are closing a multicolumn cell.

```

7626 \leavevmode\unskip\LWR@htmltag{/td}\LWR@orignewline%
7627 \global\booltrue{LWR@tabularcelladded}%
7628 \LWR@insertatbangcols%
7629 }% not skipping mrowcell
7630 }% not exiting tabular

```

```

7631 \boolfalse{LWR@skippingmrowcell}%
7632 \boolfalse{LWR@skippingmcolrowcell}%
7633 \boolfalse{LWR@skipatbang}%

```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```

7634 \def\LWR@cellHTMLcolor{}%
7635 \def\LWR@columnHTMLcolor{}%
7636 \defcounter{LWR@cellcolordepth}{0}%
7637 }

```

When not used inside a tabular, & performs its original function as recorded here ( with catcode 4 ).

```

7638 \let\LWR@origampmacro&
7639 \end{warpHTML}

```

### 72.5.1 Handling &

**for HTML output:** 7640 \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.

```

7641 \newcommand*{\LWR@tabularampersand}{%
7642 \LWR@traceinfo{LWR@tabularampersand}%
7643 \ifnumcomp{\value{LWR@tabulardepth}}{>}{0}%
7644 {%

```

If not skipping a multirow cell, close the current data cell.

```

7645 \unskip%
7646 \LWR@closetabledatacell%

```

Move to the next column.

```

7647 \defaddtocounter{LWR@tableLaTeXcolindex}{1}%

```

Have not yet added data in this column:

```

7648 \global\boolfalse{LWR@tabularcellladded}%

```

Look at the next token to decide multi or single column data tag.

```

7649 \LWR@getmynexttoken%
7650 }%

```

If not inside a tabular, performs the original action:

```
7651 {%
7652 \LWR@origampmacro%
7653 }%
7654 }
```

& 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.

### 72.5.2 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.

```
7655 \newcommand*{\LWR@tabularfinishrow}{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```
7656 \ifboolexpr{%
7657 not bool {LWR@exitingtabular} or%
7658 bool{LWR@doingtbrule} or%
7659 bool{LWR@doingcmidrule} or%
7660 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
7661 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
7662 bool{LWR@startedrow}%
7663 }{%
```

To temporarily turn off `LWR@exitingtabular` so that table data tags will still be generated:

If generating a final row for the `\bottomrule` borders, turn off the @, !, <, and > column output:

```
7664 \ifbool{LWR@exitingtabular}{%
7665 \booltrue{LWR@tabularmutemods}%
7666 }{%
7667 \boolfalse{LWR@tabularmutemods}%
7668 }%
```

Locally reenable the table data tags until finished with the final row:

```
7669 \boolfalse{LWR@exitingtabular}%
```

Generate table data tags and ampersands until the right edge:

```

7670 \whileboolexpr{%
7671 test {
7672 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
7673 {\value{LWR@tabletotalLaTeXcols}}
7674 } or %
7675 (%
7676 bool{LWR@intabularmetadata} and%
7677 not bool{LWR@tabularcellladed} and%
7678 test {
7679 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}
7680 {\value{LWR@tabletotalLaTeXcols}}
7681 }%
7682)%
7683 }%
7684 {%
7685 \LWR@tabledatasinglecolumnntag%

```

The following is essentially `\LWR@tabularampersand` with `LWR@emptyatbang` added to empty the following cells:

```

7686 \LWR@closetabledatacell%
7687 \defaddtocounter{LWR@tableLaTeXcolindex}{1}%
7688 \global\boolfalse{LWR@tabularcellladed}%
7689 \booltrue{LWR@emptyatbang}%

```

Starts the next cell:

```

7690 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
7691 {\value{LWR@tabletotalLaTeXcols}}%
7692 {\LWR@getmynexttoken}%
7693 {}%
7694 }%

```

Reenable the original `LWR@exitingtabular` to close the entire table:

```

7695 \ifbool{LWR@tabularmutemods}{%
7696 \booltrue{LWR@exitingtabular}%
7697 }{%
7698 \boolfalse{LWR@exitingtabular}%
7699 }%
7700 \boolfalse{LWR@tabularmutemods}%

7701 \boolfalse{LWR@emptyatbang}%
7702 }{}% ifboolexpr
7703 }

```

## 72.6 Handling `\`

Inside `tabular`, `\` is redefined to `\LWR@tabularendofline`

Throws away options `\\[dim]` or `\\*`

`\LWR@tabularendofline`

7704 `\NewDocumentCommand{\LWR@tabularendofline}{s o}{%`

Finish the row:

```
7705 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
7706 {\value{LWR@tabletotalLaTeXcols}}%
7707 {\LWR@tabularfinishrow}%
7708 {\LWR@closetabledatacell}%
7709 \LWR@htmltag{/tr}\LWR@orignewline%
```

xcolor row color support:

7710 `\@rowcolor%`

No longer inside a data cell:

7711 `\booltrue{LWR@intabularmetadata}%`

Not yet started a table row:

7712 `\boolfalse{LWR@startedrow}%`

Additional setup:

```
7713 \defcounter{LWR@hlines}{0}%
7714 \defcounter{LWR@hdashedlines}{0}%
7715 \boolfalse{LWR@doingtbrule}%
7716 \boolfalse{LWR@doingcmidrule}%
7717 \LWR@clearmidrules%
```

7718 `\def\LWR@rowHTMLcolor{}`

Start at first column:

7719 `\defcounter{LWR@tableLaTeXcolindex}{1}%`

Have not yet added data in this column:

7720 `\global\boolfalse{LWR@tabularcelladded}%`

Allow T<sub>E</sub>X to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

7721 `\LWR@stoppars%`

7722 `\LWR@origpar%`

Look at the next token to decide between single column data tag or a special case:

7723 `\LWR@getmynexttoken%`

7724 }

## 72.7 Looking ahead in the column specifications

`\LWR@columnspeclookahead` {<*offset*>}

Looks off set tokens ahead in the column specification, setting `\LWR@strresulttwo`.

The w column alignment will be seen as a single unit such as {c}.

```
7725 \newcommand*{\LWR@columnspeclookahead}[1]{%
7726 \setcounter{\LWR@tempcountone}{\value{\LWR@tablecolspecindex}}%
7727 \addtocounter{\LWR@tempcountone}{#1}%
7728 \fullexpandarg%
7729 \StrChar{\LWR@origcolspec}{\arabic{\LWR@tempcountone}}[\LWR@strresulttwo]%

```

Get the contents of the first group in `\LWR@strresulttwo`:

```
7730 \exploregroups%
7731 \StrChar{\LWR@strresulttwo}{1}[\LWR@strresulttwo]%
7732 \noexploregroups%
7733 }

```

## 72.8 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```
7734 \newcommand*{\LWR@colparameter}{ }

```

`\LWR@parseatcolumn` Handles @{text} columns.

```
7735 \newcommand*{\LWR@parseatcolumn}{%

```

Move to the next token after the '@':

```
7736 \LWR@traceinfo{at column}%
7737 \defaddtocounter{\LWR@tablecolspecindex}{1}%

```

Read the next token into `\LWR@colparameter`, expanding once:

```
7738 \LWR@traceinfo{about to read the next token:}%
7739 \expandarg%
7740 \StrChar{\LWR@origcolspec}%
7741 {\arabic{\LWR@tablecolspecindex}}[\LWR@colparameter]%
7742 \fullexpandarg%

```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
7743 \LWR@traceinfo{have now read the next token}%
7744 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
7745 {% left edge of the table:
7746 \LWR@traceinfo{at the left edge}%
7747 \LWR@setexparray{\LWR@colatspec}%

```

```

7748 {leftedge}%
7749 {\expandafter\@firstofone\LWR@colparameter}%
7750 \LWR@traceinfo{at the left edge: %
7751 \LWR@getexparray{LWR@colatspec}{leftedge}}%
7752 }%
7753 {% not at the left edge:
7754 \LWR@traceinfo{not at the left edge}%
7755 \LWR@setexparray{LWR@colatspec}%
7756 {\arabic{LWR@tabletotalLaTeXcols}}%
7757 {\expandafter\@firstofone\LWR@colparameter}%
7758 \LWR@traceinfo{at \arabic{LWR@tabletotalLaTeXcols}: %
7759 \LWR@getexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcols}}}%
7760 }%
7761 \let\LWR@colparameter\relax%
7762 \booltrue{LWR@validtablecol}%
7763 }

```

`\LWR@parsebangcolumn` Handles `!{text}` columns.

```
7764 \newcommand*{\LWR@parsebangcolumn}{%
```

Move to the next token after the '!':

```

7765 \LWR@traceinfo{bang column}%
7766 \defaddtocounter{LWR@tablecolspecindex}{1}%

```

Read the next token into `\LWR@colparameter`, expanding once:

```

7767 \LWR@traceinfo{about to read the next token:}%
7768 \expandarg%
7769 \StrChar{\LWR@origcolspec}%
7770 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
7771 \fullexpandarg%

```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```

7772 \LWR@traceinfo{have now read the next token}%
7773 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7774 {% left edge of the table:
7775 \LWR@traceinfo{at the left edge}%
7776 \LWR@setexparray{LWR@colbangspec}%
7777 {leftedge}%
7778 {\expandafter\@firstofone\LWR@colparameter}%
7779 }%
7780 {% not at the left edge:
7781 \LWR@traceinfo{not at the left edge}%
7782 \LWR@setexparray{LWR@colbangspec}%
7783 {\arabic{LWR@tabletotalLaTeXcols}}%
7784 {\expandafter\@firstofone\LWR@colparameter}%
7785 \LWR@traceinfo{bang \arabic{LWR@tabletotalLaTeXcols}: \LWR@colparameter!}%
7786 }%
7787 \let\LWR@colparameter\relax%
7788 \booltrue{LWR@validtablecol}%
7789 }

```

`\LWR@parsebeforecolumn` Handles `>{text}` columns.

```
7790 \newcommand*{\LWR@parsebeforecolumn}{%
```

Move to the next token after the '>':

```
7791 \defaddtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into `\LWR@colparameter`:

```
7792 \expandarg%
7793 \StrChar{\LWR@origcolspec}%
7794 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
7795 \fullexpandarg%
```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
7796 \LWR@setexparray{LWR@colbeforespec}%
7797 {\arabic{LWR@tabletotalLaTeXcolsnext}}%
7798 {\expandafter\@firstofone\LWR@colparameter}%
7799 \let\LWR@colparameter\relax%
7800 \booltrue{LWR@validtablecol}%
7801 }
```

`\LWR@parseaftercolumn` Handles `<{text}` columns.

```
7802 \newcommand*{\LWR@parseaftercolumn}{%
```

Move to the next token after the '<':

```
7803 \defaddtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into `\LWR@colparameter`:

```
7804 \expandarg%
7805 \StrChar{\LWR@origcolspec}%
7806 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
7807 \fullexpandarg%
```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
7808 \LWR@setexparray{LWR@colafterspec}%
7809 {\arabic{LWR@tabletotalLaTeXcols}}%
7810 {\expandafter\@firstofone\LWR@colparameter}%
7811 \let\LWR@colparameter\relax%
7812 \booltrue{LWR@validtablecol}%
7813 }
```

`\LWR@parsebarcolumn` Handles vertical rules.

```
7814 \newcommand*{\LWR@parsebarcolumn}{%
7815 \LWR@traceinfo{LWR@parsebarcolumn}%
```

Remember the bar at this position:

```

7816 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7817 {% left edge of the table:
7818 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
7819 \ifdefstring{\LWR@tempone}{tvertbarl}%
7820 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldouble}}%
7821 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarl}}%
7822 }%
7823 {% not at the left edge:
7824 \edef\LWR@tempone{%
7825 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
7826 }%
7827 \ifdefstring{\LWR@tempone}{tvertbarr}%
7828 {%
7829 \LWR@setexparray{LWR@colbarspec}%
7830 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdouble}}%
7831 }%
7832 {%
7833 \LWR@setexparray{LWR@colbarspec}%
7834 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarr}}%
7835 }%
7836 }%
7837 \booltrue{LWR@validtablecol}%
7838 }
```

`\LWR@parsecoloncolumn` Handles vertical rules.

```

7839 \newcommand*{\LWR@parsecoloncolumn}{%
7840 \LWR@traceinfo{LWR@parsecoloncolumn}%
```

Remember the bar at this position:

```

7841 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7842 {% left edge of the table:
7843 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
7844 \ifdefstring{\LWR@tempone}{tvertbarldash}%
7845 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldoubledash}}%
7846 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldash}}%
7847 }%
7848 {% not at the left edge:
7849 \edef\LWR@tempone{%
7850 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
7851 }%
7852 \ifdefstring{\LWR@tempone}{tvertbarrdash}%
7853 {\LWR@setexparray{LWR@colbarspec}%
7854 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdoubledash}}%
7855 {\LWR@setexparray{LWR@colbarspec}%
7856 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdash}}%
7857 }%
7858 \booltrue{LWR@validtablecol}%
7859 }
```

`\LWR@parsesemicoloncolumn` Handles vertical rules.

```
7860 \newcommand*{\LWR@parsesemicoloncolumn}{%
```

Treat ; as a : column:

```
7861 \LWR@parsecoloncolumn%
```

Skip the following width token:

```
7862 \defaddtocounter{LWR@tablecolspecindex}{1}%
7863 }
```

## 72.9 Parsing ‘l’, ‘c’, or ‘r’ columns

`\LWR@parsenormalcolumn`  $\langle thiscolumn \rangle$

Add to the accumulated column specs, advance counters, and pre-clear another column of at, before, and after specs.

```
7864 \newcommand*{\LWR@parsenormalcolumn}[1]{%
7865 \defaddtocounter{LWR@tabletotalLaTeXcols}{1}%
7866 \defaddtocounter{LWR@tabletotalLaTeXcolsnext}{1}%

7867 \LWR@setexparray{LWR@tablecolspec}{\arabic{LWR@tabletotalLaTeXcols}}{#1}%

7868 \LWR@traceinfo{normal column \arabic{LWR@tabletotalLaTeXcols}: #1}%
7869 \LWR@setexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7870 \LWR@setexparray{LWR@colbangspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7871 \LWR@setexparray{LWR@colbeforespec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7872 \LWR@setexparray{LWR@colafterspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7873 \LWR@setexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7874 \booltrue{LWR@validtablecol}%
7875 }
```

## 72.10 Parsing ‘p’, ‘m’, or ‘b’ columns

`\LWR@parsepcolumn`  $\langle thiscolumn \rangle$  The width will be ignored.

```
7876 \newcommand*{\LWR@parsepcolumn}[1]{%
```

Converts to the given column type:

```
7877 \LWR@parsenormalcolumn{#1}%
```

Skips the following width token:

```
7878 \defaddtocounter{LWR@tablecolspecindex}{1}%
7879 }
```

## 72.11 Parsing ‘w’ columns

`\LWR@parsewcolumn` The width will be ignored.

```
7880 \newcommand*\LWR@parsewcolumn}{%
```

```
7881 \LWR@columnspeclookahead{1}%
```

```
7882 \expandafter\LWR@parsenormalcolumn\expandafter{\LWR@strresulttwo}%
```

Skips the following width and alignment tokens:

```
7883 \defaddtocounter{LWR@tablecolspecindex}{2}%
```

```
7884 }
```

## 72.12 Parsing ‘\*’ columns

`\LWR@parsestarcolumn` Star columns should already have been expanded, so this should never be used.

```
7885 \newcommand*\LWR@parsestarcolumn}{%
```

```
7886 \defaddtocounter{LWR@tablecolspecindex}{2}%
```

```
7887 }
```

## 72.13 Parsing ‘D’ columns

From the `dcolumn` package.

`\LWR@parseDcolumn`  $\{ \langle thiscolumn \rangle \}$  The three parameters will be ignored.

```
7888 \newcommand*\LWR@parseDcolumn}[1]{%
```

Converts to the given column type.

```
7889 \LWR@parsenormalcolumn{#1}%
```

Skips the following three parameters.

```
7890 \defaddtocounter{LWR@tablecolspecindex}{3}%
```

```
7891 }
```

## 72.14 Expanding the star column specifications

`\Ctr` `LWR@starcount` Internal count for duplicating star columns.

```
7892 \newcount\LWR@starcount
```

`\LWR@expcolspec` Temporary storage used to build the expanded column specifier.

```
7893 \newcommand*{\LWR@expcolspec}{}
```

Ctrl `LWR@splitstarindex` Indexes into the column specifiers.

```
7894 \newcounter{LWR@splitstarindex}
```

Ctrl `LWR@splitstarcopies` Number of copies.

```
7895 \newcounter{LWR@splitstarcopies}
```

`\LWR@splitstarcontents` Contents to duplicate.

```
7896 \newcommand*{\LWR@splitstarcontents}{}
```

`\expandcolspec` Expands `\LWR@origcolspec` for star columns.

```
7897 \newcommand*{\expandcolspec}{%
```

Find the position of any star token.

```
7898 \StrPosition{\LWR@origcolspec}{*}[\LWR@tempone]%
```

Expand until no stars are found:

```
7899 \whileboolexpr{ test {\ifnumgreater{\LWR@tempone}{0}}}%
7900 {%
```

Begin with any characters to the left of the star.

```
7901 \setcounter{LWR@splitstarindex}{\LWR@tempone}%
7902 \addtocounter{LWR@splitstarindex}{-1}%
7903 \StrLeft{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@expcolspec]%
```

Move past the star to remember its number of copies.

```
7904 \addtocounter{LWR@splitstarindex}{2}%
7905 \StrChar{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@tempone]%
7906 \setcounter{LWR@splitstarcopies}{\expandafter\@firstofone\LWR@tempone}%
```

Move past the number of copies and remember the contents.

```
7907 \addtocounter{LWR@splitstarindex}{1}%
7908 \StrChar{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@splitstarcontents]%
```

For each copy, append the contents.

```
7909 \ifnumgreater{\value{LWR@splitstarcopies}}{0}%
7910 {%
7911 \LWR@starcount=\value{LWR@splitstarcopies}%
7912 \loop
7913 \appto\LWR@expcolspec{%
```

Table 10: Tabular baseline

|   |     |     |     |   |
|---|-----|-----|-----|---|
| l | p   | m   | b   | r |
|   |     |     | bot |   |
|   |     | mid | bot |   |
| l | par | mid | bot | r |
|   | par | mid |     |   |
|   | par |     |     |   |

(Remove the enclosing braces.)

```

7914 \expandafter\@firstofone\LWR@splitstarcontents%
7915 }%
7916 \advance \LWR@starcount -1
7917 \ifnum \LWR@starcount>0 \repeat
7918 }{}%
```

Remove any token to the left, and append the rightmost remaining tokens.

```

7919 \StrGobbleLeft{\LWR@origcolspec}{\value{\LWR@splitstarindex}}[\colspecremainder]%
7920 \appto{\LWR@expcolspec}{\colspecremainder}%
```

Remember the final result.

```

7921 \edef\LWR@origcolspec{\LWR@expcolspec}%
```

See if more stars exist.

```

7922 \StrPosition{\LWR@origcolspec}{*}[\LWR@tempone]%
7923 }%
7924 }
```

## 72.15 Parsing the column specifications

 **tabular baselines** HTML CSS cannot exactly match the  $\LaTeX$  concept of a baseline for a table row. Table 10 shows the  $\LaTeX$  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 11 for details.

Table 11 describes how each kind of column is converted to HTML.

```
\LWR@parsetablecols {<colspecs>}
```

Scans the column specification left to right.

Builds `\LWR@tablecolspec` with the final specification, one  $\LaTeX$  column per entry. The final number of  $\LaTeX$  columns in each row is stored in `\LWR@tabletotalLaTeXcols`,

Table 11: Tabular HTML column conversions

---

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>l, r, c:</b>          | Converted to table cells without paragraph tags.<br>Uses css <code>vertical-align:middle</code> so that top or bottom-aligned cells may go above or below this cell.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>p:</b>                | Converted to table cells with paragraph tags. Ref: Table 10, $\LaTeX$ places the top line of a parbox aligned with the rest of the text line, so css <code>vertical-align:bottom</code> 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 <code>td.tdp</code> , <code>td.tdP</code> , <code>td.tdprule</code> , and <code>td.tdPrule</code> to <code>vertical-align: middle</code> . Another possibility is to change L,R,C, and P to <code>vertical-align: top</code> and not worry about the alignment of B and M cells or trying to approximate $\LaTeX$ baselines. |
| <b>m:</b>                | With paragraph tags, css <code>vertical-align:middle</code> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>b:</b>                | With paragraph tags, css <code>vertical-align:top</code> so that the bottom of the text is closest to the middle of the text line.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>P, M, B:</b>          | Horizontally-centered versions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>S:</b>                | Converted to 'r'. Ignores optional argument. From the <code>siunitx</code> package.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>D:</b>                | Converted to 'c'. From the <code>dcolumn</code> package.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>@, !, &gt;, &lt;:</b> | One each, in that order.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b> :</b>                | Vertical rule.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Unknown:</b>          | Converted to 'l'.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>\newcolumn:</b>       | Currently treated as unknown.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

---

which is the number of & and \\ in each line, but which does not include @, !, <, > specifications in the count.

```
7925 \newcommand*\LWR@parsetablecols}[1]{%
7926 \LWR@traceinfo{LWR@parsetablecols}%
```

Remember the original supplied column spec:

```
7927 \renewcommand*\LWR@origcolspec}{#1}%
```

Remove spaces:

```
7928 \expandarg%
7929 \StrSubstitute{\LWR@origcolspec}{ }{ }[\LWR@origcolspec]%
```

Expand any star columns:

```
7930 \expandcolspec%
```

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:

```
7931 \defcounter{LWR@tabletotalLaTeXcols}{0}%
7932 \defcounter{LWR@tabletotalLaTeXcolsnext}{1}%
7933 \LWR@setexparray{LWR@colatspec}{leftedge}{}%
7934 \LWR@setexparray{LWR@colatspec}{1}{}%
7935 \LWR@setexparray{LWR@colatspec}{2}{}%
7936 \LWR@setexparray{LWR@colatspec}{3}{}%
7937 \LWR@setexparray{LWR@colbangspec}{leftedge}{}%
7938 \LWR@setexparray{LWR@colbangspec}{1}{}%
7939 \LWR@setexparray{LWR@colbangspec}{2}{}%
7940 \LWR@setexparray{LWR@colbangspec}{3}{}%
7941 \LWR@setexparray{LWR@colbeforespec}{1}{}%
7942 \LWR@setexparray{LWR@colbeforespec}{2}{}%
7943 \LWR@setexparray{LWR@colbeforespec}{3}{}%
7944 \LWR@setexparray{LWR@colafterspec}{1}{}%
7945 \LWR@setexparray{LWR@colafterspec}{2}{}%
7946 \LWR@setexparray{LWR@colafterspec}{3}{}%
7947 \LWR@setexparray{LWR@colbarspec}{leftedge}{}%
7948 \LWR@setexparray{LWR@colbarspec}{1}{}%
7949 \LWR@setexparray{LWR@colbarspec}{2}{}%
7950 \LWR@setexparray{LWR@colbarspec}{3}{}%
```

Starting at the first column specification:

```
7951 \defcounter{LWR@tablecolspecindex}{1}%
```

Place the colspecs string length into `\LWR@strresult`, and remember the number of characters in the column specification:

```

7952 \expandarg%
7953 \StrLen{\LWR@origcolspec}[\LWR@strresult]%
7954 \fullexpandarg%
7955 \LWR@traceinfo{original column spec length: \LWR@strresult}%
7956 \defcounter{\LWR@tablecolspecwidth}{\LWR@strresult}%

```

Haven't seen any optional arguments so far

```
7957 \boolfalse{\LWR@opttablecol}%
```

Scan through the column specifications:

```

7958 \whileboolexpr{%
7959 not test{%
7960 \ifnumcomp{\value{\LWR@tablecolspecindex}}{>}%
7961 {\value{\LWR@tablecolspecwidth}}%
7962 }%
7963 }%
7964 {%

```

Place the next single-character column type into \LWR@strresult:

```

7965 \expandarg%
7966 \StrChar{\LWR@origcolspec}{\arabic{\LWR@tablecolspecindex}}[\LWR@strresult]%
7967 \LWR@traceinfo{position \arabic{\LWR@tablecolspecindex}: \LWR@strresult}%
7968 \fullexpandarg%

```

Not yet found a valid column type:

```
7969 \boolfalse{\LWR@validtablecol}%
```

Skip over any optional arguments, such as siunitx S column:

```
7970 \IfStrEq{\LWR@strresult}{[]}{\booltrue{\LWR@opttablecol}}{>%
```

Throw away anything found inside the optional argument:

```

7971 \ifbool{\LWR@opttablecol}%
7972 {}% inside an optional argument
7973 {}% not an optional tabular argument

```

Not inside an optional argument, so consider the column type:

```

7974 \IfStrEq{\LWR@strresult}{l}{\LWR@parsenormalcolumn{l}}{>%
7975 \IfStrEq{\LWR@strresult}{c}{\LWR@parsenormalcolumn{c}}{>%
7976 \IfStrEq{\LWR@strresult}{r}{\LWR@parsenormalcolumn{r}}{>%
7977 \IfStrEq{\LWR@strresult}{L}{\LWR@parsenormalcolumn{l}}{>%
7978 \IfStrEq{\LWR@strresult}{C}{\LWR@parsenormalcolumn{c}}{>%
7979 \IfStrEq{\LWR@strresult}{R}{\LWR@parsenormalcolumn{r}}{>%
7980 \IfStrEq{\LWR@strresult}{J}{\LWR@parsenormalcolumn{l}}{>%

7981 \IfStrEq{\LWR@strresult}{S}{\LWR@parsenormalcolumn{c}}{>%
7982 \IfStrEq{\LWR@strresult}{s}{\LWR@parsenormalcolumn{c}}{>%

```

```

7983 \IfStrEq{\LWR@strresult}{\detokenize@}{\LWR@parseatcolumn}{}%
7984 \IfStrEq{\LWR@strresult}{!}{\LWR@parsebangcolumn}{}%
7985 \IfStrEq{\LWR@strresult}{>}{\LWR@parsebeforecolumn}{}%
7986 \IfStrEq{\LWR@strresult}{<}{\LWR@parseaftercolumn}{}%
7987 \IfStrEq{\LWR@strresult}{|}{\LWR@parsebarcolumn}{}%
7988 \IfStrEq{\LWR@strresult}{:}{\LWR@parsecoloncolumn}{}%
7989 \IfStrEq{\LWR@strresult}{;}{\LWR@parsesemicoloncolumn}{}%

7990 \IfStrEq{\LWR@strresult}{p}{\LWR@parsepcolumn{p}}{%
7991 \IfStrEq{\LWR@strresult}{m}{\LWR@parsepcolumn{m}}{%
7992 \IfStrEq{\LWR@strresult}{b}{\LWR@parsepcolumn{b}}{%

7993 \IfStrEq{\LWR@strresult}{w}{\LWR@parsewcolumn}{}%
7994 \IfStrEq{\LWR@strresult}{W}{\LWR@parsewcolumn}{}%

```

A star column:

```
7995 \IfStrEq{\LWR@strresult}{*}{\LWR@parsestarcolumn}{}%
```

From the dcolumn package:

```
7996 \IfStrEq{\LWR@strresult}{D}{\LWR@parseDcolumn{c}}{%
```

From the tabularx package. X column has no parameter, but will be given paragraph tags.

```
7997 \IfStrEq{\LWR@strresult}{X}{\LWR@parsenormalcolumn{X}}{%
```

---

Many people define centered versions “P”, “M”, and “B”:

```
\newcolumnntype{P}[1]{>{\centering\arraybackslash}p{#1}}
```

---

```

7998 \IfStrEq{\LWR@strresult}{P}{\LWR@parsepcolumn{P}}{%
7999 \IfStrEq{\LWR@strresult}{M}{\LWR@parsepcolumn{M}}{%
8000 \IfStrEq{\LWR@strresult}{B}{\LWR@parsepcolumn{B}}{%

```

If this column was an invalid column type, convert it to an l column:

```

8001 \ifbool{LWR@validtablecol}{}%
8002 \LWR@traceinfo{invalid column type: \LWR@strresult}%
8003 \LWR@parsenormalcolumn{l}%
8004 }%
8005 }% not an optional column argument

```

If read the closing bracket, no longer inside the optional argument:

```
8006 \IfStrEq{\LWR@strresult}{]}{\boolfalse{LWR@opttablecol}}{%
```

Move to the next character:

```

8007 \defaddtocounter{LWR@tablecolspecindex}{1}%
8008 }% whiledo
8009 }%

```

## 72.16 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.

```
8010 \@ifundefined{rownum}{\newcount\rownum}{}
```

`\@rowcolors` Emulated in case xcolor is not used.

```
8011 \newcommand*{\@rowcolors}{}

```

`\@rowc@lors` Emulated in case xcolor is not used.

```
8012 \newcommand*{\@rowc@lors}{}

```

`\LWR@xcolorrowHTMLcolor` Emulated xcolor row color.

```
8013 \newcommand*{\LWR@xcolorrowHTMLcolor}{}

```

`\LWR@columnHTMLcolor` HTMLstyle code for the column color.

```
8014 \def\LWR@columnHTMLcolor{}

```

`\LWR@rowHTMLcolor` HTMLstyle code for the row color.

```
8015 \def\LWR@rowHTMLcolor{}

```

`\LWR@cellHTMLcolor` HTMLstyle code for the cell color.

```
8016 \def\LWR@cellHTMLcolor{}

```

`\LWR@ruleHTMLcolor` HTMLstyle code for the rule color.

```
8017 \newcommand*{\LWR@ruleHTMLcolor}{}

```

`\rowcolor` [*model*] {*color*} [*left overhang*] [*right overhang*] Print version. The HTML version is in `lwarp-colortbl`. Used before starting a tabular data cell, thus `\LWR@getmynexttoken`.

```
8018 \newcommand*{\rowcolor}{\LWR@getmynexttoken}%
```

`\arrayrulecolor` [*model*] {*color*}

`\arrayrulecolornexttoken` [*model*] {*color*}

Print versions for use outside and inside a tabular:

```
8019 \newcommand{\arrayrulecolor}[2][named]{}
8020 \newcommand{\arrayrulecolornexttoken}[2][named]{\LWR@getmynexttoken}
```

`\doublerulesepcolor` [*model*] {*color*}

`\doublerulesepcolornexttoken` [*model*] {*color*}

Print versions for use inside and outside a tabular:

```
8021 \newcommand{\doublerulesepcolor}[2][named]{}
8022 \newcommand{\doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
```

## 72.17 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.

```
8023 \newcommand*{\LWR@maybenewtablerow}
8024 {%
8025 \ifbool{\LWR@startedrow}%
8026 {}% started the row
8027 {}% not started the row
```

Remember that now have started the row:

```
8028 \booltrue{\LWR@startedrow}%
```

Create the row tag, with a class if necessary.

```
8029 \booltrue{\LWR@intabularmetadata}%
8030 \ifboolexpr{%
8031 test{\ifnumcomp{\value{\LWR@hlines}}{>}{0}} or%
8032 test{\ifnumcomp{\value{\LWR@hdashedlines}}{>}{0}}}%
8033 {%
8034 {\LWR@htmltag{tr class="hline" }}%
8035 \LWR@orignewline%
8036 }%
8037 {}% not doing hline
```

```

8039 \ifbool{LWR@doingtbrule}%
8040 {%
8041 \ifdefvoid{\LWR@ruleHTMLcolor}{%
8042 \LWR@htmltag{tr class="tbrule"}%
8043 }{%
8044 \LWR@htmltag{%
8045 tr class="tbrule" % space
8046 style="border-top: 1px solid % space
8047 \LWR@origpound\LWR@ruleHTMLcolor "%
8048 }%
8049 }%
8050 \LWR@orignewline%
8051 }%
8052 {\LWR@htmltag{tr}\LWR@orignewline}%
8053 }% end of not doing hline
8054 }% end of not started the row
8055 }

```

## 72.18 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.

```

8056 \newcommand*{\LWR@printbartag}[1]{%
8057 \LWR@traceinfo{LWR@printbartag !#1!}%
8058 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
8059 {}% muting or empty
8060 {% not muting
8061 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{#1}}%
8062 \ifdefempty{\LWR@tempone}{{ \LWR@tempone}%
8063 }% not muting
8064 \LWR@traceinfo{LWR@printbartag done}%
8065 }

```

## 72.19 Printing @ or ! tags

`\LWR@printatbang`  $\langle at \text{ — } or \text{ — } bang \rangle$   $\langle index \rangle$

```

8066 \newcommand*{\LWR@printatbang}[2]{%

```

Fetch the column at or bang spec:

```

8067 \xdef\LWR@atbangspec{\LWR@getexparray{LWR@col#1spec}{#2}}%
8068 \LWR@traceinfo{atbang: #2 !\LWR@atbangspec!}%

```

Only generate if is not empty;

```

8069 \ifdefempty{\LWR@atbangspec}%
8070 {}%

```

```

8071 {% not empty
8072 \LWR@htmltag{%
8073 td class="td#1%
8074 \LWR@subaddcmidruletrim{}}}%
8075 \LWR@printbartag{#2}%
8076 "%
8077 \LWR@tdstartstyles%
8078 \LWR@addcmidrulewidth%
8079 \LWR@addcdashline%
8080 \LWR@addtabularrulecolors%
8081 \LWR@tdendstyles%
8082 }%

```

Create an empty cell if muting for the \bottomrule:

```

8083 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
8084 {}%
8085 {\LWR@atbangspec}%
8086 %
8087 \LWR@htmltag{/td}\LWR@orignewline%
8088 \global\booltrue{LWR@tabularcelladded}%
8089 }% not empty
8090 }%

```

\LWR@addleftmostbartag

```

8091 \newcommand*{\LWR@addleftmostbartag}{%
8092 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}{%
8093 \LWR@printbartag{leftedge}%
8094 }{}%
8095 }

```

\LWR@tabularleftedge

```

8096 \newcommand*{\LWR@tabularleftedge}{%
8097 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}%
8098 {%
8099 \LWR@printatbang{at}{leftedge}%
8100 \LWR@printatbang{bang}{leftedge}%
8101 }% left edge
8102 {}% not left edge
8103 }

```

## 72.20 Data opening tag

\LWR@thiscolspec Temporary storage.

```
8104 \newcommand*{\LWR@thiscolspec}{}
```

\LWR@tabledatasinglecolumn tag Print a table data opening tag with style for alignment and color.

```

8105 \newcommand*{\LWR@tabledatasinglecolumnstag}%
8106 {%
8107 \LWR@traceinfo{\LWR@tabledatasinglecolumnstag}%
8108 \LWR@maybenewtablerow%

```

Don't start a new paragraph tag if have already started one:

```

8109 \ifbool{\LWR@intabularmetadata}%
8110 {%

```

If have found the end of tabular command, do not create the next data cell:

```

8111 \ifbool{\LWR@exitingtabular}{}%
8112 {% not exiting tabular

```

Print the @ and ! contents before first column:

```

8113 \LWR@tabularleftedge%

```

Fetch the current column's alignment character into \LWR@strresult:

```

8114 \xdef\LWR@strresult{%
8115 \LWR@getexparray{\LWR@tablecolspec}{\arabic{\LWR@tableLaTeXcolindex}}%
8116 }%

```

print the start of a new table data cell:

```

8117 \LWR@traceinfo{\LWR@tabledatasinglecolumnstag: about to print td tag}%
8118 \LWR@htmltag{%
8119 td class="td%

```

append this column's spec:

```

8120 \LWR@strresult%

```

If this column has a cmidrule, add "rule" to the end of the HTML class tag. Also add vertical bar tags.

```

8121 \LWR@addcmidruletrim%
8122 \LWR@addleftmostbartag%
8123 \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%
8124 "%

```

Add styles for rules, alignment:

```

8125 \LWR@tdstartstyles%
8126 \LWR@addcmidrulewidth%
8127 \LWR@addcdashline%

8128 \xdef\LWR@thiscolspec{%
8129 \LWR@getexparray{\LWR@tablecolspec}%
8130 {\arabic{\LWR@tableLaTeXcolindex}}%
8131 }%
8132 \LWR@addformatwpaignment{\LWR@thiscolspec}%

```

Add styles for cell and rule colors:

```

8133 \LWR@addtabulararrowcolor%
8134 \LWR@addtabularrulecolors%

8135 \LWR@tdendstyles%
8136 }% HTML td
8137 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done printing td tag}%

```

If this is a p, m, b, or X column, allow paragraphs:

```

8138 \ifboolexpr{%
8139 test{ \ifdefstring{LWR@strresult}{p} } or
8140 test{ \ifdefstring{LWR@strresult}{m} } or
8141 test{ \ifdefstring{LWR@strresult}{b} } or
8142 test{ \ifdefstring{LWR@strresult}{P} } or
8143 test{ \ifdefstring{LWR@strresult}{M} } or
8144 test{ \ifdefstring{LWR@strresult}{B} } or
8145 test{ \ifdefstring{LWR@strresult}{X} }
8146 }%
8147 {% allow pars
8148 \LWR@traceinfo{LWR@tabledatasinglecolumntag: about to LWR@startpars}%
8149 \booltrue{LWR@tableparcell}%
8150 \LWR@startpars%
8151 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done with LWR@startpars}%
8152 }% allow pars
8153 }% no pars

```

Print the > contents unless muted for the \bottomrule:

```

8154 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
8155 {%
8156 {%
8157 \LWR@getexparray{LWR@colbeforeSpec}{\arabic{LWR@tableLaTeXcolindex}}%
8158 }%
8159 \boolfalse{LWR@intabularmetadata}%
8160 }% not exiting tabular
8161 }{% in tabular metadata
8162 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done}%
8163 }%

```

## 72.21 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

arydshn package "cdashed line" should be created for this column.

Len \LWR@heavyrulewidth The default width of the rule.

```
8164 \newlength{\LWR@heavyrulewidth}
8165 \setlength{\LWR@heavyrulewidth}{.08em}
```

Len \LWR@lightrulewidth The default width of the rule.

```
8166 \newlength{\LWR@lightrulewidth}
8167 \setlength{\LWR@lightrulewidth}{.05em}
```

Len \LWR@cmidrulewidth The default width of the rule.

```
8168 \newlength{\LWR@cmidrulewidth}
8169 \setlength{\LWR@cmidrulewidth}{.03em}
```

Len \LWR@thiscmidrulewidth 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.

```
8170 \newlength{\LWR@thiscmidrulewidth}
8171 \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.

```
8172 \newcommand*{\LWR@clearmidrules}
8173 {%
8174 \defcounter{LWR@midrulecounter}{1}%
8175 \whileboolexpr{%
8176 not test{%
8177 \ifnumcomp{\value{LWR@midrulecounter}}{>}%
8178 {\value{LWR@tabletotalLaTeXcols}}%
8179 }%
8180 }%
8181 {%
8182 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{0pt}%
8183 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
8184 \LWR@setexparray{LWR@trimlrules}{\arabic{LWR@midrulecounter}}{}%
8185 \LWR@setexparray{LWR@trimrrules}{\arabic{LWR@midrulecounter}}{}%
8186 \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{N}%
8187 \defadddtocounter{LWR@midrulecounter}{1}%
8188 }%
8189 }
```

\LWR@subcmidrule  $\langle width \rangle$   $\langle trim \rangle$   $\langle leftcolumn \rangle$   $\langle rightcolumn \rangle$

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.

```

8190 \newcommand*{\LWR@subcmidrule}[4]{%
8191 \defcounter{LWR@midrulecounter}{#3}%
8192 \whileboolexpr{%
8193 not test {%
8194 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
8195 }%
8196 }%
8197 {%
8198 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{#1}%
8199 \defaddtocounter{LWR@midrulecounter}{1}%
8200 }% whiledo
8201 \IfSubStr{#2}{l}{\LWR@setexparray{LWR@trimlrules}{#3}{l}}{%
8202 \IfSubStr{#2}{r}{\LWR@setexparray{LWR@trimrrules}{#4}{r}}{%
8203 \booltrue{LWR@doingcmidrule}%
8204 }

```

`\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.

```

8205 \NewDocumentCommand{\LWR@docmidrule}
8206 {O{\LWR@cmidrulewidth} D(){} >\SplitArgument{1}{-}}m
8207 {\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.

```

8208 \newcommand*{\LWR@subcdashline}[2]{%
8209 \defcounter{LWR@midrulecounter}{#1}%
8210 \whileboolexpr{%
8211 not test {%
8212 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#2}%
8213 }%
8214 }%
8215 {%
8216 \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{Y}%
8217 \defaddtocounter{LWR@midrulecounter}{1}%
8218 }% whiledo
8219 \booltrue{LWR@doingcmidrule}%
8220 }

```

`\LWR@docdashline` {*leftcolumn-rightcolumn*}

Marks LWR@cdashlines data array elements to be Y from left to right columns.

```

8221 \NewDocumentCommand{\LWR@docdashline}
8222 {>\SplitArgument{1}{-}m}%
8223 {%
8224 \LWR@subcdashline#1%
8225 }

```

Used to compute margins, tabular trims, column offsets:

```

8226 \newlength{\LWR@templengthone}
8227 \newlength{\LWR@templengthtwo}
8228 \newlength{\LWR@templengththree}
8229 \newcounter{\LWR@tempcountone}

```

`\LWR@tdstartstyles` Begins possibly adding a table data cell style.

```

8230 \newcommand*{\LWR@tdstartstyles}{\boolfalse{\LWR@tdhavecellstyle}}

```

`\LWR@tdaddstyle` Starts adding a table data cell style.

```

8231 \newcommand*{\LWR@tdaddstyle}{%
8232 \ifbool{\LWR@tdhavecellstyle}%
8233 {; }%
8234 { style="}%
8235 \booltrue{\LWR@tdhavecellstyle}%
8236 }

```

`\LWR@tdendstyles` Finishes possibly adding a table data cell style. Prints the closing quote.

```

8237 \newcommand*{\LWR@tdendstyles}{%
8238 \ifbool{\LWR@tdhavecellstyle}%
8239 {%
8240 "%
8241 \boolfalse{\LWR@tdhavecellstyle}%
8242 }{}%
8243 }

```

`\LWR@subaddcmidruletrim` `{\lefttrim}` `{\righttrim}` Adds a `\cmidrule` with optional trim.

```

8244 \newcommand*{\LWR@subaddcmidruletrim}[2]{%
8245 \setlength{\LWR@templengthone}{%
8246 \LWR@getexparray{\LWR@midrules}{\arabic{\LWR@tableLaTeXcolindex}}%
8247 }%
8248 \ifdimcomp{\LWR@templengthone}{>}{0pt}%
8249 {%

```

Print the class with left and right trim letters appended:

```

8250 \LWR@origtilde tdrule#1#2%

```

Remember the width of the rule:

```

8251 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
8252 }%
8253 {%
8254 \setlength{\LWR@thiscmidrulewidth}{\opt}%
8255 }%
8256 }

```

`\LWR@addcmidruletrim` Adds left or right trim to a `\cmidrule`.

```

8257 \newcommand*{\LWR@addcmidruletrim}{%
8258 \LWR@subaddcmidruletrim%
8259 {\LWR@getexparray{\LWR@trimlrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8260 {\LWR@getexparray{\LWR@trimrrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8261 }

```

`\LWR@addrulewidth` `{\langle thiswidth \rangle}{\langle defaultwidth \rangle}`

If not default width, add a custom style with width and color depending on `thiswidth`.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```
8262 \newcommand{\LWR@addrulewidth}[2]{%
```

Only add a custom width if `thiswidth` is different than the `defaultwidth`, or if a color is being used:

```

8263 \ifboolexpr{%
8264 test{\ifdimcomp{#1}{=}{\opt}} or
8265 (
8266 (test{\ifdimcomp{#1}{=}{#2}} and not bool{FormatWP})
8267 and (test {\ifdefvoid{\LWR@ruleHTMLcolor}})
8268)
8269 }%
8270 {}% default width and color
8271 {% custom width and/or color

```

Ensure that the width is wide enough to display in the browser:

```
8272 \LWR@forceminwidth{#1}%
```

Begin adding another style:

```
8273 \LWR@tdaddstyle%
```

The style itself:

```
8274 border-top:\LWR@printlength{\LWR@atleastonept} solid % space
```

If default gray, the darkness of the color depends on the thickness of the rule:

```

8275 \ifdefvoid{\LWR@ruleHTMLcolor}{%
8276 \ifdimcomp{#1}{<}{\LWR@lightrulewidth}%

```

```

8277 {\LWR@origpound{ }A0A0A0}%
8278 {% lightrule or heavier
8279 \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}%
8280 {\LWR@origpound{ }808080}%
8281 {black}%
8282 }% lightrule or heavier
8283 }{%
8284 \LWR@origpound\LWR@ruleHTMLcolor%
8285 }%
8286 }% custom width and/or color
8287 }

```

`\LWR@addcmidrulewidth` Adds a style for the rule width.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8288 \newcommand{\LWR@addcmidrulewidth}{%
8289 \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
8290 }

```

`\LWR@addcdashline` Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8291 \newcommand{\LWR@addcdashline}{%
8292 \edef\LWR@tempone{%
8293 \LWR@getexparray{\LWR@cdashlines}{\arabic{\LWR@tableLaTeXcolindex}}%
8294 }%
8295 \ifdefstring{\LWR@tempone}{Y}{%
8296 \LWR@tdaddstyle%
8297 border-top: 1pt dashed %
8298 \ifdefvoid{\LWR@ruleHTMLcolor}%
8299 {black}%
8300 {\LWR@origpound\LWR@ruleHTMLcolor}%
8301 }{%
8302 }

```

`\LWR@WPcell` `{<text-align>}{<vertical-align>}`

```

8303 \newcommand*{\LWR@WPcell}[2]{%
8304 \LWR@tdaddstyle%
8305 \LWR@print@mbbox{text-align:#1}; \LWR@print@mbbox{vertical-align:#2}%
8306 }

```

`\LWR@addformatwpalignment` If `FormatWP`, adds a style for the alignment.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8307 \newcommand*{\LWR@addformatwpalignment}[1]{%
8308 \ifbool{FormatWP}{%
8309 \IfSubStr{#1}{l}{\LWR@WPcell{left}{middle}}{%
8310 \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{%
8311 \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{%
8312 \IfSubStr{#1}{p}{\LWR@WPcell{left}{bottom}}{%

```

```

8313 \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{}%
8314 \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{}%
8315 \IfSubStr{#1}{P}{\LWR@WPcell{center}{bottom}}{}%
8316 \IfSubStr{#1}{M}{\LWR@WPcell{center}{middle}}{}%
8317 \IfSubStr{#1}{B}{\LWR@WPcell{center}{top}}{}%
8318 }{}%
8319 }

```

## 72.22 Cell colors

`\LWR@addtabulararrowcolor` Adds a cell's row color style, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```

8320 \newcommand*{\LWR@addtabulararrowcolor}{%
8321 \ifbool{LWR@tabularmutemods}{}{%
8322 \ifdefvoid{\LWR@rowHTMLcolor}{%
8323 \ifdefvoid{\LWR@xcolorrowHTMLcolor}{%
8324 {% xcolor row color
8325 \LWR@tdaddstyle%
8326 background:\LWR@origpound\LWR@xcolorrowHTMLcolor%
8327 }%
8328 }%
8329 {% explicit row color
8330 \LWR@tdaddstyle%
8331 background:\LWR@origpound\LWR@rowHTMLcolor%
8332 }%
8333 }%
8334 }

```

`\LWR@addtabularhrulecolor` Adds a cell's horizontal rule color style, if needed.

```
8335 \newcommand*{\LWR@addtabularhrulecolor}{%
```

If either form of horizontal rule is requested:

```

8336 \ifboolexpr{%
8337 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
8338 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
8339 bool{LWR@doingtbrule}%
8340 }{%

```

If there is a no custom color:

```

8341 \ifdefvoid{\LWR@ruleHTMLcolor}%
8342 {%
8343 \ifnumcomp{\value{LWR@hlines}}{>}{1}%
8344 {%
8345 \LWR@tdaddstyle%
8346 border-top: 4px double%
8347 }{% else
8348 \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%

```

```

8349 {%
8350 \LWR@tdaddstyle%
8351 border-top: 2px dashed%
8352 }{% else
8353 \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
8354 {%
8355 \LWR@tdaddstyle%
8356 border-top: 1px dashed%
8357 }{}}%

```

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

```
8358 }%
```

If there is a custom color:

```

8359 {%
8360 \ifnumcomp{\value{LWR@hlines}}{>}{1}%
8361 {%
8362 \LWR@tdaddstyle%
8363 border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
8364 }{% else
8365 \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
8366 {%
8367 \LWR@tdaddstyle%
8368 border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8369 }{% else
8370 \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
8371 {%
8372 \LWR@tdaddstyle%
8373 border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8374 }{% else
8375 \LWR@tdaddstyle%
8376 border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
8377 }}}%
8378 }%
8379 }{}%
8380 }

```

`\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.

```
8381 \newcommand*{\LWR@addtabularrulecolors}{%
```

Custom horizontal rule color:

```
8382 \LWR@addtabularhrulecolor%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8383 \ifbool{LWR@tabularmutemods}{}{%
```

If at the leftmost cell, possibly add a leftmost vertical rule:

```
8384 \ifnumequal{\value{LWR@tableLaTeXcolindex}}{1}{%
```

Fetch the left edge's vertical bar specification:

```
8385 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
```

Add a custom style if a vertical bar was requested:

```
8386 \ifdefstring{\LWR@tempone}{tvertbarl}{%
8387 \LWR@tdaddstyle%
8388 border-left: 1px solid % space
8389 \LWR@vertruleHTMLcolor%
8390 }{}%
8391 \ifdefstring{\LWR@tempone}{tvertbarldouble}{%
8392 \LWR@tdaddstyle%
8393 border-left: 4px double % space
8394 \LWR@vertruleHTMLcolor%
8395 }{}%
8396 \ifdefstring{\LWR@tempone}{tvertbarldash}{%
8397 \LWR@tdaddstyle%
8398 border-left: 1px dashed % space
8399 \LWR@vertruleHTMLcolor%
8400 }{}%
8401 \ifdefstring{\LWR@tempone}{tvertbarldoubledash}{%
8402 \LWR@tdaddstyle%
8403 border-left: 2px dashed % space
8404 \LWR@vertruleHTMLcolor%
8405 }{}%
8406 }{}%
```

Possibly add a right vertical rule for this cell:

```
8407 \edef\LWR@tempone{%
8408 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tableLaTeXcolindex}}%
8409 }%
8410 \ifdefstring{\LWR@tempone}{tvertbarr}{%
```

Add a custom style if a vertical bar was requested:

```
8411 \LWR@tdaddstyle%
8412 border-right: 1px solid \LWR@vertruleHTMLcolor%
8413 }{}%
8414 \ifdefstring{\LWR@tempone}{tvertbarrdouble}{%
8415 \LWR@tdaddstyle%
8416 border-right: 4px double \LWR@vertruleHTMLcolor%
8417 }{}%
8418 \ifdefstring{\LWR@tempone}{tvertbarrdash}{%
8419 \LWR@tdaddstyle%
8420 border-right: 1px dashed \LWR@vertruleHTMLcolor%
8421 }{}%
8422 \ifdefstring{\LWR@tempone}{tvertbarrdoubledash}{%
8423 \LWR@tdaddstyle%
8424 border-right: 2px dashed \LWR@vertruleHTMLcolor%
```

```

8425 }}%
8426 }%
8427 }

```

`\LWR@subadddtabularcellcolor` {*HTML color*}

```

8428 \newcommand*\LWR@subadddtabularcellcolor}[1]{%
8429 \LWR@htmltag{div class="cellcolor" style="%
8430 background:\LWR@origpound{}}{#1 %
8431 "% }%
8432 \defaddtocounter{LWR@cellcolordepth}{1}%
8433 }

```

`\LWR@addtabularcellcolor` Adds a cell color style, if needed.

```

8434 \newcommand*\LWR@addtabularcellcolor}{%
8435 \ifdefvoid{\LWR@cellHTMLcolor}%
8436 {%
8437 \ifdefvoid{\LWR@rowHTMLcolor}%
8438 {%
8439 \ifdefvoid{\LWR@xcolorrowHTMLcolor}%
8440 {%
8441 \ifdefvoid{\LWR@columnHTMLcolor}%
8442 {}%
8443 {\LWR@subadddtabularcellcolor{\LWR@columnHTMLcolor}}%
8444 }%
8445 {\LWR@subadddtabularcellcolor{\LWR@xcolorrowHTMLcolor}}%
8446 }%
8447 {\LWR@subadddtabularcellcolor{\LWR@rowHTMLcolor}}%
8448 }%
8449 {\LWR@subadddtabularcellcolor{\LWR@cellHTMLcolor}}%
8450 }

```

## 72.23 Multicolumns

### 72.23.1 Parsing multicolumns

`\LWR@printmccoltype` {*colspec*} 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.

```

8451 \newcommand*\LWR@printmccoltype}[1]{%
8452 \LWR@traceinfo{lwr@printmccoltype -#1-}%

```

Get one token of the column spec:

```

8453 \StrChar{#1}{\arabic{LWR@tablemulticolspost}}[\LWR@strresult]%

```

Add to the HTML tag depending on which column type is found:

```

8454 \IfStrEq{\LWR@strresult}{l}{l}{}%
8455 \IfStrEq{\LWR@strresult}{c}{c}{}%
8456 \IfStrEq{\LWR@strresult}{r}{r}{}%
8457 \IfStrEq{\LWR@strresult}{p}{p}{}%
8458 \IfStrEq{\LWR@strresult}{m}{m}{}%
8459 \IfStrEq{\LWR@strresult}{b}{b}{}%
8460 \IfStrEq{\LWR@strresult}{P}{P}{}%
8461 \IfStrEq{\LWR@strresult}{M}{M}{}%
8462 \IfStrEq{\LWR@strresult}{B}{B}{}%

8463 \IfStrEq{\LWR@strresult}{w}{w}{}%
8464 \IfStrEq{\LWR@strresult}{W}{W}{}%

8465 \IfStrEq{\LWR@strresult}{S}{c}{}%
8466 \IfStrEq{\LWR@strresult}{s}{c}{}%

8467 \IfStrEq{\LWR@strresult}{X}{p}{}%

8468 \IfStrEq{\LWR@strresult}{|}{}%
8469 {%
8470 \ifbool{LWR@mcolvertbaronleft}%
8471 {\defaddtocounter{LWR@mcolvertbarsl}{1}}% left edge
8472 {\defaddtocounter{LWR@mcolvertbarsr}{1}}% not left edge
8473 }%
8474 {%
8475 \IfStrEq{\LWR@strresult}{:}{}%
8476 {%
8477 \ifbool{LWR@mcolvertbaronleft}%
8478 {\defaddtocounter{LWR@mcolvertbarsldash}{1}}% left edge
8479 {\defaddtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
8480 }%
8481 {%
8482 \IfStrEq{\LWR@strresult}{;}{}%
8483 {%
8484 \ifbool{LWR@mcolvertbaronleft}%
8485 {\defaddtocounter{LWR@mcolvertbarsldash}{1}}% left edge
8486 {\defaddtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
8487 }%
8488 {\boolfalse{LWR@mcolvertbaronleft}}%
8489 }%
8490 }%
8491 \LWR@traceinfo{lwr@printmccoltype done}%
8492 }

```

`\LWR@multicolpartext`  $\langle num\ parameters \rangle$  Print the data with paragraph tags, advance to bypass the given number of parameters.

```

8493 \newcommand*{\LWR@multicolpartext}[1]{%
8494 \LWR@startpars%
8495 \LWR@multicoltext%
8496 \defaddtocounter{LWR@tablemulticolspos}{#1}%
8497 \LWR@stoppars%
8498 }

```

`\LWR@multicolother`  $\langle colspec \rangle$  For @, !, >, <, print the next token without paragraph tags:

```
8499 \newcommand*\LWR@multicolother}[1]{%
8500 \defaddtocounter{LWR@tablemulticolspos}{1}%
8501 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
8502 \LWR@strresult%
```

A valid column data type was found:

```
8503 \booltrue{LWR@validtablecol}%
8504 }
```

`\LWR@multicolskip` Nothing to print for this column type.

```
8505 \newcommand*\LWR@multicolskip}{%
```

A valid column data type was found:

```
8506 \booltrue{LWR@validtablecol}%
8507 }
```

`\LWR@printmccoldata`  $\langle colspec \rangle$  Print the data for any valid column type found.

```
8508 \newcommand*\LWR@printmccoldata}[1]{%
8509 \LWR@traceinfo{lwr@printmccoldata -#1}%
```

Not yet found a valid column type:

```
8510 \boolfalse{LWR@validtablecol}%
```

Get one token of the column spec, into a local copy in case nested.

```
8511 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
8512 \edef\LWR@printmccoldataatoken{\LWR@strresult}%
```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```
8513 \IfStrEq{\LWR@printmccoldataatoken}{l}{\LWR@multicoltext}{}%
8514 \IfStrEq{\LWR@printmccoldataatoken}{c}{\LWR@multicoltext}{}%
8515 \IfStrEq{\LWR@printmccoldataatoken}{r}{\LWR@multicoltext}{}%
8516 \IfStrEq{\LWR@printmccoldataatoken}{D}{}%
8517 \defaddtocounter{LWR@tablemulticolspos}{3}% skip parameters
8518 \LWR@multicoltext%
8519 }{}
```

```
8520 \IfStrEq{\LWR@printmccoldataatoken}{p}{\LWR@multicolpartext{2}}{}%
8521 \IfStrEq{\LWR@printmccoldataatoken}{m}{\LWR@multicolpartext{2}}{}%
8522 \IfStrEq{\LWR@printmccoldataatoken}{b}{\LWR@multicolpartext{2}}{}%
8523 \IfStrEq{\LWR@printmccoldataatoken}{P}{\LWR@multicolpartext{2}}{}%
8524 \IfStrEq{\LWR@printmccoldataatoken}{M}{\LWR@multicolpartext{2}}{}%
8525 \IfStrEq{\LWR@printmccoldataatoken}{B}{\LWR@multicolpartext{2}}{}
```

```

8526 \IfStrEq{\LWR@printmccoldata token}{w}{\LWR@multicolpartext{3}}{}%
8527 \IfStrEq{\LWR@printmccoldata token}{W}{\LWR@multicolpartext{3}}{}%

8528 \IfStrEq{\LWR@printmccoldata token}{S}{\LWR@multicoltext{}}%
8529 \IfStrEq{\LWR@printmccoldata token}{s}{\LWR@multicoltext{}}%

8530 \IfStrEq{\LWR@printmccoldata token}{X}{\LWR@multicolpartext{1}}{}%
8531 \IfStrEq{\LWR@printmccoldata token}{|}{\LWR@multicolskip{}}%
8532 \IfStrEq{\LWR@printmccoldata token}{:}{\LWR@multicolskip{}}%
8533 \IfStrEq{\LWR@printmccoldata token}{;}{;}%
8534 \LWR@multicolskip%
8535 \defaddtocounter{LWR@tablemulticolspos}{1}% skip parameter
8536 }{}%
8537 \IfStrEq{\LWR@printmccoldata token}{\detokenize{@}}{\LWR@multicolother{#1}}{}%
8538 \IfStrEq{\LWR@printmccoldata token}{\detokenize{!}}{\LWR@multicolother{#1}}{}%
8539 \IfStrEq{\LWR@printmccoldata token}{\detokenize{>}}{\LWR@multicolother{#1}}{}%
8540 \IfStrEq{\LWR@printmccoldata token}{\detokenize{<}}{\LWR@multicolother{#1}}{}%

```

If an invalid column type:

```
8541 \ifbool{LWR@validtablecol}{\LWR@multicoltext{}}%
```

Tracing:

```
8542 \LWR@traceinfo{lwarp@printmccoldata done}%
8543 }
```

`\parsemulticolumnalignment` {<1: colspec>} {<2: printresults>}

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.

```

8544 \newcommand*{\LWR@parsemulticolumnalignment}[2]{%
8545 \defcounter{LWR@tablemulticolspos}{1}%
8546 \StrLen{#1}[LWR@strresult]%
8547 \defcounter{LWR@tablemulticolswidth}{\LWR@strresult}%

```

Scan across the tokens in the column spec:

```

8548 \whileboolexpr{%
8549 not test {%
8550 \ifnumcomp{\value{LWR@tablemulticolspos}}{>}%
8551 {\value{LWR@tablemulticolswidth}}%
8552 }%
8553 }%
8554 {%

```

Execute the assigned print function for each token in the column spec:

```
8555 #2{#1}%
```

Move to the next token in the column spec:

```
8556 \defaddtocounter{LWR@tablemulticolspos}{1}%
8557 }%
8558 }
```

### 72.23.2 Multicolumn factored code

`\LWR@addmulticolvertrulecolor`

```
8559 \newcommand*{\LWR@addmulticolvertrulecolor}{%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8560 \ifbool{LWR@tabularmutemods}{}{}%
```

Left side:

```
8561 \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{%
8562 \LWR@tdaddstyle%
8563 border-left: 1px solid \LWR@vertruleHTMLcolor%
8564 }{}%
8565 \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{%
8566 \LWR@tdaddstyle%
8567 border-left: 4px double \LWR@vertruleHTMLcolor%
8568 }{}%
8569 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{%
8570 \LWR@tdaddstyle%
8571 border-left: 1px dashed \LWR@vertruleHTMLcolor%
8572 }{}%
8573 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{%
8574 \LWR@tdaddstyle%
8575 border-left: 2px dashed \LWR@vertruleHTMLcolor%
8576 }{}%
```

Right side:

```
8577 \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{%
8578 \LWR@tdaddstyle%
8579 border-right: 1px solid \LWR@vertruleHTMLcolor%
8580 }{}%
8581 \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{%
8582 \LWR@tdaddstyle%
8583 border-right: 4px double \LWR@vertruleHTMLcolor%
8584 }{}%
8585 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{%
8586 \LWR@tdaddstyle%
8587 border-right: 1px dashed \LWR@vertruleHTMLcolor%
8588 }{}%
8589 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{%
8590 \LWR@tdaddstyle%
8591 border-right: 2px dashed \LWR@vertruleHTMLcolor%
8592 }{}%
```

```
8593 }%
8594 }
```

```
8595 \newcommand{\LWR@multicoltext}{}%
```

To find multicolumn right trim:

```
8596 \newcounter{LWR@lastmulticolumn}
```

```
\LWR@domulticolumn [1: vpos] [2: #rows] [3: numLaTeXcols] [4: numHTMLcols] [5: colspec]
 [6: text]
```

```
8597 \NewDocumentCommand{\LWR@domulticolumn}{o o m m m +m}{%
8598 \LWR@traceinfo{LWR@domulticolumn -#1- -#2- -#4- -#5-}%
```

Remember the text to be inserted, and remember that a valid column type was found:

```
8599 \renewcommand{\LWR@multicoltext}{%
8600 #6%
8601 \booltrue{LWR@validtablecol}%
8602 }%
```

Compute the rightmost column to be included. This is used to create the right trim.

```
8603 \defcounter{LWR@lastmulticolumn}{\value{LWR@tableLaTeXcolindex}}%
8604 \defaddtocounter{LWR@lastmulticolumn}{#3}%
8605 \defaddtocounter{LWR@lastmulticolumn}{-1}%
```

Row processing:

```
8606 \LWR@maybenewtablerow%
```

Begin the opening table data tag:

```
8607 \LWR@htmltag{%
8608 td colspan="#4" %

8609 \IfValueT{#2}{ % rows?
8610 rowspan="#2" %

8611 \IfValueT{#1}{% vpos?
8612 \ifstrequal{#1}{b}%
8613 {style="\LWR@print@mbbox{vertical-align:bottom}" }{}%
8614 \ifstrequal{#1}{t}%
8615 {style="\LWR@print@mbbox{vertical-align:top}" }{}%
8616 }% vpos?
8617 }% rows?

8618 class="td%
```

Print the column type and vertical bars:

```
8619 \defcounter{LWR@mcolvertbarsl}{0}%
8620 \defcounter{LWR@mcolvertbarsr}{0}%
8621 \defcounter{LWR@mcolvertbarsldash}{0}%
8622 \defcounter{LWR@mcolvertbarsrdash}{0}%
8623 \booltrue{LWR@mcolvertbaronleft}%
8624 \LWR@parsemulticolumnalignment{#5}{\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:

```
8625 \LWR@subaddcmidruletrim%
8626 {%
8627 \LWR@getexparray{LWR@trimlrules}%
8628 {\arabic{LWR@tableLaTeXcolindex}}%
8629 }%
8630 {%
8631 \LWR@getexparray{LWR@trimrrules}%
8632 {\arabic{LWR@lastmulticolumn}}%
8633 }%
```

Also add vertical bar class.

```
8634 \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{ tvertbarl}{}%
8635 \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{ tvertbarldouble}{}%
8636 \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{ tvertbarr}{}%
8637 \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{ tvertbarrdouble}{}%
8638 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{ tvertbarldash}{}%
8639 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}%
8640 { tvertbarldoubledash}{}%
8641 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{ tvertbarrdash}{}%
8642 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}%
8643 { tvertbarrdoubledash}{}%
```

Close the class tag’s opening quote:

```
8644 "%

8645 \LWR@tdstartstyles%

8646 \LWR@addtabulararrowcolor%

8647 \LWR@addcmidrulewidth%
8648 \LWR@addcdashline%
8649 \LWR@addtabularhrulecolor%
8650 \LWR@addmulticolverttrulecolor%
8651 \LWR@addformatwpalignment{#5}%
8652 \LWR@tdendstyles%
8653 }% end of the opening table data tag
8654 \boolfalse{LWR@intabularmetadata}%
8655 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoldata}%
8656 }
```

### 72.23.3 Multicolumn

```
\LWR@htmlmulticolumn {<numcols>} {<alignment>} {<text>}
```

```
8657 \NewDocumentCommand{\LWR@htmlmulticolumn}{m m +m}%
8658 {%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
8659 \LWR@tabularhtmlcolumns{\arabic{\LWR@tableLaTeXcolindex}}{#1}%
```

Create the multicolumn tag:

```
8660 \LWR@domulticolumn{#1}{\arabic{\LWR@tabhtmlcoltotal}}{#2}{#3}%
```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```
8661 \defaddtocounter{\LWR@tableLaTeXcolindex}{#1}%
8662 \defaddtocounter{\LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
8663 \booltrue{\LWR@skipatbang}%
8664 }
```

### 72.23.4 Longtable captions

longtable captions use \multicolumn.

Per the caption package. User-redefinable float type.

```
8665 \providecommand*\LTcaptiontype{table}
```

```
\LWR@longtabledatacaptiontag * [<toc entry>] { <caption> }
```

```
8666 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m}
8667 {%
```

Remember the latest name for \nameref:

```
8668 \IfValueTF{#2}{% optional given?
8669 \ifblank{#2}{% optional empty?
8670 {\LWR@setlatestname{#3}}}% empty
8671 {\LWR@setlatestname{#2}}}% given and non-empty
8672 }% optional given
8673 {\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:

8674 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalLaTeXcols}}%

Create the multicolumn tag:

8675 \LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcols}}%  
 8676 {\arabic{LWR@tabhtmlcoltotal}}%  
 8677 {P}%  
 8678 {% \LWR@domulticolumn  
 8679 \IfBooleanTF{#1}% star?

Star version, show a caption but do not make a LOT entry:

8680 {% yes star  
 8681 \LWR@figcaption%  
 8682 \LWR@isolate{#3}%  
 8683 \endLWR@figcaption%  
 8684 }%  
 8685 {% No star:

Not the star version:

Don't step the counter if \caption[] {A caption.}

8686 \ifbool{LWR@starredlongtable}%  
 8687 {%  
 8688 \ifblank{#2}% TOC entry  
 8689 }%  
 8690 {%  
 8691 \refstepcounter{\LTcaption}%  
 8692 \protected@edef\@currentlabel{%  
 8693 \@nameuse{p@\LTcaption}\@nameuse{the\LTcaption}%  
 8694 }%  
 8695 }%  
 8696 }{ }%

Create an HTML caption. Afterwards, maybe make a LOT entry.

8697 \LWR@figcaption%  
 8698 \LWR@isolate{\@nameuse{fnum@\LTcaption}}%  
 8699 \CaptionSeparator%  
 8700 \LWR@isolate{#3}%  
 8701 \endLWR@figcaption%

See if an optional caption was given:

8702 \ifblank{#2}% TOC entry empty

if the optional caption was given, but empty, do not form a TOC entry

8703 }%

If the optional caption was given, but might only be []:

8704 {% TOC entry not empty

```
8705 \IfNoValueTF{#2}% No TOC entry?
```

The optional caption is []:

```
8706 {% No TOC entry
8707 \addcontentsline%
8708 {\@nameuse{ext@LTcaption}}%
8709 {LTcaption}%
8710 {%
8711 \protect\numberline%
8712 {\LWR@isolate{\@nameuse{p@LTcaption}}\@nameuse{theLTcaption}}%
8713 {\ignorespaces \LWR@isolate{#3}\protect\relax}%
8714 }%
8715 }% end of No TOC entry
```

The optional caption has text enclosed:

```
8716 {% yes TOC entry
8717 \addcontentsline%
8718 {\@nameuse{ext@LTcaption}}%
8719 {LTcaption}%
8720 {%
8721 \protect\numberline%
8722 {\LWR@isolate{\@nameuse{p@LTcaption}}\@nameuse{theLTcaption}}%
8723 {\ignorespaces \LWR@isolate{#2}\protect\relax}%
8724 }%
8725 }% end of yes TOC entry
8726 }% end of TOC entry not empty
8727 }% end of no star
```

Skip any trailing @ or ! columns for this cell:

```
8728 \booltrue{LWR@skipatbang}%
8729 }% end of \LWR@domulticolumn
8730 \defaddtocounter{LWR@tableLaTeXcolindex}{\value{LWR@tabletotalLaTeXcols}}%
8731 \defaddtocounter{LWR@tableLaTeXcolindex}{-1}
8732
8733 }
```

### 72.23.5 Counting HTML tabular columns

The  $\LaTeX$  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  $\LaTeX$  `\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.

```
8734 \newcounter{LWR@tabhtmlcolindex}
```

```
8735 \newcounter{LWR@tabhtmlcolend}
8736 \newcounter{LWR@tabhtmlcoltotal}
```

`\LWR@subtabularhtmlcolumns` {<*index*>}

Factored from `\LWR@tabularhtmlcolumns`, which follows.

```
8737 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%
```

Temporarily define a macro equal to the @ specification for this column:

```
8738 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colatspec}{#1}}%
```

If the @ specification is not empty, add to the count:

```
8739 \ifdefempty{\LWR@atbangspec}%
8740 {}%
8741 {\defaddtocounter{LWR@tabhtmlcoltotal}{1}}%
```

Likewise for the ! columns:

```
8742 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colbangspec}{#1}}%
8743 \ifdefempty{\LWR@atbangspec}%
8744 {}%
8745 {\defaddtocounter{LWR@tabhtmlcoltotal}{1}}%
8746 }
```

`\LWR@tabularhtmlcolumns` {<*starting L<sup>A</sup>T<sub>E</sub>X* column>} {<*number L<sup>A</sup>T<sub>E</sub>X* columns>}

Compute the total number of HTML columns being spanned, considering the starting L<sup>A</sup>T<sub>E</sub>X table column and the number of L<sup>A</sup>T<sub>E</sub>X 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 `LWR@tabhtmlcoltotal`.

```
8747 \newcommand*{\LWR@tabularhtmlcolumns}[2]{%
```

Count the starting index, compute ending index, and begin with the count being the L<sup>A</sup>T<sub>E</sub>X span, to which additional @ and ! columns may be added:

```
8748 \defcounter{LWR@tabhtmlcolindex}{#1}%
8749 \defcounter{LWR@tabhtmlcoltotal}{#2}%
8750 \defcounter{LWR@tabhtmlcolend}{#1}%
8751 \defaddtocounter{LWR@tabhtmlcolend}{#2}%
```

If at the left edge, add the at/bang columns for the left edge:

```
8752 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{=}{1}{%
8753 \LWR@subtabularhtmlcolumns{leftedge}%
8754 }{%}
```

Walk across the L<sup>A</sup>T<sub>E</sub>X columns looking for @ and ! columns:

```

8755 \whileboolexpr{%
8756 test {%
8757 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{<}{\value{LWR@tabhtmlcolend}}%
8758 }%
8759 }%
8760 {%
8761 \LWR@subtabularhtmlcolumns{\arabic{LWR@tabhtmlcolindex}}%
8762 \defaddtocounter{LWR@tabhtmlcolindex}{1}%
8763 }% whiledo
8764 }

8765 \end{warpHTML}

```

## 72.24 Multirow if not loaded

A default definition in case `multirow` is not loaded. This is used during table parsing.

```

8766 \begin{warpHTML}
8767 \newcommand{\multirow}[2][c]{}
8768 \end{warpHTML}

```

## 72.25 Multicolumnrow

A print-mode version is defined here, and is also used during HTML output while inside a `lateximage`.

See section 367 for the HTML versions.

**for HTML & PRINT:** 8769 \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.

```

8770 \AtBeginDocument{

\ifundefined{@xmultirow} determines if multirow was never loaded.

Null action if not loaded:

8771 \ifundefined{@xmultirow}
8772 {
8773 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8774 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%

```

```

8775 {}%
8776 }% no version of multirow was loaded
8777 {% \@xmultirow defined, so some version of multirow was loaded

```

`\@ifpackageloaded{multirow}` determines if v2.0 or later of `multirow` was used, which included the `\ProvidesPackage` macro.

The print version:

```

8778 \@ifpackageloaded{multirow}{% v2.0 or newer
8779 \@ifpackagelater{multirow}{2016/09/01}% 2016/09/27 for v2.0
8780 {% v2.0+:
8781 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8782 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8783 {\multicolumn{#1}{#2}{\@xmultirow[#3][#4][#5][#6][#7][#8]}}%
8784 }
8785 {% loaded but older, probably not executed:
8786 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8787 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8788 {\multicolumn{#1}{#2}{\@xmultirow{#4}[#5][#6][#7][#8]}}%
8789 }
8790 }% packageloaded{multirow}

```

If not `\@ifpackageloaded{multirow}` but `\@xmultirow` is defined, then this must be v1.6 or earlier, which did not `\ProvidesPackage{multirow}`, and did not have the `vposn` option.

```

8791 {% v1.6 or older did not \ProvidePackage
8792 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8793 {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8794 {\multicolumn{#1}{#2}{\@xmultirow{#4}[#5][#6][#7][#8]}}%
8795 }
8796
8797 }% \@ifundefined{@xmultirow}
8798
8799 \providecommand*{\multicolumnrow}{\LWR@print@multicolumnrow}
8800
8801 }% AtBeginDocument

8802 \end{warpall}

```

## 72.26 Utility macros inside a table

**for HTML output:** 8803 `\begin{warpHTML}`

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```
8804 \newcommand*{\LWR@donothing}{}

```

In case `array` is not loaded:

```
8805 \let\firsthline\relax
8806 \let\lasthline\relax
8807 \newcommand*\firsthline{}
8808 \newcommand*\lasthline{}
```

In case bigdelim is not loaded:

```
8809 \newcommand*\ldelim{}
8810 \newcommand*\rdelim{}

8811 \end{warpHTML}
```

## 72.27 Special-case tabular markers

**for HTML & PRINT:** 8812 \begin{warpall}

`\TabularMacro` Place this just before inserting a custom macro in a table data cell. Doing so tells lwarp not to automatically start a new HTML table data cell yet. See section 8.10.1.

```
8813 \newcommand*\TabularMacro{}
8814 \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, lwarp'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 % because & is used in a definition
\newenvironment{outerenvironment}
{
 \tabular{cc}
 left & right \
}
{
 \TabularMacro\ResumeTabular
 left & right \
 \endtabular
}
\StopDefiningTabulars
```

**for HTML output:** 8815 \begin{warpHTML}

```
8816 \newcommand*\ResumeTabular{%
8817 \boolfalse{LWR@exitingtabular}%
8818 \boolfalse{LWR@tabularmutemods}%
8819 \LWR@getmynexttoken%
8820 }
```

```
8821 \end{warpHTML}
```

**for PRINT output:** 8822 \begin{warpprint}

```
8823 \newcommand*{\ResumeTabular}{}
8824 \end{warpprint}
```

## 72.28 Checking for a new table cell

**for HTML output:** 8825 \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:

```
8826 \newcommand*{\LWR@tabledatacolumnntag}%
8827 {%
8828 \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:

```
8829 \global\let\LWR@mynextaction\LWR@tabledatasinglecolumnntag%
```

If exiting the tabular:

```
8830 \ifdefequal{\LWR@mynexttoken}{\end}%
8831 {\booltrue{\LWR@exitingtabular}}{}%
```

longtable can have a caption in a cell

```
8832 \ifdefequal{\LWR@mynexttoken}{\caption}%
8833 {\global\let\LWR@mynextaction\LWR@donothing}}{}%
```

Look for other things which would not start a table cell:

```
8834 \ifdefequal{\LWR@mynexttoken}{\multicolumn}%
8835 {\global\let\LWR@mynextaction\LWR@donothing}}{}%
8836 \ifdefequal{\LWR@mynexttoken}{\multirow}%
8837 {\global\let\LWR@mynextaction\LWR@donothing}}{}%
8838 \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%
8839 {\global\let\LWR@mynextaction\LWR@donothing}}{}%
8840 \ifdefequal{\LWR@mynexttoken}{\noalign}%
8841 {\global\let\LWR@mynextaction\LWR@donothing}}{}%
```

If an `\mrowcell`, this is a cell to be skipped over:

```
8842 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%
8843 {\global\let\LWR@mynextaction\LWR@donothing}}{}%
```

If an `\mcolrowcell`, this is a cell to be skipped over:

```

8844 \ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
8845 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8846 \ifdefequal{\LWR@mynexttoken}{\TabularMacro}%
8847 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8848 \ifdefequal{\LWR@mynexttoken}{\hline}%
8849 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8850 \ifdefequal{\LWR@mynexttoken}{\firstline}%
8851 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8852 \ifdefequal{\LWR@mynexttoken}{\lastline}%
8853 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8854 \ifdefequal{\LWR@mynexttoken}{\toprule}%
8855 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8856 \ifdefequal{\LWR@mynexttoken}{\midrule}%
8857 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8858 \ifdefequal{\LWR@mynexttoken}{\cmidrule}%
8859 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8860 \ifdefequal{\LWR@mynexttoken}{\morecmidrules}%
8861 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8862 \ifdefequal{\LWR@mynexttoken}{\specialrule}%
8863 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8864 \ifdefequal{\LWR@mynexttoken}{\cline}%
8865 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8866 \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
8867 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8868 \ifdefequal{\LWR@mynexttoken}{\hhline}%
8869 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8870 \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
8871 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8872 \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
8873 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8874 \ifdefequal{\LWR@mynexttoken}{\doublerulesepcolor}%
8875 {\global\let\LWR@mynextaction\LWR@donothing}{}%

8876 \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
8877 {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

```

8878 \ifdefequal{\LWR@mynexttoken}{\warpHTMLonly}%
8879 {\global\let\LWR@mynextaction\LWR@doanything}{}%

8880 \ifdefequal{\LWR@mynexttoken}{\ldelim}%
8881 {\global\let\LWR@mynextaction\LWR@doanything}{}%

8882 \ifdefequal{\LWR@mynexttoken}{\rdelim}%
8883 {\global\let\LWR@mynextaction\LWR@doanything}{}%

```

For arydashln:

```

8884 \ifdefequal{\LWR@mynexttoken}{\hdashline}%
8885 {\global\let\LWR@mynextaction\LWR@doanything}{}%

8886 \ifdefequal{\LWR@mynexttoken}{\cdashline}%
8887 {\global\let\LWR@mynextaction\LWR@doanything}{}%

8888 \ifdefequal{\LWR@mynexttoken}{\firsthdashline}%
8889 {\global\let\LWR@mynextaction\LWR@doanything}{}%

8890 \ifdefequal{\LWR@mynexttoken}{\lasthdashline}%
8891 {\global\let\LWR@mynextaction\LWR@doanything}{}%

```

Ignore an empty line between rows:

```

8892 \ifdefequal{\LWR@mynexttoken}{\par}%
8893 {\global\let\LWR@mynextaction\LWR@doanything}{}%

```

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:

```

8894 \LWR@traceinfo{\LWR@tabledatacolumnstag: about to do mynext}%
8895 \LWR@mynextaction%
8896 \LWR@traceinfo{\LWR@tabledatacolumnstag: done}%
8897 }

8898 \end{warpHTML}

```

## 72.29 \mrowcell

**for HTML & PRINT:** 8899 \begin{warpall}

 **multirow cells** \mrowcell The user must insert \mrowcell into any \multirow cells which must be skipped. This command has no action during print output.

```

8900 \newcommand*{\mrowcell}{}

8901 \end{warpall}

```

## 72.30 `\mcolrowcell`

**for HTML & PRINT:** 8902 `\begin{warpall}`

 `\mcolrowcell` The user must insert `\mcolrowcell` into any `\multicolumnrow` cells which must be **multirow cells** skipped. This command has no action during print output.

```
8903 \newcommand*\mcolrowcell{}
```

```
8904 \end{warpall}
```

## 72.31 HTML tabular environment

**for HTML output:** 8905 `\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`.

```
8906 \providecommand*\toprule[1][\hline]
8907 \providecommand*\midrule[1][\hline]
8908 \providecommand*\cmidrule{\cline}
8909 \providecommand*\bottomrule[1][\hline]
8910 \providecommand*\addlinespace[1][\]
8911 \providecommand*\morecmidrules{}
8912 \providecommand*\specialrule[3][\hline]
```

`\noalign`  $\langle text \rangle$  Redefined for use inside `tabular`.

```
8913 \LetLtxMacro\LWR@orignoalign\noalign
8914
8915 \newcommand{\LWR@tabularnoalign}[1]{%
8916 \advance\rownum\m@ne%
8917 \LetLtxMacro\LWR@save@xcolorrowHTMLcolor\LWR@xcolorrowHTMLcolor%
8918 \renewcommand*\LWR@xcolorrowHTMLcolor{}%
8919 \multicolumn{\value{\LWR@tabletotalLaTeXcols}}{l}{#1} \ \
8920 \LetLtxMacro\LWR@xcolorrowHTMLcolor\LWR@save@xcolorrowHTMLcolor%
8921 % \@rowcol@lors%
8922 \LWR@getmynexttoken%
8923 }
```

`\LWR@HTMLhline` The definition of `\hline` depends on whether `tabls` has been loaded. If so, optional space below the line may be specified, but will be ignored.

```
8924 \AtBeginDocument{
8925
8926 \ifpackageloaded{lwarp-tabls}
8927 {
8928 \newcommand*\LWR@HTMLhline[1][\]{
8929 \ifbool{FormatWP}%
8930 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%

```

```

8931 {\defaddtocounter{LWR@hlines}{1}}%
8932 \LWR@getmynexttoken}%
8933 }
8934 {
8935 \newcommand*\LWR@HTMLhline{%
8936 \ifbool{FormatWP}%
8937 {\LWR@docmidrule{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8938 {\defaddtocounter{LWR@hlines}{1}}%
8939 \LWR@getmynexttoken}%
8940 }
8941
8942 }% AtBeginDocument

```

`\LWR@HTMLcline` {<*columns*>}

```

8943 \NewDocumentCommand{\LWR@HTMLcline}{m}%
8944 {\LWR@docmidrule{#1}\LWR@getmynexttoken}%

```

`\LWR@tabular@warpprintonly` {<*contents*>}

Only process the contents if producing printed output. Modified inside a tabular to grab the next token.

```

8945 \newcommand{\LWR@tabular@warpprintonly}[1]{%
8946 \ifbool{warpingprint}{#1}{}%
8947 \LWR@getmynexttoken%
8948 }

```

`\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 column parsing code, which uses `xstring`.

```

8949 \AtBeginDocument{
8950 \@ifundefined{NoAutoSpacing}%
8951 {% no babel-french
8952 \newcommand*\LWR@nullifyNoAutoSpacing{}%
8953 }% no babel-french
8954 {% yes babel-french
8955 \newcommand*\LWR@nullifyNoAutoSpacing{%
8956 \NoAutoSpacing%
8957 \renewcommand*\NoAutoSpacing{}%
8958 \renewcommand*\LWR@FBcancel{}%
8959 }
8960 }% yes babel-french
8961 }% AtBeginDocument

```

Env `tabular` <direction> [*<verticalposition>*] {<*colspecs*>}

The <direction> is from `plext` for Japanese documents, and is ignored.

```

8962 \StartDefiningTabulars
8963

```

```

8964 \NewDocumentCommand{\LWR@HTML@tabular}{d< o m}
8965 {%
8966 \LWR@traceinfo{\LWR@HTML@tabular started}%

```



### <table> inside <span>

In L<sup>A</sup>T<sub>E</sub>X, a tabular may be placed inside a minipage, but in HTML a <table> may not be inside a <span>. Since there may be several nested <span>s, with an unknown number of other objects between, it is hard to undo all these <span>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 <span>. 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 <span>. Since this is such a sloppy situation, a warning is issued here instructing the user to please isolate the <span> to print-only.

```

8967 \ifnumcomp{\value{\LWR@spandepth}}{>}{0}{%
8968 \PackageWarning{lwarp}{%
8969 A tabular is being used inside a span such as\MessageBreak
8970 a minipage. Some formatting may not be correct\MessageBreak
8971 in the tabular.\MessageBreak
8972 It is recommended to use \protect\warpprintonly\space or the\MessageBreak
8973 warpprint environment to isolate the span to\MessageBreak
8974 print-only,%
8975 }
8976 }{}%
8977 \addtocounter{\LWR@tabulardepth}{1}%

```

Not yet started a table row:

```

8978 \boolfalse{\LWR@startedrow}%

```

Not yet doing any rules:

```

8979 \defcounter{\LWR@hlines}{0}%
8980 \defcounter{\LWR@hdashedlines}{0}%
8981 \boolfalse{\LWR@doingtbrule}%
8982 \boolfalse{\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.

```

8983 \LWR@nullifyNoAutoSpacing%

```

Have not yet found the end of tabular command. Unmute the @ and ! columns.

```

8984 \boolfalse{\LWR@exitingtabular}%
8985 \boolfalse{\LWR@tabularmutemods}%

```

Error if failed to use \mrowcell or \mcolrowcell when needed.

```

8986 \boolfalse{\LWR@usedmultirow}%
8987 \boolfalse{\LWR@foundmrowcell}%

8988 \renewcommand*{\LWR@multicoltext}{}%

```

Create the table tag:

```
8989 \booltrue{LWR@intabularmetadata}%
8990 \LWR@traceinfo{LWR@tabular: About to LWR@forecenenewpage.}%
8991 \LWR@forcenenewpage
8992 \LWR@htmlblocktag{table}%
```

Parse the table columns:

```
8993 \LWR@parsetablecols{#3}%
```

Table col spec is: \LWR@tablecolspec which is a string of llccrr, etc.

Do not place the table inside a paragraph:

```
8994 \LWR@stoppars%
```

Track column #:

```
8995 \defcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
8996 \global\boolfalse{LWR@tabularcelladded}%
```

Start looking for midrules:

```
8997 \LWR@clearmidrules%
```

\\ becomes a macro to end the table row:

```
8998 \LetLtxMacro{\\}{LWR@tabularendofline}%
```

\warpprintonly inside a tabular must grab the next token.

```
8999 \LetLtxMacro\warpprintonly\LWR@tabular@warpprintonly%
```

The following adjust for colortbl.

```
9000 \LetLtxMacro\arrayrulecolor\arrayrulecolornexttoken%
9001 \LetLtxMacro\doublerulesepcolor\doublerulesepcolornexttoken%
9002 \def\LWR@columnHTMLcolor{}%
9003 \def\LWR@rowHTMLcolor{}%
9004 \def\LWR@cellHTMLcolor{}%
9005 \@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.

```
9006 \ifdefvoid{LWR@ruleHTMLcolor}%
9007 {\edef\LWR@vertruleHTMLcolor{black}}%
9008 {\edef\LWR@vertruleHTMLcolor{LWR@origpound\LWR@ruleHTMLcolor}}%
```

Tracking the depth of cell color <div>s:

```
9009 \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 `tabs` package.

```
9010 \LWR@traceinfo{LWR@HTML@tabular: redefining macros}%
9011 \LetLtxMacro\noalign\LWR@tabularnoalign%
9012 \LetLtxMacro\hline\LWR@HTMLhline%
9013 \LetLtxMacro\cline\LWR@HTMLcline%

9014 \DeclareDocumentCommand{\hdashline}{o}{%
9015 \ifbool{FormatWP}%
9016 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9017 {\defaddtocounter{LWR@hdashedlines}{1}}}%
9018 \LWR@getmynexttoken%
9019 }%

9020 \DeclareDocumentCommand{\cdashline}{m}{%
9021 \LWR@docdashline{##1}\LWR@getmynexttoken%
9022 }%

9023 \DeclareDocumentCommand{\firsthdashline}{o}{%
9024 \ifbool{FormatWP}%
9025 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9026 {\defaddtocounter{LWR@hdashedlines}{1}}}%
9027 \LWR@getmynexttoken%
9028 }%

9029 \DeclareDocumentCommand{\lasthdashline}{o}{%
9030 \ifbool{FormatWP}%
9031 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9032 {\defaddtocounter{LWR@hdashedlines}{1}}}%
9033 \LWR@getmynexttoken%
9034 }%
```

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`.

```
9035 \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
9036 \renewcommand*\mrowcell{%
9037 \LWR@maybenewtablerow%
9038 \LWR@tabularleftedge%
9039 \booltrue{LWR@skippingmrowcell}%
9040 \booltrue{LWR@foundmrowcell}%
9041 }%
9042 \renewcommand*\mcolrowcell{%
9043 \LWR@maybenewtablerow%
9044 \booltrue{LWR@skippingmcolrowcell}%
9045 \booltrue{LWR@foundmrowcell}%
```

```
9046 }%
9047 \LetLtxMacro\caption\LWR@longtabledatacaptiontag%
```

Reset for new processing:

```
9048 \boolfalse{LWR@tableparcell}%
9049 \boolfalse{LWR@skippingmrowcell}%
9050 \boolfalse{LWR@skippingmcolrowcell}%
9051 \boolfalse{LWR@skipatbang}%
9052 \boolfalse{LWR@emptyatbang}%
```

Set & for its special meaning inside the tabular:

```
9053 \StartDefiningTabulars%
9054 \protected\gdef&{\LWR@tabularampersand}%
```

Locally force any minipages to be fullwidth, until the end of the tabular:

```
9055 \booltrue{LWR@forceminipagefullwidth}%
```

Nest one level deeper of tabular paragraph handling:

```
9056 \addtocounter{LWR@tabularpardepth}{1}%
```

Look ahead for a possible table data cell:

```
9057 \LWR@traceinfo{LWR@@HTML@tabular: about to LWR@getmynexttoken}%
9058 \LWR@getmynexttoken%
9059 }%
```

Ending the environment:

```
9060 \newcommand*{\LWR@HTML@endtabular}
9061 {%
9062 \LWR@traceinfo{LWR@HTML@endtabular}%
```

Unnest one level of tabular paragraph handling:

```
9063 \addtocounter{LWR@tabularpardepth}{-1}%
9064 \ifboolexpr{%
9065 test {%
9066 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}%
9067 {\value{LWR@tabletotalLaTeXcols}}
9068 } or %
9069 (%
9070 bool{LWR@intabularmetadata} and%
9071 not bool{LWR@tabularcelladded} and%
9072 test {%
9073 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}%
9074 {\value{LWR@tabletotalLaTeXcols}}%
9075 }%
9076)%
9077 }%
9078 {%
```

```

9079 \LWR@tabularfinishrow%
9080 }%
9081 {%
9082 \LWR@closetabledatacell%
9083 }%
9084 \LWR@htmlblocktag{/tr}%

```

**xcolor row color support:**

```

9085 \@rowcolor%

9086 \LWR@htmlblocktag{/table}%
9087 \boolfalse{LWR@intabularmetadata}%

```

**Unnest one level of tabular:**

```

9088 \addtocounter{LWR@tabulardepth}{-1}%

```

**Restore & to its usual meaning:**

```

9089 \ifnumequal{\value{LWR@tabulardepth}}{0}{%
9090 \protected\gdef&{\LWR@origampmacro}%
9091 \StopDefiningTabulars%
9092 }{%

```

Error if used `\multirow` or `\multicolumnrow` without using `\mrowcell` or `\mcolrowcell`.

```

9093 \ifbool{LWR@usedmultirow}{%
9094 \ifbool{LWR@foundmrowcell}%
9095 {%
9096 {%
9097 \PackageError{lwarp}%
9098 {%
9099 When using \protect\multirow, \protect\multicolumnrow, \MessageBreak
9100 or the bigdelim package, \MessageBreak
9101 place \protect\mrowcell\space or \protect\mcolrowcell\MessageBreak
9102 in empty cells which are to be skipped.\MessageBreak
9103 See the Lwarp package documentation:\MessageBreak
9104 "Special cases and limitations" -> "Tabular"
9105 }%
9106 }%
9107 See the Lwarp package documentation:\MessageBreak
9108 "Special cases and limitations" -> "Tabular".
9109 }%
9110 }%
9111 }{%

9112 \LWR@traceinfo{LWR@HTML@endtabular finished}%
9113 }
9114
9115 \csletcs{LWR@HTML@endtabular*}{LWR@HTML@endtabular}
9116
9117 \StopDefiningTabulars

```

siunitx may redefine tabular, so set the following later:

```

9118 \AtBeginDocument{
9119 \LetLtxMacro\LWR@origendtabular\endtabular
9120 \csletcs{LWR@origendtabular*}{endtabular*}
9121 \LWR@formatted{@tabular}
9122 \LWR@formatted{endtabular}
9123 \LWR@formatted{endtabular*}
9124 }

9125 \end{warpHTML}

```

## 73 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.

File `*_html.aux` A new entry in `*_html.aux` is used to remember section name, file, and lateximage depth and number for each label:

```

\newlabel{<labelname>@lwarp}{{<section name>}{<filename>}
 {<imagedepth>}{<imagenumber>}}

```

Table 12 shows the data structures related to cross-referencing.

for HTML output: 9126 \begin{warpHTML}

### 73.1 Setup

`\@currentlabelname` To remember the most recently defined section name, description, or caption, for `\nameref`.

```
9127 \providecommand*\@currentlabelname{}
```

`\LWR@stripperperiod` `{<text>} [⟨.⟩]`

Removes a trailing period.

```
9128 \def\LWR@stripperperiod#1.\ltx@empty#2\@nil{#1}%
```

`\LWR@setlatestname` `{⟨object name⟩}`

Removes `\label`, strips any final period, and remembers the result.

```
9129 \newcommand*\LWR@setlatestname[1]{%
```

Table 12: Cross-referencing data structures

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| <b>Original L<sup>A</sup>T<sub>E</sub>X:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (print and HTML)                |
| <p><b>\refstepcounter:</b> Steps the counter and sets \currentlabel.</p> <p><b>\currentlabel:</b> \p@&lt;ctr&gt;\the&lt;ctr&gt; Updated by \refstepcounter.</p> <p><b>\label:</b> Writes to the .aux file:<br/> <code>\newlabel{&lt;label&gt;}{\currentlabel}{\thepage}}</code></p> <p><b>\newlabel:</b> When the .aux file is read, sets \r@&lt;label&gt;.</p> <p><b>\r@&lt;label&gt;:</b> Set to: <code>{\currentlabel}{\thepage}</code></p> <p><b>\ref:</b> Returns the first part of \r@&lt;label&gt;.</p> <p><b>\pageref:</b> Returns the second part of \r@&lt;label&gt;.</p>                                                                                                                                                                                                                                                                                     |                                 |
| <b>Added by lwarp:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (HTML only)                     |
| <p><b>\label:</b> Adds HTML tags (section 73.3), and another .aux entry (section 73.2).</p> <p><b>\newlabel:</b> Unchanged. When the .aux file is read, sets \r@&lt;label&gt;@lwarp.</p> <p><b>\r@&lt;label&gt;@lwarp:</b> Set to <code>{{section_name}{file_name}{depth}{number}}</code>:</p> <p style="padding-left: 2em;"><b>\LWR@nameref:</b> The section name for this label.</p> <p style="padding-left: 2em;"><b>\LWR@htmlfileref:</b> The filename or name for this label.</p> <p style="padding-left: 2em;"><b>\LWR@lateximagedepthref:</b> The lateximagedepth for this label.</p> <p style="padding-left: 2em;"><b>\LWR@lateximagenumberref:</b> The lateximagenumber for this label.</p> <p><b>\nameref:</b> Emulated from hyperref for lwarp. See section 73.4.</p> <p><b>\ref and \nameref:</b> Adds HTML tags. See section 73.4.</p>                     |                                 |
| <b>Added by amsmath:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (print and HTML)                |
| <p><b>\label:</b> Execution is delayed until the math environment is completed.</p> <p><b>\ltx@label:</b> L<sup>A</sup>T<sub>E</sub>X \label, (HTML: patched by lwarp,) later patched by cleveref.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |
| <b>Added by cleveref:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | (print and HTML)                |
| <p><b>\refstepcounter:</b> Added: sets \cref@currentlabel.</p> <p><b>\cref@currentlabel:</b> (&lt;type&gt;=&lt;ctr&gt; unless an alias is used):<br/> <code>[&lt;type&gt;][\arabic{&lt;ctr&gt;}][&lt;parent ctrs&gt;]{\p@&lt;ctr&gt;\the&lt;ctr&gt;}</code> Also see section 59.4 for use with footnotes.</p> <p><b>\label:</b> Writes to the .aux file:<br/> <code>\newlabel{&lt;label&gt;@cref}{\cref@currentlabel}{\thepage}}</code></p> <p><b>\newlabel:</b> Unchanged. When the .aux file is read, sets \r@&lt;label&gt;@cref.</p> <p><b>\r@&lt;label&gt;@cref:</b> Set to: <code>{\cref@currentlabel}{\thepage}</code></p> <p><b>Utility functions:</b> See \cref@getlabel, \cref@gettype, \cref@getcounter, \cref@getprefix.</p> <p><b>Cross-referencing names:</b> \crefname and \Crefname assign human-readable names for references to this counter type.</p> |                                 |
| <b>Additionally patched by lwarp:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (HTML only)                     |
| <p><b>\cref, etc.:</b> Modified for lwarp. See section 87.</p> <p><b>\label inside math:</b> See section 79.7.1.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |
| <b>Footnotes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | See \noteentry in section 59.4. |

Remove `\label` and other commands from the name, the strip any final period. See `getttitlestring`.

```

9130 \GetTitleStringExpand{#1}%
9131 \edef\@currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
9132 \edef\@currentlabelname{%
9133 \expandafter\LWR@stripperperiod\@currentlabelname%
9134 \ltx@empty.\ltx@empty\@nil%
9135 }%
9136 }

```

## 73.2 New lwarp labels.

File `*_html.aux` A new entry in `*_html.aux` is used to remember section name, file, and lateximage depth and number for each label:

```

\newlabel{<labelname>@lwarp}{<<section name>>{<filename>}
 {<limagedepth>}{<limagenumber>}}

```

See:

<http://tex.stackexchange.com/questions/57194/extract-section-number-from-equation-reference>

`\LWR@setref` `{<args list>} {<selector>} {<label>}`

`\@setref` without the `\null` (`\hbox`), and without the warning messages. Each caused problems with lwarp references. The regular reference will cause the warning.

```

9137 \def\LWR@setref#1#2#3{%
9138 \ifx#1\relax%
9139 ??%
9140 \else%
9141 \expandafter#2#1%
9142 \fi}

```

`\LWR@nameref` `{<label>}` Returns the section name for this label:

```

9143 \newcommand*\LWR@nameref}[1]{%
9144 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@firstoffour{#1}%
9145 }

```

`\LWR@htmlfileref` `{<label>}` Returns the file number or name for this label:

```

9146 \newcommand*\LWR@htmlfileref}[1]{%
9147 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@secondoffour{#1}%
9148 }

```

`\LWR@lateximagedepthref` `{<label>}` Returns the `lateximagedepth` for this label:

```

9149 \newcommand*\LWR@lateximagedepthref}[1]{%
9150 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@thirdoffour{#1}%
9151 }

```

`\LWR@lateximagenumberref`  $\langle label \rangle$  Returns the lateximagenumber for this label:

```

9152 \newcommand*\LWR@lateximagenumberref}[1]{%
9153 \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@fourthoffour{#1}%
9154 }

```

`\LWR@lwarplabel`  $\langle label \rangle$  Sanitize the name and then creates the label:

```

9155 \newcommand*\LWR@lwarplabel}[1]{%
9156 \LWR@traceinfo{\LWR@lwarplabel !#1!}%
9157 \LWR@setlatestname{\@currentlabelname}%
9158 \@bsphack%
9159 \protected@write\@auxout{%
9160 {%
9161 \string\newlabel{#1@lwarp}{%
9162 {\@currentlabelname}%
9163 {%
9164 \ifbool{FileSectionNames}%
9165 {\LWR@thisfilename}%
9166 {\arabic{\LWR@htmlfilenumber}}}%
9167 }%
9168 {\arabic{\LWR@lateximagedepth}}%
9169 {\arabic{\LWR@lateximagenumber}}}%
9170 }%
9171 }%
9172 \@esphack%
9173 }

```

### 73.3 Labels

`\LWR@sublabel`  $\langle label \rangle$  Creates an HTML id tag.

`\detokenize` is used to allow underscores in the labels.

```

9174 \newcommand*\LWR@sublabel}[1]{%
9175 \LWR@traceinfo{\LWR@sublabel !#1!}%

```

Create an HTML id tag unless are inside a lateximage, since it would appear in the image:

```

9176 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
9177 }{%
9178 {% not lateximage

```

If not doing a lateximage, create an HTML ID tag: (To be factored...)

```

9179 \LWR@sanitize{#1}%

```

```

9180 \ifbool{LWR@doingstartpars}%
9181 {% pars allowed
9182 \ifbool{LWR@doingapar}%
9183 {% par started
9184 \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}%
9185 \LWR@htmltag{/a}%
9186 }% par started
9187 {% par not started
9188 \LWR@stoppars%
9189 \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}%
9190 \LWR@htmltag{/a}%
9191 \LWR@startpars%
9192 }% par not started
9193 }% pars allowed
9194 {% pars not allowed
9195 \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}%
9196 \LWR@htmltag{/a}%
9197 }% pars not allowed
9198 }% not lateximage
9199 }

```

`\LWR@new@label` (*bookmark*) [*label*] [*type*]

`\label` during HTML output when not in SVG math mode, removing extra spaces around the label, as done by a regular L<sup>A</sup>T<sub>E</sub>X `\label`.

This is also used during a `lateximage`, including SVG math, since the special label handling is required, but `\LWR@sublabel` does not generate HTML tags inside a `lateximage`.

`cleveref` later encases this to add its own cross-referencing.

The optional *bookmark* is per the memoir class, and is ignored.

The optional *type* is per the ntheorem package, and is ignored.

```

9200 \NewDocumentCommand{\LWR@new@label}{d() m o}{%
9201 \LWR@traceinfo{LWR@new@label: starting}%
9202 \LWR@traceinfo{LWR@new@label: !#2!}%
9203 % \@bsphack%

```

Create a traditional L<sup>A</sup>T<sub>E</sub>X label, as modified by `cleveref`:

```

9204 \LWR@orig@label{#2}%

```

Create a special label which holds the section number, `LWR@htmlfilenumber`, `LWR@lateximagedepth`, and `LWR@lateximagenumber`:

```

9205 \LWR@traceinfo{%
9206 LWR@new@label: filesectionnames is %
9207 \ifbool{FileSectionNames}{true}{false}%
9208 }%
9209 \LWR@traceinfo{%
9210 LWR@new@label: LWR@thisfilename is !\LWR@thisfilename!%
9211 }%

```

```

9212 \LWR@traceinfo{%
9213 LWR@new@label: LWR@htmlfilenumber is \arabic{LWR@htmlfilenumber}%
9214 }%
9215 \LWR@lwarplabel{#2}%
9216 \LWR@sublabel{#2}%
9217 % \@esphack%
9218 \LWR@traceinfo{LWR@new@label: done}%
9219 }

```

## 73.4 References

\LWR@addlinktitle

```

9220 \newcommand*\LWR@addlinktitle{%
9221 \ifdefvoid{\LWR@ThisAltText}{ }{ % space
9222 title="\LWR@ThisAltText" % space
9223 \gdef\LWR@ThisAltText{}}%
9224 }%
9225 }

```

\LWR@startref {<label>} (Common code for \ref and \nameref.)

Open an HTML tag reference to a filename, # character, and a label.

```

9226 \newcommand*\LWR@startref}[1]
9227 {%
9228 \LWR@sanitize{#1}%
9229 \LWR@traceinfo{LWR@startref A: !#1!}%

```

Create the filename part of the link:

```

9230 \LWR@htmltag{a href="%
9231 \LWR@traceinfo{LWR@startref B}%
9232 \LWR@print@mbx{\LWR@htmlrefsectionfilename{#1}}%
9233 \LWR@traceinfo{LWR@startref C}%
9234 \LWR@origpound%

```

Create the destination id:

See if LWR@lateximagedepth is unknown:

```

9235 \LWR@traceinfo{LWR@startref D: !#1!}%
9236 \ifcsundef{r@#1@lwarp}%

```

“??” if LWR@lateximagedepth is unknown, so create a link with an unknown destination:

```

9237 {%
9238 \LWR@traceinfo{LWR@startref D0: ??}%
9239 ??%
9240 }%

```

If `LWR@lateximagedepth` is known. Use a `lateximage` if the depth is greater than zero, or a regular link otherwise:

```

9241 {%
9242 \ifthenelse{\cinttest{\LWR@lateximagedepthref{#1}}{>}{0}}%
9243 {%
9244 \LWR@ImagesName\LWR@lateximagenumberref{#1}%
9245 }%
9246 {%
9247 \LWR@traceinfo{\LWR@startref D3}%

```

`\detokenize` is used to allow underscores in the labels:

```

9248 \LWR@print@mbox{\LWR@sanitized}%
9249 }%
9250 }%
9251 \LWR@traceinfo{\LWR@startref E}%

```

Closing quote:

```

9252 "%

```

Maybe add a title:

```

9253 \LWR@addlinktitle%
9254 }%
9255 \LWR@traceinfo{\LWR@startref F}%
9256 }

```

`\LWR@subnewref` `{\label}` `{\label or sub@label}`

Factored for the `subfig` package. Uses the original label for the hyper-reference, but prints its own text, such as “1(b)”.

```

9257 \NewDocumentCommand{\LWR@subnewref}{m m}{%
9258 \LWR@traceinfo{\LWR@subnewref #1 #2}%
9259 \LWR@startref{#1}%
9260 \LWR@print@ref{#2}%
9261 \LWR@htmltag{/a}%
9262 }

```

`\ref` \* `{\label}` `\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` \* `{\label}` Create an internal document reference link, or without a link if starred per `hyperref`.

```

9263 \NewDocumentCommand{\LWR@HTML@ref}{s m}{%
9264 \LWR@traceinfo{\LWR@HTML@ref !#2!}%
9265 \IfBooleanTF{#1}%
9266 {\LWR@print@ref{#2}}%
9267 {\LWR@subnewref{#2}{#2}}%

```

```

9268 }
9269
9270 \LWR@formatted{ref}

```

`\LWR@ref@ignorestar` \*  $\langle label \rangle$  For use inside `\hyperref`. Ignores the star, then uses the original `\ref`.

```

9271 \NewDocumentCommand{\LWR@ref@ignorestar}{s m}{%
9272 \LWR@print@ref{#2}%
9273 }

```

`\pagerefPageFor` Text for page references.

```

9274 \newcommand*{\pagerefPageFor}{see }

```

`\pageref` \*  $\langle label \rangle$  Create an internal document reference, or just the unlinked number if starred, per `hyperref`.

```

9275 \NewDocumentCommand{\LWR@new@pageref}{s m}{%
9276 \IfBooleanTF{#1}%
9277 {(\pagerefPageFor\LWR@print@ref{#2})}%
9278 {(\cpageref{#2})}%
9279 }

```

`\nameref`  $\langle label \rangle$

```

9280 \newrobustcmd*{\nameref}[1]{%
9281 \LWR@traceinfo{nameref}%
9282 \LWR@startref{#1}%
9283 \LWR@traceinfo{nameref B}%
9284 \LWR@nameref{#1}%
9285 \LWR@traceinfo{nameref C}%
9286 \LWR@htmltag{/a}%
9287 \LWR@traceinfo{nameref: done}%
9288 }

```

`\Nameref`  $\langle label \rangle$  In print, adds the page number. In HTML, does not.

```

9289 \LetLtxMacro\Nameref\nameref

```

## 73.5 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.

Pkg `hyperref`



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.

```
9290 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it:
9291 % \EmulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.
```

Emulates `hyperref`:

`\@currentHref` Added to support `backref`.

```
9292 \AtBeginDocument{
9293
9294 \def\@currentHref{%
9295 autopage-\theLWR@currentautosec%
9296 }
9297
9298 }
```

`\LWR@linkcatcodes` Sets catcodes before processing macros which have hyperlinks as arguments.

```
9299 \newcommand*\LWR@linkcatcodes{%
9300 \catcode'\#=12%
9301 \catcode'\%=12%
9302 \catcode'\&=12%
9303 \catcode'\~=12%
9304 \catcode'_ =12%
```

For `babel-french`:

```
9305 \LWR@FBcancel%
9306 }
```

`\LWR@linkmediacatcodes` Sets catcodes before processing macros which have hyperlinks as arguments. Modified for multimedia links.

```
9307 \newcommand*\LWR@linkmediacatcodes{%
9308 \catcode'\#=12%
9309 \catcode'\%=12%
9310 % \catcode'\&=12% left alone for splitting flash variables
9311 \catcode'\~=12%
9312 \catcode'_ =12%
```

For `babel-french`:

```
9313 \LWR@FBcancel%
9314 }
```

`\LWR@subhyperref` `{\langle URL \rangle}`

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.

```

9315 \NewDocumentCommand{\LWR@subhyperref}{m}{%
9316 \LWR@traceinfo{\LWR@subhyperref !#1!}%
9317 \LWR@sanitize{#1}%
9318 \LWR@htmltag{%
9319 a href="\LWR@sanitized" % space
9320 \LWR@addlinktitle % space
9321 target="_{}blank" % space
9322 }%
9323 }

```

`\LWR@subhyperref`text {<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.

```

9324 \newcommand{\LWR@subhyperref}text}[1]{%
9325 #1%
9326 \LWR@htmltag{/a}%
9327 \LWR@ensuredoingapar%
9328 }

```

`\LWR@subhyperref`class {<URL>} {<text>} {<htmlclass>}

```

9329 \NewDocumentCommand{\LWR@subhyperref}class}{m +m m}{%
9330 \LWR@htmltag{%
9331 a % space
9332 href="\begingroup\@sanitize#1\endgroup" % space
9333 class="#3" % space
9334 \LWR@addlinktitle % space
9335 }\LWR@orignewline%
9336 #2%
9337 \LWR@htmltag{/a}%
9338 \LWR@ensuredoingapar%
9339 }

```

`\href` [*<options>*] {<URL>}

Create a link with accompanying text:

```

9340 \DeclareDocumentCommand{\LWR@hrefb}{O{} m}{%
9341 \LWR@ensuredoingapar%
9342 \LWR@subhyperref{#2}%
9343 \endgroup% restore catcodes
9344 \LWR@subhyperref}text%
9345 }
9346
9347 \newrobustcmd*{\href}{%
9348 \begingroup%
9349 \LWR@linkcatcodes%
9350 \LWR@hrefb%
9351 }

```

`\nolinkurl` {<URL>}

Print the name of the link without creating the link:

```

9352 \newcommand*{\LWR@nolinkurlb}[1]{%
9353 \LWR@ensuredoingapar%
9354 \def\LWR@templink{#1}%
9355 \@onelevel@sanitize\LWR@templink%
9356 \LWR@templink%
9357 \endgroup%
9358 }
9359
9360 \newrobustcmd*{\nolinkurl}{%
9361 \begingroup%
9362 \LWR@linkcatcodes%
9363 \LWR@nolinkurlb%
9364 }

```

`\url`  $\{\langle URL \rangle\}$

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 `lwarp-url`.

```

9365 \DeclareDocumentCommand{\LWR@urlb}{m}{%
9366 \LWR@ensuredoingapar%
9367 \def\LWR@templink{#1}%
9368 \@onelevel@sanitize\LWR@templink%
9369 \href{\LWR@templink}{\LWR@templink}%
9370 \endgroup%
9371 }
9372
9373 \newrobustcmd*{\url}{%
9374 \begingroup%
9375 \LWR@linkcatcodes%
9376 \LWR@urlb%
9377 }

```

`\LWR@subinlineimage`  $\{\langle \text{alt} \rangle \text{tag} \} \{\langle \text{class} \rangle \} \{\langle \text{filename} \rangle \} \{\langle \text{extension} \rangle \} \{\langle \text{CSS style} \rangle \}$

Factored from `lateximage`.

```

9378 \newcommand*{\LWR@subinlineimage}[5]{%
9379 \ifblank{#1}%
9380 {%
9381 \LWR@htmltag{img \LWR@indentHTML
9382 src="#3.#4" \LWR@indentHTML
9383 alt="#3" \LWR@indentHTML
9384 style="#5" \LWR@indentHTML
9385 class="#2" \LWR@orignewline
9386 }%
9387 }%
9388 {%
9389 \LWR@htmltag{img \LWR@indentHTML
9390 src="#3.#4" \LWR@indentHTML

```

```
9391 alt="#1" \LWR@indentHTML
9392 style="#5" \LWR@indentHTML
9393 class="#2" \LWR@orignewline
9394 }%
9395 }%
9396 }

9397 \end{warpHTML}
```

Table 13: 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<sup>A</sup>T<sub>E</sub>X 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.
- 

## 74 Floats

Floats are supported, although partially through emulation.

Table 13 shows the data structure associated with each `<type>` of float.

`\makecaption` is redefined to print the float number and caption text, separated by `\CaptionSeparator`, which works with the `babel` package to adjust the caption separator according to the language. French, for example, uses an en-dash instead of a colon: “Figure 123 – Caption text”.

### 74.1 Float environment

**for HTML output:** 9398 `\begin{warphTML}`

`\LWR@floatbegin` `{\<type>}` [`\<placement>`] Begins a `\newfloat` environment.

```

9399 \NewDocumentCommand{\LWR@floatbegin}{m o}{%
9400 \ifbool{FormatWP}{\newline}{}%
9401 \LWR@stoppars%

```

There is a new float, so increment the unique float counter:

```

9402 \addtocounter{LWR@thisautoid}{1}%
9403 \booltrue{LWR@freezethisautoid}%

9404 \begingroup%

```

Settings while inside the environment:

```

9405 \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.

```

9406 \LWR@htmltag{%
9407 figure id="\LWR@print@mbbox{autoid-\arabic{LWR@thisautoid}}" % space
9408 class="#1 \@nameuse{LWR@floatstyle@#1}"%
9409 }%
9410 \ifbool{FormatWP}{%
9411 \LWR@orignewLine%
9412 \LWR@BlockClassWP{#1}{\wp#1}%
9413 }{}%

```

Update the caption type:

```

9414 \renewcommand*\@capttype{#1}%
9415 \caption@settype{#1}%

```

Mark the float for a word processor conversion:

```

9416 \LWR@startpars%
9417 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
9418
9419 === begin #1 ===
9420
9421 }{}%

```

Look for `\centering`, etc:

```

9422 \LWR@futurenonospacelet\LWR@mynexttoken\LWR@floatalignment%
9423 }

```

For koma-script. The following does not work for tables.

```

9424 \AtBeginDocument{
9425
9426 \ifpackageloaded{tocbasic}{

```

```

9427
9428 \appto\figure@atbegin{%
9429 \LWR@futurenonSPACElet\LWR@mynexttoken\LWR@floatalignment%
9430 }
9431
9432 }{}% tocbasic
9433
9434 }% AtBeginDocument

```

`\@float` Support packages which create floats directly.

`\@dblfloat`

```

9435 \let\@float\LWR@floatbegin
9436 \let\@dblfloat\LWR@floatbegin

```

`\LWR@floatend` Ends a `\newfloat` environment.

```

9437 \newcommand*{\LWR@floatend}{%

```

If saw a `\centering`, finish the center environment:

```

9438 \LWR@endfloatalignment%

```

Mark the float end for a word processor conversion:

```

9439 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
9440
9441 === end ===
9442
9443 }{}%
9444 \LWR@stoppars%

```

Close an HTML figure tag:

```

9445 \ifbool{FormatWP}{\endLWR@BlockClassWP}{}%
9446 \LWR@htmlElementend{figure}%
9447 \endgroup%
9448 \boolfalse{LWR@freezethisautoid}%
9449 \LWR@startpars%
9450 \ifbool{FormatWP}{\newline}{}%
9451 }

```

`\end@float` Support packages which create floats directly.

`\end@dblfloat`

```

9452 \let\end@float\LWR@floatend
9453 \let\end@dblfloat\LWR@floatend

```

## 74.2 Float tracking

`ctr LWR@thisautoid` 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.

```

9454 \newcounter{LWR@thisautoid}

```

**Ctrl** LWR@thisautoidWP A sequential counter for all word processor conversion <div>s. This is used to convince LIBREOFFICE to form a frame around this element.

```
9455 \newcounter{LWR@thisautoidWP}
```

**Bool** LWR@freezethisautoid Prevents multiple increments of \LWR@thisautoid inside a float.

```
9456 \newbool{LWR@freezethisautoid}
9457 \boolfalse{LWR@freezethisautoid}
```

**\LWR@forcenewautoidanchor** Adds a new <autoid> anchor.

```
9458 \newcommand*{\LWR@forcenewautoidanchor}{%
9459 \addtocounter{LWR@thisautoid}{1}%
9460 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}"}%
9461 \LWR@htmltag{/a}%
9462 }
```

**\LWR@newautoidanchor** Sometimes adds a new <autoid> anchor.

```
9463 \newcommand*{\LWR@newautoidanchor}{%
9464 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9465 }{%
9466 {\ifbool{LWR@freezethisautoid}}{\LWR@forcenewautoidanchor}}%
9467 }
```

**\@capttype** Remembers which float type is in use.

```
9468 \newcommand*{\@capttype}{}
```

**\LWR@floatalignmentname** Set to center, flushleft, or flushright if saw \centering, \raggedright, or \raggedleft.

```
9469 \newcommand*{\LWR@floatalignmentname}{}
```

**\LWR@floatalignment** If sees a \centering, \raggedleft, or \raggedright, creates a center, flushright, or flushleft environment.

```
9470 \newcommand*{\LWR@floatalignment}{%
9471 \ifdefstrequal{\LWR@mynexttoken}{\centering}{%
9472 \center%
9473 \renewcommand*{\LWR@floatalignmentname}{center}%
9474 }{%
9475 \ifdefstrequal{\LWR@mynexttoken}{\raggedright}{%
9476 \flushleft%
9477 \renewcommand*{\LWR@floatalignmentname}{flushleft}%
9478 }{%
9479 \ifdefstrequal{\LWR@mynexttoken}{\raggedleft}{%
9480 \flushright%
9481 \renewcommand*{\LWR@floatalignmentname}{flushright}%
9482 }{%
9483 }
```

`\LWR@endfloatalignment` Closes an environment from `\LWR@floatalignment`.

```
9484 \newcommand*\LWR@endfloatalignment{%
9485 \ifdefvoid{\LWR@floatalignmentname}%
9486 {}%
9487 {\@nameuse{end\LWR@floatalignmentname}}%
9488 \renewcommand*\LWR@floatalignmentname{}}%
9489 }
```

### 74.3 Caption inside a float environment

`\CaptionSeparator` How to separate the float number and the caption text.

```
9490 \AtBeginDocument{\providecommand*\CaptionSeparator{:~}}
```

`\@makecaption`  $\{\langle name\ and\ num\rangle\}\{\langle text\rangle\}$

Prints the float type and number, the caption separator, and the caption text.

```
9491 \AtBeginDocument{\renewcommand*\@makecaption}[2]{%
9492 \LWR@traceinfo{@makecaption}%
9493 \LWR@isolate{#1}\CaptionSeparator\LWR@isolate{#2}%
9494 \LWR@traceinfo{@makecaption: done}%
9495 }%
9496 }
```

### 74.4 Caption and LOF linking and tracking

When a new HTML file is marked in the L<sup>A</sup>T<sub>E</sub>X PDF file, the L<sup>A</sup>T<sub>E</sub>X page number at that point is stored in `LWR@latestautopage`, (and the associated filename is remembered by the special L<sup>A</sup>T<sub>E</sub>X labels). This page number is used to generate an `autopage HTML <id>` in the HTML output at the start of the new HTML file. 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.

Ctrl `LWR@nextautoid` Tracks autoid for floats. Tracks autopage for floats.

Ctrl `LWR@nextautopage` These are updated per float as the `.lof`, `.lot` file is read.

```
9497 \newcounter{LWR@nextautoid}
9498 \newcounter{LWR@nextautopage}
```

`\LWRsetnextfloat`  $\{\langle autopage\rangle\}\{\langle float\ autoid\rangle\}$

File `*_html.lof` This is written to the `*_html.lof` or `*_html.lot` file just before each float's usual entry. The `autopage` and the float's `autoid` are remembered for `\l@figure` to use when creating the HTML links.

File `*_html.lot`

```

9499 \newcommand*{\LWRsetnextfloat}[2]{%
9500 \setcounter{LWR@nextautopage}{#1}%
9501 \setcounter{LWR@nextautoid}{#2}%
9502 }

```

Ctrl LWR@latestautopage Updated each time a new HTML file is begun. \LWRsetnextfloat is written with this and the autoid by the modified \addcontentsline just before each float's entry.

```

9503 \newcounter{LWR@latestautopage}
9504 \setcounter{LWR@latestautopage}{1}

```

Env LWR@figcaption An HTML <figcaption> is not allowed in places where L<sup>A</sup>T<sub>E</sub>X 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.

```

9505 \newenvironment*LWR@figcaption}
9506 {%
9507 \ifbool{FormatWP}{%
9508 \BlockClass[font-style:italic]{figurecaption}%
9509 %
9510 \LWR@print@vspace*{\baselineskip}
9511 }{%
9512 \BlockClass{figurecaption}%
9513 }%
9514 {\endBlockClass}

```

\LWR@HTML@caption@begin {<type>}

Low-level code to create HTML tags for captions.

The print versions are from the caption package.

```

9515 \newcommand*{\LWR@HTML@caption@begin}[1]
9516 {%
9517 \LWR@traceinfo{LWR@HTML@caption@begin}%

```

Keep par and minipage changes local:

```

9518 \begingroup%

```

No need for a minipage or \parbox inside the caption:

```

9519 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}{}{}%
9520 \RenewDocumentCommand{\parbox}{O{t} O{} O{t} m +m}{##5}%

```

Enclose the original caption code inside an HTML tag:

```

9521 \LWR@figcaption%
9522 \LWR@traceinfo{LWR@HTML@caption@begin: about to LWR@origcaption@begin}%
9523 \LWR@print@caption@begin{#1}%
9524 \LWR@traceinfo{LWR@HTML@caption@begin: done}%
9525 }

```

`\LWR@HTML@caption@end` Low-level patches to create HTML tags for captions.

```
9526 \newcommand*{\LWR@HTML@caption@end}
9527 {%
9528 \LWR@traceinfo{\LWR@HTML@caption@end}%
9529 \LWR@print@caption@end%
```

Closing tag:

```
9530 \endLWR@figcaption%
9531 \endgroup%
9532 % \leavevmode% avoid bad space factor (0) error
9533 \LWR@traceinfo{\LWR@HTML@caption@end: done}%
9534 }
```

`\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.

```
9535 \AtBeginDocument{
9536 \LWR@formatted{caption@begin}
9537 \LWR@formatted{caption@end}
9538 }
```

`\captionlistentry` Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```
9539 \let\LWR@origcaptionlistentry\captionlistentry
9540
9541 \renewcommand*{\captionlistentry}{%
9542 \LWR@ensuredoingapar%
9543 \LWR@origcaptionlistentry%
9544 }

9545 \def\LWR@LTcaptionlistentry{%
9546 \LWR@ensuredoingapar%
9547 \LWR@forcenewautooidanchor%
9548 \bgroup
9549 \@ifstar{\egroup\LWR@LT@captionlistentry}% gobble *
9550 {\egroup\LWR@LT@captionlistentry}%
9551 }%
9552
9553 \def\LWR@LT@captionlistentry#1{%
9554 \caption@listentry\@firstoftwo[\LTcapttype]{#1}%
9555 }%
```

`\addcontentsline` Patched to write the autopage and autooid 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

```

9556 \let\LWR@origaddcontentsline\addcontentsline
9557
9558 \renewcommand*{\addcontentsline}[3]{%
9559 \ifstrequal{#1}{toc}{}% not TOC

9560 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9561 {}%
9562 {\LWR@newautoidanchor}%

9563 \ifcsvoid{ext@#2}{\csdef{ext@#2}{#1}}{%

9564 \addtocontents{\@nameuse{ext@#2}}{%
9565 \protect\LWRsetnextfloat%
9566 {\arabic{LWR@latestautopage}}%
9567 {\arabic{LWR@thisautoid}}%
9568 }%
9569 }% not TOC
9570 \LWR@origaddcontentsline{#1}{#2}{#3}%
9571 }

```

Pkg `capt-of` Either package provides `\captionof`, which is later patched at the beginning of the document.

Pkg `caption` document.

`\captionof` Patched to handle paragraph tags.

```

9572 \AtBeginDocument{
9573
9574 \let\LWR@origcaptionof\captionof
9575
9576 \renewcommand*{\captionof}{%
9577 \LWR@stoppars%
9578 \LWR@origcaptionof%
9579 }
9580
9581 }% AtBeginDocument

9582 \end{warpHTML}

```

## 75 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<sup>A</sup>T<sub>E</sub>X infrastructure is used for TOC, along with some patches to generate HTML output.

**for HTML output:** 9583 \begin{warpHTML}

## 75.1 Reading and printing the toc

\LWR@myshorttoc {<toc/lof/lot/sidetoc>}

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<sup>A</sup>T<sub>E</sub>X, the file is not reset after being read, since the sidetoc may be referred to again in each HTML page.

```
9584 \newcommand*\LWR@myshorttoc}[1]{%
9585 \LWR@traceinfo{LWR@myshorttoc: #1}%
9586 \LWR@ensuredoingapar%
```

Only if the file exists:

```
9587 \IfFileExists{\jobname.#1}{%
9588 \LWR@traceinfo{LWR@myshorttoc: loading}%
```



Many of the commands in the file will have @ characters in them, so @ must be made a regular letter.

```
9589 \begingroup%
9590 \makeatletter%
```

Read in the toc file:

```
9591 \@input{\jobname.#1}%
9592 \endgroup%
9593 }%
9594 {%
9595 \LWR@traceinfo{LWR@myshorttoc: done}%
9596 }
```

\LWR@subtableofcontents {<toc/lof/lot>} {<sectionstarname>}

Places a TOC/LOF/LOT at the current position.

```
9597 \NewDocumentCommand{\LWR@subtableofcontents}{m m}{%
```

Closes previous levels:

```
9598 \@ifundefined{chapter}%
9599 {\LWR@closeprevious{section}}%
9600 {\LWR@closeprevious{chapter}}%
```

Prints any pending footnotes so that they appear above the potentially large toc:

```
9601 \LWR@printpendingfootnotes%
```

Place the list into its own chapter (if defined) or section:

```
9602 \@ifundefined{chapter}{\section*{#2}}{\chapter*{#2}}%
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
9603 \LWR@htmlElementclass{nav}{#1}%
```

Create the actual list:

```
9604 \LWR@myshorttoc{#1}%
```

Close the nav:

```
9605 \LWR@htmlElementclassend{nav}{#1}%
9606 }
```

```
\@starttoc {<ext>}
```

Patch \@starttoc to encapsulate the toc inside HTML tags:

```
9607 \let\LWR@orig@starttoc\@starttoc
9608
9609 \renewcommand{\@starttoc}[1]{
9610 \LWR@htmlElementclass{nav}{#1}%
9611 \LWR@orig@starttoc{#1}%
9612 \LWR@htmlElementclassend{nav}{#1}%
9613 }
```

Bool LWR@copiedsidetoc 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.)

```
9614 \newbool{LWR@copiedsidetoc}
9615 \boolfalse{LWR@copiedsidetoc}
```

\tableofcontents Patch \tableofcontents, etc. to print footnotes first. newfloat uses \listoffigures for all future float types.

```
9616 \AtBeginDocument{
9617
9618 \let\LWR@origtableofcontents\tableofcontents
9619
9620 \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:

```

9621 \ifboolexpr{bool{FormatWP} and bool{WPMarkTOC}}{
9622
9623 === table of contents ===
9624
9625 }
9626 {

```

Copy the .toc file to .sidedoc for printing the sideroc. The original .toc file is renewed when \tableofcontents is finished.

```

9627 \ifbool{LWR@copiedsidedoc}{%
9628 \LWR@copyfile{\jobname.toc}{\jobname.sidedoc}%
9629 \booltrue{LWR@copiedsidedoc}%
9630 }%
9631 \LWR@printpendingfootnotes
9632 \LWR@origtableofcontents
9633 }
9634 }% \tableofcontents
9635
9636 }% AtBeginDocument

```

#### \listoffigures

```

9637 \let\LWR@origlistoffigures\listoffigures
9638
9639 \renewcommand*{\listoffigures}{
9640 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9641
9642 === list of figures ===
9643
9644 }
9645 {
9646 \LWR@printpendingfootnotes
9647 \LWR@origlistoffigures
9648 }
9649 }

```

#### \listoftables

```

9650 \let\LWR@origlistoftables\listoftables
9651
9652 \renewcommand*{\listoftables}{
9653 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9654
9655 === list of tables ===
9656
9657 }
9658 {
9659 \LWR@printpendingfootnotes
9660 \LWR@origlistoftables
9661 }
9662 }

```

## 75.2 High-level toc commands

`\listof`  $\langle type \rangle$   $\langle title \rangle$

Emulate the `\listof` command from the `float` package (section 247). Used to create lists of custom float types. Also used to redefine the standard L<sup>A</sup>T<sub>E</sub>X `\listoffigures` and `\listoftables` commands.

```

9663 \NewDocumentCommand{\listof}{m +m}{%
9664 \ifundefined{l@#1}{%
9665 \csdef{l@#1}##1##2{\hypertocfloat{1}{#1}{\@nameuse{ext@#1}}{##1}{##2}}%
9666 }{%
9667 \LWR@subtableofcontents{\@nameuse{ext@#1}}{#2}%
9668 \expandafter\newwrite\csname tf@\csname ext@#1\endcsname\endcsname%
9669 \immediate\openout \csname tf@\csname ext@#1\endcsname\endcsname%
9670 \jobname.\@nameuse{ext@#1}\relax%
9671 }

```

## 75.3 Side toc

The “side toc” is a table-of-contents positioned to the side.

It may be renamed by redefining `\sidoctocname`, and may contain paragraphs.

`css` may be used to format the `sideroc`:

*CSS related to sideroc:*

---

**div.sidetoccontainer:** The entire sideroc.

**div.sidoctitle:** The title.

**div.sidetoccontents:** The table of contents.

---

```

9672 \end{warpHTML}

```

**for HTML & PRINT:** `9673 \begin{warpall}`

**Ctrl SideTOCDepth** Controls how deep the side-TOC gets. Use a standard L<sup>A</sup>T<sub>E</sub>X section level similar to `tocdepth`. Warn if parts of the website may be inaccessible.

```

9674 \newcounter{SideTOCDepth}
9675 \setcounter{SideTOCDepth}{1}
9676
9677 \AtBeginDocument{%
9678 \ifnumcomp{\value{SideTOCDepth}}{<}{\value{FileDepth}}{
9679 \PackageWarningNoLine{lwarp}
9680 {%
9681 SideTOCDepth is less than FileDepth,\MessageBreak
9682 so some website pages may be inaccessible%
9683 }

```

```
9684 }{}
9685 }
```

`\sitetocname` Holds the default name for the sideroc.

```
9686 \newcommand{\sitetocname}{Contents}

9687 \end{warpall}
```

**for HTML output:** 9688 `\begin{warpHTML}`

`\LWR@sitetoc` Creates the actual side-TOC.

```
9689 \newcommand*{\LWR@sitetoc}{%
9690 \LWR@forcenewpage
9691 \LWR@stoppars
9692 }
```

The entire sideroc is placed into a `nav` of class `sitetoc`.

```
9693 \LWR@htmlElementclass{div}{sitetoccontainer}
9694 \LWR@htmlElementclass{nav}{sitetoc}
9695
9696 \setcounter{tocdepth}{\value{SideTOCDepth}}
9697 }
```

The title is placed into a `<div>` of class `sitetoctitle`, and may contain paragraphs.

```
9698 \begin{BlockClass}{sitetoctitle}
9699 \ifcsvoid{thetitle}{}{\InlineClass{sitetocthetitle}{\thetitle}\par}
9700 \sitetocname
9701 \end{BlockClass}
```

The table of contents is placed into a `<div>` of class `sitetoccontents`.

```
9702 \begin{BlockClass}{sitetoccontents}
9703 \LinkHome
9704
9705 \LWR@myshorttoc{sitetoc}
9706 \end{BlockClass}
9707 \LWR@htmlElementclassend{nav}{sitetoc}
9708 \LWR@htmlElementclassend{div}{sitetoccontainer}
9709 }
```

## 75.4 Low-level toc line formatting

`\numberline`  $\{ \langle number \rangle \}$

(Called from each line in the `.aux`, `.lof` files.)

Record this section number for further use:

```
9710 \newcommand*{\LWR@numberline}[1]{%
9711 \LWR@sectionnumber{#1}\quad%
9712 }
9713
9714 \LetLtxMacro\numberline\LWR@numberline
```

`\LWR@maybetocdata` Replaced by `tocdata`. Adds author name.

```
9715 \newcommand*{\LWR@maybetocdata}{}
```

`\hypertoc` `{\langle 1: depth \rangle}{\langle 2: type \rangle}{\langle 3: name \rangle}{\langle 4: page \rangle}`

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

```
9716 \NewDocumentCommand{\hypertoc}{m m +m m}{%
9717 \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
```

Respond to `tocdepth`:

```
9718 \ifthenelse{\cinttest{#1}{<=}{\value{tocdepth}}}{%
9719 {%
9720 \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.

```
9721 \LWR@subhyperrefclass{%
9722 \LWR@htmlrefsectionfilename{\BaseJobname-autopage-#4}%
9723 \LWR@origpound\LWR@print@inbox{autosec-#4}%
9724 }{#3}{toc#2}%

9725 \LWR@maybetocdata%

9726 \LWR@stoppars%
9727 }%
9728 }%
9729 \LWR@traceinfo{hypertoc done}%
9730 }
```

Ctrl lofdepth TOC depth for figures.

```
9731 \@ifclassloaded{memoir}{}{
9732 \newcounter{lofdepth}
9733 \setcounter{lofdepth}{1}
9734 }
```

Ctrl lotdepth TOC depth for tables.

```
9735 \@ifclassloaded{memoir}{}{
9736 \newcounter{lotdepth}
9737 \setcounter{lotdepth}{1}
9738 }
```

`\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

```
9739 \newcommand{\hypertocfloat}[5]{%
9740 \LWR@startpars%
```

If some float-creation package has not yet defined the float type's lofdepth counter, etc, define it here:

```
9741 \@ifundefined{c@#3depth}{%
9742 \newcounter{#3depth}%
9743 \setcounter{#3depth}{1}%
9744 }{}
```

Respond to lofdepth, etc.:

```
9745 \LWR@traceinfo{hypertocfloat depth is #1 #3depth is \arabic{#3depth}}%
9746 \ifthenelse{\cnttest{#1}{<=} {\arabic{#3depth}}}%
9747 {%
9748 \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.

```
9749 \LWR@subhyperrefclass{%
9750 \LWR@htmlrefsectionfilename{%
9751 \BaseJobname-autopage-\arabic{LWR@nextautopage}}%
```

```

9752 }%
9753 \LWR@origpound\LWR@print@box{autoid-\arabic{LWR@nextautoid}}}%
9754 {#4}{toc#2}%

9755 \LWR@maybetocdata%

9756 \LWR@stoppars%
9757 }%
9758 {}%
9759 }

```

Automatically called by `\contentsline`:

```
\l@book {<name>} {<page>}
```

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\book`.

```
9760 \DeclareDocumentCommand{\l@book}{m m}{\hypertoc{-2}{book}{#1}{#2}}
```

```
\l@part {<name>} {<page>}
```

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\part`.

```
9761 \DeclareDocumentCommand{\l@part}{m m}{\hypertoc{-1}{part}{#1}{#2}}
```

```
\l@chapter {<name>} {<page>}
```

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\chapter`.

```

9762 \@ifundefined{chapter}
9763 {}
9764 {
9765 \DeclareDocumentCommand{\l@chapter}{m m}
9766 {\hypertoc{0}{chapter}{#1}{#2}}
9767 }

```

```
\l@section {<name>} {<page>}
```

```
9768 \renewcommand{\l@section}[2]{\hypertoc{1}{section}{#1}{#2}}
```

```
\l@subsection {<name>} {<page>}
```

```
9769 \renewcommand{\l@subsection}[2]{\hypertoc{2}{subsection}{#1}{#2}}
```

```
\l@subsubsection {<name>} {<page>}
```

```
9770 \renewcommand{\l@subsubsection}[2]{\hypertoc{3}{subsubsection}{#1}{#2}}
```

```
\l@paragraph {<name>} {<page>}
```

```
9771 \renewcommand{\l@paragraph}[2]{\hypertoc{4}{paragraph}{#1}{#2}}
```

```
\l@subparagraph {<name>} {<page>}
```

```
9772 \renewcommand{\l@subparagraph}[2]{\hypertoc{5}{subparagraph}{#1}{#2}}
```

```
\l@figure {<name>} {<page>}
```

```
9773 \renewcommand{\l@figure}[2]{\hypertocfloat{1}{figure}{lof}{#1}{#2}}
```

```
\l@table {<name>} {<page>}
```

```
9774 \renewcommand{\l@table}[2]{\hypertocfloat{1}{table}{lot}{#1}{#2}}
```

```
9775 \end{warpHTML}
```

## 76 Index and glossary

See:

<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 output:** 9776 \begin{warpHTML}

```
9777 \newcounter{LWR@autoindex}
```

```
9778 \setcounter{LWR@autoindex}{0}
```

```
9779
```

```
9780 \newcounter{LWR@autoglossary}
```

```
9781 \setcounter{LWR@autoglossary}{0}
```

Env theindex

```
9782 \@ifundefined{chapter}
```

```
9783 {\newcommand*\LWR@indexsection[1]{\section*{#1}}}
```

```
9784 {\newcommand*\LWR@indexsection[1]{\chapter*{#1}}}
```

```
9785
```

```
9786
```

```
9787 \AtBeginDocument{
```

```
9788
```

```
9789 \renewenvironment*{theindex}{%
```

```
9790 \LWR@indexsection{\indexname}%
```

```
9791 \let\item\LWR@indexitem%
```

```

9792 \let\subitem\LWR@indexsubitem%
9793 \let\subsubitem\LWR@indexsubsubitem%
9794 }{}
9795
9796 }% AtBeginDocument

```

`\LWR@indexitem` [*<index key>*] The optional argument is added to support `repeatindex`.

```

9797 \newcommand{\LWR@indexitem}[1][\@empty]{
9798
9799 \InlineClass{indexitem}{\LWR@htmlcomment{}}#1%
9800 }

```

`\LWR@indexsubitem`

```

9801 \newcommand{\LWR@indexsubitem}{
9802
9803 \InlineClass{indexsubitem}{\LWR@htmlcomment{}}%
9804 }

```

`\LWR@indexsubsubitem`

```

9805 \newcommand{\LWR@indexsubsubitem}{
9806
9807 \InlineClass{indexsubsubitem}{\LWR@htmlcomment{}}%
9808 }

```

`\@wrindex` {*<term>*} Redefined to write the `LWR@autoindex` counter instead of page.

```

9809 \def\LWR@wrindex#1{%
9810 \addtocounter{LWR@autoindex}{1}%
9811 \LWR@new@Label{LWRindex-\arabic{LWR@autoindex}}%
9812 \protected@write\@indexfile{%
9813 {\string\indexentry{#1}{\arabic{LWR@autoindex}}}%
9814 \endgroup%
9815 \@esphack%
9816 }
9817
9818 \AtBeginDocument{
9819 \let\@wrindex\LWR@wrindex
9820 }

```

`\@wrglossary` {*<term>*} Redefined to write the `LWR@latestautopage` counter instead of page.

```

9821 \def\@wrglossary#1{%
9822 \addtocounter{LWR@autoglossary}{1}%
9823 \LWR@new@Label{LWRglossary-\theLWR@autoglossary}%
9824 \protected@write\@glossaryfile{%
9825 {\string\glossaryentry{#1}{\theLWR@autoglossary}}%
9826 \endgroup%
9827 \@esphack%
9828 }

```

`\LWR@indexnameref` { $\langle LWR@autoindex \rangle$ }

Creates a hyperlink based on the given entry's autoindex.

```
9829 \newcommand*\LWR@indexnameref}[1]{\nameref{LWRindex-#1}}
```

`\LWR@doindexentry` { $\langle LWR@autoindex, or macros. \rangle$ }

Creates a hyperlink, or handles `\see`, `\textbf`, etc.

```
9830 \newrobustcmd{\LWR@doindexentry}[1]{%
9831 \IfInteger{#1}%
9832 {\LWR@indexnameref{#1}}%
9833 {#1}%
9834 }
```

`\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{. . . }
```

```
9835 \newcommand{\LWR@hyperindexrefnullified}{%
9836 \renewrobustcmd{\emph}[1]{\LWR@HTML@emph{\LWR@doindexentry{##1}}}%
9837 \renewrobustcmd{\textbf}[1]{\LWR@HTML@textbf{\LWR@doindexentry{##1}}}%
9838 \renewrobustcmd{\texteb}[1]{\LWR@HTML@texteb{\LWR@doindexentry{##1}}}%
9839 \renewrobustcmd{\textlg}[1]{\LWR@HTML@textlg{\LWR@doindexentry{##1}}}%
9840 \renewrobustcmd{\textrm}[1]{\LWR@HTML@textrm{\LWR@doindexentry{##1}}}%
9841 \renewrobustcmd{\textsf}[1]{\LWR@HTML@textsf{\LWR@doindexentry{##1}}}%
9842 \renewrobustcmd{\texttt}[1]{\LWR@HTML@texttt{\LWR@doindexentry{##1}}}%
9843 \renewrobustcmd{\textup}[1]{\LWR@HTML@textup{\LWR@doindexentry{##1}}}%
9844 \renewrobustcmd{\textsc}[1]{\LWR@HTML@textsc{\LWR@doindexentry{##1}}}%
9845 \renewrobustcmd{\textulc}[1]{\LWR@HTML@textulc{\LWR@doindexentry{##1}}}%
9846 \renewrobustcmd{\textsi}[1]{\LWR@HTML@textsi{\LWR@doindexentry{##1}}}%
9847 \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
9848 \renewrobustcmd{\textsl}[1]{\LWR@HTML@textsl{\LWR@doindexentry{##1}}}%
9849 }
```

`\hyperindexref` { $\langle LWR@autoindex \rangle$ }

`\hyperindexref{LWR@autoindex}` is inserted into `*.ind` by the `makeindex` style file `lwarp.ist` or the `xindy` style file `lwarp.xdy`.

```
9850 \newcommand{\hyperindexref}[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.

```
9851 \def\LWR@tempone{#1}%
9852 \IfBeginWith{\LWR@tempone}{ }{%
```

```

9853 \StrGobbleLeft{\LWR@tempone}{1}[\LWR@tempone]%
9854 }{}%

```

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.

```

9855 \IfInteger{\LWR@tempone}%
9856 {\LWR@indexnameref{\LWR@tempone}}%
9857 {%
9858 \begingroup%
9859 \LWR@hyperindexrefnullified%
9860 #1%
9861 \endgroup%
9862 }%
9863 }

```

```
9864 \end{warpHTML}
```

**for PRINT output:** A null command for print mode, in case `hyperref` was not used:

```

9865 \begin{warpprint}
9866 \newcommand{\hyperindexref}[1]{#1}
9867 \end{warpprint}

```

**for HTML & PRINT:** For the `glossaries` package, try to prevent an error where `\glo@name` was not found:

```

9868 \begin{warpall}
9869 \providecommand{\glo@name}{}
9870 \end{warpall}

```

## 77 Bibliography presentation

**for HTML output:** 9871 `\begin{warpHTML}`

```
\bibliography {(\filenames)}
```

Modified to use the base jobname instead of the `_html` jobname.

```

9872 \def\bibliography#1{%
9873 \if@filesw
9874 \immediate\write\@auxout{\string\bibdata{#1}}%
9875 \fi
9876 % \@input@{\jobname.bbl}% original
9877 \begingroup%
9878 \@input@{\BaseJobname.bbl}% lwarp
9879 \endgroup%
9880 }

```

```
\@biblabel {\text-refnumber}
```

```
9881 \renewcommand{\@biblabel}[1][[#1]\quad}
```

Env thebibliography 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>

```

9882 \AtBeginDocument{
9883
9884 \AtBeginEnvironment{thebibliography}{
9885
9886 \providecommand*\LWR@newem[1]{\textit{#1}}
9887
9888 \renewrobustcmd{\em}{%
9889 \begingroup
9890 \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
9891 \afterassignment\LWR@em@after
9892 \toks@\bgroup
9893 }
9894
9895 \def\LWR@em@finish#1{%
9896 \xdef\LWR@em@after{\noexpand#1\the\toks@}}%
9897 \endgroup
9898 \LWR@em@after\egroup
9899 }
9900
9901 }% \AtBeginEnvironment{thebibliography}
9902
9903 }% \AtBeginDocument

9904 \end{warpHTML}

```

## 78 Restoring original formatting

`\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`.

**for HTML output:** 9905 `\begin{warpHTML}`

```

9906 \newcommand*\LWR@restoreorigformatting{%
9907 \LWR@traceinfo{\LWR@restoreorigformatting}%

```

Numerous macros change their print/HTML meaning depending on `\LWR@formatting`:

```

9908 \renewcommand*{\LWR@formatting}{print}%
9909 \linespread{1}%

9910 \let\par\LWR@origpar%

9911 \LWR@select@print@hspace%

9912 \LetLtxMacro\hfil\LWR@origfil%
9913 \let\hss\LWR@orighss%
9914 \let\llap\LWR@origllap%
9915 \let\rlap\LWR@origrlap%
9916 \let\hfilneg\LWR@origfilneg%

9917 \let\,\LWR@origcomma% disable HTML short unbreakable space
9918 \let\thinspace\LWR@origthinspace% disable HTML short unbreakable space
9919 \let\negthinspace\LWR@orignegthinspace% disable HTML negative short unbreakable space
9920 \let\textellipsis\LWR@origtextellipsis%
9921 \let\textless\LWR@origtextless%
9922 \let\textgreater\LWR@origtextgreater%

9923 \let\&\LWR@origampersand%

9924 \LetLtxMacro\em\LWR@origem%
9925 \LetLtxMacro\normalfont\LWR@orignormalfont%
9926 \let\sp\LWR@origsp%
9927 \let\sb\LWR@origsb%
9928 \LetLtxMacro\textsuperscript\LWR@origtextsuperscript%
9929 \LetLtxMacro@textsuperscript\LWR@orig@textsuperscript%
9930 \LetLtxMacro\textsubscript\LWR@origtextsubscript%
9931 \LetLtxMacro@textsubscript\LWR@orig@textsubscript%
9932 \LetLtxMacro\underline\LWR@origunderline%
9933 \let~\LWR@origtilde%
9934 \let\enskip\LWR@origenskip%
9935 \let\quad\LWR@origquad%
9936 \let\qqquad\LWR@origqqquad%

```

`\endtabular` must be restored to its original, instead of relying on `lwarp`'s `\LWR@formatted` mechanism:

```

9937 \LetLtxMacro\endtabular\LWR@origendtabular%
9938 \csletcs{endtabular*}{LWR@origendtabular*}%

9939 \LetLtxMacro\noalign\LWR@orignoalign%
9940 \LetLtxMacro\hline\LWR@orighline%

9941 \let\newline\LWR@orignewline%
9942 \LetLtxMacro\includegraphics\LWR@origincludegraphics%

9943 \LetLtxMacro@ensuredmath\LWR@origensuredmath%

```

```

9944 \let\math\LR@orig@math%
9945 \let\endmath\LR@orig@endmath%
9946 \let\displaymath\LR@orig@displaymath%
9947 \let\enddisplaymath\LR@orig@enddisplaymath%
9948 %
9949 \LR@restoreorigaccents%
9950 \LR@restoreoriglists%
9951 %
9952 \LR@FBcancel%
9953 }

9954 \end{warpHTML}

```

## 79 Math

### 79.1 Limitations

See [Math](#), section 8.7.

### 79.2 HTML alt tag names

Redefinable names for the HTML alt tags, for translation according to the reader's native language.

**for HTML & PRINT:** 9955 \begin{warpall}

`\AltTextOpen` The opening part of HTML alt tag for an image. The default is a left parenthesis.

Default: (

```
9956 \newcommand*{\AltTextOpen}{(}
```

`\AltTextClose` The closing part of HTML alt tag for an image. The default is a right parenthesis.

Default: )

```
9957 \newcommand*{\AltTextClose}{)}
```

`\ImageAltText` The HTML alt tag for an image.

Default: image

```
9958 \newcommand*{\ImageAltText}{image}
```

`\MathImageAltText` The HTML alt tag for an SVG math image.

Default: "math image"

```
9959 \newcommand*{\MathImageAltText}{math image}
```

`\LWR@ThisAltText` The HTML alt tag for the next image. Cleared after use, and also after each `lateximage`, `\LWR@subsingledollar`, and each use of `MATHJAX`.

```
9960 \newcommand*\LWR@ThisAltText{}
```

`\ThisAltText`  $\langle text \rangle$

Assigns the HTML alt tag for the next image generated by `lwarp`, such as a `lateximage`, `picture`, or `svg math`.

```
9961 \newcommand*\ThisAltText}[1]{%
9962 \renewcommand{\LWR@ThisAltText}{#1}%
9963 }
```

`\PackageDiagramAltText` Appended to the `lateximage` HTML alt tag for the images generated by many packages.  
Default: “`diagram`”

```
9964 \newcommand*\PackageDiagramAltText{diagram}
```

```
9965 \end{warpall}
```

### 79.3 Inline and display math

**for HTML output:** `9966 \begin{warpHTML}`

`ctr LWR@externalfilecnt` Counter for the external files which are generated and then referenced from the HTML:

```
9967 \newcounter{LWR@externalfilecnt}
```

`Bool LWR@indisplaymathimage` 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.

```
9968 \newbool{LWR@indisplaymathimage}
```

`Bool LWR@xfakebold` True if `xfakebold \setBold` is in use.

```
9969 \newbool{LWR@xfakebold}
9970 \boolfalse{LWR@xfakebold}
```

`\LWR@orig@setBold` Redefined by `lwarp-xfakebold`.

```
9971 \newcommand*\LWR@orig@setBold{}
```

`\LWR@orig@unsetBold` Redefined by `lwarp-xfakebold`.

```
9972 \newcommand*\LWR@orig@unsetBold{}
```

`\LWR@applyxfakebold` Redefined by `lwarp-xfakebold`.

```
9973 \newcommand*{\LWR@applyxfakebold}{}

```

`\LWR@setcurrentfont` Sets the actual  $\LaTeX$  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`.

```
9974 \newcommand*{\LWR@setcurrentfont}{%
9975 \LWR@traceinfo{Using font family \LWR@f@family}%
9976 \@nameuse{\LWR@print@\LWR@f@family family}%
9977 \LWR@traceinfo{Using font series \LWR@f@series}%
9978 \@nameuse{\LWR@print@\LWR@f@series series}%
9979 \LWR@traceinfo{Using font shape \LWR@f@shape}%
9980 \@nameuse{\LWR@print@\LWR@f@shape shape}%
9981 \LWR@traceinfo{Using font caps shape \LWR@f@shapecaps}%
9982 \@nameuse{\LWR@print@\LWR@f@shapecaps shape}%
9983 }

```

`\$` 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`.

```
9984 \let\LWR@origtextdollar\$
9985
9986 \renewcommand*{\$}{%
9987 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
9988 {\LWR@origtextdollar}%
9989 {\HTMLUnicode{00024}}%
9990 }

```

File `lwarp_baseline_marker.png` A marker to be used to help `pdfcrop` identify the inline math baseline and width. 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.

File `lwarp_baseline_marker.eps`

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.

```
9991 \AtBeginDocument{

```

```

9992
9993 \ifpdf
9994 \newcommand*\LWR@baselinename}{lwarp_baseline_marker.png}
9995 \else
9996 \ifXeTeX
9997 \newcommand*\LWR@baselinename}{lwarp_baseline_marker.png}
9998 \else
9999 \newcommand*\LWR@baselinename}{lwarp_baseline_marker.eps}
10000 \fi
10001 \fi
10002
10003 \IfFileExists{\LWR@baselinename}%
10004 {
10005 \@ifpackageloaded{graphicx}{
10006 \newcommand*\LWR@addbaselinemarker}{%
10007 \LWR@originincludegraphics{\LWR@baselinename}%
10008 }
10009 }{
10010 \@ifpackageloaded{graphics}{
10011 \newcommand*\LWR@addbaselinemarker}{%
10012 \LWR@originincludegraphics{\LWR@baselinename}%
10013 }
10014 }{
10015 \newcommand*\LWR@addbaselinemarker}{%
10016 \global\booltrue{LWR@warnbaselinemarker}%
10017 }
10018 \AtEndDocument{
10019 \ifbool{LWR@warnbaselinemarker}{
10020 \PackageWarningNoLine{lwarp}{%
10021 Load graphicx or graphics for improved\MessageBreak
10022 SVG math sizing and baselines%
10023 }
10024 }{}
10025 }
10026 }
10027 }
10028 }{% lwarp_baseline_marker.png or .eps is not present
10029 \newcommand*\LWR@addbaselinemarker}{%
10030 \global\booltrue{LWR@warnbaselinemarker}%
10031 }
10032 \AtEndDocument{
10033 \ifbool{LWR@warnbaselinemarker}{
10034 \PackageWarningNoLine{lwarp}{%
10035 File \LWR@baselinename\space is not installed\MessageBreak
10036 alongside the lwarp-*.sty files, so\MessageBreak
10037 SVG math sizing and baselines may not be accurate}
10038 }{}
10039 }
10040 }
10041
10042 }% AtBeginDocument

```

Bool LWR@warnbaselinemarker True if the math baseline marker was ever called for, but graphics or graphicx were not loaded.

```
10043 \newbool{LWR@warnbaselinemarker}
10044 \boolfalse{LWR@warnbaselinemarker}
```

Bool LWR@unknownmathsize 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.

```
10045 \newbool{LWR@unknownmathsize}
```

$\backslash$ LWR@singledollarmeasure  $\{(\mathit{expression})\}$

Measures the size of the image of the math expression.

(In some circumstances SVG math is used even if MATHJAX is preferred.)

**SVG math:**  $\backslash$ LWR@origensuredmath is part of argument #4.

**SVG math \ensuremath:**  $\backslash$ LWR@origensuredmath is part of argument #4.

**SVG dynamic math:**  $\backslash$ LWR@origensuredmath is part of argument #4.

**Mathjax:** Argument #4 is the contents of the math expression without  $\backslash$ LWR@origensuredmath. This case is handled above.

**Mathjax \ensuremath:**  $\backslash$ LWR@origensuredmath is part of argument #4.

**Mathjax dynamic math:** Argument #4 is the contents of the math expression without  $\backslash$ LWR@origensuredmath, so  $\backslash$ LWR@origensuredmath is added below.

**\ifmmode:** Included “just in case”.

Factored from  $\backslash$ LWR@subsingledollarsvg.

```
10046 \newcommand*{\LWR@singledollarmeasure}[1]{%
10047 \begingroup%
```

Temporarily disable formatting while measuring the image parameters:

```
10048 \LWR@restoreorigformatting%
10049 \RenewDocumentEnvironment{lateximage}{s o s o}{\relax}{\relax}% inside group
10050 \LWR@print@normalsize%
```

Temporarily set font for the HTML PDF output:

```
10051 \LWR@setcurrentfont%
```

lateximagedepth must be nested to avoid generating paragraph tags.  $\mathcal{AMS}$  math modifies the  $\backslash$ text macro such that  $\backslash$ addtocounter does not always occur as expected. Lower-level code is used instead.

```
10052 \global\advance\c@LWR@lateximagedepth 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.

```

10053 \boolfalse{LWR@unknownmathsize}%
10054 \ifmmode%
10055 \global\abox{\LWR@singledollarbox}{#1}%
10056 \else%
10057 \ifbool{LWR@dynamicmath}{%
10058 \ifbool{mathjax}{%
10059 \global\abox{\LWR@singledollarbox}%
10060 {\LWR@origensuredmath{#1}}%
10061 }{%
10062 \global\abox{\LWR@singledollarbox}{#1}%
10063 }%
10064 }{%
10065 \global\abox{\LWR@singledollarbox}{#1}%
10066 }%
10067 \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 *pdfcrop* would crop the image without depth. The marker below the baseline is seen by *pdfcrop* and preserves the depth.

```

10068 \global\abox{\LWR@singledollarbox}{%
10069 \usebox{\LWR@singledollarbox}%
10070 \raisebox{-\dp\LWR@singledollarbox}{%
10071 \LWR@addbaselinemarker%
10072 }%
10073 }%

```

More low-level code to undo the counter change.

```

10074 \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.

```

Measure the depth:

```

10075 \setlength{\LWR@singledollardepth}{%
10076 \LateximageFontScale\dp\LWR@singledollarbox%
10077 }%

```

Make the length a global change:

```

10078 \global\LWR@singledollardepth=\LWR@singledollardepth%

```

Likewise for width:

```

10079 \setlength{\LWR@singledollarwidth}{%
10080 \LateximageFontScale\wd\LWR@singledollarbox%
10081 }%
10082 \global\LWR@singledollarwidth=\LWR@singledollarwidth%

```

Likewise for total height:

```

10083 \setlength{\LWR@singledollarheight}{%
10084 \LateximageFontScale\ht\LWR@singledollarbox%
10085 }%
10086 \addtolength{\LWR@singledollarheight}{%
10087 \LateximageFontScale\dp\LWR@singledollarbox%
10088 }%
10089 \global\LWR@singledollarheight=\LWR@singledollarheight%

10090 \endgroup%
10091 }

```

`\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`.

```

10092 \newcommand*\LWR@subsingledollarsvg[4]{%

```

Measure the depth, width, and height of the math image:

```

10093 \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:

```

10094 \ifdimgreater{\LWR@singledollarwidth}{.7\LWR@singledollarheight}{%
10095 \def\LWR@singledollarstyle{%
10096 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
10097 }%
10098 }{%
10099 \def\LWR@singledollarstyle{%
10100 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
10101 }%
10102 }%

```

If a very narrow width, use the height.

```

10103 \ifdimless{\LWR@singledollarwidth}{.2em}%
10104 {%
10105 \def\LWR@singledollarstyle{%
10106 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
10107 }%
10108 }%
10109 }%

```

If very wide and short, use the width:

```

10110 \ifdimless{\LWR@singledollarheight}{.2em}%
10111 {%
10112 \def\LWR@singledollarstyle{%
10113 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
10114 }%
10115 }%
10116 {}%
```

If there is significant text depth, add the depth to the style.

```

10117 \ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
10118 \def\LWR@singledollardepthstyle{%
10119 \ ; % extra space
10120 \LWR@print@mbbox{%
10121 vertical-align:-\LWR@convertto{em}{\the\LWR@singledollardepth} em%
10122 } % extra space
10123 }%
10124 }{%
10125 \def\LWR@singledollardepthstyle{}%
10126 }%
```

If using certain Tikz actions inside math, the resulting image may exceed the T<sub>E</sub>X boundaries, so the HTML size styles may be incorrect, and must be neutralized.

```

10127 \ifbool{\LWR@unknownmathsize}{%
10128 \def\LWR@singledollarstyle{}%
10129 \def\LWR@singledollardepthstyle{}%
10130 }{%}
```

Create the lateximage using the alternate tag and the computed size and depth. The star causes lateximage to use an MD5 hash as the filename. When hashing, also include the current font and color in the hash.

```

10131 \ifbool{\LWR@dynamicmath}{%
10132 \LWR@traceinfo{subsingledollar: dynamic}%
10133 \begin{lateximage}% no hashing
10134 [\MathImageAltText]% alt tag
10135 []% no add'l hashing
10136 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
10137 }{% not dynamic math
10138 \LWR@traceinfo{subsingledollar: static}%
10139 \IfValueTF{#1}{% #1 True
10140 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
```

Support for xfakebold:

```

10141 \ifbool{\LWR@xfakebold}%
10142 {\def\LWR@tempone{Y}}%
10143 {\def\LWR@tempone{N}}%

10144 \begin{lateximage}*% use hashing
10145 [#2]% alt
```

```

10146 *% do not add open/closing braces
10147 [% addl' hashing
10148 #3%
10149 FM\LWR@f@family%
10150 SR\LWR@f@series%
10151 SH\LWR@f@shape%
10152 SHC\LWR@f@shapecaps%
10153 CL\LWR@tempcolor%
10154 FB\LWR@tempone% xfakebold
10155]%
10156 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
10157 }{% #1 False
10158 \begin{lateximage}% no hashing
10159 [#2]% alt
10160 [% no add'l hashing
10161 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
10162]%
10163 }% 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.)

```
10164 \LWR@addbaselinemarker%
```

Support for xfakebold:

```
10165 \LWR@applyxfakebold%
```

Typeset the contents:

```
10166 \usebox{\LWR@singledollarbox}%
```

The closing baseline marker:

```
10167 \LWR@addbaselinemarker%
```

```
10168 \end{lateximage}%
```

```
10169 %
```

```
10170 }
```

```
\LWR@subsingledollar * {<2: alt text>} {<3: add'l hashing>} {<4: math expression>}
```

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 duplicated in the additional hashing argument.

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.

```

10171 \newlength{\LWR@singledollarwidth}
10172 \newlength{\LWR@singledollarheight}
10173 \newlength{\LWR@singledollardepth}
10174
10175 \newsavebox{\LWR@singledollarbox}
10176
10177 \NewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
10178 \LWR@traceinfo{\LWR@subsingledollar}%

10179 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
10180 {%
10181 \LWR@traceinfo{\LWR@subsingledollar: already in a lateximage}%
10182 #4% contents
10183 }%
10184 {% not in a lateximage
10185 \begingroup%
```

Support for `xfakebold`:

```

10186 \LWR@applyxfakebold%
```

MathJax cannot parse the often complicated `TEX` 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:

```

10187 \ifboolexpr{%
10188 (
10189 bool{mathjax} or
10190 (bool{FormatWP} and bool{WPMarkMath})
10191) and
10192 (not test {
10193 \ifstrequal {#2}% from \ensuredmath
10194 {\AltTextOpen\MathImageAltText\AltTextClose}
10195 }
10196) and
10197 (not bool{LWR@dynamicmath})
10198 }%

```

For MATHJAX, print the math between  $\left($  and  $\right)$ :

```

10199 {%
10200 \LWR@traceinfo{LWR@subsingledollar: Mathjax}%
10201 {\textbackslash(LWR@HTMLsanitize{#4}\textbackslash)}%
10202 }% mathjax

```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the L<sup>A</sup>T<sub>E</sub>X code, and a CSS style to control the baseline adjustment.

```

10203 {% not mathjax
10204 \LWR@traceinfo{%
10205 LWR@subsingledollar: NOT mathjax, or is ensuremath, or is dynamic%
10206 }%
10207 \LWR@subsingledollarsvg{#1}{#2}{#3}{#4}%
10208 }% not mathjax
10209 \endgroup%
10210 }% not in a lateximage

```

Clear the single-use alt text:

```

10211 \gdef\LWR@ThisAltText{}%
10212 \LWR@traceinfo{LWR@subsingledollar: done}%
10213 }

```

```

10214 \LetLtxMacro\LWR@origdollar$
10215 \LetLtxMacro\LWR@secondorigdollar$% balance for editor syntax highlighting

```

```

10216 \LetLtxMacro\LWR@origopenparen\left
10217 \LetLtxMacro\LWR@origcloseparen\right
10218 \LetLtxMacro\LWR@origopenbracket\[
10219 \LetLtxMacro\LWR@origclosebracket\]

```

**\$** Redefine the dollar sign to place math inside a `lateximage`, or use MATHJAX:  
**\$\$**

```

10220 \begingroup
10221 \catcode'\$=\active%
10222 \protected\gdef$\{\ifnextchar$\LWR@doubledollar\LWR@singledollar}%

```

Used by `chemformula` to escape single-dollar math:

```
10223 \protected\gdef\LWR@newsingledollar{\ifnextchar$\LWR@doubledollar\LWR@singledollar}%
```

`\LWR@doubledollar` Redefine the double dollar sign to place math inside a lateximage, or use MATHJAX:

```
10224 \protected\gdef\LWR@doubledollar$#1$${%
```

If MATHJAX or formatting for a word processor, print the L<sup>A</sup>T<sub>E</sub>X expression:

```
10225 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }{%
```

For MATHJAX, print the math between `\[` and `\]`:

```
10226 {
10227
10228 \textbackslash[%
10229 \LWR@HTMLsanitize{#1}%
10230 \textbackslash]
10231
10232 }% mathjax
```

For SVG, print the math inside a lateximage, with an `<alt>` tag of the L<sup>A</sup>T<sub>E</sub>X code:

```
10233 {% not mathjax
10234 \begin{BlockClass}{displaymath}%
10235 \LWR@newautoidanchor%
10236 \booltrue{LWR@indisplaymathimage}%
10237 \begin{lateximage}%
10238 [%
10239 \textbackslash[[] % extra space
10240 \LWR@HTMLsanitize{#1} % extra space
10241 \textbackslash[]]%
10242]%
10243 *% do not add open/closing braces
```

Support for xfakebold:

```
10244 \LWR@applyxfakebold%

10245 \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
10246 \end{lateximage}%
10247 \end{BlockClass}%
10248 }% not mathjax
```

Clear the single-use alt text:

```
10249 \gdef\LWR@ThisAltText{%
10250 }%
```

`\LWR@singledollar` `{\langle alt text \rangle}{\langle math expression \rangle}`

```
10251 \protected\gdef\LWR@singledollar#1${%
10252 \ifbool{mathjax}{%
```

```

10253 \LWR@subsingledollar*%
10254 {% alt tag
10255 \textbackslash(%
10256 \LWR@HTMLsanitize{#1} % extra space
10257 \textbackslash)%
10258 }%
10259 {singledollar}% add'l hashing
10260 {#1}% contents
10261 }{% not mathjax
10262 \LWR@subsingledollar*%
10263 {% alt tag
10264 \textbackslash(%
10265 \LWR@HTMLsanitize{#1} % extra space
10266 \textbackslash)%
10267 }%
10268 {singledollar}% add'l hashing
10269 {\LWR@origensuredmath{#1}}% contents
10270 }% not mathjax

```

Clear the single-use alt text:

```

10271 \gdef\LWR@ThisAltText{}%
10272 }

```

\( Redefine to the above dollar macros.

```

\[
10273 \AtBeginDocument{
10274 \protected\gdef\(#1\){$#1$}
10275 \protected\gdef\[#1\]{$$#1$$}
10276 }
10277
10278 \endgroup

10279 \AtBeginDocument{
10280 \LetLtxMacro\LWR@openbracketnormal\[
10281 \LetLtxMacro\LWR@closebracketnormal\]
10282 }

```

\@ensuredmath {<expression>}

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.

```

10283 \LetLtxMacro\LWR@origensuredmath\@ensuredmath
10284
10285 \renewcommand{\@ensuredmath}[1]{%
10286 \ifbool{mathjax}{%
10287 \LWR@subsingledollar*\AltTextOpen\MathImageAltText\AltTextClose}%
10288 {%
10289 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
10290 }%
10291 }%

```

```

10292 \relax%
10293 \LWR@origensuredmath{#1}%
10294 }%
10295 }{% SVG math

```

If already inside a `lateximage` in math mode, continue as-is.

```

10296 \ifmmode%
10297 \LWR@origensuredmath{#1}%
10298 \else%

```

Create an inline math `lateximage` with a simple `alt` tag and additional hashing according to the contents.

```

10299 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
10300 {\LWR@origensuredmath{#1}}%
10301 {%
10302 \LWR@subsingledollar*%
10303 {\AltTextOpen\MathImageAltText\AltTextClose}%
10304 {\protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
10305 {\LWR@origensuredmath{#1}}%
10306 }%
10307 \fi%
10308 }%

```

Clear the single-use `alt` text:

```

10309 \gdef\LWR@ThisAltText{}%
10310 }

```

Remember then remove the old `math` and `displaymath` environments:

```

10311 \let\LWR@orig@math\math
10312 \let\LWR@orig@endmath\endmath
10313 \let\LWR@orig@displaymath\displaymath
10314 \let\LWR@orig@enddisplaymath\enddisplaymath
10315
10316 \let\math\relax
10317 \let\endmath\relax
10318 \let\displaymath\relax
10319 \let\enddisplaymath\relax

```

Env `math` Set `math` mode then typeset the body of what was between the `begin/end`. See the `environ` package for `\BODY`.

```

10320 \NewEnviron{math}{\expandafter\(\BODY\)}

```

Env `LWR@displaymathnormal` Set `math` mode then typeset the body of what was between the `begin/end`. See the `environ` package for `\BODY`.

```

10321 \NewEnviron{LWR@displaymathnormal}{\expandafter\[\BODY\]\@ignoretrue}

```

Set the default displaymath to the normal version:

```
10322 \LetLtxMacro\[\LWR@openbracketnormal%
10323 \LetLtxMacro\]\LWR@closebracketnormal%
10324 \LetLtxMacro\displaymath\LWR@displaymathnormal%
10325 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
```

Env LWR@displaymathother A version of displaymath which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```
10326 \newenvironment{LWR@displaymathother}
10327 {%
10328 \begin{BlockClass}{displaymath}%
10329 \LWR@newautoidanchor%
10330 \booltrue{LWR@indisplaymathimage}%
10331 \begin{lateximage}%
10332 [\MathImageAltText]%
10333 \LWR@origdollar\LWR@origdollar%
10334 }
10335 {%
10336 \LWR@origdollar\LWR@origdollar%
10337 \end{lateximage}%
10338 \end{BlockClass}%
10339 }
```

Env LWR@equationother A version of displaymath which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```
10340 \newenvironment{LWR@equationother}
10341 {%
10342 \begin{BlockClass}{displaymathnumbered}%
10343 \LWR@newautoidanchor%
10344 \booltrue{LWR@indisplaymathimage}%
10345 \begin{lateximage}[\MathImageAltText]%
10346 \LWR@origequation%
10347 }
10348 {%
10349 \LWR@origendequation%
10350 \end{lateximage}%
10351 \end{BlockClass}%
10352 }
```

## 79.4 MATHJAX support

Ctrl LWR@nextequation Used to add one to compute the next equation number.

```
10353 \newcounter{LWR@nextequation}
```

\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<sup>A</sup>T<sub>E</sub>X.

```
10354 \newcommand*{\LWR@syncmathjax}{%
```

If using chapters, place the chapter number in front of the equation. Otherwise, use the simple equation number.

```
10355 \ifcsdef{thechapter}{
10356 \InlineClass{hidden}{
10357 \textbackslash(
10358 \textbackslash{}seteqsection \{\thechapter\}
10359 \textbackslash)
10360 }
10361 }
10362 {}% not using chapters
```

MATHJAX doesn't allow setting the equation number to 1:

```
10363 \ifthenelse{\cnttest{\value{equation}}>0}
10364 {
```

Tell MATHJAX that the next set of equations begins with the current L<sup>A</sup>T<sub>E</sub>X equation number, plus one.

```
10365 \setcounter{LWR@nextequation}{\value{equation}}
10366 \addtocounter{LWR@nextequation}{1}
```

Place the MATHJAX command inside “\(" and “\)” characters, to be printed to HTML, not interpreted by L<sup>A</sup>T<sub>E</sub>X.

```
10367 \InlineClass{hidden}{
10368 \textbackslash(
10369 \textbackslash{}seteqnumber \{\arabic{LWR@nextequation}\}
10370 \textbackslash)
10371 }
10372 }{}% not eq > 0
10373 }
```

```
\LWR@hidelatexequation {<environment>} {<contents>}
```

Creates the L<sup>A</sup>T<sub>E</sub>X version of the equation inside an HTML comment.

```
10374 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
```

Stop HTML paragraph handling and open an HTML comment:

```
10375 \LWR@stoppars
10376 \LWR@htmlopencomment
10377
```

Start the L<sup>A</sup>T<sub>E</sub>X math environment inside the HTML comment:

```
10378 \begingroup
10379 \@nameuse{LWR@orig#1}
```

While in the math environment, restore various commands to their L<sup>A</sup>T<sub>E</sub>X meanings.

```
10380 \LWR@restoreorigformatting
```

See `\LWR@htmlmathlabel` in section 79.7.1.

Print the contents of the equation:

```
10381 #2
```

End the L<sup>A</sup>T<sub>E</sub>X math environment inside the HTML comment:

```
10382 \@nameuse{LWR@origend#1}
10383 \endgroup
10384
```

Close the HTML comment and resume HTML paragraph handling:

```
10385 \LWR@htmlclosecomment
10386 \LWR@startpars
10387 }
```

```
\LWR@addmathjax {<environment>} {<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<sup>A</sup>T<sub>E</sub>X.

```
10388 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%
```

Enclose the MATHJAX environment inside printed “\ (“ and “\)” characters.

```
10389 \LWR@origtilde\LWR@orignewline
10390 \textbackslash{}begin\{#1\}
```

Print the contents, sanitizing for HTML special characters.

```
10391 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#2}}
```

Close the MATHJAX environment:

```
10392 \textbackslash{}end\{#1\}
10393 \LWR@orignewline
10394 }
```

## 79.5 Equation environment

Remember existing equation environment, after redefined by `amsmath`, if loaded.

```

10395 \AtBeginDocument{
10396 \let\LWR@origequation\equation
10397 \let\LWR@origendequation\endequation
10398 \csletcs{LWR@origequation*}{equation*}
10399 \csletcs{LWR@origendequation*}{endequation*}
10400 }

```

```
\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  $\LaTeX$  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.

```

10401 \newcommand*{\LWR@doequation}[2]{%
10402

```

If `mathjax` or `FormatWP`, print the  $\LaTeX$  expression:

```
10403 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
```

MATHJAX output:

```
10404 {
```

Print commands to synchronize MATHJAX's equation number and format to the current  $\LaTeX$  chapter/section and equation number:

```
10405 \LWR@syncmathjax
```

Print the  $\LaTeX$  math inside an HTML comment:

```

10406 \LWR@hidelatexequation{#2}{#1}
10407 }

```

SVG output: Create the `lateximage` along with an HTML `<alt>` tag having an equation number, the  $\LaTeX$  equation environment commands, and the contents of the environment's `\BODY`.

```
10408 {% not mathjax
```

Begin the `lateximage` with an `<alt>` tag containing the math source:

```

10409 \ifstrequal{#2}{equation*}{%
10410 \begin{BlockClass}{displaymath}%
10411 }{%
10412 \begin{BlockClass}{displaymathnumbered}%
10413 }%
10414 \LWR@newautoidanchor%
10415 \booltrue{LWR@indisplaymathimage}%

```

```

10416 \begin{lateximage}[%
10417 \ifstrequal{#2}{equation*}{%
10418 \ifdefequal{\LWR@equationtag}{\theequation}{%
10419 % no tag was given
10420 }{%
10421 (\LWR@equationtag) % tag was given
10422 }%
10423 }{%
10424 (\LWR@equationtag) % automatic numbering
10425 }%
10426 \textbackslash{begin\{#2\}} % extra space
10427 \LWR@HTMLsanitizexpand{\detokenize\expandafter{#1}} % extra space
10428 \textbackslash{end\{#2\}}%
10429]*% alt tag

```

Support for xfakebold:

```
10430 \LWR@applyxfakebold%
```

Create the actual L<sup>A</sup>T<sub>E</sub>X-formatted equation inside the lateximage using the contents of the environment.

```

10431 \@nameuse{\LWR@orig#2}%
10432 #1% contents collected by \collect@body
10433 \@nameuse{\LWR@origend#2}%
10434 \end{lateximage}%
10435 \end{BlockClass}%
10436 }% not mathjax

```

Clear the single-use alt text:

```

10437 \gdef\LWR@ThisAltText{}%
10438 }

```

After the environment, if MATHJAX, print the math to the HTML output for MATHJAX processing:

```

10439 \newcommand*\LWR@doendequation}[1]{%
10440 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
10441 {%
10442 \LWR@addmathjax{#1}{\BODY}%
10443 }{%
10444

```

Clear the single-use alt text:

```

10445 \gdef\LWR@ThisAltText{}%
10446 }

```

Remove existing equation environment:

```

10447 \AtBeginDocument{
10448 \let\equation\relax

```

```

10449 \let\endequation\relax
10450 \csletcs{equation*}{relax}
10451 \csletcs{endequation*}{relax}
10452 }

```

Env `equation` The new equation environment is created with `\NewEnviron` (from the `environ` package), which stores the contents of its environment in a macro called `\BODY`.

```

10453 \AtBeginDocument{
10454
10455 \NewEnviron{equation}%
10456 {\LWR@doequation{\BODY}{equation}}%
10457 [\LWR@doendequation{equation}]
10458
10459 \LetLtxMacro\LWR@equationnormal\equation
10460 \LetLtxMacro\endLWR@equationnormal\endequation
10461
10462 }% AtBeginDocument

```

Env `equation*`

```

10463 \AtBeginDocument{
10464
10465 \NewEnviron{equation*}%
10466 {\LWR@doequation{\BODY}{equation*}}%
10467 [\LWR@doendequation{equation*}]
10468
10469 \csletcs{LWR@equationnormalstar}{equation*}
10470 \csletcs{LWR@endequationnormalstar}{endequation*}
10471
10472 }% AtBeginDocument

```

Remember the “less” version of `equation`, which uses `MATHJAX` and `alt` tags, but does not support complicated contents such as some `Tikz` expressions.

```

10473 \AtBeginDocument{
10474 \LetLtxMacro\LWR@equationless\equation
10475 \LetLtxMacro\endLWR@equationless\endequation
10476 \csletcs{LWR@equationlessstar}{equation*}
10477 \csletcs{LWR@endequationlessstar}{endequation*}
10478 }

```

## 79.6 `\displaymathnormal` and `\displaymathother`

`\displaymathnormal` By default, or when selecting `\displaymathnormal`, `MATHJAX` math display environments print their contents as text into `HTML`, 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 compli-

**MathJax unsupported complicated alt tag**

cated 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.

 **$\displaymathnormal$  simple math objects**

Use when display math environments have simple math which is to sent to MATHJAX or included in HTML alt tags.

```

10479 \newcommand*{\displaymathnormal}{%
10480 \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}%
10481 \LetLtxMacro\[\LWR@openbracketnormal%
10482 \LetLtxMacro\]\LWR@closebracketnormal%
10483 \LetLtxMacro\displaymath\LWR@displaymathnormal%
10484 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
10485 \LetLtxMacro\equation\LWR@equationnormal%
10486 \LetLtxMacro\endequation\endLWR@equationnormal%
10487 \csletcs{equation*}{LWR@equationnormalstar}%
10488 \csletcs{endequation*}{LWR@endequationnormalstar}%
10489 }
```

 **$\displaymathother$  complicated math objects**

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.

```

10490 \newcommand*{\displaymathother}{%
10491 \boolfalse{mathjax}%
10492 \LetLtxMacro\displaymath\LWR@displaymathother%
10493 \LetLtxMacro\enddisplaymath\endLWR@displaymathother%
10494 \LetLtxMacro\[\LWR@displaymathother%
10495 \LetLtxMacro\]\endLWR@displaymathother%
10496 \LetLtxMacro\equation\LWR@equationother%
10497 \LetLtxMacro\endequation\endLWR@equationother%
10498 \csletcs{equation*}{displaymath}%
10499 \csletcs{endequation*}{enddisplaymath}%
10500 }
```

```
10501 \end{warpHTML}
```

**for PRINT output:** 10502 \begin{warpprint}

Print-mode versions:

```

10503 \newcommand*{\displaymathnormal}{%}
10504 \newcommand*{\displaymathother}{%}

10505 \end{warpprint}
```

**for HTML output:** 10506 \begin{warpHTML}

## 79.7 AMS Math environments

### 79.7.1 Support macros

Bool LWR@amsmultline 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 is used in an `amsmath` environment which is not a `multiline` environment and not an equation.

```
10507 \newbool{LWR@amsmultline}
10508 \boolfalse{LWR@amsmultline}
```

`\LWR@htmlmathlabel`  $\langle label \rangle$

`lwarp` points `\ltx@label` here. This is used by `\label` when inside a  $\LaTeX$  AMS math environment's math display environment.

`\LWR@origltx@label` points to the  $\LaTeX$  original, modified by `lwarp`, then by `amsmath`, then by `cleveref`.

```
10509 \newcommand*{\LWR@htmlmathlabel}[1]{%
10510 \LWR@traceinfo{LWR@htmlmathlabelb #1}%
```

If `mathjax` or `FormatWP`, print the  $\LaTeX$  expression:

```
10511 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }{%
10512 {%
```

The combined  $\LaTeX$  & HTML label is printed in a `\text` field:

```
10513 \text{%
```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
10514 \ifbool{LWR@amsmultline}{\hspace*{\totwidth@}}%
```

Temporarily end the HTML comment, insert the  $\LaTeX$  & HTML label, then resume the HTML comment. `\@firstofone` is required to remove extra braces introduced by the `amsmath` package.)

```
10515 \LWR@htmlclosecomment%
10516 \LWR@origltx@label{#1}%
10517 \LWR@htmlopencomment%
10518 }% text
10519 }% mathjax
10520 {%
10521 \LWR@origltx@label{#1}%
10522 }%
10523 }
```

`\LWR@beginhideamsmath` Starts hiding L<sup>A</sup>T<sub>E</sub>X math inside an HTML comment.

```
10524 \newcommand*{\LWR@beginhideamsmath}{
10525 \LWR@stoppars
10526 \LWR@origtilde\LWR@orignewline
10527 \LWR@htmlopencomment
10528
10529 \begingroup
10530 \LWR@restoreorigformatting
10531 }
```

`\LWR@endhideamsmath` Ends hiding L<sup>A</sup>T<sub>E</sub>X math inside an HTML comment.

```
10532 \newcommand*{\LWR@endhideamsmath}{
10533 \endgroup
10534
10535 \LWR@htmlclosecomment
10536 \LWR@orignewline
10537 \LWR@startpars
10538 }
```

### 79.7.2 Environment patches

The `amsmath` environments already collect their contents in `\@envbody` for further processing. `eqnarray` is not an  $\mathcal{A}\mathcal{M}\mathcal{S}$  package, and thus requires special handling.

For `svg` math: Each environment is encapsulated inside a `lateximage` environment, along with a special optional argument of `\LWR@amsmathbody` or `\LWR@amsmathbodynumbered` telling `lateximage` to use as the HTML `<alt>` tag the environment's contents which were automatically captured by the  $\mathcal{A}\mathcal{M}\mathcal{S}$  environment.

For `MATHJAX`: Each environment is syched with L<sup>A</sup>T<sub>E</sub>X's equation numbers, typeset with L<sup>A</sup>T<sub>E</sub>X inside an HTML comment, then printed to HTML output for `MATHJAX` to process.

Env `eqnarray` This environment is not an  $\mathcal{A}\mathcal{M}\mathcal{S}$  environment and thus its body is not automatically captured, so the `environ` package is used to capture the environment into `\BODY`.

```
10539 \let\LWR@origeqnarray\eqnarray
10540 \let\LWR@origendeqnarray\endeqnarray
```

To remember whether the starred environment was used, and thus whether to number the equations:

```
10541 \newbool{\LWR@numbereqnarray}
10542 \booltrue{\LWR@numbereqnarray}
```

Common code used by `eqnarray` and `Beqnarray` (from `fancybox`):

```
10543 \newcommand{\LWR@eqnarrayfactor}{%
```

If `mathjax` or `FormatWP`, print the  $\LaTeX$  expression:

```
10544 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
10545 {%
```

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:

```
10546 \LWR@syncmathjax%
10547 \boolfalse{LWR@amsmultline}%
10548 \ifbool{LWR@numbereqnarray}%
10549 {%
```

If numbering the equations, execute a copy inside an `HTML` comment block:

```
10550 \LWR@beginhideamsmath%
10551 \LWR@origeqnarray%
10552 \BODY%
10553 \LWR@origendeqnarray%
10554 \LWR@endhideamsmath%
```

Then print the (sanitized) contents to the output for `MATHJAX` to interpret:

```
10555 \LWR@addmathjax{eqnarray}{\BODY}%
10556 }%
10557 {% not LWR@numbereqnarray
```

If not numbering equations, just create the contents for `MATHJAX`:

```
10558 \LWR@addmathjax{eqnarray*}{\BODY}%
10559 }% LWR@numbereqnarray
10560 }% mathjax
10561 {% not mathjax
10562 \ifbool{LWR@numbereqnarray}%
10563 {%
```

For numbered `svg` equations, first create a `latex` image with an `alt` attribute containing sanitized copy of the source code:

```
10564 \begin{BlockClass}{displaymathnumbered}%
10565 \LWR@newautoanchor%
10566 \booltrue{LWR@indisplaymathimage}%
10567 \begin{lateximage}[(\LWR@startingequationtag--\LWR@equationtag)%
10568 \LWR@addmathjax{eqnarray}{\BODY}]*%
```

Support for `xfakebold`:

```
10569 \LWR@applyxfakebold%
```

Create the image contents using an actual `eqnarray`:

```
10570 \LWR@origeqnarray%
```

```

10571 \BODY%
10572 \LWR@origendeqnarray%
10573 \end{lateximage}%
10574 \end{BlockClass}%
10575 }%
10576 {% not LWR@numbereqnarray

```

If not numbered, do the same, but an extra `\nonumber` seems to be required:

```

10577 \begin{BlockClass}{displaymath}%
10578 \LWR@newautoidanchor%
10579 \booltrue{LWR@indisplaymathimage}%
10580 \begin{lateximage}[\LWR@addmathjax{eqnarray*}{\BODY}]*%

```

Support for `xfakebold`:

```

10581 \LWR@applyxfakebold%

10582 \def\@eqnrcr{\nonumber\@seqnrcr}
10583 \csuse{LWR@origeqnarray}%
10584 \BODY%
10585 \nonumber\csuse{LWR@origendeqnarray}%
10586 \end{lateximage}%
10587 \end{BlockClass}%
10588 }% LWR@numbereqnarray
10589 }% not mathjax

```

Default to number equations in the future:

```

10590 \booltrue{LWR@numbereqnarray}%

```

Clear the single-use `alt` text:

```

10591 \gdef\LWR@ThisAltText{}%
10592 }

```

`eqnarray` itself is made with a blank line before and after to force it to be on its own line:

```

10593 \RenewEnviron{eqnarray}
10594 {%
10595
10596 \LWR@eqnarrayfactor
10597
10598 }

```

The starred version is patched to turn off the numbering:

```

10599 \csgpreto{eqnarray*}{\boolfalse{LWR@numbereqnarray}}

10600 \end{warpHTML}

```

## 80 Lateximages

### 80.1 Description

**Env** `lateximage` A `lateximage` is a piece of the document which is typeset in  $\LaTeX$  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 78.)

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 `lwarpmk` 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 `<span>` is created to hold both the HTML comment, which will have the `pdftotext` conversion, and also the link to the final `.svg` image.

A  $\LaTeX$  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  $\LaTeX$  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 `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.

**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 `\LateximageFontScale`, which defaults to:

```
\newcommand*{\LateximageFontScale}{.75}
```

## 80.2 Support counters and macros

**for HTML output:** 10601 `\begin{warpHTML}`

Ctrl LWR@lateximagenumber Sequence the images.

```
10602 \newcounter{LWR@lateximagenumber}
10603 \setcounter{LWR@lateximagenumber}{0}
```

Ctrl LWR@lateximagedepth Do not create `\lateximage` inside of `\lateximage`.

```
10604 \newcounter{LWR@lateximagedepth}
10605 \setcounter{LWR@lateximagedepth}{0}
```

A few utility macros to write special characters:

```
10606 \edef\LWR@hashmark{\string#} % for use in \write
10607 \edef\LWR@percent{\@percentchar} % for use in \write
```

Ctrl LWR@LIpage Used to reference the PDF page number of a `lateximage` to be written into `<project>-images.txt`.

```
10608 \newcounter{LWR@LIpage}
```

```
10609 \end{warpHTML}
```

## 80.3 Font size

**for HTML & PRINT:** 10610 `\begin{warpall}`

`\LateximageFontSizeName` Declares how large to write text in `\lateximages`. 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.

```
10611 \newcommand*{\LateximageFontSizeName}{normalsize}
```

`\LateximageFontScale` 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.

```
10612 \newcommand*{\LateximageFontScale}{1}
10613 \end{warpall}
```

## 80.4 Equation numbers

**for HTML output:** 10614 \begin{warpHTML}

**Ctrl** LWR@startingequation For use with `lateximage` and multi-line numbered equations. Remembers the next equation number so that it may be printed in the alt tag.

```
10615 \newcounter{LWR@startingequation}
10616
10617 \@ifundefined{chapter}
10618 {
10619 \renewcommand{\theLWR@startingequation}{%
10620 \arabic{LWR@startingequation}%
10621 }
10622 }
10623 {% chapter defined
10624 \renewcommand{\theLWR@startingequation}{%
10625 \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}{}%
10626 \arabic{LWR@startingequation}%
10627 }
10628 }
```

**Bool** LWR@isstartingequation True for the first equation tag, false for later tags in the same environment.

```
10629 \newbool{LWR@isstartingequation}
```

**\LWR@startingequationtag** Prints the starting equation number or tag.

```
10630 \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@remember tag`.

```
10631 \newcommand*{\LWR@equationtag}{}
```

Only if `svg math`, patch `\tag` after packages have loaded, in case someone else modified `\tag`.

```
10632 \AtBeginDocument{
10633
10634 \ifbool{mathjax}{}{% not mathjax
```

**\LWR@remember tag**  $\langle tag \rangle$

For use inside the math environments while using `svg math`. Sets `\theLWR@startingequation` and `\theequation` to the given tag.

```

10635 \NewDocumentCommand{\LWR@remembertag}{m}{%
10636 \ifbool{LWR@isstartingequation}%
10637 {%
10638 \global\boolfalse{LWR@isstartingequation}%
10639 \xdef\LWR@startingequationtag{#1}%
10640 }{}%
10641 \xdef\LWR@equationtag{#1}%
10642 }%

10643 }% not mathjax
10644 }% AtBeginDocument

```

## 80.5 HTML alt tags

`\LWR@amsmathbody`  $\langle envname \rangle$  For use inside the optional argument to a `lateximage` to add the contents of an AMS math environment to the `<alt>` tag.

```

10645 \newcommand*{\LWR@amsmathbody}[1]
10646 {%
10647 \textbackslash\{begin\}\{#1\} % extra space
10648 \LWR@HTMLSanitizeExpand{\detokenize\expandafter{\the\envbody}}%
10649 \textbackslash\{end\}\{#1\}%
10650 }

```

`\LWR@amsmathbodynumbered`  $\langle envname \rangle$  For use inside the optional argument to a `lateximage` to add the contents of an AMS math environment to the `alt` tag, prefixed by the equation numbers.

```

10651 \newcommand*{\LWR@amsmathbodynumbered}[1]
10652 {%
10653 \ifnumcomp{\value{LWR@startingequation}}{=}{\value{equation}}%
10654 {(\LWR@equationtag)}%
10655 {(\LWR@startingequationtag--\LWR@equationtag)} % extra space
10656 \LWR@amsmathbody{#1} % extra space
10657 }

```

## 80.6 lateximage environment

`\LWR@lateximage@oneimageb`  $\langle 1: alt text \rangle \langle 2: filename \rangle \langle 3: CSS style \rangle$  Creates the image for the `lateximage`.

```

10658 \newcommand{\LWR@lateximage@oneimageb}[3]{%
10659 \LWR@subinlineimage{#1}{lateximage}%
10660 {%
10661 \LWR@print@mbox{%
10662 \LWR@ImagesDirectory\OSPathSymbol%
10663 #2%
10664 }%

```

```
10665 }{svg}{#3}%
10666 }
```

```
\LWR@lateximage@oneimage {<1: alt text>} {<2: filename>} {<3: css style>} {<4: delimit?>}
```

Creates an image for the `lateximage`, whose `alt` text depends on the circumstances.

```
10667 \newcommand{\LWR@lateximage@oneimage}[4]{%
10668 \ifdefvoid{\LWR@ThisAltText}{%
10669 \IfBooleanTF{#4}{%
10670 \LWR@lateximage@oneimageb{#1}{#2}{#3}%
10671 }{%
10672 \LWR@lateximage@oneimage%
10673 {\AltTextOpen#1\AltTextClose}%
10674 {#2}{#3}%
10675 }%
10676 }{%
10677 \LWR@lateximage@oneimageb%
10678 {\AltTextOpen\LWR@ThisAltText\AltTextClose}%
10679 {#2}{#3}%
10680 }%
10681 }
```

```
Env lateximage * [<2: <alt> tag>] * [<4: add'l hashing>] [<5: css style>]
```

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 duplicated in the additional hashing argument.

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.

```
File *_html.aux 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.

```
File *-images.txt 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.

```
10682 \catcode'\$=\active%
10683
10684 \NewDocumentEnvironment{lateximage}{s O{\ImageAltText} s O{} O{}}
10685 {%
10686 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
10687 \LWR@traceinfo{lateximage: entering depth is \arabic{LWR@lateximagedepth}}%
```

Nested lateximages remain one large lateximage:

```
10688 \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.

```
10689 {%
10690 % \addtocounter{LWR@lateximagedepth}{1}%
10691 \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
10692 }%
```

Otherwise, this is the outer-most lateximage:

```
10693 {% start of outer-most lateximage
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

```
10694 \LWR@traceinfo{lateximage: starting outer-most lateximage}%
10695 \setcounter{LWR@startingequation}{\value{equation}}%
10696 \addtocounter{LWR@startingequation}{1}%
10697 \booltrue{LWR@isstartingequation}%
10698 \let\LWR@startingequationtag\theLWR@startingequation%
```

The default equation tag, unless overwritten by `\tag`:

```
10699 \let\LWR@equationtag\theequation%
```

Starting a new lateximage:

```
10700 \addtocounter{LWR@lateximagenumber}{1}%
10701 \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}%
```

While inside a lateximage, locally do not use `mathjax`:

```
10702 \boolfalse{mathjax}%
```

Be sure that are doing a paragraph:

```
10703 \LWR@ensuredoingapar%
```

Next file:

```
10704 \addtocounter{LWR@externalfilecnt}{1}%
10705 \LWR@traceinfo{lateximage: 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 `LWRlateximage-BaseJobname-XXX`:

```
10706 \setcounterpageref{LWR@LIpage}{%
10707 LWRlateximage-\BaseJobname-\arabic{LWR@lateximagenumber}%
10708 }%
10709 \LWR@traceinfo{lateximage: 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:

```
10710 \LWR@htmltag{span\LWR@indentHTML%
10711 id="lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}"\LWR@indentHTML
10712 class="lateximagesource"\LWR@originewline
10713 }%
```

Write instructions to the `<ImagesDirectory>.txt` file:

```
10714 \LWR@traceinfo{lateximage: about to write to \BaseJobname-images.txt}%
10715 \IfBooleanTF{#1}% starred
10716 {% hash
```

Compute and save the hashed file name for later use:

```
10717 \ifdefvoid{\LWR@ThisAltText}{%
10718 \IfBooleanTF{#3}{%
10719 \edef\LWR@hashedname{%
10720 \LWR@mdfive{\detokenize\expandafter{#2}-!-#4}%
10721 }%
10722 }{%
10723 \edef\LWR@hashedname{%
10724 \LWR@mdfive{\detokenize\expandafter{\AltTextOpen#2\AltTextClose}-!-#4}%
10725 }%
10726 }%
10727 }{%
10728 \edef\LWR@hashedname{%
10729 \LWR@mdfive{\detokenize\expandafter{\AltTextOpen\LWR@ThisAltText\AltTextClose}-!-#4}%
10730 }%
10731 }%
10732 \LWR@traceinfo{lateximage: hash is \LWR@hashedname}%
```

Write the page, hashing, and hashed name:

```
10733 \immediate\write\LWR@lateximagesfile{%
10734 |\arabic{LWR@LIpage}|true|\LWR@hashedname|%
10735 }%
10736 }% hash
```

```
10737 {% no hash
```

No hash, so write the page, no hashing, and the image number:

```
10738 \LWR@traceinfo{lateximage: hash false}%
10739 \immediate\write\LWR@lateximagesfile{%
10740 |\arabic{LWR@Lpage}|false|\LWR@ImagesName\arabic{LWR@externalfilecnt}}|}%
10741 }%
10742 }% no hash
```

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by *pdftotext*.

```
10743 \LWR@traceinfo{lateximage: about to create open comment}%
10744 \LWR@htmlopencomment%
```

One level deeper. At this outer-most lateximage, it is known that this is not being used inside an  $\mathcal{A}\mathcal{M}\mathcal{S}$  \text, since the outer-most level will never be in math mode.

```
10745 \addtocounter{LWR@lateximagedepth}{1}%
```

Start the new PDF page:

```
10746 \LWR@traceinfo{lateximage: about to create a new page}%
10747 \LWR@orignewpage%
```

If the current page is larger, typeset the image in a “standard” width page and font size:

```
10748 \LWR@traceinfo{lateximage: about to create minipage}%
10749 \ifdimless{\linewidth}{6in}{%
10750 \LWR@print@minipage{\linewidth}%
10751 }{%
10752 \LWR@print@minipage{6in}%
10753 }%
10754 \@nameuse{LWR@print@\LateximageFontSizeName}%
```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for \hspace, etc. inside a lateximage.

```
10755 \LWR@traceinfo{lateximage: about to temporarily restore formatting}%
10756 \LWR@restoreorigformatting%
```

Use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

```
10757 \def\@mpfn{footnote}%
10758 \def\thempfn{\thefootnote}%
10759 \LetLtxMacro\@footnotetext\LWR@footnotetext%
```

Create the LWRlateximage<number> label:

```
10760 \LWR@traceinfo{lateximage: about to create label}%
10761 \LWR@orig@label{LWRlateximage-\BaseJobname-\arabic{LWR@lateximagenumber}}}%
10762 \LWR@traceinfo{lateximage: finished creating the label}%
```

Adjust the rule color to match HTML:

```
10763 \ifdefvoid{\LWR@ruleHTMLcolor}{}{%
10764 \LWR@print@arrayrulecolor[HTML]{\LWR@ruleHTMLcolor}%
10765 }
```

Enable print-mode math functions:

```
10766 \LetLtxMacro$\LWR@origdollar%
10767 \catcode'\$=3% math shift
10768 \LetLtxMacro\(\LWR@origopenparen%
10769 \LetLtxMacro\)\LWR@origcloseparen%
```

Only enable print-mode display math if are not already inside display math:

```
10770 \ifbool{\LWR@indisplaymathimage}{}{% not in display math
10771 \LetLtxMacro[\LWR@origopenbracket%
10772 \LetLtxMacro\]\LWR@origclosebracket%
10773 \let\equation\LWR@origequation%
10774 \let\endequation\LWR@origendequation%
10775 \csletcs{equation*}{LWR@origequation*}%
10776 \csletcs{endequation*}{LWR@origendequation*}%
10777 }
```

For chemformula:

```
10778 \LetLtxMacro\LWR@newsingledollar$%
10779 \LetLtxMacro\LWR@newsingledollar$% syntax highlighting

10780 }% end of outer-most lateximage
10781 \LWR@traceinfo{lateximage: finished start of environment}%
10782 }% end of \begin{lateximage}
```

`\endlateximage` When the environment closes:

```
10783 {% start of \end{lateximage}
10784 \LWR@traceinfo{lateximage: starting end of lateximage}%
```

Nested more than one deep?

```
10785 \LWR@traceinfo{lateximage: internal depth was \arabic{\LWR@lateximagedepth}}%
10786 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{1}%
```

If nesting inside an already existing lateximage, simply record one less level. Uses a lower-level T<sub>E</sub>X macro due to  $\mathcal{A}\mathcal{M}\mathcal{S}$  `\text` change of `\addtocounter`.

```
10787 {%
10788 \LWR@traceinfo{lateximage: unnesting}%
10789 \global\advance\c@LWR@lateximagedepth -1\relax%
10790 }
```

If this is the outer-most lateximage:

```
10791 {% end of outer-most lateximage
```

Finish the lateximage minipage and start a new PDF page:

```
10792 \LWR@traceinfo{lateximage: ending outer-most lateximage}%
10793 \endLWR@print@minipage%
10794 \LWR@orignewpage%
```

Close the HTML comment which encapsulated any traces of the lateximage picked up by *pdfotext*:

```
10795 \LWR@print@vspace*{.5\baselineskip}%
10796 \LWR@htmlclosecomment%
10797 \LWR@traceinfo{lateximage: The page after the image is \arabic{page}}%
```

Create a link to the lateximage, allowing its natural height:

```
10798 \IfBooleanTF{#1}% starred
10799 {% hash
10800 \LWR@lateximage@oneimage{#2}{\LWR@hashedname}{#5}{#3}%
10801 }% hash
10802 {% no hash
10803 \LWR@lateximage@oneimage{#2}{\LWR@ImagesName\theLWR@externalfilecnt}{#5}{#3}%
10804 }% no hash
```

Be sure that are doing a paragraph:

```
10805 \LWR@ensuredoingapar%
```

Close the HTML span which has the *pdfotext* comment and also the link to the .svg image:

```
10806 \LWR@htmltag{/span}%
10807 \ifbool{HTMLDebugComments}{%
10808 \LWR@htmlcomment{End of lateximage}%
10809 }{%}
```

Undo one lateximage level. This is not inside an  $\mathscr{AMS}$  \text, so regular \addtocounter may be used here.

```
10810 \addtocounter{LWR@lateximagedepth}{-1}%
```

Clear the single-use alt text:

```
10811 \gdef\LWR@ThisAltText{}%
10812 }% end of outer-most lateximage
10813 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
10814 \LWR@traceinfo{lateximage: done}%
10815 }%
10816 \catcode'\$=3% math shift
10817 \end{warpHTML}
```

**for PRINT output:** 10818 \begin{warpprint}

Env lateximage \* [<alt> tag] \* [<add'l hashing>] [<css style>]

`varwidth` is used to create a box of the natural width of its contents.

```
10819 \NewDocumentEnvironment{lateximage}{s o s o o}
10820 {\begin{varwidth}[b]{\linewidth}}
10821 {\end{varwidth}}

10822 \end{warpprint}
```

## 81 center, flushleft, flushright

**for HTML output:** 10823 `\begin{warpHTML}`

Env `center` Replace center functionality with CSS tags:

```
10824 \renewenvironment*{center}
10825 {
10826 \LWR@forcenewpage
10827 \ifbool{FormatWP}
10828 {\BlockClass[\LWR@print@mbx{text-align:center}]{center}}
10829 {\BlockClass{center}}
10830 }
10831 {\endBlockClass}
```

Env `flushright`

```
10832 \renewenvironment*{flushright}
10833 {
10834 \LWR@forcenewpage
10835 \ifbool{FormatWP}
10836 {\BlockClass[\LWR@print@mbx{text-align:right}]{flushright}}
10837 {\BlockClass{flushright}}
10838 }
10839 {\endBlockClass}
```

Env `flushleft`

```
10840 \renewenvironment*{flushleft}
10841 {
10842 \LWR@forcenewpage
10843 \ifbool{FormatWP}
10844 {\BlockClass[\LWR@print@mbx{text-align:left}]{flushleft}}
10845 {\BlockClass{flushleft}}
10846 }
10847 {\endBlockClass}
```

`\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`

```
10848 \newcommand*{\LWR@HTML@centering}{%
10849 \ifbool{HTMLDebugComments}{%
10850 \LWR@htmlcomment{centering}%
10851 }{}%
10852 }
10853 \LWR@formatted{centering}
```

`\raggedleft`

```
10854 \newcommand*{\LWR@HTML@raggedleft}{%
10855 \ifbool{HTMLDebugComments}{%
10856 \LWR@htmlcomment{raggedleft}%
10857 }{}%
10858 }
10859 \LWR@formatted{raggedleft}
```

`\raggedright`

```
10860 \newcommand*{\LWR@HTML@raggedright}{%
10861 \ifbool{HTMLDebugComments}{%
10862 \LWR@htmlcomment{raggedright}%
10863 }{}%
10864 }
10865 \LWR@formatted{raggedright}
```

`\leftline {<text>}`

```
10866 \renewcommand{\leftline}[1]{\begin{flushleft}#1\end{flushleft}}
```

`\centerline {<text>}`

```
10867 \renewcommand{\centerline}[1]{\begin{center}#1\end{center}}
```

`\rightline {<text>}`

```
10868 \renewcommand{\rightline}[1]{\begin{flushright}#1\end{flushright}}
```

```
10869 \end{warpHTML}
```

## 82 Preloaded packages

**for HTML output:** 10870 `\begin{warpHTML}`

If the given package was loaded before or by lwarp, load the lwarp version as well.

`\LWR@PreloadedPackage {<packagename>}`

```

10871 \newcommand*{\LWR@PreloadedPackage}[1]{%
10872 \@ifpackageloaded{#1}%
10873 {%
10874 \AtBeginDocument{
10875 \LWR@origRequirePackage{lwarp-#1}%
10876 }
10877 }%
10878 {}%
10879 }

```

If `inputtrc` was loaded before `lwarp`, as is usually done, explicitly load the `lwarp` patches now:

```
10880 \LWR@PreloadedPackage{inputtrc}
```

If `textcomp` was loaded before `lwarp`, perhaps as part of the font-related packages, explicitly load the `lwarp` patches now:

```
10881 \LWR@PreloadedPackage{textcomp}
```

If `xunicode` was loaded before `lwarp`, perhaps as part of the font-related packages, explicitly load the `lwarp` patches now:

```
10882 \LWR@PreloadedPackage{xunicode}
```

If `graphics` or `graphicx` were loaded before `lwarp`, perhaps by `xunicode`, explicitly load the `lwarp` patches now:

```
10883 \LWR@PreloadedPackage{graphics}
```

```
10884 \LWR@PreloadedPackage{graphicx}
```

`fontaxes` must be preloaded so that `lwarp` may patch it for `HTML`.

```
10885 \LWR@PreloadedPackage{fontaxes}
```

`nfssect-cfr` may be preloaded by `cfm-lm` or related font packages.

```
10886 \LWR@PreloadedPackage{nfssect-cfr}
```

`ulem` may be preloaded by `ctex`, `ctexart`, and related classes.

```
10887 \LWR@PreloadedPackage{ulem}
```

`xetexko-vertical` may be preloaded by `xetexko`.

```
10888 \LWR@PreloadedPackage{xetexko-vertical}
```

`geometry` is preloaded by `lwarp`, and perhaps by various classes.

```
10889 \LWR@PreloadedPackage{geometry}
```

`plext` is preloaded by some CJK classes.

```
10890 \LWR@PreloadedPackage{plext}
```

`stfloats` is preloaded by `ltj*` classes.

```
10891 \LWR@PreloadedPackage{stfloats}
```

`lltjext` is preloaded by `ltj*` classes.

```
10892 \LWR@PreloadedPackage{lltjext}
```

```
10893 \end{warpHTML}
```

## 83 siunitx

`Pkg siunitx` The `lwarp` core passes a few options to `siunitx`.

**fractions** Due to *pdftotext* limitations, fraction output is replaced by symbol output for `per-mode` and `quotient-mode`.

 **math mode required** Some units will require that the expression be placed inside math mode.

 **tabular** Tabular `S` columns are rendered as simple `c` columns, and tabular `s` columns are not supported. These may be replaced by `c` columns with each cell contained in `\num` or `\si`.

 **MathJax** For math mode with `svg` display, the original `siunitx` code is used while generating the `svg` image. For text mode, `lwarp` uses an emulation which provides a very effective `HTML` interpretation of `siunitx`. For math expressions while using `MATHJAX`, a limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. `siunitx` macros with more than one optional value cannot absorb the second optional value, and complicated parsing such as for `\ang` is not supported. The result usually looks fine, and otherwise is enough to get the meaning across.

`lwarp`'s `MATHJAX` emulation for `siunitx` is meant to be a stop-gap measure until an extension is included in `MATHJAX`. As of this writing, the third-party `siunitx` extension for `MATHJAX` is not currently hosted at any public CDN, thus `siunitx` is not usable with this extension unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom `MathJax` script, but `lwarp`'s emulation would have to be disabled as well.

Document modifications required for `MATHJAX`:

**custom units** • Custom units may be added with `\CustomizeMathJax`. See the `lwarp-siunitx` code for examples.

 **unit spacing** • 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.

Also see **MATHJAX option**, section 8.7.4.

**for HTML output:** 10894 \begin{warpHTML}

Options for siunitx:

```
10895 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}C}
10896 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
10897 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLunicode{2032}}
10898 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLunicode{2033}}
10899 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLunicode{0127}}}}
10900
10901 \appto\LWR@restoreorigformatting{%
10902 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}C}}%
10903 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}%
10904 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}%
10905 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{^\prime\prime}}}%
10906 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}%
10907 }
10908
10909 \PassOptionsToPackage{
10910 detect-mode=true,
10911 per-mode=symbol,% fraction is not seen by pdftotext
10912 text-celsius = {\LWR@siunitx@textcelsius},
10913 text-degree = {\LWR@siunitx@textdegree},
10914 text-arcminute = {\LWR@siunitx@textprime} ,
10915 text-arcsecond = {\LWR@siunitx@textdblprime} ,
10916 }{siunitx}

10917 \end{warpHTML}
```

## 84 Graphics print-mode modifications

### 84.1 General limitations

 **scale** Avoid using the `\includegraphics scale` option. Change:

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

to:

```
\includegraphics[width=<yy>\linewidth]{...}
```

**`\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, `lwarp` 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
```

Prog `pdftocairo` To convert a PDF image to SVG, use the utility *pdftocairo*:

PDF to SVG

Enter ⇒ **`pdftocairo -svg filename.pdf`**

Prog `lwarpmk pdftosvg` For a large number of images, use *lwarpmk*:

Enter ⇒ **`lwarpmk pdftosvg *.pdf`** (or a list of filenames)

Prog `lwarpmk epstopdf` For EPS images converted to PDF using the package `epstopdf`, use

Prog `epstopdf`

`epstopdf` package

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.

△ **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 `lwarp`—the entire image will be shown.

△ **viewport**

△ **viewport 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.

HTML class With HTML output, `\includegraphics` accepts an optional `class=xyz` keyval combi-

nation, 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`.

`\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<sup>A</sup>T<sub>E</sub>X, so expect some ugly results for scaling and rotating.

## 84.2 Print-mode modifications

**for PRINT output:** For print output, accept and then discard the new class key:

```
10918 \begin{warpprint}
10919 \define@key{Gin}{class}{}
10920 \define@key{Gin}{alt}{}

```

Print-mode additions for the `overpic` package. See section 391 for the HTML version.

```
10921 \AtBeginDocument{
10922 \ifpackageloaded{overpic}{
10923 \newcommand*\overpicfontsize{12}
10924 \newcommand*\overpicfontskip{14}
10925 }{}
10926 }
10927 \end{warpprint}

```

## 85 xcolor boxes

**Pkg** `xcolor` 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` definitions. These are defined inside `warppall` because they are also used for HTML while inside a `lateximage`. 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 & PRINT:** 10928 `\begin{warppall}`

After `xparse` may have been loaded ...

```
10929 \AtBeginDocument{

```

... and *only* if xcolor was loaded:

```
10930 \@ifpackageloaded{xcolor}{
10931 \LWR@traceinfo{patching xcolor}
```

The print version:

`\colorboxBlock` `\colorboxBlock` is the same as `\colorbox`:

```
10932 \LetLtxMacro\colorboxBlock\colorbox
```

The original definition is reused by the new versions:

```
10933 \LetLtxMacro\LWR@orig@print@fcolorbox\fcolorbox
```

```
\fcolorbox [framemodel] [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`.)

```
10934 \newsavebox{\LWR@colorminipagebox}
10935
10936 \NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%
10937 \LWR@traceinfo{\LWR@print@fcolorbox #2 #4}%
```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```
10938 \begin{lrbox}{\LWR@colorminipagebox}%
10939 #5%
10940 \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.

```
10941 \ifstrequal{#4}{none}%
10942 {% #4 none
10943 \LWR@traceinfo{background is none}%
10944 {% scope the \colorlet
10945 \colorlet{\LWR@currentcolor}{.}%
10946 \color{#2}%
10947 \fbox{%
10948 \color{\LWR@currentcolor}%
10949 \usebox{\LWR@colorminipagebox}%
10950 }% fbox
10951 }% colorlet
10952 }% #4 none
10953 {% #4 not none
10954 \LWR@traceinfo{background not none}%
```

```

10955 \IfValueTF{#1}%
10956 {%
10957 \IfValueTF{#3}%
10958 {\LWR@orig@print@fcolorbox[#1][#2][#3][#4]{\usebox{\LWR@colorminipagebox}}}%
10959 {\LWR@orig@print@fcolorbox[#1][#2][#4]{\usebox{\LWR@colorminipagebox}}}%
10960 }%
10961 {% no value #1
10962 \IfValueTF{#3}%
10963 {\LWR@orig@print@fcolorbox[#2][#3][#4]{\usebox{\LWR@colorminipagebox}}}%
10964 {\LWR@orig@print@fcolorbox[#2][#4]{\usebox{\LWR@colorminipagebox}}}%
10965 }% no value #1
10966 }% #4 not none
10967 \LWR@traceinfo{\LWR@print@fcolorbox done}%
10968 }

10969 \renewrobustcmd*{\fcolorbox}{\LWR@print@fcolorbox}%

```

`\fcolorboxBlock` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

In print mode, `\fcolorboxBlock` is the same as `\fcolorbox`.

```

10970 \newcommand*{\LWR@print@fcolorboxBlock}{\LWR@print@fcolorbox}

10971 \newrobustcmd*{\fcolorboxBlock}{\LWR@print@fcolorboxBlock}

```

Env `fcolorminipage` [*1:framemodel*] [*2:framecolor*] [*3:boxmodel*] [*4:boxcolor*] [*5:align*] [*6:height*] [*7:inner-align*] [*8:width*]

In print mode, becomes a `\fcolorbox` containing a minipage:

```

10972 \NewDocumentEnvironment{LWR@print@fcolorminipage}{o m o m O{c} O{ } o m}
10973 {%
10974 \LWR@traceinfo{*** fcolorminipage: #2 #4 #8}%

```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```

10975 \begin{lrbox}{\LWR@colorminipagebox}%

```

If inner alignment is not given, use the outer alignment instead:

```

10976 \IfValueTF{#7}%
10977 {\begin{minipage}[#5][#6][#7]{#8}}%
10978 {\begin{minipage}[#5][#6][#5]{#8}}%
10979 }%
10980 {%
10981 \end{minipage}%
10982 \end{lrbox}%
10983 \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.

```

10984 \ifstrequal{#4}{none}%
10985 {% #4 none
10986 {% scope the \colorlet
10987 \colorlet{LWR@currentcolor}{.}%
10988 \color{#2}%
10989 \fbox{%
10990 \color{LWR@currentcolor}%
10991 \usebox{LWR@colorminipagebox}%
10992 }% fbox
10993 }% colorlet
10994 }% #4 none
10995 {% #4 not none
10996 \IfValueTF{#1}%
10997 {%
10998 \IfValueTF{#3}%
10999 {\LWR@orig@print@fcolorbox[#1][#2][#3][#4]{\usebox{LWR@colorminipagebox}}}%
11000 {\LWR@orig@print@fcolorbox[#1][#2][#4]{\usebox{LWR@colorminipagebox}}}%
11001 }%
11002 {% no value #1
11003 \IfValueTF{#3}%
11004 {\LWR@orig@print@fcolorbox[#2][#3][#4]{\usebox{LWR@colorminipagebox}}}%
11005 {\LWR@orig@print@fcolorbox[#2][#4]{\usebox{LWR@colorminipagebox}}}%
11006 }% no value #1
11007 }% #4 not none
11008 \LWR@traceinfo{*** finished end fcolorminipage}%
11009 }

11010 \NewDocumentEnvironment{fcolorminipage}{}
11011 {\LWR@print@fcolorminipage}
11012 {\endLWR@print@fcolorminipage}

11013 \LWR@traceinfo{xcolor patches done}
11014 }{% xcolor loaded
11015 }% AtBeginDocument

11016 \end{warppall}

```

## 86 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 output:** 11017 `\begin{warpprint}`

```

11018 \AtBeginDocument{
11019 \@ifpackageloaded{chemmacros}{

```

Env polymerdelims

```
11020 \DeclareDocumentEnvironment{polymerdelims}{}
11021 {}{}
```

Env redoxreaction  $\{\langle space above \rangle\} \{\langle space below \rangle\}$

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 177.4.

```
11022 \DeclareDocumentEnvironment{redoxreaction}{m m}
11023 {\rule{0pt}{#1}}{\rule[-#2]{0pt}{#2}}

11024 }{}% chemmacros
11025 }% AtBeginDocument

11026 \end{warpprint}
```

## 87 cleveref

Pkg cleveref cleveref package is used as-is with minor patches.

 **cleveref page numbers** 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 558 to redefine the message which is printed for page number references.

**loading order** cleveref and the following 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 lwarp 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 lwarp’s additional loading of cleveref will have no effect.

Table 12 on page 478 shows the data structure of the label/reference system as revised by lwarp and cleveref.

A few patches allow cleveref to work as-is:

**for HTML output:** 11027 `\begin{warppHTML}`

`\AtEndPreamble` forces `cleveref` to be loaded last:

```
11028 \AtEndPreamble{
11029 \RequirePackage{cleveref}
11030 }
```

The following patches are applied after `cleveref` has loaded, and after `\AtBeginDocument`. Print-mode versions are not required since they all come down to `\ref` eventually, and `\ref` has a print-mode version.

```
11031 \AfterEndPreamble{
11032 \LWR@traceinfo{Patching cleveref.}
```

```
\@@@setcref {<kindofref>} {<label>}
```

`\@templabel` becomes the section number.

```
11033 \def\LWR@orig@@@setcref#1#2{\cref@getlabel{#2}{\@templabel}#1{\@templabel}{}}%
11034
11035 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% before v0.21
11036 \renewcommand*\@@@setcref}[2]{#1{\ref{#2}}{}}
11037 }{
11038 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
11039 \renewcommand*\@@@setcref}[2]{#1{\ref{#2}}{}}
11040 }{
11041 \PackageWarning{lwarp-cleveref}{
11042 Unknown version of cleveref.
11043 \protect\cref\space will fail.
11044 }%
11045 }
11046 }
```

```
\@@@setcrefrange {<text>} {<label>} {<label>}
```

```
11047 \def\LWR@orig@@@setcrefrange#1#2#3{%
11048 \cref@getlabel{#2}{\@labela}%
11049 \cref@getlabel{#3}{\@labelb}%
11050 #1{\@labela}{\@labelb}{}}%
11051
11052 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
11053 \renewcommand{\@@@setcrefrange}[3]{%
11054 #1{\ref{#2}}{\ref{#3}}{}}%
11055 }
11056 }{
11057 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
11058 \renewcommand{\@@@setcrefrange}[3]{%
11059 #1{\ref{#2}}{\ref{#3}}{}}%
11060 }
11061 }{
11062 \PackageWarning{lwarp-cleveref}{
11063 Unknown version of cleveref.
11064 \protect\crefrange\space will fail.

```

```

11065 }
11066 }
11067 }
11068

```

`\cpagerefFor` Redefinable word between “page(s)” and the page numbers.

```

11069 \newcommand*{\cpagerefFor}{for}

```

`\@@@setcpageref`  $\langle\textit{typeofref}\rangle$   $\langle\textit{label}\rangle$ , where *typeofref* is “page” or “pages”

```

11070 \def\LWR@orig@@setcpageref#1#2{% before v0.21
11071 \cref@getpageref{#2}{\@temppage}#1{\@temppage}{}}%
11072
11073 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
11074 \cpageref@getlabel{#2}{\@temppage}#1{\@temppage}{}}}%
11075
11076 \ifdefequal{\@@setcpageref}{\LWR@orig@@setcpageref}{
11077 \renewcommand*{\@@setcpageref}[2]{%
11078 #1{\cpagerefFor\ \cref{#2}}{}}}%
11079 }
11080 }{
11081 \ifdefequal{\@@@setcpageref}{\LWR@orig@@@setcpageref}{
11082 \renewcommand*{\@@@setcpageref}[2]{%
11083 #1{\cpagerefFor\ \cref{#2}}{}}}%
11084 }
11085 }
11086 {
11087 \PackageWarning{lwarp-cleveref}{
11088 Unknown version of cleveref.
11089 \protect\cpageref\space will fail.
11090 }
11091 }
11092 }

11093 \def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
11094 \cref@getpageref{#2}{\@pagea}%
11095 \cref@getpageref{#3}{\@pageb}%
11096 #1{\@pagea}{\@pageb}{}}}%
11097
11098 \def\LWR@orig@@@setcpagerefrange#1#2#3{% as of v0.21
11099 \cpageref@getlabel{#2}{\@pagea}%
11100 \cpageref@getlabel{#3}{\@pageb}%
11101 #1{\@pagea}{\@pageb}{}}}%
11102
11103 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
11104 \renewcommand*{\@@setcpagerefrange}[3]{%
11105 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{}}}%
11106 }
11107 }{
11108 \ifdefequal{\@@@setcpagerefrange}{\LWR@orig@@@setcpagerefrange}{
11109 \renewcommand*{\@@@setcpagerefrange}[3]{%
11110 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{}}}%

```

```

1111 }
1112 }
1113 {
1114 \PackageWarning{lwarp-cleveref}{
1115 Unknown version of cleveref.
1116 \protect\cpgerefrange\space will fail.
1117 }
1118 }
1119 }
1120
1121 }% AfterEndPreamble

```

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.

```

1122 \LetLtxMacro\LWR@orig@label\label
1123 \RenewDocumentCommand{\label}{}{\LWR@new@label}
1124
1125 \LetLtxMacro\LWR@orig@pageref\pageref
1126 \RenewDocumentCommand{\pageref}{}{\LWR@new@pageref}
1127 \end{warpHTML}

```

## 88 picture environment

Env `picture` The `picture` environment is enclosed inside a `\lateximage`.

for HTML output: `1128 \begin{warpHTML}`

Env `picture`

```

1129 \BeforeBeginEnvironment{picture}{\begin{lateximage}[picture]}
1130
1131 \AfterEndEnvironment{picture}{\end{lateximage}}
1132 \end{warpHTML}

```

## 89 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`, `\qquad`, `\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 `<span>`. An HTML `<div>` cannot appear inside a `<span>`. While in a `<span>`, 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 `lwarp` 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 `lwarp` 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 L<sup>A</sup>T<sub>E</sub>X PDF output they do not. Use a `flushleft` or similar environment in the child minipage to force a text alignment.

**for HTML output:** 11133 `\begin{warpHTML}`

## 89.1 Computed lengths

- Len `\LWR@minipagewidth` Used to convert the width into printable units.
- ```
11134 \newlength{\LWR@minipagewidth}
```
- Len `\LWR@minipageheight` Used to convert the height into printable units.
- ```
11135 \newlength{\LWR@minipageheight}
```

## 89.2 Virtual page size

Ctrl LWR@virtualpagedepth Used to only reset the line width at the outermost minipage.

```
11136 \newcounter{LWR@virtualpagedepth}
11137 \setcounter{LWR@virtualpagedepth}{0}
```

Env LWR@setvirtualpage \* [*columns*]

If not nesting a minipage, adjust `\linewidth`, `\textwidth`, and `\textheight` for a virtual  $6 \times 9$  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.

```
11138 \NewDocumentEnvironment{LWR@setvirtualpage}{s O{1}}{%
11139 \ifnumequal{\value{LWR@virtualpagedepth}}{0}{%
11140 \IfBooleanT{#1}{\LWR@orignewpage}%
11141 \setlength{\linewidth}{6in/#2}%
11142 \setlength{\textwidth}{6in}%
11143 \setlength{\textheight}{9in}%
11144 }{%
11145 \addtocounter{LWR@virtualpagedepth}{1}%
11146 }
11147 {\addtocounter{LWR@virtualpagedepth}{-1}}
```

## 89.3 Footnote handling

Also see section 59 for other forms of footnotes. Minipage footnotes are gathered in section 59.5, and then placed into the document in section 89.4.

## 89.4 Minipage handling

Bool LWR@minipagefullwidth Should the next minipage have no HTML width?

```
11148 \newbool{LWR@minipagefullwidth}
11149 \boolfalse{LWR@minipagefullwidth}
```

Bool LWR@forceminipagefullwidth 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`.

```
11150 \newbool{LWR@forceminipagefullwidth}
11151 \boolfalse{LWR@forceminipagefullwidth}
```

`\minipagefullwidth` Requests that the next minipage have no width tag in HTML:

**for HTML output:** 11152 \newcommand\*{\minipagefullwidth}{\global\booltrue{LWR@minipagefullwidth}}

\UseMinipageWidths Locally requests that minipage widths be honored.

```
11153 \newcommand*{\UseMinipageWidths}{\boolfalse{LWR@forceminipagefullwidth}}
```

\IgnoreMinipageWidths Locally requests that minipage widths be ignored.

```
11154 \newcommand*{\IgnoreMinipageWidths}{\booltrue{LWR@forceminipagefullwidth}}
```

```
11155 \end{warpHTML}
```

**for PRINT output:** 11156 \begin{warpprint}  
11157 \newcommand\*{\minipagefullwidth}{}  
11158 \newcommand\*{\UseMinipageWidths}{}  
11159 \newcommand\*{\IgnoreMinipageWidths}{}  
11160 \end{warpprint}

**for HTML output:** 11161 \begin{warpHTML}

Bool LWR@minipagethispar Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

```
11162 \newbool{LWR@minipagethispar}
```

```
11163 \boolfalse{LWR@minipagethispar}
```

Env minipage [*<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.

```
11164 \NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m m}
```

```
11165 {%
```

```
11166 \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.

```
11167 \begin{LWR@setvirtualpage}*%
```

Save the requested width now that \linewidth, etc. are adjusted to virtual size.

```
11168 \setlength{\LWR@minipagewidth}{#4}%
```

```
11169 \ifnumequal{\value{LWR@virtualpagedepth}}{1}{%
```

```
11170 \addtolength{\LWR@minipagewidth}{3em}% room for frames
```

```
11171 }{)%
```

```
11172 \LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%
```

Compute height:

```
11173 \setlength{\LWR@minipageheight}{\textheight}% default unless specified
11174 \ifblank{#2}{ }\setlength{\LWR@minipageheight}{#2}}%
```

L<sup>A</sup>T<sub>E</sub>X 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.

```
11175 \ifbool{FormatWP}{\newline}{}%
11176 \LWR@stoppars%
```

If FormatWP, add a text frame:

```
11177 \ifbool{FormatWP}{%
11178
11179 \addtocounter{LWR@thisautoidWP}{1}%
11180 \LWR@htmltag{%
11181 div id="\LWR@print@mbx{autoidWP-\arabic{LWR@thisautoidWP}}" %
11182 class="wminipage"%
11183 }%
11184
11185 }{}}%
```

Create the <div> tag with optional alignment style:

```
11186 \LWR@traceinfo{minipage: creating div class}%
11187 \LWR@htmltag{div class="minipage" style="%
11188 \ifthenelse{equal{#1}{t}}{\LWR@print@mbx{vertical-align:bottom} ; }{}}%
11189 \ifthenelse{equal{#1}{c}}{\LWR@print@mbx{vertical-align:middle} ; }{}}%
11190 \ifthenelse{equal{#1}{b}}{\LWR@print@mbx{vertical-align:top} ; }{}}%
11191 \ifthenelse{equal{#3}{t}}{\LWR@print@mbx{justify-content:flex-start} ; }{}}%
11192 \ifthenelse{equal{#3}{c}}{\LWR@print@mbx{justify-content:center} ; }{}}%
11193 \ifthenelse{equal{#3}{b}}{\LWR@print@mbx{justify-content:flex-end} ; }{}}%
11194 \ifthenelse{equal{#3}{s}}{\LWR@print@mbx{justify-content:space-between} ; }{}}%
```

Print the width and optional height styles:

```
11195 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
11196 \ifbool{LWR@minipagefullwidth}%
11197 {\global\boolfalse{LWR@minipagefullwidth}}%
11198 {%
11199 \ifbool{LWR@forceminipagefullwidth}%
11200 {}%
11201 {%
11202 \ifdimequal{#4}{\linewidth}%
11203 {}%
11204 {width:\LWR@printlength{\LWR@minipagewidth} ; }%
11205 }%
11206 }%
11207 \LWR@traceinfo{minipage: about to print the height}%
11208 \ifblank{#2}{ }\height:\LWR@printlength{\LWR@minipageheight} ; }%
11209 "%}
```

Finish with an empty line to start the contents on a new line.

```
11210
11211 % 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.

```
11212 \ifnumequal{\value{LWR@virtualpagedepth}}{1}{%
11213 \addtolength{\LWR@minipagewidth}{-3em}% undo frame padding
11214 }{%
11215 \setlength{\linewidth}{\LWR@minipagewidth}%
```

`\raggedright` cancels hyphenation, which will be done by HTML instead.

```
11216 \LWR@print@raggedright%
```

Set minipage footnotes:

```
11217 \def\@mpfn{mpfootnote}%
11218 \def\thempfn{\thempfootnote}\c@mpfootnote\z@%
11219 \let\@footnotetext\@mpfootnotetext%
```

Resume paragraph tag handling for the contents of the minipage:

```
11220 \LWR@startpars%
11221 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
11222
11223 === begin minipage ===
11224
11225 }{%
11226 \LWR@traceinfo{minipage: finished starting the minipage}%
11227 }% finished \minipage
11228 {% \endminipage
```

Print pending minipage footnotes:

```
11229 \LWR@printpendingmpfootnotes%
```

End the environment with closing tag:

```
11230 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
11231
11232 === end minipage ===
11233
11234 }{%
11235 \LWR@stoppars%
11236
11237 \ifbool{FormatWP}{%
11238
11239 \LWR@htmlElementend{div}%
```

```

11240
11241 }{}%
11242 \LWR@htmldivclassend{minipage}%
11243
11244 \end{LWR@setvirtualpage}%
11245 \LWR@startpars%
11246 \ifbool{FormatWP}{\newline}{}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

11247 \global\booltrue{LWR@minipagethispar}%
11248 \LWR@traceinfo{LWR@minipage: done}%
11249 }
11250
11251 \NewDocumentEnvironment{LWR@HTML@minipage}{0{t} 0{} 0{t} m}
11252 {\LWR@HTML@sub@minipage{#1}{#2}{#3}{#4}}
11253 {\endLWR@HTML@sub@minipage}
11254
11255 \LWR@formattedenv{minipage}

```

## 89.5 \parbox, \mbox, \makebox, \framebox, \fbox, \raisebox

for HTML output:

```
\parbox [pos] [height] [inner-pos] {width} {text}
```

A parbox uses the minipage code:

```

11256 \NewDocumentCommand{\LWR@HTML@parbox}{0{t} 0{} 0{t} m +m}
11257 {
11258 \LWR@traceinfo{parbox of width #4}%
11259 \begin{minipage}[#1][#2][#3]{#4}%
11260 #5
11261 \end{minipage}%
11262 }
11263
11264 \LWR@formatted{parbox}

```

```
\mbox {text} Nullified for HTML.
```

```

11265 \newcommand*{\LWR@HTML@mbox}[1]{#1}
11266
11267 \LWR@formatted{mbox}

```

```
\LWR@makebox@paren {width} , {height}
```

Adds to the style in \LWR@temptwo.

```

11268 \NewDocumentCommand{\LWR@makebox@paren}{m m}{%
11269 \IfValueTF{#2}{%
11270 \setlength{\LWR@tempwidth}{#1\unitlength}%

```

```

11271 \setlength{\LWR@tempheight}{#2\unitlength}%
11272 \appto{\LWR@temptwo}{%
11273 \LWR@print@mbx{width:\LWR@printlength{\LWR@tempwidth}} ; % space
11274 \LWR@print@mbx{height:\LWR@printlength{\LWR@tempheight}} ; % space
11275 }%
11276 }{%
11277 \PackageError{lwarp}%
11278 {(width,height) is missing a comma ',' character}%
11279 {\protect\makebox\space and \protect\framebox\space accept
11280 a size in the format (width,height).}%
11281 }%
11282 }

```

`\LWR@makebox@align` {<*alignment character*>}

Adds to the style in `\LWR@temptwo`.

```

11283 \newcommand*{\LWR@makebox@align}[1]{%
11284 \def\LWR@align{center}%
11285 \ifstrequal{#1}{l}{\def\LWR@align{left}}{%
11286 \ifstrequal{#1}{r}{\def\LWR@align{right}}{%
11287 \ifstrequal{#1}{s}{\def\LWR@align{justify}}{%
11288 \appto{\LWR@temptwo}{%
11289 \LWR@print@mbx{text-align:\LWR@align} ; %
11290 }%
11291 }

```

`\makebox` ((*width,height*)) [*width*] [*pos*] {<*text*>}

```

11292 \NewDocumentCommand{\LWR@HTML@makebox}{>{\SplitArgument{1}{,}}d() o o +m}{%

```

Build the style depending on arguments:

```

11293 \begin{LWR@setvirtualpage}%
11294 \def\LWR@temptwo{%
11295 \IfValueTF{#1}%
11296 {% (width,height) ..
11297 \LWR@makebox@paren #1%
11298 \IfValueT{#2}%
11299 {% (width,height) [posn]
11300 \LWR@makebox@align{#2}%
11301 }%
11302 }%
11303 {% [width]
11304 \IfValueT{#2}% [width]
11305 {%
11306 \setlength{\LWR@tempwidth}{#2}%
11307 \ifdimgreater{\LWR@tempwidth}{0pt}{%
11308 \appto{\LWR@temptwo}{%
11309 width:\LWR@printlength{\LWR@tempwidth} ; % space
11310 }%
11311 }{}%
11312 }%
11313 }%

```

```

11314 \IfValueT{#3}%
11315 {% [width] [posn]
11316 \LWR@makebox@align{#3}%
11317 }%
11318 \InlineClass[%
11319 \LWR@print@mbx{display:inline-block} ; %
11320 \LWR@temptwo%
11321]%
11322 {makebox}%
11323 {#4}%
11324 \end{LWR@setvirtualpage}%
11325 }
11326 \LWR@formatted{makebox}

```

`\framebox` (*<width,height>*) [*<width>*] [*<pos>*] {*<text>*}

```

11327 \NewDocumentCommand{\LWR@HTML@framebox}{d() o o +m}{%
11328 \fbox{\makebox(#1)[#2][#3]{#4}}%
11329 }
11330
11331 \LWR@formatted{framebox}

```

`\LWR@forceminwidth` {*<legth>*}

Sets `\LWR@atleastonept` to be at least 1pt.

```

11332 \newlength{\LWR@atleastonept}
11333
11334 \newcommand*{\LWR@forceminwidth}[1]{%
11335 \setlength{\LWR@atleastonept}{#1}%
11336 \ifthenelse{%
11337 \lengthtest{\LWR@atleastonept>0pt}\AND%
11338 \lengthtest{\LWR@atleastonept<1pt}%
11339 }%
11340 {\setlength{\LWR@atleastonept}{1pt}}%
11341 {}%
11342 }

```

`\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.

```

11343 \newcommand*{\LWR@fboxstyle}{%
11344 \LWR@findcurrenttextcolor%
11345 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@origpound\LWR@tempcolor ; %
11346 padding:\LWR@printlength{\fboxsep} ; %
11347 color:\LWR@origpound\LWR@tempcolor%
11348 }

```

`\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:

```
11349 \newcommand{\LWR@HTML@fbox}[1]{%
11350 \LWR@traceinfo{HTML fbox}%
11351 \LWR@forceminwidth{\fboxrule}%
11352 \InlineClass[%
11353 \LWR@print@mbbox{display:inline-block} ; %
11354 \LWR@fboxstyle%
11355]{fbox}{#1}%
11356 }
```

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:

```
11357 \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:**

```
11358 \end{warpHTML}
11359 \begin{warpall}
11360 \let\fboxBlock\fbox
11361 \end{warpall}
11362
11363 \begin{warpHTML}
```

**for HTML output:** Next, an HTML version:

```
11364 \newcommand{\LWR@HTML@fboxBlock}[1]{%
11365 \LWR@forceminwidth{\fboxrule}%
11366 \LWR@stoppars%
11367 \begin{BlockClass}[%
11368 \LWR@fboxstyle%
11369]{fboxBlock}
11370 #1
11371 \end{BlockClass}
11372 \LWR@startpars%
11373 }
11374
11375 \LWR@formatted{fboxBlock}
11376
11377 \end{warpHTML}
```

Env `fminipage` `[\align]` `[\height]` `[\align]` `{\width}`

Creates a framed HTML <div> around its contents.

**for HTML & PRINT:** Print version:

```
11378 \begin{warpall}
11379
11380 \newsavebox{\LWR@fminipagebox}
11381
```

```
11382 \NewDocumentEnvironment{LWR@print@fminipage}{0{t} o 0{t} m}
11383 {%
```

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:

```
11384 \IfValueTF{#3}%
11385 {\def\LWR@thisalign{#3}}
11386 {\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.

```
11387 \IfValueTF{#2}%
11388 {\minipage[#1][#2+2\fboxsep+2\fboxrule][\LWR@thisalign]{#4+2\fboxsep+2\fboxrule}}%
11389 {\minipage[#1]{#4+2\fboxsep+2\fboxrule}}%
```

Capture the contents of the environment:

```
11390 \begin{lrbox}{\LWR@fminipagebox}%
```

Nest the contents inside an inner minipage of the desired size:

```
11391 \IfValueTF{#2}%
11392 {\minipage[#1][#2][\LWR@thisalign]{#4}}%
11393 {\minipage[#1]{#4}}%
11394 }
11395 {%
```

Close the inner minipage and the LR box with the contents:

```
11396 \endminipage%
11397 \end{lrbox}%
```

Create a frame around the contents of the environment:

```
11398 \fbox{\usebox{\LWR@fminipagebox}}%
```

The entire thing is placed inside the outer minipage:

```
11399 \endminipage%
11400 }
11401
11402 \LetLtxMacro\fminipage\LWR@print@fminipage
11403 \LetLtxMacro\endfminipage\endLWR@print@fminipage
11404 % \newenvironment{fminipage}{\LWR@print@fminipage}{\endLWR@print@fminipage}
11405
11406 \end{warpall}
```

HTML version:

for HTML output:

```

11407 \begin{warpHTML}
11408
11409 \NewDocumentEnvironment{LWR@HTML@fminipage}{O{t} o O{t} m}
11410 {%
11411 \LWR@traceinfo{fminipage #1 #2 #3 #4}%

```

Locally change to the virtual page size before processing the requested sizes:

```

11412 \begin{LWR@setvirtualpage}*%
11413 \setlength{\LWR@tempwidth}{#4}%
11414 \IfValueT{#2}{\setlength{\LWR@tempheight}{#2}}%

```

Use a rule of at least one pixel in width:

```

11415 \LWR@forceminwidth{\fboxrule}%

11416 \LWR@stoppars%

11417 \begin{BlockClass}[%
11418 \LWR@fboxstyle ; %
11419 \IfValueT{#2}{height:\LWR@printlength{\LWR@tempheight} ; }%
11420 \ifbool{LWR@minipagefullwidth}%
11421 {\global\boolfalse{LWR@minipagefullwidth}}%
11422 {%
11423 \ifbool{LWR@forceminipagefullwidth}%
11424 {}%
11425 {%
11426 \ifdimequal{\LWR@tempwidth}{\linewidth}%
11427 {}%
11428 {width:\LWR@printlength{\LWR@tempwidth} ; }%
11429 }%
11430 }%
11431]{fminipage}%
11432 }
11433 {%
11434 \end{BlockClass}%
11435 \end{LWR@setvirtualpage}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

11436 \global\booltrue{LWR@minipagethispar}%
11437 \LWR@traceinfo{fminipage done}%
11438 }
11439
11440 \LWR@formattedenv{fminipage}

```

`\raisebox`  $\langle\textit{raiselen}\rangle$  [ $\langle\textit{height}\rangle$ ] [ $\langle\textit{depth}\rangle$ ]  $\langle\textit{text}\rangle$

```

11441 \NewDocumentCommand{\LWR@HTML@raisebox}{m o o m}{%
11442 #4%
11443 }
11444
11445 \LWR@formatted{raisebox}

```

```
11446 \end{warpHTML}
```

## 90 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 convert `&`, `<`, and `>` to proper HTML entities.

**verbatim** The various `verbatim`-related environments do not convert `&`, `<`, and `>`, so care must be taken to avoid accidentally including valid HTML code inside these environments. Adding a space on either side may be sufficient.

For high-level block and inline custom CSS classes, see section [51.9](#).

**for HTML output:** 11447 `\begin{warpHTML}`

```
\emph {<text>}
```

```
11448 \DeclareRobustCommand{\LWR@HTML@emph}[1]{%
11449 {%
11450 \LWR@HTML@itshape%
11451 \LWR@htmlspan{em}{#1}%
11452 }%
11453 }
11454
11455 \LWR@formatted{emph}
11456
11457 \newcommand{\LWR@null@emph}[1]{#1}
```

```
\textmd {<text>}
```

```
11458 \DeclareRobustCommand{\LWR@HTML@textmd}[1]{%
11459 {%
11460 \LWR@HTML@mdseries%
11461 \InlineClass(font-weight:normal){textmd}{#1}%
11462 }%
11463 }
11464
11465 \LWR@formatted{textmd}
11466
11467 \newcommand{\LWR@null@textmd}[1]{#1}
```

```
\textbf {<text>}
```

```
11468 \DeclareRobustCommand{\LWR@HTML@textbf}[1]{%
```

```

11469 {%
11470 \LWR@HTML@bfseries%
11471 \LWR@htmlspan{b}{#1}%
11472 }%
11473 }
11474
11475 \LWR@formatted{textbf}
11476
11477 \newcommand{\LWR@null@textbf}[1]{#1}

```

`\texteb`  $\{\langle text \rangle\}$  From `nfssect-cfr`.

```

11478 \DeclareRobustCommand{\LWR@HTML@texteb}[1]{%
11479 {%
11480 \LWR@HTML@ebweight%
11481 \InlineClass{texteb}{#1}%
11482 }%
11483 }
11484
11485 \LWR@formatted{texteb}
11486
11487 \newcommand{\LWR@null@texteb}[1]{#1}

```

`\textlg`  $\{\langle text \rangle\}$  From `nfssect-cfr`.

```

11488 \DeclareRobustCommand{\LWR@HTML@textlg}[1]{%
11489 {%
11490 \LWR@HTML@lgweight%
11491 \InlineClass{textlg}{#1}%
11492 }%
11493 }
11494
11495 \LWR@formatted{textlg}
11496
11497 \newcommand{\LWR@null@textlg}[1]{#1}

```

`\textrm`  $\{\langle text \rangle\}$

```

11498 \DeclareRobustCommand{\LWR@HTML@textrm}[1]{%
11499 {%
11500 \LWR@HTML@rmfamily%
11501 \InlineClass(font-family:serif){textrm}{#1}%
11502 }%
11503 }
11504
11505 \LWR@formatted{textrm}
11506
11507 \newcommand{\LWR@null@textrm}[1]{#1}

```

`\textsf`  $\{\langle text \rangle\}$

```

11508 \DeclareRobustCommand{\LWR@HTML@textsf}[1]{%

```

```
11509 {%
11510 \LWR@HTML@sffamily%
11511 \InlineClass(font-family:sans){textsf}{#1}%
11512 }%
11513 }
11514
11515 \LWR@formatted{textsf}
11516
11517 \newcommand{\LWR@null@textsf}[1]{#1}
```

`\texttt` {*<text>*}

```
11518 \DeclareRobustCommand{\LWR@HTML@texttt}[1]{%
11519 {%
11520 \LWR@HTML@ttfamily%
11521 \LWR@htmlspan{kbd}{#1}%
11522 }%
11523 }
11524
11525 \LWR@formatted{texttt}
11526
11527 \newcommand{\LWR@null@texttt}[1]{#1}
```

`\textup` {*<text>*}

```
11528 \DeclareRobustCommand{\LWR@HTML@textup}[1]{%
11529 {%
11530 \LWR@HTML@upshape%
11531 \InlineClass(font-style:normal){textup}{#1}%
11532 }%
11533 }
11534
11535 \LWR@formatted{textup}
11536
11537 \newcommand{\LWR@null@textup}[1]{#1}
```

`\textit` {*<text>*}

```
11538 \DeclareRobustCommand{\LWR@HTML@textit}[1]{%
11539 {%
11540 \LWR@HTML@itshape%
11541 \LWR@htmlspan{i}{#1}%
11542 }%
11543 }
11544
11545 \LWR@formatted{textit}
11546
11547 \newcommand{\LWR@null@textit}[1]{#1}
```

`\textsc` {*<text>*}

```
11548 \DeclareRobustCommand{\LWR@HTML@textsc}[1]{%
```

```

11549 {%
11550 \LWR@HTML@scshape%
11551 \InlineClass{textsc}{#1}%
11552 }%
11553 }
11554
11555 \LWR@formatted{textsc}
11556
11557 \newcommand{\LWR@null@textsc}[1]{#1}

```

`\textulc`  $\{<text>\}$  From fontaxes.

```

11558 \DeclareRobustCommand{\LWR@HTML@textulc}[1]{%
11559 {%
11560 \LWR@HTML@ulcshape%
11561 \InlineClass{textulc}{#1}%
11562 }%
11563 }
11564
11565 \LWR@formatted{textulc}
11566
11567 \newcommand{\LWR@null@textulc}[1]{#1}

```

`\textsi`  $\{<text>\}$

```

11568 \@ifundefined{textsi}{
11569 \LetLtxMacro\LWR@print@textsi\LWR@print@textsc
11570 }{}
11571
11572 \DeclareRobustCommand{\LWR@HTML@textsi}[1]{%
11573 {%
11574 \LWR@HTML@sishape%
11575 \textsc{\textit{#1}}%
11576 % \InlineClass(
11577 % font-style: italic;
11578 % font-variant: small-caps ;
11579 % font-variant-numeric: oldstyle-nums ;
11580 %){textsi}{#1}%
11581 }%
11582 }
11583
11584 \LWR@formatted{textsi}
11585
11586 \newcommand{\LWR@null@textsi}[1]{#1}

```

`\textsl`  $\{<text>\}$

```

11587 \DeclareRobustCommand{\LWR@HTML@textsl}[1]{%
11588 {%
11589 \slshape%
11590 \InlineClass(font-style:oblique){textsl}{#1}%
11591 }%
11592 }

```

```

11593
11594 \LWR@formatted{textsl}
11595
11596 \newcommand{\LWR@null@textsl}[1]{#1}

```

`\textnormal`  $\langle text \rangle$

```

11597 \DeclareRobustCommand{\LWR@HTML@textnormal}[1]{\textmd{\textrm{\textup{#1}}}}
11598
11599 \LWR@formatted{textnormal}
11600
11601 \newcommand{\LWR@null@textnormal}[1]{#1}

```

```

11602 \newcommand{\LWR@null@rmfamily}{}
11603 \newcommand{\LWR@null@sffamily}{}
11604 \newcommand{\LWR@null@ttfamily}{}
11605 \newcommand{\LWR@null@bfseries}{}
11606 \newcommand{\LWR@null@ebweight}{}
11607 \newcommand{\LWR@null@lgweight}{}
11608 \newcommand{\LWR@null@mdseries}{}
11609 \newcommand{\LWR@null@upshape}{}
11610 \newcommand{\LWR@null@slshape}{}
11611 \newcommand{\LWR@null@scshape}{}
11612 \newcommand{\LWR@null@itshape}{}
11613 \newcommand{\LWR@null@normalfont}{}

```

```

11614 \newcommand{\LWR@null@em}{}

```

`\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.

```

11615 \catcode'\$=\active% redefining $ below
11616 \catcode'_ =12% redefining _ below
11617 \newcommand*{\LWR@nullfonts}{%
11618 \LetLtxMacro\emph\LWR@null@emph%
11619 \LetLtxMacro\textmd\LWR@null@textmd%
11620 \LetLtxMacro\textbf\LWR@null@textbf%
11621 \LetLtxMacro\textrm\LWR@null@textrm%
11622 \LetLtxMacro\textsf\LWR@null@textsf%
11623 \LetLtxMacro\texttt\LWR@null@texttt%
11624 \LetLtxMacro\textup\LWR@null@textup%
11625 \LetLtxMacro\textit\LWR@null@textit%
11626 \LetLtxMacro\textsc\LWR@null@textsc%
11627 \LetLtxMacro\textulc\LWR@null@textulc%
11628 \LetLtxMacro\textsi\LWR@null@textsi%
11629 \LetLtxMacro\textsl\LWR@null@textsl%
11630 \LetLtxMacro\textnormal\LWR@null@textnormal%
11631 \LetLtxMacro\rmfamily\LWR@null@rmfamily%
11632 \LetLtxMacro\sffamily\LWR@null@sffamily%

```

```

11633 \LetLtxMacro\ttfamily\LWR@null@ttfamily%
11634 \LetLtxMacro\bfseries\LWR@null@bfseries%
11635 \LetLtxMacro\mdseries\LWR@null@mdseries%
11636 \LetLtxMacro\upshape\LWR@null@upshape%
11637 \LetLtxMacro\slshape\LWR@null@slshape%
11638 \LetLtxMacro\scshape\LWR@null@scshape%
11639 \LetLtxMacro\ulcshape\LWR@null@ulcshape%

11640 \LetLtxMacro\sisshape\LWR@null@sisshape%

11641 \LetLtxMacro\itshape\LWR@null@itshape%
11642 \LetLtxMacro\normalfont\LWR@null@normalfont%
11643 \LetLtxMacro\em\LWR@null@em%

```

#### Various built-in symbols.

```

11644 \renewcommand*{\$}{-}%
11645 \renewcommand*{\%}{-}%
11646 \renewcommand*{_}{-}%
11647 \renewcommand*{\}}{-}%
11648 \renewcommand*{\{}{-}%
11649 \renewcommand*{\&}{and}%
11650 \renewcommand*{\#}{-}%
11651 \renewcommand*{\,}{-}%
11652 \renewcommand*{\~}{-}%
11653 \renewcommand*{\^}[1]{-}%
11654 \renewcommand*{\~}[1]{-}%
11655 \renewcommand*{\newline}{-}%
11656 \renewcommand*{\textasciicircum}{-}%
11657 \renewcommand*{\textasciitilde}{-}%
11658 \renewcommand*{\textasteriskcentered}{-}%
11659 \renewcommand*{\textbackslash}{-}%
11660 \renewcommand*{\textbar}{-}%
11661 \renewcommand*{\textbardbl}{-}%
11662 \renewcommand*{\textbigcirc}{-}%
11663 \renewcommand*{\textbraceleft}{-}%
11664 \renewcommand*{\textbraceright}{-}%
11665 \renewcommand*{\textbullet}{-}%
11666 \renewcommand*{\textcopyright}{-}%
11667 \renewcommand*{\textdagger}{-}%
11668 \renewcommand*{\textdaggerdbl}{-}%
11669 \renewcommand*{\textdollar}{-}%
11670 \renewcommand*{\textellipsis}{-}%
11671 \renewcommand*{\textemdash}{-}%
11672 \renewcommand*{\textendash}{-}%
11673 \renewcommand*{\textexclamdown}{-}%
11674 \renewcommand*{\textgreater}{-}%
11675 \renewcommand*{\textless}{-}%
11676 \renewcommand*{\textordfeminine}{-}%
11677 \renewcommand*{\textordmasculine}{-}%
11678 \renewcommand*{\textparagraph}{-}%
11679 \renewcommand*{\textperiodcentered}{-}%
11680 \renewcommand*{\textpertenthousand}{-}%
11681 \renewcommand*{\textperthousand}{-}%

```

11682 \renewcommand\*{\textquestiondown}{-}%  
11683 \renewcommand\*{\textquotedblleft}{-}%  
11684 \renewcommand\*{\textquotedblright}{-}%  
11685 \renewcommand\*{\textquoteleft}{-}%  
11686 \renewcommand\*{\textquoteright}{-}%  
11687 \renewcommand\*{\textregistered}{-}%  
11688 \renewcommand\*{\textsection}{-}%  
11689 \renewcommand\*{\textsterling}{-}%  
11690 \renewcommand\*{\texttrademark}{-}%  
11691 \renewcommand\*{\textunderscore}{-}%  
11692 \renewcommand\*{\textvisiblespace}{-}%  
11693 \renewcommand\*{\copyright}{-}%  
11694 \renewcommand\*{\dag}{-}%  
11695 \renewcommand\*{\ddag}{-}%  
11696 \renewcommand\*{\dots}{-}%  
11697 \renewcommand\*{\P}{-}%  
11698 \renewcommand\*{\pounds}{-}%  
11699 \renewcommand\*{\S}{-}%  
11700 \renewcommand\*{\aa}{a}%  
11701 \renewcommand\*{\AA}{A}%  
11702 \renewcommand\*{\AE}{AE}%  
11703 \renewcommand\*{\ae}{ae}%  
11704 \renewcommand\*{\dh}{d}%  
11705 \renewcommand\*{\DH}{D}%  
11706 \renewcommand\*{\DJ}{D}%  
11707 \renewcommand\*{\dj}{d}%  
11708 \renewcommand\*{\IJ}{IJ}%  
11709 \renewcommand\*{\ij}{ij}%  
11710 \renewcommand\*{\L}{L}%  
11711 \renewcommand\*{\l}{l}%  
11712 \renewcommand\*{\NG}{NG}%  
11713 \renewcommand\*{\ng}{ng}%  
11714 \renewcommand\*{\O}{O}%  
11715 \renewcommand\*{\o}{o}%  
11716 \renewcommand\*{\oe}{oe}%  
11717 \renewcommand\*{\OE}{OE}%  
11718 \renewcommand\*{\ss}{ss}%  
11719 \renewcommand\*{\SS}{SS}%  
11720 \renewcommand\*{\th}{th}%  
11721 \renewcommand\*{\TH}{TH}%  
11722 \renewcommand\*{\guillemotleft}{}%  
11723 \renewcommand\*{\guilsinglleft}{}%  
11724 \renewcommand\*{\quotedblbase}{}%  
11725 \renewcommand\*{\textquotedbl}{}%  
11726 \renewcommand\*{\guillemotright}{}%  
11727 \renewcommand\*{\guilsinglright}{}%  
11728 \renewcommand\*{\quotesinglbase}{}%  
  
11729 \renewcommand\*{\HTMLunicode}[1]{}%  
11730 \renewcommand\*{\HTMLentity}[1]{}%  
  
11731 \renewcommand{\textsuperscript}[1]{##1}%  
11732 \renewcommand{\textsubscript}[1]{##1}%  
  
11733 \renewcommand{\underline}[1]{##1}%

```

11734 \RenewDocumentCommand{\hspace}{s m}{}%
11735 \RenewDocumentCommand{\LWR@htmlspanclass}{o m +m}{##3}%
11736 \DeclareExpandableDocumentCommand{\InlineClass}{D{()}{}}{o m +m}{##4}%

```

Nullify math macros.

```

11737 \def\{##1\}{}%
11738 \def\[##1\]{}%
11739 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
11740 \protected\def$##1${}%

```

Nullify logos:

```

11741 \renewcommand*\TeX{\TeX}%
11742 \renewcommand*\LaTeX{\LaTeX}%
11743 \renewcommand*\LaTeXe{\LaTeXe}%
11744 \renewcommand*\LuaTeX{\LuaTeX}%
11745 \renewcommand*\LuaLaTeX{\LuaLaTeX}%
11746 \renewcommand*\XeTeX{\XeTeX}%
11747 \renewcommand*\XeLaTeX{\XeLaTeX}%
11748 \renewcommand*\ConTeXt{\ConTeXt}%
11749 \renewcommand*\BibTeX{\BibTeX}%
11750 \renewcommand*\MakeIndex{\MakeIndex}%
11751 \renewcommand*\AmS{\AmS}%
11752 \renewcommand*\MiKTeX{\MiKTeX}%
11753 \renewcommand*\LyX{\LyX}%

```

Use the simpler form with `\texorpdfstring`:

```

11754 \let\texorpdfstring\relax%
11755 \newcommand{\texorpdfstring}[2]{##2}%
11756 }
11757 \catcode'\$=3%
11758 \catcode'_ =8%

```

`\FilenameNullify` *{(redefinitions)}*

Adds more nullifying definitions for filename generation.

```

11759 \newcommand*\FilenameNullify[1]{%
11760 \appto{\LWR@nullfonts}{#1}%
11761 }

```

Remembers the current font family, series, and shape. fontaxes support is integrated [here](#).

```

11762 \newcommand*\LWR@f@family}{rm}
11763 \newcommand*\LWR@f@series}{md}
11764 \newcommand*\LWR@f@shape}{up}
11765 \newcommand*\LWR@f@shapecaps}{ulc}

```

`\LWR@textcurrentfont` {<*text*>}

Prints the text with the current font choices. Avoids nesting repeated font selections.

```

11766 \newcounter{LWR@textcurrentfontdepth}
11767 \setcounter{LWR@textcurrentfontdepth}{0}
11768
11769 \newcommand*{\LWR@textcurrentfont}[1]{%
11770 \ifnumcomp{\value{LWR@textcurrentfontdepth}}{>}{0}%
11771 {%
11772 \addtocounter{LWR@textcurrentfontdepth}{1}%
11773 #1%
11774 \addtocounter{LWR@textcurrentfontdepth}{-1}%
11775 }%
11776 {%
11777 \addtocounter{LWR@textcurrentfontdepth}{1}%
11778 \InlineClass{%
11779 text\LWR@family\LWR@origtilde{%
11780 text\LWR@series\LWR@origtilde{%
11781 text\LWR@shape\LWR@origtilde{%
11782 text\LWR@shapecaps%
11783 }%
11784 {#1}%
11785 \addtocounter{LWR@textcurrentfontdepth}{-1}%
11786 }%
11787 }
```

Env `LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```

11788 \newenvironment*{LWR@blocktextcurrentfont}{%
11789 \LWR@stoppars%
11790 \BlockClass{%
11791 text\LWR@family\LWR@origtilde{%
11792 text\LWR@series\LWR@origtilde{%
11793 text\LWR@shape\LWR@origtilde{%
11794 text\LWR@shapecaps%
11795 }%
11796 }\endBlockClass\LWR@startpars}
```

`\mdseries`

```

11797 \newrobustcmd*{\LWR@HTML@mdseries}{\renewcommand*{\LWR@f@series}{md}}
11798 \LWR@formatted{mdseries}
```

`\bfseries`

```

11799 \newrobustcmd*{\LWR@HTML@bfseries}{\renewcommand*{\LWR@f@series}{bf}}
11800 \LWR@formatted{bfseries}
```

`\ebweight` From `nfssect-cfr`.

```
11801 \newrobustcmd*{\LWR@HTML@ebweight}{\renewcommand*{\LWR@f@series}{eb}}
11802 \LWR@formatted{ebweight}
```

`\lgweight` From `nfssex-cfr`.

```
11803 \newrobustcmd*{\LWR@HTML@lgweight}{\renewcommand*{\LWR@f@series}{lg}}
11804 \LWR@formatted{lgweight}
```

`\rmfamily`

```
11805 \newrobustcmd*{\LWR@HTML@rmfamily}{\renewcommand*{\LWR@f@family}{rm}}
11806 \LWR@formatted{rmfamily}
```

`\sffamily`

```
11807 \newrobustcmd*{\LWR@HTML@sffamily}{\renewcommand*{\LWR@f@family}{sf}}
11808 \LWR@formatted{sffamily}
```

`\ttfamily`

```
11809 \newrobustcmd*{\LWR@HTML@ttfamily}{\renewcommand*{\LWR@f@family}{tt}}
11810 \LWR@formatted{ttfamily}
```

`\upshape`

```
11811 \newrobustcmd*{\LWR@HTML@upshape}{\renewcommand*{\LWR@f@shape}{up}}
11812 \LWR@formatted{upshape}
```

`\itshape`

```
11813 \newrobustcmd*{\LWR@HTML@itshape}{\renewcommand*{\LWR@f@shape}{it}}
11814 \LWR@formatted{itshape}
```

`\scshape`

```
11815 \newrobustcmd*{\LWR@HTML@scshape}{\renewcommand*{\LWR@f@shapecaps}{sc}}
11816 \LWR@formatted{scshape}
```

`\ulcshape` From `fontaxes`.

```
11817 \@ifundefined{ulcshape}{
11818 \LetLtxMacro\ulcshape\upshape
11819 }{}
11820 \newrobustcmd*{\LWR@HTML@ulcshape}{\renewcommand*{\LWR@f@shapecaps}{ulc}}
11821 \LWR@formatted{ulcshape}
```

`\sishape`

```

11822 \@ifundefined{sisshape}{
11823 \LetLtxMacro\sisshape\scshape
11824 }{}
11825 \newrobustcmd*\LWR@HTML@sisshape}{%
11826 \renewcommand*\LWR@f@shape}{it}
11827 \renewcommand*\LWR@f@shapecaps}{sc}%
11828 }
11829 \LWR@formatted{sisshape}

```

**\slshape**

```

11830 \newrobustcmd*\LWR@HTML@slshape}{\renewcommand*\LWR@f@shape}{sl}}
11831 \LWR@formatted{slshape}

```

**\normalfont**

```

11832 \newrobustcmd*\LWR@HTML@normalfont}{\rmfamily\mdseries\upshape\ulcshape}
11833 \LWR@formatted{normalfont}

```

**\sp** *{<text>}*

For siunitx. Must work in math mode.

```
11834 \renewcommand{\sp}[1]{\text{^{#1}}}
```

**\sb** *{<text>}*

For siunitx. Must work in math mode.

```
11835 \renewcommand{\sb}[1]{\text{_{#1}}}
```

**\textsuperscript** *{<text>}*

```
11836 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

**\@textsuperscript** *{<text>}*

```
11837 \renewcommand{\@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

**\textsubscript** *{<text>}*

```

11838 \AtBeginDocument{
11839 \renewrobustcmd{\textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
11840 }

```

**\@textsubscript** *{<text>}*

```

11841 \AtBeginDocument{
11842 \renewcommand{\@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
11843 }

```

`\up`  $\langle text \rangle$  Prints superscript.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
11844 \AtBeginDocument{\let\up\textsuperscript}
```

`\fup`  $\langle text \rangle$  Prints superscript.

Supports `fntcount` package.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
11845 \AtBeginDocument{\let\fup\textsuperscript}
```

`\underline`  $\langle text \rangle$

```
11846 \renewcommand{\underline}[1]{%
11847 \InlineClass%
11848 (text-decoration:underline; text-decoration-skip: auto)%
11849 {\underline}{#1}%
11850 }
```

`\LWR@overline`  $\langle text \rangle$

```
11851 \newcommand{\LWR@overline}[1]{%
11852 \InlineClass%
11853 (text-decoration:overline; text-decoration-skip: auto)%
11854 {\overline}{#1}%
11855 }
```

`\LWR@currenttextcolor` The color to use for text and `\rule`, defaulting to black:

```
11856 \newcommand*{\LWR@currenttextcolor}{black}
```

`\LWR@tempcolor` The color converted to HTML colorspace.

`\LWR@tempcolortwo`

```
11857 \newcommand*{\LWR@tempcolor}{}
11858 \newcommand*{\LWR@tempcolortwo}{}

```

`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```
11859 \newcommand*{\LWR@findcurrenttextcolor}{%
11860 \renewcommand{\LWR@tempcolor}{000000}%
11861 }
```

`\LWR@textcurrentcolor`  $\langle text \rangle$  Like `\textcolor` but uses the current `\color` instead.

```
11862 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%
```

```

11863 \renewcommand*\LWR@currenttextcolor}{black}%
11864 #1%
11865 }

```

```
11866 \end{warpHTML}
```

**for PRINT output:** 11867 \begin{warpprint}

```
\LWR@textcurrentfont {<text>}
```

Prints the text with the current font choices.

```
11868 \newcommand*\LWR@textcurrentfont}[1]{#1}
```

Env LWR@blocktextcurrentfont Prints the contents with the current font choices.

```
11869 \newenvironment*LWR@blocktextcurrentfont}{ }{ }
```

```
\FilenameNullify {<macros to nullify>}
```

```
11870 \newcommand*\FilenameNullify}[1]{ }
```

```
11871 \end{warpprint}
```

## 91 Skips, spaces, font sizes

**for HTML output:** 11872 \begin{warpHTML}

`\`, and `\thinspace` may be redefined by other packages, so are redefined `\AtBeginDocument` here.

Direct-formatting space commands become HTML entities:

```

11873 \AtBeginDocument{
11874 \renewrobustcmd*\,}{\HTMLUnicode{202f}} % HTML thin non-breakable space
11875 \renewrobustcmd*\thinspace{\HTMLUnicode{202f}} % HTML thin non-breakable space
11876 \renewrobustcmd*\negthinspace{\HTMLUnicode{202f}} % HTML thin non-breakable space
11877 \renewrobustcmd*\~{\HTMLentity{nbsp}}
11878 \renewrobustcmd*\textellipsis{\HTMLUnicode{2026}}
11879 }

```

Direct-formatting font sizes are remembered for future use:

```

11880 \newcommand*\LWR@font@size}{normalsize}
11881
11882 \newrobustcmd*\LWR@HTML@normalsize}{\renewcommand*\LWR@font@size}{normalsize}}
11883 \LWR@formatted{normalsize}
11884

```

```
11885 \newrobustcmd*{\LWR@HTML@small}{\renewcommand*{\LWR@font@size}{small}}
11886 \LWR@formatted{small}
11887
11888 \newrobustcmd*{\LWR@HTML@footnotesize}{\renewcommand*{\LWR@font@size}{footnotesize}}
11889 \LWR@formatted{footnotesize}
11890
11891 \newrobustcmd*{\LWR@HTML@scriptsize}{\renewcommand*{\LWR@font@size}{scriptsize}}
11892 \LWR@formatted{scriptsize}
11893
11894 \newrobustcmd*{\LWR@HTML@tiny}{\renewcommand*{\LWR@font@size}{tiny}}
11895 \LWR@formatted{tiny}
11896
11897 \newrobustcmd*{\LWR@HTML@large}{\renewcommand*{\LWR@font@size}{large}}
11898 \LWR@formatted{large}
11899
11900 \newrobustcmd*{\LWR@HTML@Large}{\renewcommand*{\LWR@font@size}{Large}}
11901 \LWR@formatted{Large}
11902
11903 \newrobustcmd*{\LWR@HTML@LARGE}{\renewcommand*{\LWR@font@size}{LARGE}}
11904 \LWR@formatted{LARGE}
11905
11906 \newrobustcmd*{\LWR@HTML@huge}{\renewcommand*{\LWR@font@size}{huge}}
11907 \LWR@formatted{huge}
11908
11909 \newrobustcmd*{\LWR@HTML@Huge}{\renewcommand*{\LWR@font@size}{Huge}}
11910 \LWR@formatted{Huge}

11911 \DeclareDocumentCommand{\onecolumn}{}{=}
11912
11913 \DeclareDocumentCommand{\twocolumn}{0=}{}
11914
11915 #1
11916
11917 }
```

### \hfill

```
11918 \newcommand*{\LWR@HTML@hfill}{\quad}
11919 \LWR@formatted{hfill}
```

### \hrulefill

```
11920 \newcommand*{\LWR@HTML@hrulefill}{\rule{1in}{1pt}}
11921 \LWR@formatted{hrulefill}
```

### \dotfill

```
11922 \newcommand*{\LWR@HTML@dotfill}{\dots}
11923 \LWR@formatted{dotfill}
```

### \newpage

```
11924 \renewcommand*{\newpage}{
11925
11926 }
```

`\newline` Uses the HTML `<br />` element.

```
11927 \newrobustcmd*{\LWR@newlinebr}{\unskip\LWR@htmltag{br /}\LWR@orignewline}%
11928 \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`.

```
11929 \LetLtxMacro\LWR@origendofline\\
11930 \NewDocumentCommand{\LWR@endofline}{s O{0pt}}
11931 {%
11932 \newline%

11933 \setlength{\LWR@templengthone}{#2}%
11934 \ifdimgreater{\LWR@templengthone}{0pt}{\newline}{}%
11935 }
```

`\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, `lwarp` 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. `lwarp` tries to do this by remembering that a minipage has been seen, in which case paragraph tags are suppressed around

`\hspace`, `\quad`, `\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.

```
11936 \newcommand*{\LWR@minipagestartpars}{%
11937 \ifbool{LWR@minipagethispar}{\LWR@startpars}{}%
11938 }
```

`\LWR@minipagestoppars` Placed just after `\hspace`, `\quad`, or `\qquad`'s HTML output.

```

11939 \newcommand*\LWR@minipagestoppars}{%
11940 \ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%
11941 }

```

`\quad` Handles special minipage & horizontal space interactions. Uses 2003 EM SPACE to pass validation.

```

11942 \renewrobustcmd*\quad}{%
11943 \LWR@minipagestoppars%
11944 \HTMLUnicode{2003}%
11945 \LWR@minipagestartpars%
11946 }

```

`\qqquad` Handles special minipage & horizontal space interactions.

```

11947 \renewrobustcmd*\qqquad}{\quad\quad}

```

`\enskip` Handles special minipage & horizontal space interactions.

```

11948 \renewrobustcmd*\enskip}{%
11949 \LWR@minipagestoppars%
11950 \HTMLUnicode{2002}%
11951 \LWR@minipagestartpars%
11952 }

```

Len `\LWR@tempwidth` Used to compute span width, height, raise for `\hspace` and `\rule`:

```

Len \LWR@tempheight 11953 \newlength{\LWR@tempwidth}
Len \LWR@tempraise 11954 \newlength{\LWR@tempheight}
11955 \newlength{\LWR@tempraise}

```

`\LWR@select@html@hspace` \*  $\langle length \rangle$  \*  $\langle length \rangle$   
`\hspace`

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 `\qqquad`.

```

11956 \newcommand{\LWR@select@html@hspace}{%
11957 \RenewDocumentCommand{\hspace}{s m}{%
11958 \setlength{\LWR@tempwidth}{##2}%

```

If `\fill`, change to `\qqquad`:

```

11959 \ifnum\gluestretchorder\LWR@tempwidth>0%
11960 \setlength{\LWR@tempwidth}{2em}%
11961 \fi%

```

Only if the width is greater than zero:

```

11962 \ifdimcomp{\LWR@tempwidth}{>}{0pt}{%

```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11963 \LWR@minipagestoppars%
```

Support the HTML thin wrappable space:

```
11964 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
11965 {%
11966 \HTMLUnicode{2009}% thin breakable space
11967 }%
```

Print the span with the converted width. Not rounded.

```
11968 {%
11969 \LWR@htmltagc{%
11970 span style="width:\LWR@printlength{\LWR@tempwidth}; % extra space
11971 display:inline-block"%
11972 }%
```

If formatting for a word processor, approximate with a number of \quads, in case a span of a given width is not supported:

```
11973 \ifbool{FormatWP}{%
11974 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
11975 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
11976 \quad%
11977 \addtolength{\LWR@templengthone}{-1em}%
11978 }%
11979 }%
```

If NOT formatting for a word processor, include an empty comment to avoid an empty span:

```
11980 {\LWR@htmlcomment{}}%
```

Close the span:

```
11981 \LWR@htmltagc{/span}%
11982 }%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11983 \LWR@minipagestartpars%
11984 }{}% width greater than 0
11985 }%
11986 }
```

```
\LWR@select@html@nohspace *{\length}
\hspace
```

Used to disable \hspace while creating description \items.

```

11987 \newcommand{\LWR@select@html@nohspace}{%
11988 \RenewDocumentCommand{\hspace}{s m}{}%
11989 }

```

\LWR@select@print@hspace

```

11990 \newcommand*{\LWR@select@print@hspace}{%
11991 \renewrobustcmd\hspace{\@ifstar\@hspacer\@hspace}%
11992 }

```

\hspace \*  $\langle length \rangle$

Handles special minipage & horizontal space interactions.

```

11993 \LWR@select@html@hspace

```

\LWR@vspace \*  $\langle length \rangle$  Nullified vspace.

```

11994 \NewDocumentCommand{\LWR@HTML@vspace}{s m}{%
11995
11996 \LWR@formatted{vspace}

```

\linebreak [ $\langle num \rangle$ ] Inserts an HTML br tag.

```

11997 \renewcommand*{\linebreak}[1][\newline]

```

\nolinebreak [ $\langle num \rangle$ ]

```

11998 \renewcommand*{\nolinebreak}[1][\{}

```

\pagebreak [ $\langle num \rangle$ ] Starts a new paragraph.

```

11999 \renewcommand*{\pagebreak}[1][\{}
12000
12001 }

```

\nopagebreak [ $\langle num \rangle$ ]

```

12002 \renewcommand*{\nopagebreak}[1][\{}

```

\enlargethispage \*  $\langle len \rangle$

```

12003 \RenewDocumentCommand{\enlargethispage}{s m}{%

```

\clearpage

\cleardoublepage

```

12004 \renewcommand*{\clearpage}{%
12005 \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.

```
12006 \newcommand*\LWR@HTML@rule[3][]{%
```

The width is copied into a temporary  $\LaTeX$  length, from which comparisons and conversions may be made:

```
12007 \setlength{\LWR@tempwidth}{#2}%
```

If it's zero-width then skip the entire rule:

```
12008 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}%
```

```
12009 {}% zero- width
```

```
12010 {% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```
12011 \ifthenelse{%
```

```
12012 \lengthtest{\LWR@tempwidth>0pt}\AND%
```

```
12013 \lengthtest{\LWR@tempwidth<1pt}}%
```

```
12014 }%
```

```
12015 {\setlength{\LWR@tempwidth}{1pt}}%
```

```
12016 {}%
```

Likewise with height:

```
12017 \setlength{\LWR@tempheight}{#3}%
```

```
12018 \ifthenelse{%
```

```
12019 \lengthtest{\LWR@tempheight>0pt}\AND%
```

```
12020 \lengthtest{\LWR@tempheight<1pt}}%
```

```
12021 }%
```

```
12022 {\setlength{\LWR@tempheight}{1pt}}%
```

```
12023 {}%
```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```
12024 \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  $\LaTeX$  code.

```
12025 \LWR@findcurrenttextcolor%
```

```
12026 \LWR@htmltagc{%
```

```
12027 span\LWR@indentHTML%
```

```
12028 style="%
```

The HTML background color is used to draw the filled rule according to the L<sup>A</sup>T<sub>E</sub>X foreground color set by `\textcolor`.

```
12029 \ifbool{FormatWP}{\background:\LWR@currenttextcolor ; }%
```

The width and height are printed, converted to PT:

```
12030 width:\LWR@printlength{\LWR@tempwidth} ; %
12031 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<sup>A</sup>T<sub>E</sub>X length allows a typical L<sup>A</sup>T<sub>E</sub>X expression to be used as an argument for the raise, whereas printing the raise argument directly to HTML output without conversion to a L<sup>A</sup>T<sub>E</sub>X length limits the allowable syntax. To do: A superior method would compute a ratio of L<sup>A</sup>T<sub>E</sub>X ex height, then print that to HTML with an ex unit.

```
12032 \ifblank{#1}%
12033 {}%
12034 {%
12035 \setlength{\LWR@tempraise}{0pt-#1}%
12036 \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
12037 \LWR@indentHTML%
12038 -ms-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
12039 \LWR@indentHTML%
12040 -webkit-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
12041 \LWR@indentHTML%
12042 transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
12043 \LWR@indentHTML%
12044 }%
```

Display inline-block to place the span inline with the text:

```
12045 display:inline-block;"\LWR@orignewline%
12046 }%
```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```
12047 \ifbool{FormatWP}{%
12048 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
12049 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
12050 _}%
12051 \addtolength{\LWR@templengthone}{-1em}%
12052 }%
12053 }%
```

If NOT formatting for a word processor, add a comment to avoid an empty `<span>`:

```
12054 {\LWR@htmlcomment{}}%
```

Close the span:

```
12055 \LWR@htmltagc{/span}%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```

12056 \LWR@minipagestartpars%
12057 }% non-zero width
12058 }
12059
12060 \LWR@formatted{rule}

12061 \end{warpHTML}

```

## 92 \phantomsection

**for HTML output:** 12062 \begin{warpHTML}

\phantomsection Emulate the hyperref \phantomsection command, often used to insert the bibliography into the table of contents. Ignores \ForceHTMLTOC.

```

12063 \DeclareDocumentCommand{\phantomsection}{*}{%
12064 \begingroup%
12065 \boolfalse{LWR@forcinghtmltoc}%
12066 \section*{}}%
12067 \endgroup%
12068 }

12069 \end{warpHTML}

```

## 93 \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:** 12070 \begin{warpall}  
12071 \newrobustcmd\*{\Xe}  
12072 {X\hspace{-.1667em}\raisebox{-.5ex}{E}}  
12073  
12074 \AtBeginDocument{  
12075 \@ifpackageloaded{graphics}{  
12076 \@ifpackageloaded{metalogo}}{  
12077 \renewrobustcmd\*{\Xe}

```

12078 {X\hspace{-.1667em}\raisebox{-.5ex}{\reflectbox{E}}}}
12079 }
12080 }{
12081 \PackageWarningNoLine{lwarp}{Load graphicx or graphics
12082 for improved XeTeX logo}
12083 }
12084 }
12085 }
12086 \providerobustcmd*{\XeTeX}{\mbox{\Xe\hspace{-.125em}\TeX}}
12087 \providerobustcmd*{\XeLaTeX}{\mbox{\Xe\hspace{-.125em}\LaTeX}}
12088 \providerobustcmd*{\AmS}{%
12089 \leavevmode\hbox{$\mathcal A\kern-.2em\lower.376ex%
12090 \hbox{$\mathcal M$}\kern-.2em\mathcal S$}%
12091 }
12092 \newrobustcmd*{\LyX}{\textsf{LyX}}
12093 \providerobustcmd*{\LuaTeX}{\mbox{Lua\TeX}}
12094 \providerobustcmd*{\LuaLaTeX}{\mbox{Lua\LaTeX}}
12095 \providerobustcmd*{\BibTeX}{\mbox{B\textsc{ib}\TeX}}
12096 \providerobustcmd*{\MakeIndex}{\mbox{\textit{MakeIndex}}}
12097 \providerobustcmd*{\ConTeXt}{\mbox{Con\TeXt}}
12098 \providerobustcmd*{\MiKTeX}{\mbox{MiK\TeX}}
12099 \end{warpall}

```

**for HTML output:** 12100 \begin{warpHTML}

The print-mode versions of the following may be changed by metalogo, so their print formatting is recorded \AtBeginDocument.

\TeX T<sub>E</sub>X

latexlogo is a css class used to properly typeset the E and A in L<sup>A</sup>T<sub>E</sub>X and friends.

latexlogofont is a css class used to select the font for the rest of the logo in L<sup>A</sup>T<sub>E</sub>X, LuaT<sub>E</sub>X, ConT<sub>E</sub>Xt, etc.

```

12101 \newrobustcmd*{\LWR@HTML@TeX}
12102 {%
12103 \InlineClass{latexlogofont}%
12104 {%
12105 \InlineClass{latexlogo}%
12106 {%
12107 T%
12108 \InlineClass{latexlogosub}{e}%
12109 X%
12110 }%
12111 }%
12112 }
12113 \AtBeginDocument{\LWR@formatted{TeX}}% may have been patched by metalogo

```

\LaTeX L<sup>A</sup>T<sub>E</sub>X, L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>

\LaTeXe

```

12114 \newrobustcmd*{\LWR@HTML@LaTeX}
12115 {%
12116 \InlineClass{latexlogofont}%

```

```

12117 {%
12118 \InlineClass{latexlogo}%
12119 {%
12120 L%
12121 \InlineClass{latexlogosup}{a}%
12122 T%
12123 \InlineClass{latexlogosub}{e}%
12124 X%
12125 }%
12126 }%
12127 }
12128
12129 \AtBeginDocument{\LWR@formatted{LaTeX}}% may have been patched by metalogo
12130
12131
12132 \newrobustcmd*{\LWR@HTML@LaTeXe}
12133 {%
12134 \LaTeX%
12135 \InlineClass{latexlogofont}{%
12136 \InlineClass{latexlogotwoe}{%
12137 2%
12138 \InlineClass{latexlogotwoesub}{\HTMLUnicode{03B5}}%
12139 }%
12140 }%
12141 }
12142 \AtBeginDocument{\LWR@formatted{LaTeXe}}% may have been patched by metalogo

```

\LuaTeX LuaTeX, Lua<sup>A</sup>TeX

\LuaLaTeX

```

12143 \newrobustcmd*{\LWR@HTML@LuaTeX}{\InlineClass{latexlogofont}{Lua}\TeX}
12144 \AtBeginDocument{\LWR@formatted{LuaTeX}}% may have been patched by metalogo
12145
12146 \newrobustcmd*{\LWR@HTML@LuaLaTeX}{\InlineClass{latexlogofont}{Lua}\LaTeX}
12147 \AtBeginDocument{\LWR@formatted{LuaLaTeX}}% may have been patched by metalogo

```

\XeTeX XeTeX, Xe<sup>A</sup>TeX

\XeLaTeX

xetexlogo is a css class which aligns the backwards E in XeTeX and spaces TeX appropriately.

xelatexlogo is a css class which aligns the backwards E in Xe<sup>A</sup>TeX and spaces <sup>A</sup>TeX appropriately.

```

12148 \newrobustcmd*{\LWR@HTML@Xe}
12149 {%
12150 X%
12151 \InlineClass{xelatexlogosub}{\HTMLUnicode{18e}}%
12152 }
12153 \AtBeginDocument{\LWR@formatted{Xe}}% may have been patched by metalogo
12154
12155 \newrobustcmd*{\LWR@HTML@XeTeX}{\InlineClass{xetexlogo}{\Xe}\TeX}
12156 \AtBeginDocument{\LWR@formatted{XeTeX}}% may have been patched by metalogo
12157
12158 \newrobustcmd*{\LWR@HTML@XeLaTeX}{\InlineClass{xelatexlogo}{\Xe}\LaTeX}

```

12159 \AtBeginDocument{\LWR@formatted{XeLaTeX}}% may have been patched by metalogo

### \ConTeXt ConTeXt

```
12160 \newrobustcmd*{\LWR@HTML@ConTeXt}{%
12161 \InlineClass{latexlogofont}{Con}\TeX{}}%
12162 \InlineClass{latexlogofont}{t}%
12163 }
12164 \LWR@formatted{ConTeXt}
```

### \BibTeX BIB<sub>T</sub>X, *MakeIndex*

#### \MakeIndex

```
12165 \newrobustcmd*{\LWR@HTML@BibTeX}
12166 {\InlineClass{latexlogofont}{B\textsc{ib}}\TeX}
12167 \LWR@formatted{BibTeX}
12168
12169 \newrobustcmd*{\LWR@HTML@MakeIndex}
12170 {\InlineClass{latexlogofont}{\textit{MakeIndex}}}
12171 \LWR@formatted{MakeIndex}
```

### \AmS *AMS*

amslogo is a css class used for the *AMS* logo.

```
12172 \AtBeginDocument{%
12173 \newrobustcmd*{\LWR@HTML@AmS}
12174 {%
12175 \InlineClass{amslogo}{%
12176 \textit{%
12177 A%
12178 \InlineClass{latexlogosub}{M}%
12179 S%
12180 }}%
12181 }%
12182 }%
12183 \LWR@formatted{AmS}
12184 }
```

### \MiKTeX MiKTeX

```
12185 \newrobustcmd*{\LWR@HTML@MiKTeX}{\InlineClass{latexlogofont}{MiK}\TeX}
12186 \LWR@formatted{MiKTeX}
```

### \LyX LyX

lyxlogo is a css class used for the LyX logo.

```
12187 \newrobustcmd*{\LWR@HTML@LyX}{\InlineClass{lyxlogo}{LyX}}
12188 \LWR@formatted{LyX}
```

```
12189 \end{warpHTML}
```

## 94 \AtBeginDocument, \AtEndDocument

**for HTML output:** 12190 \begin{warpHTML}

\LWR@LwarpStart Automatically sets up the HTML-related actions for the start and end of the document.

\LWR@LwarpEnd

12191 \AfterEndPreamble{\LWR@LwarpStart}

12192 \AtEndDocument{\LWR@LwarpEnd}

12193 \end{warpHTML}

## 95 Loading KOMA-SCRIPT class patches

Load patches to koma-script.

**for HTML output:** 12194 \begin{warpHTML}

12195 \@ifclassloaded{scrbook}{\RequirePackage{lwarp-patch-komascript}}{}

12196 \@ifclassloaded{scrartcl}{\RequirePackage{lwarp-patch-komascript}}{}

12197 \@ifclassloaded{scrreprt}{\RequirePackage{lwarp-patch-komascript}}{}

12198 \end{warpHTML}

## 96 Loading MEMOIR class patches

Load patches to memoir.

**for HTML output:** 12199 \begin{warpHTML}

12200 \@ifclassloaded{memoir}{\RequirePackage{lwarp-patch-memoir}}{}

12201 \end{warpHTML}

## 97 ut\* class patches

Load patches to uj\* and ut\* classes, as well as ltj\* classes.

**for HTML output:** 12202 \begin{warpHTML}

12203 \newcommand\*{\LWR@patchujtclasses}{

uj/t does not use \partname

12204 \def\@partnameformat{}

```

12205 \def\@partcntformat##1{%
12206 \prepartname%
12207 \csname the##1\endcsname%
12208 \postpartname%
12209 \quad%
12210 }
12211 \@ifundefined{chapter}{%{
12212 \def\@chapcntformat##1{%
12213 \prechaptername%
12214 \csname the##1\endcsname%
12215 \postchaptername%
12216 \quad%
12217 }
12218 }

```

Use decimal points instead of centered dots:

```

12219 \renewcommand{\thepart}{\@Roman\c@part}
12220 \@ifundefined{chapter}{
12221 \renewcommand{\thesection}{\@arabic\c@section}
12222 }{
12223 \renewcommand{\thechapter}{\@arabic\c@chapter}
12224 \renewcommand{\thesection}{\thechapter.\@arabic\c@section}
12225 }
12226 \renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}
12227 \renewcommand{\thesubsubsection}{%
12228 \thesubsection.\@arabic\c@subsubsection}
12229 \renewcommand{\theparagraph}{%
12230 \thesubsubsection.\@arabic\c@paragraph}
12231 \renewcommand{\thesubparagraph}{%
12232 \theparagraph.\@arabic\c@subparagraph}
12233 \@ifundefined{chapter}{
12234 \renewcommand{\thefigure}{\@arabic\c@figure}
12235 \renewcommand{\thetable}{\@arabic\c@table}
12236 }{
12237 \renewcommand{\thefigure}{%
12238 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@figure}
12239 \renewcommand{\thetable}{%
12240 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@table}
12241 }
12242 }
12243
12244 \@ifclassloaded{ujarticle}{\LWR@patchujtclasses}{}
12245 \@ifclassloaded{ujbook}{\LWR@patchujtclasses}{}
12246 \@ifclassloaded{ujreport}{\LWR@patchujtclasses}{}
12247 \@ifclassloaded{utarticle}{\LWR@patchujtclasses}{}
12248 \@ifclassloaded{utbook}{\LWR@patchujtclasses}{}
12249 \@ifclassloaded{utreport}{\LWR@patchujtclasses}{}
12250 \@ifclassloaded{ltjarticle}{\LWR@patchujtclasses}{}
12251 \@ifclassloaded{ltjbook}{\LWR@patchujtclasses}{}
12252 \@ifclassloaded{ltjreport}{\LWR@patchujtclasses}{}
12253 \@ifclassloaded{ltjsarticle}{\LWR@patchujtclasses}{}
12254 \@ifclassloaded{ltjsbook}{\LWR@patchujtclasses}{}
12255 \@ifclassloaded{ltjsreport}{\LWR@patchujtclasses}{}
12256 \@ifclassloaded{ltjskiyou}{\LWR@patchujtclasses}{}

```

```

12257 \@ifclassloaded{ltjspf}{\LWR@patchujtclasses}{}
12258 \@ifclassloaded{ltjtarticle}{\LWR@patchujtclasses}{}
12259 \@ifclassloaded{ltjtbook}{\LWR@patchujtclasses}{}
12260 \@ifclassloaded{ltjtreport}{\LWR@patchujtclasses}{}

12261 \end{warpHTML}

```

## 98 CTEX patches

Patches for `ctex` and related classes, which are loaded before `lwarp`.

All CTEX classes and the `ctex` package seem to load `ctexpatch`, so its presence is used to decide whether to have `lwarp` patch CTEX.

**for HTML output:** 12262 \begin{warpHTML}

\AtBeginDocument in case the user set `FileSectionNames` in the preamble.

```

12263 \AtBeginDocument{
12264 \@ifpackageloaded{ctexpatch}{%
12265 \def\@partcntformat#1{%
12266 \LWR@isolate{\CTEX@partname}~%
12267 \CTEX@part@aftername%
12268 }%
12269
12270 \def\@partnameformat{}
12271
12272 \def\@chapcntformat#1{%
12273 \LWR@isolate{\CTEX@chaptername}~%
12274 \CTEX@chapter@aftername%
12275 }%
12276 }{}
12277 }

12278 \end{warpHTML}

```

## 99 kotexutf patches

Patch for `kotexutf`, which is loaded before `lwarp`.

`kotexutf`'s `\@setref` was conflicting with `lwarp`'s cross references.

**for HTML output:** 12279 \begin{warpHTML}

If `kotexutf`'s version of `\@setref` is detected, it is reverted to the original.

```

12280 \AtBeginDocument{
12281 \@ifpackageloaded{kotexutf}{%
12282 \def\LWR@kotexutf@setref#1#2#3{%

```

```

12283 \@setref@dhucs@orig{#1}{#2}{#3}%
12284 \ifx#1\relax\else
12285 \bgroup
12286 \dhucs@make@cjckchar@null
12287 \edef\@temp{\expandafter#2#1}\global\josatoks\expandafter{\@temp}%
12288 \egroup
12289 \fi%
12290 }%
12291
12292 \ifdefequal{\@setref}{\LWR@kotexutf@setref}{
12293 \let\@setref\@setref@dhucs@orig
12294 }{}
12295 }{}
12296 }

12297 \end{warpHTML}

```

## 100 babel and polyglossia warnings

lwarp prints a message instructing the user how to avoid the following error.

(These are not `\PackageWarnings` because there may not be a problem.)

lwarp uses `cleveref`, which has some limitations when using `polyglossia`, possibly resulting in the error

```
! Undefined control sequence. . . . \@begindocumenthook
```

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 `lwarp`.

```

for HTML output: 12298 \begin{warpHTML}
12299 \AtBeginDocument{
12300
12301 \ifpackageloaded{polyglossia}{
12302 \PackageWarningNoLine{lwarp}
12303 {%
12304 Polyglossia has been loaded. Lwarp also uses cleveref.\MessageBreak
12305 See the cleveref documentation regarding\MessageBreak
12306 polyglossia support. Some languages are not supported%
12307 }

```

```

12308 \typeout{---}
12309 \typeout{Package lwarp:}
12310 \typeout{If the error}
12311 \typeout{\space\space‘! Undefined control sequence.
12312 \space ... \space \protect\@begindocumenthook’}
12313 \typeout{occurs here, use the polyglossia macro:}
12314 \typeout{\space\space\protect\setmainlanguage\protect{... \protect}}
12315 \typeout{---}
12316 }{
12317 \@ifpackageloaded{babel}{
12318 \PackageWarningNoLine{lwarp}
12319 {%
12320 Babel has been loaded. Lwarp also uses cleveref.\MessageBreak
12321 See the cleveref documentation regarding\MessageBreak
12322 babel support. Some languages are not supported%
12323 }
12324 }{}
12325 }
12326
12327 }
12328 \end{warpHTML}

```

## 101 MATHJAX warnings

`\LWR@mathjaxwarn`  $\langle packagename \rangle$   $\langle More\ text. \rangle$

To be done `\AtBeginDocument`.

```

12329 \newcommand*{\LWR@mathjaxwarn}[2]{%
12330 \@ifpackageloaded{lwarp-#1}{%
12331 \ifblank{#2}{%
12332 \PackageWarningNoLine{lwarp}
12333 {%
12334 Lwarp provides emulation for MathJax when used\MessageBreak
12335 with the #1 package%
12336 }
12337 }{%
12338 \PackageWarningNoLine{lwarp}
12339 {%
12340 Lwarp provides emulation for MathJax when used\MessageBreak
12341 with the #1 package.\MessageBreak
12342 #2%
12343 }
12344 }%
12345 }{}%
12346 }
12347
12348 \AtBeginDocument{
12349 \ifbool{mathjax}{
12350 \LWR@mathjaxwarn{arydshln}
12351 {In a math array, do not use the optional argument\MessageBreak
12352 for \protect\cdashline.\space\space

```

```

12353 Furthermore, \protect\cline\space is not\MessageBreak
12354 supported by MathJax}
12355 \LWR@mathjaxwarn{autonum}
12356 {MathJax does not support equation+.\MessageBreak
12357 You may use the warpprint and warpHTML\MessageBreak
12358 environments to isolate the package load\MessageBreak
12359 and the equation+ environments}
12360 \LWR@mathjaxwarn{backnaur}
12361 {You may enclose its uses inside\MessageBreak
12362 lateximage environments to force SVG output,\MessageBreak
12363 but this also changes the print output}
12364 \LWR@mathjaxwarn{bigdelim}
12365 {Delimiters appear only of the first line}
12366 \LWR@mathjaxwarn{booktabs}
12367 {In a math array, do not use (trim) for \protect\cmidrule}
12368 \LWR@mathjaxwarn{breqn}
12369 {Each environment becomes an SVG image}
12370 \LWR@mathjaxwarn{delarray}
12371 {Enclose its uses inside lateximage\MessageBreak
12372 environments to force SVG output}
12373 \LWR@mathjaxwarn{jkmath}{ }
12374 \LWR@mathjaxwarn{mathspec}{ }
12375 \LWR@mathjaxwarn{mathtools}
12376 {Avoid starred macros.\MessageBreak
12377 See the Lwarp manual for other limitations}
12378 \LWR@mathjaxwarn{multirow}
12379 {Multirow works as expected in text mode, but\MessageBreak
12380 limited emulation is provided for MathJax math.\MessageBreak
12381 \protect\multirow\space ignores all arguments except\MessageBreak
12382 the text}
12383 \LWR@mathjaxwarn{pb-diagram}
12384 {Enclose its uses inside lateximage environments\MessageBreak
12385 to force SVG output}
12386 \LWR@mathjaxwarn{physics}
12387 {The third-party extension is not yet used.\MessageBreak
12388 Avoid starred macros and automatic delimiters.\MessageBreak
12389 Use all mandatory arguments, adding empty as needed.\MessageBreak
12390 See the Lwarp manual for details}
12391 \LWR@mathjaxwarn{unicode-math}
12392 {Not all characters are encoded correctly.\MessageBreak
12393 Some symbol fonts are not supported by MathJax,\MessageBreak
12394 and are only approximated}
12395 \LWR@mathjaxwarn{witharrows}
12396 {Arrows can only point to the next line.\MessageBreak
12397 Text is only placed on a single line}
12398 \LWR@mathjaxwarn{xy}
12399 {xy works in text, but in math you must\MessageBreak
12400 enclose its uses inside lateximage\MessageBreak
12401 environments to force SVG output}
12402 }{ }
12403 }

```

File 2 **lwarp-2in1.sty**§ 102 Package **2in1**

Pkg 2in1 2in1 is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{2in1}File 3 **lwarp-2up.sty**§ 103 Package **2up**

Pkg 2up 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 **lwarp-a4.sty**§ 104 Package **a4**

Pkg a4 a4 is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a4}[2004/04/15]

```

2 \newcommand*{\WideMargins}{}

```

File 5 **lwarp-a4wide.sty**§ 105 Package **a4wide**

Pkg a4wide a4wide is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a4wide}[1994/08/30]

File 6 **lwarp-a5comb.sty**§ 106 Package **a5comb**

Pkg a5comb a5comb is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a5comb}

File 7 **lwarp-abstract.sty**§ 107 Package **abstract**

*(Emulates or patches code by PETER WILSON.)*

Pkg abstract abstract is supported and patched by lwarp.

 **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, lwarp 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 lwarp-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
18 \@ifclassloaded{memoir}
19 {
20 \renewenvironment{abstract}{%
21 % \titlepage
22 \null\vfil
23 \@beginparpenalty\@lowpenalty
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{@bstrctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
43 {\par\end{@bstrctlist}\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{\abstitlekip}%
64 \fi
65 \fi
66 \vspace{\abstitlekip}%
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{\abstitlekip}%
86 \fi
87 \fi
88 \vspace{\abstitlekip}%
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 **lwarp-academicons.sty**

§ 108 Package **academicons**

*(Emulates or patches code by DIOGO A. B. FERNANDES.)*

Pkg academicons academicons is patched for use by lwarp.

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 **lwarp-afterpage.sty**

#### § 109 Package **afterpage**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg afterpage afterpage is emulated.

**for HTML output:** Discard all options for lwarp-afterpage:

```

1 \LWR@ProvidesPackageDrop{afterpage}[2014/10/28]
2 \newcommand{\afterpage}[1]{#1}

```

---

### File 10 **lwarp-accessibility.sty**

#### § 110 Package **accessibility**

Pkg accessibility accessibility is emulated.

**for HTML output:** Discard all options for lwarp-accessibility:

```

1 \LWR@ProvidesPackageDrop{accessibility}[2019/10/14]
2 \newcommand{\alt}[1]{\ThisAltText{#1}}
3 \newcommand{\newhref}[3]{\ThisAltText{#2}\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 **lwarp-accsupp.sty**

§ 111 Package **accsupp**

Pkg accsupp 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 **lwarp-acro.sty**

§ 112 Package **acro**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg acro acro is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{acro}[2019/10/12]

\DeclareAcronym is used in the preamble, where lwarp has not yet made the dollar active, so temporarily enable lwarp math catcode just for this definition:

```
2 \ExplSyntaxOn
3 \NewDocumentCommand \LWR@DeclareAcronym {mm}
4 {
5 \acro_declare_acronym:nn {#1} {#2}
6 \catcode'\$=3% lwarp
7 }
8 \ExplSyntaxOff
9
10 \RenewDocumentCommand{\DeclareAcronym}{}{
11 \catcode'\$=\active% lwarp
12 \LWR@DeclareAcronym
13 }
```

Modified to activate the current font:

```

14 \ExplSyntaxOn
15 \@ifpackagelater{acro}{2019/09/23}%
16 {% v2.10 or later
17 \cs_gset_protected:Npn __acro_typeset:nn #1#2
18 {
19 \mode_if_horizontal:F { \leavevmode }
20 \group_begin:
21 \use:x
22 {
23 \bool_if:cTF {l__acro_custom_#1_format_bool}
24 { \exp_not:v {l__acro_custom_#1_format_tl} }
25 { \exp_not:v {l__acro_#1_format_tl} }
26 { \exp_not:N\LWR@textcurrentfont{#2}}% lwarp
27 }
28 \group_end:
29 }
30
31 \cs_gset_protected:Npn __acro_ending_format:nn #1#2
32 {
33 \bool_if:NTF \l__acro_include_endings_format_bool
34 {
35 \str_case:nn {#1}
36 {
37 {long}
38 {
39 \bool_if:NTF \l__acro_custom_long_format_bool
40 { \l__acro_custom_long_format_tl }
41 {
42 \bool_if:NTF \l__acro_first_instance_bool
43 { \l__acro_first_long_format_tl }
44 { \l__acro_long_format_tl }
45 }
46 }
47 } {short}
48 {
49 \bool_if:NTF \l__acro_custom_short_format_bool
50 { \l__acro_custom_short_format_tl }
51 { \l__acro_short_format_tl }
52 }
53 {alt}
54 {
55 \bool_if:NTF \l__acro_custom_alt_format_bool
56 { \l__acro_custom_alt_format_tl }
57 { \l__acro_alt_format_tl }
58 }
59 }
60 }
61 { \use:n }
62 { \exp_not:N\LWR@textcurrentfont{#2}}% lwarp
63 }
64 }% v2.10 or later
65 {% before v2.10
66 \cs_gset_protected:Npn \acro_write_short:nn #1#2
67 {
68 \mode_if_horizontal:F { \leavevmode }

```

```

69 \group_begin:
70 \bool_if:NTF \l__acro_custom_format_bool
71 { \l__acro_custom_format_tl }
72 { \l__acro_short_format_tl }
73 {\LWR@textcurrentfont{#2}}% lwarp
74 \group_end:
75 }
76
77 \cs_gset_protected:Npn \acro_write_alt:nn #1#2
78 {
79 \mode_if_horizontal:F { \leavevmode }
80 \group_begin:
81 \bool_if:NTF \l__acro_custom_format_bool
82 { \l__acro_custom_format_tl }
83 { \l__acro_alt_format_tl }
84 {\LWR@textcurrentfont{#2}}% lwarp
85 \group_end:
86 }
87
88 \cs_gset_protected:Npn \acro_write_long:nn #1#2
89 {
90 \mode_if_horizontal:F { \leavevmode }
91 \group_begin:
92 \bool_if:NTF \l__acro_custom_long_format_bool
93 { \l__acro_custom_long_format_tl }
94 { \use:n }
95 {
96 \use:x
97 {
98 \exp_not:n {#1}
99 {
100 \bool_if:NTF \l__acro_first_upper_bool
101 { \exp_not:N __acro_first_upper_case:n { \exp_not:n {
102 \LWR@textcurrentfont{#2}}% lwarp
103 } } }
104 { \exp_not:n {\LWR@textcurrentfont{#2}} }% lwarp
105 }
106 }
107 }
108 \group_end:
109 }
110 }% before v2.10
111 \ExplSyntaxOff

```

---

File 13 **lwarp-acronym.sty**

§ 113 Package **acronym**

*(Emulates or patches code by TOBIAS OETIKER.)*

Pkg acronym acronym is patched for use by lwarp.

 multiply-defined labels \acresetall does not work with cleveref, causing multiply-defined labels. lwarp

patches acronym for HTML, but not for print mode.

**for HTML output:** `1 \LWR@ProvidesPackagePass{acronym}[2015/03/21]`

Uses `\textit` instead of `\itshape`:

```
2 \renewcommand{\acfia}[1]{%
3 {\textit{\AC@acl{#1}}} (\ifAC@starred\acs*{#1}\else\acs{#1}\fi)}
```

Removes the mbox to allow math inside:

```
4 \renewcommand*\AC@acs[1]{%
5 % \mbox{
6 \expandafter\AC@get\csname fn#1\endcsname\@firstoftwo{#1}}
7 }
```

Fix for acronym labels in the captions of floats.

```
8 \renewcommand{\@starttoc}[1]{
9 \LWR@html@elementclass{nav}{#1}
10 \LetLtxMacro\@verrideLabel\@gobble
11 \LWR@orig@starttoc{#1}
12 \LWR@html@elementclassend{nav}{#1}
13 }
```

Modified for `cleveref` and `lwarp`:

```
14 \renewcommand*\AC@und@newl@bel[3]{%
15 \@ifundefined{#1@#3}%
16 {%
17 \global\expandafter\let\csname#2@#3\endcsname\@nnil
18 \global\expandafter\let\csname#2@#3@lwarp\endcsname\@nnil% lwarp
19 \global\expandafter\let\csname#2@#3@cref\endcsname\@nnil% lwarp
20 }%
21 {%
22 \global\expandafter\let\csname#1@#3\endcsname\relax
23 \global\expandafter\let\csname#1@#3@lwarp\endcsname\relax% lwarp
24 \global\expandafter\let\csname#1@#3@cref\endcsname\relax% lwarp
25 }%
26 }%
```

File 14 **lwarp-adjmulticol.sty**

§ 114 Package **adjmulticol**

*(Emulates or patches code by BORIS VEYTSMAN.)*

Pkg `adjmulticol` `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, `lwarp` allows a variable number of columns up to three.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{adjmulticol}[2012/01/20]

2 \RequirePackage{multicol}

adjmulticols \* {<numcols>} {<left margin>} {<right margin>}

3 \NewDocumentEnvironment{adjmulticols}{s 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@mccolstype{multicols}%

10 \ifnumcomp{#2}{=}{1}{\renewcommand\*\LWR@mccolstype{singlecolumn}}{%

Help avoid page overflow:

11 \LWR@forcenewpage%

Create the <div> with the given margin and class:

12 \BlockClass[%

13 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ; %

14 \LWR@print@mbx{margin-right:\LWR@printlength{\LWR@templengthtwo}}%

15 ]{\LWR@mccolstype}%

16 }

17 {\endBlockClass}

File 15 **lwarp-addlines.sty**

§ 115 Package **addlines**

(Emulates or patches code by WILL ROBERTSON.)

Pkg addlines 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\squeezepage[1][0]{}

---

File 16 **lwarp-afterpage.sty**

§ 116 Package **afterpage**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg afterpage afterpage is emulated.

**for HTML output:** Discard all options for lwarp-afterpage:

```
1 \LWR@ProvidesPackageDrop{afterpage}[2014/10/28]
2 \newcommand{\afterpage}[1]{#1}
```

---

File 17 **lwarp-algorithm2e.sty**

§ 117 Package **algorithm2e**

*(Emulates or patches code by CHRISTOPHE FIORIO.)*

Pkg algorithm2e algorithm2e is patched for use by lwarp.

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 lwarp 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 \newbool{LWR@algocf@dopars}
17 \booltrue{LWR@algocf@dopars}
18
19 \renewcommand{\algocf@everypar}{%
20 \ifbool{LWR@algocf@dopars}{%
21 \ifbool{LWR@doingstartpars}{%
22 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
23 {}%
24 {%
25 \algocf@everyparn\algocf@everyparhanging%
26 }%
27 }{}%
28 }{}%
29 }

```

lwarp caption handling:

```

30 \renewcommand{\algocf@makecaption}[2]{%
31 \LWR@HTML@caption@begin{algocf}%
32 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
33 \LWR@HTML@caption@end%
34 }

```

Print any caption where it is declared:

```

35 \renewcommand{\algocf@makecaption@plain}[2]{%
36 \LWR@HTML@caption@begin{algocf}%
37 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
38 \LWR@HTML@caption@end%
39 }
40
41 \renewcommand{\algocf@makecaption@boxed}[2]{%
42 \LWR@HTML@caption@begin{algocf}%
43 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
44 \LWR@HTML@caption@end%
45 }
46
47 \renewcommand{\algocf@makecaption@ruled}[2]{%
48 \LWR@HTML@caption@begin{algocf}%
49 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
50 \LWR@HTML@caption@end%
51 }

```

Turn off line numbering while making the caption:

```

52 \long\def\algocf@latexcaption#1[#2]#3{% original definition of caption
53 \boolfalse{LWR@algocf@dopars}% lwarp
54 \par%
55 \addcontentsline{\csname ext#1\endcsname}{#1}%
56 {\protect\numberline{\csname the#1\endcsname}{\ignorespaces \LWR@isolate{#2}}}%
57 \begingroup%
58 \@parboxrestore%
59 \if@minipage%

```

```

60 \setminipage%
61 \fi%
62 \normalsize%
63 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par%
64 \endgroup%
65 \booltrue{LWR@algocf@dopars}% lwarp
66 }

```

Line numbers are printed in a `<span>` of class `alg2elinenumber`:

```

67 \renewcommand{\algocf@printnl}[1]{%
68 \InlineClass{alg2elinenumber}{\NLSty{#1}}~%
69 }%

```

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.

```

70 \preto\@algocf@init{%
71 \edef\LWR@floatstyle@figure{\LWR@floatstyle@algocf}%
72 }

```

For `lwarp`, the algorithm is not assembled inside a box, since `lateximages` would not work, so the captions are printed where declared.

```

73 \renewcommand{\@algocf@start}{%
74 \let\@mathsemicolon=\; \def\;{\ifmmode\@mathsemicolon\else\@endalgoln\fi}%
75 % \raggedright%
76 \AlFnt{}}%
77 \booltrue{LWR@algocf@dopars}% lwarp
78 }
79
80 \renewcommand{\@algocf@finish}{%
81 \boolfalse{LWR@algocf@dopars}% lwarp
82 \lineskip\normallineskip\setlength{\skiptotal}{\@defaultskiptotal}%
83 \let\;=\@mathsemicolon%
84 \let\]=\@emathdisplay%
85 }

```

Use an HTML break:

```

86 \renewcommand{\BlankLine}{%
87 \LWR@stoppars%
88 \LWR@htmltagc{br /}%
89 \LWR@startpars%
90 }

```

Simplified for HTML. The paragraph handling must be preserved.

```

91 \renewcommand{\SetKwInOut}[2]{%
92 \algocf@newcommand{#1}[1]{%
93 \ifthenelse{\boolean{algocf@hanginginout}}%
94 {\relax}%
95 {\algocf@seteveryparhanging{\relax}}%
96 \ifthenelse{\boolean{algocf@inoutnumbered}}%

```

```

97 {\relax}%
98 {\algocf@seteveryparnl{\relax}}%
99 {%
100 \KwSty{#2\algocf@typo:}%
101 ~##1\par%
102 }%
103 \algocf@linesnumbered% reset the numbering of the lines
104 \ifthenelse{\boolean{algocf@hanginginout}}%
105 {\relax}%
106 {\algocf@reseteveryparhanging}%
107 }%
108 }%
109
110 \renewcommand{\ResetInOut}[1]{%

```

Each of the following creates a <div> of a given class, and turns off line numbering while creating the <div> tags:

```

111 \renewcommand{\algocf@Vline}[1]{%
112 \boolfalse{LWR@algocf@dopars}%
113 \begin{BlockClass}{alg2evline}
114 \booltrue{LWR@algocf@dopars}%
115 #1
116 \boolfalse{LWR@algocf@dopars}%
117 \end{BlockClass}
118 \booltrue{LWR@algocf@dopars}%
119 }

120 \renewcommand{\algocf@Vsline}[1]{%
121 \boolfalse{LWR@algocf@dopars}%
122 \begin{BlockClass}{alg2evsline}
123 \booltrue{LWR@algocf@dopars}%
124 #1
125 \boolfalse{LWR@algocf@dopars}%
126 \end{BlockClass}
127 \booltrue{LWR@algocf@dopars}%
128 }

129 \renewcommand{\algocf@Noline}[1]{%
130 \boolfalse{LWR@algocf@dopars}%
131 \begin{BlockClass}{alg2enoline}
132 \booltrue{LWR@algocf@dopars}%
133 #1
134 \boolfalse{LWR@algocf@dopars}%
135 \end{BlockClass}
136 \booltrue{LWR@algocf@dopars}%
137 }

```

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.

```

138 \LetLtxMacro\algocf@Here\algocf
139 \LetLtxMacro\endalgocf@Here\endalgocf

```

File 18 **lwarp-algorithmicx.sty**§ 118 Package **algorithmicx***(Emulates or patches code by SZÁSZ JÁNOS.)*

Pkg algorithmicx 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 `<span>` of the required length, and comments are placed inside a `<span>` which is floated right.

 **package conflicts** If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section [538.1](#).

**for HTML output:** 2 \begin{warpHTML}

```

3 \AtBeginEnvironment{algorithmic}{%
4 %
5 \let\origALG@doentity\ALG@doentity%
6 %
7 \renewcommand*{\ALG@doentity}{%
8 \origALG@doentity%
9 \LWR@htmltagc{%
10 span style="width:\LWR@printlength{\ALG@thistlm}; display:inline-block;"%
11 }%
12 \ifbool{FormatWP}{%
13 \setlength{\LWR@templengthone}{\the\ALG@thistlm}%
14 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
15 \quad%
16 \addtolength{\LWR@templengthone}{-1em}%
17 }%
18 }{%
19 \LWR@htmltagc{/span}%
20 }%
21
22 \let\LWR@origComment\Comment%
23
24 \renewcommand{\Comment}[1]{%
25 \InlineClass{floatright}{\LWR@origComment{#1}}%
26 }%
27 }
28
29 \renewcommand\algorithmiccomment[1]{%
30 \hfill\HTMLUnicode{25B7} #1% white right triangle
31 }%

32 \end{warpHTML}

```

File 19 **lwarp-alltt.sty**§ 119 Package **alltt**

*(Emulates or patches code by JOHANNES BRAAMS.)*

Pkg alltt alltt is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{alltt}[1997/06/16]

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching alltt.}
4 \AtBeginEnvironment{alltt}{%
5 \LWR@forcenewpage
6 \LWR@atbeginverbatim{3}{alltt}%
7 }
8 \AfterEndEnvironment{alltt}{%
9 \LWR@afterendverbatim{2}%
10 }
11 }
```

File 20 **lwarp-amsmath.sty**§ 120 Package **amsmath**

*(Emulates or patches code by AMERICAN MATHEMATICAL SOCIETY, L<sup>A</sup>T<sub>E</sub>X3 PROJECT.)*

Pkg amsmath amsmath is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{amsmath}[2017/09/02]
```

Patches to allow `\eqref` inside a caption:

```

2 \def\maketag@@@#1{\text{#1}}
3 \def\tagform@#1{\maketag@@@(\ignorespaces#1\unskip)}
```

Patches for  $\mathcal{AMS}$  math `\tag` macro to remember the first tag:

```

4 \ifbool{mathjax}{}{% not mathjax
5
6 \LetLtxMacro\LWR@origmake@df@tag@@\make@df@tag@@
7 \LetLtxMacro\LWR@origmake@df@tag@@@\make@df@tag@@@
8
9 \renewcommand*\make@df@tag@@[1]{%
10 \LWR@remembertag{#1}%
11 \LWR@origmake@df@tag@@{#1}%
12 }
```

```

13
14 \renewcommand*\make@df@tag@@@[1]{%
15 \LWR@remember@tag{#1}%
16 \LWR@origmake@df@tag@@@{#1}%
17 }
18
19 }% not mathjax

```

For nesting  $\mathcal{AMS}$  environments:

```

20 \newcounter{LWR@amsmathdepth}
21 \setcounter{LWR@amsmathdepth}{0}

```

The following  $\mathcal{AMS}$  environments are patched in-place:

```

\LWR@amsmathenv@@before * {\environment name}
* if the environment was starred.
Embeds the environment inside a lateximage.

22 \NewDocumentCommand{\LWR@amsmathenv@@before}{s m}{%
23 \IfBooleanTF{#1}{
24 \begin{BlockClass}{displaymath}
25 }{
26 \begin{BlockClass}{displaymathnumbered}
27 }
28 \LWR@newautoanchor%
29 \booltrue{LWR@indisplaymathimage}%
30 \begin{lateximage}[\LWR@amsmathbodynumbered{#1}]*
31 \LWR@applyxfakebold%
32 }

```

```

\LWR@amsmathenv@@before * {\environment name}
* if the environment was starred.
Embeds the environment with MATHJAX or a lateximage.

33 \NewDocumentCommand{\LWR@amsmathenv@@before}{s m}{%
34 \ifnumequal{\value{LWR@amsmathdepth}}{0}{%
35 \LWR@stoppars%
36 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
37 {
38 \LWR@syncmathjax
39 \boolfalse{LWR@amsmultline}
40 \ifstrequal{#2}{multline}{\booltrue{LWR@amsmultline}}{ }
41 \ifstrequal{#2}{multline*}{\booltrue{LWR@amsmultline}}{ }

```



autonom's "+" environments are not supported by MATHJAX.

```

42 \LWR@beginhideamsmath
43 }
44 {
45 \IfBooleanTF{#1}{
46 \LWR@amsmathenv@@before*{#2}
47 }{
48 \LWR@amsmathenv@@before{#2}

```

```

49 }
50 }
51 }{}
52 \addtocounter{LWR@amsmathdepth}{1}
53 }

```

`\LWR@amsmathenv@@after`

Embeds the environment inside a `lateximage`.

```

54 \newcommand*{\LWR@amsmathenv@@after}{%
55 \end{lateximage}\end{BlockClass}\LWR@startpars%
56 }

```

`\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`.

```

57 \NewDocumentCommand{\LWR@amsmathenv@after}{s m}{%
58 \ifnumequal{\value{LWR@amsmathdepth}}{1}{%
59 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
60 {
61 \LWR@endhideamsmath
62 \boolfalse{LWR@amsmultline}
63 \LWR@addmathjax{#2}{\the\envbody}
64 }
65 {\LWR@amsmathenv@@after}

```

Clear the single-use alt text:

```

66 \gdef\LWR@ThisAltText{}%
67 }{}
68 \addtocounter{LWR@amsmathdepth}{-1}
69 }

```

Env `multline`

```

70 \BeforeBeginEnvironment{multline}{\LWR@amsmathenv@before{multline}}
71
72 \AfterEndEnvironment{multline}{\LWR@amsmathenv@after{multline}}

```

Env `multline*`

```

73 \BeforeBeginEnvironment{multline*}{\LWR@amsmathenv@before*{multline*}}
74
75 \AfterEndEnvironment{multline*}{\LWR@amsmathenv@after*{multline*}}
76

```

Env `gather`

```

77 \BeforeBeginEnvironment{gather}{\LWR@amsmathenv@before{gather}}
78
79 \AfterEndEnvironment{gather}{\LWR@amsmathenv@after{gather}}

```

Env gather\*

```
80 \BeforeBeginEnvironment{gather*}{\LWR@amsmathenv@before*{gather*}}
81
82 \AfterEndEnvironment{gather*}{\LWR@amsmathenv@after*{gather*}}
```

Env align

```
83 \BeforeBeginEnvironment{align}{\LWR@amsmathenv@before{align}}
84
85 \AfterEndEnvironment{align}{\LWR@amsmathenv@after{align}}
```

Env align\*

```
86 \BeforeBeginEnvironment{align*}{\LWR@amsmathenv@before*{align*}}
87
88 \AfterEndEnvironment{align*}{\LWR@amsmathenv@after*{align*}}
```

Env flalign

```
89 \BeforeBeginEnvironment{flalign}{\LWR@amsmathenv@before{flalign}}
90
91 \AfterEndEnvironment{flalign}{\LWR@amsmathenv@after{flalign}}
```

Env flalign\*

```
92 \BeforeBeginEnvironment{flalign*}{\LWR@amsmathenv@before*{flalign*}}
93
94 \AfterEndEnvironment{flalign*}{\LWR@amsmathenv@after*{flalign*}}
```

Env alignat

```
95 \BeforeBeginEnvironment{alignat}{\LWR@amsmathenv@before{alignat}}
96
97 \AfterEndEnvironment{alignat}{\LWR@amsmathenv@after{alignat}}
```

Env alignat\*

```
98 \BeforeBeginEnvironment{alignat*}{\LWR@amsmathenv@before*{alignat*}}
99
100 \AfterEndEnvironment{alignat*}{\LWR@amsmathenv@after*{alignat*}}
```

For MATHJAX:

```
101 \begin{warpMathJax}
102 \CustomizeMathJax{\newcommand{\intertext}[1]{\ \ \ \text{#1}\notag \ \ }}
103 \end{warpMathJax}
```

---

File 21 **lwarp-amsthm.sty**

§ 121 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`.

Pkg `amsthm` `amsthm` is patched for use by `lwarp`.

---

Table 14: `amsthm` package—css styling of theorems and proofs

**Theorem:** `<div>` of class `amsthmbody<theoremstyle>`

**Theorem Name:** `<span>` of class `amsthmname<theoremstyle>`

**Theorem Number:** `<span>` of class `amsthmnumber<theoremstyle>`

**Theorem Note:** `<span>` of class `amsthmnote<theoremstyle>`

**Proof:** `<div>` of class `amsthmproof`

**Proof Name:** `<span>` of class `amsthmproofname`

where `<theoremstyle>` is `plain`, `definition`, etc.

---

**for HTML output:** `amsthm` must be loaded before `mdframed`:

```

1 \@ifpackageloaded{mdframed}{
2 \PackageError{lwarp}
3 {Package mdframed must be loaded after package amsthm}
4 {%
5 Move \detokenize{\usepackage}{amsthm} before
6 \detokenize{\usepackage}{mdframed}.\MessageBreak
7 Package amsthm may be loaded by something else,\MessageBreak
8 which must also be moved before mdframed.%
9 }
10 }
11 {}

```

```
12 \LWR@ProvidesPackagePass{amsthm}[2017/10/31]
```

Storage for the style being used for new theorems:

```
13 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```

14 \renewcommand{\theoremstyle}[1]{%
15 \ifundefined{th@#1}{%

```

```

16 \PackageWarning{amsthm}{Unknown theoremstyle ‘#1’}%
17 \thm@style{plain}%
18 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
19 }{%
20 \thm@style{#1}%
21 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
22 }%
23 }

```

Patched to remember the style for this theorem type:

```

24 \def\@xnthm#1#2{%
25 \csedef{LWR@thmstyle#2}{\LWR@newtheoremstyle}% lwarp
26 \let\@tempa\relax
27 \@xp\@ifdefinable\csname #2\endcsname{%
28 \global\@xp\let\csname end#2\endcsname\@endtheorem
29 \ifx *#1% unnumbered, need to get one more mandatory arg
30 \edef\@tempa#1{%
31 \gdef\@xp\@nx\csname#2\endcsname{%
32 \@nx\@thm{\@xp\@nx\csname th@the\thm@style\endcsname}%
33 }{##1}}}%
34 \else % numbered theorem, need to check for optional arg
35 \def\@tempa{\@oparg{\@ynthm{#2}}{}}}%
36 \fi
37 \AtBeginEnvironment{#2}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#2}}}% lwarp
38 }%
39 \@tempa
40 }

```

Patched to enclose with css:

```

41 \newcommand{\LWR@haveamsthmname}{
42 \renewcommand{\thmname}[1]{\InlineClass{amsthmname\LWR@thisthmstyle}{#1}}
43 }
44
45 \newcommand{\LWR@haveamsthmnumber}{
46 \renewcommand{\thmnumber}[1]{\InlineClass{amsthmnumber\LWR@thisthmstyle}{#1}}
47 }
48
49 \newcommand{\LWR@haveamsthmnote}{
50 \renewcommand{\thmnote}[1]{\InlineClass{amsthmnote\LWR@thisthmstyle}{#1}}
51 }
52
53 \LWR@haveamsthmname
54 \LWR@haveamsthmnumber
55 \LWR@haveamsthmnote

```

Patches for css:

```

56 \def\@begintheorem#1#2[#3]{%
57 \item[
58 % \deferred@thm@head{
59 % \the\thm@headfont \thm@indent
60 \@ifempty{#1}{\let\thmname\@gobble}{\LWR@haveamsthmname}% lwarp
61 \@ifempty{#2}{\let\thmnumber\@gobble}{\LWR@haveamsthmnumber}% lwarp

```

```

62 \ifempty{#3}{\let\thmnote@gobble}{\LWR@haveamsthmnote}% lwarp
63 \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
64 \the\thm@headpunct~
65 \thmheadnl % possibly a newline.
66 \hskip\thm@headsep
67 % }%
68]
69 \ignorespaces}

```

Patched for css:

```

70 \def\@thm#1#2#3{%
71 \ifhmode\unskip\unskip\par\fi
72 \normalfont
73 \LWR@forcenewpage% lwarp
74 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
75 \trivlist
76 \let\thmheadnl\relax
77 \let\thm@swap@gobble
78 \thm@notefont{\fontseries\mddefault\upshape}%
79 \thm@headpunct{.}% add period after heading
80 \thm@headsep 5\p@ plus\p@ minus\p@\relax
81 \thm@space@setup
82 #1% style overrides
83 \@topsep \thm@preskip % used by thm head
84 \@topsepadd \thm@postskip % used by \@endparenv
85 \def\@tempa{#2}\ifx\@empty\@tempa
86 \def\@tempa{\@oparg{\@begintheorem{#3}}{}}{}}{}}%
87 \else
88 \refstepcounter{#2}%
89 \def\@tempa{\@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}{}}%
90 \fi
91 \@tempa
92 }

```

cleveref patches \@thm to do \cref@thmoptarg if an optional argument is given. lwarp then patches \cref@thmoptarg \@AtBeginDocument.

```

93 \@AtBeginDocument{%
94 \def\cref@thmoptarg[#1]#2#3#4{%
95 \ifhmode\unskip\unskip\par\fi%
96 \normalfont%
97 \LWR@forcenewpage% lwarp
98 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
99 \trivlist%
100 \let\thmheadnl\relax%
101 \let\thm@swap@gobble%
102 \thm@notefont{\fontseries\mddefault\upshape}%
103 \thm@headpunct{.}% add period after heading
104 \thm@headsep 5\p@ plus\p@ minus\p@\relax%
105 \thm@space@setup%
106 #2% style overrides
107 \@topsep \thm@preskip % used by thm head
108 \@topsepadd \thm@postskip % used by \@endparenv
109 \def\@tempa{#3}\ifx\@empty\@tempa%

```

```

110 \def\@tempa{\@oparg{\@begintheorem{#4}}{}}[]%
111 \else%
112 \refstepcounter[#1]{#3}% <<< cleveref modification
113 \def\@tempa{\@oparg{\@begintheorem{#4}{\csname the#3\endcsname}}{}}%
114 \fi%
115 \@tempa
116 }%
117 }% AtBeginDocument
118
119 \def\@endtheorem{\endtrivlist\endBlockClass\@endpfalse }

```

Proof QED symbol:

```

120 \AtBeginDocument{
121 \ifundefined{LWR@orig@openbox}{
122 \LetLtxMacro\LWR@orig@openbox\openbox
123 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
124 \LetLtxMacro\LWR@orig@Box\Box
125
126 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
127 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
128 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
129
130 \appto\LWR@restoreorigformatting{%
131 \LetLtxMacro\openbox\LWR@orig@openbox%
132 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
133 \LetLtxMacro\Box\LWR@orig@Box%
134 }% appto
135 }{}% @ifundefined
136 }% AtBeginDocument

```

Patched for css:

```

137 \renewenvironment{proof}[1][\proofname]{\par
138 \LWR@forcenewpage% lwarp
139 \BlockClass{amsthmproof}% lwarp
140 \pushQED{\qed}%
141 \normalfont \topsep6\p@\@plus6\p@\relax
142 \trivlist
143 \item[
144 \InlineClass{amsthmproofname}{#1\@addpunct{.}}\ignorespaces% changes
145]{%
146 \InlineClass{theoremendmark}{\popQED}\endtrivlist%
147 \endBlockClass% lwarp
148 \@endpfalse
149 }

```

---

File 22 **lwarp-anonchap.sty**

§ 122 Package **anonchap**

(Emulates or patches code by PETER WILSON.)

Pkg anonchap anonchap is emulated.

Pkg tocloft 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<sup>A</sup>T<sub>E</sub>X commands to create the titles, allowing other packages to work with it.

⚠ **tocloft & other packages**

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\@secntformat%
10 }
```

---

File 23 **lwarp-anysize.sty**

§ 123 Package **anysize**

*(Emulates or patches code by MICHAEL SALZENBERG, THOMAS ESSER.)*

Pkg anysize anysize is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{anysize}[1994/08/13]

2 \def\papersize#1#2{}
3 \def\marginsize#1#2#3#4{}
```

---

File 24 **lwarp-appendix.sty**

§ 124 Package **appendix**

*(Emulates or patches code by PETER WILSON.)*

Pkg appendix appendix is patched for use by lwarp.

⚠ **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@pppage}{%
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 25 **lwarp-ar.sty**

§ 125 Package **ar**

*(Emulates or patches code by AGOSTINO DE MARCO.)*

Pkg ar ar is patched for use by lwarp.

**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 lateximage, additionally hashed by the font series, with a width depending on the given glyph:

```

10 \begin{lateximage}*[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 26 **lwarp-arabicfront.sty**

§ 126 Package **arabicfront**

Pkg arabicfront arabicfront is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{arabicfront}[2006/09/03]

File 27 **lwarp-array.sty**§ 127 Package **array**

Pkg array array is used as-is for print output, and emulated for HTML.

plarray and plectarray do not affect `\firstline` or `\lastline`, and so are not affected by the following.

**for HTML output:** Remove the default nullfied macros:

```

1 \let\firstline\relax
2 \let\lastline\relax
3
4 \LWR@ProvidesPackagePass{array}[2018/12/30]

5 \newcommand*\LWR@HTML@firstline{\LWR@HTMLhline}%
6 \LWR@expandableformatted{firstline}
7
8 \newcommand*\LWR@HTML@lastline{\LWR@HTMLhline}%
9 \LWR@expandableformatted{lastline}

10 \providecommand*\LWR@HTML@tabularnewline{\LWR@tabularendofline}
11 \LWR@formatted{tabularnewline}

```

For MATHJAX:

```

12 \CustomizeMathJax{
13 \newcommand{\multicolumn}[3]{#3}% only uses one cell
14 }

```

File 28 **lwarp-arydshln.sty**§ 128 Package **arydshln**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg arydshln 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{;}[1]{|}%
22 \let\txMacro\hdashline\hline%
23 }
```

Some of these macros are already defined as temporary placeholders in the lwarp 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% lwarp
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 % \ifadlezwhrule \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 % \@tempcnta#2
54 % \global\advance\adl@totalheight\@tempcnta
55 % \xdef\adl@rowsL{\adl@rowsL
56 % (#1/\number\@tempcnta);}
57 % \xdef\adl@rowsR{\adl@rowsR
58 % (#1/\number\@tempcnta);}
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}\ccline{#1-#2}}

70 \begin{warpMathJax}
71 \CustomizeMathJax{\newcommand{\firstdashline}[1][\hdashline]}
72 \CustomizeMathJax{\let\lastdashline\firstdashline}
73 \CustomizeMathJax{\let\cdashline\ccline}
74 \end{warpMathJax}

```

---

File 29 **lwarp-asymptote.sty**

§ 129 Package **asymptote**

*(Emulates or patches code by ANDY HAMMERLINDL, JOHN BOWMAN, TOM PRINCE.)*

Pkg asymptote asymptote is patched for use by lwarp.

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 \xpatchcmd{\asyinclude}
8 {\begingroup}
9 {\begin{lateximage}[-asymptote~\PackageDiagramAltText]}
10 {}
11 {\LWR@patcherror{asymptote}{asyinclude-begingroup}}
12
13 \xpatchcmd{\asyinclude}
14 {\endgroup}
15 {\end{lateximage}}
16 {}
17 {\LWR@patcherror{asymptote}{asyinclude-endgroup}}
```

---

File 30 **lwarp-atbegshi.sty**

§ 130 Package **atbegshi**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg atbegshi atbegshi is ignored.

**for HTML output:** Discard all options for lwarp-atbegshi:

```
1 \LWR@ProvidesPackageDrop[atbegshi][2011/10/05]
2 \newcommand*{\AtBeginShipout}[1]{}
3 \newbox\AtBeginShipoutBox
4 \newcommand*{\AtBeginShipoutNext}[1]{}
5 \newcommand*{\AtBeginShipoutFirst}[1]{}

```

```

6 \newcommand*\AtBeginShipoutDiscard{}
7 \newcommand*\AtBeginShipoutInit{}
8 \newcommand*\AtBeginShipoutAddToBox}[1]{}
9 \newcommand*\AtBeginShipoutAddToBoxForeground}[1]{}
10 \newcommand*\AtBeginShipoutUpperLeft}[1]{}
11 \newcommand*\AtBeginShipoutUpperLeftForeground}[1]{}
12 \newcommand*\AtBeginShipoutOriginalShipout}[1]{}
13 \def\AtBeginShipoutBoxWidth{0pt}
14 \def\AtBeginShipoutBoxHeight{0pt}
15 \def\AtBeginShipoutBoxDepth{0pt}
16

```

---

File 31 **lwarp-attachfile.sty**

§ 131 Package **attachfile**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg attachfile attachfile is patched for use by lwarp.

 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 \href{#1}{\LWR@attachfile@appearance}%
33 }
```

### File 32 **lwarp-attachfile2.sty**

## § 132 Package **attachfile2**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg attachfile2 **attachfile2** is patched for use by **lwarp**.



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}% lwarp
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 \href{#1}{\LWR@attachfile@appearance}%
45 }

```

Modified for text color:

```

46 \DeclareRobustCommand{\notextattachfile}[2][]{%
47 \begingroup
48 \atfi@setup{#1}%
49 \ifatfi@print
50 \leavevmode
51 \begingroup
52 \HyColor@UseColor\atfi@color@tex
53 \LWR@textcurrentcolor{#2}% lwarp
54 % \strut
55 \endgroup
56 % \else
57 % \sbox\ltx@zero{#2\strut}%

```

```

58 % \makebox[\wd0]{}%
59 \fi
60 \endgroup
61 }

```

Modified to draw the icon:

```

62 \DeclareRobustCommand{\noattachfile}[1][[]]{%
63 \begingroup
64 \atfi@setup{#1}%
65 \atfi@set@appearance@icon
66 \ifatfi@print
67 \LWR@attachfile@appearance% lwarp
68 % \expandafter
69 % \atfi@refxform\csname atfi@appobj\atfi@icon@icon\endcsname
70 % \else
71 % \makebox[\atfi@appearancewidth]{}%
72 \fi
73 \endgroup
74 }

```

---

File 33 **lwarp-authblk.sty**

§ 133 Package **authblk**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg authblk authblk is patched for HTML.

**package support** lwarp supports the native L<sup>A</sup>T<sub>E</sub>X titling commands, and also supports the packages  
**△ load order** 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 66.8.

*(Emulates or patches code by PATRICK W. DALY.)*

**for HTML output:** Require that authblk be loaded before titling:

```

1 \@ifpackageloaded{titling}{
2 \PackageError{lwarp-authblk}
3 {Package authblk must be loaded before titling}
4 {Titling appends authblk's author macro, so authblk must be loaded first.}
5 }
6 {}

```

Load authblk:

```

7 \LWR@ProvidesPackagePass{authblk}[2001/02/27]

```

Patch to add a class for the affiliation:

```

8 \LetLtxMacro\LWRAB@affil\affil
9
10 \renewcommand{\affil}[2][]{%
11 \LWRAB@affil[#1]{\protect\InlineClass{affiliation}{#2}}
12 }

```

Create an HTML break for an `\authorcr`:

```
13 \renewcommand*{\authorcr}{\protect\LWR@newlinebr}
```

---

File 34 **lwarp-autobreak.sty**

§ 134 Package **autobreak**

*(Emulates or patches code by TAKAHIRO UEDA.)*

Pkg autobreak 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 `align` 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 \renewenvironment{autobreak}{\newcommand{\MoveEqLeft}[1]{}{}}
4 \let\start@align\@autobreak@oldstart@align
5 \let\end@align\@autobreak@oldend@align
6 \CustomizeMathJax{\newenvironment{autobreak}{}{}}
7 \CustomizeMathJax{\newcommand{\MoveEqLeft}[1]{}{}}
8 \CustomizeMathJax{\newcommand{\everybeforeautobreak}[1]{}{}}
9 \CustomizeMathJax{\newcommand{\everyafterautobreak}[1]{}{}}
10 \end{warpMathJax}

```

---

File 35 **lwarp-autonum.sty**

§ 135 Package **autonum**

Pkg autonum 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
21
22 \newenvironment{flalign+}{\flalign}{\endflalign}
23
24 \BeforeBeginEnvironment{flalign+}{\LWR@amsmathenv@@before{flaline+}}
25
26 \AfterEndEnvironment{flalign+}{\LWR@amsmathenv@@after}
27
28
29 \newenvironment{align+}{\align}{\endalign}
30
31 \BeforeBeginEnvironment{align+}{\LWR@amsmathenv@@before{aline+}}
32
33 \AfterEndEnvironment{align+}{\LWR@amsmathenv@@after}
34
35
36 \newenvironment{alignat+}{\alignat}{\endalignat}
37
38 \BeforeBeginEnvironment{alignat+}{\LWR@amsmathenv@@before{alineat+}}
39
40 \AfterEndEnvironment{alignat+}{\LWR@amsmathenv@@after}
41
42
43 \newenvironment{split+}{\split}{\endsplit}

```

---

File 36 **lwarp-awesomebox.sty**

§ 136 Package **awesomebox**

*(Emulates or patches code by ÉTIENNE DEPARIS.)*

Pkg awesomebox awesomebox is patched for use by lwarp.

**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 { 0{abvrulecolor} 0{ } o m 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}{ 0{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 \ifdefstrequal{\abShortLine}{#2}{%
27 \renewcommand*\LWR@awesomebox@contentsborders}{\LWR@awesomebox@ruleborders}%
28 }{%
29 \ifdefstrequal{\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\newline}{}
48 }
49 {%
50 \end{BlockClass}
51 \end{BlockClass}
52 }

```

---

File 37 **lwarp-axessibility.sty**

§ 137 Package **axessibility**

Pkg axessibility axessibility is ignored.

**for HTML output:**

```

1 \PackageInfo{lwarp}{Using the lwarp version of package ‘axessibility’.}%
2 \ProvidesPackage{lwarp-axessibility}% no date is declared by the original
3
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 38 **lwarp-axodraw2.sty**

§ 138 Package **axodraw2**

(Emulates or patches code by JOHN C. COLLINS, J.A.M. VERMASEREN.)

Pkg axodraw2 axodraw2 is patched for use by lwarp.

**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 39 **lwarp-backnaur.sty**

§ 139 Package **backnaur**

*(Emulates or patches code by ADRIAN P. ROBSON.)*

Pkg backnaur backnaur is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{backnaur}[2019/06/18]
2 \renewenvironment{bnf}{\eqnarray}{\endeqnarray}
3 \renewenvironment{bnf*}{\csuse{eqnarray*}}{\csuse{endeqnarray*}}
```

File 40 **lwarp-backref.sty**

§ 140 Package **backref**

*(Emulates or patches code by DAVID CARLISLE AND SEBASTIAN RAHTZ.)*

Pkg backref backref is patched for use by lwarp.

 **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]
2 \def\backref{ }\let\backrefxxx\hyper@section@backref
```

File 41 **lwarp-balance.sty**

§ 141 Package **balance**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg balance balance is ignored.

**for HTML output:** Discard all options for lwarp-balance:

```
1 \LWR@ProvidesPackageDrop{balance}[1999/02/23]
2 \newcommand*\balance{}
3 \newcommand*\nobalance{}
```

File 42 **lwarp-bbding.sty**§ 142 Package **bbding***(Emulates or patches code by KAREL HORAK, PETER MØLLER NEERGAARD.)*Pkg bbding **bbding** is patched for use by lwarp.

```

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@TwelveStar}{\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{CrossLowerTips}  
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{TwelveStar}  
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{FourCLowerOpen}
217 \LWR@formatted{FourCLowerSolid}
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 43 **lwarp-biblatex.sty**

§ 143 Package **biblatex**

*(Emulates or patches code by PHILIPP LEHMAN.)*

Pkg biblatex When biblatex is used, modifications from newfloat may have to be undone.

for HTML output:

1. lwarp 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 chapterlists gaps option may no longer work.

```

1 \ifdef{\newfloat@addtocontents@ORI}{
2 \let\addtocontents\newfloat@addtocontents@ORI
3 }{}

4 \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.

```

5 \AfterPreamble{
6
7 \let\blx@anchors\@empty
8 \protected\def\blx@anchor{%
9 \xifinlist{\the\c@refsection @\abx@field@entrykey}{\blx@anchors}
10 {}
11 {\listxadd\blx@anchors{\the\c@refsection @\abx@field@entrykey}%
12 \hypertarget{cite.\the\c@refsection @\abx@field@entrykey}{}}
13 \protected\def\blx@imc@bibhyperref{%
14 \@ifnextchar[%
15 {\blx@bibhyperref}
16 {\blx@bibhyperref[\abx@field@entrykey]}}%
17
18 \long\def\blx@bibhyperref[#1]#2{%
19 % \blx@sfsave
20 % \hyperlink{cite.\the\c@refsection @#1}{%
21 % \blx@sfrst
22 % #2%
23 % \blx@sfsave
24 % }%
25 % \blx@sfrst%
26 }%% \def\blx@nohyperref[#1]#2{#2}%
27
28 \protected\long\def\blx@imc@bibhyperlink#1#2{%
29 % \blx@sfsave
30 % \hyperlink{cite.\the\c@refsection:#1}{%
31 % \blx@sfrst
32 % #2%
33 % \blx@sfsave
34 % }%

```

```

35 % \blx@sfrest%
36 }%
37
38 \protected\long\def\blx@imc@bibhypertarget#1#2{%
39 % \blx@sfsave%
40 \hypertarget{cite.\the\c@refsection:#1}{%
41 % \blx@sfrest
42 #2%
43 % \blx@sfsave%
44 }%
45 % \blx@sfrest%
46 }
47
48 \let\blx@imc@ifhyperref\@firstoftwo
49 }

```

---

File 44 **lwarp-bibunits.sty**

§ 144 Package **bibunits**

*(Emulates or patches code by THORSTEN HANSEN.)*

Pkg bibunits **bibunits** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{bibunits}[2004/05/12]

2 \def\bu@bibdata{\BaseJobname}

---

File 45 **lwarp-bigdelim.sty**

§ 145 Package **bigdelim**

*(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)*

Pkg bigdelim **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 `<span>` 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}[2018/08/03]

```

```

\ldelim <{1:delimiter}> <{2:#rows}> <{3:width}> [<{4:text}>]
\rdelim

```

```

4 \NewDocumentCommand{\LWR@HTML@ldelim}{m m m O{}}{%
5 \renewcommand{\LWR@multirowborder}{right}%
6 \multirow{#2}{#3}{#4 \InlineClass{ldelim}{#1}}%
7 }
8
9 \LWR@formatted{ldelim}
10
11 \NewDocumentCommand{\LWR@HTML@rdelim}{m m m O{}}{%
12 \renewcommand{\LWR@multirowborder}{left}%
13 \multirow{#2}{#3}{\InlineClass{rdelim}{#1} #4}%
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{\LWRldelim}[1][]{\text{#1}~\LWRbigdelim}}
20 \CustomizeMathJax{\def\ldelim#1#2#3{\def\LWRbigdelim{#1}\LWRldelim}}
21 % \rdelim) [n]{width}[text]

```

---

```

22 \CustomizeMathJax{\newcommand{\LWRrdelim}[1][\LWRbigdelim~\text{#1}]}
23 \CustomizeMathJax{\def\rdelim#1#2#3{\def\LWRbigdelim{#1}\LWRrdelim}}
24 \end{warpMathJax}

```

---

File 46 **lwarp-bigfoot.sty**

§ 146 Package **bigfoot**

Pkg bigfoot 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\vttypefraction{0.7}
12 \def\FootnoteMinimum{1sp}
13 \def\FootnoteMainMinimum{0pt}
14 \newcount\bigfoottolerance
15 \bigfoottolerance=100
16 \providecommand\footnotecarryratio{2}

```

---

File 47 **lwarp-bigstrut.sty**

§ 147 Package **bigstrut**

*(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)*

Pkg bigstrut bigstrut is used as-is for print or lateximage, 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][x]}
12 \end{warpMathJax}

```

File 48 **lwarp-bitpattern.sty**§ 148 Package **bitpattern**

(Emulates or patches code by JEAN-MARC BOURGUET.)

Pkg bitpattern bitpattern is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{bitpattern}[2015/12/11]
2 \xpatchcmd{\bitpattern}
3 {\begingroup}
4 {\begin{lateximage}[-bitpattern--\PackageDiagramAltText]}
5 {}
6 {\LWR@patcherror{bitpattern}{bitpattern}}
7
8 \xpatchcmd{\bp@Done}
9 {\endgroup}
10 {\end{lateximage}}
11 {}
12 {\LWR@patcherror{bitpattern}{bp@Done}}
```

File 49 **lwarp-blowup.sty**§ 149 Package **blowup**

Pkg blowup blowup is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{blowup}[2018/01/02]
2 \newcommand*\blowUp[1]{}

```

File 50 **lwarp-bm.sty**§ 150 Package **bm**

(Emulates or patches code by DAVID CARLISLE, FRANK MITTELBACH.)

Pkg bm bm is patched for use by lwarp.

**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{#2}{\boldsymbol{#3}}}%
8 }
9
10 \@onlypreamble\DeclareBoldMathCommand
11
12 \CustomizeMathJax{\newcommand{\bm}[1]{\boldsymbol{#1}}}
13 \end{warpMathJax}

```

---

File 51 **lwarp-booklet.sty**

§ 151 Package **booklet**

*(Emulates or patches code by PETER WILSON.)*

Pkg booklet 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 52 **lwarp-bookmark.sty**

§ 152 Package **bookmark**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg bookmark bookmark is ignored.

**for HTML output:** Discard all options for lwarp-bookmark:

```
1 \LWR@ProvidesPackageDrop{bookmark}[2016/05/17]
```

```

2 \newcommand*{\bookmarksetup}[1]{}
3 \newcommand*{\bookmarksetupnext}[1]{}
4 \newcommand*{\bookmark}[2][1]{}
5 \newcommand*{\bookmarkdefinestyle}[2]{}
6 \newcommand*{\bookmarkget}[1]{}
7 \newcommand{\BookmarkAtEnd}[1]{}

```

---

File 53 **lwarp-booktabs.sty**

§ 153 Package **booktabs**

*(Emulates or patches code by SIMON FEAR.)*

Pkg booktabs **booktabs** is emulated during HTML output, and used as-is during print output and inside an HTML latex image.

⚠ **\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 **lwarp**, such as by **memoir**, use it as-is. If not, the **lwarp** core will have placed some dummy macros which should be removed before loading the actual **booktabs** definitions.

```

1 \@ifpackageloaded{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@tabletotalLaTeXcols}}\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{\newcommand{\cmidrule}[2][{}]}% avoid (trim)
78 \CustomizeMathJax{\newcommand{\morecmidrules}{}}
79 \CustomizeMathJax{\newcommand{\specialrule}[3]{\hline}}
80 \CustomizeMathJax{\newcommand{\addlinespace}[1][{}]}
81 \end{warpMathJax}

```

---

File 54 **lwarp-bophook.sty**

§ 154 Package **bophook**

Pkg bophook bophook is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{bophook}[2001/03/29]

2 \newcommand*{\AtBeginPage}[1]{}
3 \newcommand*{\PageLayout}[1]{}

```

---

File 55 **lwarp-bounddvi.sty**

§ 155 Package **bounddvi**

Pkg bounddvi bounddvi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{bounddvi}[2016/12/28]

```

---

File 56 **lwarp-boxedminipage2e.sty**

§ 156 Package **boxedminipage2e**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg boxedminipage2e boxedminipage2e is emulated for HTML, and used as-is for lateximages.

**for HTML output:** Discard all options for lwarp-boxedminipage2e:

```

1 \LWR@ProvidesPackagePass{boxedminipage2e}[2015/03/09]

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 57 **lwarp-braket.sty**

§ 157 Package **braket**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg braket **braket** works as-is for HTML with SVG math. For MATHJAX, emulation is provided by MATHJAX macros.

**for HTML output:** 1 \LWR@ProvidesPackagePass{braket}% No date is provided by the file.

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\bra}[1]{\langle#1\vert}}
4 \CustomizeMathJax{\newcommand{\Bra}[1]{\left\langle#1\right\vert}}
5 \CustomizeMathJax{\newcommand{\ket}[1]{\vert#1\rangle}}
6 \CustomizeMathJax{\newcommand{\Ket}[1]{\left\vert#1\right\rangle}}
7 \CustomizeMathJax{\newcommand{\braket}[1]{\langle#1\rangle}}
8 \CustomizeMathJax{\newcommand{\Braket}[1]{\left\langle#1\right\rangle}}
9 \CustomizeMathJax{\newcommand{\set}[1]{\{#1\}}}
10 \CustomizeMathJax{\newcommand{\Set}[1]{\left\{#1\right\}}}
11 \end{warpMathJax}

```

---

File 58 **lwarp-breakurl.sty**

§ 158 Package **breakurl**

*(Emulates or patches code by VILAR CAMARA NETO.)*

Pkg breakurl **breakurl** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{breakurl}[2013/04/10]

```

2 \LetLtxMacro\url\url
3
4 \NewDocumentCommand{\LWR@bur\altb}{O{} +m m}{%
5 \LWR@ensuredoingapar%
6 \LWR@subhyperref{#2}%
7 \LWR@subhyperreftext{#3}%
8 \endgroup% restore catcodes
9 }
10
11 \newrobustcmd*{\bur\alt}{%
12 \begingroup%
13 \LWR@linkcatcodes%
14 \LWR@bur\altb%
15 }

```

```
16
17 \LetLtxMacro\urlalt\burlalt
```

---

File 59 **lwarp-breqn.sty**

§ 159 Package **breqn**

(Emulates or patches code by MICHAEL J. DOWNES, MORTEN HØGHOLM.)

Pkg breqn breqn is patched for use by lwarp.

 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 60 **lwarp-bsheaders.sty**

§ 160 Package **bsheaders**

Pkg bsheaders bsheaders is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{bsheaders}[1997/10/06]

---

File 61 **lwarp-bxpapersize.sty**

§ 161 Package **bxpapersize**

Pkg bxpapersize bxpapersize is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{bxpapersize}[2017/10/08]

---

```
2 \providecommand*\papersizesetup{\bxpapersizesetup}
3 \newcommand*\bxpapersizesetup[1]{}

```

---

File 62 **lwarp-bytefield.sty**

§ 162 Package **bytefield**

(Emulates or patches code by SCOTT PAKIN.)

Pkg bytefield **bytefield** is patched for use by lwarp.

**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 63 **lwarp-cancel.sty**

§ 163 Package **cancel**

Pkg cancel **cancel** is used as-is for SVG math, and emulated for HTML text output.

**for HTML output:**

```
1 \LWR@origRequirePackage{lwarp-xcolor}% for \convertcolorspec
2 \LWR@ProvidesPackagePass{cancel}[2013/04/12]

```

`\cancelto` is math-only, so is used as-is.

```
3 \LetLtxMacro\LWR@origcancel\cancel
4 \LetLtxMacro\LWR@origbcancel\bcancel
5 \LetLtxMacro\LWR@origxcancel\xcancel
6
7 \appto\LWR@restoreorigformatting{%
8 \LetLtxMacro\cancel\LWR@origcancel%
9 \LetLtxMacro\bcancel\LWR@origbcancel%
10 \LetLtxMacro\xcancel\LWR@origxcancel%
11 }

```

`\LWR@cancelcolor`  $\langle text \rangle \langle color \rangle \langle class \rangle \langle colorstyle \rangle \langle FormatWPstyle \rangle$

Add colors if not empty:

```
12 \newcommand{\LWR@cancelcolor}[5]{%
13 \ifcsempy{#2}%
14 {\InlineClass{#5}{#3}{#1}}%
15 {\LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}}%
16 }

```

```

\cancel {<text>}
17 \DeclareRobustCommand{\cancel}[1]{%
18 \begingroup%
19 \CancelColor%
20 \LWR@findcurrenttextcolor%
21 \color{black}%
22 \LWR@cancelcolor{#1}{LWR@tempcolor}{sout}{text-decoration-color}%
23 {text-decoration:line-through}%
24 \endgroup%
25 }
26
27 \LetLtxMacro\bcancel\cancel
28 \LetLtxMacro\xcancel\cancel

```

---

#### File 64 **lwarp-canoniclayout.sty**

### § 164 Package **canoniclayout**

Pkg canoniclayout canoniclayout is ignored.

**for HTML output:** s1 \LWR@ProvidesPackageDrop{canoniclayout}[2011/11/05]

```

2 \newcommand*\currentfontletters{}
3 \newcommand*\charactersperpage{}

```

---

#### File 65 **lwarp-caption.sty**

### § 165 Package **caption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg caption caption is patched for use by lwarp.

**for HTML output:**

```

1 \typeout{---}
2 \typeout{Packages lwarp 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\protect\captionsetup{opti
5 \typeout{instead of: \protect\usepackage[options]\protect{caption\protect}.}
6 \typeout{---}
7
8 \LWR@ProvidesPackagePass{caption}[2019/09/01]

9 \renewcommand\caption@ibox[3]{%
10 \@testopt\caption@iibox{#1}{#2}{#3}}{%
11 % \wd\@tempboxa%
12 % \linewidth% lwarp
13 }%
14 % \LWR@traceinfo{caption@ibox: done}%
15 }

```

```

16 \long\def\caption@iiibox#1#2#3[#4]{%
17 \@testopt{\caption@iiibox{#1}{#2}{#3}{#4}}\captionbox@hj@default
18 }

19 \long\def\caption@iiibox#1#2#3#4[#5]#6{%
20 % \setbox\@tempboxa\hbox{#6}%
21 \begingroup
22 #1*% set \caption@position
23 \caption@iftop{%
24 \LWR@traceinfo{caption@iiibox top}%
25 \endgroup
26 \parbox[t]{#4}{%
27 #1\relax
28 \caption@setposition t%
29 % \vbox{\caption#2{#3}}%
30 {\caption#2{#3}}% lwarp
31 % \captionbox@hrule
32 % \csname caption@hj@#5\endcsname
33 % \unhbox\@tempboxa
34 #6% lwarp
35 }%
36 }{%
37 \LWR@traceinfo{caption@iiibox bottom}%
38 \endgroup
39 \parbox[b]{#4}{%
40 #1\relax
41 \caption@setposition b%
42 % \csname caption@hj@#5\endcsname
43 % \unhbox\@tempboxa
44 #6% lwarp
45 % \captionbox@hrule
46 % \vtop{\caption#2{#3}}%
47 {\caption#2{#3}}% lwarp
48 }%
49 }%
50 \LWR@traceinfo{caption@iiibox: done}%
51 }
52
53 % \def\caption@caption{%
54 % \caption@iftype
55 % {%
56 % \caption@checkgrouplevel\@empty\caption
57 % \caption@star
58 % {\caption@refstepcounter\@capttype}%
59 % {\caption@dblarg{\@caption\@capttype}}%
60 % {\caption@Error{\noexpand\caption outside float}}%
61 % \caption@gobble}%
62 % }
63
64 \long\def\caption@@caption#1[#2]#3{%

65 \ifcaption@star
66 \else
67 \caption@prepareanchor{#1}{#2}%
68 \memcaptioninfo{#1}{\csname the#1\endcsname}{#2}{#3}%

```

```

69 \@nameuse{nag@hascaptiontrue}%
70 \fi

71 \par
72 \caption@beginex{#1}{#2}{#3}%
73 \caption@setfloatcapt{%
74 \caption@boxrestore
75 \if@minipage
76 \setminipage
77 \fi
78 \caption@normalsize

79 \ifcaption@star
80 \let\caption@makeanchor\@firstofone
81 #3% lwarp
82 \else% lwarp
83 \@makecaption{\csname fnum@#1\endcsname}%
84 {\ignorespaces\caption@makeanchor{#3}}%
85 \fi% lwarp

86 % \par
87 \caption@if@minipage\@minipagetrue\@minipagefalse}%
88 \caption@end%
89 }

```

`\caption@@@make`     $\{\langle caption label \rangle\} \{\langle caption text \rangle\}$

```

90 \renewcommand\caption@@@make[2]{%
91 \LWR@traceinfo{caption@@@make}%
92 % \box\@tempboxa{#1}%
93 % \ifdim\wd\@tempboxa=\z@
94 % \let\caption@lsep\relax
95 % \fi
96 \caption@ifempty{#2}{%
97 \let\caption@lsep\@empty
98 \let\caption@tfmt\@firstofone
99 }%
100 \caption@applyfont

```

`\caption@fmt` with plain format is defined as  $\{\#1\#2\#3\backslash\par\}$ :

```

101 % \caption@fmt
102 {\ifcaption@star\else
103 \begingroup
104 \captionlabelfont
105 #1%
106 \endgroup
107 \fi}%
108 {\ifcaption@star\else
109 \begingroup
110 \caption@iflfl\captionlabelfont
111 \relax
112 \caption@lsep
113 \endgroup

```

```

114 \fi}%
115 {%
116 \captiontextfont
117 % \caption@ifstrut
118 % {\vrule\@height\ht\strutbox\@width\z}%
119 % {}%
120 % \nobreak\hskip\z@skip % enable hyphenation
121 \caption@tfmt{#2}%
122 \caption@ifstrut
123 % {\ifhmode\@finalstrut\strutbox\fi}%
124 % {}%
125 }}%
126 \LWR@traceinfo{caption@@@make done}%
127 }

```

```

\caption@@make@ {<>}{<>}

128 \renewcommand{\caption@@make@[2]}{%
129 \caption@stepthecounter
130 \caption@beginhook
131 \caption@@make{#1}{#2}%
132 \caption@endhook
133 }

```

\caption@makecaption

```

134 \long\def\caption@makecaption#1#2{%
135 % \caption@iftop
136 % {\vskip\belowcaptionskip}%
137 % {\caption@rule\vskip\abovecaptionskip}%
138 \caption@@make{#1}{#2}%
139 % \caption@iftop
140 % {\vskip\abovecaptionskip\caption@rule}%
141 % {\vskip\belowcaptionskip}%
142 }

143 % \DeclareCaptionBox{none}{#2}
144 \DeclareCaptionBox{parbox}{%
145 #2%
146 }
147 \DeclareCaptionBox{colorbox}{%
148 #2%
149 }

```

---

File 66 **lwarp-cases.sty**

§ 166 Package **cases**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg cases **cases** is patched for use by **lwarp**.

While using MATHJAX, cases objects are converted to svg math images.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{cases}[2002/05/02]

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 67 **lwarp-centernot.sty**

§ 167 Package **centernot**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg centernot 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{\newcommand{\centernot}[1]{\not{!\#1\,}}}
4 \end{warpMathJax}
```

---

File 68 **lwarp-changebar.sty**

§ 168 Package **changebar**

Pkg changebar 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*\cbcolor[1]{}
8 \newlength{\changebarwidth}
9 \newlength{\deletebarwidth}
10 \newlength{\changebarsep}
11 \newcounter{changebargrey}

```

File 69 **lwarp-changelayout.sty**

§ 169 Package **changelayout**

*(Emulates or patches code by AHMED MUSA.)*

Pkg changelayout **changelayout** is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{changelayout}[2009/10/07]

2 \renewrobustcmd\cpl@backtodefautls{}
3
4 \renewrobustcmd\cpl@checkifoddpagelayout[1]{%
5 \cpl@oddpagelayoutfalse%
6 }
7
8 \renewrobustcmd\changepagelayout[1]{%
9 \setkeys[KV]{changelayout}{#1}%
10 }
11
12 \renewrobustcmd{\changetextlayout}[1]{\changepagelayout{#1}}
13
14 \renewrobustcmd\adjustpagelayout[1]{%
15 \setkeys[KV@X]{changelayout}{#1}%
16 }
17
18 \renewrobustcmd{\adjusttextlayout}[1]{\adjustpagelayout{#1}}
19
20 \renewrobustcmd\adjusttextwidth[1]{%
21 \setkeys[KV]{changelayout}{#1}%
22 \begin{BlockClass}[color:\LWR@colorstyle{named}{\cpl@textcolor}]{changelayout}
23 \color{\cpl@textcolor}%
24 \cpl@content
25 \end{BlockClass}
26 }

```

File 70 **lwarp-changepage.sty**

§ 170 Package **changepage**

*(Emulates or patches code by PETER WILSON.)*

Pkg changepage **changepage** is ignored.

**for HTML output:** Discard all options for lwarp-changepage:

```

1 \LWR@ProvidesPackageDrop{changepage}[2009/10/20]

2 \newif\ifoddpag
3 \DeclareRobustCommand{\checkoddpag}{\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 71 **lwarp-changes.sty**

§ 171 Package **changes**

*(Emulates or patches code by EKKART KLEINOD.)*

Pkg changes **changes** is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{changes}[2019/01/26]

\BaseJobname is added to the label in case xr or xr-hyper are used.

```

2 \renewcommand{\ChangesListline}[4]{%
3 \IfSubStr{\Changes@loc@show}{#1}{%
4 \LWR@startpars%
5 #2: #3 \qqquad
6 \nameref{\BaseJobname-autopage-#4}%
7 \LWR@stoppars%
8 }{}%

```

```

9 }
10
11 \renewcommand{\Changes@summaryline}[4]{%
12 \IfSubStr{\Changes@loc@show}{#1}{%
13 \ifthenelse{\not\equal{\Changes@loc@style}{compactsummary} \or #2 > 0}%
14 {%
15 #3:~#2#4%
16 }%
17 }%
18 }
19
20 \xpatchcmd{\listofchanges}
21 {\changesauthorname: \changesanonymousname}}
22 {\LWR@textcurrentcolor{\changesauthorname: \changesanonymousname}}}
23 {}
24 {\LWR@patcherror{changes}{listofchanges A}}
25
26 \xpatchcmd{\listofchanges}
27 {\changesauthorname: \Changes@InID}
28 {\LWR@textcurrentcolor{\changesauthorname: \Changes@InID}}
29 {}
30 {\LWR@patcherror{changes}{listofchanges B}}
31
32 \xpatchcmd{\listofchanges}
33 {(\Changes@InName)}
34 {\LWR@textcurrentcolor{(\Changes@InName)}}
35 {}
36 {\LWR@patcherror{changes}{listofchanges C}}
37
38 \xpatchcmd{\listofchanges}
39 {\parbox{\Changes@summary@width}}
40 {}
41 {}
42 {\LWR@patcherror{changes}{listofchanges D}}
43
44 \xpatchcmd{\Changes@Markup@comment}
45 {%
46 \ifthenelse{\isAnonymous{#2}}%
47 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
48 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
49 #1%
50 }
51 {%
52 \LWR@textcurrentcolor{% lwarp
53 \ifthenelse{\isAnonymous{#2}}%
54 {\textbf{[\arabic{Changes@commentCount#2}]:} }%
55 {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
56 #1%
57 }% lwarp
58 }
59 {}
60 {\LWR@patcherror{changes}{\Changes@Markup@comment A}}
61
62 \xpatchcmd{\Changes@Markup@comment}
63 {%

```

```

64 \uwave{%
65 \ifthenelse{\isAnonymous{#2}}%
66 {\textbf{[\arabic{Changes@commentCount#2}]} }%
67 {\textbf{[#3~\arabic{Changes@commentCount#2}]} }%
68 #1%
69 }%
70 }
71 {%
72 \LWR@textcurrentcolor{% lwarp
73 \uwave{%
74 \ifthenelse{\isAnonymous{#2}}%
75 {\textbf{[\arabic{Changes@commentCount#2}]} }%
76 {\textbf{[#3~\arabic{Changes@commentCount#2}]} }%
77 #1%
78 }%
79 }% lwarp
80 }
81 {}
82 {\LWR@patcherror{changes}{\Changes@Markup@comment B}}
83
84 \xpatchcmd{\Changes@output}
85 {\Changes@Markup@author{\Changes@output@author{#2}{left}}}
86 {\LWR@textcurrentcolor{\Changes@Markup@author{\Changes@output@author{#2}{left}}}}
87 {}
88 {\LWR@patcherror{changes}{Changes@output A}}
89
90 \xpatchcmd{\Changes@output}
91 {%
92 \ifthenelse{\equal{#1}{added}}{\Changes@Markup@added{#3}}{}%
93 \ifthenelse{\equal{#1}{deleted}}{\Changes@Markup@deleted{#4}}{}%
94 \ifthenelse{\equal{#1}{replaced}}{%
95 {\Changes@Markup@added{#3}}\allowbreak\Changes@Markup@deleted{#4}%
96 }{}%
97 \ifthenelse{\equal{#1}{highlight}}{\Changes@Markup@highlight{#3}}{}%
98 }
99 {%
100 \LWR@textcurrentcolor{%
101 \ifthenelse{\equal{#1}{added}}{\Changes@Markup@added{#3}}{}%
102 \ifthenelse{\equal{#1}{deleted}}{\Changes@Markup@deleted{#4}}{}%
103 \ifthenelse{\equal{#1}{replaced}}{%
104 {\Changes@Markup@added{#3}}\allowbreak\Changes@Markup@deleted{#4}%
105 }{}%
106 \ifthenelse{\equal{#1}{highlight}}{\Changes@Markup@highlight{#3}}{}%
107 }%
108 }
109 {}
110 {\LWR@patcherror{changes}{Changes@output B}}
111
112 \xpatchcmd{\Changes@output}
113 {\Changes@Markup@author{\Changes@output@author{#2}{right}}}
114 {\LWR@textcurrentcolor{\Changes@Markup@author{\Changes@output@author{#2}{right}}}}
115 {}
116 {\LWR@patcherror{changes}{Changes@output C}}

```

File 72 **lwarp-chappg.sty**§ 172 Package **chappg***(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg chappg chappg is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{chappg}[2006/05/09]

2 \renewcommand{\pagenumbering}[2][{}]{
3 \providecommand{\chappgsep}{--}
```

File 73 **lwarp-chapterbib.sty**§ 173 Package **chapterbib***(Emulates or patches code by DONALD ARSENEAU.)*

Pkg chapterbib chapterbib is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{chapterbib}[2010/09/18]

2 \xdef\@savedjobname{\BaseJobname}
3 \let\@currentipfile\@savedjobname
```

File 74 **lwarp-chemfig.sty**§ 174 Package **chemfig***(Emulates or patches code by CHRISTIAN TELLECHEA.)*

Pkg chemfig chemfig is patched for use by lwarp.

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `lateximage`:

```

\begin{lateximage}[-chemfig-~\PackageDiagramAltText]
\chemfig{. . .}
\polymerdelim[. . .]{. . .}
\end{lateximage}
```

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}
```

```

2
3 \catcode'_ =11
4
5 \@ifpackagelater{chemfig}{2019/04/18}%
6 {% 2019/04/18 or newer
7
8 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
9
10 \renewcommand*{\chemfig}[2][]{%
11 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
12 \LWR@chemfig@origchemfig[#1]{#2}%
13 \end{lateximage}%
14 }
15
16 \GlobalLetLtxMacro\LWR@chemfig@origCF_lewisc\CF_lewisc
17 \gdef\CF_lewisc#1,#2_nil{%
18 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
19 \LWR@chemfig@origCF_lewisc#1,#2_nil
20 \end{lateximage}
21 }
22
23 \gpreto{\schemestart}{%
24 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
25 }
26 \gappto{\CF_schemestop}{\end{lateximage}}
27
28 }% 2019/04/18 or newer
29 {% older than 2019/04/18
30
31 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
32
33 \DeclareDocumentCommand\chemfig{s O{} O{} m}{%
34 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
35 \IfBooleanTF{#1}{%
36 \LWR@chemfig@origchemfig*[#2][#3]{#4}%
37 }{%
38 \LWR@chemfig@origchemfig[#2][#3]{#4}%
39 }
40 \end{lateximage}%
41 }
42
43 \LetLtxMacro\LWR@chemfig@origCF@lewis@b\CF@lewis@b
44
45 \def\CF@lewis@b#1#2{%
46 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
47 \LWR@chemfig@origCF@lewis@b{#1}{#2}%
48 \end{lateximage}%
49 }
50
51 \preto{\schemestart}{%
52 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
53 }
54 \appto{\CF@schemestop}{\end{lateximage}}
55
56 }% older than 2019/04/18

```

```

57
58 \catcode'_ =8%
59
60
61
62 \LetLtxMacro\LWR@chemfig@origchemleft\chemleft
63
64 \def\chemleft#1#2\chemright#3{%
65 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
66 \LWR@chemfig@origchemleft#1#2\chemright#3%
67 \end{lateximage}%
68 }
69
70 \LetLtxMacro\LWR@chemfig@origchemup\chemup
71
72 \def\chemup#1#2\chemdown#3{%
73 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
74 \LWR@chemfig@origchemup#1#2\chemdown#3%
75 \end{lateximage}%
76 }

```

---

File 75 **lwarp-chemformula.sty**

§ 175 Package **chemformula**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemformula chemformula is patched for use by lwarp.

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}[2019/10/13]

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 \RenewDocumentCommand \ch { O{}m }
4 { %

```

To work inside align with `\displaymath` other, a simple version must be used to work with `chemformula`'s adaptation to align.

```

5 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
6 {
7 \chemformula_ch:nn {#1} {#2}% original
8 }

```

If used as the outer level, must temporarily ensure MATHJAX is disabled:

```

9 {
10 \begingroup%
11 \boolfalse{mathjax}%

```

An inline image is used, adjusted for the baseline:

```

12 \LWR@subsingledollar*{% lwarp
13 \textbackslash}ch{\LWR@HTMLsanitize{#2}\}% alt text
14 }{%
15 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}% add'l hashing
16 }%
17 {%
18 \chemformula_ch:nn {#1} {#2}% original
19 }%
20 \endgroup%
21 }
22 }

```

`\chcpd` Similar to `\ch`.

```

23 \@ifpackagelater{chemformula}{2019/10/13}{
24 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
25 {
26 \begingroup%
27 \boolfalse{mathjax}%
28 \LWR@subsingledollar*{% lwarp
29 \textbackslash}chcpd{\LWR@HTMLsanitize{#2}\}%
30 }{%
31 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
32 }{% original
33 \group_begin:
34 \tl_if_blank:nF {#2}
35 {
36 \keys_set:nn {chemformula} {#1}
37 __chemformula_save_catcodes:
38 __chemformula_sanitize:Nn
39 \l__chemformula_chemformula_tmpa_tl
40 {#2}
41 __chemformula_input_compound_no_check:NV
42 \l__chemformula_compound_tl
43 \l__chemformula_chemformula_tmpa_tl
44 __chemformula_prepare_output:NV
45 \l__chemformula_compound_tl
46 \l__chemformula_catcodes_tl
47 \chemformula_write:V \l__chemformula_compound_tl
48 }
49 \group_end:

```

```

50 }
51 \endgroup
52 }
53 }% later than 2019/10/13
54 {% earlier than 2019/10/13
55 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
56 {
57 \begingroup%
58 \boolfalse{mathjax}%
59 \LWR@subsingledollar*{% lwarp
60 \textbackslash{}chcpd\{\LWR@HTMLsanitize{#2}\}%
61 }{%
62 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
63 }{% original
64 \group_begin:
65 \tl_if_blank:nF {#2}
66 {
67 \keys_set:nn {chemformula} {#1}
68 __chemformula_save_catcodes:
69 __chemformula_sanitize:Nn
70 \l__chemformula_chemformula_tmpa_tl
71 {#2}
72 __chemformula_input_compound_no_check:NV
73 \l__chemformula_compound_tl
74 \l__chemformula_chemformula_tmpa_tl
75 __chemformula_prepare_output:N \l__chemformula_compound_tl
76 \chemformula_write:V \l__chemformula_compound_tl
77 }
78 \group_end:
79 }
80 \endgroup
81 }
82 }% earlier than 2019/10/13

```

`\charrow` If standalone, appears in a regular `lateximage`.

```

83 \RenewDocumentCommand \charrow { m0{}0{} }
84 {
85 \begin{lateximage}[-chemformula- charrow]
86 \group_begin:
87 __chemformula_draw_arrow:nnn {#1} {#2} {#3}
88 \group_end:
89 \end{lateximage}
90 }

```

`\chname` If standalone, appears in a regular `lateximage`, hashed according to contents.

```

91 \RenewDocumentCommand \chname { R(){}R(){} }
92 {
93 \begin{lateximage}*[%
94 \textbackslash{}chname(\LWR@HTMLsanitize{#1})(\LWR@HTMLsanitize{#2})
95]*%
96 \chemformula_chwritebelow:nn {#1} {#2}
97 \end{lateximage}
98 }

```

`\chLewis` Placed inline, hashed according to contents and options.

```

99 \RenewDocumentCommand \chLewis { 0{ }mm }
100 {
101 \begingroup%
102 \boolfalse{mathjax}%
103 \LWR@subsingledollar*{\textbackslash}chLewis\{#2\}\{#3\}%
104 {
105 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
106 }{
107 \chemformula_lewis:nnn {#1} {#2} {#3}
108 }
109 \endgroup%
110 }

```

`lwarp` redefines the `$` character, so special handling is required to escape math expressions inside `\ch`.

This boolean tracks a new kind of escaped math:

```
111 \bool_new:N \l__chemformula_first_last_LWRdollar_bool
```

`\chemformula_input_escape_math`

Adds additional escaping for the new dollar definition:

```

112 \cs_gset_protected:Npn __chemformula_input_escape_math:n #1
113 {
114 __chemformula_first_last_math:n {#1}
115 \bool_if:NT \l__chemformula_first_last_dollar_bool
116 {
117 \bool_set_true:N \l__chemformula_first_last_math_bool
118 __chemformula_read_escape_dollar:w #1 \q_nil
119 }
120 \bool_if:NT \l__chemformula_first_last_mathbraces_bool
121 {
122 \bool_set_true:N \l__chemformula_first_last_math_bool
123 __chemformula_read_escape_mathbraces:w #1 \q_nil
124 }

```

Added by `lwarp`:

```

125 \bool_if:NT \l__chemformula_first_last_LWRdollar_bool% lwarp
126 {
127 \bool_set_true:N \l__chemformula_first_last_math_bool% lwarp
128 __chemformula_read_escape_LWRdollar:w #1 \q_nil% lwarp
129 }
130 }

```

`\chemformula_read_escape_LWRdollar`

The following parses the contents inside the new dollars.

lwarp 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.

```

131 \begingroup
132 \catcode'\$=\active
133
134 \cs_new_protected:Npn __chemformula_read_escape_LWRdollar:w $#1$ \q_nil
135 {
136 __chemformula_read_escape_math:n {#1}
137 }
138
139 \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 \$.

```

140 \cs_new_protected:Npn __chemformula_bool_cs_set_if_first_last:NnNN #1#2#3#4
141 {
142 \int_zero:N \l__chemformula_tmpa_int
143 \int_zero:N \l__chemformula_tmpb_int
144 \int_set:Nn \l__chemformula_tmpa_int { \tl_count:n {#2} }
145 \tl_map_inline:nn {#2}
146 {
147 \int_incr:N \l__chemformula_tmpb_int
148 \int_compare:nT { \l__chemformula_tmpb_int = 1 }
149 {

```

At the start, the cs\_ version compares control sequences:

```

150 \ifdefstrequal{##1}{#3}% lwarp
151 {
152 \bool_set_true:N #1
153 }% lwarp
154 {}
155 }

```

At the end, compare more control sequences:

```

156 \int_compare:nT { \l__chemformula_tmpb_int = \l__chemformula_tmpa_int }
157 {
158 \ifdefstrequal{##1}{#4}
159 {
160 {
161 \bool_set_false:N #1
162 }
163 }
164 }
165 }

```

\chemformula\_first\_last\_math

Modified to check for the new meaning of \$ at first/last:

```

166 \cs_gset_protected:Npn __chemformula_first_last_math:n #1
167 {
168 \bool_set_false:N __chemformula_first_last_math_bool
169 \bool_set_false:N __chemformula_first_last_dollar_bool
170 \bool_set_false:N __chemformula_first_last_LWRdollar_bool% lwarp
171 \bool_set_false:N __chemformula_first_last_mathbraces_bool
172 __chemformula_bool_set_if_first_last:Nnnn
173 __chemformula_first_last_dollar_bool
174 {#1}
175 { $ } { $ }
176 \bool_if:NF __chemformula_first_last_dollar_bool
177 {
178 __chemformula_bool_set_if_first_last:Nnnn
179 __chemformula_first_last_mathbraces_bool
180 {#1}
181 { \ () { \) }

```

Added by lwarp:

```

182 \bool_if:NF __chemformula_first_last_mathbraces_bool% lwarp
183 {
184 __chemformula_bool_cs_set_if_first_last:NnnN
185 __chemformula_first_last_LWRdollar_bool
186 {#1}
187 { \LWR@newsingledollar } { \LWR@newsingledollar }
188 }% lwarp
189 }
190 }

191 \ExplSyntaxOff

```

---

File 76 **lwarp-chemgreek.sty**

§ 176 Package **chemgreek**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg chemgreek chemgreek is patched for use by lwarp.

 **Greek symbols package selection** To use text-mode symbols, use packages `textalpha` or `textgreek`. Using the other 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<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X, Lua<sup>A</sup>T<sub>E</sub>X** If using X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X or Lua<sup>A</sup>T<sub>E</sub>X, select the fontspec mapping:

```
\selectchemgreekmapping{fontspec}
```

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{chemgreek}[2016/02/10]

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 77 **lwarp-chemmacros.sty**

§ 177 Package **chemmacros**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg chemmacros chemmacros is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{chemmacros}[2017/08/28]

SVG file hashing assumes that the relevant options are constant for the entire document.

§ 177.1 **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}

```

§ 177.2 **Code**§ 177.3 **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.

```

2 \ExplSyntaxOn
3
4 \newcommand{\@ifchemmacrosmoduleloaded}[1]{%
5 \@ifl@aded{\c__chemmacros_module_extension_tl}{\c__chemmacros_module_prefix_tl.#1}%
6 }
7
8 \ExplSyntaxOff

```

§ 177.4 **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`

```

9 \DeclareDocumentEnvironment{polymerdelims}{}
10 {\begin{lateximage}[-chemmacros- polymer]}
11 {\end{lateximage}}

```

Env `redoxreaction` `{\langle space above \rangle}{\langle space below \rangle}`

For HTML output, the above and below space is ignored, and a `lateximage` is used instead. For the print output version, see section 86.

```

12 \DeclareDocumentEnvironment{redoxreaction}{m m}
13 {\begin{lateximage}[-chemmacros- redoxreaction]}
14 {\end{lateximage}}

```

```

15 \ExplSyntaxOn

```

§ 177.5 **Acid-base**

```

16 \AtBeginDocument{
17 \@ifchemmacrosmoduleloaded{acid-base}{
18 \PackageInfo{lwarp}{Patching~chemmacros~module~acid-base}
19
20 \cs_gset_protected:Npn \chemmacros_p:n #1
21 {
22 \begingroup
23 \boolfalse{mathjax}
24 \LWR@subsingledollar*{
25 \textbackslash}p\{\LWR@HTMLsanitize{#1}\}
26 }{
27 chemmacrosp\protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%

```

```
28 }{
29 \group_begin:
30 \mbox
31 {
32 \chemmacros_p_style:n {p}
33 \ensuremath {#1}
34 }
35 \group_end:
36 }
37 \endgroup
38 }
39
40 \RenewDocumentCommand \pH {} {
41 \begingroup
42 \boolfalse{mathjax}
43 \LWR@subsingledollar*{\textbackslash}pH}{chemmacros}{
44 \chemmacros_p:n { \chemmacros_chemformula:n {H} }
45 }
46 \endgroup
47 }
48
49 \RenewDocumentCommand \pOH {} {
50 \begingroup
51 \boolfalse{mathjax}
52 \LWR@subsingledollar*{\textbackslash}pOH}{chemmacros}{
53 \chemmacros_p:n { \chemmacros_chemformula:n {OH} }
54 }
55 \endgroup
56 }
57
58 \RenewDocumentCommand \pKa {O{}}
59 {
60 \begingroup
61 \boolfalse{mathjax}
62 \LWR@subsingledollar*{\textbackslash}pKa{[]#1{}}}{chemmacros #1}{
63 \chemmacros_p:n
64 {
65 \Ka \ifblank {#1} {}
66 { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
67 }
68 }
69 \endgroup
70 }
71
72 \RenewDocumentCommand \pKb {O{}}
73 {
74 \begingroup
75 \boolfalse{mathjax}
76 \LWR@subsingledollar*{\textbackslash}pKb{[]#1{}}}{chemmacros #1}{
77 \chemmacros_p:n
78 {
79 \Kb \ifblank {#1} {}
80 { {} \c_math_subscript_token { \chemmacros_bold:n {#1} } }
81 }
82 }
```

```

83 \endgroup
84 }
85
86 \LetLtxMacro\LWR@chemmacros@origKa\Ka
87 \renewcommand*\Ka{%
88 \begingroup
89 \boolfalse{mathjax}
90 \LWR@subsingledollar*\textbackslash{Ka}{chemmacros}{%
91 \LWR@chemmacros@origKa%
92 }%
93 \endgroup
94 }
95
96 \LetLtxMacro\LWR@chemmacros@origKb\Kb
97 \renewcommand*\Kb{%
98 \begingroup
99 \boolfalse{mathjax}
100 \LWR@subsingledollar*\textbackslash{Kb}{chemmacros}{%
101 \LWR@chemmacros@origKb%
102 }%
103 \endgroup
104 }
105
106 \LetLtxMacro\LWR@chemmacros@origKw\Kw
107 \renewcommand*\Kw{%
108 \begingroup
109 \boolfalse{mathjax}
110 \LWR@subsingledollar*\textbackslash{Kw}{chemmacros}{
111 \LWR@chemmacros@origKw
112 }
113 \endgroup
114 }
115
116 }{}% \ifchemmacrosmoduleloaded
117 }% AtBeginDocument

```

## § 177.6 Charges

```

118 \AtBeginDocument{
119 \ifchemmacrosmoduleloaded{charges}{
120 \PackageInfo{lwarp}{Patching~chemmacros~module~charges}
121
122 \cs_gset_protected:Npn \fplus {
123 \begingroup
124 \boolfalse{mathjax}
125 \LWR@subsingledollar*\textbackslash{fplus}{chemmacros}
126 { \LWR@origensuredmath{\chemformula_fplus:} }
127 \endgroup
128 }
129 \cs_gset_protected:Npn \fminus {
130 \begingroup
131 \boolfalse{mathjax}
132 \LWR@subsingledollar*\textbackslash{fminus}{chemmacros}
133 { \LWR@origensuredmath{\chemformula_fminus:} }
134 \endgroup
135 }

```

```

136
137 }{}% \@ifchemmacrosmoduleloaded
138 }% AtBeginDocument

```

## § 177.7 Nomenclature

```

139 \AtBeginDocument{
140 \@ifchemmacrosmoduleloaded{nomenclature}{
141 \PackageInfo{lwarp}{Patching~chemmacros~module~nomenclature}
142
143 \cs_gset_protected:Npn \chemmacros_charge:n #1
144 {
145 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}
146 {\chemmacros_chemformula:n { }^{#1} }}
147 {
148 \ifmmode
149 {\chemmacros_chemformula:n { }^{#1} }}
150 \else
151 { \textsuperscript{\ensuremath{#1}} }
152 \fi
153 }
154 }
155
156
157 \letLtxMacro\LWR@chemmacros@origchemprime\chemprime
158
159 \protected\def\chemprime { \HTMLunicode{2032} }
160
161 \appto\LWR@restoreorigformatting{%
162 \letLtxMacro\chemprime\LWR@chemmacros@origchemprime%
163 }

164 \ChemCompatibilityFrom{5.8}
165 \cs_gset_protected:Npn __chemmacros_cip:n #1
166 {
167 \tl_set:Nn \l__chemmacros_tmpa_tl {#1}
168 \int_step_inline:nnnn {0} {1} {9}
169 {
170 \tl_replace_all:Nnn \l__chemmacros_tmpa_tl
171 {##1}
172 { { \l__chemmacros_cip_number_tl ##1} }
173 }
174 {
175 \l__chemmacros_cip_inner_tl
176 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
177 \l__chemmacros_tmpa_tl
178 }}% lwarp
179 }
180 }
181 \EndChemCompatibility

182 \RenewDocumentCommand \Sconf { 0{S} } {
183 \begin{lateximage}[\textbackslash{}Sconf{[#1{]]}]*
184 \chemmacros_sconf:n {#1}
185 \end{lateximage}
186 }

```

```
187
188 \RenewDocumentCommand \Rconf { O{R} } {
189 \begin{lateximage}[\textbackslash{}Rconf{[#1{}}]*
190 \chemmacros_rconf:n {#1}
191 \end{lateximage}
192 }

193 \cs_gset_protected:Npn \chemmacros_hapto:n #1
194 {
195 \begingroup
196 \boolfalse{mathjax}
197 \LWR@subsingledollar*{\textbackslash{}hapto\{#1\}}{\chemmacros}{
198 \chemmacros_coordination_symbol:nnnn
199 { \l__chemmacros_coord_use_hyphen_bool }
200 {
201 \chemmacros_if_compatibility:nnTF {>} {5.7}
202 { \c_true_bool }
203 { \c_false_bool }
204 }
205 { \chemeta }
206 {#1}
207 }
208 \endgroup
209 }
210
211 \cs_gset_protected:Npn \chemmacros_dento:n #1
212 {
213 \begingroup
214 \boolfalse{mathjax}
215 \LWR@subsingledollar*{\textbackslash{}dento\{#1\}}{\chemmacros}{
216 \chemmacros_coordination_symbol:nnnn
217 { \l__chemmacros_coord_use_hyphen_bool }
218 {
219 \chemmacros_if_compatibility:nnTF {>} {5.7}
220 { \c_true_bool }
221 { \c_false_bool }
222 }
223 { \chemkappa }
224 {#1}
225 }
226 \endgroup
227 }
228
229 \cs_gset_protected:Npn \chemmacros_bridge:n #1
230 {
231 \begingroup
232 \boolfalse{mathjax}
233 \LWR@subsingledollar*{\textbackslash{}bridge\{#1\}}{\chemmacros}{
234 \chemmacros_coordination_symbol:nnnn
235 { \l__chemmacros_coord_use_hyphen_bool }
236 { \l__chemmacros_bridge_super_bool }
237 { \chemmu }
238 {#1}
239 }
240 \endgroup
241 }
```

```
242 }{}% \@ifchemmacrosmoduleloaded
243 }% AtBeginDocument
```

### § 177.8 Particles

```
244 \AtBeginDocument{
245 \@ifchemmacrosmoduleloaded{particles}{
246 \PackageInfo{lwarp}{Patching~chemmacrosmodule~particles}
247
248 \cs_gset_protected:Npn \chemmacros_declare_nucleophile:Nn #1#2
249 {
250 \cs_set_protected:cpn {__chemmacros_ \chemmacros_remove_backslash:N #1:}
251 {
252 \bool_if:NTF \l__chemmacros_nucleophile_elpair_bool
253 {
254 \chemmacros_elpair:n { #2 }
255 \chemmacros_if_compatibility:nnT {>=} {5.3}
256 { \skip_horizontal:N \l__chemmacros_nucleophile_dim }
257 \chemmacros_chemformula:n { {}^{ - } }
258 }
259 { \chemmacros_chemformula:n { #2^{ - } } }
260 }
261 \DeclareDocumentCommand #1 {o}
262 {%
263 \begin{lateximage}%
264 \group_begin:%
265 \IfNoValueF {##1}%
266 { \chemmacros_set_keys:nn {particles} {##1} }%
267 \use:c {__chemmacros_ \chemmacros_remove_backslash:N #1:}%
268 \group_end:%
269 \end{lateximage}%
270 }
271 }
272
273 \RenewChemNucleophile \Nuc {Nu}
274 \RenewChemNucleophile \ba {ba}
275
276 }{}% \@ifchemmacrosmoduleloaded
277 }% AtBeginDocument
```

### § 177.9 Phases

```
278 \AtBeginDocument{
279 \@ifchemmacrosmoduleloaded{phases}{
280 \PackageInfo{lwarp}{Patching~chemmacrosmodule~phases}
281
282 \cs_undefine:N \chemmacros_phase:n
283 \cs_new_protected:Npn \chemmacros_phase:n #1
284 {
285 \mode_leave_vertical:
286
287 \bool_if:NTF \l__chemmacros_phases_sub_bool
288 {
289 \ifnumequal{\value{LWR@lateximagedepth}}{0}
```

```

289 {
290 \textsubscript{ (#1) }
291 }
292 {
293 \chemformula_subscript:n { (#1) }
294 }
295 }
296 {
297 \skip_horizontal:N \l__chemmacros_phases_space_dim
298 \chemmacros_text:n { (#1) }
299 }
300 }
301
302 }{}% \@ifchemmacrosmoduleloaded
303 }% AtBeginDocument

```

## §177.10 Mechanisms

```

304 \AtBeginDocument{
305 \@ifchemmacrosmoduleloaded{mechanisms}{
306 \PackageInfo{lwarp}{Patching~chemmacros~module~mechanisms}
307
308 \chemmacros_define_keys:nn {textmechanisms}
309 {
310 type .choice: ,
311 type / .code:n =
312 {
313 __chemmacros_set_mechanisms:nnn { S }
314 {
315 \textsubscript{N}
316 }
317 { }
318 } ,
319 type / 1 .code:n =
320 {
321 __chemmacros_set_mechanisms:nnn { S }
322 {
323 \textsubscript{N}
324 1
325 }
326 { }
327 } ,
328 type / 2 .code:n =
329 {
330 __chemmacros_set_mechanisms:nnn { S }
331 {
332 \textsubscript{N}
333 2
334 }
335 { }
336 } ,
337 type / se .code:n =
338 {
339 __chemmacros_set_mechanisms:nnn { S }
340 {
341 \textsubscript{E}

```

```

342 }
343 { }
344 } ,
345 type / 1e .code:n =
346 {
347 __chemmacros_set_mechanisms:nnn { S }
348 {
349 \textsubscript{E}
350 1
351 }
352 { }
353 } ,
354 type / 2e .code:n =
355 {
356 __chemmacros_set_mechanisms:nnn { S }
357 {
358 \textsubscript{E}
359 2
360 }
361 { }
362 } ,
363 type / ar .code:n =
364 {
365 __chemmacros_set_mechanisms:nnn { S }
366 {
367 \textsubscript{E}
368 }
369 { Ar - }
370 } ,
371 type / e .code:n =
372 { __chemmacros_set_mechanisms:nnn { E } { } { } } ,
373 type / e1 .code:n =
374 { __chemmacros_set_mechanisms:nnn { E } { 1 } { } } ,
375 type / e2 .code:n =
376 { __chemmacros_set_mechanisms:nnn { E } { 2 } { } } ,
377 type / cb .code:n =
378 {
379 __chemmacros_set_mechanisms:nnn { E }
380 {
381 1
382 \textsubscript{cb}
383 }
384 { }
385 } ,
386 type .default:n =
387 }
388
389 \cs_gset_protected:Npn \chemmacros_mechanisms:n #1
390 {
391 \tl_if_blank:nTF {#1}
392 { \chemmacros_set_keys:nn {textmechanisms} { type } }
393 { \chemmacros_set_keys:nn {textmechanisms} { type = #1 } }
394 \mbox
395 {
396 \tl_use:N \l__chemmacros_mechanisms_ar_tl

```

```

397 \tl_use:N \l__chemmacros_mechanisms_type_tl
398 \tl_use:N \l__chemmacros_mechanisms_mol_tl
399 }
400 }
401
402 \appto\LWR@restoreorigformatting{%
403 \cs_set_protected:Npn \chemmacros_mechanisms:n #1%
404 {%
405 \tl_if_blank:nTF {#1}%
406 { \chemmacros_set_keys:nn {mechanisms} { type } }%
407 { \chemmacros_set_keys:nn {mechanisms} { type = #1 } }%
408 \mbox%
409 {%
410 \tl_use:N \l__chemmacros_mechanisms_ar_tl%
411 \tl_use:N \l__chemmacros_mechanisms_type_tl%
412 \tl_use:N \l__chemmacros_mechanisms_mol_tl%
413 }%
414 }%
415 }
416
417 }{}% \@ifchemmacrosmoduleloaded
418 }% AtBeginDocument

```

### § 177.11 Newman

```

419 \AtBeginDocument{
420 \@ifchemmacrosmoduleloaded{newman}{
421 \PackageInfo{lwarp}{Patching~chemmacros~module~newman}
422
423 \RenewDocumentCommand \newman {od()m}%
424 {
425 \IfValueTF{#2}
426 {\begin{lateximage}[\textbackslash}newman(#2)\{#3\}]*}
427 {\begin{lateximage}[\textbackslash}newman\{#3\}]*}
428 \group_begin:
429 \IfNoValueF {#1} { \chemmacros_set_keys:nn {newman} {#1} }
430 \IfNoValueTF {#2}
431 { \chemmacros_newman:nn { } {#3} }
432 { \chemmacros_newman:nn {#2} {#3} }
433 \group_end:
434 \end{lateximage}
435 }%
436
437 }{}% \@ifchemmacrosmoduleloaded
438 }% AtBeginDocument

```

### § 177.12 Orbital

```

439 \AtBeginDocument{
440 \@ifchemmacrosmoduleloaded{orbital}{
441 \PackageInfo{lwarp}{Patching~chemmacros~module~orbital}
442
443 \RenewDocumentCommand \orbital {om}
444 {
445 \IfValueTF{#1}

```

```

446 {
447 \begin{lateximage}[%
448 \textbackslash{}orbital{[]\LWR@HTMLSanitize{#1}{}}\{#2\}%
449]*[][margin-left: 1em ; margin-right: 1em]
450 }
451 {
452 \begin{lateximage}[%
453 \textbackslash{}orbital\{#2\}%
454]*[][margin-left: 1em ; margin-right: 1em]
455 }
456 \group_begin:
457 \chemmacros_set_keys:nn {orbital/type} {#2}
458 \IfNoValueTF {#1}
459 { \chemmacros_orbital:n { } }
460 { \chemmacros_orbital:n {#1} }
461 \group_end:
462 \end{lateximage}
463 }
464
465 }{}% \ifchemmacrosmoduleloaded
466 }% AtBeginDocument

```

### § 177.13 Reactions

```

\chemmacros_declare_reaction_env {<chem>} {<math>} {<args number>} {<argument list ({#2}{#3}...)}

467 \AtBeginDocument{
468 \ifchemmacrosmoduleloaded{reactions}{
469 \PackageInfo{lwarp}{Patching~chemmacros~module~reactions}
470
471 \cs_gset_protected:Npn \chemmacros_declare_reaction_env:nnnn #1#2#3#4
472 {
473 \exp_args:Nnx \DeclareDocumentEnvironment {#1} { 0{} \prg_replicate:nn {#3+0} {m} }
474 {
475 \boolfalse{mathjax}% lwarp
476 \ifvoid{\LWR@ThisAltText}{% lwarp
477 \ThisAltText{-chemmacros~reaction}% lwarp
478 }{}% lwarp
479 \chemmacros_add_reaction_description:n {##1}
480 __chemmacros_begin_reaction:
481 \chemmacros_reaction_read:nnw {#2} {#4}
482 }
483 {
484 __chemmacros_end_reaction:
485 \gdef\LWR@ThisAltText{}% lwarp
486 }
487 }
488 \cs_generate_variant:Nn \chemmacros_declare_reaction_env:nnnn {nnnV}
489
490 \RenewChemReaction {reaction} {equation}
491 \RenewChemReaction {reaction*} {equation*}
492 \RenewChemReaction {reactions} {align}
493 \RenewChemReaction {reactions*} {align*}
494
495 }{}% \ifchemmacrosmoduleloaded

```

```
496 }% AtBeginDocument
```

### § 177.14 **Redox**

```
497 \AtBeginDocument{
498 \@ifchemmacrosmoduleloaded{redox}{
499 \PackageInfo{lwarp}{Patching~chemmacros~module~redox}
500
501 \NewDocumentCommand \LWR@chemmacros@ox { s m >{\SplitArgument{1}{,}}m }
502 {
503 \IfBooleanTF {#1}
504 { \chemmacros_ox:nnnn {#1} {#2} #3 }
505 { \chemmacros_ox:nnnn { } {#2} #3 }
506 }
507
508 \RenewDocumentCommand \ox { s O{ } m }
509 {
510 \begingroup
511 \boolfalse{mathjax}
512 \IfBooleanTF {#1}
513 {
514 \LWR@subsingledollar*{% yes hash
515 \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
516 }{%
517 star \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}%
518 }{%
519 \LWR@chemmacros@ox* {#2} {#3}% contents
520 }%
521 }
522 {
523 \LWR@subsingledollar*{% yes hash
524 \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
525 }{%
526 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}%
527 }{%
528 \LWR@chemmacros@ox {#2} {#3}% contents
529 }%
530 }
531 \endgroup
532 }
533
534 }{}% \@ifchemmacrosmoduleloaded
535 }% AtBeginDocument
```

### § 177.15 **Scheme**

Fix for chemmacros as of v5.8b, when using newfloat and babel:

```
536 \AtBeginDocument{
537 \@ifchemmacrosmoduleloaded{scheme}{
538 \PackageInfo{lwarp}{Patching~chemmacros~module~scheme}
539
540 \ifdefstring{\schemename}{los}{
541 \SetupFloatingEnvironment{scheme}{
542 name = \chemmacros_translate:n {scheme-name}
```

```

543 }
544 }{}
545
546 }{}% \@ifchemmacrosmoduleloaded
547 }% AtBeginDocument

```

## § 177.16 Spectroscopy

```

548 \AtBeginDocument{
549 \@ifchemmacrosmoduleloaded{spectroscopy}{
550 \PackageInfo{lwarp}{Patching~chemmacros~module~spectroscopy}
551
552 \ChemCompatibilityTo{5.8}
553 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
554 {
555 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
556 {
557 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
558 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
559 }
560 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
561 % \chemmacros_chemformula:n { ^{#1} }
562 #1
563 \bool_if:NTF \l__chemmacros_nmr_parse_bool
564 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
565 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
566 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
567 \tl_use:N \l__chemmacros_nmr_method_tl
568 }
569 \EndChemCompatibility
570 \ChemCompatibilityFrom{5.8}
571 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
572 {
573 \group_begin:
574 \tl_use:N \l__chemmacros_nmr_base_format_tl
575 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
576 {
577 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
578 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
579 }
580 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
581 % \chemmacros_chemformula:n { ^{#1} }
582 #1
583 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
584 {
585 \bool_if:NTF \l__chemmacros_nmr_parse_bool
586 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
587 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
588 }
589 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
590 \tl_use:N \l__chemmacros_nmr_method_tl
591 \group_end:
592 }
593 \EndChemCompatibility
594

```

```

595
596 \cs_gset_protected:Npn \chemmacros_nmr_position:n #1
597 {
598 \chemmacros_chemformula:x
599 {
600 \exp_not:V \g__chemmacros_nmr_element_tl
601 \bool_if:NF \l__chemmacros_nmr_position_side_bool
602 {
603 \tl_if_eq:NnTF \l__chemmacros_nmr_position_tl {^}% lwarp
604 { \textsuperscript{\exp_not:n { #1} }} % lwarp
605 { \textsubscript{\exp_not:n { #1} }} % lwarp
606 % \exp_not:V \l__chemmacros_nmr_position_tl
607 % \exp_not:n { #1 }
608 }
609 }
610 \bool_if:NT \l__chemmacros_nmr_position_side_bool
611 {
612 \tl_use:N \l__chemmacros_nmr_position_tl
613 __chemmacros_nmr_position:n {#1}
614 }
615 }
616
617 \cs_gset_protected:Npn __chemmacros_nmr_coupling:w (#1;#2)
618 {
619 \tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
620 {
621 \l__chemmacros_nmr_coupling_bonds_pre_tl
622 #1
623 \l__chemmacros_nmr_coupling_bonds_post_tl
624 }
625 \bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
626 {
627 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
628 {
629 % \c_math_subscript_token
630 \textsubscript% lwarp
631 {
632 \l__chemmacros_nmr_coupling_nuclei_pre_tl
633 \chemmacros_chemformula:n {#2}
634 \l__chemmacros_nmr_coupling_nuclei_post_tl
635 }
636 }
637 }
638 {
639 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
640 {
641 \l__chemmacros_nmr_coupling_nuclei_pre_tl
642 \chemmacros_chemformula:n {#2}
643 \l__chemmacros_nmr_coupling_nuclei_post_tl
644 }
645 }
646 __chemmacros_nmr_coupling_aux_i:w
647 }
648 \AfterEndPreamble{% After \AtBeginDocument
649 % \NMR{<num>,<elem>}{<num>,<unit>}[<solvent>] ALL arguments are optional

```

```

650 % \NMR* same but without ": δ " at end
651 \cs_gset_protected:Npn \chemmacros_nmr:nmmm #1#2#3#4
652 {
653 \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
654 \group_begin:

655 \mode_leave_vertical:

656 \bool_set_false:N \l__chemmacros_nmr_frequency_bool
657 \bool_set_false:N \l__chemmacros_nmr_solvent_bool
658 \tl_if_empty:nF {#3}
659 { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
660 \tl_if_empty:nF {#4}
661 { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
662 \bool_if:nT
663 {
664 \l__chemmacros_nmr_frequency_bool
665 ||
666 \l__chemmacros_nmr_solvent_bool
667 }
668 { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
669 \bool_if:nT
670 {
671 \l__chemmacros_nmr_frequency_bool
672 &&
673 \l__chemmacros_nmr_solvent_bool
674 }
675 { \bool_set_true:N \l__chemmacros_nmr_comma_bool }
676 \tl_if_empty:nTF {#2}
677 {
678 __chemmacros_nmr_nucleus:VV
679 \l__chemmacros_nmr_isotope_default_tl
680 \l__chemmacros_nmr_element_default_tl
681 }
682 { __chemmacros_nmr_nucleus:w #2 \q_stop }
683 \mode_if_math:TF
684 {
685 \text
686 {
687 \group_begin:
688 \tl_use:N \l__chemmacros_nmr_format_tl
689 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
690 __chemmacros_nmr_base:VV
691 \g__chemmacros_nmr_isotope_tl
692 \g__chemmacros_nmr_element_tl
693 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
694 { ~ (}
695 \bool_if:NT \l__chemmacros_nmr_frequency_bool
696 { __chemmacros_nmr_frequency:n {#3} }
697 \bool_if:NT \l__chemmacros_nmr_comma_bool
698 { , ~ }
699 \bool_if:NT \l__chemmacros_nmr_solvent_bool
700 { \chemmacros_chemformula:n {#4} }
701 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
702 {) }

```

```

703 \tl_if_blank:nT {#1} {:~}
704 }}% lwarp
705 \group_end:
706 }
707 \tl_if_blank:nT {#1}
708 {
709 \delta
710 \text { \l__chemmacros_nmr_delta_tl }
711 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {=}
712 }
713 }
714 {
715 \group_begin:
716 \tl_use:N \l__chemmacros_nmr_format_tl
717 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
718 __chemmacros_nmr_base:VV
719 \g__chemmacros_nmr_isotope_tl
720 \g__chemmacros_nmr_element_tl
721 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
722 {~()}
723 \bool_if:NT \l__chemmacros_nmr_frequency_bool
724 { __chemmacros_nmr_frequency:n {#3} }
725 \bool_if:NT \l__chemmacros_nmr_comma_bool
726 {,~}
727 \bool_if:NT \l__chemmacros_nmr_solvent_bool
728 {
729 \bool_if:NTF \l__chemmacros_nmr_parse_bool

730 % { \chemformula_ch:nn { } {#4} }% original
731 {\ch{#4}}% lwarp
732 {#4}
733 }
734 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
735 {}}
736 }}% lwarp
737 \tl_if_blank:nT {#1} {:}
738 \group_end:
739 \tl_if_blank:nT {#1}
740 {
741 \tl_use:N \c_space_tl
742 \c_math_toggle_token
743 \delta
744 \c_math_toggle_token
745 \l__chemmacros_nmr_delta_tl
746 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {~=}
747 }
748 }
749 \group_end:
750 }
751 }% AfterEndPreamble
752
753
754 \RenewDocumentCommand \chemmacros_data:w { smo }
755 {
756 \bool_if:NT \l__chemmacros_nmr_list_bool { \item }

```

```

757 {
758 % \tl_use:N \l__chemmacros_nmr_format_tl #2
759 \tl_use:N \l__chemmacros_nmr_format_tl
760 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
761 #2
762 \IfNoValueF {#3} { ~ (#3) }
763 \IfBooleanT {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { : } }
764 }}% lwarp
765 }
766 \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
767 }
768
769 }{}% \@ifchemmacrosmoduleloaded
770 }% AtBeginDocument

```

### § 177.17 Thermodynamics

```

771 \AtBeginDocument{
772 \@ifchemmacrosmoduleloaded{thermodynamics}{
773 \PackageInfo{lwarp}{Patching~chemmacros~module~thermodynamics}
774
775 \cs_gset_protected:Npn \chemmacros_state:nn #1#2
776 {
777 \group_begin:
778 \boolfalse{mathjax}
779 \chemmacros_set_keys:nn {thermodynamics} {#1}
780 \LWR@subsingledollar*{% yes hashing
781 \textbackslash{}state{\LWR@HTMLsanitize{#2}}\}% alt
782 }{%
783 chemmacros_state% add'l hashing
784 #1% options
785 LSP \tl_use:N \l__chemmacros_state_sp_left_tl% super/subscripts
786 LSB \tl_use:N \l__chemmacros_state_sb_left_tl
787 RSP \tl_use:N \l__chemmacros_state_sp_right_tl
788 RSB \tl_use:N \l__chemmacros_state_sb_right_tl
789 }
790 {
791 \LWR@origensuredmath{
792 \chemmacros_text:V \l__chemmacros_state_pre_tl
793 \c_math_superscript_token
794 { \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 T<sub>E</sub>X but cropped out by *pdfcrop*.

```

795 \tl_if_empty:NTF \l__chemmacros_state_sb_left_tl
796 {}
797 {
798 \c_math_subscript_token
799 { \chemmacros_text:V \l__chemmacros_state_sb_left_tl }
800 }
801 #2
802 \c_math_superscript_token
803 { \chemmacros_text:V \l__chemmacros_state_sp_right_tl }
804 \tl_if_empty:NTF \l__chemmacros_state_sb_right_tl

```

```

805 {}
806 {
807 \c_math_subscript_token
808 { \chemmacros_text:V \l__chemmacros_state_sb_right_tl }
809 }
810 \chemmacros_text:V \l__chemmacros_state_post_tl
811 }
812 }
813 \group_end:
814 }
815 \cs_generate_variant:Nn \chemmacros_state:nn { nV }
816
817 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
818 {
819 \chemmacros_define_keys:xn
820 {thermodynamics/\chemmacros_remove_backslash:N #1}
821 {
822 pre .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
823 post .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
824 superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
825 superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,
826 superscript .meta:n = { superscript-right = ##1 } ,
827 subscript-left .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
828 subscript-right .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
829 subscript .meta:n = { subscript-left = ##1 } ,
830 subscript-pos .choices:nn =
831 { left , right }
832 { \tl_set_eq:NN \l__chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
833 symbol .tl_set:N = \l__chemmacros_state_symbol_tl ,
834 unit .tl_set:N = \l__chemmacros_state_unit_tl
835 }
836 \DeclareDocumentCommand #1 { sO{}D{}m }
837 {
838 \group_begin:
839 \chemmacros_set_keys:xn
840 {thermodynamics/\chemmacros_remove_backslash:N #1}
841 {#2}
842 \tl_if_blank:nF {##3}
843 {
844 \chemmacros_set_keys:nx {thermodynamics}
845 { subscript-\l__chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
846 }
847 \chemmacros_state:nV {##2} \l__chemmacros_state_symbol_tl
848 \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
849 \IfBooleanF {##1} { = ~ \SI {##4} { \l__chemmacros_state_unit_tl } }
850 \group_end:
851 }
852 }

```

The pre-existing macros are redefined with the new definition:

```

853 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
854 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
855 \RenewChemState \gibbs { symbol = G , unit = \kilo\joule\per\mole }
856

```

```

857 }{}% \@ifchemmacrosmoduleloaded
858 }% AtBeginDocument

859 \ExplSyntaxOff

```

---

File 78 **lwarp-chemnum.sty**

§ 178 Package **chemnum**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg chemnum chemnum is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{chemnum}[2016/04/14]

2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemnum_compound_write:n #1
5 {
6 \chemnum_get_compound_property:nn {#1} {pre-main-label-code}
7 \group_begin:
8 \bool_if:NTF \l__chemnum_compound_local_bool
9 { \l__chemnum_local_label_format_tl }
10 { \chemnum_get_compound_property:nn {#1} {label-format} }
11 {
12 \LWR@textcurrentfont{
13 \chemnum_get_compound_property:nn {#1} {counter-representation}
14 }
15 }
16 \group_end:
17 \chemnum_get_compound_property:nn {#1} {post-main-label-code}
18 }
19
20 \cs_gset_protected:Npn \chemnum_subcompound_write:nn #1#2
21 {
22 \group_begin:
23 \bool_if:NTF \l__chemnum_compound_local_bool
24 { \l__chemnum_local_label_format_tl }
25 { \chemnum_get_compound_property:nn {#1} {label-format} }
26 {
27 \LWR@textcurrentfont{
28 \chemnum_get_subcompound_property:nnn {#1} {#2}
29 {counter-representation}
30 }
31 }
32 \group_end:
33 }
34
35 \ExplSyntaxOff

```

---

File 79 **lwarp-chkfloat.sty**

§ 179 Package **chkfloat**

Pkg chkfloat chkfloat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]

---

File 80 **lwarp-chngpage.sty**

§ 180 Package **chngpage**

*(Emulates or patches code by PETER WILSON.)*

Pkg chngpage chngpage is ignored.

**for HTML output:** Discard all options for lwarp-chngpage:

```
1 \LWR@ProvidesPackageDrop{chngpage}[2009/10/20]
2 \LWR@origRequirePackage{lwarp-chngpage}
```

---

File 81 **lwarp-cite.sty**

§ 181 Package **cite**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg cite cite is patched for use by lwarp.

**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 \ifdefstrequal{\@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{#1}
9
10 \DeclareDocumentCommand\citepunct{}{\,\, \relax}
```

---

File 82 **lwarp-CJK.sty**

§ 182 Package **CJK**

Pkg CJK CJK does not work with lwarp unless called from ctex.

**for HTML output:**

```

1 \@ifpackageloaded{xeCJK}{
2 \LWR@loadnever{CJK}{ctex, xeCJK}
3 }
4
5 \LWR@ProvidesPackagePass{CJK}[2015/04/18]
```

---

File 83 **lwarp-CJKutf8.sty**

§ 183 Package **CJKutf8**

Pkg CJKutf8 CJKutf8 does not work with lwarp unless called from ctex.

**for HTML output:**

```

1 \@ifpackageloaded{xeCJK}{
2 \LWR@loadnever{CJKutf8}{ctex, xeCJK}
3 }
4
5 \LWR@ProvidesPackagePass{CJKutf8}[2015/04/18]
```

---

File 84 **lwarp-clrdblpg.sty**

§ 184 Package **clrdblpg**

Pkg clrdblpg clrdblpg is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{clrdblpg}[2018/04/21]
```

---

File 85 **lwarp-cmdtrack.sty**

§ 185 Package **cmdtrack**

Pkg cmdtrack cmdtrack is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]
2 \newcommand{\untrack}[1]{}
```

---

File 86 **lwarp-colonequals.sty**

§ 186 Package **colonequals**

(Emulates or patches code by HEIKO OBERDIEK.)

Pkg colonequals 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}{\unicode{x2236}}}
6 \CustomizeMathJax{\newcommand{\coloncolon}{\unicode{x2237}}}
7 \CustomizeMathJax{\newcommand{\colonequals}{\coloncolon=}}
8 \CustomizeMathJax{\newcommand{\coloncolonequals}{\coloncolon=}}
9 \CustomizeMathJax{\newcommand{equalscolon}{=! \ratio}}
10 \CustomizeMathJax{\newcommand{equalscoloncolon}{=! \coloncolon}}
11 \CustomizeMathJax{\newcommand{\colonminus}{\ratio-}}
12 \CustomizeMathJax{\newcommand{\coloncolonminus}{\coloncolon-}}
13 \CustomizeMathJax{\newcommand{\minuscolon}{-\ratio}}
14 \CustomizeMathJax{\newcommand{\minuscoloncolon}{-\coloncolon}}
15 \CustomizeMathJax{\newcommand{\colonapprox}{\ratio\approx}}
16 \CustomizeMathJax{\newcommand{\coloncolonapprox}{\coloncolon\approx}}
17 \CustomizeMathJax{\newcommand{\approxcolon}{\approx\! \ratio}}
18 \CustomizeMathJax{\newcommand{\approxcoloncolon}{\approx\! \coloncolon}}
19 \CustomizeMathJax{\newcommand{\colonsim}{\ratio\sim}}
20 \CustomizeMathJax{\newcommand{\coloncolonsim}{\coloncolon\sim}}
21 \CustomizeMathJax{\newcommand{\simcolon}{\sim\! \ratio}}
22 \CustomizeMathJax{\newcommand{\simcoloncolon}{\sim\! \coloncolon}}
23 \end{warpMathJax}

```

---

File 87 **lwarp-color.sty**

§ 187 Package **color**

Pkg color Allowed but ignored. xcolor is then required as well.

color is superceded by xcolor, and lwarp 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}

```

File 88 **lwarp-colortbl.sty**§ 188 Package **colortbl**

Pkg colortbl 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.

**for HTML output:** A placeholder definition is forgotten first:

```
1 \let\rowcolor\relax
2
3 \LWR@ProvidesPackagePass{colortbl}[2018/12/12]
```

The following `\LWR@HTML` versions are used inside an HTML tabular.

`\columncolor` [*model*] [*color*] [*left overhang*] [*right overhang*]

`\LWR@getmynexttoken` is not used here because `\columncolor` is not used inside the data area of the tabular.

```
4 \NewDocumentCommand{\LWR@HTML@columncolor}{O{named} m o o}{%
5 \convertcolorspec{#1}{#2}{HTML}\LWR@columnHTMLcolor%
6 \LWR@addtabularcellcolor%
7 }
8
9 \AtBeginDocument{\LWR@formatted{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*]

```
10 \NewDocumentCommand{\LWR@HTML@rowcolor}{O{named} m o o}{%
11 \convertcolorspec{#1}{#2}{HTML}\LWR@rowHTMLcolor%
12 \LWR@getmynexttoken%
13 }
14
15 \AtBeginDocument{\LWR@expandableformatted{rowcolor}}
```

`\cellcolor` [*model*] [*color*] [*left overhang*] [*right overhang*]

```
16 \NewDocumentCommand{\LWR@HTML@cellcolor}{O{named} m o o}{%
17 \convertcolorspec{#1}{#2}{HTML}\LWR@cellHTMLcolor%
18 \LWR@addtabularcellcolor%
19 }
20
21 \AtBeginDocument{\LWR@formatted{cellcolor}}
```

`\arrayrulecolor` [*model*] {*color*}

The HTML version for use outside a tabular. Inside a tabular, `\LWR@HTML@arrayrulecolornexttoken` is used instead.

```
22 \newcommand{\LWR@HTML@arrayrulecolor}[2][named]{%
23 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
24 }
25
26 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolor}}
```

[*model*] {*color*}

`\LWR@arrayrulecolornexttoken`

The HTML version for use inside a tabular.

```
27 \newcommand{\LWR@HTML@arrayrulecolornexttoken}[2][named]{%
28 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
29 \LWR@getmynexttoken%
30 }
31
32 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolornexttoken}}
```

`\doublerulesepcolor` [*model*] {*color*}

The version for use outside a tabular.

```
33 \newcommand{\LWR@HTML@doublerulesepcolor}[2][named]{%
34
35 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolor}}
```

[*model*] {*color*}

`\LWR@doublerulesepcolornexttoken`

The version for use inside a tabular.

```
36 \newcommand{\LWR@HTML@doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
37
38 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolornexttoken}}
```

## File 89 **lwarp-continue.sty**

### § 189 Package **continue**

Pkg continue 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 90 **lwarp-copyrightbox.sty**

§ 190 Package **copyrightbox**

*(Emulates or patches code by THOMAS FISCHER, IVES VAN DER FLAAS.)*

Pkg copyrightbox **copyrightbox** is emulated for use by **lwarp**.

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 91 **lwarp-crop.sty**

§ 191 Package **crop**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg crop **crop** is ignored.

**for HTML output:** Discard all options for **lwarp-crop**:

```

1 \LWR@ProvidesPackageDrop{crop}[2003/05/20]

2 \newcommand*{\crop}[1][{}]{
3 \newcommand*{\cropdef}[6][{}]{

```

File 92 **lwarp-ctable.sty**

§ 192 Package **ctable**

(Emulates or patches code by WYBO DEKKER.)

Pkg ctable ctable is patched for use by lwarp.

⚠ 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 \@dfLTtaborfig
4 \let\@CTalign \@dfLTalign
5 \let\@CTsideways \@dfLTsideways
6 \let\@CTcontinued \empty
7 \let\@CTpos \@dfLTpos
8 \let\@CTcaption \empty
9 \let\@CTcap \undefined
10 \let\@CTlabel \empty
11 \let\@CTbotcap \@dfLTbotcap
12 \let\@CTstarred \@dfLTstarred
13 \let\@CTsuper \@dfLTsuper
14 \let\@CTnotespar \@dfLTnotespar
15 \let\@CTdoinside \@dfLTdoinside
16 \let\@CTbgopacity \@dfLTbgopacity
17 \@CTframerule \@dfLTframerule
18 \@CTcaptionskip \@dfLTcaptionskip
19 \@CTframesep \@dfLTframesep
20 \@CTwidth \@dfLTwidth
21 \@CTmaxwidth \@dfLTmaxwidth
22 \@CTmincapwidth \@dfLTmincapwidth
23 \@CTfooterwidth \@dfLTfooterwidth
24 \def\@CTfgactual {@dfLTframefg}%
25 \def\@CTbgactual {@dfLTframebg}%
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[lwarp-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{lwarp-ctable}{\MessageBreak
41 You can, currently, use the sidecap option only with\MessageBreak
42 memoir documents. Use topcap or botcap only}
43 \fi
44 \fi
45 \ifdim\@CTwidth=0pt\else
46 \ifdim\@CTmaxwidth=0pt\else
47 \PackageError{lwarp-ctable}{\MessageBreak
48 You may not use the width and maxwidth options together\MessageBreak
49 Use either width or maxwidth}
50 \fi
51 \fi
52 \ifx\@CTpos\empty
53 \ifx\@CTsideways\empty\else
54 \PackageError{lwarp-ctable}{\MessageBreak
55 You may not use the pos and sideways options together\MessageBreak
56 Rotated tables and figures are always typeset on a separate page}
57 \fi
58 \fi
59 \ifx\@CTcaption\empty
60 \ifx\@CTlabel\empty\else
61 \PackageError{lwarp-ctable}{\MessageBreak
62 You may not label a captionless table\MessageBreak
63 Such a label can't be referenced}
64 \fi
65 \fi

```

Some of the original, regarding computing the width of \CT@t, is removed here.

```

66 \@CTbegin
67 \ifx\@CTcontinued\empty\else\addtocounter{\@CTtaborfig}{-1}\fi
68 \@CTalign

```

lwarp's patches begin here:

```

69 \begin{center}
70 \setlength{\fboxrule}{\@CTframerule}
71 \setlength{\fboxsep}{\@CTframesep}
72 \LWR@forceminwidth{\fboxrule}% lwarp
73 \convertcolorspec{named}{\@CTbgactual}{HTML}\LWR@tempcolor% lwarp
74 \begin{BlockClass}[% lwarp
75 border:
76 \LWR@printlength{\LWR@atleastonept}
77 solid
78 \LWR@colorstyle{named}{\@CTfgactual} ; %
79 padding:\LWR@printlength{\fboxsep} ; %
80 \ifdefstring{\LWR@tempcolor}{FFFFFF}{%
81 background: \LWR@colorstyle{named}{\@CTbgactual} ; %
82 }%
83]{fminipage}% lwarp
84 \ifx\@CTbotcap\@CTfalse\@CTCaption\vskip\@CTcaptionskip\fi
85 \ifx\@CTbotcap\undefined%
86 \begin{sidecaption}[\@CTcap][\@CTcaption][\@CTlabel]

```

```

87 \fi
88 \@CTdoinside
89 \begin{tabularx}{\linewidth}{#2}% lwarp
90 #4%
91 \end{tabularx}% lwarp
92 \def\@CTfootnotes{#3}%
93 \ifx#3\empty\else{% append footnotes, if any
94 \begin{BlockClass}{tnotes}% lwarp
95 #3
96 \end{BlockClass}% lwarp
97 }
98 \fi
99 \ifx\@CTbotcap\undefined\end{sidecaption}\fi
100 \ifx\@CTbotcap\@CTtrue\vskip\@CTcaptionskip\@CTcaption\fi
101 \end{BlockClass}
102 \end{center}
103 \@CTend
104 }
105 \LWR@formatted{ctable}

```

Required to properly detect the toprule:

```
106 \LetLtxMacro\FL\toprule
```

Table notes are redefined for HTML:

```

107 \newcommand{\LWR@HTML@tmark}[1][a]{%
108 \textsuperscript{\textrm{\textit{#1}}}}
109 }
110 \LWR@formatted{tmark}
111
112 \newcommand{\LWR@HTML@tnote}[2][a]{%
113 \tmark[1]\,#2\par
114 }
115 \LWR@formatted{tnote}

```

---

File 93 **lwarp-cuted.sty**

§ 193 Package **cuted**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg cuted **cuted** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{cuted}[2012/10/04]

```

2 \newenvironment{strip}{}{}
3 \newskip\stripsep
4 \def\oldcolsbreak#1{}

```

File 94 **lwarp-cutwin.sty**§ 194 Package **cutwin**

(Emulates or patches code by PETER WILSON AND ALAN HOENIG.)

Pkg cutwin cutwin is emulated.

**for HTML output:** Discard all options for lwarp-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 95 **lwarp-dblfloatfix.sty**§ 195 Package **dblfloatfix**

Pkg dblfloatfix dblfloatfix is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{dblfloatfix}[2012/12/31]

---

File 96 **lwarp-dblfnote.sty**

§ 196 Package **dblfnote**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg dblfnote **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 97 **lwarp-dcolumn.sty**

§ 197 Package **dcolumn**

Pkg dcolumn **dcolumn** is emulated by the lwarp core.

1 \LWR@ProvidesPackageDrop{dcolumn}[2014/10/28]

---

File 98 **lwarp-decimal.sty**

§ 198 Package **decimal**

*(Emulates or patches code by A. SYROPOULOS AND R. W. D. NICKALLS.)*

Pkg decimal **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 99 **lwarp-diagbox.sty**§ 199 Package **diagbox***(Emulates or patches code by LEO LIU.)*Pkg diagbox **diagbox** is patched for use by **lwarp**.**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 {\langle E/W \rangle} {\langle A \rangle} {\langle E/W \rangle} {\langle B \rangle}
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@stoppars%
16 }

```

```

\LWR@diagboxNW {\langle A \rangle} {\langle B \rangle}
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 {\langle keys \rangle} {\langle A \rangle} {\langle B \rangle}
26 \def\diagbox@double#1#2#3{%

```

```

27 \setkeys{diagbox}{dir=NW,#1}%
28 \@nameuse{LWR@diagbox\diagbox@dir}{#2}{#3}%
29 }

```

`\LWR@diagboxTNW`     $\langle title \rangle \langle A \rangle \langle B \rangle$

```

30 \newcommand{\LWR@diagboxTNW}[3]{%
31 \BlockClassSingle{diagboxtitleN}{#1}
32 \LWR@diagboxNW{#2}{#3}
33 }

```

Likewise for NE, SW, SE:

```

34 \newcommand{\LWR@diagboxTNE}[3]{%
35 \BlockClassSingle{diagboxtitleN}{#1}
36 \LWR@diagboxNE{#2}{#3}
37 }
38
39 \newcommand{\LWR@diagboxTSW}[3]{%
40 \LWR@diagboxSW{#2}{#3}
41 \BlockClassSingle{diagboxtitleS}{#1}
42 \LWR@stoppars%
43 }
44
45 \newcommand{\LWR@diagboxTSE}[3]{%
46 \LWR@diagboxSE{#2}{#3}
47 \BlockClassSingle{diagboxtitleS}{#1}
48 \LWR@stoppars%
49 }

```

`\diagbox@triple`     $\langle keys \rangle \langle A \rangle \langle T \rangle \langle B \rangle$

```

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 100    **lwarp-dingbat.sty**

§ 200    Package    **dingbat**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg    dingbat    dingbat is patched for use by lwarp.

**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 101 **lwarp-DotArrow.sty**

§ 201 Package **DotArrow**

*(Emulates or patches code by SVEN SCHNEIDER.)*

Pkg DotArrow **DotArrow** is patched for use by lwarp, 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}{\unicode{x21E2}}}}
6 \end{warpMathJax}

```

---

File 102 **lwarp-dotlessi.sty**

§ 202 Package **dotlessi**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg dotlessi 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 103 **lwarp-dprogress.sty**

§ 203 Package **dprogress**

Pkg dprogress dprogress is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]

---

File 104 **lwarp-draftcopy.sty**

§ 204 Package **draftcopy**

Pkg draftcopy 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 105 **lwarp-draftfigure.sty**

§ 205 Package **draftfigure**

Pkg draftfigure 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 106 **lwarp-draftwatermark.sty**

§ 206 Package **draftwatermark**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg draftwatermark draftwatermark is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{draftwatermark}[2015/02/19]

2 \newcommand{\SetWatermarkAngle}[1]{}
3 \newcommand{\SetWatermarkColor}[1]{}
4 \newcommand{\SetWatermarkLightness}[1]{}
5 \newcommand{\SetWatermarkFontSize}[1]{}
6 \newcommand{\SetWatermarkScale}[1]{}
7 \newcommand{\SetWatermarkHorCenter}[1]{}
8 \newcommand{\SetWatermarkVertCenter}[1]{}
9 \newcommand{\SetWatermarkText}[1]{}

```

---

File 107 **lwarp-easy-todo.sty**

§ 207 Package **easy-todo**

*(Emulates or patches code by JUAN RADA-VILELA.)*

Pkg easy-todo **easy-todo** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{easy-todo}[2014/01/01]

\listoftodos Modified to correct buggy use of \flushright.

```
2 \let\LWR@origlistoftodos\listoftodos
3
4 \renewcommand{\listoftodos}{%
5 \begingroup
6 \renewcommand{\flushright}{}
7 \LWR@origlistoftodos
8 \endgroup
9 }
```

\todoi Modified to use \textcolor instead of \color.

```
10 \renewcommand{\todoi}[2]{%
11 \ifthenelse{\equal{\@todoobeyfinal}{true}}{%
12 {%
13 \ifoptionfinal{\todoenable{false}}{\todoenable{true}}%
14 }%
15 {}%
16 \ifthenelse{\equal{\@todoenable}{true}}{%
17 {%
18 \refstepcounter{todos}%
19 \noindent{%
20 \todocolor%
21 \LWR@textcurrentcolor%
22 \normalfont\scriptsize{\bfseries{\thetodos.#1}}%
23 }%
24 }%
25 \addcontentsline{lod}{todos}{\protect{\thetodos. } \LWR@isolate{#2}}%
26 }%
27 {}%
28 }
```

---

File 108 **lwarp-ebook.sty**

§ 208 Package **ebook**

*(Emulates or patches code by JØRGEN STEENSGAARD.)*

Pkg ebook **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 109 **lwarp-econometrics.sty**

§ 209 Package **econometrics**

*(Emulates or patches code by ERIK KOLE.)*

Pkg econometrics **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 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{econometrics}
4
5 \CustomizeMathJax{\newcommand{\SC}{\mathbb{C}}}
6 \CustomizeMathJax{\newcommand{\SN}{\mathbb{N}}}
7 \CustomizeMathJax{\newcommand{\SQ}{\mathbb{Q}}}
8 \CustomizeMathJax{\newcommand{\SR}{\mathbb{R}}}
9 \CustomizeMathJax{\newcommand{\SZ}{\mathbb{Z}}}
10
11 \CustomizeMathJax{\newcommand{\calA}{\mathcal{A}}}
12 \CustomizeMathJax{\newcommand{\calB}{\mathcal{B}}}
13 \CustomizeMathJax{\newcommand{\calC}{\mathcal{C}}}
14 \CustomizeMathJax{\newcommand{\calD}{\mathcal{D}}}
15 \CustomizeMathJax{\newcommand{\calE}{\mathcal{E}}}
16 \CustomizeMathJax{\newcommand{\calF}{\mathcal{F}}}
17 \CustomizeMathJax{\newcommand{\calG}{\mathcal{G}}}
18 \CustomizeMathJax{\newcommand{\calH}{\mathcal{H}}}
19 \CustomizeMathJax{\newcommand{\calI}{\mathcal{I}}}
20 \CustomizeMathJax{\newcommand{\calJ}{\mathcal{J}}}
21 \CustomizeMathJax{\newcommand{\calK}{\mathcal{K}}}
22 \CustomizeMathJax{\newcommand{\calL}{\mathcal{L}}}
23 \CustomizeMathJax{\newcommand{\calM}{\mathcal{M}}}
24 \CustomizeMathJax{\newcommand{\calN}{\mathcal{N}}}
25 \CustomizeMathJax{\newcommand{\calO}{\mathcal{O}}}
26 \CustomizeMathJax{\newcommand{\calP}{\mathcal{P}}}
27 \CustomizeMathJax{\newcommand{\calQ}{\mathcal{Q}}}
28 \CustomizeMathJax{\newcommand{\calR}{\mathcal{R}}}
29 \CustomizeMathJax{\newcommand{\calS}{\mathcal{S}}}
30 \CustomizeMathJax{\newcommand{\calT}{\mathcal{T}}}
31 \CustomizeMathJax{\newcommand{\calU}{\mathcal{U}}}
32 \CustomizeMathJax{\newcommand{\calV}{\mathcal{V}}}
33 \CustomizeMathJax{\newcommand{\calW}{\mathcal{W}}}
34 \CustomizeMathJax{\newcommand{\calX}{\mathcal{X}}}
35 \CustomizeMathJax{\newcommand{\calY}{\mathcal{Y}}}
36 \CustomizeMathJax{\newcommand{\calZ}{\mathcal{Z}}}
37
38 \CustomizeMathJax{\newcommand{\mA}{\bm A}}
39 \CustomizeMathJax{\newcommand{\va}{\bm a}}

```

```
40 \CustomizeMathJax{\newcommand{\mB}}{\bm B}}
41 \CustomizeMathJax{\newcommand{\vb}}{\bm b}}
42 \CustomizeMathJax{\newcommand{\mC}}{\bm C}}
43 \CustomizeMathJax{\newcommand{\vc}}{\bm c}}
44 \CustomizeMathJax{\newcommand{\mD}}{\bm D}}
45 \CustomizeMathJax{\newcommand{\vd}}{\bm d}}
46 \CustomizeMathJax{\newcommand{\mE}}{\bm E}}
47 \CustomizeMathJax{\newcommand{\ve}}{\bm e}}
48 \CustomizeMathJax{\newcommand{\mF}}{\bm F}}
49 \CustomizeMathJax{\newcommand{\vf}}{\bm f}}
50 \CustomizeMathJax{\newcommand{\mG}}{\bm G}}
51 \CustomizeMathJax{\newcommand{\vg}}{\bm g}}
52 \CustomizeMathJax{\newcommand{\mH}}{\bm H}}
53 \CustomizeMathJax{\newcommand{\vh}}{\bm h}}
54 \CustomizeMathJax{\newcommand{\mI}}{\bm I}}
55 \CustomizeMathJax{\newcommand{\vi}}{\bm i}}
56 \CustomizeMathJax{\newcommand{\mJ}}{\bm J}}
57 \CustomizeMathJax{\newcommand{\vj}}{\bm j}}
58 \CustomizeMathJax{\newcommand{\mk}}{\bm K}}
59 \CustomizeMathJax{\newcommand{\vk}}{\bm k}}
60 \CustomizeMathJax{\newcommand{\mL}}{\bm L}}
61 \CustomizeMathJax{\newcommand{\vL}}{\bm l}}
62 \CustomizeMathJax{\newcommand{\mM}}{\bm M}}
63 \CustomizeMathJax{\newcommand{\vm}}{\bm m}}
64 \CustomizeMathJax{\newcommand{\mN}}{\bm N}}
65 \CustomizeMathJax{\newcommand{\vn}}{\bm n}}
66 \CustomizeMathJax{\newcommand{\mO}}{\bm O}}
67 \CustomizeMathJax{\newcommand{\vo}}{\bm o}}
68 \CustomizeMathJax{\newcommand{\mP}}{\bm P}}
69 \CustomizeMathJax{\newcommand{\vp}}{\bm p}}
70 \CustomizeMathJax{\newcommand{\mQ}}{\bm Q}}
71 \CustomizeMathJax{\newcommand{\vq}}{\bm q}}
72 \CustomizeMathJax{\newcommand{\mR}}{\bm R}}
73 \CustomizeMathJax{\newcommand{\vr}}{\bm r}}
74 \CustomizeMathJax{\newcommand{\mS}}{\bm S}}
75 \CustomizeMathJax{\newcommand{\vs}}{\bm s}}
76 \CustomizeMathJax{\newcommand{\mT}}{\bm T}}
77 \CustomizeMathJax{\newcommand{\vt}}{\bm t}}
78 \CustomizeMathJax{\newcommand{\mU}}{\bm U}}
79 \CustomizeMathJax{\newcommand{\vu}}{\bm u}}
80 \CustomizeMathJax{\newcommand{\mV}}{\bm V}}
81 \CustomizeMathJax{\newcommand{\vv}}{\bm v}}
82 \CustomizeMathJax{\newcommand{\mW}}{\bm W}}
83 \CustomizeMathJax{\newcommand{\vw}}{\bm w}}
84 \CustomizeMathJax{\newcommand{\mX}}{\bm X}}
85 \CustomizeMathJax{\newcommand{\vx}}{\bm x}}
86 \CustomizeMathJax{\newcommand{\mY}}{\bm Y}}
87 \CustomizeMathJax{\newcommand{\vy}}{\bm y}}
88 \CustomizeMathJax{\newcommand{\mZ}}{\bm Z}}
89 \CustomizeMathJax{\newcommand{\vz}}{\bm z}}
90
91 \CustomizeMathJax{\newcommand{\valpha}}{\bm \alpha}}
92 \CustomizeMathJax{\newcommand{\vbeta}}{\bm \beta}}
93 \CustomizeMathJax{\newcommand{\vgamma}}{\bm \gamma}}
94 \CustomizeMathJax{\newcommand{\vdelta}}{\bm \delta}}
```

```

95 \CustomizeMathJax{\newcommand{\vepsi}{\bm \epsi}}
96 \CustomizeMathJax{\newcommand{\vvarepsilon}{\bm \varepsilon}}
97 \CustomizeMathJax{\newcommand{\vzeta}{\bm \zeta}}
98 \CustomizeMathJax{\newcommand{\veta}{\bm \eta}}
99 \CustomizeMathJax{\newcommand{\vtheta}{\bm \theta}}
100 \CustomizeMathJax{\newcommand{\viota}{\bm \iota}}
101 \CustomizeMathJax{\newcommand{\vkappa}{\bm \kappa}}
102 \CustomizeMathJax{\newcommand{\vlambda}{\bm \lambda}}
103 \CustomizeMathJax{\newcommand{\vmu}{\bm \mu}}
104 \CustomizeMathJax{\newcommand{\vnu}{\bm \nu}}
105 \CustomizeMathJax{\newcommand{\vxi}{\bm \xi}}
106 \CustomizeMathJax{\newcommand{\vpi}{\bm \pi}}
107 \CustomizeMathJax{\newcommand{\vrho}{\bm \rho}}
108 \CustomizeMathJax{\newcommand{\vsigma}{\bm \sigma}}
109 \CustomizeMathJax{\newcommand{\vtau}{\bm \tau}}
110 \CustomizeMathJax{\newcommand{\vupsilon}{\bm \upsilon}}
111 \CustomizeMathJax{\newcommand{\vphi}{\bm \phi}}
112 \CustomizeMathJax{\newcommand{\vchi}{\bm \chi}}
113 \CustomizeMathJax{\newcommand{\vpsi}{\bm \psi}}
114 \CustomizeMathJax{\newcommand{\vomega}{\bm \omega}}
115
116 \CustomizeMathJax{\newcommand{\mGamma}{\bm \varGamma}}
117 \CustomizeMathJax{\newcommand{\mDelta}{\bm \varDelta}}
118 \CustomizeMathJax{\newcommand{\mTheta}{\bm \varTheta}}
119 \CustomizeMathJax{\newcommand{\mLambda}{\bm \varLambda}}
120 \CustomizeMathJax{\newcommand{\mXi}{\bm \varXi}}
121 \CustomizeMathJax{\newcommand{\mPi}{\bm \varPi}}
122 \CustomizeMathJax{\newcommand{\mSigma}{\bm \varSigma}}
123 \CustomizeMathJax{\newcommand{\mUpsilon}{\bm \varUpsilon}}
124 \CustomizeMathJax{\newcommand{\mPhi}{\bm \varPhi}}
125 \CustomizeMathJax{\newcommand{\mPsi}{\bm \varPsi}}
126 \CustomizeMathJax{\newcommand{\mOmega}{\bm \varOmega}}
127
128 \CustomizeMathJax{\newcommand{\rb}{\mathrm{b}}}
129 \CustomizeMathJax{\newcommand{\rB}{\mathrm{B}}}
130 \CustomizeMathJax{\newcommand{\rC}{\mathrm{C}}}
131 \CustomizeMathJax{\newcommand{\rD}{\mathrm{D}}}
132 \CustomizeMathJax{\newcommand{\rf}{\mathrm{f}}}
133 \CustomizeMathJax{\newcommand{\rF}{\mathrm{F}}}
134 \CustomizeMathJax{\newcommand{\rH}{\mathrm{H}}}
135 \CustomizeMathJax{\newcommand{\rL}{\mathrm{L}}}
136 \CustomizeMathJax{\newcommand{\rN}{\mathrm{N}}}
137 \CustomizeMathJax{\newcommand{\rt}{\mathrm{t}}}
138 \CustomizeMathJax{\newcommand{\rU}{\mathrm{U}}}
139 \CustomizeMathJax{\newcommand{\rGam}{\mathrm{Gam}}}
140 \CustomizeMathJax{\newcommand{\rBeta}{\mathrm{Beta}}}
141
142 \CustomizeMathJax{\newcommand{\Bin}{\mathrm{Bin}}}
143 \CustomizeMathJax{\newcommand{\eu}{\mathrm{e}}}
144 \CustomizeMathJax{\newcommand{\iu}{\mathrm{i}}}
145 \CustomizeMathJax{\newcommand{\LN}{\mathrm{LN}}}
146 \CustomizeMathJax{\newcommand{\IN}{\mathrm{IN}}}
147
148 \CustomizeMathJax{\newcommand{\Poi}{\mathrm{Poi}}}
149

```

```

150 \CustomizeMathJax{\newcommand{\ped}[1]{_\mathrm{#1}}}
151 \CustomizeMathJax{\newcommand{\ap}[1]{^\mathrm{#1}}}
152 \CustomizeMathJax{\renewcommand{\Re}{\mathrm{Re}}{\nolimits}}
153 \CustomizeMathJax{\renewcommand{\Im}{\mathrm{Im}}{\nolimits}}
154
155 \CustomizeMathJax{\newcommand{\deriv}[3][]{%
156 \frac{\mathrm{d}^{#1}#2}{\mathrm{d}\, #3^{#1}}%
157 }}
158 \CustomizeMathJax{\newcommand{\pderiv}[3][]{%
159 \frac{\partial^{#1}#2}{\partial #3^{#1}}%
160 }}
161
162 \CustomizeMathJax{\newcommand{\bias}{\operatorname{bias}}}
163 \CustomizeMathJax{\newcommand{\col}{\operatorname{col}}}
164 \CustomizeMathJax{\newcommand{\corr}{\operatorname{corr}}}
165 \CustomizeMathJax{\newcommand{\cov}{\operatorname{cov}}}
166 \CustomizeMathJax{\newcommand{\dg}{\operatorname{dg}}}
167 \CustomizeMathJax{\newcommand{\diag}{\operatorname{diag}}}
168 \CustomizeMathJax{\newcommand{\E}{\operatorname{E}}}
169 \CustomizeMathJax{\newcommand{\etr}{\operatorname{etr}}}
170 \CustomizeMathJax{\newcommand{\ip}{\mathrm{int}}{\nolimits}}
171 \CustomizeMathJax{\newcommand{\kur}{\operatorname{kur}}}
172 \CustomizeMathJax{\newcommand{\MSE}{\operatorname{MSE}}}
173 \CustomizeMathJax{\newcommand{\MSFE}{\operatorname{MSFE}}}
174 \CustomizeMathJax{\newcommand{\OLS}{\operatorname{OLS}}}
175 \CustomizeMathJax{\newcommand{\plim}{\operatorname{plim}}}
176 \CustomizeMathJax{\newcommand{\resid}{\operatorname{resid}}}
177 \CustomizeMathJax{\newcommand{\rk}{\operatorname{rk}}}
178 \CustomizeMathJax{\newcommand{\SE}{\operatorname{SE}}}
179 \CustomizeMathJax{\newcommand{\sgn}{\operatorname{sgn}}}
180 \CustomizeMathJax{\newcommand{\tr}{\operatorname{tr}}}
181 \CustomizeMathJax{\newcommand{\var}{\operatorname{var}}}
182 \CustomizeMathJax{\renewcommand{\vec}{\operatorname{vec}}}
183 \CustomizeMathJax{\newcommand{\vech}{\operatorname{vech}}}
184
185 \CustomizeMathJax{\newcommand{\distr}{\sim}}
186 \CustomizeMathJax{\newcommand{\adistr}{\stackrel{a}{\distr}}}
187 \CustomizeMathJax{\newcommand{\diff}{\Delta}}
188 \CustomizeMathJax{\newcommand{\fdiff}{\diff_{\rf}}}
189 \CustomizeMathJax{\newcommand{\bdiff}{\diff_{\rb}}}
190
191 \CustomizeMathJax{\newcommand{\eps}{\epsilon}}
192 \CustomizeMathJax{\newcommand{\epsi}{\varepsilon}}
193
194 \CustomizeMathJax{\newcommand{\longto}{\longrightarrow}}
195 \CustomizeMathJax{\newcommand{\pto}{\stackrel{p}{\longrightarrow}}}
196 \CustomizeMathJax{\newcommand{\dto}{\stackrel{d}{\longrightarrow}}}
197 \CustomizeMathJax{\newcommand{\wto}{\stackrel{w}{\longrightarrow}}}
198
199 \CustomizeMathJax{\newcommand{\Infmat}{\bm{\cal I}}}
200 \CustomizeMathJax{\newcommand{\Hesmat}{\bm{\cal H}}}
201 \CustomizeMathJax{\newcommand{\bcdot}{\bullet}}
202
203 \CustomizeMathJax{\newcommand{\vones}{\bm{\imath}}}
204 \CustomizeMathJax{\newcommand{\vzeros}{\boldsymbol{0}}}

```

---

```

205 \CustomizeMathJax{\newcommand{\mZeros}{\mathbf{0}}}
206
207 \CustomizeMathJax{\newcommand{\e}{\eu}}
208 \CustomizeMathJax{\newcommand{\mply}{\cdot}}
209 \CustomizeMathJax{\newcommand{\rW}{\ensuremath{\mathrm{W}}}}
210 \end{warpMathJax}

```

---

File 110 **lwarp-ed.sty**

§ 210 Package **ed**

*(Emulates or patches code by MICHAEL KOHLHASE.)*

Pkg ed ed is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{ed}[2012/01/29]

Bugs:

1. `todolist` 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{#2}\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 111 **lwarp-ellipsis.sty**

§ 211 Package **ellipsis**

*(Emulates or patches code by PETER J. HESLIN.)*

Pkg ellipsis ellipsis is emulated.

---

```

1 \LWR@ProvidesPackageDrop{ellipsis}[2004/09/28]
2
3 \newcommand{\ellipsisgap}{0.1em}
4
5 \newcommand*{\midwordellipsis}{\,\textellipsis\,}

```

---

File 112 **lwarp-embrac.sty**

§ 212 Package **embrac**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg embrac **embrac** is nullfied for HTML and used as-is for print.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{embrac}[2017/07/04]
2
3 \LetLtxMacro\LWR@orig@HTML@emph\LWR@HTML@emph
4 \RenewDocumentCommand{\LWR@HTML@emph}{s m}{\LWR@orig@HTML@emph{#2}}
5
6 \LetLtxMacro\LWR@orig@HTML@textit\LWR@HTML@textit
7 \RenewDocumentCommand{\LWR@HTML@textit}{s m}{\LWR@orig@HTML@textit{#2}}
8
9 \LetLtxMacro\LWR@orig@HTML@textsl\LWR@HTML@textsl
10 \RenewDocumentCommand{\LWR@HTML@textsl}{s m}{\LWR@orig@HTML@textsl{#2}}
11
12 \ifxetexorluatex
13 \LetLtxMacro\LWR@orig@HTML@textsi\LWR@HTML@textsi
14 \RenewDocumentCommand{\LWR@HTML@textsi}{s m}{%
15 \LWR@orig@HTML@textsi{#2}}
16 \fi
17
18 \AtBeginDocument{
19 \LWR@formatted{emph}
20 \LWR@formatted{textit}
21 \LWR@formatted{textsl}
22 \ifxetexorluatex
23 \LWR@formatted{textsi}
24 \fi
25 }
26
27 \newcommand{\LWR@HTML@EmbracOff}{}
28 \LWR@formatted{EmbracOff}
29
30 \newcommand{\LWR@HTML@EmbracOn}{}
31 \LWR@formatted{EmbracOn}

```

---

File 113 **lwarp-emptypage.sty**

§ 213 Package **emptypage**

Pkg emptypage **emptypage** is ignored.

**for HTML output:** Discard all options for lwarp-emptypage:

```
1 \LWR@ProvidesPackageDrop{emptypage}[2010/05/30]
```

---

File 114 **lwarp-endfloat.sty**

§ 214 Package **endfloat**

Pkg endfloat 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\efloattype{}
15 \providecommand\efloatheading[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 115 **lwarp-endheads.sty**

§ 215 Package **endheads**

Pkg endheads 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\ifnotesincontentson \notesincontentsonfalse
10 \newcommand{\notesincontents}{\notesincontentsontrue}
11 \newif\ifendnoteheaderson \endnoteheadersonfalse
12 \newcommand{\setupendnoteheaders}{%
13 \endnoteheadersontrue%
14 }
15 \newif\iftitleinnotes \titleinnotesttrue
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}{\notesbychapterontrue}

```

---

File 116 **lwarp-endnotes.sty**

§ 216 Package **endnotes**

*(Emulates or patches code by JOHN LAVAGNINO.)*

Pkg endnotes Used as-is.

[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

```

**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
10 \def\@makeenmark{\hbox{\LWR@htmlspan{sup}}{\normalfont\theenmark}}
11 \def\makeenmark{\@makeenmark}

```

File 117 **lwarp-engtcl.sty**

§ 217 Package **engtcl**

(Emulates or patches code by CLAUDIO FIANDRINO.)

Pkg engtcl engtcl is patched for use by lwarp. MATHJAX is emulated.

 For MATHJAX, \sight, \signf, \signn, and \signz do not force letter case as they do in SVG math.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{engtcl}[2012/12/18]
2 \newcommand{\LWR@HTML@fines}{%
3 \begin{BlockClass}[text-align:right]{exerend}%
4 \HTMLUnicode{220E}%
5 \end{BlockClass}%
6 }
7 \LWR@formatted{fines}
8
9 \newcommand{\LWR@HTML@exerend}{\fines}
10 \LWR@formatted{exerend}
11
12 \begin{warpMathJax}
13 \LWR@infoprocessingmathjax{engtcl}
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\lbrace#2\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]{I\left(#1\right)}}
121 \CustomizeMathJax{\newcommand{\versore}[1]{\hat{#1}}}
122 \CustomizeMathJax{\newcommand{\vettore}[1]{\overrightarrow{#1}}}
123 \CustomizeMathJax{\newcommand{\coseno}[1]{\cos\left(2\pi#1t\right)}}
124 \CustomizeMathJax{\newcommand{\seno}[1]{\sin\left(2\pi#1t\right)}}
125 \CustomizeMathJax{\newcommand{\energia}[1]{\mathcal{E}_{#1}}}
126 \CustomizeMathJax{\newcommand{\moduloexp}[2]{\left\vert#1\right\vert^{\#2}}}
127 \CustomizeMathJax{\newcommand{\modulo}[1]{\left\vert#1\right\vert}}
128 \CustomizeMathJax{\newcommand{\indB}[1]{%
129 \mathopen{\}\left.#1\right\vert_{\mathrm{dB}}\mathclose{}}}%
130 \CustomizeMathJax{\newcommand{\for}[2]{\left.#1\right\vert_{\#2}}}
131 \CustomizeMathJax{\newcommand{\massimo}[1]{\etsymbolbracearg{\max}{#1}}}
132 \CustomizeMathJax{\newcommand{\minimo}[1]{\etsymbolbracearg{\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{\mathrm{d}}}}
137 \CustomizeMathJax{\newcommand{\intinf}[1]{\int_{-\infty}^{+\infty}{#1}}}
138 \CustomizeMathJax{\newcommand{\deltain}[1]{\delta\left(#1\right)}}
139 \CustomizeMathJax{\newcommand{\iu}{\mathrm{j}}}
140 \CustomizeMathJax{\newcommand{\ex}[1]{\mathrm{e}^{\#1}}}
141 %
142 \CustomizeMathJax{\newcommand{\gammatens}{\{\}\^{\mathrm{V}}\Gamma}}
143 \CustomizeMathJax{\newcommand{\gammacorr}{\{\}\^{\mathrm{I}}\Gamma}}
144 \CustomizeMathJax{\newcommand{\gammatensin}[1]{\{\}\^{\mathrm{V}}\Gamma_{\mathrm{#1}}}}
145 \CustomizeMathJax{\newcommand{\gammacorrin}[1]{\{\}\^{\mathrm{I}}\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}[1]{P_{\mathrm{#1}}}}
154 \CustomizeMathJax{\newcommand{\potdisp}[1][P_{\mathrm{disp}}^{\#1}}
155 \CustomizeMathJax{\newcommand{\potDC}[1][P_{\mathrm{DC}}^{\#1}}
156 \CustomizeMathJax{\newcommand{\potCC}[1][P_{\mathrm{CC}}^{\#1}}
157 \CustomizeMathJax{\newcommand{\potirr}[1][P_{\mathrm{irr}}^{\#1}}
158 \CustomizeMathJax{\newcommand{\potdiss}[1][P_{\mathrm{diss}}^{\#1}}
159 \CustomizeMathJax{\newcommand{\potinc}[1][P_{\mathrm{inc}}^{\#1}}
160 %
161 \CustomizeMathJax{\newcommand{\z}[1]{Z_{\mathrm{#1}}}}
162 \CustomizeMathJax{\newcommand{\znorm}[1]{z_{\mathrm{#1}}}}
163 \CustomizeMathJax{\newcommand{\y}[1]{Y_{\mathrm{#1}}}}
164 \CustomizeMathJax{\newcommand{\ynorm}[1]{y_{\mathrm{#1}}}}
165 \CustomizeMathJax{\newcommand{\zinf}[1][Z_{\infty\#1}}
166 \CustomizeMathJax{\newcommand{\zinfn}[1]{zinf\#1}}
167 \CustomizeMathJax{\newcommand{\yinf}[1][Y_{\infty\#1}}
168 \CustomizeMathJax{\newcommand{\yinfn}[1]{yinf\#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{\campoe fas}{\underline{E}(\underline{r})}}
174 \CustomizeMathJax{\newcommand{\campoh}{\underline{\mathcal{H}}(\underline{r},t)}}
175 \CustomizeMathJax{\newcommand{\campoh fas}{\underline{H}(\underline{r})}}
176 %
177 \CustomizeMathJax{\newcommand{\signt}[1]{\#1(t)}}
178 \CustomizeMathJax{\newcommand{\signf}[1]{\#1(f)}}
179 \CustomizeMathJax{\newcommand{\signn}[1]{\#1(n)}}
180 \CustomizeMathJax{\newcommand{\signz}[1]{\#1(z)}}
181 %
182 \CustomizeMathJax{\newcommand{\prob}[1]{\mathcal{P}\left(\#1\right)}}
183 \CustomizeMathJax{\newcommand{\valatt}[1]{\mathbb{E}\left[\#1\right]}}
184 \CustomizeMathJax{\newcommand{\var}[1]{\mathrm{Var}\left[\#1\right]}}
185 \CustomizeMathJax{\newcommand{\comma}{\ , \ , \ ,}}
186 \CustomizeMathJax{\newcommand{\dato}{\ , | \ ,}}
187 %
188 \CustomizeMathJax{\let\bfRe\partereale}
189 \CustomizeMathJax{\let\bfIm\parteimm}
190 \CustomizeMathJax{\let\noisevar\varianzarumore}
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\clicht\valc}
204 \CustomizeMathJax{\let\Log\loga}

```

```

205 \CustomizeMathJax{\let\analytic\analitic}
206 \CustomizeMathJax{\let\infint\intinf}
207 \CustomizeMathJax{\let\deltaimp\deltain}
208 \CustomizeMathJax{\let\Gamma\gammatens}
209 \CustomizeMathJax{\let\Gamma\gammacorr}
210 \CustomizeMathJax{\let\Gamma\gammain\gammatensin}
211 \CustomizeMathJax{\let\Gamma\gammain\gammacorrin}
212 \CustomizeMathJax{\let\Kgamma\gammak}
213 \CustomizeMathJax{\let\powerin\potin}
214 \CustomizeMathJax{\let\availpow\potdisp}
215 \CustomizeMathJax{\let\irrpow\potirr}
216 \CustomizeMathJax{\let\disppow\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\phasorHfield\campohfas}
224 \CustomizeMathJax{\let\given\dato}
225 \CustomizeMathJax{\let\expval\valatt}
226 \CustomizeMathJax{\let\rmexp\ex}
227 \end{warpMathJax}

```

---

File 118 **lwarp-enumerate.sty**

§ 218 Package **enumerate**

Pkg enumerate 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 lwarp and thus must no longer be dropped.

**for HTML output:** 1 \LWR@ProvidesPackagePass{enumerate}[2015/07/23]

---

File 119 **lwarp-enumitem.sty**

§ 219 Package **enumitem**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg enumitem enumitem is supported with minor adjustments.

**for HTML output:** 1 \LWR@ProvidesPackagePass{enumitem}[2018/11/30]

**for HTML output:** 2 \begin{warpHTML}

```
\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.

```
3 \let\LWR@enumitem@orignewlist\newlist
4
5 \renewcommand*\newlist[3]{%
6 \LWR@enumitem@orignewlist{#1}{#2}{#3}%
7 \AtBeginEnvironment{#1}{\@nameuse{LWR@#2start}}%
8 \AtEndEnvironment{#1}{\@nameuse{LWR@#2end}}%
9 }
10
11 \def\DrawEnumitemLabel{}

12 \end{warpHTML}
```

---

File 120 **lwarp-epigraph.sty**

§ 220 Package **epigraph**

*(Emulates or patches code by PETER WILSON.)*

Pkg epigraph **epigraph** is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{epigraph}[2009/09/02]

2 \DeclareDocumentCommand{\qitem}{m m}
3 {
4 \begin{BlockClass}{qitem}
5 #1
6 \LWR@stoppars%
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 \DeclareDocumentCommand{\epigraph}{m m}
15 {
16 \begin{LWR@BlockClassWP}{\LWR@print@mbbox{text-align:right}}{\epigraph}
17 \qitem{#1}{#2}
18 \end{LWR@BlockClassWP}
19 }
20
21 \DeclareDocumentEnvironment{epigraphs}{}
22 {\LWR@BlockClassWP{\LWR@print@mbbox{text-align:right}}{\epigraph}}
23 {\endLWR@BlockClassWP}
```

Use css to format epigraphs.

The following are null commands for source compatibility:

```

24 \newenvironment*{flushepinormal}{}{}

25 \@ifclassloaded{memoir}{
26 \setlength{\epigraphwidth}{.5\linewidth}
27 \renewcommand{\textflush}{flushepinormal}
28 \renewcommand{\epigraphhead}[2][0]{#2}
29 \renewcommand{\dropchapter}[1]{}
30 \renewcommand*{\undodrop}{}
31 }{% not memoir
32 \newlength{\epigraphwidth}
33 \setlength{\epigraphwidth}{.5\linewidth}
34 \newcommand{\textflush}{flushepinormal}
35 \newcommand{\epigraphflush}{flushright}
36 \newcommand{\sourceflush}{flushright}
37 \newcommand*{\epigraphsize}{\small}
38 \newlength{\epigraphrule}
39 \newlength{\beforeepigraphskip}
40 \newlength{\afterepigraphskip}
41 \newcommand{\epigraphhead}[2][0]{#2}
42 \newcommand{\dropchapter}[1]{}
43 \newcommand*{\undodrop}{}
44 }% not memoir
45
46 \let\cleartoevenpage\relax% also in nextpage
47 \newcommand{\cleartoevenpage}[1][{}]{

48 \newif\ifepigraphnoindent
49 \newcommand\epigraphnoindent{\epigraphnoindenttrue}

```

---

File 121 **lwarp-epsfig.sty**

§ 221 Package **epsfig**

Pkg epsfig epsfig is emulated for use by lwarp.

 Only the L<sup>A</sup>T<sub>E</sub>X2e syntax is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{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{\epsfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}
16
17 \newcommand{\psfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}

```

---

### File 122 **lwarp-epstopdf.sty**

#### § 222 Package **epstopdf**

Pkg epstopdf Previous versions of lwarp had a nullified version, but now `epstopdf-base` is supported. `lwarp-epstopdf` becomes a placeholder to overwrite previous versions.

See package `epstopdf-base` for details.

**for HTML output:** 1 \LWR@ProvidesPackagePass{epstopdf}[2016/05/15]

---

### File 123 **lwarp-epstopdf-base.sty**

#### § 223 Package **epstopdf-base**

Pkg epstopdf-base

 **convert to .svg**

Images with an `.eps` extension will be converted to `.pdf`. The HTML output uses the `.svg` version, so use

Enter ⇒ **lwarpmk pdftosvg <listofPDFfiles>**

to generate `.svg` versions.

**for HTML output:** 1 \LWR@ProvidesPackagePass{epstopdf-base}[2016/05/15]

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 124 **lwarp-eqlist.sty**

§ 224 Package **eqlist**

Pkg eqlist 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 125 **lwarp-eqparbox.sty**

§ 225 Package **eqparbox**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg eqparbox eqparbox is patched for use by lwarp.

**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 126 **lwarp-errata.sty**

§ 226 Package **errata**

(Emulates or patches code by MICHAEL KOHLHASE.)

Pkg errata **errata** is patched for use by **lwarp**.

This is for v0.3 of **errata**. A newer version of **errata** with more features is under development, at which time the **lwarp** 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 \xpatchcmd{\erratumAdd}
4 {$_a^{\arabic{erratum}}}$}
5 % {\inlinemathother$_a^{\arabic{erratum}}$\inlinemathnormal}
6 {\textsubscript{a}\textsuperscript{\arabic{erratum}}}
7 {}
8 {\LWR@patcherror{erratum}{erratumAdd}}
9
10 \xpatchcmd{\erratumDelete}
11 {$_d^{\arabic{erratum}}}$}
12 % {\inlinemathother$_d^{\arabic{erratum}}$\inlinemathnormal}
13 {\textsubscript{d}\textsuperscript{\arabic{erratum}}}
14 {}
15 {\LWR@patcherror{erratum}{erratumDelete}}
16
17 \xpatchcmd{\erratumReplace}
18 {$_r^{\arabic{erratum}}}$}
19 % {\inlinemathother$_r^{\arabic{erratum}}$\inlinemathnormal}
20 {\textsubscript{r}\textsuperscript{\arabic{erratum}}}
21 {}
22 {\LWR@patcherror{erratum}{erratumReplace}}
23
24 \xpatchcmd{\erratum}
25 {$_a$}
26 % {\inlinemathother$_a$\inlinemathnormal}
27 {\textsubscript{a}}
28 {}
29 {\LWR@patcherror{erratum}{erratumDelete}}
30
31 \xpatchcmd{\erratum}
```

```

32 {$_d^{\@thefnmark}$}
33 % {\inlinemathother$_d^{\@thefnmark}$\inlinemathnormal}
34 {\textsubscript{d}\@thefnmark}
35 {}
36 {\LWR@patcherror{erratum}{eDelete}}
37
38 \xpatchcmd{\erratum}
39 {$_r^{\@thefnmark}$}
40 % {\inlinemathother$_r^{\@thefnmark}$\inlinemathnormal}
41 {\textsubscript{r}\@thefnmark}
42 {}
43 {\LWR@patcherror{erratum}{eReplace}}

```

Finish the current page's errata before closing and reloading the list:

```
44 \preto\PrintErrata{\LWR@orignewpage}
```

No longer defining math macros with the HTML \$:

```
45 \StopDefiningMath
```

File 127 **lwarp-eso-pic.sty**

§ 227 Package **eso-pic**

*(Emulates or patches code by ROLF NIEPRASCHK.)*

Pkg eso-pic **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][1]{}

```

---

File 128 **lwarp-eurosym.sty**

§ 228 Package **eurosym**

*(Emulates or patches code by HENRIK THEILING.)*

Pkg eurosym eurosym is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{eurosym}[1998/08/06]

2 \renewrobustcmd\officialeuro{\HTMLentity{euro}}
3 \let\geneuro\officialeuro
4 \let\geneuronarrow\officialeuro
5 \let\geneurowide\officialeuro
6 \let\euro\officialeuro
7 \renewrobustcmd\eurobars{}
8 \renewrobustcmd\eurobarsnarrow{}
9 \renewrobustcmd\eurobarswide{}

```

---

File 129 **lwarp-everypage.sty**

§ 229 Package **everypage**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg everypage everypage is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{everypage}[2007/06/20]

2 \newcommand*\AddEverypageHook}[1]{}
3 \newcommand*\AddThispageHook}[1]{}

```

---

File 130 **lwarp-everyshi.sty**

§ 230 Package **everyshi**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg everyshi ignored.

**for HTML output:** Discard all options for lwarp-everyshi:

```

1 \LWR@ProvidesPackageDrop{everyshi}[2001/05/15]

2 \newcommand*\EveryShipout}[1]{}
3 \newcommand*\AtNextShipout}[1]{}

```

File 131 **lwarp-extarrows.sty**

§ 231 Package **extarrows**

*(Emulates or patches code by HUYNH KY ANH.)*

Pkg extarrows **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\xLonglefttrightharpoon{10,10}{0x21D4}}
6 \CustomizeMathJax{\Newextarrow\xLefttrightharpoon{10,10}{0x21D4}}
7 \CustomizeMathJax{\Newextarrow\xlonglefttrightharpoon{10,10}{0x2194}}
8 \CustomizeMathJax{\Newextarrow\xlefttrightharpoon{10,10}{0x2194}}
9 \CustomizeMathJax{\let\xLongleftarrow\xleftarrow}
10 \CustomizeMathJax{\let\xLongrightarrow\xrightarrow}
11 \end{warpMathJax}

```

File 132 **lwarp-extramarks.sty**

§ 232 Package **extramarks**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg extramarks **extramarks** is ignored.

**for HTML output:** Discard all options for lwarp-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 133 **lwarp-fancybox.sty**

§ 233 Package **fancybox**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg fancybox 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 lateximage, which is done by adding \lateximage at the very start of FramedEqn's beginning code, and \endlateximage at the very end of the ending code. Unfortunately, the HTML alt attribute is not used here.

```
\newenvironmentFramedEqn
{
\lateximage% NEW
\setlength{\fboxsep}{15pt}
... }{...
\[\fbox{\TheSbox}\]
\endlateximage% NEW
}
```

[framing alternatives](#) \fbox works with fancybox. Also see lwarp's \fboxBlock macro and fminipage environment for alternatives to \fbox for framing environments.

[framed table example](#) The fancybox documentation's example framed table using an \fbox containing a tabular does not work with lwarp, but the FramedTable environment does work if \fbox is replaced by \fboxBlock. This method loses 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](#) lwarp 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}
 \beginVerbatim
}{
 \endVerbatim
 \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.

**fancybox, fancyvrb**

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

 `\VerbatimFootnotes`  
 sectioning or  
 displaymath

```

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

```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when `\VerbatimFootnotes` are selected. The browser usually compensates.

```
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% lwarp
7 }

```

`\V@footnotetext` Patches in a subset of `lwarp`'s `\LWR@footnotetext` to the fancyvrb version of `\V@footnotetext`.

```
8 \def\V@footnotetext{%
9 \LWR@traceinfo{V@footnotetext}%
10 \global\setbox\LWR@footnotebox=\vbox\bgroup%

```

Add to any current footnotes:

```
11 \unvbox\LWR@footnotebox%
```

Remember the footnote number for `\ref`:

```
12 \protected@edef\@currentLabel{%

```

```

13 \csname p@footnote\endcsname\@thefnmark%
14 }% @currentlabel

```

Use HTML superscripts in the footnote even inside a lateximage:

```

15 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%

```

Use paragraph tags if in a tabular data cell or a lateximage:

```

16 \ifthenelse{%
17 \boolean{LWR@doingstartpars} \AND%
18 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
19 }%
20 {}%
21 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

```

Append the footnote to the list:

```

22 \@makefntext{}%

```

The footnote text will follow after \V@@@footnotetext has completed.

```

23 \bgroup%
24 \aftergroup{\V@@@footnotetext}%
25 \ignorespaces%
26 }%

```

```

27 }% AfterEndPreamble

```

```

28 \renewcommand*{\@shadowbox}[1]{%
29 \ifbool{FormatWP}%
30 {\InlineClass[border:1px solid black]{shadowbox}{#1}}%
31 {\InlineClass{shadowbox}{#1}}%
32 }
33
34 \renewcommand*{\@doublebox}[1]{%
35 \ifbool{FormatWP}%
36 {\InlineClass[border:1px double black]{doublebox}{#1}}%
37 {\InlineClass{doublebox}{#1}}%
38 }
39
40 \renewcommand*{\@ovalbox}[2]{%
41 \ifbool{FormatWP}%
42 {\InlineClass[border:1px solid black; border-radius:1ex]{ovalbox}{#2}}%
43 {%
44 \ifthenelse{\isequivalentto{#1}{\thinlines}}%
45 {\InlineClass{ovalbox}{#2}}%
46 {\InlineClass{Ovalbox}{#2}}%
47 }%
48 }

```

Convert minipages, parboxes, and lists into linear text using the LWR@nestspan environment:

```

49 \let\LWR@origSbox\Sbox
50
51 \def\Sbox{\LWR@origSbox\LWR@nestspan}
52

```

```

53
54 \let\LWR@origendSbox\endSbox
55
56 \def\endSbox{\endLWR@nestspan\LWR@origendSbox}

```

Beqarray is adapted for MATHJAX or enclosed inside a lateximage:

```

57 \RenewEnviron{Beqarray}
58 {\LWR@eqnarrayfactor}
59
60 \csgpreto{Beqarray*}{\boolfalse{LWR@numbereqnarray}}

```

\GenericCaption is enclosed in an HTML block:

```

61 \renewcommand{\GenericCaption}[1]{%
62 \LWR@figcaption%
63 \LWR@isolate{#1}%
64 \endLWR@figcaption%
65 }

```

Btrivlist is enclosed in an HTML block. This is a tabular, and does not use \item.

```

\trivlist {\langle/lcr\rangle} [\langle/tc/b\rangle]

66 \RenewDocumentEnvironment{Btrivlist}{m o}
67 {%
68 \LWR@stoppars%
69 \begin{BlockClass}{Btrivlist}%
70 \tabular{#1}%
71 }
72 {%
73 \endtabular%
74 \end{BlockClass}%
75 \LWR@startpars%
76 }

```

Btrivlist is also neutralized when used inside a span:

```

77 \AtBeginEnvironment{LWR@nestspan}{%
78 \RenewDocumentEnvironment{Btrivlist}{m o}{\}{\}%
79 }

```

lwarp's handling of \item is patched to accept fancybox's optional arguments:

```

80 \let\LWRFB@origitemizeitem\LWR@itemizeitem
81 \let\LWRFB@origdescitem\LWR@descitem
82
83 \RenewDocumentCommand{\LWR@itemizeitem}{d()o}{%
84 \IfValueTF{#2}{%
85 \LWRFB@origitemizeitem[#2]%
86 }{%
87 \LWRFB@origitemizeitem%
88 }%

```

```

89 }
90
91 \RenewDocumentCommand{\LWR@descitem}{d()}{%
92 \IfValueTF{#2}{%
93 \LWRFB@origdescitem[#2]~%
94 }{%
95 \LWRFB@origdescitem%
96 }%
97 }

98 \RenewDocumentCommand{\LWR@nestspanitem}{d()}{%
99 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
100 \LWR@origitem%
101 }

```

The various boxed lists become regular lists:

```

102 \renewenvironment{Bitemize}[1][\begin{itemize}]{\end{itemize}}
103 \renewenvironment{Benumerate}[1][\begin{enumerate}]{\end{enumerate}}
104 \renewenvironment{Bdescription}[1][\begin{description}]{\end{description}}

```

`\boxput` simply prints one then the other argument, side-by-side instead of above and behind:

```

105 \RenewDocumentCommand{\boxput}{s d() m m}{%
106 \IfBooleanTF{#1}{#3\quad#4}{#4\quad#3}%
107 }

```

Neutralized commands:

```

108 \RenewDocumentCommand{\fancyput}{s d() m}{%}
109 \RenewDocumentCommand{\thisfancyput}{s d() m}{%}
110
111 \RenewDocumentCommand{\fancypage}{m m}{%}
112 \RenewDocumentCommand{\thisfancypage}{m m}{%}
113
114 \def\LandScape#1{}
115 \def\endLandScape{}
116 \def\@Landscape#1#2#3{}
117 \def\endLandscape{}

```

Low-level patches for `UseVerbatim` and friends:

```

118 \let\LWRFB@UseVerbatim\UseVerbatim
119 \renewcommand*{\UseVerbatim}[1]{%
120 \LWR@atbeginverbatim{3}{Verbatim}%
121 \LWRFB@UseVerbatim{#1}%
122 \LWR@afterendverbatim{.5}%
123 }
124
125 \let\LWRFB@LUseVerbatim\LUseVerbatim
126

```

```

127 \renewcommand*\LUseVerbatim[1]{%
128 \LWR@atbeginverbatim{3}{LVerbatim}%
129 \noindent%
130 \LWRFB@LUseVerbatim{#1}%
131 \LWR@afterendverbatim{.5}%
132 }
133
134 \def\@BUseVerbatim[#1]#2{%
135 \LWR@atbeginverbatim{3}{BVerbatim}%
136 \LWRFB@UseVerbatim{#2}%
137 \LWR@afterendverbatim{.5}%
138 }

```

---

File 134 **lwarp-fancyhdr.sty**

§ 234 Package **fancyhdr**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg fancyhdr **fancyhdr** is ignored.

**for HTML output:** Discard all options for **lwarp-fancyhdr**:

```

1 \LWR@ProvidesPackageDrop{fancyhdr}[2019/01/31]

2 \newcommand*\fancyhead[2][{}]{
3 \newcommand*\fancyfoot[2][{}]{
4 \newcommand*\fancyhf[2][{}]{
5 \newcommand*\fancypagestyle[2]{
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 \newcommand*\headrule{}{
15 \newcommand*\footrule{}{
16 \newlength\headwidth
17 \newcommand*\fancyheadoffset[2][{}]{
18 \newcommand*\fancyfootoffset[2][{}]{
19 \newcommand*\fancyhfoffset[2][{}]{
20 \newcommand*\iffloatpage[2]{#2}
21 \newcommand*\iffloatpage[2]{#2}
22 \newcommand*\iffbotfloat[2]{#2}
23 \newcommand*\iffootnote[2]{#2}

```

File 135 **lwarp-fancyref.sty**

§ 235 Package **fancyref**

Pkg fancyref fancyref is emulated.

**for HTML output:** 1 \LWR@ProvidesPackagePass{fancyref}[1999/02/03]

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 lwarp has revised the meaning of \mbox so the comparison failed.)

```
2 \newcommand*\LWRfref@parenfancyrefhook}[1]{(#1)}
3
4 \ifdefstrequal{\fancyrefhook}{\LWRfref@parenfancyrefhook}
5 {}{
6 \renewcommand*\fancyrefhook}[1]{#1}%
7 }
```

Modified to ignore the page number and varioref.

```
8 \renewcommand*\@f@ref}[4]{%
9 \@ifundefined{#1r@#2@#3}{%
10 \PackageError{lwarp-fancyref}{%
11 \backslashchar#1ref\space format ‘#2’
12 undefined\MessageBreak
13 for label type ‘#3’}%
14 }{%
15 The format ‘#2’ was not defined for the label type
16 ‘#3’\MessageBreak
17 and the \backslashchar#1ref\space command. Perhaps
18 you have only misspelled its name.\MessageBreak
19 Otherwise you will have to define it with
20 \protect\new#1reformat\MessageBreak
21 prior to using it.%
22 }%
23 }{%
24 \fancyrefhook{%
25 \@nameuse{#1r@#2@#3}%
26 {\ref{#3\fancyrefargdelim#4}}%
27 {\pageref{#3\fancyrefargdelim#4}}% original
28 {\@fancyref@page@ref{#3\fancyrefargdelim#4}}% original
29 }% lwarp
30 }% lwarp
31 }%
32 }%
33 }%
```

File 136 **lwarp-fancytabs.sty**

§ 236 Package **fancytabs**

Pkg fancytabs 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 137 **lwarp-fancyvrb.sty**

§ 237 Package **fancyvrb**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg fancyvrb 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.

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

△ \VerbatimFootnotes  
△ sectioning or displaymath

```

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

```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when \VerbatimFootnotes are selected. The browser usually compensates.

```
1 \RequirePackage{xcolor}% for \convertcolorspec
```

```

2
3 \LWR@ProvidesPackagePass{fancyvrb}[2008/02/07]

```

Initial default patch for fancyvrb:

```
4 \fvset{frame=none}%
```

After the preamble is loaded, after any patches to Verbatim:

```
5 \AfterEndPreamble{
6 \LWR@traceinfo{Patching fancyvrb.}

```

`\VerbatimFootnotes` Patched to use the new version.

```

7 \def\VerbatimFootnotes{%
8 \let\@footnotetext\V@footnotetext%
9 \let\footnote\V@footnote%
10 \let\LWR@footnotetext\V@footnotetext% lwarp
11 }

```

`\V@footnotetext` Patches in a subset of `lwarp`'s `\LWR@footnotetext` to the `fancyvrb` version of `\V@footnotetext`.

```

12 \def\V@footnotetext{%
13 \LWR@traceinfo{V@footnotetext}%
14 \global\setbox\LWR@footnotebox=\vbox\bgroup%

```

Add to any current footnotes:

```
15 \unvbox\LWR@footnotebox%
```

Remember the footnote number for `\ref`:

```

16 \protected@edef\@currentlabel{%
17 \csname p@footnote\endcsname\@thefnmark%
18 }% @currentlabel

```

Use HTML superscripts in the footnote even inside a `lateximage`:

```
19 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```

20 \ifthenelse{%
21 \boolean{LWR@doingstartpars} \AND%
22 \cnttest{\value{LWR@lateximagedepth}}{=}{0}}%
23 }%
24 {}%
25 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@originewline}%

```

Append the footnote mark to the list:

```
26 \@makefntext{}%
```

The footnote text will follow after `\V@@@footnotetext` has completed.

```

27 \bgroup%
28 \aftergroup{\V@@@footnotetext}%
29 \ignorespaces%
30 }%

```

```

31 \preto\FVB@Verbatim{\LWR@forcenewpage}
32 \preto\FVB@LVerbatim{\LWR@forcenewpage}
33 % \preto\FVB@BVerbatim{\LWR@forcenewpage}% Fails, so done below.

```

Simplified to remove PDF formatting:

```

34 \def\FV@BeginListFrame@Single{%
35 \FV@SingleFrameLine{\z@}%
36 }
37
38 \def\FV@endListFrame@Single{%
39 \FV@SingleFrameLine{\@ne}%
40 }
41
42 \def\FV@BeginListFrame@Lines{%
43 \FV@SingleFrameLine{\z@}%
44 }
45
46 \def\FV@endListFrame@Lines{%
47 \FV@SingleFrameLine{\@ne}%
48 }
49
50 \renewcommand*{\FV@SingleFrameSep}{}

```

Adds HTML formatting:

```

51 \def\FV@BUseVerbatim#1{%
52 \LWR@atbeginverbatim{0}{verbatim}%
53 \FV@BVerbatimBegin#1\FV@BVerbatimEnd%
54 \LWR@afterendverbatim{0}%
55 }

```

`\LWR@FVstyle` Holds the style of the verbatim.

```

56 \newcommand*{\LWR@FVstyle}{}

```

The following patches to Verbatim are executed at the start and end of the environment, depending on the choice of frame. Original code is from the fancyvrb package.

```

57 \newcommand*{\LWR@fvstartnone}{%
58 \LWR@traceinfo{fvstartnone}%
59 % \hbox to\z@{
60 \BlockClass[\LWR@FVstyle]{fancyvrb}
61 \LWR@stoppars
62 \ifx\FV@LabelPositionTopLine\relax\else
63 \ifx\FV@LabelBegin\relax\else
64 \FancyVerbRuleColor{\LWR@FVfindbordercolor}
65 \LWR@htmltagc{%
66 div class="fancyvrblabel" % extra space
67 style="color: \LWR@origpound\LWR@tempcolor"%
68 }
69 \LWR@print@textrm{\FV@LabelBegin}% \textrm preserves emdash

```

```
70 \LWR@htmltagc{/div}\LWR@orignewline%
71 \fi
72 \fi
73 \LWR@atbeginverbatim{0}{verbatim}%
74 % }%
75 }
76
77 \newcommand*\LWR@fvendnone}{%
78 \LWR@traceinfo{fvendnone}%
79 % \hbox to\z@{
80 \LWR@afterendverbatim{0}%
81 \LWR@stoppars%
82 \ifx\FV@LabelPositionBottomLine\relax\else
83 \ifx\FV@LabelEnd\relax\else
84 \FancyVerbRuleColor{\LWR@FVfindbordercolor}
85 \LWR@htmltagc{%
86 div class="fancyvrblabel" % extra space
87 style="color: \LWR@origpound\LWR@tempcolor"%
88 }
89 \LWR@print@textrm{\FV@LabelEnd}
90 \LWR@htmltagc{/div}\LWR@orignewline%
91 \fi
92 \fi
93 \endBlockClass
94 }
95
96 \newcommand*\LWR@fvstartsingle}{%
97 \LWR@traceinfo{fvstartsingle}%
98 \LWR@fvstartnone%
99 \FV@BeginListFrame@Single%
100 }
101
102 \newcommand*\LWR@fvendsingle}{%
103 \LWR@traceinfo{fvendsingle}%
104 \FV@EndListFrame@Single%
105 \LWR@fvendnone%
106 }
107
108 \newcommand*\LWR@fvstartline}{%
109 \LWR@traceinfo{fvstartline}%
110 \LWR@fvstartnone%
111 % \setlength{\LWR@templengthone}{\baselineskip}%
112 \FV@BeginListFrame@Lines%
113 % \setlength{\baselineskip}{\LWR@templengthone}%
114 % \setlength{\baselineskip}{5pt}%
115 }
116
117 \newcommand*\LWR@fvendline}{%
118 \LWR@traceinfo{fvendline}%
119 \FV@EndListFrame@Lines%
120 \LWR@fvendnone%
121 }
```

The following patches select the start/left/right/end behaviors depending on frame. Original code is from the fancyvrb package.

```

122 \newcommand*{\LWR@FVfindbordercolor}{%
123 \FancyVerbRuleColor%
124 \LWR@findcurrenttextcolor%
125 \color{black}%
126 }
127
128 % border width of \FV@FrameRule
129 \newcommand*{\LWR@FVborderstyle}[1]{%
130 padding#1: \strip@pt\dimexpr \FV@FrameSep\relax\relax pt ; % space
131 \LWR@FVfindbordercolor\LWR@indentHTMLtwo%
132 border#1: \strip@pt\dimexpr \FV@FrameRule\relax\relax pt % space
133 solid {\FancyVerbRuleColor{\LWR@origpound\LWR@tempcolor}} ; % space
134 }
135
136 \def\FV@Frame@none{%
137 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle}%
138 \let\FV@BeginListFrame\LWR@fvstartnone%
139 \let\FV@LeftListFrame\relax%
140 \let\FV@RightListFrame\relax%
141 \let\FV@endListFrame\LWR@fvendnone}
142
143 \FV@Frame@none% default values
144
145 \def\FV@Frame@single{%
146 \renewcommand*{\LWR@FVstyle}{%
147 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
148 \LWR@FVborderstyle}%
149 }%
150 \let\FV@BeginListFrame\LWR@fvstartsingle%
151 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
152 \let\FV@RightListFrame\FV@RightListFrame@Single%
153 \let\FV@endListFrame\LWR@fvendsingle}
154
155 \def\FV@Frame@lines{%
156 \renewcommand*{\LWR@FVstyle}{%
157 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
158 \LWR@FVborderstyle{-top}%
159 \LWR@indentHTMLtwo%
160 \LWR@FVborderstyle{-bottom}%
161 }%
162 \let\FV@BeginListFrame\LWR@fvstartline%
163 \let\FV@LeftListFrame\relax%
164 \let\FV@RightListFrame\relax%
165 \let\FV@endListFrame\LWR@fvendline}
166
167 \def\FV@Frame@topline{%
168 \renewcommand*{\LWR@FVstyle}{%
169 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
170 \LWR@FVborderstyle{-top}%
171 }%
172 \let\FV@BeginListFrame\LWR@fvstartline%
173 \let\FV@LeftListFrame\relax%

```

```

174 \let\FV@RightListFrame\relax%
175 \let\FV@EndListFrame\LWR@fvendnone}
176
177 \def\FV@Frame@bottomline{%
178 \renewcommand*{\LWR@FVstyle}{%
179 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
180 \LWR@FVborderstyle{-bottom}%
181 }%
182 \let\FV@BeginListFrame\LWR@fvstartnone%
183 \let\FV@LeftListFrame\relax%
184 \let\FV@RightListFrame\relax%
185 \let\FV@EndListFrame\LWR@fvendline}
186
187 \def\FV@Frame@leftline{%
188 \renewcommand*{\LWR@FVstyle}{%
189 \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
190 \LWR@FVborderstyle{-left}%
191 }%
192 % To define the \FV@FrameFillLine macro (from \FV@BeginListFrame)
193 \ifx\FancyVerbFillColor\relax%
194 \let\FV@FrameFillLine\relax%
195 \else%
196 \@tempdima\FV@FrameRule\relax%
197 \multiply\@tempdima-\tw@%
198 \edef\FV@FrameFillLine{%
199 \noexpand\FancyVerbFillColor{\vrule\@width\@number\@tempdima sp}%
200 \kern-\@number\@tempdima sp}}%
201 \fi%
202 \let\FV@BeginListFrame\LWR@fvstartnone%
203 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
204 \let\FV@RightListFrame\relax%
205 \let\FV@EndListFrame\LWR@fvendnone}

```

Adds the optional label to the top and bottom edges. Original code is from the fancyvrb package.

```

206 \def\FV@SingleFrameLine#1{%
207 % \hbox to\z@{%
208 % \kern\leftmargin
209 \ifnum#1=\z@\relax
210 \let\FV@Label\FV@LabelBegin
211 \else
212 \let\FV@Label\FV@LabelEnd
213 \fi
214 \ifx\FV@Label\relax
215 % \FancyVerbRuleColor{\vrule \@width\linewidth \@height\FV@FrameRule}%
216 \else
217 \ifnum#1=\z@
218 % \setbox\z@\hbox{\strut\enspace\FV@LabelBegin\enspace\strut}%
219 \ifx\FV@LabelPositionTopLine\relax
220 \else
221 \fi
222 \else
223 % \setbox\z@\hbox{\strut\enspace\FV@LabelEnd\enspace\strut}%
224 \ifx\FV@LabelPositionBottomLine\relax

```

```

225 \else
226 \fi
227 \fi
228 \fi
229 % \hss
230 % }
231 }

```

Processes each line, adding optional line numbers. Original code is from the fancyvrb package.

```

232 \def\FV@ListProcessLine#1{%
233 \hbox to \hsize{%
234 \kern\leftmargin
235 \hbox to \VerbatimHTMLWidth {%
236 \ifcvoid{FV@LeftListNumber}{\kern 2.5em}%
237 \FV@LeftListNumber%
238 }%
239 \FancyVerbFormatLine{#1}%
240 \hss%
241 \FV@RightListFrame
242 \FV@RightListNumber%
243 }%
244 \hss% required to avoid underfull hboxes
245 }
246 }

```

Env BVerbatim

```

247 \AtBeginEnvironment{BVerbatim}
248 {%
249 \LWR@forcenewpage% instead of \preto
250 \LWR@atbeginverbatim{0}{bverbatim}%
251 }
252
253 \AfterEndEnvironment{BVerbatim}
254 {%
255 \LWR@afterendverbatim{0}%
256 }

```

End of the modifications to make at the end of the preamble:

```

257 } % \AfterEndPreamble

```

---

File 138 **lwarp-fewerfloatpages.sty**

§ 238 Package **fewerfloatpages**

Pkg fewerfloatpages fewerfloatpages is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fewerfloatpages}[2020/02/14]

```

2 \newcommand\floatpagekeepfraction{\textfraction}
3 \newcounter{floatpagedeferlimit}
4 \newcounter{floatpagekeeplimit}

```

---

File 139 **lwarp-figcaps.sty**

§ 239 Package **figcaps**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg figcaps figcaps is ignored.

**for HTML output:** Discard all options for lwarp-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 140 **lwarp-figsize.sty**

§ 240 Package **figsize**

*(Emulates or patches code by ANTHONY A. TANBAKUHL.)*

Pkg figsize 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 141 **lwarp-fitbox.sty**

§ 241 Package **fitbox**

Pkg fitbox 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 142 **lwarp-fix2col.sty**

§ 242 Package **fix2col**

Pkg fix2col fix2col is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{fix2col}[2015/11/13]

```

---

File 143 **lwarp-fixme.sty**

§ 243 Package **fixme**

*(Emulates or patches code by DIDIER VERNA.)*

Pkg fixme fixme is patched for use by lwarp.

 **external layouts** External layouts (\fxloadlayouts) are not supported.

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}[2017/03/05]

Restore lwarp's version of \@wrindex, ignoring the fixme package's target option:

```
2 \let\@wrindex\LWR@wrindex
```

Float-related macros required by lwarp:

```
3 \newcommand{\ext@fixme}{lox}
4
5 \renewcommand{\l@fixme}[2]{\hypertocfloat{1}{fixme}{lox}{#1}{#2}}
```

Other modifications:

```
6 \def\FXFaceInlineHTMLStyle{font-weight:bold}
7
8 \renewcommand*\FXLayoutInline[3]{ %
9 \InlineClass[\FXFaceInlineHTMLStyle]{fixmeinline}%
10 {\@fxttextstd{#1}{#2}{#3}}%
11 }
12
13 \def\FXFaceEnvHTMLStyle{font-weight:bold}
14
15 \renewcommand*\FXEnvLayoutPlainBegin[2]{%
16 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
17 \ignorespaces#2 \fxnotename{#1}: \ignorespaces}
18
19 \renewcommand*\FXEnvLayoutPlainEnd[2]{\endBlockClass}
20
21 \renewcommand*\FXEnvLayoutSignatureBegin[2]{%
22 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
23 \fxnotename{#1}: \ignorespaces}
24
25 \renewcommand*\FXEnvLayoutSignatureEnd[2]{\@fxsignature{#2}\endBlockClass}
26
27 \def\FXFaceSignatureHTMLStyle{font-style:italic}
28
29 \DeclareRobustCommand*\@fxsignature[1]{%
30 \ifthenelse{\equal{#1}{}}%
31 {}%
32 { -- {\InlineClass[\FXFaceSignatureHTMLStyle]{fixmesignature}{#1}}}%
33 }
34
35
36 \def\FXFaceTargetHTMLStyle{font-style:italic}
37
38 \renewcommand\FXTargetLayoutPlain[2]{%
39 \InlineClass[\FXFaceTargetHTMLStyle]{fixmetarget}{#2}%
40 }
```

---

File 144 **lwarp-fixmetodonotes.sty**

§ 244 Package **fixmetodonotes**

*(Emulates or patches code by GIOELE BARABUCCI.)*

Pkg fixmetodonotes **fixmetodonotes** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{fixmetodonotes}[2013/04/28]
2 \renewcommand{\NOTES@addtolist}[2]{%
3 \refstepcounter{NOTES@note}%
4 % \phantomsection% REMOVED
5 \addcontentsline{notes}{NOTES@note}{%
6 \protect\numberline{\theNOTES@note}{#1}: {#2}}%
7 }%
8 }
9
10 \renewcommand{\NOTES@marker}[2]{\fbox{%
11 \textcolor{#2}{% WAS \color
12 \textbf{#1}}}%
13 }}
14
15 \renewcommand{\NOTES@colorline}[2]{%
16 \bgroup%
17 \ULon{\LWR@backgroundcolor{#1}{#2}}%
18 }
```

---

File 145 **lwarp-flafter.sty**

§ 245 Package **flafter**

Pkg flafter **flafter** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{flafter}[2018/01/08]
2 \providecommand\fl@trace[1]{}
```

---

File 146 **lwarp-flippdf.sty**

§ 246 Package **flippdf**

Pkg flippdf **flippdf** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]
```

```
2 \newcommand\FlipPDF{}
3 \newcommand\UnFlipPDF{}
```

File 147 **lwarp-float.sty**

§ 247 Package **float**

(Emulates or patches code by ANSELM LINGNAU.)

Pkg float 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.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{float}[2001/11/08]

\listof See section 75.2 for the \listof command.

\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%
```

Likewise, **newfloat** also creates \l@<type>, but float does not, so remove it here:

```
10 \cslet{l@#1}\relax%
11 }
```

`\floatname`     $\langle type \rangle$   $\langle name \rangle$

Sets the text name of the float, such as “Figure”.

```
12 \NewDocumentCommand{\floatname}{m +m}{%
13 \SetupFloatingEnvironment{#1}{name=#2}%
14 }
```

`\floatplacement`     $\langle type \rangle$   $\langle placement \rangle$

Float placement is ignored.

```
15 \newcommand*{\floatplacement}[2]{%
16 \SetupFloatingEnvironment{#1}{placement=#2}%
17 }
```

`\floatstyle`     $\langle style \rangle$

Remember the style for future floats:

```
18 \newcommand{\floatstyle}[1]{%
19 \def\LWR@floatstyle{#1}%
20 }
```

`\restylefloat`    \*  $\langle type \rangle$

Remember the style for this float:

```
21 \NewDocumentCommand{\restylefloat}{s m}{%
22 \csedef{LWR@floatstyle@#2}{\LWR@floatstyle}%
23 }
```

File 148    **lwarp-floatflt.sty**

§ 248    Package    **floatflt**

*(Emulates or patches code by MATS DAHLGREN.)*

Pkg floatflt    floatflt is emulated.

**for HTML output:**    Discard all options for lwarp-floatflt:

```
1 \LWR@ProvidesPackageDrop{floatflt}[1997/07/16]
```

Env [⟨⟩]    offset  $\langle type \rangle$   $\langle width \rangle$  Borrowed from the lwarp version of keyfloat:

```
2 \NewDocumentEnvironment{KFLTfloatflt@marginfloat}{0{-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 {marginblock}%
12 }{%
13 \setlength{\LWR@templengthone}{#3}%
14 \LWR@BlockClassWP{%
15 float:right; %
16 width:\LWR@printlength{\LWR@templengthone}; % extra space
17 margin:10pt%
18 }{%
19 width:\LWR@printlength{\LWR@templengthone}%
20 }%
21 {marginblock}%
22 }%
23 \captionsetup{type=#2}%
24 }
25 {%
26 \endLWR@BlockClassWP%
27 \end{LWR@setvirtualpage}%
28 }

```

Env floatingfigure [*(placement)*] *{(width)}*

```

29 \DeclareDocumentEnvironment{floatingfigure}{o m}
30 {\begin{KFLTfloatflt@marginfloat}{figure}{#2}}
31 {\end{KFLTfloatflt@marginfloat}}

```

Env floatingtable [*(placement)*]

```

32 \DeclareDocumentEnvironment{floatingtable}{o}
33 {\begin{KFLTfloatflt@marginfloat}{table}{}}
34 {\end{KFLTfloatflt@marginfloat}}

```

File 149 **lwarp-floatpag.sty**

§ 249 Package **floatpag**

*(Emulates or patches code by VYTAS STATULEVIČIUS AND SIGITAS TOLUŠIS.)*

Pkg floatpag floatpag is ignored.

**for HTML output:** Discard all options for lwarp-floatpag:

```

1 \LWR@ProvidesPackageDrop{floatpag}[2012/05/29]

2 \newcommand*{\floatpagestyle}[1]{}
3 \newcommand*{\rotfloatpagestyle}[1]{}
4 \newcommand*{\thisfloatpagestyle}[1]{}

```

File 150 **lwarp-floatrow.sty**

§ 250 Package **floatrow**

(Emulates or patches code by OLGA LAPKO.)

Pkg floatrow 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. `lwarp` 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 \ifpackageloaded{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}}%
16 {\@nameuse{sub#2}{\linewidth}}%
17 }% subcaption in a subfloatrow
18 {% subcaption not in subfloatrow
```

figure and table environments do not take a width argument.

```
19 \@nameuse{#2}%
20 }% subcaption not in subfloatrow
21 #6
22
23 #7
```

End the environments:

```
24 \ifbool{LWR@insubfloatrow}%
25 {\@nameuse{endsub#2}}%
26 {\@nameuse{end#2}}%
27 }% subcaption
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 {% subfig package, but not a subfig
```

figure and table are environments:

```
37 \@nameuse{#2}
38 #6
39
40 #7
41 \@nameuse{end#2}
42 }% subfig package, but not a subfig
43 }% assume subfig
44 }
```

Not used:

```

45 \newcommand*\nocapbeside{}
46 \newcommand*\capbeside{}
47 \newcommand*\captop{}
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`     $\langle 1 \text{ command} \rangle$   $\langle 2 \text{ captype} \rangle$  [ $\langle 3 \text{ preamble} \rangle$ ] [ $\langle 4 \text{ default width} \rangle$ ]

Preamble and default width are ignored.

```

57 \NewDocumentCommand\newfloatcommand{m m o o}{%
58 \@namedef{#1}{
59 \floatbox{#2}
60 }
61 }

```

`\renewfloatcommand`     $\langle 1 \text{ command} \rangle$   $\langle 2 \text{ captype} \rangle$  [ $\langle 3 \text{ preamble} \rangle$ ] [ $\langle 4 \text{ default width} \rangle$ ]

Preamble and default width are ignored.

```

62 \NewDocumentCommand\renewfloatcommand{m m o o}{%
63 \@namedef{#1}{%
64 \floatbox{#2}
65 }
66 }

```

`\ffigbox`    [ $\langle width \rangle$ ] [ $\langle height \rangle$ ] [ $\langle vposn \rangle$ ]  $\langle caption \text{ commands} \rangle$   $\langle contents \rangle$

```

67 \newfloatcommand{ffigbox}{figure}[\nocapbeside][

```

`\ttabbox`    [ $\langle width \rangle$ ] [ $\langle height \rangle$ ] [ $\langle vposn \rangle$ ]  $\langle caption \text{ commands} \rangle$   $\langle contents \rangle$

```

68 \newfloatcommand{ttabbox}{table}[\captop][\FBwidth]

```

`\fcapside`    [ $\langle width \rangle$ ] [ $\langle height \rangle$ ] [ $\langle vposn \rangle$ ]  $\langle caption \text{ commands} \rangle$   $\langle contents \rangle$

```

69 \newfloatcommand{fcapside}{figure}[\capbeside][

```

Env `floatrow`    [ $\langle numfloats \rangle$ ]

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 }%
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{\buildFBBBOX}[2]{}
121 \newcommand*\CenterFloatBoxes{}
122 \newcommand*\TopFloatBoxes{}
123 \newcommand*\BottomFloatBoxes{}
124 \newcommand*\PlainFloatBoxes{}
125
126 \newcommand{\capsubrowsettings}{}
127
128 \NewDocumentCommand{\RawFloats}{o o}{}

```

`\RawCaption`     $\langle text \rangle$

To be used inside a minipage or parbox.

```
129 \newcommand{\RawCaption}[1]{#1}
```

`\floatfoot`     $\langle text \rangle$

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`     $[\langle num\_floats \rangle]$

```

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 151 **lwarp-fltrace.sty**

§ 251 Package **fltrace**

Pkg fltrace fltrace is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fltrace}[2018/01/08]

```

2 \def\tracefloats{}
3 \def\tracefloatsoff{}
4 \def\tracefloatvals{}

```

---

File 152 **lwarp-flushend.sty**

§ 252 Package **flushend**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg flushend flushend is ignored.

**for HTML output:** Discard all options for lwarp-flushend:

```

1 \LWR@ProvidesPackageDrop{flushend}[2017/03/27]

2 \newcommand*\flushend{}
3 \newcommand*\raggedend{}
4 \newcommand*\flushcolsend{}
5 \newcommand*\raggedcolsend{}
6 \newcommand*\atColsBreak}[1]{}
7 \newcommand*\atColsEnd}[1]{}
8 \newcommand*\showcolsendrule{}

```

---

File 153 **lwarp-fnbreak.sty**

§ 253 Package **fnbreak**

Pkg fnbreak 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 154 **lwarp-fncychap.sty**

§ 254 Package **fncychap**

*(Emulates or patches code by ULF A. LINDGREN.)*

Pkg fncychap **fncychap** is ignored.

**for HTML output:** Discard all options for lwarp-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{\pyy}
22 \newlength{\pxx}
23 \newlength{\RW}
24 \newcommand{\FmN}[1]{#1}
25 \newcommand{\FmTi}[1]{#1}

```

---

File 155 **lwarp-fnlineno.sty**

§ 255 Package **fnlineno**

Pkg fnlineno **fnlineno** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnlineno}[2011/01/07]

---

File 156 **lwarp-fnpara.sty**

§ 256 Package **fnpara**

Pkg fnpara fnpara is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnpara}

---

File 157 **lwarp-fnpos.sty**

§ 257 Package **fnpos**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg fnpos 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}{}

```

---

File 158 **lwarp-fontawesome.sty**

§ 258 Package **fontawesome**

*(Emulates or patches code by XAVIER DANAUX.)*

Pkg fontawesome fontawesome is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

 **poppler syntax warning** If using pdfL<sup>A</sup>T<sub>E</sub>X, *poppler* may issue a syntax warning regarding parsing a ligature component. X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X or LuaL<sup>A</sup>T<sub>E</sub>X 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 pdfL<sup>A</sup>T<sub>E</sub>X, the alt tag includes the icon (symbol) number. For X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X and LuaL<sup>A</sup>T<sub>E</sub>X, 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 159 **lwarp-fontawesome5.sty**

§ 259 Package **fontawesome5**

*(Emulates or patches code by MARCEL KRÜGER.)*

Pkg fontawesome5 fontawesome5 is patched for use by lwarp.

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}[2018/07/27]

2 \ExplSyntaxOn
3 \cs_set:Nn\fontawesome_use_icon:nn{
4 \LWR@findcurrenttextcolor
5 \cs_if_exist:cTF{c__fontawesome_slot_#2_tl}{
6 \begin{lateximage}*[#2][fontawesome5#1SZ\LWR@font@size{}CL\LWR@tempcolor]
7 \csuse{\LWR@font@size}
8 \exp_last_unbraced:Nv
9 __fontawesome_icon_at:nnnn
10 {c__fontawesome_slot_#2_tl}
11 {#1}{#2}
12 \end{lateximage}
13 }{
14 \msg_error:nxxx{fontawesome5}{icon-not-found}{#2}{#1}
15 }
16 }
17 \ExplSyntaxOff

```

---

File 160 **lwarp-fontaxes.sty**

§ 260 Package **fontaxes**

*(Emulates or patches code by ANDREAS BÜHMANN, MICHAEL UMMELS.)*

Pkg fontaxes fontaxes is emulated for HTML, and used as-is for print output.

Functionality for small caps is in the lwarp core. Swashes and figure styles are ignored for HTML.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{fontaxes}[2014/03/23]

2 \newrobustcmd{\LWR@HTML@sscshape}{\LWR@HTML@sscshape}
3 \LWR@formatted{sscshape}
4 \newcommand*{\LWR@null@sscshape}{}
5

```

---

```

6 \newrobustcmd{\LWR@HTML@textssc}[1]{\textsc{#1}}
7 \LWR@formatted{textssc}
8 \newcommand*\LWR@null@textssc[1]{#1}
9
10 \ifdef{\LWR@HTML@swshape}{}{% duplicated by nfssect-cfr
11 \newcommand{\LWR@HTML@swshape}{}
12 \LWR@formatted{swshape}
13 \newcommand*\LWR@null@swshape{}
14
15 \newcommand{\LWR@HTML@textsw}[1]{#1}
16 \LWR@formatted{textsw}
17 \newcommand*\LWR@null@textsw[1]{#1}
18 }
19
20 \appto{\LWR@null@fontss}{%
21 \LetLtxMacro\sscshape\LWR@null@sscshape%
22 \LetLtxMacro\textssc\LWR@null@textssc%
23 \LetLtxMacro\swshape\LWR@null@swshape%
24 \LetLtxMacro\textsw\LWR@null@textsw%
25 }

```

---

File 161 **lwarp-fontenc.sty**

§ 261 Package **fontenc**

Pkg fontenc If using pdfL<sup>A</sup>T<sub>E</sub>X, lwarp used to require fontenc be loaded before lwarp, but now lwarp itself loads \fontenc with T1 encoding, which lwarp requires. fontenc is now allowed to be loaded with another encoding after lwarp.

lwarp-fontenc is no longer necessary, but is still provided to overwrite older versions.

**for HTML output:** 1 \LWR@ProvidesPackagePass{fontenc}[2017/04/05]

---

File 162 **lwarp-footmisc.sty**

§ 262 Package **footmisc**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg footmisc footmisc is emulated.

lwarp 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@ \hrule \kern2.6\p@}
15
16 \providecommand*\multiplefootnotemarker{3sp}
17 \providecommand*\multfootsep}{,}

```

Using `cleveref`:

```
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 163 **lwarp-footnote.sty**

§ 263 Package **footnote**

*(Emulates or patches code by MARK WOODING.)*

Pkg footnote footnote is used with minor patches.

for HTML output: 1 \LWR@ProvidesPackagePass{footnote}[1997/01/28]

Removed print-version formatting:

```

2 \def\fn@startnote{%
3 % \@parboxrestore%

```

```

4 \protected@edef\@currentlabel{\csname p@\@mpfn\endcsname\@thefnmark}%
5 % \color@begingroup% *** conflicts with lwarp
6 }
7
8 % \let\fn@endnote\color@endgroup% *** conflicts with lwarp
9 \def\fn@endnote{%
10 \LWR@htmltagc{/LWR@tagregularparagraph}%
11 \LWR@orignewline%
12 }

```

Removed print-version formatting:

```

13 \def\fn@startfntext{%
14 \setbox\z@\vbox\bgroup%
15 \fn@startnote%
16 \ignorespaces%
17 }

```

Removed print-version formatting, added closing paragraph tag:

```

18 \def\fn@endfntext{%
19 \LWR@htmltagc{/LWR@tagregularparagraph}%
20 \LWR@orignewline%
21 \egroup%
22 \begingroup%
23 \let\@makefntext\@empty%
24 \let\@finalstrut\@gobble%
25 \LetLtxMacro\rule\@gobbletwo% *8* also the optional argument?
26 \@footnotetext{\unvbox\z}%
27 \endgroup%
28 }

```

These have been redefined, so re-\let them again:

```

29 \let\endfootnote\fn@endfntext
30 \let\endfootnotetext\endfootnote

```

---

File 164 **lwarp-footnotebackref.sty**

§ 264 Package **footnotebackref**

Pkg footnotebackref footnotebackref is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{footnotebackref}[2012/07/01]

---

File 165 **lwarp-footnotehyper.sty**

§ 265 Package **footnotehyper**

Pkg footnotehyper footnotehyper is a hyperref-safe version of footnote. For lwarp, footnotehyper is em-

ulated.

**for HTML output:** Discard all options for `lwarp-footnotehyper`:

```
1 \RequirePackage{footnote}
2 \LWR@ProvidesPackageDrop{footnotehyper}[2018/01/23]
```

---

File 166 **lwarp-footnoterange.sty**

§ 266 Package **footnoterange**

*(Emulates or patches code by H.-MARTIN MÜNCH.)*

Pkg footnoterange footnoterange is patched for use by `lwarp`.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{footnoterange}[2012/02/17]

2 \csletcs{footnoterange}{footnoterange*}
3 \csletcs{endfootnoterange}{endfootnoterange*}
```

---

File 167 **lwarp-footnpag.sty**

§ 267 Package **footnpag**

Pkg footnpag footnpag is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{footnpag}
```

---

File 168 **lwarp-foreign.sty**

§ 268 Package **foreign**

*(Emulates or patches code by PHILIP G. RATCLIFFE.)*

Pkg foreign foreign is patched for use by `lwarp`.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{foreign}[2012/09/25]

2 \renewcommand\foreignabbrfont{\emph}
```

---

File 169 **lwarp-forest.sty**

§ 269 Package **forest**

*(Emulates or patches code by SAŠO ŽIVANOVIĆ.)*

Pkg forest forest is patched for use by lwarp.

⚠ **\Forest\*** The starred version of the macro `\Forest*` is not supported. `lwarp` 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}{\begin{lateximage}[forest]}
3
4 \AfterEndEnvironment{forest}{\end{lateximage}}
5
6 \RenewDocumentCommand{\Forest}{s D(){} m}{%
7 \forest@config{#2}%
8 \IfBooleanTF{#1}{%
9 \PackageError{lwarp-forest}%
10 {Starred \Forest is not supported}%
11 {Lwarp uses an environment for images, but \Forest* cannot work in an environment.}%
12 \let\forest@next\forest@env%
13 }{\let\forest@next\forest@group@env}%
14 \begin{lateximage}[-forest-~\PackageDiagramAltText] lwarp
15 \forest@next{#3}%
16 \end{lateximage} lwarp
17 }
```

File 170 **lwarp-fouridx.sty**

§ 270 Package **fouridx**

*(Emulates or patches code by STEFAN KARRMANN.)*

Pkg fouridx 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}^{\hphantom{#2}#1}_{\hphantom{#1}#2}{#5}^{\#3}_{#4}%
6 }%
7 }
8 \end{warpMathJax}
```

File 171 **lwarp-framed.sty**

§ 271 Package **framed**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg framed framed is supported and patched by lwarp.

for HTML output: Accept all options for lwarp-framed:

```

1 \LWR@ProvidesPackagePass{framed}[2011/10/22]
2 \RequirePackage{xcolor}% for \convertcolorspec

3
4 \renewenvironment{framed}{%
5 \LWR@forcenewpage
6 \BlockClass{framed}%
7 }
8 {\endBlockClass}
9
10 \renewenvironment{oframed}{%
11 \LWR@forcenewpage
12 \BlockClass{framed}%
13 }
14 {\endBlockClass}
15
16
17 \renewenvironment{shaded}{%
18 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
19 \LWR@forcenewpage
20 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
21 }
22 {\endBlockClass}
23
24 \renewenvironment{shaded*}{%
25 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
26 \LWR@forcenewpage
27 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
28 }
29 {\endBlockClass}
30
31
32 \renewenvironment{leftbar}{%
33 \LWR@forcenewpage
34 \BlockClass{framedleftbar}
35 \def\FrameCommand{%
36 \MakeFramed {}
37 }%
38 {\endMakeFramed\endBlockClass}
39
40
41 \renewenvironment{snugshade}{%
42 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
43 \LWR@forcenewpage
44 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
45 }
46 {\endBlockClass}
47
48 \renewenvironment{snugshade*}{%
49 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
50 \LWR@forcenewpage
51 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
52 }
53 {\endBlockClass}

```

```

54
55 \let\oframed\framed
56 \let\endoframed\endframed
57
58
59 \RenewEnviron{titled-frame}[1]{%
60 \CustomFBox{#1}{0pt}{0pt}{0pt}{0pt}{\BODY}
61 }

\CustomFBox {<toptitle>} {<bottomtitle>} {<thicknessstop>} {<bottom>} {<left>} {<right>}
{<text contents>}

62 \renewcommand{\CustomFBox}[7]{%
63 \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
64 \LWR@forcenewpage
65 \begin{BlockClass}[border: 3px solid \LWR@origpound\LWR@tempcolor]{framed}%
66 \ifthenelse{\isempty{#1}}{0pt}{% not empty
67 \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
68 \textcolor{TFTitleColor}{\textbf{#1}}%
69 \end{BlockClass}
70 }% not empty
71
72 #7
73
74 \ifthenelse{\isempty{#2}}{0pt}{% not empty
75 \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
76 \begin{BlockClass}[background: \LWR@origpound\LWR@tempcolor]{framedtitle}%
77 \textcolor{TFTitleColor}{\textbf{#2}}%
78 \end{BlockClass}
79 }% not empty
80 \end{BlockClass}
81 }

\TitleBarFrame [<marker>] {<title>} {<contents>}

82 \renewcommand\TitleBarFrame[3][1]{
83 \CustomFBox
84 {#2}{%
85 \fboxrule\fboxrule\fboxrule\fboxrule
86 {#3}%
87 }

88 \renewcommand{\TF@Title}[1]{#1}

MakeFramed {<settings>}

89 \let\MakeFramed\relax
90 \let\endMakeFramed\relax
91
92 \NewEnviron{MakeFramed}[1]{%
93 \FrameCommand{\begin{minipage}{\linewidth}\BODY\end{minipage}}%
94 }

```

---

```
\fb@put@frame {\frame cmd no split} {\frame cmd split}
```

```
95 \renewcommand*{\fb@put@frame}[2]{%
96 \relax%
97 \@tempboxa%
98 }
```

---

File 172 **lwarp-ftcap.sty**

§ 272 Package **ftcap**

Pkg ftcap ftcap is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ftcap}

---

File 173 **lwarp-ftnright.sty**

§ 273 Package **ftnright**

Pkg ftnright ftnright is ignored.

**for HTML output:** Discard all options for lwarp-ftnright:

```
1 \LWR@ProvidesPackageDrop{ftnright}[2014/10/28]
```

---

File 174 **lwarp-fullminipage.sty**

§ 274 Package **fullminipage**

Pkg fullminipage fullminipage is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]

```
2 \newenvironment{fullminipage}[1][{}]{}
```

---

File 175 **lwarp-fullpage.sty**

§ 275 Package **fullpage**

Pkg fullpage fullpage is ignored.

**for HTML output:** Discard all options for lwarp-fullpage:

```
1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]
```

File 176 **lwarp-fullwidth.sty**

§ 276 Package **fullwidth**

*(Emulates or patches code by MARCO DANIEL.)*

Pkg fullwidth 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 \minipagefullwidth%
4 \minipage{\linewidth}%
5 }
6 {%
7 \endminipage%
8 }
```

File 177 **lwarp-fwlw.sty**

§ 277 Package **fwlw**

Pkg fwlw 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@fwlhead{}
6 \def\ps@NextWordFoot{}
```

File 178 **lwarp-gensymb.sty**

§ 278 Package **gensymb**

*(Emulates or patches code by WALTER SCHMIDT.)*

Pkg gensymb gensymb works as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{gensymb}[2003/07/02]
```

---

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}
4 \CustomizeMathJax{\newcommand{\celsius}{\unicode{x2103}}}
5 \CustomizeMathJax{\newcommand{\perthousand}{\unicode{x2030}}}
6 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
7 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
8 \end{warpMathJax}

```

---

File 179 **lwarp-gentombow.sty**

§ 279 Package **gentombow**

Pkg gentombow 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 180 **lwarp-geometry.sty**

§ 280 Package **geometry**

*(Emulates or patches code by HIDEO UMEKI.)*

Pkg geometry geometry is preloaded by lwarp, but must be nullified as seen by the user's source code.

**for HTML output:** Discard all options for lwarp-geometry:

```
1 \LWR@ProvidesPackageDropA{geometry}{2018/04/16}
```

If geometry is never loaded by the user, it will be loaded by lwarp \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 lwarp will save this, then set its own geometry.

```

3 \edef\LWR@tempone{reset, \optionlist{\@currname.\@current}}%
4 \expandafter\LWR@origgeometry\expandafter{\LWR@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 181 **lwarp-ghsystem.sty**

§ 281 Package **ghsystem**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg gsystem gsystem is patched for use by lwarp.

 **\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 gsystem images, and then convert them with

Enter ⇒ **lwarpmk pdftosvg images/\*.pdf**

**for HTML output:** 1 \LWR@ProvidesPackagePass{ghsystem}[2020/02/17]

```
2 \ExplSyntaxOn
3
4 \cs_set_protected:Npn \ghsystem_filler:n #1
5 { \emph { \textless #1 \textgreater } }
6
7 \cs_set_protected:Npn \ghsystem_pic:n #1
8 {
9 __ghsystem_includegraphics:xn
10 {
11 % scale = \fp_to_tl:N \l__ghsystem_picture_scale_fp
12 width = 1.25cm
13 \exp_not:V \l__ghsystem_picture_includegraphics_tl
14 }
15 { gsystem_ #1 . \l__ghsystem_picture_type_tl }
16 }
17
18 \ExplSyntaxOff

```

---

File 182 **lwarp-gloss.sty**

§ 282 Package **gloss**

*(Emulates or patches code by JOSE LUIS DÍAZ, JAVIER BEZOS.)*

Pkg gloss gloss is patched for use by lwarp.

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 \xpatchcmd{\gls@gloss@iii}
3 {\thepage}
4 {\theLWR@previousautopagelabel}
5 {}
6 {\LWR@patcherror{gloss}{\gls@gloss@iii}}
7
8 \def\gls@page@i#1#2{%
9 \endgroup%
10 \global\@namedef{gls@#1}{\nameref{\BaseJobname-autopage-#2}}}%
```

---

File 183 **lwarp-glossaries.sty**

§ 283 Package **glossaries**

(Emulates or patches code by NICOLA L.C. TALBOT.)

Pkg glossaries  
processing glossaries

Opt GlossaryCmd

Default: `makeglossaries`

Opt [lwarpmk] printglossary

Opt [lwarpmk] htmlglossary

`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 `lwarp` 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},
] {lwarp}
```

*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 \renewcommand*{\@p@glossarysection}[2]{%
8 \glsclearpage
9 \phantomsection
10 \ifdefempty\@glossarysecstar
11 {%
12 \csname\@glossarysec\endcsname{#2}%
13 }%
14 {%

```

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:

```

15 \csname\@glossarysec\endcsname*{#2}%
16 \@gls@toc{#1}{\@glossarysec}% Moved after the previous line.
17 }%
18 \@glossaryseclabel
19 }

```

lwarp'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.

```

20 \newcommand*\LWR@comp@glossaryname{\translate{Glossary}}
21
22 \ifdefstrequal{\glossaryname}\LWR@comp@glossaryname{
23 \translatelet\LWR@translatetemp{Glossary}
24 \edef\glossaryname{\LWR@translatetemp}
25 }{}
26
27 \newcommand*\LWR@comp@acronymname{\translate{Acronym}}
28
29 \ifdefstrequal{\acronymname}\LWR@comp@acronymname{
30 \translatelet\LWR@translatetemp{Acronym}
31 \edef\acronymname{\LWR@translatetemp}
32 }{}
33
34 \newcommand*\LWR@comp@glsymbolsgroupname{\translate{Symbols (glossaries)}}
35
36 \ifdefstrequal{\glsymbolsgroupname}\LWR@comp@glsymbolsgroupname{
37 \translatelet\LWR@translatetemp{Symbols (glossaries)}
38 \edef\glsymbolsgroupname{\LWR@translatetemp}
39 }{}
40
41 \newcommand*\LWR@comp@glsnumbersgroupname{\translate{Numbers (glossaries)}}
42
43 \ifdefstrequal{\glsnumbersgroupname}\LWR@comp@glsnumbersgroupname{
44 \translatelet\LWR@translatetemp{Numbers (glossaries)}
45 \edef\glsnumbersgroupname{\LWR@translatetemp}
46 }{}

```

---

File 184 **lwarp-gmeometric.sty**

§ 284 Package **gmeometric**

Pkg gmeometric gmeometric is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{gmeometric}[2008/11/22]
2 \RequirePackageWithOptions{geometry}

```

---

File 185 **lwarp-graphics.sty**

§ 285 Package **graphics**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg graphics graphics is emulated.

for HTML output: 1 \LWR@ProvidesPackagePass{graphics}[2017/06/25]

## § 285.1 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
```

## § 285.2 Length conversions and graphics options

⚠ **whitespace**

A scaled image in L<sup>A</sup>T<sub>E</sub>X 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 \newcommand*\LWR@igclass{inlineimage}

31 \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:

```
32 \define@key{igraph}{width}{%
33 \setlength{\LWR@igwidth}{#1}%
34 \ifthenelse{\lengthtest{\LWR@igwidth > 0pt}}%
35 {%
```

Default to use the converted fixed length given:

```
36 \renewcommand*{\LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%
```

If ex or em dimensions were given, use those instead:

```
37 \IfEndWith{#1}{ex}%
38 {\renewcommand*{\LWR@igwidthstyle}{width:#1}}% yes ex
39 {}% not ex
40 \IfEndWith{#1}{em}%
41 {\renewcommand*{\LWR@igwidthstyle}{width:#1}}% yes em
42 {}% not em
43 \IfEndWith{#1}{\}%
44 {\renewcommand*{\LWR@igwidthstyle}{width:#1}}% yes percent
45 {}% not percent
46 \IfEndWith{#1}{px}%
47 {\renewcommand*{\LWR@igwidthstyle}{width:#1}}% yes px
48 {}% not px
49 }{}% end of length > 0pt
50 }
```

If an optional height was given, set an HTML style:

```
51 \define@key{igraph}{height}{%
52 \setlength{\LWR@igheight}{#1}%
53 \ifthenelse{\lengthtest{\LWR@igheight > 0pt}}%
54 {%
```

Default to use the converted fixed length given:

```
55 \renewcommand*{\LWR@igheightstyle}{%
56 height:\LWR@printlength{\LWR@igheight} % extra space
57 }%
```

If ex or em dimensions were given, use those instead:

```
58 \IfEndWith{#1}{ex}%
59 {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes ex
60 {}% not ex
61 \IfEndWith{#1}{em}%
62 {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes em
63 {}% not em
64 \IfEndWith{#1}{\}%
65 {\renewcommand*{\LWR@igheightstyle}{height:#1}}% yes percent
```

```

66 {}% not percent
67 \IfEndWith{#1}{px}%
68 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes px
69 {}% not px
70 }{}% end of length > 0pt
71 }

```

Handle origin key:

```

72 \define@key{igraph}{origin}[c]{%
73 \renewcommand*\LWR@igorigin}{#1}%
74 }

```

Handle angle key:

```

75 \define@key{igraph}{angle}{\renewcommand*\LWR@igangle}{#1}}

```

Handle class key:

```

76 \define@key{igraph}{class}{\renewcommand*\LWR@igclass}{#1}}

```

Handle alt key:

```

77 \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.

```

78 \define@key{igraph}{scale}{%
79 \ifthenelse{\equal{#1}{1}}{}{}% must expand #1
80 \PackageWarning{lwarp}{%
81 It is recommended to use\MessageBreak
82 [width=xx\protect\linewidth]\MessageBreak
83 instead of [scale=yy],%
84 }%
85 }%
86 \renewcommand*\LWR@igxscale}{#1}%
87 \renewcommand*\LWR@igyscale}{#1}%
88 }

```

Numerous ignored keys:

```

89 \define@key{igraph}{bb}{}
90 \define@key{igraph}{bblx}{}
91 \define@key{igraph}{bblly}{}
92 \define@key{igraph}{bburx}{}
93 \define@key{igraph}{bbury}{}
94 \define@key{igraph}{natwidth}{}
95 \define@key{igraph}{natheight}{}
96 \define@key{igraph}{hiresbb}[true]{}
97 \define@key{igraph}{viewport}{}
98 \define@key{igraph}{trim}{}
99 \define@key{igraph}{totalheight}{}
100 \define@key{igraph}{keepaspectratio}[true]{}

```

```

101 \define@key{igraph}{clip}[true]{}
102 \define@key{igraph}{draft}[true]{}
103 \define@key{igraph}{type}{}
104 \define@key{igraph}{ext}{}
105 \define@key{igraph}{read}{}
106 \define@key{igraph}{command}{}

```

New in v1.1a:

```

107 \define@key{igraph}{quite}{}
108 \define@key{igraph}{page}{}
109 \define@key{igraph}{pagebox}{}
110 \define@key{igraph}{interpolate}[true]{}

```

New in v1.1b:

```

111 \define@key{igraph}{decodearray}{}

```

### § 285.3 **Printing HTML styles**

`\LWR@rotstyle`     $\{\langle prefix \rangle\} \{\langle degrees \rangle\}$

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.

```

112 \newcommand*{\LWR@rotstyle}[2]{%
113 \edef\LWR@tempone{#2}%
114 \setcounter{LWR@tempcountone}{-1*\real{\LWR@tempone}} % space
115 #1transform:rotate(\arabic{LWR@tempcountone}deg); % space
116 }

```

`\LWR@scalestyle`     $\{\langle prefix \rangle\} \{\langle xscale \rangle\} \{\langle yscale \rangle\}$

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.

```

117 \newcommand*{\LWR@scalestyle}[3]{%
118 #1transform:scale(#2,#3);
119 }

```

### § 285.4 **\includegraphics**

`\LWR@opacity`    For HTML, used only for `\includegraphics`.

`\LWR@opacity` may be set by the transparent package.

```

120 \def\LWR@opacity{1}

```

`\LWR@imagesizebox`    Used to determine the actual image size if needed.

```

121 \newsavebox{\LWR@imagesizebox}

```

`\LWR@HTML@Gin@setfile`     $\{\langle w \rangle\} \{\langle h \rangle\} \{\langle filename \rangle\}$  Sets the parsed filename for HTML output.

```

122 \newcommand*\LWR@HTML@Gin@setfile}[3]{%
123 \xdef\LWR@parsedfilename{#3}%
124 }

```

Key [Gin] class css class for the image.

Define the new class key for the print-mode version of `\includegraphics`, which is enabled inside a `lateximage`.

```

125 \AtBeginDocument{
126 \define@key{Gin}{class}{}
127 \define@key{Gin}{alt}{}
128 }

```

`\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.

```

129 \AtBeginDocument{
130 \ifpackageloaded{epstopdf}
131 {
132 \newcommand*\LWR@replaceEPSSVG{}
133 }{%
134 \newcommand*\LWR@replaceEPSSVG{%
135 \StrSubstitute{\LWR@tempone}{.eps}{.svg}[\LWR@tempone]%
136 \StrSubstitute{\LWR@tempone}{.EPS}{.SVG}[\LWR@tempone]%
137 }
138 }%
139 }

```

`\LWR@ig@wpimagesizes` \* [*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:

```

140 \newcommand*\LWR@ig@wpimagesizes}[4]{%
141 \ifbool{FormatWP}{%
142 \begingroup%
143 \LWR@restoreorigformatting%
144 \ifpdf%
145 \appto\LWR@restoreorigformatting{%
146 \DeclareGraphicsExtensions{%
147 .pdf, .PDF, .gif, .GIF, .png, .PNG, .jpg, .JPG, .jpeg, .JPEG%
148 }%
149 }%
150 \else% \ifpdf
151 \ifXeTeX%
152 \appto\LWR@restoreorigformatting{%
153 \DeclareGraphicsExtensions{%
154 .pdf, .PDF, .gif, .GIF, .png, .PNG, .jpg, .JPG, .jpeg, .JPEG%
155 }%
156 }%
157 \else%
158 \appto\LWR@restoreorigformatting{%
159 \DeclareGraphicsExtensions{%

```

```

160 .eps, .EPS, .gif, .GIF, .png, .PNG, .jpg, .JPG, .jpeg, .JPEG%
161 }%
162 }%
163 \fi%
164 \fi% \ifpdf
165 \define@key{Gin}{angle}{}%
166 \IfBooleanTF{#1}%
167 {% starred
168 \IfValueTF{#3}%
169 {%
170 \global\abox{\LWR@imagesizebox}{%
171 \LWR@originincludegraphics*[#2][#3]{#4}%
172 }%
173 }%
174 {%
175 \IfValueTF{#2}%
176 {%
177 \global\abox{\LWR@imagesizebox}{%
178 \LWR@originincludegraphics*[#2]{#4}%
179 }%
180 }{%
181 \global\abox{\LWR@imagesizebox}{%
182 \LWR@originincludegraphics*{#4}%
183 }%
184 }%
185 }%
186 }% starred
187 {% not starred
188 \IfValueTF{#3}%
189 {%
190 \global\abox{\LWR@imagesizebox}{%
191 \LWR@originincludegraphics[#2][#3]{#4}%
192 }%
193 }%
194 {%
195 \IfValueTF{#2}%
196 {%
197 \global\abox{\LWR@imagesizebox}{%
198 \LWR@originincludegraphics[#2]{#4}%
199 }%
200 }{%
201 \global\abox{\LWR@imagesizebox}{%
202 \LWR@originincludegraphics{#4}%
203 }%
204 }%
205 }%
206 }% not starred
207 \endgroup%
208 \settowidth{\LWR@igwidth}{\usebox{\LWR@imagesizebox}}%
209 \global\renewcommand*{\LWR@igwidthstyle}{%
210 width:\LWR@printlength{\LWR@igwidth}%
211 }%
212 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
213 \global\renewcommand*{\LWR@igheightstyle}{%
214 height:\LWR@printlength{\LWR@igheight}%

```

```

215 }%
216 }{}% FormatWP
217 }

```

`\LWR@ig@htmltag` For the HTML reference, add the graphicspath, filename, extension, alt tag, style, and class.

```

218 \newcommand*{\LWR@ig@htmltag}{%
219 img\LWR@indentHTML%
220 src="%

221 \detokenize\expandafter{\LWR@parsedfilename}%
222 "\LWR@indentHTML%

```

Only include a style tag if a width, height, angle, or scale was given:

```

223 \ifthenelse{
224 \NOT\equal{\LWR@igwidthstyle}{ } \OR
225 \NOT\equal{\LWR@igheightstyle}{ } \OR
226 \NOT\equal{\LWR@igorigin}{ } \OR
227 \NOT\equal{\LWR@igangle}{ } \OR
228 \NOT\equal{\LWR@igxscale}{1} \OR
229 \NOT\equal{\LWR@igyscale}{1}
230 }%
231 {%
232 style="\LWR@indentHTML
233 \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{ }}%
234 {\LWR@igwidthstyle;\LWR@indentHTML}{ }%
235 \ifthenelse{\NOT\equal{\LWR@igheightstyle}{ }}%
236 {\LWR@igheightstyle;\LWR@indentHTML}{ }%
237 \ifthenelse{\NOT\equal{\LWR@igorigin}{ }}%
238 {%
239 transform-origin: \LWR@originnames{\LWR@igorigin};%
240 \LWR@indentHTML%
241 }{}%
242 \ifthenelse{\NOT\equal{\LWR@igangle}{ }}%
243 {%
244 \LWR@rotstyle{-ms-}{\LWR@igangle}\LWR@indentHTML
245 \LWR@rotstyle{-webkit-}{\LWR@igangle}\LWR@indentHTML
246 \LWR@rotstyle}{\LWR@igangle } \LWR@indentHTML
247 }{}%
248 \ifthenelse{%
249 \NOT\equal{\LWR@igxscale}{1}\OR%
250 \NOT\equal{\LWR@igyscale}{1}%
251 }%
252 {%
253 \LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyscale}%
254 \LWR@indentHTML
255 \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyscale}%
256 \LWR@indentHTML
257 \LWR@scalestyle}{\LWR@igxscale}{\LWR@igyscale}%
258 \LWR@indentHTML
259 }{}%
260 %
261 \ifthenelse{\NOT\equal{\LWR@opacity}{1}}%

```

```

262 {opacity:\LWR@opacity;\LWR@indentHTML}{}%
263 %
264 "\LWR@indentHTML%
265 }{)%

```

Set the class and alt tag:

```

266 class="\LWR@igclass"\LWR@indentHTML%
267 alt="\AltTextOpen\LWR@igalt\AltTextClose" \LWR@orignewline%
268 }% end of image tags

```

`\LWR@includegraphicsb` \* [*<2: options>*] [*<3: options>*] [*<4: filename>*]

graphics syntax is `\includegraphics * [<lx,lly>] [<urx,ury>] [<file>]`

graphicx syntax is `\includegraphics [<key values>] [<file>]`

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.

```

269 \NewDocumentCommand{\LWR@includegraphicsb}{s o m}
270 {%

```

Start the image tag on a new line, allow PDF output word wrap:

```

271 \LWR@origtilde \LWR@orignewline%

```

Temporarily compute `\linewidth`, `\textwidth`, `\textheight` arguments with a 6x9 inch size until the next `\endgroup`.

```

272 \begin{LWR@setvirtualpage}%

```

For correct em sizing during the width and height conversions:

```

273 \large%

```

Reset some defaults, possibly will be changed below if options were given:

```

274 \setlength{\LWR@igwidth}{0pt}%
275 \setlength{\LWR@igheight}{0pt}%
276 \renewcommand*{\LWR@igwidthstyle}{}%
277 \renewcommand*{\LWR@igheightstyle}{}%
278 \renewcommand*{\LWR@igorigin}{}%
279 \renewcommand*{\LWR@igangle}{}%
280 \renewcommand*{\LWR@igxscale}{1}%
281 \renewcommand*{\LWR@igyyscale}{1}%
282 \renewcommand*{\LWR@igclass}{inlineimage}%

```

```

283 \ifdefvoid{\LWR@ThisAltText}{%
284 \edef\LWR@igalt{\ImageAltText}%
285 }{%
286 \edef\LWR@igalt{\LWR@ThisAltText}%
287 }%

```

If #3 is empty, only one optional argument was given, thus `graphicx` syntax:

```

288 \IfValueF{#3}{%
289 \IfValueTF{#2}%
290 {\setkeys{igraph}{#2}}%

```

```

291 {\setkeys{igraph}{}}%
292 }%

```

Fully expand and detokenize the filename, changing the file extension to .svg if necessary.

```

293 \begingroup%
294 \LetLtxMacro\Gin@setfile\LWR@HTML@Gin@setfile%
295 \edef\LWR@tempone{#4}%
296 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
297 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
298 \LWR@replaceEPSSVG%
299 \xdef\LWR@parsedfilename{\LWR@tempone}%
300 \Gin@graphics{\detokenize\expandafter{\LWR@tempone}}%
301 \endgroup%
302 \filename@parse{\LWR@parsedfilename}%
303 \LWR@traceinfo{LWR@parsedfilename is \LWR@parsedfilename}%
304 % \LWR@sanitize{\LWR@parsedfilename}%

```

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:

```

305 \LWR@ig@wpimagesizes{#1}{#2}{#3}{#4}%

```

Create the HTML reference with the graphicspath, filename, extension, alt tag, style, and class:

```

306 \LWR@traceinfo{LWR@includegraphicsb: about to create href}%
307 \href{\LWR@parsedfilename}%
308 {% start of href
309 \LWR@traceinfo{LWR@includegraphicsb: about to LWR@htmltag}%
310 \LWR@htmltag{\LWR@ig@htmltag}%
311 }% end of href

```

Return to original page size and font size:

```

312 \end{LWR@setvirtualpage}%

```

Clear the single-use alt text:

```

313 \gdef\LWR@ThisAltText{}%
314 \LWR@traceinfo{LWR@includegraphicsb done}%
315 }

```

`\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.

```

316 \AtBeginDocument{
317
318 \LWR@traceinfo{Patching includegraphics.}
319
320 \LetLtxMacro\LWR@originincludegraphics\includegraphics

```

```

321 \renewrobustcmd*{\includegraphics}
322 {%

```

This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:

```
323 \LWR@traceinfo{includegraphics}%
324 \LWR@ensuredoingapar%
325 \LWR@includegraphicsb%
326 }% includegraphics
327 }% AtBeginDocument
```

## § 285.5 Boxes

`\LWR@rotboxorigin` Holds the origin key letters.

```
328 \newcommand*\LWR@rotboxorigin{}
```

`\LWR@originname`  $\{\langle letter \rangle\}$

Given one L<sup>A</sup>T<sub>E</sub>X origin key value, translate into an HTML origin word:

```
329 \newcommand*\LWR@originname[1]{%
330 \ifthenelse{equal{#1}{t}}{top}{}%
331 \ifthenelse{equal{#1}{b}}{bottom}{}%
332 \ifthenelse{equal{#1}{c}}{center}{}%
333 \ifthenelse{equal{#1}{l}}{left}{}%
334 \ifthenelse{equal{#1}{r}}{right}{}%
335 }
```

`\LWR@originnames`  $\{\langle letters \rangle\}$

Given one- or two-letter L<sup>A</sup>T<sub>E</sub>X origin key values, translate into HTML origin words:

```
336 \newcommand*\LWR@originnames[1]{%
337 \StrChar{#1}{1}[\LWR@strresult]%
338 \LWR@originname{\LWR@strresult}
339 \StrChar{#1}{2}[\LWR@strresult]%
340 \LWR@originname{\LWR@strresult}
341 }
```

Handle the origin key for `\rotatebox`:

```
342 \define@key{krotbox}{origin}{%
343 \renewcommand*\LWR@rotboxorigin{#1}%
344 }
```

These keys are ignored:

```
345 \define@key{krotbox}{x}{}
346 \define@key{krotbox}{y}{}
347 \define@key{krotbox}{units}{}

```

`\rotatebox`  $[\langle keyval list \rangle] \{\langle angle \rangle\} \{\langle text \rangle\}$

```
348 \AtBeginDocument{
```

The HTML version:

```
349 \NewDocumentCommand{\LWR@HTML@rotatebox}{0{} m +m}{%
```

Reset the origin to “none-given”:

```
350 \renewcommand*{\LWR@rotboxorigin}{}
```

Process the optional keys, which may set `\LWR@rotateboxorigin`:

```
351 \setkeys{krotbox}{#1}%
```

Select inline-block so that HTML will transform this span:

```
352 \LWR@htmltagc{%
353 span\LWR@indentHTML
354 style="\LWR@indentHTML
355 display: inline-block;\LWR@indentHTML
```

If an origin was given, translate and print the origin information:

```
356 \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{}}{%
357 {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@indentHTML}%
358 {}}%
```

Print the rotation information:

```
359 \LWR@rotstyle{-ms-}{#2}\LWR@indentHTML
360 \LWR@rotstyle{-webkit-}{#2}\LWR@indentHTML
361 \LWR@rotstyle}{#2}"\LWR@orignewLine%
362 }\LWR@orignewLine%
```

Print the text to be rotated:

```
363 \begin{LWR@nestspan}%
364 #3%
```

Close the span:

```
365 \LWR@htmltagc{/span}%
366 \end{LWR@nestspan}%
367 }
```

The high-level interface:

```
368 \LWR@formatted{rotatebox}
369
370 }% AtBeginDocument
```

```
\scalebox {⟨h-scale⟩} [⟨v-scale⟩] {⟨text⟩}
```

```
371 \AtBeginDocument{
```

The HTML version:

```
372 \NewDocumentCommand{\LWR@HTML@scalebox}{m o m}{%
```

Select inline-block so that HTML will transform this span:

```
373 \LWR@htmltagc{%
374 span\LWR@indentHTML
375 style="\LWR@indentHTML
376 display: inline-block;\LWR@indentHTML
```

Print the scaling information:

```
377 \LWR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
378 \LWR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
379 \LWR@scalestyle{}{#1}{\IfNoValueTF{#2}{#1}{#2}}
380 "\LWR@orignewLine
381 }\LWR@orignewLine%
```

Print the text to be scaled:

```
382 \begin{LWR@nestspan}%
383 #3%
```

Close the span:

```
384 \LWR@htmltagc{/span}%
385 \end{LWR@nestspan}%
386 }
```

The high-level interface:

```
387 \LWR@formatted{scalebox}
388
389 }% AtBeginDocument
```

`\reflectbox`  $\{\langle text \rangle\}$

```
390 \AtBeginDocument{
391
392 \newcommand{\LWR@HTML@reflectbox}[1]{%
393 \scalebox{-1}[1]{#1}%
394 }% \reflectbox
395
396 \LWR@formatted{reflectbox}
397
398 }% AtBeginDocument
```

`\resizebox`  $\{\langle h-length \rangle\} \{\langle v-length \rangle\} \{\langle text \rangle\}$

Simply prints its text argument.

```
399 \AtBeginDocument{
400
401 \NewDocumentCommand{\LWR@HTML@resizebox}{s m m m}{%
```

```

402 #4%
403 }
404
405 \LWR@formatted{resizebox}
406
407 }% AtBeginDocument

```

---

File 186 **lwarp-graphics.sty**

§ 286 Package **graphicx**

Pkg graphicx graphicx is emulated.

graphicx loads `graphics`, which also loads `lwarp-graphics`, which remembers the original `graphics` definitions for use inside a `lateximage`, and then patches them `\AtBeginDocument` for HTML output.

`lwarp-graphics` handles the syntax of either `graphics` or `graphicx`.

**for HTML output:** `1 \LWR@ProvidesPackagePass{graphicx}[2017/06/01]`

---

File 187 **lwarp-grffile.sty**

§ 287 Package **grffile**

Pkg grffile 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.



matching PDF and SVG

`lwarp-grffile` now exists as a placeholder since `grffile` used to be emulated by `lwarp`, and thus older versions of `lwarp-grffile` may exist and should be overwritten by this newer version.

**for HTML output:** `1 \LWR@ProvidesPackagePass{grffile}[2017/06/30]`

---

File 188 **lwarp-grid.sty**

§ 288 Package **grid**

Pkg grid grid is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{grid}[2009/06/16]`

`2 \newenvironment*{gridenv}{}{}`

---

File 189 **lwarp-grid-system.sty**

§ 289 Package **grid-system**

*(Emulates or patches code by MARCUS BITZL.)*

Pkg grid-system **grid-system** is patched for use by **lwarp**.

**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 190 **lwarp-gridset.sty**

§ 290 Package **gridset**

Pkg gridset **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*\theuserinfo[1]{(theuserinfo)}
12 \newcommand*\theypos[1]{(theypos)}
```

---

File 191 **lwarp-hang.sty**

§ 291 Package **hang**

*(Emulates or patches code by ANDREAS NOLDA.)*

Pkg hang 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@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
17 \LWR@print@mbx{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=""
29 \LWR@print@mbx{list-style-type:none;} % extra space
30 \LWR@print@mbx{%
31 margin-left:\LWR@printlength{\LWR@templengthone}%
32 } ; % extra space
33 \LWR@print@mbx{%
34 text-indent:-\LWR@printlength{\hangingindent}%
35 }%
36 ""
37 }%
38 \let\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@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
55 \LWR@print@mbx{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 192 **lwarp-hanging.sty**

§ 292 Package **hanging**

Pkg hanging hanging is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hanging}[2009/09/02]

```

2 \@ifclassloaded{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@mbx{margin-left:\LWR@printlength{#1}} ; %
14 \LWR@print@mbx{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{\nhlq}{'}
24 \newcommand{\nhrq}{'}

```

---

File 193 **lwarp-hhline.sty**

§ 293 Package **hhline**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg hhline hhline is patched for use by lwarp.

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 194 **lwarp-hypbmsec.sty**

§ 294 Package **hypbmsec**

Pkg hypbmsec hypbmsec is emulated by the lwarp core.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{hypbmsec}[2016/05/16]

```

---

File 195 **lwarp-hypcap.sty**

§ 295 Package **hypcap**

Pkg hypcap hypcap is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hypcap}[2016/05/16]

```
2 \newcommand*\capstart{}
3 \newcommand*\hypcapspace{}
4 \newcommand*\hypcapredef}[1]{}
5 \newcommand*\capstartfalse{}
6 \newcommand*\capstarttrue{}
```

---

File 196 **lwarp-hypdestopt.sty**

§ 296 Package **hypdestopt**

Pkg hypdestopt hypdestopt is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hypdestopt}[2016/05/21]

---

File 197 **lwarp-hypernat.sty**

§ 297 Package **hypernat**

Pkg hypernat hypernat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hypernat}[2001/07/09]

---

File 198 **lwarp-hyperref.sty**

§ 298 Package **hyperref**

*(Emulates or patches code by SEBASTIAN RAHTZ, HEIKO OBERDIEK.)*

Pkg hyperref hyperref is emulated.

**for HTML output:**

```
1 % \LWR@ProvidesPackageDrop{hyperref}% not allowed
2 % \ProvidesPackage{lwarp-#1-#2}% not allowed
3 \PackageInfo{lwarp}{%
4 Using the lwarp HTML version of package ‘hyperref’,\MessageBreak
5 and discarding options.\MessageBreak
6 (Not using \protect\ProvidesPackage, so that other packages\MessageBreak
7 do not attempt to patch lwarp’s version of ‘hyperref’.)\MessageBreak}
8
9 \DeclareOption*{}

10 % \ProcessOptions\relax
11 \let\ds@\@empty% from the original \ProcessOptions
12 \edef\@curroptions{}% lwarp modification to \ProcessOptions
13 \@process@ptions\relax% from the original \ProcessOptions
```

```
14 \newcommand*\hypersetup}[1]{}
15 \newcommand*\hyperbaseurl}[1]{}

```

`\hyperimage`     $\{\langle URL \rangle\} \{\langle alt \text{ text} \rangle\}$

Insert an image with alt text:

```
16 \NewDocumentCommand{\LWR@hyperimageb}{m +m}{%
17 \LWR@ensuredoingapar%
18 \def\LWR@templink{#1}%
19 \@onelevel@sanitize\LWR@templink%
20 \LWR@htmltag{img src="\LWR@templink" alt="#2" class="hyperimage"}%
21 \LWR@ensuredoingapar%
22 \endgroup%
23 }
24
25 \newrobustcmd*\hyperimage}{%
26 \begingroup%
27 \LWR@linkcatcodes%
28 \LWR@hyperimageb%
29 }
30

```

`\hyperdef`     $\{\langle 1: category \rangle\} \{\langle 2: name \rangle\} \{\langle 3: text \rangle\}$

Creates an HTML anchor to `category.name` with the given text.

```
31 \NewDocumentCommand{\LWR@hyperdefb}{m m +m}{%
32 \LWR@ensuredoingapar%
33 \LWR@sublabel{#1.#2}%
34 #3%
35 \endgroup%
36 }
37
38 \newcommand*\hyperdef}{%
39 \begingroup%
40 \LWR@linkcatcodes%
41 \LWR@hyperdefb%
42 }
43

```

`\LWR@hyperrefb`     $\{\langle 1: URL \rangle\} \{\langle 2: category \rangle\} \{\langle 3: name \rangle\} \{\langle 4: text \rangle\}$

Creates an HTML link to `URL#category.name` with the given text.

```
44 \newcommand{\LWR@hyperreffinish}[1]{%
45 \begingroup%
46 \RenewDocumentCommand{\ref}{\LWR@ref@ignorestar}%
47 #1%
48 \endgroup%
49 \LWR@htmltag{/a}%
50 }
51
52 \newcommand*\LWR@hyperrefbb}[3]{%
53 \LWR@htmltag{%
54 a href="%

```

```

55 \detokenize\expandafter{#1}\LWR@hashmark%
56 \detokenize\expandafter{#2}.\detokenize\expandafter{#3}%
57 "%
58 \LWR@addlinktitle%
59 }%
60 \endgroup%
61 \LWR@hyperreffinish%
62 }
63
64 \newrobustcmd*{\LWR@hyperrefb}{%
65 \begingroup%
66 \LWR@linkcatcodes%
67 \LWR@hyperrefbb%
68 }

```

`\LWR@hyperrefc` [*label*] {*text*}

Creates text as an HTML link to the L<sup>A</sup>T<sub>E</sub>X label.

```

69
70 \NewDocumentCommand{\LWR@hyperrefcb}{0{label}}{%
71 \LWR@startref{#1}%
72 \endgroup%
73 \LWR@hyperreffinish%
74 }
75
76 \newcommand*{\LWR@hyperrefc}{%
77 \begingroup%
78 \LWR@linkcatcodes%
79 \LWR@hyperrefcb%
80 }

```

`\hyperref` {*1: URL*} {*2: category*} {*3: name*} {*4: text*} — or —  
[*1: label*] {*2: text*}

```

81 \DeclareRobustCommand*\hyperref{%
82 \LWR@ensuredoingapar%
83 \@ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
84 }

```

`\hypertarget` {*name*} {*text*}

Creates an anchor to name with the given text.

```

85 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%
86 \label{LWR-ht-#1}%
87 #2%
88 \endgroup%
89 }
90
91 \newcommand*{\hypertarget}{%
92 \begingroup%
93 \LWR@linkcatcodes%
94 \LWR@hypertargetb%
95 }

```

`\hyperlink`     $\langle name \rangle$   $\langle text \rangle$

Creates a link to the anchor created by `hypertarget`, with the given link text.

Declared because also defined by `memoir`.

```

96 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%
97 \LWR@hyperrefcb[LWR-ht-#1]%
98 }
99
100 \DeclareDocumentCommand{\hyperlink}{}{%
101 \LWR@ensuredoingapar%
102 \begingroup%
103 \LWR@linkcatcodes%
104 \LWR@hyperlinkb%
105 }
```

`\autoref`    \*  $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

106 \NewDocumentCommand{\autoref}{s m}{%
107 \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%
108 }
```

`\autopageref`     $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

109 \NewDocumentCommand{\autopageref}{s m}{%
110 \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}%
111 }
```

`\pdfstringdef`     $\langle macroname \rangle$   $\langle TEXstring \rangle$

```

112 \newcommand{\pdfstringdef}[2]{}

```

`\pdfbookmark`    [ $\langle level \rangle$ ]  $\langle text \rangle$   $\langle name \rangle$

```

113 \newcommand{\pdfbookmark}[3][{}]{

```

`\currentpdfbookmark`     $\langle text \rangle$   $\langle name \rangle$

```

114 \newcommand{\currentpdfbookmark}[2]{}

```

`\subpdfbookmark`     $\langle text \rangle$   $\langle name \rangle$

```

115 \newcommand{\subpdfbookmark}[2]{}

```

`\belowpdfbookmark`     $\langle text \rangle$   $\langle name \rangle$

```

116 \newcommand{\belowpdfbookmark}[2]{}

```

`\texorpdfstring`     $\{\langle TE\!Xstring\rangle\} \{\langle PDFstring\rangle\}$

117 `\newcommand{\texorpdfstring}[2]{#1}`

$\{\langle commands\rangle\}$

`\pdfstringdefDisableCommands`

118 `\newcommand{\pdfstringdefDisableCommands}[1]{}`

`\hypercalcbp`     $\{\langle dimen\rangle\}$     From `hyperref`.

119 `\def\hypercalcbp#1{%`

120     `\strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax`

121 `}%`

`\Acrobatmenu`     $\{\langle menuoption\rangle\} \{\langle text\rangle\}$

122 `\newcommand{\Acrobatmenu}[2]{}`

`\TextField`     $[\langle parameters\rangle] \{\langle label\rangle\}$

123 `\DeclareRobustCommand{\TextField}[2][{}]`

`\CheckBox`     $[\langle parameters\rangle] \{\langle label\rangle\}$

124 `\DeclareRobustCommand{\CheckBox}[2][{}]`

`\ChoiceMenu`     $[\langle parameters\rangle] \{\langle label\rangle\} \{\langle choices\rangle\}$

125 `\DeclareRobustCommand{\ChoiceMenu}[3][{}]`

`\PushButton`     $[\langle parameters\rangle] \{\langle label\rangle\}$

126 `\DeclareRobustCommand{\PushButton}[2][{}]`

`\Submit`     $[\langle parameters\rangle] \{\langle label\rangle\}$

127 `\DeclareRobustCommand{\Submit}[2][{}]`

`\Reset`     $[\langle parameters\rangle] \{\langle label\rangle\}$

128 `\DeclareRobustCommand{\Reset}[2][{}]`

`\Gauge`     $[\langle parameters\rangle] \{\langle label\rangle\}$

129 `\DeclareRobustCommand{\Gauge}[2][{}]`

`\LayoutTextField`     $\{\langle label\rangle\} \{\langle field\rangle\}$

130 `\newcommand*{\LayoutTextField}[2]{}`

|                                 |                                                              |
|---------------------------------|--------------------------------------------------------------|
| <code>\LayoutChoiceField</code> | <code>{\langle label \rangle}{\langle field \rangle}</code>  |
|                                 | 131 <code>\newcommand*{\LayoutChoiceField}[2]{}</code>       |
| <code>\LayoutCheckField</code>  | <code>{\langle label \rangle}{\langle field \rangle}</code>  |
|                                 | 132 <code>\newcommand*{\LayoutCheckField}[2]{}</code>        |
| <code>\MakeRadioField</code>    | <code>{\langle width \rangle}{\langle height \rangle}</code> |
|                                 | 133 <code>\newcommand*{\MakeRadioField}[2]{}</code>          |
| <code>\MakeCheckField</code>    | <code>{\langle width \rangle}{\langle height \rangle}</code> |
|                                 | 134 <code>\newcommand*{\MakeCheckField}[2]{}</code>          |
| <code>\MakeTextField</code>     | <code>{\langle width \rangle}{\langle height \rangle}</code> |
|                                 | 135 <code>\newcommand*{\MakeTextField}[2]{}</code>           |
| <code>\MakeChoiceField</code>   | <code>{\langle width \rangle}{\langle height \rangle}</code> |
|                                 | 136 <code>\newcommand*{\MakeChoiceField}[2]{}</code>         |
| <code>\MakeFieldButton</code>   | <code>{\langle text \rangle}</code>                          |
|                                 | 137 <code>\newcommand{\MakeFieldButton}[1]{}</code>          |

---

File 199 **lwarp-hyperxmp.sty**

§ 299 Package **hyperxmp**

Pkg hyperxmp hyperxmp is ignored.

**for HTML output:** Discard all options for lwarp-hyperxmp:

1 `\LWR@ProvidesPackageDrop{hyperxmp}[2018/11/27]`

---

File 200 **lwarp-hyphenat.sty**

§ 300 Package **hyphenat**

Pkg hyphenat 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@originhttfamily\nhttfamily
4 \LetLtxMacro\LWRHYNAT@originohyphens\nohyphens
5 \LetLtxMacro\LWRHYNAT@origbshyp\bshyp
6 \LetLtxMacro\LWRHYNAT@origfshyp\fshyp
7 \LetLtxMacro\LWRHYNAT@origdothyp\dothyp
8 \LetLtxMacro\LWRHYNAT@origcolonyhyp\colonyhyp
9 \LetLtxMacro\LWRHYNAT@orighyp\hyp
10
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{\colonyhyp}{:}
21 \renewrobustcmd{\hyp}{-}
22
23 \appto\LWR@restoreorigformatting{%
24 \LetLtxMacro\textnhtt\LWRHYNAT@origtextnhtt%
25 \LetLtxMacro\nhttfamily\LWRHYNAT@originhttfamily%
26 \LetLtxMacro\nohyphens\LWRHYNAT@originohyphens%
27 \LetLtxMacro\bshyp\LWRHYNAT@origbshyp%
28 \LetLtxMacro\fshyp\LWRHYNAT@origfshyp%
29 \LetLtxMacro\dothyp\LWRHYNAT@origdothyp%
30 \LetLtxMacro\colonyhyp\LWRHYNAT@origcolonyhyp%
31 \LetLtxMacro\hyp\LWRHYNAT@orighyp%
32 }

```

---

File 201 **lwarp-idxlayout.sty**

§ 301 Package **idxlayout**

*(Emulates or patches code by THOMAS TITZ.)*

Pkg idxlayout idxlayout is emulated.

**for HTML output:** Discard all options for lwarp-idxlayout:

```

1 \LWR@ProvidesPackageDrop{idxlayout}[2012/03/30]
2 \newcommand{\LWR@indexprenote}{}
3
4 \preto\printindex{
5
6 \LWR@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}{}
18 \newcommand*{\indexjustific}{}
19 \newcommand*{\indexsubsdelim}{}
20 \newcommand*{\indexstheadcase}{}

```

---

File 202 **lwarp-ifoddpag.sty**

§ 302 Package **ifoddpag**

*(Emulates or patches code by MARTIN SCHARRER.)*

Pkg ifoddpag ifoddpag is emulated.

**for HTML output:** Discard all options for lwarp-ifoddpag:

```

1 \LWR@ProvidesPackageDrop{ifoddpag}[2016/04/23]

2 \newif\ifoddpag
3
4 \newif\ifoddpageoroneside
5
6 \DeclareRobustCommand{\checkoddpag}{\oddpagetrue\oddpageoronesidetrue}
7
8 \def\oddpag@page{1}
9
10 \def\@ifoddpag{%
11 \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpageoroneside{%
15 \expandafter\@firstoftwo
16 }

```

---

File 203 **lwarp-imakeidx.sty**

§ 303 Package **imakeidx**

*(Emulates or patches code by ENRICO GREGORIO.)*

Pkg imakeidx imakeidx is patched for use by lwarp.

**letter headings** When using *makeindex*, to match the print and HTML output's display of index letter headings, specify the lwarp.ist style:

```
\makeindex[options={-s lwarp.ist}]
```

(For HTML the `lwarp.ist` style is used automatically, which displays letter headings. When using *xindy* the default style also displays letter headings.)

**index setup** See section 8.6.18 for how to setup *lwarpmk* 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@orignewpage%
9 \LWR@startpars%
10 \ifstrequal{#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 \catcode'_ =12%
23
24 \def\@index[#1]{%
25 \ifstrequal{#1}{\imki@jobname}%
26 {%
27 \@ifundefined{#1@idxfile}%
28 {%
29 \PackageWarning{lwarp-imakeidx}{Undefined index file '#1'}%
30 \begingroup
31 \@sanitize
32 \imki@nowrindex%
33 }%
34 {%
35 \edef\@idxfile{#1}%
36 \begingroup
37 \@sanitize
38 \@wrindex\@idxfile%
39 }%

```

```

40 }%
41 {%
42 \@ifundefined{#1_html@idxfile}%
43 {%
44 \PackageWarning{lwarp-imakeidx}{Undefined index file '#1_html'}%
45 \begingroup
46 \@sanitize
47 \imki@nowrindex%
48 }%
49 {%
50 \edef\@idxfile{#1_html}%
51 \begingroup
52 \@sanitize
53 \@wrindex\@idxfile%
54 }%
55 }%
56 }
57
58 \catcode'_ =8%

```

```

\item
\subitem
\subsubitem HTML versions of \item, etc.:

```

```

59 \appto\theindex{%
60 \let\item\LWR@indexitem%
61 \let\subitem\LWR@indexsubitem%
62 \let\subsubitem\LWR@indexsubsubitem%
63 }

```

```
\imki@wrindexentrysplit {<file>} {<entry>} {<page>}
```

```
\imki@wrindexentryunique {<file>} {<entry>} {<page>}
```

While writing index entries, adds an HTML label, and writes the label's index instead of the page number:

```

64 \renewcommand\imki@wrindexentrysplit[3]{%
65 \addtocounter{LWR@autoindex}{1}%
66 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
67 \expandafter\protected@write\csname#1@idxfile\endcsname{%
68 {\string\indexentry{#2}{\arabic{LWR@autoindex}}}%
69 }
70
71 \renewcommand\imki@wrindexentryunique[3]{%
72 \addtocounter{LWR@autoindex}{1}%
73 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
74 \protected@write\@indexfile{%
75 {\string\indexentry[#1]{#2}{\arabic{LWR@autoindex}}}%
76 }
77
78 \def\imki@wrindexsplit#1#2{%
79 \imki@wrindexentrysplit{#1}{#2}{\thepage}%
80 \endgroup\imki@showindexentry{#1}{#2}%
81 \@esphack%

```

```

82 }
83
84 \def\imki@wrindexunique#1#2{%
85 \imki@wrindexentryunique{#1}{#2}{\thepage}%
86 \endgroup\imki@showindexentry{#1}{#2}%
87 \@esphack%
88 }
89

```

`\LWR@imki@setxdydefopts`

Sets the xindy HTML options, ignoring the user's settings.

```

90 \newcommand*\LWR@imki@setxdydefopts{%
91 \edef\imki@options{ \space %
92 -M \space \LWR@xindyStyle\space %
93 -L \space \LWR@xindyLanguage\space %
94 -C \space \LWR@xindyCodepage\space %
95 }%
96 }

```

`\LWR@imki@setdefopts`    `{\langle user options \rangle}`

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 lwarp version is used. (Only one style at a time is possible.)

For *xindy*, multiple modules may be specified, and the lwarp version is appended.

```

97 \newcommand*\LWR@imki@setdefopts}[1]{%
98 \ifblank{#1}{%
99 \edef\imki@options{\space -s \space \LWR@makeindexStyle \space}%
100 \ifdefstring{\imki@progdefault}{xindy}{\LWR@imki@setxdydefopts}{}%
101 \ifdefstring{\imki@progdefault}{texindy}{\LWR@imki@setxdydefopts}{}%
102 \ifdefstring{\imki@progdefault}{truexindy}{\LWR@imki@setxdydefopts}{}%
103 }{%
104 \edef\imki@options{\space #1 \space}%
105 }%
106 }

```

`\imki@makeindex`    Use the new HTML options:

```

107 \xpatchcmd{\imki@makeindex}
108 {\let\imki@options\space}
109 {\LWR@imki@setdefopts{}}%
110 {}
111 {\LWR@patcherror{imakeidx}{makeindex}}

```

Use the new HTML options.

```

112 \define@key{imki}{options}{\LWR@imki@setdefopts{#1}}

```

`\imki@resetdefaults`    Use the new HTML options:

```

113 \xpatchcmd{\imki@resetdefaults}
114 {\def\imki@options{ }}
115 {\LWR@imki@setdefopts{}}
116 {}
117 {\LWR@patcherror{imakeidx}{resetdefaults}}

```

theindex was already defined \AtBeginDocument by the lwarp core, so it must be redefined here similarly, but patched for imakeidx:

Env theindex

```

118 \AtBeginDocument{
119 \renewenvironment*{theindex}{%
120 \imki@maybeaddtoc
121 \imki@indexlevel{\indexname}
122 \let\item\LWR@indexitem%
123 \let\subitem\LWR@indexsubitem%
124 \let\subsubitem\LWR@indexsubsubitem%
125 }{}
126 }% AtBeginDocument

```

Update to the new defaults:

```
127 \imki@resetdefaults
```

Update to the new patches:

\AtBeginDocument is because \@wrindex is previously defined as \AtBeginDocument in the lwarp core.

```

128 \ifimki@splitindex
129 \let\imki@startidx\imki@startidxunique
130 \AtBeginDocument{\let\@wrindex\imki@wrindexunique}
131 \let\imki@putindex\imki@putindexunique
132 \let\imki@wrindexentry\imki@wrindexentryunique
133 \let\imki@startidxsplit\@undefined
134 \let\imki@wrindexsplit\@undefined
135 \let\imki@putindexsplit\@undefined
136 \else
137 \let\imki@startidx\imki@startidxsplit
138 \AtBeginDocument{\let\@wrindex\imki@wrindexsplit}
139 \let\imki@putindex\imki@putindexsplit
140 \let\imki@wrindexentry\imki@wrindexentrysplit
141 \let\imki@startidxunique\@undefined
142 \let\imki@wrindexunique\@undefined
143 \let\imki@putindexunique\@undefined
144 \fi

```

---

File 204 **lwarp-index.sty**

§ 304 Package **index**

(Emulates or patches code by DAVID M. JONES.)

Pkg index index is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{index}[2004/01/20]

Use `\theLWR@autoindex` instead of `\thepage`. `\@tempwattrue` is used to force an immediate write to the index file instead of waiting until the end of the page.

```

2 \xpatchcmd{\newindex}
3 {\x@newindex[thepage]}
4 {%
5 \@tempwattrue%
6 \x@newindex[theLWR@autoindex]%
7 }
8 {}
9 {\LWR@patcherror{index}{newindex}}
10
11 \xpatchcmd{\renewindex}
12 {\x@renewindex[thepage]}
13 {%
14 \@tempwattrue%
15 \x@renewindex[theLWR@autoindex]%
16 }
17 {}
18 {\LWR@patcherror{index}{renewindex}}

```

Patched to set a new autoindex:

```

19 \xpatchcmd{\@wrindex}
20 {\begingroup}
21 {%
22 \addtocounter{LWR@autoindex}{1}%
23 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
24 \begingroup%
25 }
26 {}
27 {\LWR@patcherror{index}{@wrindex}}

```

`\AtBeginDocument lwarp core \lets \@wrindex to \LWR@wrindex`. Since the index package has been loaded, `\let` to its version instead:

```

28 \let\LWR@index@wrindex\@wrindex
29
30 \AtBeginDocument{
31 \let\@wrindex\LWR@index@wrindex
32 }

```

Modified to add `\index@prologue`:

```

33 \AtBeginDocument{
34 \renewenvironment*{theindex}{%
35 \LWR@indexsection{\indexname}%
36 \ifx\index@prologue\@empty\else
37 \index@prologue
38 \bigskip

```

```

39 \fi
40 \let\item\LWR@indexitem%
41 \let\subitem\LWR@indexsubitem%
42 \let\subsubitem\LWR@indexsubsubitem%
43 }{}
44 }% AtBeginDocument

```

Disabled:

```

45 \def\@showidx#1{}
46 \let\@texttop\relax
47 \renewcommand*\raggedbottom{}
48 \renewcommand*\flushbottom{}
49 \renewcommand*\markboth}[2]{}
50 \renewcommand*\markright}[1]{}

```

---

File 205 **lwarp-inputtrc.sty**

§ 305 Package **inputtrc**

*(Emulates or patches code by Uwe Lück.)*

Pkg inputtrc inputtrc is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{inputtrc}[2012/10/10]

Patched to remove extraneous spaces, which sometimes showed up in logos inside a lateximage.

```

2 \renewcommand*\IT@prim@input}[1]{}
3 \typeout{\IT@indent\IT@currfile INPUTTING #1}%
4 % ... TODO: option to write to '.log' only.
5 \xdef\IT@filestack{{\IT@currfile}\IT@filestack}%
6 \xdef\IT@currfile{#1}%
7 \expandafter \gdef\expandafter \IT@indent\expandafter{%
8 \IT@indent \IT@indent@unit}% lwarp
9 \@input#1% lwarp
10 \expandafter\IT@pop@indent\IT@indent \@nil% lwarp
11 \expandafter\IT@pop@file \IT@filestack\@nil% lwarp
12 \IT@maybe@returnmessage%% v0.2 lwarp
13 }

```

---

File 206 **lwarp-intopdf.sty**

§ 306 Package **intopdf**

Pkg intopdf 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 m}{%
3 \href{#2}{#5}%
4 }

```

---

File 207 **lwarp-karnaugh-map.sty**

§ 307 Package **karnaugh-map**

*(Emulates or patches code by MATTIAS JACOBSSON.)*

Pkg karnaugh-map **karnaugh-map** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{karnaugh-map}[2017/02/20]

```

(It is hard to patch this macro, so the entire thing is redefined here, with the **lwarp** modifications identified in comments.)

```

2 \RenewDocumentEnvironment{karnaugh-map}{s O{4} O{4} O{1} O{X_1X_0$} O{X_3X_2$} O{X_5X_4$}}{%
3 \beginngroup
4 % store map size {[START]
5 \renewcommand{\@karnaughmap@var@mapsize@}{#2}%
6 \renewcommand{\@karnaughmap@var@mapsizey@}{#3}%
7 \renewcommand{\@karnaughmap@var@mapsizez@}{#4}%
8 % [END]}
9 % determinate if markings should be color or black and white
10 \IfBooleanTF{#1}{%
11 % should be black and white
12 \renewcommand{\@karnaughmap@var@bw@}{1}%
13 }{%
14 % should be color
15 \renewcommand{\@karnaughmap@var@bw@}{0}%
16 }%
17 %
18 % find matching matrix template and alignment parameters {[START]
19 \newcommand{\@karnaughmap@local@matrixtemplate@}{0}% '0' is considered as missing matrix template
20 \newcommand{\@karnaughmap@local@maprealignmentx@}{0}%
21 \newcommand{\@karnaughmap@local@maprealignmenty@}{0}%
22 \ifnum\@karnaughmap@var@mapsize@<\@karnaughmap@var@mapsizey@&\@karnaughmap@var@mapsize@=221
23 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
24 \& 0 \& 1 \& \&
25 0 \& |(000000)| \& |(000001)| \& \&
26 1 \& |(000010)| \& |(000011)| \& \&
27 \& \& \& \& \&
28 }%
29 \fi
30 \ifnum\@karnaughmap@var@mapsize@>\@karnaughmap@var@mapsizey@&\@karnaughmap@var@mapsize@=241
31 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
32 \& 0 \& 1 \& \&
33 00 \& |(000000)| \& |(000001)| \& \&
34 01 \& |(000010)| \& |(000011)| \& \&

```

```

35 11 \& |(000110)| \& |(000111)| \& \\\
36 10 \& |(000100)| \& |(000101)| \& \\\
37 \& \& \& \\\
38 }%
39 \fi
40 \ifnum\@karnaughmap@var@mapsize@x\@karnaughmap@var@mapsize@y\@karnaughmap@var@mapsize@z=421
41 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
42 \& 00 \& 01 \& 11 \& 10 \& \phantom
43 0 \& |(000000)| \& |(000001)| \& |(000011)| \& |(000010)
44 1 \& |(000100)| \& |(000101)| \& |(000111)| \& |(000110)
45 \& \& \& \& \&
46 }%
47 \fi
48 \ifnum\@karnaughmap@var@mapsize@x\@karnaughmap@var@mapsize@y\@karnaughmap@var@mapsize@z=441
49 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
50 \& 00 \& 01 \& 11 \& 10 \& \phantom
51 00 \& |(000000)| \& |(000001)| \& |(000011)| \& |(000010)
52 01 \& |(000100)| \& |(000101)| \& |(000111)| \& |(000110)
53 11 \& |(001100)| \& |(001101)| \& |(001111)| \& |(001110)
54 10 \& |(001000)| \& |(001001)| \& |(001011)| \& |(001010)
55 \& \& \& \& \&
56 }%
57 \fi
58 \ifnum\@karnaughmap@var@mapsize@x\@karnaughmap@var@mapsize@y\@karnaughmap@var@mapsize@z=442
59 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
60 \& 00 \& 01 \& 11 \& 10 \& \phantom
61 00 \& |(000000)| \& |(000001)| \& |(000011)| \& |(000010)
62 01 \& |(000100)| \& |(000101)| \& |(000111)| \& |(000110)
63 11 \& |(001100)| \& |(001101)| \& |(001111)| \& |(001110)
64 10 \& |(001000)| \& |(001001)| \& |(001011)| \& |(001010)
65 \& \& \& \& \&
66 }%
67 \renewcommand{\@karnaughmap@local@maprealignmentx@}{2.5}%
68 \fi
69 \ifnum\@karnaughmap@var@mapsize@x\@karnaughmap@var@mapsize@y\@karnaughmap@var@mapsize@z=444
70 \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
71 \& 00 \& 01 \& 11 \& 10 \& \phantom
72 00 \& |(000000)| \& |(000001)| \& |(000011)| \& |(000010)
73 01 \& |(000100)| \& |(000101)| \& |(000111)| \& |(000110)
74 11 \& |(001100)| \& |(001101)| \& |(001111)| \& |(001110)
75 10 \& |(001000)| \& |(001001)| \& |(001011)| \& |(001010)
76 \& \& \& \& \&
77 00 \& |(100000)| \& |(100001)| \& |(100011)| \& |(100010)
78 01 \& |(100100)| \& |(100101)| \& |(100111)| \& |(100110)
79 11 \& |(101100)| \& |(101101)| \& |(101111)| \& |(101110)
80 10 \& |(101000)| \& |(101001)| \& |(101011)| \& |(101010)
81 \& \& \& \& \&
82 }%
83 \renewcommand{\@karnaughmap@local@maprealignmentx@}{2.5}%
84 \renewcommand{\@karnaughmap@local@maprealignmenty@}{-2.5}%
85 \fi
86 % [END]}
87 % test if a matrix template is found or not(aka "\@karnaughmap@local@matrixtemplate@" equals to '0')
88 \ifdefstring{\@karnaughmap@local@matrixtemplate@}{0}{% lwarp
89 % \ifnum0=\@karnaughmap@local@matrixtemplate@% original

```

```

90 % print error if no template could be found
91 \PackageError{lwarp-karnaugh-map}{%
92 Can not find a template fitting your specification (\@karnaughmap@var@mapsize@x\space x \@karnaughma
93 }{%
94 Existing templates have the following dimensions: 2x2x1, 2x4x1, 4x2x1, 4x4x1, 4x4x2, and 4x4x4.
95 }%
96 % \fi original
97 }{% lwarp
98 \begin{tikzpicture}
99 % grid
100 % for all dimensions
101 \draw[color=black, ultra thin] (0,0) grid (\@karnaughmap@var@mapsize@,\@karnaughmap@var@mapsize@);
102 % when there are 2 sub maps
103 \ifnum\@karnaughmap@var@mapsize@=2
104 \draw[color=black, ultra thin] (5,0) grid (9,4);
105 \fi
106 % when there are 4 sub maps
107 \ifnum\@karnaughmap@var@mapsize@=4
108 \draw[color=black, ultra thin] (5,0) grid (9,4);
109 \draw[color=black, ultra thin] (0,-5) grid (4,-1);
110 \draw[color=black, ultra thin] (5,-5) grid (9,-1);
111 \fi
112 % labels
113 % for all dimensions
114 \node[above] at (\@karnaughmap@var@mapsize@*0.5,\@karnaughmap@var@mapsize@+0.9) {\small{#5}};
115 \node[left] at (-0.9,\@karnaughmap@var@mapsize@*0.5) {\small{#6}};
116 % when there are 2 sub maps
117 \ifnum\@karnaughmap@var@mapsize@=2
118 \node[above] at (7,4.9) {\small{#5}};
119 % extra sub maps labels
120 \node[below] at (2,-0.1) {\small{#7$=0$}};
121 \node[below] at (7,-0.1) {\small{#7$=1$}};
122 \fi
123 % when there are 4 sub maps
124 \ifnum\@karnaughmap@var@mapsize@=4
125 \node[above] at (7,4.9) {\small{#5}};
126 \node[left] at (-0.9,-3) {\small{#6}};
127 % extra sub maps labels
128 \node[below] at (2,-0.1) {\small{#7$=00$}};
129 \node[below] at (7,-0.1) {\small{#7$=01$}};
130 \node[below] at (2,-5.1) {\small{#7$=10$}};
131 \node[below] at (7,-5.1) {\small{#7$=11$}};
132 \fi
133 % data
134 \matrix[
135 matrix of nodes,
136 ampersand replacement=\&,
137 column sep={1cm,between origins},
138 row sep={1cm,between origins},
139] at (\@karnaughmap@var@mapsize@*0.5+\@karnaughmap@local@maprealignmentx@,\@karnaughmap@var@mapsize@
140 \@karnaughmap@local@matrixtemplate@%
141);
142 }{
143 \end{tikzpicture}
144 \endgroup

```

145 }

File 208 **lwarp-keyfloat.sty**§ 308 Package **keyfloat***(Emulates or patches code by BRIAN DUNN.)*

Pkg keyfloat **keyfloat** is supported with a considerable amount of hacking. (It's a mashup of **lwarp**, **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 HTML output:**

```

1 \LWR@ProvidesPackagePass{keyfloat}[2019/09/23]
2
3 \@ifpackagelater{keyfloat}{2019/09/23}{}{
4 \PackageError{lwarp-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{

14 \providecommand*\KFLT@LWR@hook@boxouter{}
15 \renewcommand*\KFLT@LWR@hook@boxouter{%
16 \ifbool{KFLT@keywrap}{%
17 }{%
18 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{%
19 \setlength{\linewidth}{6in}%
20 \setlength{\textwidth}{6in}%
21 \setlength{\textheight}{9in}%
22 }{}%
23 }%
24 \normalcolor%
25 }

26 \let\ltxMacro\KFLT@LWR@hook@keyfloats\KFLT@LWR@hook@boxouter
27
28 \let\KFLT@LWR@hook@keyfloatsminipage\relax
29 \let\endKFLT@LWR@hook@keyfloatsminipage\relax
30 \newenvironment{KFLT@LWR@hook@keyfloatsminipage}[1]{}{

```

```

31 \LetLtxMacro\KFLT@LWR@hook@keyfloats\KFLT@LWR@hook@boxouter
32
33 \renewcommand*{\KFLT@maybeendfloatrow}{%
34 \ifnumless{\value{KFLT@thiscol}}{\value{KFLT@numcols}}%
35 }% thiscol < numcols
36 {% >=
37 \defcounter{KFLT@thiscol}{0}%
38 }%
39 }%
40
41 \renewcommand{\KFLT@trackrows}%
42 {%

```

If are nested inside a keyfloats or a subfloat:

```

43 \ifboolexpr{%
44 test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}} or%
45 bool{KFLT@inkeysubfloats}%
46 }%
47 {% nested

```

Tracks row start and end:

```

48 \KFLT@maybestartfloatrow%

```

Possibly fill space between columns:

```

49 \ifnumgreater{\value{KFLT@thiscol}}{1}%
50 {%
51 % \hfill%
52 }%
53 {}%
54 }% nested
55 {}% not nested
56 }

57 \RenewDocumentCommand{\KFLT@onefigureimage}{m}
58 {%
59 \LWR@traceinfo{KFLT@onefigureimage}%
60 % \begin{lrbox}{\KFLT@envbox}%
61 \ifthenelse{\NOT\equal{\KFLT@lw}{}}%
62 {%
63 \KFLT@frame{\includegraphics%
64 [scale=\KFLT@s,width=\KFLT@imagewidth]{#1}}%
65 }%
66 {% not linewidth
67 \ifthenelse{\dimtest{\KFLT@w}{>}{0pt}}%
68 {% width is given
69 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
70 {% w and h
71 \KFLT@frame{\includegraphics%
72 [scale=\KFLT@s,%
73 width=\KFLT@imagewidth,height=\KFLT@h]{#1}}%
74 }% w and h

```

```

75 {% only w
76 \KFLT@frame{\includegraphics%
77 [scale=\KFLT@es,width=\KFLT@imagewidth]{#1}}%
78 }% only w
79 }% width is given
80 {% width is not given
81 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
82 {%
83 \KFLT@frame{\includegraphics%
84 [scale=\KFLT@es,height=\KFLT@h]{#1}}%
85 }%
86 {%
87 \KFLT@frame{\includegraphics%
88 [scale=\KFLT@es]{#1}}%
89 }%
90 }% width is not given
91 }% not linewidth
92 % \end{lrbox}%
93 % \unskip%
94 % \KFLT@findenvboxwidth%
95 % \begin{turn}{\KFLT@r}%
96 % \KFLT@frame{\usebox{\KFLT@envbox}}%
97 % \unskip%
98 % \end{turn}%
99 \LWR@traceinfo{KFLT@onefigureimage: done}%
100 }

101 \RenewDocumentEnvironment{KFLT@boxinner}{}
102 {%
103 \LWR@traceinfo{KFLT@boxinner}%
104 \LWR@stoppars%
105 \minipagefullwidth%
106 \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
107 \fminipage{\KFLT@imagewidth}%
108 }{%
109 \minipage{\KFLT@imagewidth}%
110 }%
111 }
112 {%
113 \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
114 \endfminipage%
115 }{%
116 \endminipage%
117 }%
118 \LWR@startpars%
119 \LWR@traceinfo{KFLT@boxinner: done}%
120 }

121 \newcommand*{\LWR@KFLT@settalign}[1]{%
122 \def\LWR@KFLT@textalign{justify}%
123 \ifcsstring{KFLT@#1textalign}{\centering}%
124 {\def\LWR@KFLT@textalign{center}}%
125 }%
126 \ifcsstring{KFLT@#1textalign}{\raggedleft}%
127 {\def\LWR@KFLT@textalign{right}}%

```

```

128 {}%
129 \ifcsstring{KFLT@#1textalign}{\raggedright}%
130 {\def\LWR@KFLT@textalign{left}}%
131 {}%
132 }
133
134 \renewcommand{\KFLT@addtext}[1]
135 {%

```

Is there text to add?

```

136 \ifcsemt{KFLT@#1t}%
137 {}% no text
138 {% text to add
139 {% local

```

Add some space, then create a <div> to contain the text:

```

140 \addvspace{\smallskipamount}%
141 \LWR@KFLT@settextalign{#1}%
142 \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%

```

Set the alignment and some text parameters:

```

143 % \csuse{KFLT@#1textalign}%
144 % \footnotesize%
145 \setlength{\parskip}{1.5ex}%
146 \setlength{\parindent}{0em}%

```

Typeset the actual text:

```

147 \csuse{KFLT@#1t}%

```

Close it all out with a little more space:

```

148 \end{BlockClass}%
149 % \par\addvspace{2ex}%
150 }% local
151 }% text to add
152 }
153
154 \@ifpackageloaded{tocdata}
155 {}
156 {% tocdata not loaded
157
158 \newcommand*\LWR@KFLT@setnamealign[1]{%
159 \def\LWR@KFLT@textalign{justify}%
160 \ifstrequal{#1}{\centering}%
161 {\def\LWR@KFLT@textalign{center}}%
162 {}%
163 \ifstrequal{#1}{\raggedleft}%
164 {\def\LWR@KFLT@textalign{right}}%
165 {}%
166 \ifstrequal{#1}{\raggedright}%

```

```

167 {\def\LWR@KFLT@textalign{left}}%
168 {}%
169 }
170
171 \renewcommand*\KFLT@addartisttext}[3]{%
172

```

Add space and create the name inside a <div>:

```

173 % \addvspace{\medskipamount}%
174 % % \begin{minipage}{\linewidth}%
175 \LWR@KFLT@setnamealign{#3}%
176 \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%
177

```

Text alignment is #3, and depends on artist or author:

```

178 % #3%
179

```

#1 is empty or 'subgrp'  
#2 is empty for artist, 'u' for author:

```

180 \footnotesize\textsc{%
181 \KFLT@optionalname{\csuse{KFLT@#1a#2p}}}%
182 \KFLT@optionalname{\csuse{KFLT@#1a#2f}}}%
183 \csuse{KFLT@#1a#2l}%
184 \csuse{KFLT@#1a#2s}%
185 }%
186 % % \end{minipage}%
187 \end{BlockClass}
188 % % \par\addvspace{2ex}%
189 }
190
191 }% tocd data not loaded

```

Env KFLT@marginfloat [*<offset>*] {*<type>*}

```

192 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}
193 {%
194 \uselengthunit{PT}%
195 \LWR@BlockClassWP%
196 {float:right; width:2in; margin:10pt}%
197 {}%
198 {marginblock}%
199 \captionsetup{type=#2}%
200 \minipage{\LWR@usersmarginparwidth}%
201 \setlength{\marginparwidth}{.95\LWR@usersmarginparwidth}%
202 }
203 {%
204 \endminipage%
205 \endLWR@BlockClassWP%
206 }

```

```

207 \DeclareDocumentEnvironment{marginfigure}{o}
208 {\begin{KFLT@marginfloat}{figure}}
209 {\end{KFLT@marginfloat}}
210
211 \DeclareDocumentEnvironment{marginfigure}{o}
212 {\begin{KFLT@marginfloat}{table}}
213 {\end{KFLT@marginfloat}}

```

Env keywrap  $\{\langle width \rangle\} \{\langle keyfloat \rangle\}$

```

214 \DeclareDocumentEnvironment{keywrap}{m +m}
215 {%
216 \begin{LWR@setvirtualpage}*
217 \setlength{\LWR@templengthone}{#1}%
218 \begin{LWR@BlockClassWP}%
219 {%
220 float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
221 margin:10pt%
222 }%
223 }%
224 {marginblock}%
225 \setlength{\linewidth}{.95\LWR@templengthone}%
226 \booltrue{KFLT@keywrap}%
227 #2%
228 \end{LWR@BlockClassWP}%
229 \end{LWR@setvirtualpage}%
230 }
231 {}

232 }% AtBeginDocument

```

---

File 209 **lwarp-layaureo.sty**

§ 309 Package **layaureo**

Pkg layaureo layaureo is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{layaureo}[2004/09/16]

---

File 210 **lwarp-layout.sty**

§ 310 Package **layout**

Pkg layout layout is ignored.

**for HTML output:** Discard all options for lwarp-layout:

1 \LWR@ProvidesPackageDrop{layout}[2014/10/28]

---

```
2 \NewDocumentCommand{\layout}{s}{}

```

---

File 211 **lwarp-layouts.sty**

§ 311 Package **layouts**

Pkg layouts 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{\tryoffset}[1]{}
32 \newcommand{\tryoffset}[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{\tryparttopsep}[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{\drawspread}[8][0]{(a spread)}
138 \newcommand{\drawfontframe}[1]{(font frame)}
139 \newcommand{\drawfontframeLabel}[1]{}

```

---

File 212 **lwarp-leading.sty**

§ 312 Package **leading**

Pkg leading leading is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{leading}[2008/12/11]

2 \newcommand\Leading[1]{}

File 213 **lwarp-leftidx.sty**

§ 313 Package **leftidx**

*(Emulates or patches code by HARALD HARDERS.)*

Pkg leftidx 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 214 **lwarp-letterspace.sty**

§ 314 Package **letterspace**

*(Emulates or patches code by R SCHLICHT.)*

Pkg letterspace letterspace is a subset of microtype, which is pre-loaded by lwarp. All user options and macros are ignored and disabled.

**for HTML output:** Discard all options for lwarp-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 215 **lwarp-lettrine.sty**

§ 315 Package **lettrine**

*(Emulates or patches code by DANIEL FLIPO.)*

Pkg lettrine lettrine is emulated.

**for HTML output:** Discard all options for lwarp-lettrine:

```

1 \LWR@ProvidesPackageDrop{lettrine}[2018-08-28]

```

The initial letter is in a `<span>` of class `lettrine`, and the following text is in a `<span>` 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 216 **lwarp-lineno.sty**

§ 316 Package **lineno**

*(Emulates or patches code by STEPHAN I. BÖTTCHER.)*

Pkg Lineno **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\line\label\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*\linerefp}[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\thelinenumbers{}
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=\fbboxrule
104
105 \newdimen\bframesep
106 \bframesep=\fbboxsep
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 217 **lwarp-lips.sty**

§ 317 Package **lips**

*(Emulates or patches code by MATT SWIFT.)*

Pkg lips **lips** is emulated.

```

1 % \LWR@ProvidesPackageDrop{lips}
2 \PackageInfo{lwarp}{Using the lwarp version of package 'lips'.}%
3 \ProvidesPackage{lwarp-lips}[2001/08/31]
4
5 \NewDocumentCommand{\Lips}{}{\textellipsis}
6
7 \NewDocumentCommand{\BracketedLips}{}{[\textellipsis]}
8
9 \let\lips\Lips
10 \let\olips\lips
11
12 \DeclareOption*{}
13 \DeclareOption{mla}{
14 \let\lips\BracketedLips
15 }
16 \ProcessOptions\relax
17
18 \newcommand \LPNobreakList {}

```

---

File 218 **lwarp-listings.sty**

§ 318 Package **listings**

*(Emulates or patches code by CARSTEN HEINZ, BROOKS MOSES, JOBST HOFFMANN.)*

Pkg listings **listings** is supported with some limitations. Text formatting is not yet supported.

**for HTML output:** 1 \begin{warphTML}

```
2 \LWR@ProvidesPackagePass{listings}[2018/09/02]
```

Force flexible columns. Fixed columns inserts spaces in the PDF output.

```
3 \lst@column@flexible
```

Patches to embed listings inside pre tags:

```
4 \let\LWR@origlst@Init\lst@Init
5 \let\LWR@origlst@DeInit\lst@DeInit
```

```

6
7 \let\LWR@origlsthkEveryPar\lsthk@EveryPar
8
9 \renewcommand{\l@lstlisting}[2]{\hypertocfloat{1}{\lstlisting}{lol}{#1}{#2}}

```

`\lstset`    *{<options>}*

Use the `listings` `literate` option to replace HTML entities:

```

10 \def\lstset@#1{\endgroup%
11 % \ifx\@empty#1%
12 % \@empty%
13 % \else%
14 \setkeys{lst}{%
15 #1%
16 ,literate=%
17 {<}{\HTMLentity{lt}}{4}%
18 {>}{\HTMLentity{gt}}{4}%
19 {\&}{\HTMLentity{amp}}{5}%
20 }%
21 % \fi%
22 }

```

`\lst@Init`    *{<backslash-processing>}*    Done at the start of a listing.

```
23 \renewcommand{\lst@Init}[1]{%
```

Perform the listings initialization:

```

24 \LWR@traceinfo{lst@Init}%
25 \renewcommand*\@capttype{\lstlisting}%
26 \let\lst@aboveskip\z@\let\lst@belowskip\z@%
27 \gdef\lst@boxpos{t}%
28 \let\lst@frame\@empty
29 \let\lst@frametshape\@empty
30 \let\lst@framershape\@empty
31 \let\lst@framebshape\@empty
32 \let\lst@framelshape\@empty
33 \lstframe@\lst@framershape ffff\relax%
34 \lst@multicols\@empty%
35 \LWR@origlst@Init{#1}\relax%

```

Avoids extra horizontal space:

```

36 \def\lst@frame{lr}%
37 \LWR@traceinfo{finished origlst@Init}%
38 \lst@ifdisplaystyle%

```

Creating a display.

Disable line numbers, produce the `<pre>`, then reenable line numbers.

```

39 \LWR@traceinfo{About to create verbatim.}%
40 \let\lsthk@EveryPar\relax%
41 \LWR@forcenewpage
42 \LWR@atbeginverbatim{2}{programlisting}%
43

```

```
44 \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
45 \else%
```

Inline, so open a <span>:

```
46 \ifbool{LWR@verbtags}{\LWR@htmltag{span class="inlineprogramlisting"}}{}%
47 \fi%
48 }
49
```

`\lst@DeInit` Done at the end of a listing.

```
50 \renewcommand*{\lst@DeInit}{%
51 \lst@ifdisplaystyle%
```

Creating a display.

Disable line numbers, produce the </pre>, then reenable line numbers:

```
52 \let\lsthk@EveryPar\relax%
53 \LWR@afterrendverbatim{0}%
54 \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
55 \else%
```

Inline, so create the closing </span>:

```
56 \ifbool{LWR@verbtags}{\noindent\LWR@htmltag{/span}}{}%
57 \fi%
```

Final listings deinit:

```
58 \LWR@origlst@DeInit%
59 }
```

`\lst@MakeCaption` `{\t/b}`

This is called BOTH at the top and at the bottom of each listing.

Patched for lwarp.

```
60 \def\lst@MakeCaption#1{%
61 \LWR@traceinfo{MAKING CAPTION at #1}%
62 \lst@ifdisplaystyle
63 \LWR@traceinfo{making a listings display caption}%
64 \ifx #1t%
65 \ifx\lst@caption\@empty\expandafter\lst@HRefStepCounter \else
66 \expandafter\refstepcounter
67 \fi {lstlisting}%
68 \LWR@traceinfo{About to assign label: !\lst@label!}%
69 % \ifx\lst@label\@empty\else
70 % \label{\lst@label}\fi
71 \LWR@traceinfo{Finished assigning the label.}%
72 \let\lst@arg\lst@intname \lst@ReplaceIn\lst@arg\lst@filenamerpl
73 \global\let\lst@name\lst@arg \global\let\lstname\lst@name
74 \lst@ifnolol\else
75 \ifx\lst@caption\@empty
76 \ifx\lst@caption\@empty
77 \ifx\lst@intname\@empty \else \def\lst@temp{ }%
78 \ifx\lst@intname\lst@temp \else
```

This code places a contents entry for a non-float. This would have to be modified for **lwarp**:

```

79 \LWR@traceinfo{addcontents lst@name: -\lst@name-}%
80 % \addcontentsline{lol}{lstlisting}{\lst@name}
81 \fi\fi
82 \fi
83 \else

```

This would have to be modified for **lwarp**:

```

84 \LWR@traceinfo{addcontents lst@caption: -\lst@caption-}%
85 \addcontentsline{lol}{lstlisting}%
86 {\protect\numberline{\thelstlisting}%
87 {\protect\ignorespaces \LWR@isolate{\lst@caption} \protect\relax}}%
88 \fi
89 \fi
90 \fi
91 \ifx\lst@caption\@empty\else
92 \LWR@traceinfo{lst@caption not empty-}%
93 \lst@ifsubstring #1\lst@captionpos
94 {\begingroup
95 \LWR@traceinfo{at the selected position}%

```

These space and box commands are not needed for HTML output:

```

96 % \let\@vskip\vskip
97 % \def\vskip{\afterassignment\lst@vskip \@tempskipa}%
98 % \def\lst@vskip{\nobreak\@vskip\@tempskipa\nobreak}%
99 % \par\@parboxrestore\normalsize\normalfont % \noindent (AS)
100 % \ifx #1t\allowbreak \fi
101 \ifx\lst@title\@empty

```

New **lwarp** code to create a caption:

```

102 \LWR@stoppars%
103 \lst@makecaption\fnm@lstlisting{\ignorespaces \lst@caption}
104 \else

```

New **lwarp** code to create a title:

```

105 % \lst@maketitle\lst@title % (AS)
106 \LWR@traceinfo{Making title: \lst@title}%
107 \begin{BlockClass}{lstlistingtitle}% lwarp
108 \lst@maketitle\lst@title% lwarp
109 \end{BlockClass}% lwarp
110 \fi
111 \LWR@traceinfo{About to assign label: !\lst@label!}%
112 \ifx\lst@label\@empty\else
113 \leavevmode% gets rid of bad space factor error
114 \GetTitleStringExpand{\lst@caption}%
115 \edef\LWR@lntemp{\GetTitleStringResult}%
116 \edef\@currentlabelname{\detokenize\expandafter{\LWR@lntemp}}%
117 \label{\lst@label}\fi
118 \LWR@traceinfo{Finished assigning the label.}%

```

Not needed for **lwarp**:

```

119 % \ifx #1b\allowbreak \fi
120 \endgroup}{}%

```

```

121 \fi
122 \LWR@traceinfo{end of making a listings display caption}%
123 \else
124 \LWR@traceinfo{INLINE}%
125 \fi
126 \LWR@traceinfo{DONE WITH CAPTION at #1}%
127 }

```

**line numbers** Patched to keep left line numbers outside of the left margin, and place right line numbers in a field `\VerbatimHTMLWidth` wide.

```

128 \lst@Key{numbers}{none}{%
129 \let\lst@PlaceNumber\@empty
130 \lstKV@SwitchCases{#1}%
131 {none:\\%
132 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.

```

133 % \LWR@origllap{
134 \LWR@orignormalfont%
135 \lst@numberstyle{\thelstnumber}\kern\lst@numbersep%
136 % }
137 }\\%
138 right:\def\lst@PlaceNumber{\LWR@origrlap{\LWR@orignormalfont
139 \kern 6in \kern\lst@numbersep
140 \lst@numberstyle{\thelstnumber}}}%
141 }{\PackageError{lwarp-listings}{Numbers #1 unknown}\@ehc}

```

142 \end{warpHTML}

---

File 219 **lwarp-listliketab.sty**

§ 319 Package **listliketab**

Pkg listliketab listliketab is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{listliketab}[2005/01/09]

```

2 \newcommand*{\storestyleof}[1]{}
3 \newcommand*{\storeliststyle}{}
4 \newenvironment{listliketab}{}{}

```

---

File 220 **lwarp-lltjext.sty**

§ 320 Package **lltjext**

*(Emulates or patches code by THE L<sup>A</sup>T<sub>E</sub>X-JA PROJECT TEAM.)*

Pkg `lltjext` `lltjext` is patched for use by `lwarp`.

**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{\rensuji}{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 #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 221 **lwarp-longtable.sty**

§ 321 Package **longtable**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg `longtable` `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 `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 . . .
\warpprintonly{
[<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}

```

Env `longtable` \* [*horizontal*] [*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 \setcaptiontype{LTcaption}%
7 \caption@setoptions{longtable}%
8 \caption@setoptions{@longtable}%
9 \caption@LT@setup%
10 \booltrue{LWR@starredlongtable}%
11 \boolfalse{LWR@longtable@havehead}%

```

```

12 \let\captionlistentry\LWR@LTcaptionlistentry%
13 \tabular{#2}%
14 }
15 {\endtabular\LWR@floatend}
16
17 \newenvironment{longtable}[2][]{%
18 \LWR@floatbegin{table}%
19 \setcaptiontype{LTcaption}%
20 \caption@setoptions{longtable}%
21 \caption@setoptions{@longtable}%
22 \caption@LT@setup%
23 \refstepcounter{LTcaption}%
24 \boolfalse{LWR@longtable@havehead}%
25 \let\captionlistentry\LWR@LTcaptionlistentry%
26 \tabular{#2}%
27 }
28 {\endtabular\LWR@floatend}

```

Provided for compatibility, but ignored:

```
29 \newcounter{LTchunksize}
```

Error for heads which should have been in \warpprintonly:

```

30 \newcommand*{\LWR@longtable@headerror}{%
31 \PackageError{lwarp}
32 {For longtable:\MessageBreak
33 1: Keep either one of an \protect\endhead\space or
34 \protect\endfirsthead\space\MessageBreak
35 \space phrase as-is, to be used by both print and HTML.\MessageBreak
36 2: Place any other \protect\end... phrases inside a\MessageBreak
37 \space\protect\warpprintonly\space macro,
38 to be ignored by HTML.\MessageBreak
39 3: Add a final footer for HTML at the end of the table\MessageBreak
40 \space inside a \protect\warpprintonly\space macro.
41 This can be\MessageBreak
42 \space a copy of an \protect\endfoot\space or
43 \protect\endfirstfoot\space phrase,\MessageBreak
44 \space but without the actual \protect\endfoot\space
45 or \protect\endfirstfoot\MessageBreak
46 \space macros. If using threeparttablex, add\MessageBreak
47 \space \protect\insertTableNotes\space here,
48 optionally with\MessageBreak
49 \space \protect\UseMinipageWidths\space in front.\MessageBreak
50 See the Lwarp documentation regarding longtables\MessageBreak
51 and threeparttablex}
52 {See the Lwarp documentation regarding longtables and threeparttablex.}
53 }

```

Error if more than one of \endhead or \endfirsthead is outside of warpprintonly.

```

54 \newcommand*{\LWR@longtable@maybeheaderror}{%
55 \ifbool{LWR@longtable@havehead}%
56 {\LWR@longtable@headerror}%

```

```

57 {%
58 \booltrue{LWR@longtable@havehead}
59 \LWR@tabularendofline% throws away options //[dim] and //*
60 }%
61 }

```

Error if more than one of these is outside of warpprint.

```

62 \def\endhead{\LWR@longtable@maybeheaderror}
63 \def\endfirsthead{\LWR@longtable@maybeheaderror}

```

Error if ANY of these is outside of warpprint.

```

64 \def\endfoot{\LWR@longtable@headerror}
65 \def\endlastfoot{\LWR@longtable@headerror}

66 \providecommand*\LWR@HTML@tabularnewline{\LWR@tabularendofline}
67 \LWR@formatted{tabularnewline}

68 \newcommand{\setlongtables}{}% Obsolete command, does nothing.
69 \newlength{\LTleft}
70 \newlength{\LTright}
71 \newlength{\LTpre}
72 \newlength{\LTpost}
73 \newlength{\LTcapwidth}

74 \LetLtxMacro\LWR@origkill\kill
75 \renewcommand*\kill{\LWR@tabularendofline}
76 \appto\LWR@restoreorigformatting{%
77 \LetLtxMacro\kill\LWR@origkill%
78 }

```

---

File 222 **lwarp-lscape.sty**

§ 322 Package **lscape**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg lscape **lscape** is ignored.

**for HTML output:** Discard all options for lwarp-lscape.

```

1 \LWR@ProvidesPackageDrop{lscape}[2000/10/22]

2 \newenvironment*{landscape}{}{}

```

---

File 223 **lwarp-ltablex.sty**

§ 323 Package **ltablex**

*(Emulates or patches code by ANIL K. GOEL.)*

Pkg ltablex **ltablex** is emulated by **lwarp**.

**for HTML output:** Relies on **tabularx**.

```

1 \RequirePackage{longtable}
2 \RequirePackage{tabularx}
3
4 \LWR@ProvidesPackageDrop{ltablex}[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 224 **lwarp-ltcaption.sty**

§ 324 Package **ltcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg ltcaption **ltcaption** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ltcaption}[2018/08/26]

\LTcapttype is already defined by **lwarp**.

longtable\* is already defined by **lwarp-longtable**.

```

2 \newlength{\LTcapskip}
3 \newlength{\LTcapleft}
4 \newlength{\LTcapright}
5 \newcommand*{\LTcapmarginfalse}{}

```

---

File 225 **lwarp-ltxgrid.sty**

§ 325 Package **ltxgrid**

Pkg ltxgrid 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*\replacestuff[2]{}

```

---

File 226 **lwarp-ltxtable.sty**

§ 326 Package **ltxtable**

Pkg ltxtable ltxtable is emulated.

 **table numbering** The print version does not seem to honor longtable\* from the caption package, while lwarp does.

**for HTML output:** 1 \RequirePackage{tabularx, longtable}  
2 \LWR@ProvidesPackageDrop{ltxtable}[1995/12/11]

```
\LTXtable {<width>} {<file>}
3 \newcommand*\LTXtable[2]{%
4 \input{#2}%
5 }

```

---

File 227 **lwarp-lua-check-hyphen.sty**

§ 327 Package **lua-check-hyphen**

Pkg lua-check-hyphen lua-check-hyphen is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{lua-check-hyphen}[2018/04/19]

```
2 \newcommand*\LuaCheckHyphen[1]{}

```

---

File 228 **lwarp-lua-visual-debug.sty**

§ 328 Package **lua-visual-debug**

Pkg lua-visual-debug lua-visual-debug is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{lua-visual-debug}[2016/05/30]

---

File 229 **lwarp-luacolor.sty**

§ 329 Package **luacolor**

Pkg luacolor luacolor is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{luacolor}[2016/05/16]

2 \newcommand{\luacolorProcessBox}[1]{}  


---

File 230 **lwarp-luamplib.sty**

§ 330 Package **luamplib**

*(Emulates or patches code by HANS HAGEN, TACO HOEKWATER, ELIE ROUX, PHILIPP GESANG, KIM DOHYUN.)*

Pkg luamplib luamplib is patched for use by lwarp.

**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 231 **lwarp-luatodonotes.sty**

§ 331 Package **luatodonotes**

*(Emulates or patches code by FABIAN LIPP.)*

Pkg luatodonotes 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}{tdo}
7
8 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{todo}{ldo}{#1}{#2}}

9 \let\LWRTODONOTES@orig@todototoc\todototoc
10
11 \renewcommand*{\todototoc}{%
12 \phantomsection%
13 \LWRTODONOTES@orig@todototoc%
14 }
15
16
17 \renewcommand{\@todonotes@drawMarginNoteWithLine}{%
18 \fcolorbox
19 {\@todonotes@currentbordercolor}
20 {\@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\LRWRTODONOTES@orig@todocommon\@todocommon
64
65 \RenewDocumentCommand{\@todocommon}{m m}{%
66 \begingroup%
67 \renewcommand*\phantomsection{}%
68 \LRWRTODONOTES@orig@todocommon{#1}{#2}%
69 \endgroup%
70 }
71
72 \renewcommand{\@todoarea}[3][[]]{%
73 \@todonotes@areaselectedtrue%
74 \@todocommon{#1}{#2}%
75 \@todonotes@textmark@highlight{#3}%
76 \zref@label{\@todonotes@arabic{\@todonotes@numberoftodonotes}@end}%
77 }%
78
79
80 \DeclareDocumentCommand{\todonotes@textmark@highlight}{m}{%
81 \InlineClass[background:\LWR@origpound{ }B3FFB3]{highlight}{#1}%
82 }
83
84 \fi% \if@todonotes@disabled

```

---

File 232 **lwarp-lyluatex.sty**

§ 332 Package **lyluatex**

(Emulates or patches code by FR. JACQUES PERON, URS LISKA, BR. SAMUEL SPRINGUEL.)

Pkg lyluatex lyluatex is patched for use by lwarp.

For the first compile, to set *lwarpmk*'s configuration, use:

```
lualatex --shell-escape <filename>
```

 **images** After compiling the document with **lwarpmk html**, use **lwarpmk limages** to convert

the Lilypond images for HTML.

The option `insert=systems` results in an image per system. Each music image “system” is placed inside a `<span>` of class `lyluatex`, which defaults to `display: inline-block`.

**△ insert=fullpage** 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 ⇒ lwarpmk pdftosvg tmp-ly/*.pdf
```

**for HTML output:**

```
1 \LWR@origRequirePackage{luacode}
2
3 \LWR@ProvidesPackagePass{lyluatex}[2019/05/27]
```

User-redefinable ALT tag:

```
4 \newcommand*{\LyluatexImageAltText}{-lilypond--\PackageDiagramAltText}
```

`\ly@compilescore` `{(Lilypond object)}`

```
5 \LetLtxMacro\LWR@orig@ly@compilescore\ly@compilescore
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@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 `<span>` 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 \directlua{
22 ly_opts:set_option('currfiledir', [[\currfiledir]])
23 ly_opts:set_option('twoside', '\ly@istwosided')
24 #1
25 }%
26 \ly@resetunits%
27 \ly@currentfonts%

```

The fullpage version is set inside an HTML <div>:

```

28 \directlua{
29 if (ly.score.insert == 'fullpage') then
30 tex.print{[[\string\begin{BlockClass}{lyluatex}]]}
31 end
32 }%

```

Generate the score:

```

33 \directlua{ly.score:process()}%

```

Close the <div>:

```

34 \directlua{
35 if (ly.score.insert == 'fullpage') then
36 tex.print{[[\string\end{BlockClass}]]}
37 end
38 }%

```

Move to a new page and renew the regular page geometry:

```

39 \LWR@orignewpage%
40 \LWR@origrestoregeometry%

```

End of the local group.

```

41 \endgroup%
42 }

```

In HTML the following generates an error, so is removed:

```

43 \xpatchcmd{\endly@bufferenv}
44 {\hspace{0pt}\}
45 {}
46 {}
47 {\LWR@patcherror{lyluatex}{endly@bufferenv}}

```

---

File 233 **lwarp-magaz.sty**

§ 333 Package **magaz**

Pkg magaz 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 234 **lwarp-makeidx.sty**

§ 334 Package **makeidx**

*(Emulates or patches code by L<sup>A</sup>T<sub>E</sub>X PROJECT TEAM.)*

Pkg makeidx makeidx is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{makeidx}[2014/09/29]

\@wrindex is redefined \AtBeginDocument by the lwarp core.

\printindex

```

2 \preto\printindex{%
3 \LWR@originewpage%
4 \LWR@startpars%
5 }

```

---

File 235 **lwarp-manyfoot.sty**

§ 335 Package **manyfoot**

Pkg manyfoot 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 **lwarp** uses many counters, and there is a difference in how counters numbered 256 and up are handled in pdf<sup>L</sup>A<sub>T</sub>E<sub>X</sub>. 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 `X3LaTeX` or `LuaLaTeX` instead of `pdfLaTeX`.

`lwarp`'s emulation of `bigfoot` uses `manyfoot`, so some of the `bigfoot` enhancements are included here.

The `bigfoot` "default" footnote is ignored, using the `lwarp` version instead.

```

for HTML output: 1 \LWR@ProvidesPackageDrop{manyfoot}[2005/09/11]

2 \RequirePackage{nccfoots}
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 \ifstrequal{#2}{default}{}{% not "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 }% not "default"
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 \ifstrequal{#2}{default}{}% not "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}% absorbs the footnote contents
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}% absorbs the footnote contents
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 \@onlypreamble\DeclareNewFootnote

```

---

File 236 **lwarp-marginal.sty**

§ 336 Package **marginal**

Pkg marginal marginal is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{marginal}

2 \newcommand*\showlostmarginals{}
3 \newcommand*\enlargefreelist{}
4 \newcommand*\onesidemarginals{}

```

File 237 **lwarp-marginfit.sty**

§ 337 Package **marginfit**

Pkg marginfit marginfit is ignored.

**for HTML output:** Discard all options for lwarp-marginfit:

```
1 \LWR@ProvidesPackageDrop{marginfit}[2018/06/08]
```

File 238 **lwarp-marginfix.sty**

§ 338 Package **marginfix**

*(Emulates or patches code by STEPHEN HICKS.)*

Pkg marginfix marginfix is ignored.

**for HTML output:** Discard all options for lwarp-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][1]{}
10 \newcommand*{\unlockmargin}[1][1]{}
11 \newcommand*{\marginphantom}[2][1]{}

```

File 239 **lwarp-marginnote.sty**

§ 339 Package **marginnote**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg marginnote marginnote is emulated.

**for HTML output:** Discard all options for lwarp-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{}

```

---

File 240 **lwarp-marvosym.sty**

§ 340 Package **marvosym**

(Emulates or patches code by THOMAS HENLICH, MOJCA MIKLAVEC.)

Pkg marvosym marvosym is patched for use by lwarp.

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 241 **lwarp-mathcomp.sty**

§ 341 Package **mathcomp**

(Emulates or patches code by TILMANN BÖB.)

Pkg mathcomp 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}{\unicode{x2103}}}
5 \CustomizeMathJax{\newcommand{\tcmu}{\mathrm{\unicode{x00B5}}}}
6 \CustomizeMathJax{\newcommand{\tcperthousand}{\unicode{x2030}}}
7 \CustomizeMathJax{\newcommand{\tcperthousand}{\unicode{x2031}}}
8 \CustomizeMathJax{\newcommand{\tcdegree}{\mathrm{^\circ}}}

```

```

9 \CustomizeMathJax{\newcommand{\tcdigitoldstyle}[1]{\oldstyle{#1}}}
10 \end{warpMathJax}

```

---

File 242 **lwarp-mathdots.sty**

§ 342 Package **mathdots**

(Emulates or patches code by DAN LUECKING.)

Pkg mathdots 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}{\unicode{x22F0}}}
4 \end{warpMathJax}

```

---

File 243 **lwarp-mathfixs.sty**

§ 343 Package **mathfixs**

(Emulates or patches code by NIKLAS BEISERT.)

Pkg mathfixs 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]{\frac{#1}{#2}}}
5 \CustomizeMathJax{\newcommand{\ProvideMathFix}[1]}
6 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{#1}}}
7 \CustomizeMathJax{\newcommand{\.}{\,}}
8 \end{warpMathJax}

```

---

File 244 **lwarp-mathtools.sty**

§ 344 Package **mathtools**

(Emulates or patches code by MORTEN HØGHOLM, LARS MADSEN.)

Pkg mathtools mathtools is patched for use by lwarp. Emulation macros are provided for MATHJAX.

 **equation numbering** showonlyrefs is disabled, as it conflicts with cleveref, which is used by lwarp. Equation numbers may not match the print version.

⚠ **italic correction** `mathic` is not emulated for HTML.

⚠ **MATHJAX** If using MATHJAX:

- Starred macros are not available. Starred environments do work.
- `mathtools disallowspace` 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.
- Due to MATHJAX limitations, the following do not render well: `\overbracket`, `\underbracket`, `\overbrace`, `\underbrace`, `rcases`, `drcases`, `\Aboxed`, and `\ArrowBetweenLines`.
- For the new cases-like environments, `\text` must be used to set the normal roman font if desired.
- `alignat` in MATHJAX requires math mode, but in L<sup>A</sup>T<sub>E</sub>Xit doesn't. It may be required to use `warpHTML` and `warpprint` to isolate a version for each mode.
- `\DeclareParedDelimiter` and related must be in the preamble before `\begin{document}`. The starred versions of each macro are not created.

**for HTML output:** `1 \LWR@ProvidesPackagePass{mathtools}[2018/01/08]`

`2 \RequirePackage{graphicx}`

`3 \MHInternalSyntaxOn`

Forces `showonlyrefs` off because `lwarp` uses `cleveref`, which is not compatible with `showonlyrefs`.

```
4 \renewcommand*{\MT_showonlyrefs_true}{%
5 \PackageWarningNoLine{lwarp}
6 {%
7 Mathtools \space showonlyrefs \space conflicts \space
8 with \space cleveref,\MessageBreak
9 which \space is \space used \space by \space lwarp, \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 `lwarp`.

```
17 \renewcommand*{\MT_mathic_true:}{\MT_mathic_false:}
18 \mathtoolsset{mathic=false}
```

19 \MHInternalSyntaxOff

For MATHJAX:

```

20 \begin{warpMathJax}
21 \LWR@infoprocessingmathjax{mathtools}
22
23 \CustomizeMathJax{\newcommand{\mathllap}[2][\{#1#2\}}
24 \CustomizeMathJax{\newcommand{\mathrllap}[2][\{#1#2\}}
25 \CustomizeMathJax{\newcommand{\mathclap}[2][\{#1#2\}}
26 \CustomizeMathJax{\newcommand{\mathmbox}[1]{#1}}
27 \CustomizeMathJax{\newcommand{\cLap}[1]{#1}}
28 \CustomizeMathJax{\newcommand{\LWRmathmakebox}[2][\{#2\}}
29 \CustomizeMathJax{\newcommand{\mathmakebox}[1][\LWRmathmakebox]}
30 \CustomizeMathJax{\newcommand{\cramped}[2][\{#1#2\}}
31 \CustomizeMathJax{\newcommand{\crampedllap}[2][\{#1#2\}}
32 \CustomizeMathJax{\newcommand{\crampedrllap}[2][\{#1#2\}}
33 \CustomizeMathJax{\newcommand{\crampedclap}[2][\{#1#2\}}
34 \CustomizeMathJax{\newenvironment{crampedsubarray}[1]{\{}}
35 \CustomizeMathJax{\newcommand{\crampedsubstack}{}}
36 \CustomizeMathJax{\newcommand{\smashoperator}[2][\{#2\}}
37 \CustomizeMathJax{\newcommand{\SwapAboveDisplaySkip}{}}
38
39 \CustomizeMathJax{\require{extpfeil}}
40 \CustomizeMathJax{\Newextarrow\xleftarrow{10,10}{0x2194}}
41 \CustomizeMathJax{\Newextarrow\xleftarrow{10,10}{0x21d0}}
42 \CustomizeMathJax{\Newextarrow\xhookrightarrow{10,10}{0x21a9}}
43 \CustomizeMathJax{\Newextarrow\xmapsto{10,10}{0x21a6}}
44 \CustomizeMathJax{\Newextarrow\xrightarrow{10,10}{0x21d2}}
45 \CustomizeMathJax{\Newextarrow\xleftarrow{10,10}{0x21d4}}
46 \CustomizeMathJax{\Newextarrow\xhookrightarrow{10,10}{0x21aa}}
47 \CustomizeMathJax{\Newextarrow\xrightharpoondown{10,10}{0x21c1}}
48 \CustomizeMathJax{\Newextarrow\xleftharpoondown{10,10}{0x21bd}}
49 \CustomizeMathJax{\Newextarrow\xrightleftharpoons{10,10}{0x21cc}}
50 \CustomizeMathJax{\Newextarrow\xrightharpoonup{10,10}{0x21c0}}
51 \CustomizeMathJax{\Newextarrow\xleftharpoonup{10,10}{0x21bc}}
52 \CustomizeMathJax{\Newextarrow\xleftrightharpoons{10,10}{0x21cb}}
53
54 \CustomizeMathJax{\newcommand{\LWRdounderbracket}[1]{\underline{#1}}}
55 \CustomizeMathJax{\newcommand{\LWRunderbracket}[2][\LWRdounderbracket{#2}}
56 \CustomizeMathJax{\newcommand{\underbracket}[1][\LWRunderbracket]}
57 \CustomizeMathJax{\newcommand{\LWRdooverbracket}[1]{\overline{#1}}}
58 \CustomizeMathJax{\newcommand{\LWRoverbracket}[2][\LWRdooverbracket{#2}}
59 \CustomizeMathJax{\newcommand{\overbracket}[1][\LWRoverbracket]}
60
61 \CustomizeMathJax{\newcommand{\LaTeXunderbrace}[1]{\underbrace{#1}}}
62 \CustomizeMathJax{\newcommand{\LaTeXoverbrace}[1]{\overbrace{#1}}}
63
64 \CustomizeMathJax{\newenvironment{matrix*}[1][\begin{matrix}]{\end{matrix}}}
65 \CustomizeMathJax{\newenvironment{pmatrix*}[1][\begin{pmatrix}]{\end{pmatrix}}}
66 \CustomizeMathJax{\newenvironment{bmatrix*}[1][\begin{bmatrix}]{\end{bmatrix}}}
67 \CustomizeMathJax{\newenvironment{Bmatrix*}[1][\begin{Bmatrix}]{\end{Bmatrix}}}
68 \CustomizeMathJax{\newenvironment{vmatrix*}[1][\begin{vmatrix}]{\end{vmatrix}}}
69 \CustomizeMathJax{\newenvironment{Vmatrix*}[1][\begin{Vmatrix}]{\end{Vmatrix}}}
70 \CustomizeMathJax{\newenvironment{smallmatrix*}[1][\begin{matrix}]{\end{matrix}}}

```

```

71 \CustomizeMathJax{\newenvironment{psmallmatrix*}[1][\begin{pmatrix}]{\end{pmatrix}}}
72 \CustomizeMathJax{\newenvironment{bsmallmatrix*}[1][\begin{bmatrix}]{\end{bmatrix}}}
73 \CustomizeMathJax{\newenvironment{Bsmallmatrix*}[1][\begin{Bmatrix}]{\end{Bmatrix}}}
74 \CustomizeMathJax{\newenvironment{vsmallmatrix*}[1][\begin{vmatrix}]{\end{vmatrix}}}
75 \CustomizeMathJax{\newenvironment{Vsmallmatrix*}[1][\begin{Vmatrix}]{\end{Vmatrix}}}
76 \CustomizeMathJax{\newenvironment{psmallmatrix}[1][\begin{pmatrix}]{\end{pmatrix}}}
77 \CustomizeMathJax{\newenvironment{bsmallmatrix}[1][\begin{bmatrix}]{\end{bmatrix}}}
78 \CustomizeMathJax{\newenvironment{Bsmallmatrix}[1][\begin{Bmatrix}]{\end{Bmatrix}}}
79 \CustomizeMathJax{\newenvironment{vsmallmatrix}[1][\begin{vmatrix}]{\end{vmatrix}}}
80 \CustomizeMathJax{\newenvironment{Vsmallmatrix}[1][\begin{Vmatrix}]{\end{Vmatrix}}}
81
82
83 \CustomizeMathJax{\newcommand{\LWRmultlined}[1][\begin{multline*}]}
84 \CustomizeMathJax{\newenvironment{multlined}[1][\LWRmultlined]{\end{multline*}}}
85
86 \CustomizeMathJax{\let\LWRorigshoveleft\shoveleft}
87 \CustomizeMathJax{\renewcommand{\shoveleft}[1][\LWRorigshoveleft]}
88 \CustomizeMathJax{\let\LWRorigshoveright\shoveright}
89 \CustomizeMathJax{\renewcommand{\shoveright}[1][\LWRorigshoveright]}
90
91 \CustomizeMathJax{\newenvironment{dcases}{\begin{cases}}{\end{cases}}}
92 \CustomizeMathJax{\newenvironment{dcases*}{\begin{cases}}{\end{cases}}}
93 \CustomizeMathJax{\newenvironment{rcases}{\begin{cases}}{\end{cases}}}
94 \CustomizeMathJax{\newenvironment{rcases*}{\begin{cases}}{\end{cases}}}
95 \CustomizeMathJax{\newenvironment{drcases}{\begin{cases}}{\end{cases}}}
96 \CustomizeMathJax{\newenvironment{drcases*}{\begin{cases}}{\end{cases}}}
97 \CustomizeMathJax{\newenvironment{cases*}{\begin{cases}}{\end{cases}}}
98
99 \CustomizeMathJax{\newcommand{\MoveEqLeft}[1][{}]}
100
101 \CustomizeMathJax{% special parsing to handle ' & ' in argument
102 \def\LWRAboxed#1!|!{\fbox{\(#1\)}&\fbox{\(#2\)}}
103 \newcommand{\Aboxed}[1]{\LWRAboxed#1&&!|!}
104 }
105
106 \CustomizeMathJax{
107 \newcommand{\ArrowBetweenLines}[1][\Updownarrow]{#1}% no starred
108 }
109
110 \CustomizeMathJax{\newcommand{\shortintertext}[1]{\ \text{#1}\notag \ \}}
111
112 \CustomizeMathJax{\newcommand{\vdotswithin}[1]{\hspace{.5em}\vdots}}
113 \CustomizeMathJax{\newcommand{\shortvdotswithin}[1]{ & \hspace{.5em}\vdots \ \}}
114 \CustomizeMathJax{\newcommand{\MTFlushSpaceAbove}{}}
115 \CustomizeMathJax{\newcommand{\MTFlushSpaceBelow}{\ \}}
116
117 % The following does not create a starred version of the macro:
118 \LetLtxMacro\LWR@mathtools@orig@DeclarePairedDelimiter\DeclarePairedDelimiter
119 \renewcommand{\DeclarePairedDelimiter}[3]{
120 \LWR@mathtools@orig@DeclarePairedDelimiter{#1}{#2}{#3}
121 \CustomizeMathJax{\newcommand{#1}[2][\{##1#2##1#3\}}
122 }
123 \@onlypreamble\DeclarePairedDelimiter
124
125 % (DeclarePairedDelimiterX is already defined to use \DeclarePairedDelimiterXPP.)

```

```

126
127 % The following does not create a starred version of the macro.
128 \letLtxMacro\LWR@mathtools@orig@DeclarePairedDelimiterXPP\DeclarePairedDelimiterXPP
129 \DeclareDocumentCommand{\DeclarePairedDelimiterXPP}{m O{1} m m m m m}{
130 \LWR@mathtools@orig@DeclarePairedDelimiterXPP{#1}[#2]{#3}{#4}{#5}{#6}{#7}
131 \appto\LWR@customizedMathJax{\LWRbackslash{}}%
132 \appto\LWR@customizedMathJax{%
133 \LWRbackslash{}newcommand{\LWRbackslash\macrotoctocname{#1}LWRsub\}%
134 }%
135 \appto\LWR@customizedMathJax{[#2]}%
136 \appto\LWR@customizedMathJax{\{\LWRbackslash\}delimsize}%
137 \LWR@subcustomizedmathjax{#3#4#7}%
138 \appto\LWR@customizedMathJax{\LWRbackslash\}delimsize}%
139 \LWR@subcustomizedmathjax{#5#6}%
140 \appto\LWR@customizedMathJax{\}\}%
141 \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
142 \appto\LWR@customizedMathJax{\LWRbackslash{}}%
143 \appto\LWR@customizedMathJax{%
144 \LWRbackslash{}newcommand{\LWRbackslash\macrotoctocname{#1}\}[1][]%
145 }%
146 \appto\LWR@customizedMathJax{%
147 \{
148 \LWRbackslash\}def\LWRbackslash\}delimsize\{\#1\}
149 \LWRbackslash\macrotoctocname{#1}LWRsub
150 \}%
151 }%
152 \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
153 }
154 \@onlypreamble\DeclarePairedDelimiterXPP
155 \@onlypreamble\DeclarePairedDelimiterX
156
157 \CustomizeMathJax{\newcommand\lparen{}}
158 \CustomizeMathJax{\newcommand\rparen{}}
159 \CustomizeMathJax{\newcommand\vcentcolon}{:}}
160 \CustomizeMathJax{\newcommand\ordinarycolon}{:}}
161
162 \CustomizeMathJax{\newcommand\dblcolon{\vcentcolon\vcentcolon}}
163 \CustomizeMathJax{\newcommand\coloneqq{\vcentcolon=}}
164 \CustomizeMathJax{\newcommand\Coloneqq{\dblcolon=}}
165 \CustomizeMathJax{\newcommand\coloneq{\vcentcolon{-}}}
166 \CustomizeMathJax{\newcommand\Coloneq{\dblcolon{-}}}
167
168 \CustomizeMathJax{\newcommand\eqqcolon{=\vcentcolon}}
169 \CustomizeMathJax{\newcommand\Eqqcolon{=\dblcolon}}
170 \CustomizeMathJax{\newcommand\eqcolon{\mathrel{-}\vcentcolon}}
171 \CustomizeMathJax{\newcommand\Eqcolon{\mathrel{-}\dblcolon}}
172
173 \CustomizeMathJax{\newcommand\colonapprox{\vcentcolon\approx}}
174 \CustomizeMathJax{\newcommand\Colonapprox{\dblcolon\approx}}
175 \CustomizeMathJax{\newcommand\colonsim{\vcentcolon\sim}}
176 \CustomizeMathJax{\newcommand\Colonsim{\dblcolon\sim}}
177
178 \CustomizeMathJax{\newcommand\canceluparrow{\cancel{\uparrow}}}
179 \CustomizeMathJax{\newcommand\canceledownarrow{\cancel{\downarrow}}}
180 \CustomizeMathJax{\newcommand\bigtimes{\Large\times}}

```

```

181
182 \CustomizeMathJax{\newcommand{\prescript}[3]{{}^{\#1}_{\#2}\#3}}
183
184
185 \CustomizeMathJax{\newenvironment{lgathered}{\begin{gathered}}{\end{gathered}}}
186 \CustomizeMathJax{\newenvironment{rgathered}{\begin{gathered}}{\end{gathered}}}
187
188 \LetLtxMacro\LWR@mathtools@orig@newgathered\newgathered
189 \renewcommand{\newgathered}[4]{%
190 \LWR@mathtools@orig@newgathered{\#1}{\#2}{\#3}{\#4}%
191 \appto\LWR@customizedMathJax{\LWRbackslash}%
192 \LWR@subcustomizedmathjax{%
193 \newenvironment{\#1}{\begin{gathered}}{\end{gathered}}%
194 }%
195 \appto\LWR@customizedMathJax{\LWRbackslash}}%
196 }
197 \@onlypreamble\newgathered
198
199 \CustomizeMathJax{\newcommand{\splitfrac}[2]{{}^{\#1}_{\#2}}}
200 \CustomizeMathJax{\let\splitfrac\splitfrac}
201 \end{warpMathJax}

```

---

File 245 **lwarp-mcaption.sty**

§ 345 Package **mcaption**

*(Emulates or patches code by STEPHAN HENNIG.)*

Pkg mcaption mcaption is ignored.

**for HTML output:** Discard all options for lwarp-mcaption:

```

1 \LWR@ProvidesPackageDrop{mcaption}[2009/03/13]

2 \newenvironment{margincap}{}{}
3 \newcommand*\margincapalign{}{}
4 \newlength{\margincapsep}

```

---

File 246 **lwarp-mdframed.sty**

§ 346 Package **mdframed**

*(Emulates or patches code by MARCO DANIEL, ELKE SCHUBERT.)*

Pkg mdframed mdframed is loaded with options forced to framemethod=none.

### § 346.1 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, `lwarp` 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 `lwarp` 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.

### § 346.2 Package loading

**for HTML output:**

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackageDrop{mdframed}[2013/07/01]
```

Do not require `Tikz` or `pstricks`:

```
4 \LWR@origRequirePackage[framemethod=none]{mdframed}
```

### § 346.3 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 % \@nmblistfalse%
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

```

#### § 346.4 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@mdf@start\LWR@print@raggedright},
34endcode={\LWR@mdf@end},
35startinnercode={\LWR@startpars\LWR@print@raggedright},
36endinnercode={\LWR@stoppars},
37}

```

#### § 346.5 Color and length HTML conversion

`\LWR@mdfprintcolor`     $\{\langle mdfcolorkey \rangle\}$

Given the `mdf@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 `mdf@key`, print the length.

```

42 \newcommand*\LWR@mdfprintlength[1]{%
43 \LWR@forceminwidth{\@nameuse{mdf@#1@length}}%
44 \LWR@printlength{\LWR@atleastonept}%
45 }

```

## § 346.6 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}%
```

Turn off paragraph handling during the generation of the encapsulating tags:

```
48 \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.

```
49 \LWR@htmltagc{div class="%
50 mdframed%
51 \ifdefstring{\LWR@mdthisenv}{mdframed}}{\LWR@mdthisenv}%
52 " \LWR@orignewline
53 style=" \LWR@orignewline
```

Convert and print the background color:

```
54 background: \LWR@mdfprintcolor{backgroundcolor} ; \LWR@orignewline
```

Convert and print the border color and width:

```
55 border: \LWR@mdfprintlength{linewidth} solid
56 \LWR@mdfprintcolor{linecolor} ; \LWR@orignewline
```

Convert and print the border radius:

```
57 border-radius: \LWR@mdfprintlength{roundcorner} ; \LWR@orignewline
```

Convert and print the shadow:

```
58 \ifbool{mdf@shadow}{%
59 box-shadow:
60 \LWR@mdfprintlength{shadowsize}
61 \LWR@mdfprintlength{shadowsize}
62 \LWR@mdfprintlength{shadowsize}
63 \LWR@mdfprintcolor{shadowcolor} ;
64 }
65 {box-shadow: none ;}
66 \LWR@orignewline
```

```
67 "}
68 % \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`:

```
69 \LWR@select@print@hspace%
70 \renewcommand*\rule}{\LWR@print@rule}
71 \LetLtxMacro\makebox\LWR@print@makebox%

72 \LWR@startpars%
73 \LWR@traceinfo{\LWR@mdframedstart done}%
74 }
```

`\LWR@mdframedend`    Actions after an mdframe ends.

After closing the `<div>`, globally restore to the default environment type:

```
75 \newcommand*\LWR@mdframedend}{
76 \LWR@traceinfo{\LWR@mdframedend start}%
```

Close the custom `<div>`:

```
77 \LWR@htmldivclassend{\LWR@mdthisenv}
```

Reset future custom class to the default:

```
78 \gdef\LWR@mdthisenv{mdframed}
```

Resume paragraph handling:

```
79 \LWR@startpars%
80 \LWR@traceinfo{\LWR@mdframedend done}%
81 }
```

### § 346.7 Mdfamed environment

```
82 \renewenvironment{mdframed}[1][]{%
83 \color@begingroup%
84 \mdfsetup{userdefinedwidth=\linewidth,#1}%
85 \mdf@startcode%
86 \mdf@preenvsetting%
87 \ifdefempty{\mdf@firstframetitle}{}%
88 {\let\mdf@frametitlesave\mdf@frametitle%
89 \let\mdf@frametitle\mdf@firstframetitle%
90 }%
91 \ifvmode\nointerlineskip\fi
92 \ifdefempty{\mdf@frametitle}{}%
93 {\mdfframedtitleenv{\mdf@frametitle}%
94 \mdf@@frametitle@use%
95 }%
96 \mdf@trivlist{\mdf@skipabove@length}%%
97 \mdf@settings%
98 % \mdf@lrbox{\mdf@splitbox@one}%
99 % \mdf@startinnercode%
100 }%
101 {%
102 % \mdf@@ignorelastdescenders%
103 \par%
104 % \unskip\ifvmode\nointerlineskip\hrule \@height\z@ \@width\hsize\fi%%
105 \ifmdf@footnoteinside%
106 \def\mdf@reserveda{%
107 \mdf@footnoteoutput%
108 }
109 \endmdf@lrbox%
110 \ifdefempty{\mdf@frametitle}{}%
111 {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
112 \detected@mdf@put@frame
113 }%
114 \else%
115 \def\mdf@reserveda{%
116 \mdf@endinnercode%
117 }
118 \endmdf@lrbox%
```

```

118 % \ifdefempty{\mdf@frametitle}{}%
119 % {\mdfframedtitleenv{\mdf@frametitle}\mdf@frametitle@use}%
120 % \detected@mdf@put@frame%
121 \mdf@footnoteoutput%
122 }%
123 \fi%
124 \mdf@reserveda%
125 \aftergroup\endmdf@trivlist%
126 \color@endgroup%
127 \mdf@endcode%
128 }

```

\mdf@footnoteoutput

```

129 \renewrobustcmd*\mdf@footnoteoutput{%
130 \LWR@printpendingmpfootnotes%
131 }

```

## § 346.8 Titles and subtitles

\mdfframedtitleenv *{<title>}*

Place the title inside a <div> of class mdfframedtitle:

```

132 \newlength{\LWR@titleroundcorner}
133
134 \renewrobustcmd\mdfframedtitleenv[1]{%
135 \LWR@traceinfo{\LWR@mdfframedtitleenv start}%

```

Open a <div> with a custom class and custom style:

```

136 \begin{BlockClass}[%

```

Convert and print the title background color:

```

137 background:
138 \LWR@mdfprintcolor{frametitlebackgroundcolor}
139 ; \LWR@orignewline

```

Convert and print the title rule:

```

140 \ifbool{mdf@frametitlerule}{%
141 border-bottom:
142 \LWR@mdfprintlength{frametitlerulewidth}
143 solid
144 \LWR@mdfprintcolor{frametitlerulecolor}
145 ; \LWR@orignewline
146 }{}%

```

Finish the custom style and the opening <div> tag:

```

147]{mdfframedtitle}%

```

Print the title inside the <div>:

```

148 \mdf@frametitlefont{\LWR@textcurrentfont{#1}}%

```

Close the <div>:

```

149 \end{BlockClass}%
150 \LWR@traceinfo{\LWR@mdfframedtitleenv end}%
151 }

```

```
\LWR@mdfsubtitlecommon {<sub — or — subsub> [<options>] {<title>}
```

Common code for \LWR@mdfsubtitle and \LWR@mdfsubsubtitle.

Encapsulate the subtitle inside a <div> of class mdframedsubtitle:

```
152 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}
153 {% the following empty line is required
154
155 \LWR@traceinfo{\LWR@mdframedsubtitlecommon start}%
```

Open a <div> with a custom class and custom style:

```
156 \begin{BlockClass}{%
```

Convert and print the background color:

```
157 background:
158 \LWR@mdfprintcolor{#1titlebackgroundcolor}
159 ; \LWR@orignewline
```

Convert and print the above line:

```
160 \ifbool{mdf@#1titleaboveline}{%
161 border-top:
162 \LWR@mdfprintlength{#1titleabovelinewidth}
163 solid
164 \LWR@mdfprintcolor{#1titleabovelinecolor}
165 ; \LWR@orignewline
166 }{)%
```

Convert and print the below line:

```
167 \ifbool{mdf@#1titlebelowline}{%
168 border-bottom:
169 \LWR@mdfprintlength{#1titlebelowlinewidth}
170 solid
171 \LWR@mdfprintcolor{#1titlebelowlinecolor}
172 ; \LWR@orignewline
173 }{)%
```

Finish the custom style and the opening <div> tag:

```
174]{mdframed#1title}%
```

Perform the original subtitle action:

```
175 \IfNoValueTF{#2}
176 {\@nameuse{\LWR@origmdf#1title}{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}}%
177 {\@nameuse{\LWR@origmdf#1title}[#2]{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}}%
```

Close the <div>:

```
178 \end{BlockClass}%
179 \LWR@traceinfo{\LWR@mdframedsubtitlecommon end}%
180 }
```

```
\LWR@mdfsubtitle [<options>] {<title>}
```

```
181 \newcommand*{\LWR@mdfsubtitle}{%
182 \LWR@mdfsubtitlecommon{sub}%
```

```
183 }
184 \let\mdfsubtitle\LWR@mdfsubtitle
```

`\LWR@mdfsubsubtitle` [*options*] {*title*}

```
185 \newcommand*\LWR@mdfsubsubtitle{%
186 \LWR@mdfsubsubtitlecommon{subsub}%
187 }
188 \let\mdfsubsubtitle\LWR@mdfsubsubtitle
```

### § 346.9 New environments

`\LWR@mdthisenv` Stores the environment of the frame about to be created:

```
189 \newcommand*\LWR@mdthisenv{\mdframed}
```

`\newmdenv` [*options*] {*env-name*}

Modified from the original to remember the environment.

```
190 \renewrobustcmd*\newmdenv[2][]{%
191 \newenvironment{#2}%
192 {%
193 \mdfsetup{#1}%
194 \renewcommand*\LWR@mdthisenv{\md#2}%
195 \begin{mdframed}%
196 }
197 \end{mdframed}}%
198 }
```

`\surroundwithmdframed` [*options*] {*environment*}

Modified from the original to remember the environment.

```
199 \renewrobustcmd*\surroundwithmdframed[2][]{%
200 \BeforeBeginEnvironment{#2}{%
201 \renewcommand*\LWR@mdthisenv{\md#2}%
202 \begin{mdframed}[#1]}%
203 \AfterEndEnvironment{#2}{\end{mdframed}}%
204 }
```

`\mdtheorem` [*mdframed-options*] {*envname*} [*numberedlike*] {*caption*} [*within*]

Modified from the original to remember the environment.

```
205 \DeclareDocumentCommand{\mdtheorem}{ O{} m o m o }%
206 {\ifcsdef{#2}%
207 {\mdf@PackageWarning{Environment #2 already exists\MessageBreak}}%
208 {%
209 \IfNoValueTF {#3}%
210 {%#3 not given -- number relationship
211 \IfNoValueTF {#5}%
212 {%#3+#5 not given
213 \@definecounter{#2}%
214 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
215 \newenvironment{#2}[1][]{%
216 \refstepcounter{#2}%
```

```

217 \ifstrempy{##1}%
218 {\let\@temptitle\relax}%
219 {%
220 \def\@temptitle{\mdf@theoremseparator%
221 \mdf@theoremspace%
222 \mdf@theoremtitlefont%
223 \LWR@textcurrentfont{##1}}% lwarp
224 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
225 }%
226 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
227 \@temptitle}]]%
228 {\end{mdframed}}%
229 \newenvironment{#2*}[1][1][1]{%
230 \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ ##1}}%
231 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
232 {\end{mdframed}}%
233 }%
234 {%#5 given -- reset counter
235 \@definecounter{#2}\@newctr{#2}[#5]%
236 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
237 \expandafter\xdef\csname the#2\endcsname{%
238 \expandafter\noexpand\csname the#5\endcsname \@thmcountersep%
239 \@thmcounter{#2}}%
240 \newenvironment{#2}[1][1][1]{%
241 \refstepcounter{#2}%
242 \ifstrempy{##1}%
243 {\let\@temptitle\relax}%
244 {%
245 \def\@temptitle{\mdf@theoremseparator%
246 \mdf@theoremspace%
247 \mdf@theoremtitlefont%
248 \LWR@textcurrentfont{##1}}% lwarp
249 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
250 }
251 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
252 \@temptitle}]]%
253 {\end{mdframed}}%
254 \newenvironment{#2*}[1][1][1]{%
255 \ifstrempy{##1}%
256 {\let\@temptitle\relax}%
257 {%
258 \def\@temptitle{\mdf@theoremseparator%
259 \mdf@theoremspace%
260 \mdf@theoremtitlefont%
261 \LWR@textcurrentfont{##1}}% lwarp
262 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
263 }%
264 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
265 {\end{mdframed}}%
266 }%
267 }%
268 {%#3 given -- number relationship
269 \global\@namedef{the#2}{\@nameuse{the#3}}%
270 \newenvironment{#2}[1][1][1]{%
271 \refstepcounter{#3}%

```

```

272 \ifstrempy{##1}%
273 {\let\@temptitle\relax}%
274 {%
275 \def\@temptitle{\mdf@theoremseparator%
276 \mdf@theoremspace%
277 \mdf@theoremtitlefont%
278 \LWR@textcurrentfont{##1}}% lwarp
279 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
280 }
281 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
282 \@temptitle}]]%
283 {\end{mdframed}}%
284 \newenvironment{#2*}[1][]{%
285 \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ ##1}}%
286 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
287 {\end{mdframed}}%
288 }%
289 \BeforeBeginEnvironment{#2}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
290 \BeforeBeginEnvironment{#2*}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
291 }%
292 }

```

`\newmdtheoremenv` [*<1: mdframed-options>*] [*<2: envname>*] [*<3: numberedlike>*] [*<4: caption>*] [*<5: within>*]

Modified from the original to remember the environment.

```

293 \DeclareDocumentCommand\newmdtheoremenv{O{} m o m o }{%
294 \ifboolexpr{ test {\IfNoValueTF {#3}} and test {\IfNoValueTF {#5}} }%
295 {\newtheorem{#2}{#4}}%
296 {%
297 \IfValueT{#3}{\newtheorem{#2}[#3]{#4}}%
298 \IfValueT{#5}{\newtheorem{#2}{#4}[#5}}%
299 }%
300 \BeforeBeginEnvironment{#2}{%
301 \renewcommand*\LWR@mdthisenv}{md#2}}%
302 \begin{mdframed}[#1]}%
303 \AfterEndEnvironment{#2}{%
304 \end{mdframed}}%
305 }

```

---

File 247 **lwarp-media9.sty**

§ 347 Package **media9**

Pkg media9 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 `addressource=`, 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/...`

 **& 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}
```

`\addmediapath`    `{\path}`

Supported.

```
5 \newcommand*\LWR@medianine@path{}
```

```
6
```

```
7 \newcommand*\addmediapath}[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 addressource can generate a multimedia object.

```
10 \define@key{\LWR@medianine}{addressource}{%
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 248 **lwarp-memhfixc.sty**

§ 348 Package **memhfixc**

Pkg memhfixc memhfixc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{memhfixc}[2013/05/30]

---

File 249 **lwarp-metalogo.sty**

§ 349 Package **metalogo**

*(Emulates or patches code by ANDREW GILBERT MOSCHOU.)*

Pkg metalogo 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 250 **lwarp-metalogox.sty**

§ 350 Package **metalogox**

*(Emulates or patches code by BRIAN DUNN.)*

Pkg metalogox metalogox is patched for use by lwarp.

**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 251 **lwarp-mhchem.sty**

§ 351 Package **mhchem**

(Emulates or patches code by MARTIN HENSEL.)

Pkg mhchem mhchem is patched for use by lwarp.

**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:

$$\text{\ce{C6H5-CHO}}$$

**not inside math** If *not* used inside a math expression, lwarp converts standalone mhchem expressions into svg math images.

**MATHJAX without mhchem extension** If the MATHJAX mhchem extension is not used, expressions inside math must be placed between \displaymathother and \displaymathnormal:

```

\displaymathother
\[\ce{...}] ... \ce{...}
\displaymathnormal

```

**⚠ nested math** When producing HTML output without the MATHJAX mhchem extension, lwarp 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 |

|                                      |                                      |       |
|--------------------------------------|--------------------------------------|-------|
| $\ce{NO_{x}}$                        | $\ce{NO_{x}}$                        | % new |
| $\ce{\$cis\{-}[PtCl2(NH3)2]}$        | $\ce{\$cis\{-}[PtCl2(NH3)2]}$        | % old |
| $\ce{\mathit{cis}\{-}[PtCl2(NH3)2]}$ | $\ce{\mathit{cis}\{-}[PtCl2(NH3)2]}$ | % 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 `lateximage` 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 \ifbool{\LWR@xfakebold}%
6 {\def\LWR@tempone{Y}}%
7 {\def\LWR@tempone{N}}%
8 \begin{lateximage}*\textbackslash{ce}\{\LWR@HTMLsanitize{#1}\}}*%
9 [%
10 FM\LWR@f@family%
11 SR\LWR@f@series%
12 SH\LWR@f@shape%
13 SHC\LWR@f@shapecaps%
14 CL\LWR@tempcolor%
15 FB\LWR@tempone% xfakebold
16]%
17 \LWR@setcurrentfont%
18 \LWR@mhchem@origce{#1}%
19 \end{lateximage}%
20 \endgroup%
21 \addtocounter{\LWR@mhchem@cedepth}{-1}%
22 }
```

Only set math shift if outer depth:

```
23 \newcounter{\LWR@mhchem@cedepth}
24 \setcounter{\LWR@mhchem@cedepth}{0}
```

The new `\ce`. Sets math shift then continues.

```
25 \renewcommand{\ce}{%
26 \begingroup%
27 \ifnumequal{\value{\LWR@mhchem@cedepth}}{0}{%
28 \catcode'\$=3% math shift
29 }{%
30 \addtocounter{\LWR@mhchem@cedepth}{1}%
31 \LWR@mhchem@HTML@ce%
32 }
```

The original definition of `\cesplit`:

```
33 \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.

```
34 \newcommand*{\LWR@mhchem@HTML@cesplit}[2]
35 {%
36 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
37 \ifbool{\LWR@xfakebold}%
38 {\def\LWR@tempone{Y}}%
39 {\def\LWR@tempone{N}}%
40 \begin{lateximage}*\textbackslash{}cesplit\{\LWR@HTMLsanitize{#2}\}*%
41 [%
42 FM\LWR@f@family%
43 SR\LWR@f@series%
44 SH\LWR@f@shape%
45 SHC\LWR@f@shapecaps%
46 CL\LWR@tempcolor%
47 FB\LWR@tempone% xfakebold
48]%
49 \LWR@setcurrentfont%
50 \LWR@mhchem@origcesplit{#1}{#2}%
51 \end{lateximage}%
52 \endgroup%
53 }
```

Only set math shift if outer depth:

```
54 \newcounter{\LWR@mhchem@cesplitdepth}
55 \setcounter{\LWR@mhchem@cesplitdepth}{0}
```

The new `\cesplit`. Sets math shift then continues.

```
56 \renewcommand{\cesplit}{%
57 \begingroup%
58 \ifnumequal{\value{\LWR@mhchem@cesplitdepth}}{0}{%
59 \catcode'\$=3% math shift
60 }{%
61 \addtocounter{\LWR@mhchem@cesplitdepth}{1}%
62 \LWR@mhchem@HTML@cesplit%
63 }
```

Resore originals inside a `lateximage`:

```
64 \appto\LWR@restoreorigformatting{%
65 \LetLtxMacro\ce\LWR@mhchem@origce%
66 \LetLtxMacro\cesplit\LWR@mhchem@origcesplit%
67 }
```

---

File 252 **lwarp-microtype.sty**

§ 352 Package **microtype**

*(Emulates or patches code by R SCHLICHT.)*

Pkg microtype **microtype** is pre-loaded by **lwarp**. All user options and macros are ignored and disabled.

**for HTML output:** Discard all options for **lwarp-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}{}
13 \DeclareDocumentCommand{\DeclareMicrotypeAlias}{m m}{}
14 \DeclareDocumentCommand{\LoadMicrotypeFile}{m}{}
15 \DeclareDocumentCommand{\DeclareMicrotypeBabelHook}{m m}{}
16 \DeclareDocumentCommand{\microtypesetup}{m}{}
17 \DeclareDocumentCommand{\microtypecontext}{m}{}
18 \DeclareDocumentCommand{\textmicrotypecontext}{m m}{#2}
19 \ifpackageloaded{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 253 **lwarp-midfloat.sty**

§ 353 Package **midfloat**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg midfloat midfloat is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{midfloat}[2012/05/29]

```
2 \newenvironment{strip}[1][[]]{}{}
3 \newskip\stripsep
```

---

File 254 **lwarp-midpage.sty**

§ 354 Package **midpage**

Pkg midpage midpage is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{midpage}[2009/09/03]

```
2 \newenvironment{midpage}
3 {\begin{BlockClass}[%
4 \LWR@print@mbx{margin-top:6ex} ; \LWR@print@mbx{margin-bottom:6ex}%
5]{midpage}}
6 {\end{BlockClass}}
```

---

File 255 **lwarp-minibox.sty**

§ 355 Package **minibox**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg minibox minibox is patched for use by lwarp.

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\fbxrule{\l_minibox_rule_dim}
10 \setlength\fbxsep{\l_minibox_pad_dim}
11 \fbxBlock{%
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 256 **lwarp-minitoc.sty**

§ 356 Package **minitoc**

Pkg minitoc minitoc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{minitoc}[2018/07/12]

mtcoff disables minitoc.

2 \usepackage{mtcoff}

---

File 257 **lwarp-mismath.sty**

§ 357 Package **mismath**

*(Emulates or patches code by ANTOINE MISSIER.)*

Pkg mismath mismath is patched for SVG math, and emulated for MATHJAX.

 **MATHJAX** \enumber, \inumber, \jnumber, and \pinumber are ignored for MATHJAX, except that \itpi is made available as a clone of \pi.

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 8.7.5. 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}[2019/12/27]`

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 {% svg
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{\changeacol}{
22 \end{aligned} \quad
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{\newcommand{\boldvect}{}{}}
33 \CustomizeMathJax{\newcommand{\arrowvect}{}{}}
34 \CustomizeMathJax{\newcommand{\pinumber}[1][{}]}
35 \CustomizeMathJax{\newcommand{\hvect}[1]{\vec{\vphantom{h}#1}}}
36 \CustomizeMathJax{\newcommand{\hvec}[1]{\vec{\vphantom{t}#1}}}
37 \CustomizeMathJax{%
38 \newcommand{\norm}[1]{\left\| \left\| \left\| \left\| \right\| \right\| \right\| \right\|}
39 }
40 \CustomizeMathJax{\newcommand{\di}{\mathop{!}\mathrm{d}}}
41
42 \CustomizeMathJax{\newcommand{\P}{\operatorname{\probastyle{P}}}}
43 \CustomizeMathJax{\newcommand{\E}{\operatorname{\probastyle{E}}}}
44 \CustomizeMathJax{\newcommand{\V}{\operatorname{\probastyle{V}}}}
45 \CustomizeMathJax{\newcommand{\Par}{\unicode{x00B6}}}
46
```

```

47 \CustomizeMathJax{\newcommand{\adj}{\mathrm{adj}}}
48 \CustomizeMathJax{\newcommand{\Aut}{\mathrm{Aut}}}
49 \CustomizeMathJax{\newcommand{\Conv}{\mathrm{Conv}}}
50 \CustomizeMathJax{\newcommand{\cov}{\mathrm{cov}}}
51 \CustomizeMathJax{\newcommand{\Cov}{\mathrm{Cov}}}
52 \CustomizeMathJax{\newcommand{curl}{\operatorname{\vect{\mathrm{curl}}}}}
53 \CustomizeMathJax{\newcommand{divg}{\mathrm{div}}}
54 \CustomizeMathJax{\newcommand{End}{\mathrm{End}}}
55
56 \CustomizeMathJax{\newcommand{erf}{\mathrm{erf}}}
57 \CustomizeMathJax{\newcommand{grad}{\operatorname{\vect{\mathrm{grad}}}}}
58 \CustomizeMathJax{\newcommand{id}{\mathrm{id}}}
59 \CustomizeMathJax{\newcommand{Id}{\mathrm{Id}}}
60 \CustomizeMathJax{\newcommand{im}{\mathrm{im}}}
61 \CustomizeMathJax{\let\oldIm\Im}
62 \CustomizeMathJax{\renewcommand{\Im}{\operatorname{Im}}}
63 \CustomizeMathJax{\newcommand{lb}{\mathrm{lb}}}
64 \CustomizeMathJax{\newcommand{lcm}{\mathrm{lcm}}}
65
66 \CustomizeMathJax{\newcommand{rank}{\mathrm{rank}}}
67 \CustomizeMathJax{\let\oldRe\Re}
68 \CustomizeMathJax{\renewcommand{\Re}{\operatorname{Re}}}
69 \CustomizeMathJax{\newcommand{rot}{\operatorname{\vect{\mathrm{rot}}}}}
70 \CustomizeMathJax{\newcommand{sgn}{\mathrm{sgn}}}
71 \CustomizeMathJax{\newcommand{spa}{\mathrm{span}}}
72 \CustomizeMathJax{\newcommand{tr}{\mathrm{tr}}}
73 \CustomizeMathJax{\newcommand{Var}{\mathrm{Var}}}
74 \CustomizeMathJax{\newcommand{Zu}{\mathrm{Z}}}
75
76 \CustomizeMathJax{\newcommand{arccot}{\mathrm{arccot}}}
77 \CustomizeMathJax{\newcommand{sech}{\mathrm{sech}}}
78 \CustomizeMathJax{\newcommand{csch}{\mathrm{csch}}}
79 \CustomizeMathJax{\newcommand{arsinh}{\mathrm{arsinh}}}
80 \CustomizeMathJax{\newcommand{arcosh}{\mathrm{arcosh}}}
81 \CustomizeMathJax{\newcommand{artanh}{\mathrm{artanh}}}
82 \CustomizeMathJax{\newcommand{arcoth}{\mathrm{arcoth}}}
83 \CustomizeMathJax{\newcommand{arsech}{\mathrm{arsech}}}
84 \CustomizeMathJax{\newcommand{arcsch}{\mathrm{arcsch}}}
85
86 \CustomizeMathJax{\newcommand{big0}{\mathcal{0}}}
87 \CustomizeMathJax{\newcommand{bigo}{\mathrm{0}}}
88 \CustomizeMathJax{\newcommand{lito}{\mathrm{o}}}
89
90 \CustomizeMathJax{\newcommand{R}{\mathset{R}}}
91 \CustomizeMathJax{\newcommand{C}{\mathset{C}}}
92 \CustomizeMathJax{\newcommand{N}{\mathset{N}}}
93 \CustomizeMathJax{\newcommand{Z}{\mathset{Z}}}
94 \CustomizeMathJax{\newcommand{Q}{\mathset{Q}}}
95 \CustomizeMathJax{\newcommand{F}{\mathset{F}}}
96 \CustomizeMathJax{\newcommand{K}{\mathset{K}}}
97
98 \CustomizeMathJax{\newcommand{ds}{\displaystyle}}
99 \CustomizeMathJax{\newcommand{dlim}{\lim\limits}}
100 \CustomizeMathJax{\newcommand{dsun}{\sum\limits}}
101 \CustomizeMathJax{\newcommand{dprod}{\prod\limits}}

```

```

102 \CustomizeMathJax{\newcommand{\dcup}{\bigcup\limits}}
103 \CustomizeMathJax{\newcommand{\dcap}{\bigcap\limits}}
104 \CustomizeMathJax{\newcommand{\lbar}{\overline{}}}
105 \CustomizeMathJax{\newcommand{\hlbar}[1]{\overline{\vphantom{h}#1}}}
106 \CustomizeMathJax{\newcommand{\eqdef}{\stackrel{\text{\mathrm{def}}}{=}}}
107 \CustomizeMathJax{\newcommand{\unbr}{\underbrace{}}}
108 \CustomizeMathJax{\newcommand{\iif}{if and only if }}
109
110 \CustomizeMathJax{\newcommand{\mul}{\mathord{\times}}}
111 \CustomizeMathJax{\newcommand{\then}{\ \Longrightarrow \ \mbox{ } }}
112 \CustomizeMathJax{\newcommand{\txt}[1]{\quad\text{#1}\quad}}
113 \CustomizeMathJax{\newcommand{\paren}[1]{\mathopen{\left(#1 \right)}}}
114 \CustomizeMathJax{\newcommand{\pow}[2]{\left(#1 \right)^{\!#2}}
115 \CustomizeMathJax{\newcommand{\abs}[1]{\left| \! \left| #1 \right| \! \right|}}
116 \CustomizeMathJax{\newcommand{\lfrac}[2]{\frac{\!#1\!}{\!#2\!}}}
117
118 \CustomizeMathJax{\newenvironment{system}[1][L]%
119 {\left\{\begin{array}{@{.15em}#1@{}}
120 {\end{array}\right.}
121 }
122
123 \CustomizeMathJax{\newenvironment{spmatrix}
124 {\left(\begin{smallmatrix}
125 {\end{smallmatrix}\right)}
126 }
127
128 \CustomizeMathJax{%
129 \newenvironment{mathcols}
130 {\begin{aligned}\displaystyle}
131 {\end{aligned}}
132 }
133 \CustomizeMathJax{\newcommand{\changepcol}{\end{aligned}\quad\begin{aligned}}}

```

User-adjustable settings, detected if in the preamble.

```

134 \AtBeginDocument{
135 \ifdef{\itpi}{
136 \CustomizeMathJax{\let\itpi\pi}
137 }{ }
138 \ifdefstring{\boldvectcommand}{\mathbf}{
139 \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\mathbf{#1}}}
140 }{
141 \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\boldsymbol{#1}}}
142 }
143 \ifbool{arrowvect}{
144 \CustomizeMathJax{\newcommand{\vect}[1]{\overrightarrow{#1}}}
145 }{
146 \CustomizeMathJax{\newcommand{\vect}[1]{\boldvectcommand{#1}}}
147 }
148 \ifdefstring{\probastyle}{\mathbb}{
149 \CustomizeMathJax{\newcommand{\probastyle}[1]{\mathbb{#1}}}
150 }{
151 \CustomizeMathJax{\newcommand{\probastyle}[1]{\mathrm{#1}}}
152 }
153 \ifdefstring{\mathset}{\mathbb}{

```

```

154 \CustomizeMathJax{\newcommand{\mathset}[1]{\mathbb{#1}}}
155 }{
156 \CustomizeMathJax{\newcommand{\mathset}[1]{\mathbf{#1}}}
157 }
158 }
159 \end{warpMathJax}

```

---

File 258 **lwarp-morefloats.sty**

§ 358 Package **morefloats**

Pkg morefloats morefloats is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{morefloats}[2015/07/22]

---

File 259 **lwarp-moreverb.sty**

§ 359 Package **moreverb**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg moreverb moreverb is supported with some patches.

**for HTML output:**

```

1 \begin{warpHTML}

2 \LWR@ProvidesPackagePass{moreverb}[2008/06/03]

3 \BeforeBeginEnvironment{verbatimtab}{%
4 \LWR@forcenewpage
5 \LWR@atbeginverbatim{3}{Verbatim}%
6 }
7 \AfterEndEnvironment{verbatimtab}{%
8 \LWR@afterrendverbatim{1}%
9 }
10
11
12 \LetLtxMacro\LWRMV@orig@verbatimtabinput\@verbatimtabinput
13
14 \renewcommand{\@verbatimtabinput}[2][]{%
15 \LWR@forcenewpage
16 \LWR@atbeginverbatim{3}{Verbatim}%
17 \LWRMV@orig@verbatimtabinput[#1]{#2}%
18 \LWR@afterrendverbatim{1}%
19 }
20
21 \BeforeBeginEnvironment{listing}{%
22 \LWR@forcenewpage
23 \LWR@atbeginverbatim{3}{programlisting}%
24 }
25

```

```

26 \AfterEndEnvironment{listing}{%
27 \LWR@afterendverbatim{1}%
28 }
29
30 \BeforeBeginEnvironment{listingcont}{%
31 \LWR@forcenewpage
32 \LWR@atbeginverbatim{3}{programlisting}%
33 }
34
35 \AfterEndEnvironment{listingcont}{%
36 \LWR@afterendverbatim{1}%
37 }

38 \LetLtxMacro\LWRMV@listinginput\@listinginput
39
40 \renewcommand{\@listinginput}[3][[]]{
41 \LWR@forcenewpage
42 \LWR@atbeginverbatim{3}{programlisting}%
43 \LWRMV@listinginput[#1]{#2}{#3}%
44 \LWR@afterendverbatim{1}%
45 }
46
47
48 \renewenvironment*{boxedverbatim}
49 {
50 \LWR@forcenewpage
51 \LWR@atbeginverbatim{3}{boxedverbatim}%
52 \verbatim%
53 }
54 {
55 \endverbatim%
56 \LWR@afterendverbatim{1}%
57 }

58 \end{warpHTML}

```

---

File 260 **lwarp-movie15.sty**

§ 360 Package **movie15**

Pkg movie15 movie15 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 `addressource=`, 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@multimediab[#1,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 261 **lwarp-mparhack.sty**

§ 361 Package **mparhack**

Pkg mparhack mparhack is ignored.

**for HTML output:** Discard all options for lwarp-mparhack:

```
1 \LWR@ProvidesPackageDrop{mparhack}[2005/04/17]
```

---

File 262 **lwarp-multicap.sty**

§ 362 Package **multicap**

Pkg multicap multicap is emulated.

**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 263 **lwarp-multicol.sty**

§ 363 Package **multicol**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg multicol multicol is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{multicol}[2018/12/27]

Multicols are converted into a 1–3 column display, browser-supported.

The optional multicols heading is placed inside a <div> of class multicolsheading.

The content is placed inside a <div> of class multicols.

```
2 \begin{warpHTML}
```

Env multicols \* {<numcols>} [<heading>]

```
3 \NewDocumentEnvironment{multicols}{s m o}
```

HTML <div> class to contain everything:

```
4 {
5 \LWR@forcenewpage
6 \BlockClass{multicols}
```

Optional HTML <div> class for the heading:

```
7 \IfValueT{#3}{\begin{BlockClass}{multicolsheading}#3\end{BlockClass}}%
```

Change \linewidth to compensate for expected size:

```
8 \setlength{\linewidth}{\linewidth/#2}
```

Locally force any minipages to be fullwidth:

```
9 \booltrue{LWR@forceminipagefullwidth}
10 }
```

When done with the environment, close the <div>:

```
11 {\endBlockClass}
```

Emulated null functions which are not used in HTML:

```
12 \newcommand*\columnbreak{}
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 }

32 \end{warpHTML}
```

---

File 264 **lwarp-multicolrule.sty**

§ 364 Package **multicolrule**

Pkg multicolrule multicolrule is ignored.

**for HTML output:**

```

1 \RequirePackage{multicol}
2
3 \LWR@ProvidesPackageDrop{multicolrule}[2019/01/01]

4 \newcommand*{\SetMCRule}[1]{}
5 \NewDocumentCommand{\DeclareMCRulePattern}{m m}{}

```

---

File 265 **lwarp-multimedia.sty**

§ 365 Package **multimedia**

Pkg multimedia 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 addressource=, 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{multimedia}[2012/05/02]

```

2 \LWR@origRequirePackage{lwarp-common-multimedia}
3
4 \LetLtxMacro\movie\LWR@multimedia
5 \LetLtxMacro\sound\LWR@multimedia
6
7 \newcommand{\hyperlinkmovie}[3][[]]{

```

---

File 266 **lwarp-multiobjective.sty**

§ 366 Package **multiobjective**

*(Emulates or patches code by LUIS MARTÍ.)*

Pkg multiobjective **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}{\prec}}
4 \CustomizeMathJax{\newcommand{\negdom}{\not\prec}}
5 \CustomizeMathJax{\newcommand{\weakdom}{\preccurlyeq}}
6 \CustomizeMathJax{\newcommand{\negweakdom}{\not\preccurlyeq}}
7 \CustomizeMathJax{\newcommand{\strictdom}{\prec!!!\prec}}
8 \CustomizeMathJax{\newcommand{\negstrictdom}{\not\prec!!!\prec}}
9 \CustomizeMathJax{\newcommand{\multepsilondom}{\preccurlyeq_{\epsilon\cdot}}}
10 \CustomizeMathJax{\newcommand{\addiepsilondom}{\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}\}}\, \max}}
28 \CustomizeMathJax{\def\argmin{\mathop{\{\mathrm{arg}\}}\, \min}
29 }}
30 \end{warpMathJax}

```

File 267 **lwarp-multirow.sty**

§ 367 Package **multirow**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

Pkg multirow **multirow** is emulated during HTML output, and used as-is while inside a lateximage.

**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 **lwarp**, so `\warpprintonly` and `\warpHTMLonly` must be used to make versions for print and HTML.

with `\multicolumn` • See section 367.2 for `\multicolumnrow`.

⚠ `\multicolumn & \multirow` **lwarp** 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.

⚠ **skipped cells** 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 lateximage, `\LWR@restoreorigformatting` restores the original print-mode versions.

See section 72.25 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}[2018/08/03]
```

`\LWR@multirowborder` Set to left or right to create a thick border for the cell, for use by `bigdelim`:

```
3 \newcommand{\LWR@multirowborder}{}
```

### § 367.1 Multirow

`\multirow` [*⟨vpos⟩*] {*⟨numrows⟩*} [*⟨bigstruts⟩*] {*⟨width⟩*} [*⟨fixup⟩*] {*⟨text⟩*}

```
4 \NewDocumentCommand{\LWR@HTML@multirow}{O{c} m o m o +m}%
```

```
5 {%
```

```
6 \LWR@traceinfo{*** LWR@HTML@multirow #1 #2 #4}%
```

```
7 \booltrue{LWR@usedmultirow}%
```

```
8 \LWR@maybenewtablerow%
```

```
9 \LWR@tabularleftedge%
```

Print the start of a new table data cell:

```
10 \LWR@htmltag{td rowspan="#2" %
```

The vertical alignment, if given:

```
11 \ifstrequal{#1}{c}{style="\LWR@print@embox{vertical-align:middle}" }{}%
```

```
12 \ifstrequal{#1}{b}{style="\LWR@print@embox{vertical-align:bottom}" }{}%
```

```
13 \ifstrequal{#1}{t}{style="\LWR@print@embox{vertical-align:top}" }{}%
```

The left/right border, if given:

```
14 \ifdefvoid{\LWR@multirowborder}{}{}%
```

```
15 style="\LWR@print@embox{border-\LWR@multirowborder:} 2px dotted black ; %
```

```
16 \LWR@print@embox{padding-\LWR@multirowborder:} 2px" %
```

```
17 }%
```

A class adds the column spec and the rule:

```
18 class="td%
```

Append this column's spec:

```
19 \LWR@getexparray{LWR@tablecolspec}{\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.

```
20 \LWR@addcmidruletrim%
```

```
21 \LWR@addleftmostbartag%
```

```
22 \LWR@printbartag{\arabic{LWR@tableLaTeXcolindex}}%
```

```
23 "%
```

```

24 \LWR@tdstartstyles%
25 \LWR@addcmidrulewidth%
26 \LWR@addcdashline%
27 \LWR@addtabularrulecolors%
28 \LWR@tdendstyles%
29 }%

```

The column's < spec:

```
30 \LWR@getexparray{LWR@colbeforeSpec}{\arabic{LWR@tableLaTeXcolindex}}%
```

While printing the text, redefine `\` to generate a new line

```

31 \begingroup\let\macro{\}\LWR@endofline}\endgroup%
32 \LWR@stoppars%
33 \boolfalse{LWR@intabularmetadata}%
34 \renewcommand{\LWR@multirowborder}{}%
35 \LWR@traceinfo{*** LWR@HTML@multirow done}%
36 }%
37
38 \LWR@formatted{multirow}

```

## § 367.2 Combined multicolumn and multirow

```
\multicolumnrow {<1:cols>} {<2:halign>} [<3:vpos>] {<4:numrows>} [<5:bigstruts>] {<6:width>} [<7:fixup>]
{<8:text>}
```

`\ifpackageloaded{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`.

```

39 \AtBeginDocument{
40
41 \NewExpandableDocumentCommand{\LWR@HTML@multicolumnrow}{m m O{ } m O{ } m O{ } +m}{%
42 \booltrue{LWR@usedmultirow}%

```

Figure out how many extra HTML columns to add for @ and ! columns:

```
43 \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`.)

```

44 \let\macro{\}\LWR@endofline}%
45 \LWR@domulticolumn[#3][#4][#1]{\arabic{LWR@tabhtmlcoltotal}}{#2}{#8}%
46 \let\macro{\}\LWR@tabularendofline}%

```

Move to the next  $\LaTeX$  column:

```
47 \defaddtocounter{LWR@tableLaTeXcolindex}{#1}%
48 \defaddtocounter{LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
49 \booltrue{LWR@skipatbang}%
50 }
51
52 \LWR@expandableformatted{multicolumnrow}
53
54 }% \AtBeginDocument
```

For MATHJAX. Only the text is used. All other parameters are ignored.

```
55 \begin{warpMathJax}
56 % \multirow[vpos]{num}[bigstruts]{width}[vmove]{text}
57 \CustomizeMathJax{\newcommand{\LWRsubmultirow}[2][]{#2}}
58 \CustomizeMathJax{\newcommand{\LWRmultirow}[2][]{\LWRsubmultirow}}
59 \CustomizeMathJax{\newcommand{\multirow}[2][]{\LWRmultirow}}
60 %
61 \CustomizeMathJax{\newcommand{\mrowcell}{}{}}
62 \CustomizeMathJax{\newcommand{\mcolrowcell}{}{}}
63 \CustomizeMathJax{\newcommand{\STneed}[1]{}{}}
64 \end{warpMathJax}
```

File 268 **lwarp-multitoc.sty**

§ 368 Package **multitoc**

Pkg multitoc multitoc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{multitoc}[1999/06/08]

```
2 \newcommand{\multicolumntoc}{2}
3 \newcommand{\multicolumnlot}{2}
4 \newcommand{\multicolumnlof}{2}
5 \newcommand*\immediateaddtocontents}[2]{}{}
```

File 269 **lwarp-musicography.sty**

§ 369 Package **musicography**

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg musicography musicography is patched for use by lwarp.

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}*[#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}{}
128 {\HTMLUnicode{1D15D}\HTMLUnicode{1D16D}}
129 \NewDocumentCommand{\LWR@HTML@musHalfDotted}{}
130 {\HTMLUnicode{1D15E}\HTMLUnicode{1D16D}}
131 \NewDocumentCommand{\LWR@HTML@musQuarterDotted}{}
132 {\HTMLUnicode{1D15F}\HTMLUnicode{1D16D}}
133 \NewDocumentCommand{\LWR@HTML@musEighthDotted}{}
134 {\HTMLUnicode{1D160}\HTMLUnicode{1D16D}}
135 \NewDocumentCommand{\LWR@HTML@musSixteenthDotted}{}
136 {\HTMLUnicode{1D161}\HTMLUnicode{1D16D}}
137 \NewDocumentCommand{\LWR@HTML@musThirtySecondDotted}{}
138 {\HTMLUnicode{1D162}\HTMLUnicode{1D16D}}
139 \NewDocumentCommand{\LWR@HTML@musSixtyFourthDotted}{}
140 {\HTMLUnicode{1D163}\HTMLUnicode{1D16D}}
141
142 \LWR@formatted{musWholeDotted}
143 \LWR@formatted{musHalfDotted}
144 \LWR@formatted{musQuarterDotted}
145 \LWR@formatted{musEighthDotted}
146 \LWR@formatted{musSixteenthDotted}
147 \LWR@formatted{musThirtySecondDotted}
148 \LWR@formatted{musSixtyFourthDotted}

```

---

File 270 **lwarp-nameauth.sty**

§ 370 Package **nameauth**

*(Emulates or patches code by CHARLES P. SCHAUM.)*

Pkg nameauth nameauth is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{nameauth}[2017/03/22]

lwarp formatting is inserted in the following.

```

2 \renewcommand*\@nameauth@Hook[1]
3 {%
4 \if@nameauth@Lock
5 \@nameauth@InHooktrue%
6 \protected@edef\test{#1}%
7 \expandafter\@nameauth@TestDot\expandafter{\test}%
8 \if@nameauth@InAKA
9 \if@nameauth@AlwaysFormat
10 \@nameauth@FirstFormattrue%
11 \else
12 \unless\if@nameauth@AKAFormat
13 \@nameauth@FirstFormatfalse\fi
14 \fi
15 \if@nameauth@MainFormat
16 \if@nameauth@FirstFormat
17 \bgroup\NamesFormat{%
18 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
19 }\egroup%
20 \else
21 \bgroup\MainNameHook{%
22 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
23 }\egroup%
24 \fi
25 \else
26 \if@nameauth@FirstFormat
27 \bgroup\FrontNamesFormat{%
28 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
29 }\egroup%
30 \else
31 \bgroup\FrontNameHook{%
32 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
33 }\egroup%
34 \fi
35 \fi
36 \else
37 \if@nameauth@AlwaysFormat
38 \@nameauth@FirstFormattrue%
39 \fi
40 \if@nameauth@MainFormat
41 \if@nameauth@FirstFormat
42 \bgroup\NamesFormat{%
43 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
44 }\egroup%
45 \else
46 \bgroup\MainNameHook{%
47 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
48 }\egroup%
49 \fi
50 \else
51 \if@nameauth@FirstFormat
52 \bgroup\FrontNamesFormat{%
53 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
54 }\egroup%

```

---

```

55 \else
56 \bgroup\FrontNameHook{%
57 \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}% lwarp
58 }\egroup%
59 \fi
60 \fi
61 \fi
62 \@nameauth@FirstFormatfalse%
63 \@nameauth@InHookfalse%
64 \fi
65 }

```

---

File 271 **lwarp-nameref.sty**

§ 371 Package **nameref**

Pkg nameref **nameref** is emulated by **lwarp**.

**for HTML output:** Discard all options for **lwarp-nameref**:

```

1 \PackageInfo{lwarp}{%
2 Using the lwarp HTML version of package ‘nameref’,\MessageBreak
3 and discarding options.\MessageBreak
4 (Not using \protect\ProvidesPackage, so that other packages\MessageBreak
5 do not attempt to patch lwarp’s version of ‘nameref’.)\MessageBreak
6 }
7 \DeclareOption*{}
8 \ProcessOptions\relax

```

---

File 272 **lwarp-natbib.sty**

§ 372 Package **natbib**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg natbib **natbib** is patched for use by **lwarp**.

**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 \ifdefstrequal{\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 `\setcitestyle` to patch after settings are made:

```

11 \let\LWRNB@origsetcitestyle\setcitestyle
12
13 \renewcommand{\setcitestyle}[1]{%
14 \LWRNB@origsetcitestyle{#1}%
15 \LWRNB@patchnatbibopenclose%
16 }

```

File 273 **lwarp-nccfancyhdr.sty**

§ 373 Package **nccfancyhdr**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg nccfancyhdr 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 274 **lwarp-nccmath.sty**

§ 374 Package **nccmath**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg nccmath nccmath is patched for use by lwarp, 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][\]{\ }}
36 \CustomizeMathJax{\newenvironment{ceqn}{\ }}

```

```

37 \CustomizeMathJax{\newenvironment{darray}[2][c]{\begin{array}[#1]{#2}\end{array}}}
38 \CustomizeMathJax{\newcommand{\dmulticolumn}[3]{#3}}
39 \CustomizeMathJax{\newcommand{\nr}{\[\[.5ex]}}
40 \CustomizeMathJax{\newcommand{\mrel}[1]{\begin{aligned}#1\end{aligned}}}
41 \CustomizeMathJax{\newcommand{\underrel}[2]{#1_#2}}
42 \CustomizeMathJax{\newcommand{\medmath}[1]{#1}}
43 \CustomizeMathJax{\newcommand{\medop}[1]{#1}}
44 \CustomizeMathJax{\newcommand{\medint}[1]{#1}}
45 \CustomizeMathJax{\newcommand{\medintcorr}[1]{#1}}
46 \CustomizeMathJax{\newcommand{\mfrac}[2]{\frac{#1}{#2}}}
47 \CustomizeMathJax{\newcommand{\mbinom}[2]{\binom{#1}{#2}}}
48 \CustomizeMathJax{\newenvironment{mmatrix}{\begin{matrix}}{\end{matrix}}}
49 \end{warpMathJax}

```

---

File 275 **lwarp-needspace.sty**

§ 375 Package **needspace**

*(Emulates or patches code by PETER WILSON.)*

Pkg needspace needspace is ignored.

**for HTML output:** Discard all options for lwarp-needspace:

```

1 \LWR@ProvidesPackageDrop{needspace}[2010/09/12]
2
3 \DeclareDocumentCommand{\needspace}{m}{}
4 \DeclareDocumentCommand{\Needspace}{s m}{}

```

---

File 276 **lwarp-nextpage.sty**

§ 376 Package **nextpage**

*(Emulates or patches code by PETER WILSON.)*

Pkg nextpage nextpage is ignored.

**for HTML output:** Discard all options for lwarp-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 277 **lwarp-nfssex-cfr.sty**

§ 377 Package **nfssex-cfr**

*(Emulates or patches code by CLEA F. REES.)*

Pkg nfssex-cfr **nfssex-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{nfssex-cfr}[2017/03/28]

Macros which are present in the **lwarp** core are commented out here.

```

2 \newrobustcmd{\LWR@HTML@lnstyle}{}
3 \newrobustcmd{\LWR@HTML@osstyle}{}
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@embosstyle}{}
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}{}
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@escolshape}{}
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@nwwidth}{}
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}{bf}}
45 \newrobustcmd{\LWR@HTML@sbweight}{\renewcommand*\LWR@f@series}{bf}}
46 % \newrobustcmd{\LWR@HTML@ebweight}{\renewcommand*\LWR@f@series}{eb}}
47 \newrobustcmd{\LWR@HTML@ubweight}{\renewcommand*\LWR@f@series}{eb}}
48 % \newrobustcmd{\LWR@HTML@lgweight}{\renewcommand*\LWR@f@series}{lg}}
49 \newrobustcmd{\LWR@HTML@elweight}{\renewcommand*\LWR@f@series}{lg}}
50 \newrobustcmd{\LWR@HTML@ulweight}{\renewcommand*\LWR@f@series}{lg}}
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{lnstyle}
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{embosstyle}
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{sisshape}
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{nwwidth}
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}{ }{% duplicated by fontaxes
117 \LWR@formatted{swshape}
118 }
119
120 \LWR@formatted{ornament}
121
122
123 \newcommand{\LWR@null@lnstyle}{}
124 \newcommand{\LWR@null@osstyle}{}
125 \newcommand{\LWR@null@instyle}{}
126 \newcommand{\LWR@null@sustyle}{}
127 \newcommand{\LWR@null@swstyle}{}
128 \newcommand{\LWR@null@pstyle}{}
129 \newcommand{\LWR@null@tistyle}{}
130 \newcommand{\LWR@null@ostyle}{}
131 \newcommand{\LWR@null@postyle}{}
132 \newcommand{\LWR@null@ltstyle}{}
133 \newcommand{\LWR@null@ofstyle}{}
134 \newcommand{\LWR@null@altstyle}{}
135 \newcommand{\LWR@null@regstyle}{}
136 \newcommand{\LWR@null@embossstyle}{}
137 \newcommand{\LWR@null@ornamentalstyle}{}
138 \newcommand{\LWR@null@qtstyle}{}
139 \newcommand{\LWR@null@shstyle}{}
140 \newcommand{\LWR@null@swashstyle}{}
141 \newcommand{\LWR@null@tmstyle}{}
142 \newcommand{\LWR@null@tvstyle}{}
143 \newcommand{\LWR@null@tstyle}{}
144 \newcommand{\LWR@null@lstyle}{}
145 \newcommand{\LWR@null@tlstyle}{}
146 \newcommand{\LWR@null@plstyle}{}
147 \newcommand{\LWR@null@tostyle}{}
148 % \newcommand{\LWR@null@sishape}{}

```

```

149 \newcommand{\LWR@null@olshape}{}
150 \newcommand{\LWR@null@scolshape}{}
151 \newcommand{\LWR@null@ushape}{}
152 \newcommand{\LWR@null@scushape}{}
153 \newcommand{\LWR@null@uishape}{}
154 \newcommand{\LWR@null@rishape}{}
155 \newcommand{\LWR@null@regwidth}{}
156 \newcommand{\LWR@null@nwidth}{}
157 \newcommand{\LWR@null@cdwidth}{}
158 \newcommand{\LWR@null@ecwidth}{}
159 \newcommand{\LWR@null@ucwidth}{}
160 \newcommand{\LWR@null@etwidth}{}
161 \newcommand{\LWR@null@epwidth}{}
162 \newcommand{\LWR@null@exwidth}{}
163 \newcommand{\LWR@null@uxwidth}{}
164 \newcommand{\LWR@null@mbweight}{}
165 \newcommand{\LWR@null@dbweight}{}
166 \newcommand{\LWR@null@sbweight}{}
167 % \newcommand{\LWR@null@ebweight}{}
168 \newcommand{\LWR@null@ubweight}{}
169 % \newcommand{\LWR@null@lgweight}{}
170 \newcommand{\LWR@null@elweight}{}
171 \newcommand{\LWR@null@ulweight}{}
172 % \newcommand{\LWR@null@itshape}{}
173 % \newcommand{\LWR@null@scshape}{}
174 % \newcommand{\LWR@null@upshape}{}
175 \newcommand{\LWR@null@dfshape}{}
176
177 \ifdef{\LWR@HTML@swshape}{}{% duplicated by fontaxes
178 \newcommand{\LWR@null@swshape}{}
179 }
180
181 \newcommand{\LWR@null@ornament}[1]{}
182
183 \appto{\LWR@null@fonts}{}%
184 \LetLtxMacro\lnstyle\LWR@null@lnstyle%
185 \LetLtxMacro\osstyle\LWR@null@osstyle%
186 \LetLtxMacro\instyle\LWR@null@instyle%
187 \LetLtxMacro\sustyle\LWR@null@sustyle%
188 \LetLtxMacro\swstyle\LWR@null@swstyle%
189 \LetLtxMacro\pstyle\LWR@null@pstyle%
190 \LetLtxMacro\tistyle\LWR@null@tistyle%
191 \LetLtxMacro\ostyle\LWR@null@ostyle%
192 \LetLtxMacro\postyle\LWR@null@postyle%
193 \LetLtxMacro\ltstyle\LWR@null@ltstyle%
194 \LetLtxMacro\ofstyle\LWR@null@ofstyle%
195 \LetLtxMacro\altstyle\LWR@null@altstyle%
196 \LetLtxMacro\regstyle\LWR@null@regstyle%
197 \LetLtxMacro\embosstyle\LWR@null@embosstyle%
198 \LetLtxMacro\ornamentalstyle\LWR@null@ornamentalstyle%
199 \LetLtxMacro\qtstyle\LWR@null@qtstyle%
200 \LetLtxMacro\shstyle\LWR@null@shstyle%
201 \LetLtxMacro\swashstyle\LWR@null@swashstyle%
202 \LetLtxMacro\tmstyle\LWR@null@tmstyle%
203 \LetLtxMacro\tvstyle\LWR@null@tvstyle%

```

```
204 \LetLtxMacro\tstyle\LWR@null@tstyle%
205 \LetLtxMacro\lstyle\LWR@null@lstyle%
206 \LetLtxMacro\lstyle\LWR@null@lstyle%
207 \LetLtxMacro\plstyle\LWR@null@plstyle%
208 \LetLtxMacro\tostyle\LWR@null@tostyle%
209 % \LetLtxMacro\sisshape\LWR@null@sisshape
210 \LetLtxMacro\olshape\LWR@null@olshape%
211 \LetLtxMacro\scolshape\LWR@null@scolshape%
212 \LetLtxMacro\ushape\LWR@null@ushape%
213 \LetLtxMacro\scushape\LWR@null@scushape%
214 \LetLtxMacro\uishape\LWR@null@uishape%
215 \LetLtxMacro\rishape\LWR@null@rishape%
216 \LetLtxMacro\regwidth\LWR@null@regwidth%
217 \LetLtxMacro\nwidth\LWR@null@nwidth%
218 \LetLtxMacro\cdwidth\LWR@null@cdwidth%
219 \LetLtxMacro\ecwidth\LWR@null@ecwidth%
220 \LetLtxMacro\ucwidth\LWR@null@ucwidth%
221 \LetLtxMacro\etwidth\LWR@null@etwidth%
222 \LetLtxMacro\epwidth\LWR@null@epwidth%
223 \LetLtxMacro\exwidth\LWR@null@exwidth%
224 \LetLtxMacro\xwidth\LWR@null@xwidth%
225 \LetLtxMacro\mbweight\LWR@null@mbweight%
226 \LetLtxMacro\dbweight\LWR@null@dbweight%
227 \LetLtxMacro\sbweight\LWR@null@sbweight%
228 % \LetLtxMacro\ebweight\LWR@null@ebweight%
229 \LetLtxMacro\ubweight\LWR@null@ubweight%
230 % \LetLtxMacro\lgweight\LWR@null@lgweight%
231 \LetLtxMacro\elweight\LWR@null@elweight%
232 \LetLtxMacro\ulweight\LWR@null@ulweight%
233 % \LetLtxMacro\itshape\LWR@null@itshape%
234 % \LetLtxMacro\scshape\LWR@null@scshape%
235 % \LetLtxMacro\upshape\LWR@null@upshape%
236 \LetLtxMacro\dfshape\LWR@null@dfshape%
237 \LetLtxMacro\swshape\LWR@null@swshape%
238 \LetLtxMacro\ornament\LWR@null@ornament%
239 }
240
241 \newrobustcmd{\LWR@HTML@textln}[1]{#1}
242 \newrobustcmd{\LWR@HTML@textos}[1]{\textsc{#1}}
243 \newrobustcmd{\LWR@HTML@textin}[1]{#1}
244 \newrobustcmd{\LWR@HTML@textsu}[1]{#1}
245 % \newrobustcmd{\LWR@HTML@textsi}[1]{#1}
246 \newrobustcmd{\LWR@HTML@textdf}[1]{#1}
247
248 \ifdef{\LWR@HTML@swshape}{}{% duplicated by fontaxes
249 \newrobustcmd{\LWR@HTML@textsw}[1]{#1}
250 }
251
252 \newrobustcmd{\LWR@HTML@textti}[1]{#1}
253 \newrobustcmd{\LWR@HTML@textlt}[1]{#1}
254 \newrobustcmd{\LWR@HTML@textof}[1]{#1}
255 \newrobustcmd{\LWR@HTML@textalt}[1]{#1}
256 \newrobustcmd{\LWR@HTML@textreg}[1]{#1}
257 \newrobustcmd{\LWR@HTML@emboss}[1]{#1}
258 \newrobustcmd{\LWR@HTML@textorn}[1]{#1}
```

```
259 \newrobustcmd{\LWR@HTML@textqt}[1]{#1}
260 \newrobustcmd{\LWR@HTML@textsh}[1]{#1}
261 \newrobustcmd{\LWR@HTML@texttm}[1]{#1}
262 \newrobustcmd{\LWR@HTML@texttv}[1]{\texttt{#1}}
263 \newrobustcmd{\LWR@HTML@textl}[1]{#1}
264 \newrobustcmd{\LWR@HTML@texto}[1]{#1}
265 \newrobustcmd{\LWR@HTML@textp}[1]{#1}
266 \newrobustcmd{\LWR@HTML@textt}[1]{#1}
267 \newrobustcmd{\LWR@HTML@textpl}[1]{#1}
268 \newrobustcmd{\LWR@HTML@textpo}[1]{\textsc{#1}}
269 \newrobustcmd{\LWR@HTML@texttl}[1]{#1}
270 \newrobustcmd{\LWR@HTML@textto}[1]{\textsc{#1}}
271 \newrobustcmd{\LWR@HTML@textol}[1]{#1}
272 \newrobustcmd{\LWR@HTML@textswash}[1]{#1}
273 \newrobustcmd{\LWR@HTML@textu}[1]{#1}
274 \newrobustcmd{\LWR@HTML@textscu}[1]{#1}
275 \newrobustcmd{\LWR@HTML@textui}[1]{\LWR@HTML@textit{#1}}
276 \newrobustcmd{\LWR@HTML@textri}[1]{#1}
277 \newrobustcmd{\LWR@HTML@textnw}[1]{#1}
278 \newrobustcmd{\LWR@HTML@textcd}[1]{#1}
279 \newrobustcmd{\LWR@HTML@textec}[1]{#1}
280 \newrobustcmd{\LWR@HTML@textuc}[1]{#1}
281 \newrobustcmd{\LWR@HTML@textet}[1]{#1}
282 \newrobustcmd{\LWR@HTML@textep}[1]{#1}
283 \newrobustcmd{\LWR@HTML@textex}[1]{#1}
284 \newrobustcmd{\LWR@HTML@textux}[1]{#1}
285 \newrobustcmd{\LWR@HTML@textrw}[1]{#1}
286 \newrobustcmd{\LWR@HTML@textmb}[1]{\textmd{#1}}
287 \newrobustcmd{\LWR@HTML@textdb}[1]{\textbf{#1}}
288 \newrobustcmd{\LWR@HTML@textsb}[1]{\textbf{#1}}
289 % \newrobustcmd{\LWR@HTML@texteb}[1]{#1}
290 \newrobustcmd{\LWR@HTML@textub}[1]{\texteb{#1}}
291 % \newrobustcmd{\LWR@HTML@textlg}[1]{#1}
292 \newrobustcmd{\LWR@HTML@textel}[1]{\textlg{#1}}
293 \newrobustcmd{\LWR@HTML@textul}[1]{\textlg{#1}}
294
295 \LWR@formatted{textln}
296 \LWR@formatted{textos}
297 \LWR@formatted{textin}
298 \LWR@formatted{textsu}
299 % \LWR@formatted{textsi}
300 \LWR@formatted{textdf}
301 \LWR@formatted{textsw}
302 \LWR@formatted{textti}
303 \LWR@formatted{textlt}
304 \LWR@formatted{textof}
305 \LWR@formatted{textalt}
306 \LWR@formatted{textreg}
307 \LWR@formatted{emboss}
308 \LWR@formatted{textorn}
309 \LWR@formatted{textqt}
310 \LWR@formatted{textsh}
311 \LWR@formatted{texttm}
312 \LWR@formatted{texttv}
313 \LWR@formatted{textl}
```

```
314 \LWR@formatted{texto}
315 \LWR@formatted{textp}
316 \LWR@formatted{textt}
317 \LWR@formatted{textpl}
318 \LWR@formatted{textpo}
319 \LWR@formatted{texttl}
320 \LWR@formatted{textto}
321 \LWR@formatted{textol}
322 \LWR@formatted{textswash}
323 \LWR@formatted{textu}
324 \LWR@formatted{textscu}
325 \LWR@formatted{textui}
326 \LWR@formatted{textri}
327 \LWR@formatted{textnw}
328 \LWR@formatted{textcd}
329 \LWR@formatted{textec}
330 \LWR@formatted{textuc}
331 \LWR@formatted{textet}
332 \LWR@formatted{textep}
333 \LWR@formatted{textex}
334 \LWR@formatted{textux}
335 \LWR@formatted{textrw}
336 \LWR@formatted{textmb}
337 \LWR@formatted{textdb}
338 \LWR@formatted{textsb}
339 % \LWR@formatted{texteb}
340 \LWR@formatted{textub}
341 % \LWR@formatted{textlg}
342 \LWR@formatted{textel}
343 \LWR@formatted{textul}
344
345 \newrobustcmd{\LWR@null@textln}[1]{#1}
346 \newrobustcmd{\LWR@null@textos}[1]{#1}
347 \newrobustcmd{\LWR@null@textin}[1]{#1}
348 \newrobustcmd{\LWR@null@textsui}[1]{#1}
349 % \newrobustcmd{\LWR@null@textsi}[1]{#1}
350 \newrobustcmd{\LWR@null@textdf}[1]{#1}
351
352 \ifdef{\LWR@HTML@swshape}{% duplicated by fontaxes
353 \newrobustcmd{\LWR@null@textsw}[1]{#1}
354 }
355
356 \newrobustcmd{\LWR@null@textti}[1]{#1}
357 \newrobustcmd{\LWR@null@textlt}[1]{#1}
358 \newrobustcmd{\LWR@null@textof}[1]{#1}
359 \newrobustcmd{\LWR@null@textalt}[1]{#1}
360 \newrobustcmd{\LWR@null@textreg}[1]{#1}
361 \newrobustcmd{\LWR@null@emboss}[1]{#1}
362 \newrobustcmd{\LWR@null@textorn}[1]{#1}
363 \newrobustcmd{\LWR@null@textqt}[1]{#1}
364 \newrobustcmd{\LWR@null@textsh}[1]{#1}
365 \newrobustcmd{\LWR@null@texttm}[1]{#1}
366 \newrobustcmd{\LWR@null@texttv}[1]{#1}
367 \newrobustcmd{\LWR@null@textl}[1]{#1}
368 \newrobustcmd{\LWR@null@texto}[1]{#1}
```

369 \newrobustcmd{\LWR@null@textp}[1]{#1}  
370 \newrobustcmd{\LWR@null@textt}[1]{#1}  
371 \newrobustcmd{\LWR@null@textpl}[1]{#1}  
372 \newrobustcmd{\LWR@null@textpo}[1]{#1}  
373 \newrobustcmd{\LWR@null@texttl}[1]{#1}  
374 \newrobustcmd{\LWR@null@textto}[1]{#1}  
375 \newrobustcmd{\LWR@null@textol}[1]{#1}  
376 \newrobustcmd{\LWR@null@textswash}[1]{#1}  
377 \newrobustcmd{\LWR@null@textu}[1]{#1}  
378 \newrobustcmd{\LWR@null@textscu}[1]{#1}  
379 \newrobustcmd{\LWR@null@textui}[1]{#1}  
380 \newrobustcmd{\LWR@null@textri}[1]{#1}  
381 \newrobustcmd{\LWR@null@textnw}[1]{#1}  
382 \newrobustcmd{\LWR@null@textcd}[1]{#1}  
383 \newrobustcmd{\LWR@null@textec}[1]{#1}  
384 \newrobustcmd{\LWR@null@textuc}[1]{#1}  
385 \newrobustcmd{\LWR@null@textet}[1]{#1}  
386 \newrobustcmd{\LWR@null@textep}[1]{#1}  
387 \newrobustcmd{\LWR@null@textex}[1]{#1}  
388 \newrobustcmd{\LWR@null@textux}[1]{#1}  
389 \newrobustcmd{\LWR@null@textrw}[1]{#1}  
390 \newrobustcmd{\LWR@null@textmb}[1]{#1}  
391 \newrobustcmd{\LWR@null@textdb}[1]{#1}  
392 \newrobustcmd{\LWR@null@textsb}[1]{#1}  
393 % \newrobustcmd{\LWR@null@texteb}[1]{#1}  
394 \newrobustcmd{\LWR@null@textub}[1]{#1}  
395 % \newrobustcmd{\LWR@null@textlg}[1]{#1}  
396 \newrobustcmd{\LWR@null@textel}[1]{#1}  
397 \newrobustcmd{\LWR@null@textul}[1]{#1}  
398  
399 \appto{\LWR@nullfonts}{%  
400 \LetLtxMacro\textln\LWR@null@textln%  
401 \LetLtxMacro\textos\LWR@null@textos%  
402 \LetLtxMacro\textin\LWR@null@textin%  
403 \LetLtxMacro\textsu\LWR@null@textsu%  
404 % \LetLtxMacro\textsi\LWR@null@textsi%  
405 \LetLtxMacro\textdf\LWR@null@textdf%  
406 \LetLtxMacro\textsw\LWR@null@textsw%  
407 \LetLtxMacro\textti\LWR@null@textti%  
408 \LetLtxMacro\textlt\LWR@null@textlt%  
409 \LetLtxMacro\textof\LWR@null@textof%  
410 \LetLtxMacro\textalt\LWR@null@textalt%  
411 \LetLtxMacro\textreg\LWR@null@textreg%  
412 \LetLtxMacro\emboss\LWR@null@emboss%  
413 \LetLtxMacro\textorn\LWR@null@textorn%  
414 \LetLtxMacro\textqt\LWR@null@textqt%  
415 \LetLtxMacro\textsh\LWR@null@textsh%  
416 \LetLtxMacro\texttm\LWR@null@texttm%  
417 \LetLtxMacro\texttv\LWR@null@texttv%  
418 \LetLtxMacro\textl\LWR@null@textl%  
419 \LetLtxMacro\texto\LWR@null@texto%  
420 \LetLtxMacro\textp\LWR@null@textp%  
421 \LetLtxMacro\textt\LWR@null@textt%  
422 \LetLtxMacro\textpl\LWR@null@textpl%  
423 \LetLtxMacro\textpo\LWR@null@textpo%

```

424 \LetLtxMacro\texttl\LWR@null@texttl%
425 \LetLtxMacro\textto\LWR@null@textto%
426 \LetLtxMacro\textol\LWR@null@textol%
427 \LetLtxMacro\textswash\LWR@null@textswash%
428 \LetLtxMacro\textu\LWR@null@textu%
429 \LetLtxMacro\textscu\LWR@null@textscu%
430 \LetLtxMacro\textui\LWR@null@textui%
431 \LetLtxMacro\textri\LWR@null@textri%
432 \LetLtxMacro\textnw\LWR@null@textnw%
433 \LetLtxMacro\textcd\LWR@null@textcd%
434 \LetLtxMacro\textec\LWR@null@textec%
435 \LetLtxMacro\textuc\LWR@null@textuc%
436 \LetLtxMacro\textet\LWR@null@textet%
437 \LetLtxMacro\textep\LWR@null@textep%
438 \LetLtxMacro\textex\LWR@null@textex%
439 \LetLtxMacro\textux\LWR@null@textux%
440 \LetLtxMacro\textrw\LWR@null@textrw%
441 \LetLtxMacro\textmb\LWR@null@textmb%
442 \LetLtxMacro\textdb\LWR@null@textdb%
443 \LetLtxMacro\textsb\LWR@null@textsb%
444 % \LetLtxMacro\texteb\LWR@null@texteb%
445 \LetLtxMacro\textub\LWR@null@textub%
446 % \LetLtxMacro\textlg\LWR@null@textlg%
447 \LetLtxMacro\textel\LWR@null@textel%
448 \LetLtxMacro\textul\LWR@null@textul%
449 }
450
451 \providecommand*\zeroslash{}{0}
452 \newrobustcmd*\LWR@HTML@zeroslash{}{0}
453 \LWR@formatted{zeroslash}

```

---

File 278 **lwarp-nicefrac.sty**

§ 378 Package **nicefrac**

*(Emulates or patches code by AXEL REICHERT.)*

Pkg nicefrac nicefrac is patched for use by lwarp.

**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][[]{#2/#3}}
25 \end{warpMathJax}

```

---

File 279 **lwarp-niceframe.sty**

§ 379 Package **niceframe**

Pkg niceframe 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 280 **lwarp-noitcrul.sty**

§ 380 Package **noitcrul**

*(Emulates or patches code by PAUL EBERMANN.)*

Pkg noitcrul noitcrul is used as-is for SVG and emulated for MATHJAX.

**for HTML output:** 1 \LWR@ProvidesPackagePass{noitcrul}[2006/04/11]

---

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\noitUnderLine}[1]{\underline{#1}\!}}
4 \end{warpMathJax}

```

---

File 281 **lwarp-nolbreaks.sty**

§ 381 Package **nolbreaks**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg nolbreaks nolbreaks is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{nolbreaks}[2012/05/31]

2 \NewDocumentCommand{\nolbreaks}{s m}{\InlineClass{nolbreaks}{#2}}

```

---

File 282 **lwarp-nomenc1.sty**

§ 382 Package **nomenc1**

*(Emulates or patches code by BORIS VEYTSMAN, BERND SCHANDL, LEE NETHERTON, CV RADHAKRISHNAN.)*

Pkg nomenc1 nomenc1 is patched for use by lwarp.

To process the HTML nomenclature:

```
makeindex <project>_html.nlo -s nomenc1.ist -o <project>_html.nls
```

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{nomenc1}[2005/09/22]

```

\BaseJobname is added to the label in case xr or xr-hyper are used.

```

2 \def\@@@nomenc1ature[#1]#2#3{%
3 \def\@tempa{#2}\def\@tempb{#3}%
4 \protected@write\@nomenc1aturefile{%
5 {\string\@nomenc1atureentry{#1\nom@verb\@tempa @[\nom@verb\@tempa]}%
6 \begingroup\nom@verb\@tempb\protect\nomeqref{\theequation}%
7 |nompageref}{\theLWR@previousautopagelabel}}% lwarp
8 \endgroup
9 \@esphack}
10
11 \renewcommand*{\pagedeclaration}[1]{, \nameref{\BaseJobname-autopage-#1}}%

```

---

File 283 **lwarp-nonfloat.sty**

§ 383 Package **nonfloat**

*(Emulates or patches code by KAI RASCHER.)*

Pkg nonfloat nonfloat is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nonfloat}[1999/07/05]

```

2 \LetLtxMacro\topcaption\caption
3 \newcommand{\figcaption}{\def\@captype{figure}\caption}
4 \newcommand{\tabcaption}{\def\@captype{table}\topcaption}
5 \newenvironment{narrow}[2]{}{}
```

File 284 **lwarp-nonumonpart.sty**

§ 384 Package **nonumonpart**

Pkg nonumonpart nonumonpart is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nonumonpart}[2011/04/15]

File 285 **lwarp-nopageno.sty**

§ 385 Package **nopageno**

Pkg nopageno nopageno is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nopageno}[1989/01/01]

File 286 **lwarp-notes.sty**

§ 386 Package **notes**

Pkg notes notes is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{notes}[2002/10/29]

```

2 \newcommand*{\LWR@notes@onenote}[2]{%
3 \newenvironment{#1}
4 {
5 \BlockClass{notes#1}
6 \begin{BlockClass}{notesicon}\textcircled{~#2~}\end{BlockClass}
7 \BlockClass{notescontents}
8 }
9 {\endBlockClass\endBlockClass}
10 }
11
12 \LWR@notes@onenote{importantnote}{!}
13
14 \LWR@notes@onenote{warningnote}{--}
15
16 \LWR@notes@onenote{informationnote}{i}
```

---

File 287 **lwarp-notespages.sty**

§ 387 Package **notespages**

Pkg notespages 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*\npnpinfo}[1]{}
9 \newcommand*\tracingnmarks{}
10 \newcommand*\notespage}[1][1]{}
11 \newcommand*\notespages}[1][1]{}
12 \newcommand*\notesfill}[1][1]{}
13 \newcommand*\setnotespages}[1]{}
14 \newcommand*\definotesoption}[2]{}
15 \newcommand*\definotesstyle}[2]{}
16 \newcommand*\definetitlestyle}[2]{}
17 \newcommand*\nppatchchapter}[1]{}
18 \newcommand*\npunpatchchapter{}

```

---

File 288 **lwarp-nowidow.sty**

§ 388 Package **nowidow**

*(Emulates or patches code by RAPHAËL PINSON.)*

Pkg nowidow nowidow is ignored.

Discard all options for lwarp-nowidow:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nowidow}[2011/09/20]

```

\nowidow [⟨lines⟩]
\setnowidow [⟨lines⟩]

2 \newcommand*\nowidow}[1][1]{}
3 \newcommand*\setnowidow}[1][1]{}

\noclub [⟨lines⟩]
\setnoclub [⟨lines⟩]

```

---

```
4 \newcommand*\noclub}[1][{}]{
5 \newcommand*\setnoclub}[1][{}]{
```

---

File 289 **lwarp-nttheorem.sty**

§ 389 Package **nttheorem**

(Emulates or patches code by WOLFGANG MAY, ANDREAS SCHEDLER.)

Pkg nttheorem nttheorem is patched for use by lwarp.

---

Table 15: Ntheorem package — css styling of theorems and proofs

**Theorem:** <div> of class theorembody<theoremstyle>

**Theorem Header:** <span> of class theoremheader<style>

where <theoremstyle> is plain, break, etc.

---

### § 389.1 Limitations

 **Font control** This conversion is not total. Font control is via css, and the custom L<sup>A</sup>T<sub>E</sub>X font settings are ignored.

 **Equation numbering** nttheorem has a bug with equation numbering in  $\mathcal{AMS}$  environments when the option thref is used. lwarp does not share this bug, so equations with \split, etc, are numbered correctly with lwarp's HTML output, but not with the print output. It is recommended to use cleveref instead of nttheorem's thref option.

### § 389.2 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 lwarp emulated hyperref.

**for HTML output:**

```
Some disabled options:
1 \DeclareOption{thref}{}
2
3
4 \newbool{LWR@nttheoremmarks}
5 \boolfalse{LWR@nttheoremmarks}
6
7 \DeclareOption{thmmarks}{
8 \booltrue{LWR@nttheoremmarks}
```

```

9 \newif\ifsetendmark\setendmarktrue
10 }
11
12
13 \newbool{LWR@theoremamsthm}
14 \boolfalse{LWR@theoremamsthm}
15
16 \DeclareOption{amsthm}{\booltrue{LWR@theoremamsthm}}
17
18
19 \DeclareOption{amsmath}{}
20 \DeclareOption{hyperref}{}
21
22 \LWR@ProvidesPackagePass{ntheorem}[2011/08/15]

```

### § 389.3 Remembering the theorem style

Storage for the style being used for new theorems.

```

23 \newcommand{\LWR@newtheoremstyle}{plain}

24 \AtBeginDocument{
25 \ifpackageloaded{cleveref}{
26 \gdef\@thm#1#2#3{%
27 \if@thmmarks
28 \stepcounter{end\InTheoType ctr}%
29 \fi
30 \renewcommand{\InTheoType}{#1}%
31 \if@thmmarks
32 \stepcounter{curr#1ctr}%
33 \setcounter{end#1ctr}{0}%
34 \fi
35 \refstepcounter[#1]{#2}% <<< cleveref modification
36 \theorem@prework
37 \LWR@forcenewpage% lwarp
38 \BlockClass{theorembody#1}\LWR@thisthmstyle% lwarp
39 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
40 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
41 \ifthm@inframe
42 \thm@topsep\theoremframepreskipamount
43 \thm@topsepadd\theoremframepostskipamount
44 \else
45 \thm@topsep\theoremframepreskipamount
46 \thm@topsepadd\theoremframepostskipamount
47 \fi
48 \else% oldframeskips
49 \thm@topsep\theoremframepreskipamount
50 \thm@topsepadd \theoremframepostskipamount
51 \ifvmode\advance\thm@topsepadd\partopsep\fi
52 \fi
53 \@topsep\thm@topsep
54 \@topsepadd\thm@topsepadd
55 \advance\linewidth -\theorem@indent
56 \advance\linewidth -\theorem@rightindent
57 \advance\@totalleftmargin \theorem@indent

```

```

58 \parshape \@ne \@totalleftmargin \linewidth
59 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
60 }
61 }{% not @ifpackageloaded{cleveref}
62 \gdef\thm#1#2#3{%
63 \if@thmmarks
64 \stepcounter{end\InTheoType ctr}%
65 \fi
66 \renewcommand{\InTheoType}{#1}%
67 \if@thmmarks
68 \stepcounter{curr#1ctr}%
69 \setcounter{end#1ctr}{0}%
70 \fi
71 \refstepcounter{#2}%
72 \theorem@prework
73 \LWR@forcenewpage% lwarp
74 \BlockClass{theorembody#1}\LWR@thisthmstyle% lwarp
75 \trivlist % latex's \trivlist, calling latex's \trivlist unchanged
76 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \trivlist
77 \ifthm@inframe
78 \thm@topsep\theoremframepreskipamount
79 \thm@topsepadd\theoremframepostskipamount
80 \else
81 \thm@topsep\theorempreskipamount
82 \thm@topsepadd\theorempostskipamount
83 \fi
84 \else% oldframeskips
85 \thm@topsep\theorempreskipamount
86 \thm@topsepadd \theorempostskipamount
87 \ifvmode\advance\thm@topsepadd\partopsep\fi
88 \fi
89 \@topsep\thm@topsep
90 \@topsepadd\thm@topsepadd
91 \advance\linewidth -\theorem@indent
92 \advance\linewidth -\theorem@rightindent
93 \advance\@totalleftmargin \theorem@indent
94 \parshape \@ne \@totalleftmargin \linewidth
95 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
96 }
97 }
98 }% AtBeginDocument

```

Patched to remember the style being used for new theorems:

```

99 \gdef\theoremstyle#1{%
100 \@ifundefined{th@#1}{\@warning
101 {Unknown theoremstyle '#1'. Using 'plain'}}%
102 \theorem@style{plain}
103 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
104 }%
105 {
106 \theorem@style{#1}
107 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
108 }
109 }

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

110
111 \gdef\@xnthm#1#2[#3]{%
112 \ifthm@tempif
113 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
114 \expandafter\ifundefined{c@#1}%
115 {\@definecounter{#1}}{%
116 \@newctr{#1}[#3]%
117 \expandafter\xdef\csname the#1\endcsname{%
118 \expandafter\noexpand\csname the#3\endcsname \@thmcountersep
119 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}}%
120 \expandafter\gdef\csname mkheader@#1\endcsname
121 {\csname setparms@#1\endcsname
122 \@thm{#1}{#1}{#2}
123 }%
124 \global\@namedef{end#1}{\@endtheorem}
125 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
126 \fi
127 }
128
129 \gdef\@ynthm#1#2{%
130 \ifthm@tempif
131 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
132 \expandafter\ifundefined{c@#1}%
133 {\@definecounter{#1}}{%
134 \expandafter\xdef\csname the#1\endcsname
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}}}% lwarp
142 \fi
143 }
144
145 \gdef\@othm#1[#2]#3{%
146 \@ifundefined{c@#2}{\@nocounterr{#2}}%
147 {\ifthm@tempif
148 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
149 \global\@namedef{the#1}{\@nameuse{the#2}}%
150 \expandafter\protected@xdef\csname num@addtheoremline#1\endcsname{%
151 \noexpand\@num@addtheoremline{#1}{#3}}%
152 \expandafter\protected@xdef\csname nonum@addtheoremline#1\endcsname{%
153 \noexpand\@nonum@addtheoremline{#1}{#3}}%
154 \theoremkeyword{#3}%
155 \expandafter\protected@xdef\csname #1Keyword\endcsname
156 {\the\theoremkeyword}%
157 \expandafter\gdef\csname mkheader@#1\endcsname
158 {\csname setparms@#1\endcsname
159 \@thm{#1}{#2}{#3}
160 }%
161 \global\@namedef{end#1}{\@endtheorem}

```

```

162 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
163 \fi}
164 }

```

#### § 389.4 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.

```

165 \newcommand{\LWR@inctheorem}{%
166 \addtocounter{LWR@thisautoid}{1}%
167 \LWR@stoppars%
168 \LWR@htmltag{a id="\LWR@print@mbbox{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
169 \LWR@startpars%
170 }

```

#### § 389.5 \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>.

```

171 \gdef\newtheoremstyle#1#2#3{%
172 \expandafter\@ifundefined{th@#1}%
173 {\expandafter\gdef\csname th@#1\endcsname{%
174 \def\@begintheorem####1####2{%
175 \LWR@inctheorem% lwarp
176 #2}%
177 \def\@opargbegintheorem####1####2####3{%
178 \LWR@inctheorem% lwarp
179 #3}%
180 }%
181 }%
182 {\PackageError{\basename}{Theorem style #1 already defined}\@eha}
183 }

```

#### § 389.6 Standard styles

```

184 \renewtheoremstyle{plain}%
185 {\item[
186 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]}%
187 {\item[
188 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]}
189
190 \renewtheoremstyle{break}%
191 {\item[
192 \InlineClass{theoremheaderbreak}{##1\ ##2\theorem@separator}\newline
193]}%
194 {\item[
195 \InlineClass{theoremheaderbreak}%

```

```

196 {{{1\ ##2\ (##3)\theoremseparator}\newline
197]}
198
199 \renewtheoremstyle{change}%
200 {\item[
201 \InlineClass{theoremheaderchange}{##2\ ##1\theoremseparator}]]%
202 {\item[
203 \InlineClass{theoremheaderchange}{##2\ ##1\ (##3)\theoremseparator}]]
204
205 \renewtheoremstyle{changebreak}%
206 {\item[
207 \InlineClass{theoremheaderchangebreak}%
208 {##2\ ##1\theoremseparator}\newline
209]}%
210 {\item[
211 \InlineClass{theoremheaderchangebreak}%
212 {##2\ ##1\ (##3)\theoremseparator}\newline
213]}
214
215 \renewtheoremstyle{margin}%
216 {\item[
217 \InlineClass{theoremheadermargin}{##2 \quad ##1\theoremseparator}
218]}%
219 {\item[
220 \InlineClass{theoremheadermargin}{##2 \quad ##1\ (##3)\theoremseparator}
221]}
222
223 \renewtheoremstyle{marginbreak}%
224 {\item[
225 \InlineClass{theoremheadermarginbreak}%
226 {##2 \quad ##1\theoremseparator}\newline
227]}%
228 {\item[
229 \InlineClass{theoremheadermarginbreak}%
230 {##2 \quad ##1\ (##3)\theoremseparator}\newline
231]}
232
233 \renewtheoremstyle{nonumberplain}%
234 {\item[
235 \InlineClass{theoremheaderplain}{##1\theoremseparator}]]%
236 {\item[
237 \InlineClass{theoremheaderplain}{##1\ (##3)\theoremseparator}]]
238
239 \renewtheoremstyle{nonumberbreak}%
240 {\item[
241 \InlineClass{theoremheaderbreak}{##1\theoremseparator}\newline
242]}%
243 {\item[
244 \InlineClass{theoremheaderbreak}{##1\ (##3)\theoremseparator}\newline
245]}
246
247 \renewtheoremstyle{empty}%
248 {\item[]}]%
249 {\item[
250 \InlineClass{theoremheaderplain}{##3}]]

```

```

251
252 \renewtheoremstyle{emptybreak}%
253 {\item[]}%
254 {\item[
255 \InlineClass{theoremheaderplain}{##3}] \ \newline}

```

### § 389.7 Additional objects

The following manually adjust the css for the standard configuration objects which are not a purely plain style:

```
256 \ifbool{LWR@theoremamsthm}{}{%
```

Upright text via CSS:

```

257 \newtheoremstyle{plainupright}%
258 {\item[
259 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]}%
260 {\item[
261 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]}

```

Upright text and small caps header via CSS:

```

262 \newtheoremstyle{nonumberplainuprightsc}%
263 {\item[
264 \InlineClass{theoremheadersc}{##1\theorem@separator}]}%
265 {\item[
266 \InlineClass{theoremheadersc}{##1\ (##3)\theorem@separator}]}
267 }% not amsthm

```

### § 389.8 Renewed standard configuration

The following standard configuration is renewed using the new css:

```

268 \ifbool{LWR@theoremamsthm}{}{%

269 \ifx\thm@usestd\@undefined
270 \else
271 \theoremnumbering{arabic}
272 \theoremstyle{plain}
273 \RequirePackage{latexsym}
274 \theoremsymbol{\Box}
275 \theorembodyfont{\itshape}
276 \theoremheaderfont{\normalfont\bfseries}
277 \theoremseparator{}
278 \renewtheorem{Theorem}{Theorem}
279 \renewtheorem{theorem}{Theorem}
280 \renewtheorem{Satz}{Satz}
281 \renewtheorem{satz}{Satz}
282 \renewtheorem{Proposition}{Proposition}
283 \renewtheorem{proposition}{Proposition}
284 \renewtheorem{Lemma}{Lemma}
285 \renewtheorem{lemma}{Lemma}
286 \renewtheorem{Korollar}{Korollar}

```

```

287 \renewtheorem{korollar}{Korollar}
288 \renewtheorem{Corollary}{Corollary}
289 \renewtheorem{corollary}{Corollary}
290
291 \theoremstyle{plainupright}
292 \theorembodyfont{\upshape}
293 \theoremsymbol{\HTMLUnicode{25A1}}% UTF-8 white box
294 \renewtheorem{Example}{Example}
295 \renewtheorem{example}{Example}
296 \renewtheorem{Beispiel}{Beispiel}
297 \renewtheorem{beispiel}{Beispiel}
298 \renewtheorem{Bemerkung}{Bemerkung}
299 \renewtheorem{bemerkung}{Bemerkung}
300 \renewtheorem{Anmerkung}{Anmerkung}
301 \renewtheorem{anmerkung}{Anmerkung}
302 \renewtheorem{Remark}{Remark}
303 \renewtheorem{remark}{Remark}
304 \renewtheorem{Definition}{Definition}
305 \renewtheorem{definition}{Definition}
306
307 \theoremstyle{nonumberplainuprightsc}
308 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
309 \renewtheorem{Proof}{Proof}
310 \renewtheorem{proof}{Proof}
311 \renewtheorem{Beweis}{Beweis}
312 \renewtheorem{beweis}{Beweis}
313 \qedsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
314
315 \theoremsymbol{}
316 \fi
317}% not amsthm

```

### § 389.9 amsthm option

Only if the amsthm option was given:

```

318 \ifbool{LWR@theoremamsthm}{
319
320 \gdef\th@plain{%
321 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
322 \def\@begintheorem##1##2{%
323 \LWR@intheorem% lwarp
324 \item[
325 \InlineClass{theoremheaderplain}{##1\ ##2.}
326]}%
327 \def\@opargbegintheorem##1##2##3{%
328 \LWR@intheorem% lwarp
329 \item[
330 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3).}
331]}}
332
333 \gdef\th@nonumberplain{%
334 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
335 \def\@begintheorem##1##2{%
336 \LWR@intheorem% lwarp

```

```

337 \item[
338 \InlineClass{theoremheaderplain}{##1.}
339]}%
340 \def\@opargbegintheorem##1##2##3{%
341 \LWR@intheorem% lwarp
342 \item[
343 \InlineClass{theoremheaderplain}{##1\ (##3).}
344]}}
345
346 \gdef\th@definition{%
347 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
348 \def\@begintheorem##1##2{%
349 \LWR@intheorem% lwarp
350 \item[
351 \InlineClass{theoremheaderdefinition}{##1\ ##2.}
352]}%
353 \def\@opargbegintheorem##1##2##3{%
354 \LWR@intheorem% lwarp
355 \item[
356 \InlineClass{theoremheaderdefinition}{##1\ ##2\ (##3).}
357]}}
358
359 \gdef\th@nonumberdefinition{%
360 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
361 \def\@begintheorem##1##2{%
362 \LWR@intheorem% lwarp
363 \item[
364 \InlineClass{theoremheaderdefinition}{##1.}
365]}%
366 \def\@opargbegintheorem##1##2##3{%
367 \LWR@intheorem% lwarp
368 \item[
369 \InlineClass{theoremheaderdefinition}{##1\ (##3).}
370]}}
371
372 \gdef\th@remark{%
373 \def\theorem@headerfont{\itshape}\normalfont%
374 \def\@begintheorem##1##2{%
375 \LWR@intheorem% lwarp
376 \item[
377 \InlineClass{theoremheaderremark}{##1\ ##2.}
378]}%
379 \def\@opargbegintheorem##1##2##3{%
380 \LWR@intheorem% lwarp
381 \item[
382 \InlineClass{theoremheaderremark}{##1\ ##2\ (##3).}
383]}}
384
385 \gdef\th@nonumberremark{%
386 \def\theorem@headerfont{\itshape}\normalfont%
387 \def\@begintheorem##1##2{%
388 \LWR@intheorem% lwarp
389 \item[
390 \InlineClass{theoremheaderremark}{##1.}
391]}%

```

```

392 \def\@opargbegintheorem##1##2##3{%
393 \LWR@intheorem% lwarp
394 \item[
395 \InlineClass{theoremheaderremark}{##1\ (##3).}
396]}}
397
398 \gdef\th@proof{%
399 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
400 \def\@begintheorem##1##2{%
401 \LWR@intheorem% lwarp
402 \item[
403 \InlineClass{theoremheaderproof}{##1.}
404]}%
405 \def\@opargbegintheorem##1##2##3{%
406 \LWR@intheorem% lwarp
407 \item[
408 \InlineClass{theoremheaderproof}{##1\ (##3).}
409]}}
410
411
412
413 \newcounter{proof}%
414 \if@thmmarks
415 \newcounter{currproofctr}%
416 \newcounter{endproofctr}%
417 \fi
418
419 \gdef\proofSymbol{\openbox}
420
421 \newcommand{\proofname}{Proof}
422
423 \newenvironment{proof}[1][\proofname]{
424 \th@proof
425 \def\theorem@headerfont{\itshape}%
426 \normalfont
427 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
428 \@thm{proof}{proof}{#1}
429 }%
430 {\@endtheorem}
431
432 }{}% amsthm option

```

## § 389.10 Ending a theorem

Patched for CSS:

```

433 \let\LWR@origendtheorem\@endtheorem
434 \renewcommand{\@endtheorem}{%
435 \ifbool{LWR@theoremmarks}{%
436 \ifsetendmark%
437 \InlineClass{theoremendmark}{\csname\InTheoType Symbol\endcsname}%
438 \setendmarkfalse%
439 \fi%
440 }{}%
441 \LWR@origendtheorem% also does \@endtrivlist

```

```

442 \ifbool{LWR@theoremmarks}{\global\setendmarktrue}{}%
443 \endBlockClass%
444 }

```

### § 389.11 **\NoEndMark**

```

445 \gdef\NoEndMark{\global\setendmarkfalse}

```

### § 389.12 **List-of**

Redefined to reuse the float mechanism to add list-of-theorem links:

```

\thm@thmline {<1: printed type>} {<2: #>} {<3: optional>} {<4: page>}

```

```

446 \renewcommand{\thm@thmline@noname}[4]{%
447 \hypertocfloat{1}{theorem}{thm}{#2 #3}{}%
448 }
449
450 \renewcommand{\thm@thmline@name}[4]{%
451 \hypertocfloat{1}{theorem}{thm}{#1 #2 #3}{}%
452 }

```

This was redefined by `ntheorem` when loaded, so it is now redefined for `lwarp`:

```

453 \def\thm@thmline{\thm@thmline@name}

```

Patch for CSS:

```

454 \def\listtheorems#1{
455 \LWR@html@elementclass{nav}{lohtm}%
456 \begin@group
457 \c@tocdepth=-2%
458 \def\thm@list{#1}\thm@processlist
459 \end@group
460 \LWR@html@elementclassend{nav}{lohtm}%
461 }

```

### § 389.13 **Symbols**

Proof QED symbol:

```

462 \newcommand{\qed}{\quad\the\qedsymbol}
463
464 \AtBeginDocument{
465 \ifundefined{LWR@orig@openbox}{
466 \LetLtxMacro\LWR@orig@openbox\openbox
467 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
468 \LetLtxMacro\LWR@orig@Box\Box
469
470 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
471 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
472 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
473
474 \appto\LWR@restoreorigformatting%

```

```

475 \LetLtxMacro\openbox\LWR@orig@openbox%
476 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
477 \LetLtxMacro\Box\LWR@orig@Box%
478 }% appto
479 }{}% @ifundefined
480 }% AtBeginDocument

```

### § 389.14 **Cross-referencing**

```
\thref {<label>}
```

```
481 \newcommand*{\thref}[1]{\cref{#1}}%
```

---

### File 290 **lwarp-octave.sty**

### § 390 Package **octave**

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg octave **octave** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{octave}[2017/10/31]

Remove the leading 1pt kern:

```

2 \RenewDocumentCommand{\@PrintTicks}{ m }{%
3 \kern-1pt% lwarp
4 \@TickNum = #1%
5 \loop
6 \@Tick{}%
7 \advance\@TickNum by -1
8 \ifnum\@TickNum > 0
9 \repeat
10 }

```

Use unicode for the prime character:

```
11 \RenewDocumentCommand{\@Tick}{}{\HTMLUnicode{2032}}
```

Catch the inline font:

```

12 \RenewDocumentCommand{\pitch}{ m o m }{%
13 \if@OctaveNumber%
14 {%
15 \pitchfont{%
16 \LWR@textcurrentfont{% lwarp
17 \MakeUppercase{#1}%
18 \IfValueTF{#2}{#2}{}}\textsubscript{#3}%
19 }%
20 }%
21 }%
22 \else%

```

```

23 {%
24 \pitchfont{%
25 \LWR@textcurrentfont{% lwarp
26 \@GetOctaveTick{#1}[#2]{#3}%
27 }%
28 }%
29 }%
30 \fi%
31 }

```

The original was hard to adapt to lwarp's handling of &.

```

32 \StartDefiningTabulars
33 \renewcommand{\octavetable}{%
34 \begin{tabular}{ll}
35 \octaveprimes \pitch{C}{0} & \octavenumbers \pitch{C}{0} \\
36 \octaveprimes \pitch{C}{1} & \octavenumbers \pitch{C}{1} \\
37 \octaveprimes \pitch{C}{2} & \octavenumbers \pitch{C}{2} \\
38 \octaveprimes \pitch{C}{3} & \octavenumbers \pitch{C}{3} \\
39 \octaveprimes \pitch{C}{4} & \octavenumbers \pitch{C}{4} \\
40 \octaveprimes \pitch{C}{5} & \octavenumbers \pitch{C}{5} \\
41 \octaveprimes \pitch{C}{6} & \octavenumbers \pitch{C}{6} \\
42 \octaveprimes \pitch{C}{7} & \octavenumbers \pitch{C}{7} \\
43 \end{tabular}
44 }
45 \StopDefiningTabulars

```

---

File 291 **lwarp-overpic.sty**

§ 391 Package **overpic**

*(Emulates or patches code by ROLF NIEPRASCHK.)*

Pkg overpic **overpic** is patched for use by lwarp.

 **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 84.2 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 292 **lwarp-pagegrid.sty**

§ 392 Package **pagegrid**

Pkg pagegrid pagegrid is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagegrid}[2016/05/16]

2 \newcommand*{\pagegridsetup}[1]{}

```

---

File 293 **lwarp-pagenote.sty**

§ 393 Package **pagenote**

Pkg pagenote pagenote works as-is, but the page option is disabled.

**for HTML output:**

```

1 \DeclareOption{page}{}
2 \LWR@ProvidesPackagePass{pagenote}[2009/09/03]

```

---

File 294 **lwarp-pagesel.sty**

§ 394 Package **pagesel**

Pkg pagesel pagesel is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagesel}[2016/05/16]

```

---

File 295 **lwarp-paralist.sty**

§ 395 Package **paralist**

*(Emulates or patches code by BERND SCHANDL.)*

Pkg paralist 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 296 **lwarp-parallel.sty**

§ 396 Package **parallel**

*(Emulates or patches code by MATTHIAS ECKERMANN.)*

Pkg parallel parallel is emulated.

Package options are ignored. Footnotes are treated as normal `lwarp` 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 `lwarp-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 \ifstrequal{#1}{v}%
13 {%
14 \renewcommand*\LWR@parallel@border{ ; border-left: 2px solid black}%
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}{% {}{}
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}[%
60 width:\arabic{LWR@parallel@Lwidth}\% ; % space
61 padding: .5ex 1\% ; % space
62]{minipage}%
63 #1%
64 \end{BlockClass}%
65 }

```

```

66
67 \newcommand*{\ParallelRText}[1]{%
68 \begin{BlockClass}%
69 width:\arabic{LWR@parallel@Rwidth}\% ; % space
70 padding: .5ex 1\% ; % space
71 \LWR@parallel@border%
72 }{minipage}%
73 #1%
74 \end{BlockClass}%
75 }
76
77 \newcommand*{\ParallelPar}{\LWR@printpendingfootnotes}
78
79 \newcommand*{\ParallelAtEnd}{}

```

---

File 297 **lwarp-parcolumns.sty**

§ 397 Package **parcolumns**

*(Emulates or patches code by JONATHAN SAUER.)*

Pkg parcolumns 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 lwarp-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 {\end{LWR@setvirtualpage}}
32
33 \newcommand{\LWR@parcolumns@onecol}[1]{%
34 \ifbool{LWR@parcolumns@started}%
35 {}%
36 {%
37 \LWR@htmldivclass{parcolumns}%
38 \booltrue{LWR@parcolumns@started}%
39 }%
40 \ifboolexpr{%
41 bool {LWR@parcolumns@rule} and
42 test {%
43 \ifnumgreater
44 {\value{LWR@parcolumns@thiscol}}
45 {1}
46 }%
47 }%
48 {\renewcommand{\LWR@tempone}{ ; border-left: 2px solid black}}%
49 {\renewcommand{\LWR@tempone}{}}%
50 \begin{BlockClass}[%
51 width:\arabic{LWR@parcolumns@width}\% ; % space
52 padding: .5ex 1\% ; % space
53 \LWR@tempone%
54]{minipage}%
55 #1%
56 \end{BlockClass}%
57 \addtocounter{LWR@parcolumns@thiscol}{1}%
58 }
59
60 \newcommand{\colchunk}[2][\value{LWR@parcolumns@thiscol}]{%
61 \whileboolexpr{%
62 test {%
63 \ifnumcomp%
64 {\value{LWR@parcolumns@thiscol}}
65 {<}
66 {#1}%
67 }%
68 }{%
69 \LWR@parcolumns@onecol{}%
70 }%
71 \LWR@parcolumns@onecol{#2}%
72 }
73
74 \newcommand*{\colplacechunks}{%

```

```

75 \ifbool{LWR@parcolumns@started}%
76 {%
77 \LWR@htmldivclassend{div}%
78 \boolfalse{LWR@parcolumns@started}%
79 }%
80 {%
81 \setcounter{LWR@parcolumns@thiscol}{1}%
82 }

```

File 298 **lwarp-parnotes.sty**

§ 398 Package **parnotes**

*(Emulates or patches code by CHELSEA HUGHES.)*

Pkg parnotes parnotes is supported with some patches.

```

for HTML output: 1 \LWR@ProvidesPackagePass{parnotes}[2016/08/15]

2 \long\def\PN@parnote@real#1#2{%
3 \parnotemark{#1}%
4 % Unless this is the first parnote in \PN@text, add a separator first
5 \unless\ifx\PN@text\empty@g@addto@macro\PN@text{\parnoteintercmd}\fi
6 % Redefine \@currentlabel to the parnote label, so \label works
7 \g@addto@macro\PN@text{%
8 \phantomsection%
9 \def\@currentlabel{#1}%
10 \def\cref@currentlabel{% lwarp
11 [parnotemark][\arabic{parnotemark}][\the parnotemark%
12]%
13 }%
14 \g@addto@macro\PN@text{%
15 \LWR@textcurrentfont{% lwarp
16 \parnotemark{#1}\nolinebreak\thinspace#2%
17 }%
18 }%
19 }
20
21 \def\PN@parnotes@real{%
22 % We call \par later, so this avoids recursion with \PN@parnotes@auto
23 \PN@inparnotestruer
24 \unless\ifvmode\par\fi
25 % Avoid page breaks between a paragraph and its parnotes
26 \nopagebreak\addvspace{\parnotevskip}%
27 \LWR@forcenewpage% lwarp
28 \begin{BlockClass}{footnotes}% lwarp
29 {\parnotefmt{\PN@text}\par}%
30 \end{BlockClass}% lwarp
31 \global\def\PN@text{}%
32 \addvspace{\parnotevskip}%
33 %
34 % These can be enabled or disabled by package options
35 %

```

---

```

36 \PN@disable@indent
37 \PN@reset@optional
38 \PN@inparnotesfalse
39 }
40
41 \AtBeginDocument{
42 \crefname{parnotemark}{paragraph note}{paragraph notes}%
43 \Crefname{parnotemark}{Paragraph note}{Paragraph notes}
44 }

```

---

File 299 **lwarp-parskip.sty**

§ 399 Package **parskip**

Pkg parskip parskip is ignored.

**for HTML output:** Discard all options for lwarp-parskip.

```
1 \LWR@ProvidesPackageDrop{parskip}[2001/04/09]
```

---

File 300 **lwarp-pbox.sty**

§ 400 Package **pbox**

*(Emulates or patches code by SIMON LAW.)*

Pkg pbox pbox is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pbox}[2011/12/07]

```

2 \NewDocumentCommand{\pbox}{0{t} 0{} 0{t} m +m}{%
3 \global\booltrue{LWR@minipagefullwidth}%
4 \parbox[#1][#2][#3]{#4}{#5}%
5 }
6
7 \newcommand{\settomwidth}[3][\columnwidth]{%
8 \settowidth{#2}{#3}%
9 }
10
11 \newcommand{\widthofpbox}[1]{%
12 \widthof{#1}%
13 }

```

---

File 301 **lwarp-pdfcol.sty**

§ 401 Package **pdfcol**

Pkg pdfcol 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{lwarp-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 302 **lwarp-pdfcolfoot.sty**

§ 402 Package **pdfcolfoot**

Pkg pdfcolfoot pdfcolfoot is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfcolfoot}[2016/05/16]
2
3 \newcommand*{\pdfcolfoot@switch}{}
4
5 \newcommand*{\pdfcolfoot@current}{}

```

---

File 303 **lwarp-pdfcolmk.sty**

§ 403 Package **pdfcolmk**

Pkg pdfcolmk pdfcolmk is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfcolmk}[2016/05/16]

```

---

File 304 **lwarp-pdfcolparallel.sty**

§ 404 Package **pdfcolparallel**

Pkg pdfcolparallel 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 305 **lwarp-pdfcolparcolumns.sty**

§ 405 Package **pdfcolparcolumns**

Pkg pdfcolparcolumns 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 306 **lwarp-pdfcomment.sty**

§ 406 Package **pdfcomment**

Pkg pdfcomment pdfcomment is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfcomment}[2016/06/13]

```

2 \newenvironment{pdfsidelinecomment}[2][{}]{ }
3 \newcommand{\pdfcomment}[2][{}]{ }
4 \newcommand{\pdfmargincomment}[2][{}]{ }
5 \newcommand{\pdfmarkupcomment}[3][]{#2}
6 \newcommand{\pdfreetextcomment}[2][{}]{ }
7 \newcommand{\pdfsquarecomment}[2][{}]{ }
8 \newcommand{\pdfcirclecomment}[2][{}]{ }
9 \newcommand{\pdflinecomment}[2][{}]{ }
10 \newcommand{\pdftooltip}[3][]{#2}
11 \newcommand{\pdfcommentsetup}[2][{}]{ }
12 \newcommand{\listofpdfcomments}[1][{}]{ }
13 \newcommand{\setliststyle}[1]{ }
14 \newcommand{\defineliststyle}[2]{ }
15 \newcommand{\defineavatar}[2]{ }
16 \newcommand{\definestyle}[2]{ }

```

For MATHJAX:

```

17 \begin{warpMathJax}
18 \CustomizeMathJax{\newcommand{\pdfmarkupcomment}[3][]{#2}}
19 \CustomizeMathJax{\newcommand{\pdftooltip}[3][]{#2}}
20 \end{warpMathJax}

```

---

File 307 **lwarp-pdfcrypt.sty**

§ 407 Package **pdfcrypt**

Pkg pdfcrypt pdfcrypt is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfcrypt}[2016/05/16]

```
2 \newcommand*{\pdfcryptsetup}[1]{ }
```

---

File 308 **lwarp-pdflscope.sty**

§ 408 Package **pdflscope**

Pkg pdflscope pdflscope is ignored.

**for HTML output:** Discard all options for lwarp-pdflscope:

```
1 \LWR@ProvidesPackageDrop{pdflscope}[2016/05/14]
```

---

File 309 **lwarp-pdfmarginpar.sty**

§ 409 Package **pdfmarginpar**

Pkg pdfmarginpar pdfmarginpar is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfmarginpar}[2011/08/05]

```
2 \newcommand{\pdfmarginpar}[2][{}]{
3 \newcommand{\pdfmarginparset}[1]{}
```

---

File 310 **lwarp-pdfpages.sty**

§ 410 Package **pdfpages**

*(Emulates or patches code by ANDREAS MATTHIAS.)*

Pkg pdfpages pdfpages is patched for use by lwarp.

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}[2017-10-31]

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}{doublepageswist}[false]{}
11 \define@key{pdfpages}{doublepageswistodd}[false]{}
12 \define@key{pdfpages}{doublepageswist*}[false]{}
13 \define@key{pdfpages}{doublepageswistodd*}[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 \xpatchcmd{\AM@output}
49 {\newpage}
50 {\LWR@esopic@newpage}
51 {}

```

```

52 {\LWR@patcherror{pdfpages}{AM@output-1}}
53
54 \xpatchcmd{\AM@output}
55 {\newpage}
56 {\LWR@esopic@newpage}
57 {}
58 {\LWR@patcherror{pdfpages}{AM@output-2}}
59
60 \xpatchcmd{\AM@output}
61 {\newpage}
62 {\LWR@esopic@newpage}
63 {}
64 {\LWR@patcherror{pdfpages}{AM@output-3}}

```

`\includepdf` Patched to set the user's paper size.

```

65 \xpretocmd{\includepdf}{%
66 \begingroup%
67 \setlength{\paperwidth}{\LWR@userspaperwidth}%
68 \setlength{\paperheight}{\LWR@userspaperheight}%
69 }{}{}
70
71 \xapptocmd{\includepdf}{%
72 \endgroup%
73 }{}{}

```

`\includepdfmerge` Patched to set the user's paper size.

```

74 \xpretocmd{\includepdfmerge}{%
75 \begingroup%
76 \setlength{\paperwidth}{\LWR@userspaperwidth}%
77 \setlength{\paperheight}{\LWR@userspaperheight}%
78 }{}{}
79
80 \xapptocmd{\includepdfmerge}{%
81 \endgroup%
82 }{}{}

```

`\AM@hyper@begin@i` Hyper links are created by `\LWR@esopic@newpage`, so don't create them here:

```

83 \renewcommand{\AM@hyper@begin@i}{}

```

---

File 311 **lwarp-pdfprivacy.sty**

§ 411 Package **pdfprivacy**

Pkg pdfprivacy pdfprivacy is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{pdfprivacy}[2017/12/03]

---

File 312 **lwarp-pdfrenderer.sty**

§ 412 Package **pdfrenderer**

Pkg pdfrenderer pdfrenderer is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{pdfrenderer}[2016/05/17]
2 \newcommand*{\pdfrenderer}[1]{}
3 \newcommand{\textpdfrenderer}[2]{#2}
```

---

File 313 **lwarp-pdfsync.sty**

§ 413 Package **pdfsync**

*(Emulates or patches code by J. LAURENS.)*

Pkg pdfsync pdfsync is ignored.

**for HTML output:** Discard all options for lwarp-pdfsync:

```
1 \LWR@ProvidesPackageDrop{pdfsync}[2008/01/26]
2 \newcommand*{\pdfsync}{}
3 \newcommand*{\pdfsyncstart}{}
4 \newcommand*{\pdfsyncstop}{}

```

---

File 314 **lwarp-pdftricks.sty**

§ 414 Package **pdftricks**

*(Emulates or patches code by C. V. RADHAKRISHNAN, C. V. RAJAGOPAL, ANTOINE CHAMBERT-LOIR.)*

Pkg pdftricks pdftricks is patched for use by lwarp.

 **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 ⇒ **lwarpmk 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{lwarp-pdftricks}{
4 When the pdftricks images change,
5 remember to convert PDF images to SVG using 'lwarpmk 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 'lwarpmk pdftosvg \BaseJobname-fig*.pdf'}}
11 \AfterEndDocument{\typeout{***}}

```

---

File 315 **lwarp-pdfx.sty**

§ 415 Package **pdfx**

Pkg pdfx pdfx is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfx}[2017/05/18]

---

File 316 **lwarp-perpage.sty**

§ 416 Package **perpage**

*(Emulates or patches code by DAVID KASTRUP.)*

Pkg perpage **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<countname> 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 317 **lwarp-pfnote.sty**

§ 417 Package **pfnote**

Pkg pfnote **pfnote** is ignored.

 **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**.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pfnote}[1999/07/14]

---

File 318 **lwarp-phfqit.sty**

§ 418 Package **phfqit**

(Emulates or patches code by PHILIPPE FAIST.)

Pkg phfqit **phfqit** is patched for use by **lwarp**.

**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 319 **lwarp-physics.sty**

§ 419 Package **physics**

(Emulates or patches code by SERGIO C. DE LA BARRERA.)

Pkg physics **physics** works as-is for HTML with SVG math.

For MATHJAX, emulation is provided via MATHJAX macros. These are not the same as the third-party MATHJAX extension.

- The `notrig` option is honored.
- ⚠ • Starred macros are not yet detected.
- ⚠ • Most macros don't work with `\big`, etc.
- ⚠ • Macros do not auto-detect variable numbers of mandatory arguments. Provide empty `{}` arguments for those which are not used.
- ⚠ • Many of the macros do not work with auto-detected delimiters. Use the delimiter-specific versions instead. Some macros do not even consider the following arguments, so they may work as expected.
- ⚠ • For `\Re` and `\Im`, the arguments must be in braces.

- For `\functionalderivative`, for the example in the manual with  $(E - TS)$ , enclose the parens in braces.
- `\expectationvalue` requires and uses two mandatory arguments, unlike the third-party MATHJAX physics extension.
- Each of `\matrixquantity`, `\smallmatrixquantity`, and `\matrixdeterminant` work, while `\identitymatrix` and the following simply print a place-holder, and must be replaced by hand.



**for HTML output:**

```

1 \LWR@ProvidesPackagePass{physics}% No date is provided by the package.

2 % doesn't work with \big, etc:
3 \begin{warpMathJax}
4 \LWR@infoprocessingmathjax{physics}
5
6 \CustomizeMathJax{\newcommand{\quantity}}{}}
7 \CustomizeMathJax{\let\qty\quantity}
8 \CustomizeMathJax{\newcommand{\pqty}[1]{\left(#1\right)}}
9 \CustomizeMathJax{\newcommand{\bqty}[1]{\left\lbrack#1\right\rbrack}}
10 \CustomizeMathJax{\newcommand{\vqty}[1]{\left\vert#1\right\vert}}
11 \CustomizeMathJax{\newcommand{\Bqty}[1]{\left\lbrack#1\right\rbrace}}
12
13 % doesn't work with \big, etc., no star
14 \CustomizeMathJax{\newcommand{\absolutevalue}[1]{\left\vert#1\right\vert}}
15 \CustomizeMathJax{\let\abs\absolutevalue}
16
17 % doesn't work with \big, etc., no star
18 \CustomizeMathJax{\newcommand{\norm}[1]{%
19 \left\vert\left\vert#1\right\right\vert\right\vert}}
20 }
21
22 % doesn't work with \big, etc., no star, no paren or bracket
23 \CustomizeMathJax{\newcommand{\evaluated}[1]{#1\vert}}
24 \CustomizeMathJax{\let\eval\evaluated}
25
26 % no \Big, star
27 \CustomizeMathJax{\newcommand{\order}[1]{\mathcal{O}\left(#1\right)}}
28
29 % no \Big, star
30 \CustomizeMathJax{\newcommand{\commutator}[2]{\left\lbrack#1,#2\right\rbrack}}
31 \CustomizeMathJax{\let\comm\commutator}
32
33 % no \Big, star
34 \CustomizeMathJax{\newcommand{\anticommutator}[2]{%
35 \left\lbrack#1,#2\right\rbrace}}
36 }
37 \CustomizeMathJax{\let\acomm\anticommutator}
38
39 % no \Big, star
40 \CustomizeMathJax{\let\poissonbracket\anticommutator}
41 \CustomizeMathJax{\let\pb\anticommutator}
42
43 % no star
44 \CustomizeMathJax{\newcommand{\vectorbold}[1]{\mathbf{#1}}}
```

```

45 \CustomizeMathJax{\let\vb\vectorbold}
46
47 % no star
48 \CustomizeMathJax{\newcommand{\vectorarrow}[1]{\vec{\mathbf{#1}}}}
49 \CustomizeMathJax{\let\va\vectorarrow}
50
51 % no star
52 \CustomizeMathJax{\newcommand{\vectorunit}[1]{\mathbf{\hat{#1}}}}
53 \CustomizeMathJax{\let\va\vectorunit}
54
55 \CustomizeMathJax{\newcommand{\dotproduct}{\boldsymbol\cdot}}
56 \CustomizeMathJax{\let\vdot\dotproduct}
57
58 \CustomizeMathJax{\newcommand{\crossproduct}{\boldsymbol\times}}
59 \CustomizeMathJax{\let\cross\crossproduct}
60 \CustomizeMathJax{\let\cp\crossproduct}
61
62 \CustomizeMathJax{\newcommand{\gradient}{\mathbf{\nabla}}}
63 \CustomizeMathJax{\let\grad\gradient}
64
65 \CustomizeMathJax{\let\divisionsymbol\div}
66
67 \CustomizeMathJax{\newcommand{\divergence}{\nabla\cdot}}
68 \CustomizeMathJax{\let\div\divergence}
69
70 \CustomizeMathJax{\newcommand{\curl}{\nabla\cross}}
71
72 \CustomizeMathJax{\newcommand{\laplacian}{\nabla^2}}
73
74 % responds to notrig option
75 \ifx\trigopt 1
76 \CustomizeMathJax{\DeclareMathOperator{\sine}{sin}}
77 \CustomizeMathJax{\DeclareMathOperator{\cosine}{cos}}
78 \CustomizeMathJax{\DeclareMathOperator{\tangent}{tan}}
79 \CustomizeMathJax{\DeclareMathOperator{\cosecant}{csc}}
80 \CustomizeMathJax{\DeclareMathOperator{\secant}{sec}}
81 \CustomizeMathJax{\DeclareMathOperator{\cotangent}{cot}}
82 \CustomizeMathJax{\DeclareMathOperator{\arcsine}{arcsin}}
83 \CustomizeMathJax{\DeclareMathOperator{\arccosine}{arccos}}
84 \CustomizeMathJax{\DeclareMathOperator{\arctangent}{arctan}}
85 \CustomizeMathJax{\DeclareMathOperator{\hypsine}{sinh}}
86 \CustomizeMathJax{\DeclareMathOperator{\hypcosine}{cosh}}
87 \CustomizeMathJax{\DeclareMathOperator{\hyptangent}{tanh}}
88 \CustomizeMathJax{\DeclareMathOperator{\hypcotangent}{coth}}
89 \CustomizeMathJax{\DeclareMathOperator{\exponential}{exp}}
90 \CustomizeMathJax{\DeclareMathOperator{\logarithm}{log}}
91 \CustomizeMathJax{\DeclareMathOperator{\naturallogarithm}{\ln}}
92 \CustomizeMathJax{\DeclareMathOperator{\determinant}{det}}
93 \CustomizeMathJax{\DeclareMathOperator{\Probability}{Pr}}
94 \CustomizeMathJax{\newcommand{\sin}[1][{}]{\mathrm{sin}^{\#1}}}
95 \CustomizeMathJax{\newcommand{\sinh}[1][{}]{\mathrm{sinh}^{\#1}}}
96 \CustomizeMathJax{\newcommand{\arcsin}[1][{}]{\mathrm{arcsin}^{\#1}}}
97 \CustomizeMathJax{\newcommand{\asin}[1][{}]{\mathrm{asin}^{\#1}}}
98 \CustomizeMathJax{\newcommand{\cos}[1][{}]{\mathrm{cos}^{\#1}}}
99 \CustomizeMathJax{\newcommand{\cosh}[1][{}]{\mathrm{cosh}^{\#1}}}

```

```

100 \CustomizeMathJax{\newcommand{\arccos}[1][{}]{\mathrm{arccos}^{\#1}}}
101 \CustomizeMathJax{\newcommand{\acos}[1][{}]{\mathrm{acos}^{\#1}}}
102 \CustomizeMathJax{\newcommand{\tan}[1][{}]{\mathrm{tan}^{\#1}}}
103 \CustomizeMathJax{\newcommand{\tanh}[1][{}]{\mathrm{tanh}^{\#1}}}
104 \CustomizeMathJax{\newcommand{\arctan}[1][{}]{\mathrm{arctan}^{\#1}}}
105 \CustomizeMathJax{\newcommand{\atan}[1][{}]{\mathrm{atan}^{\#1}}}
106 \CustomizeMathJax{\newcommand{\csc}[1][{}]{\mathrm{csc}^{\#1}}}
107 \CustomizeMathJax{\newcommand{\csch}[1][{}]{\mathrm{csch}^{\#1}}}
108 \CustomizeMathJax{\newcommand{\arccsc}[1][{}]{\mathrm{arccsc}^{\#1}}}
109 \CustomizeMathJax{\newcommand{\acsc}[1][{}]{\mathrm{acsc}^{\#1}}}
110 \CustomizeMathJax{\newcommand{\sec}[1][{}]{\mathrm{sec}^{\#1}}}
111 \CustomizeMathJax{\newcommand{\sech}[1][{}]{\mathrm{sech}^{\#1}}}
112 \CustomizeMathJax{\newcommand{\arcsec}[1][{}]{\mathrm{arcsec}^{\#1}}}
113 \CustomizeMathJax{\newcommand{\asec}[1][{}]{\mathrm{asec}^{\#1}}}
114 \CustomizeMathJax{\newcommand{\cot}[1][{}]{\mathrm{cot}^{\#1}}}
115 \CustomizeMathJax{\newcommand{\coth}[1][{}]{\mathrm{coth}^{\#1}}}
116 \CustomizeMathJax{\newcommand{\arccot}[1][{}]{\mathrm{arccot}^{\#1}}}
117 \CustomizeMathJax{\newcommand{\acot}[1][{}]{\mathrm{acot}^{\#1}}}
118 \else
119 \CustomizeMathJax{\DeclareMathOperator{\arccsc}{arccsc}}
120 \CustomizeMathJax{\DeclareMathOperator{\arcsec}{arcsec}}
121 \CustomizeMathJax{\DeclareMathOperator{\arccot}{arccot}}
122 \CustomizeMathJax{\DeclareMathOperator{\asin}{asin}}
123 \CustomizeMathJax{\DeclareMathOperator{\acos}{acos}}
124 \CustomizeMathJax{\DeclareMathOperator{\atan}{atan}}
125 \CustomizeMathJax{\DeclareMathOperator{\acsc}{acsc}}
126 \CustomizeMathJax{\DeclareMathOperator{\asec}{asec}}
127 \CustomizeMathJax{\DeclareMathOperator{\acot}{acot}}
128 \CustomizeMathJax{\DeclareMathOperator{\csch}{csch}}
129 \CustomizeMathJax{\DeclareMathOperator{\sech}{sech}}
130 \CustomizeMathJax{\newcommand{\tr}{\text{trace}}}
131 \CustomizeMathJax{\newcommand{\Tr}{\text{Trace}}}
132 \CustomizeMathJax{\newcommand{\Res}{\text{Residue}}}
133 \fi
134
135 \CustomizeMathJax{\DeclareMathOperator{\trace}{tr}}
136 \CustomizeMathJax{\let\tr\trace}
137 \CustomizeMathJax{\DeclareMathOperator{\Trace}{Tr}}
138 \CustomizeMathJax{\let\Tr\Trace}
139 \CustomizeMathJax{\DeclareMathOperator{\rank}{rank}}
140 \CustomizeMathJax{\DeclareMathOperator{\erf}{erf}}
141 \CustomizeMathJax{\DeclareMathOperator{\Residue}{Res}}
142 \CustomizeMathJax{\newcommand{\principalvalue}{\mathcal{P}}}
143 \CustomizeMathJax{\let\pv\principalvalue}
144 \CustomizeMathJax{\newcommand{\PV}{\text{P.V.}}}
145 \CustomizeMathJax{\newcommand{\real}{\mathcal{R}}}
146 \CustomizeMathJax{\newcommand{\imaginary}{\mathcal{I}}}
147
148 % must be brace arguments
149 \CustomizeMathJax{\newcommand{\Re}[1]{\mathrm{Re}\left\lbrace\#1\right\rbrace}}
150 \CustomizeMathJax{\newcommand{\Im}[1]{\mathrm{Im}\left\lbrace\#1\right\rbrace}}
151
152 \CustomizeMathJax{\newcommand{\qqtext}[1]{\quad\mathrm{\#1}\quad}}
153 \CustomizeMathJax{\let\qq\qqtext}
154 \CustomizeMathJax{\newcommand{\qqcomma}{\text{,}\quad}}

```

```

155 \CustomizeMathJax{\let\qc\qqcomma}
156 \CustomizeMathJax{\newcommand{\qcc}{\quad\text{c. c.}\quad}}
157 \CustomizeMathJax{\let\qcc}
158 \CustomizeMathJax{\newcommand{\qif}{\quad\text{if}\quad}}
159 \CustomizeMathJax{\newcommand{\qthen}{\quad\text{then}\quad}}
160 \CustomizeMathJax{\newcommand{\qelse}{\quad\text{else}\quad}}
161 \CustomizeMathJax{\newcommand{\qotherwise}{\quad\text{otherwise}\quad}}
162 \CustomizeMathJax{\newcommand{\qunless}{\quad\text{unless}\quad}}
163 \CustomizeMathJax{\newcommand{\qgiven}{\quad\text{given}\quad}}
164 \CustomizeMathJax{\newcommand{\qusing}{\quad\text{using}\quad}}
165 \CustomizeMathJax{\newcommand{\qassume}{\quad\text{assume}\quad}}
166 \CustomizeMathJax{\newcommand{\qsince}{\quad\text{since}\quad}}
167 \CustomizeMathJax{\newcommand{\qlet}{\quad\text{let}\quad}}
168 \CustomizeMathJax{\newcommand{\qfor}{\quad\text{for}\quad}}
169 \CustomizeMathJax{\newcommand{\qall}{\quad\text{all}\quad}}
170 \CustomizeMathJax{\newcommand{\qeven}{\quad\text{even}\quad}}
171 \CustomizeMathJax{\newcommand{\qodd}{\quad\text{odd}\quad}}
172 \CustomizeMathJax{\newcommand{\qinteger}{\quad\text{integer}\quad}}
173 \CustomizeMathJax{\newcommand{\qand}{\quad\text{and}\quad}}
174 \CustomizeMathJax{\newcommand{\qor}{\quad\text{or}\quad}}
175 \CustomizeMathJax{\newcommand{\qas}{\quad\text{as}\quad}}
176 \CustomizeMathJax{\newcommand{\qin}{\quad\text{in}\quad}}
177
178 \CustomizeMathJax{\newcommand{\differential}[1][\text{d}^{\#1}}
179 \CustomizeMathJax{\let\dd\differential}
180
181 \CustomizeMathJax{\newcommand{\derivative}[3][\%
182 \frac{\text{d}^{\#1}\#2}{\text{d}^{\#3}\#1}}\%
183 }
184 \CustomizeMathJax{\let\dv\derivative}
185
186 \CustomizeMathJax{\newcommand{\partialderivative}[3][\%
187 \frac{\partial^{\#1}\#2}{\partial^{\#3}\#1}}\%
188 }
189 \CustomizeMathJax{\let\pderivative\partialderivative}
190 \CustomizeMathJax{\let\pdv\partialderivative}
191
192 \CustomizeMathJax{\newcommand{\variation}{\delta}}
193 \CustomizeMathJax{\let\var\variation}
194
195 % Must provide two mandatory args.
196 % For the example in the manual with (E-TS), enclose the parens in braces
197 \CustomizeMathJax{\newcommand{\functionalderivative}[3][\%
198 \frac{\delta^{\#1}\#2}{\delta^{\#3}\#1}}\%
199 }
200 \CustomizeMathJax{\let\fdv\functionalderivative}
201
202
203 % use \braket to contract
204 \CustomizeMathJax{\newcommand{\bra}[1]{\langle\#1\rvert}}
205 \CustomizeMathJax{\newcommand{\ket}[1]{\lvert\#1\rangle}}
206
207 % must have two args
208 \CustomizeMathJax{\newcommand{\innerproduct}[2][\%
209 \left\langle\#1\middle\lvert\#2\right\rangle}\%

```

```

210 }
211 \CustomizeMathJax{\let\braket\innerproduct}
212 \CustomizeMathJax{\let\ip\innerproduct}
213
214 % must have two args
215 \CustomizeMathJax{\newcommand{\outerproduct}[2]{%
216 \left\|\vert\{#1\}\middle\l\langle\!\middle\l\langle\{#2\}\right\rvert}%
217 }
218 \CustomizeMathJax{\let\dyad\outerproduct}
219 \CustomizeMathJax{\let\op\outerproduct}
220
221 % must have two args, unlike the MathJax version
222 \CustomizeMathJax{\newcommand{\expectationvalue}[2]{%
223 \left\l\langle\{#2\}\middle\vert\{#1\}\middle\vert\{#2\}\right\rangle}%
224 }
225 \CustomizeMathJax{\let\expval\expectationvalue}
226 \CustomizeMathJax{\let\ev\expectationvalue}
227
228 \CustomizeMathJax{\newcommand{\matricelement}[3]{%
229 \left\l\langle\{#1\}\middle\vert\{#2\}\middle\vert\{#3\}\right\rangle}%
230 }
231 \CustomizeMathJax{\let\mel\matricelement}
232
233 \CustomizeMathJax{\newcommand{\matrixquantity}[1]{\begin{matrix}#1\end{matrix}}}
234 \CustomizeMathJax{\let\mqty\matrixquantity}
235 \CustomizeMathJax{\newcommand{\pmqty}[1]{\begin{pmatrix}#1\end{pmatrix}}}
236 \CustomizeMathJax{\newcommand{\Pmqty}[1]{%
237 \left\lgroup\begin{matrix}#1\end{matrix}\right\rgroup}%
238 }
239 \CustomizeMathJax{\newcommand{\bmqty}[1]{\begin{bmatrix}#1\end{bmatrix}}}
240 \CustomizeMathJax{\newcommand{\vmqty}[1]{\begin{vmatrix}#1\end{vmatrix}}}
241
242 \CustomizeMathJax{\newcommand{\smallmatrixquantity}[1]{%
243 \begin{smallmatrix}#1\end{smallmatrix}}}%
244 }
245 \CustomizeMathJax{\let\smqty\smallmatrixquantity}
246 \CustomizeMathJax{\newcommand{\spmqty}[1]{%
247 \pqty{\begin{smallmatrix}#1\end{smallmatrix}}}%
248 }
249 \CustomizeMathJax{\newcommand{\sPmqty}[1]{%
250 \left\lgroup\begin{smallmatrix}#1\end{smallmatrix}\right\rgroup}%
251 }
252 \CustomizeMathJax{\newcommand{\sbmqty}[1]{%
253 \bqty{\begin{smallmatrix}#1\end{smallmatrix}}}%
254 }
255 \CustomizeMathJax{\newcommand{\svmqty}[1]{%
256 \vqty{\begin{smallmatrix}#1\end{smallmatrix}}}%
257 }
258
259 \CustomizeMathJax{\let\matrixdeterminant\vmqty}
260 \CustomizeMathJax{\let\mdet\vmqty}
261 \CustomizeMathJax{\let\smdet\svmqty}
262
263 \CustomizeMathJax{\newcommand{\identitymatrix}[1]{(\text{imat}\{#1\})}}
264 \CustomizeMathJax{\let\imat\identitymatrix}

```

```

265
266 \CustomizeMathJax{\newcommand{\xmatrix}[3]{(\text{xmat}\{\}\{\#2\}\{\#3\})}}
267 \CustomizeMathJax{\let\xmat\xmatrix}
268
269 \CustomizeMathJax{\newcommand{\zeromatrix}[2]{(\text{zmat}\{\#1\}\{\#2\})}}
270 \CustomizeMathJax{\let\zmat\zeromatrix}
271
272 \CustomizeMathJax{\newcommand{\paulimatrix}[1]{(\text{pmat}\{\#1\})}}
273 \CustomizeMathJax{\let\pmat\paulimatrix}
274
275 \CustomizeMathJax{\newcommand{\diagonalmatrix}[2][[]]{%
276 \left(\text{dmat}\right)%
277 }
278 \CustomizeMathJax{\let\dmat\diagonalmatrix}
279
280 \CustomizeMathJax{\newcommand{\antidiagonalmatrix}[2][[]]{%
281 \left(\text{admat}\right)%
282 }
283 \CustomizeMathJax{\let\admat\antidiagonalmatrix}
284 \end{warpMathJax}

```

File 320 **lwarp-physunits.sty**

§ 420 Package **physunits**

*(Emulates or patches code by BRIAN W. MULLIGAN.)*

Pkg physunits **physunits** is supported as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{physunits}[2020/01/26]
2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{physunits}
4
5 \CustomizeMathJax{\newcommand{\micro}{\mu}}
6 \CustomizeMathJax{\newcommand{\V}[1][]{\, \mathrm{\#1V}}}
7 \CustomizeMathJax{\newcommand{\Volt}[1][]{\, \mathrm{\#1V}}}
8 \CustomizeMathJax{\newcommand{\Coulomb}[1][]{\, \mathrm{\#1C}}}
9 \CustomizeMathJax{\newcommand{\esu}{\, \mathrm{esu}}}
10 \CustomizeMathJax{\newcommand{\Ohm}[1][]{\, \mathrm{\#1\Omega}}}
11 \CustomizeMathJax{\newcommand{\Amp}[1][]{\, \mathrm{\#1A}}}
12 \CustomizeMathJax{\newcommand{\Farad}[1][]{\, \mathrm{\#1F}}}
13 \CustomizeMathJax{\newcommand{\Tesla}[1][]{\, \mathrm{\#1T}}}
14 \CustomizeMathJax{\newcommand{\Gauss}[1][]{\, \mathrm{\#1G}}}
15 \CustomizeMathJax{\newcommand{\Henry}[1][]{\, \mathrm{\#1H}}}
16 \CustomizeMathJax{\newcommand{\eV}[1][]{\, \mathrm{\#1eV}}}
17 \CustomizeMathJax{\newcommand{\keV}{\, \mathrm{keV}}}
18 \CustomizeMathJax{\newcommand{\MeV}{\, \mathrm{MeV}}}
19 \CustomizeMathJax{\newcommand{\J}[1][]{\, \mathrm{\#1J}}}
20 \CustomizeMathJax{\newcommand{\Joule}[1][]{\, \mathrm{\#1J}}}
21 \CustomizeMathJax{\newcommand{\erg}{\, \mathrm{erg}}}
22 \CustomizeMathJax{\newcommand{\kcal}[1][]{\, \mathrm{kcal}}}% bug
23 \CustomizeMathJax{\newcommand{\Cal}{\, \mathrm{Cal}}}

```

```

24 \CustomizeMathJax{\newcommand{\calorie}[1][]{\, \mathrm{#1cal}}}
25 \CustomizeMathJax{\newcommand{\BTU}{\, \mathrm{BTU}}}
26 \CustomizeMathJax{\newcommand{\tnt}{\, \mathrm{ton\, of\, TNT}}}
27 \CustomizeMathJax{\newcommand{\Watt}[1][]{\, \mathrm{#1W}}}
28 \CustomizeMathJax{\newcommand{\hpi}{\, \mathrm{hp(I)}}}
29 \CustomizeMathJax{\newcommand{\hpm}{\, \mathrm{hp(M)}}}
30 \CustomizeMathJax{\newcommand{\hp}{\, \mathrm{hp}}}
31 \CustomizeMathJax{\newcommand{\meter}[1][]{\, \mathrm{#1m}}}
32 \CustomizeMathJax{\newcommand{\m}[1][]{\, \mathrm{#1m}}}
33 \CustomizeMathJax{\newcommand{\km}{\, \mathrm{km}}}
34 \CustomizeMathJax{\newcommand{\au}{\, \mathrm{au}}}
35 \CustomizeMathJax{\newcommand{\pc}[1][]{\, \mathrm{#1pc}}}
36 \CustomizeMathJax{\newcommand{\ly}[1][]{\, \mathrm{#1ly}}}
37 \CustomizeMathJax{\newcommand{\cm}{\, \mathrm{cm}}}
38 \CustomizeMathJax{\newcommand{\nm}{\, \mathrm{nm}}}
39 \CustomizeMathJax{\newcommand{\ft}{\, \mathrm{ft}}}
40 \CustomizeMathJax{\newcommand{\inch}{\, \mathrm{in}}}
41 \CustomizeMathJax{\newcommand{\mi}{\, \mathrm{mi}}}
42 \CustomizeMathJax{\newcommand{\s}[1][]{\, \mathrm{#1s}}}
43 \CustomizeMathJax{\newcommand{\Sec}[1][]{\, \mathrm{#1s}}}
44 \CustomizeMathJax{\newcommand{\Min}{\, \mathrm{min}}}
45 \CustomizeMathJax{\newcommand{\h}{\, \mathrm{h}}}
46 \CustomizeMathJax{\newcommand{\y}[1][]{\, \mathrm{#1y}}}
47 \CustomizeMathJax{\newcommand{\Day}{\, \mathrm{d}}}
48
49 \CustomizeMathJax{\newcommand{\gm}[1][]{\, \mathrm{#1g}}}
50 \CustomizeMathJax{\newcommand{\kg}{\, \mathrm{kg}}}
51 \CustomizeMathJax{\newcommand{\lb}{\, \mathrm{lb}}}
52 \CustomizeMathJax{\newcommand{\amu}{\, \mathrm{amu}}}
53 \CustomizeMathJax{\newcommand{\N}[1][]{\, \mathrm{#1N}}}
54 \CustomizeMathJax{\newcommand{\Newton}[1][]{\, \mathrm{#1N}}}
55 \CustomizeMathJax{\newcommand{\dyne}[1][]{\, \mathrm{#1dyn}}}
56 \CustomizeMathJax{\newcommand{\lbf}{\, \mathrm{lbf}}}
57 \CustomizeMathJax{\newcommand{\kmph}{\, \mathrm{km}\, \mathrm{s}^{-1}}}
58 \CustomizeMathJax{\newcommand{\kmph}{\, \mathrm{km}\, \mathrm{h}^{-1}}}
59 \CustomizeMathJax{\newcommand{\mps}[1][]{\, \mathrm{#1m}\, \mathrm{s}^{-1}}}
60 \CustomizeMathJax{\newcommand{\miph}{\, \mathrm{mi}\, \mathrm{h}^{-1}}}
61 \CustomizeMathJax{\newcommand{\kts}{\, \mathrm{kts}}}
62
63 \CustomizeMathJax{\newcommand{\mpss}[1][]{\, \mathrm{#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{\Celcius}{^\circ\, \mathrm{C}}}% move space
69 \CustomizeMathJax{\newcommand{\Rankine}{^\circ\, \mathrm{R}}}% move space
70 \CustomizeMathJax{\newcommand{\Fahrenheit}{^\circ\, \mathrm{F}}}% move space
71
72 \CustomizeMathJax{\newcommand{\rpm}{\, \mathrm{rev}\, \mathrm{Min}^{-1}}}
73
74 \CustomizeMathJax{\newcommand{\Hz}[1][]{\, \mathrm{#1Hz}}}
75 \CustomizeMathJax{\newcommand{\barP}[1][]{\, \mathrm{#1bar}}}
76 \CustomizeMathJax{\newcommand{\atm}{\, \mathrm{atm}}}
77 \CustomizeMathJax{\newcommand{\Pa}[1][]{\, \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}[1][]{\,\mathrm{#1Ba}}}
83 \CustomizeMathJax{\newcommand{\Torr}[1][]{\,\mathrm{#1Torr}}}
84 \CustomizeMathJax{\newcommand{\mol}{\,\mathrm{mol}}}
85 \end{warpMathJax}

```

---

File 321 **lwarp-pifont.sty**

§ 421 Package **pifont**

*(Emulates or patches code by WALTER SCHMIDT.)*

Pkg pifont **pifont** is patched for use by **lwarp**.

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 322 **lwarp-placeins.sty**

§ 422 Package **placeins**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg placeins **placeins** is ignored.

Discard all options for **lwarp-placeins**:

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{placeins}[2005/04/18]
2 \newcommand*\FloatBarrier{}

```

---

File 323 **lwarp-plarydshln.sty**

§ 423 Package **plarydshln**

Pkg plarydshln plarydshln is emulated by lwarp-arydshln.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{plarydshln}[2018/10/20]
2 \LWR@origRequirePackage{lwarp-arydshln}
```

---

File 324 **lwarp-plext.sty**

§ 424 Package **plext**

Pkg plext plext is preloaded by jarticle and related classes.

**for HTML output:**

```
1 \LWR@loadbefore{plext}
2
3 \LWR@ProvidesPackagePass{plext}[2017/07/21]

4 \let\tate\relax
5
6 \DeclareExpandableDocumentCommand{\rensuji}{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<> O{t} O{ } O{t} m}
21 {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
22 {\endLWR@HTML@sub@minipage}
23
24 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{ } O{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 `lwarp` core.

---

File 325 **lwarp-plextarydshln.sty**

§ 425 Package **plextarydshln**

Pkg `plextarydshln` `plextarydshln` is emulated by `lwarp-arydshln`.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{plextarydshln}[2018/10/20]
2 \LWR@origRequirePackage{lwarp-arydshln}

```

---

File 326 **lwarp-plextcolortbl.sty**

§ 426 Package **plextcolortbl**

Pkg `plextcolortbl` `plextcolortbl` is emulated by `lwarp-colortbl`.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{plextcolortbl}[2018/09/19]
2 \LWR@origRequirePackage{lwarp-colortbl}

```

---

File 327 **lwarp-prelim2e.sty**

§ 427 Package **prelim2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg `prelim2e` `prelim2e` is ignored.

**for HTML output:** Discard all options for `lwarp-prelim2e`:

```

1 \LWR@ProvidesPackageDrop{prelim2e}[2009/05/29]
2 \newcommand{\PrelimText}{}
3 \newcommand{\PrelimTextStyle}{}
4 \newcommand{\PrelimWords}{}

```

---

File 328 **lwarp-prettyref.sty**

§ 428 Package **prettyref**

*(Emulates or patches code by KEVIN S. RULAND.)*

Pkg prettyref prettyref is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{prettyref}[1998/07/09]
2 \newreformat{fig}{Figure \ref{#1}}
3 \newreformat{tab}{Table \ref{#1}}
```

---

File 329 **lwarp-preview.sty**

§ 429 Package **preview**

Pkg preview 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 330 **lwarp-psfrag.sty**

§ 430 Package **psfrag**

*(Emulates or patches code by MICHAEL C. GRANT, DAVID CARLISLE.)*

Pkg psfrag psfrag is patched for use by lwarp.

 **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 lwarp.

 **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 331 **lwarp-psfragx.sty**

§ 431 Package **psfragx**

*(Emulates or patches code by PASCAL KOCKAERT.)*

Pkg psfragx psfragx is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{psfragx}[2012/05/02]

A lateximage captures the modified image from the document.

```

2 \def\pfx@includegraphicx#1#2{%
3 \begin{lateximage}[-psfragx--\PackageDiagramAltText]%
4 \mbox{\pfx@overpix{#1}{#2}\endpfx@overpix}%
5 \end{lateximage}%
6 }
7
8 \def\@@@overpix[#1]<#2>[#3]#4{%
9 \begin{lateximage}[-psfragx--\PackageDiagramAltText]%
10 \pfx@overpix{#1,ovpfgd={#2},ovpbgd={#3}}{#4}%
11 }
12
13 \def\endoverpix{%
14 \endpfx@overpix%
15 \end{lateximage}%
16 }
```

---

File 332 **lwarp-pst-eps.sty**

§ 432 Package **pst-eps**

*(Emulates or patches code by HERBERT VOSS.)*

Pkg pst-eps pst-eps is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{pst-eps}[2005/05/20]

```

2 \renewenvironment{TeXtoEPS}{}{}
3 \renewcommand{\PSTtoEPS}[3][{}]
```

---

File 333 **lwarp-pstool.sty**

§ 433 Package **pstool**

*(Emulates or patches code by ZEBB PRIME, WILL ROBERTSON.)*

Pkg pstool pstool is patched for use by lwarp.

`\graphicspath` is ignored, and the file directory must be stated.

⚠ path and filename The filename must not have a file extension.

Use

Enter ⇒ **Lwarpmk html**

followed by

Enter ⇒ **Lwarpmk 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 334 **lwarp-pstricks.sty**

§ 434 Package **pstricks**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg pstricks pstricks is patched for use by lwarp.

⚠ 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}}
```

---

File 335 **lwarp-pxatbegshi.sty**

§ 435 Package **pxatbegshi**

Pkg pxatbegshi pxatbegshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxatbegshi}[2017/11/04]
2 \LWR@origRequirePackage{lwarp-atbegshi}
```

---

File 336 **lwarp-pxeveryshi.sty**

§ 436 Package **pxeveryshi**

Pkg pxeveryshi pxeveryshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxeveryshi}[2012/05/19]
2 \LWR@origRequirePackage{lwarp-everyshi}
```

---

File 337 **lwarp-pxftnright.sty**

§ 437 Package **pxftnright**

Pkg pxftnright pxftnright is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxftnright}[2017/02/28]
2 \LWR@origRequirePackage{lwarp-ftnright}
```

---

File 338 **lwarp-pxjahyper.sty**

§ 438 Package **pxjahyper**

Pkg pxjahyper pxjahyper is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxjahyper}[2018/07/15]
```

File 339 **lwarp-quotchap.sty**

§ 439 Package **quotchap**

*(Emulates or patches code by KARSTEN TINNEFELD, JAN KLEVER.)*

Pkg quotchap 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 340 **lwarp-quoting.sty**

§ 440 Package **quoting**

*(Emulates or patches code by THOMAS TITZ.)*

Pkg quoting **quoting** is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{quoting}[2014/01/28]

```

2 \xpatchcmd{\quoting}{\quo@begintext}
3 {\begin{LWR@blocktextcurrentfont}\quo@begintext}
4 {}
5 {\LWR@patcherror{quoting}{quoting}}
6
7 \xpatchcmd{\endquoting}{\quo@endtext}
8 {\quo@endtext\end{LWR@blocktextcurrentfont}\LWR@stoppars}
9 {}
10 {\LWR@patcherror{imakeidx}{endquoting}}

```

---

File 341 **lwarp-ragged2e.sty**

§ 441 Package **ragged2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg ragged2e **ragged2e** is emulated.

Discard all options for lwarp-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*\justifying{}
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 342 **lwarp-realscripts.sty**

§ 442 Package **realscripts**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg realscripts **realscripts** is emulated. See `lwarp.css` for the `<span>` of class `supsubscript`.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{realscripts}[2016/02/13]

2 \let\realsuperscript\textsuperscript
3 \let\realssubscript\textsubscript
4
5 \let\fakesuperscript\textsuperscript
6 \let\fakesubscript\textsubscript
7
8 \newlength{\subsupersep}
9
10 \newcommand*{\LWR@realscriptsalign}{}
11
12 \newcommand*{\LWR@setrealscriptsalign}[1]{%
13 \renewcommand*{\LWR@realscriptsalign}{}%
14 \ifthenelse{\equal{#1}{c}}{%
15 \renewcommand{\LWR@realscriptsalign}{%
16 \LWR@print@mbbox{text-align:center} ; %
17 }%
18 }{}%
19 \ifthenelse{\equal{#1}{r}}{%
20 \renewcommand{\LWR@realscriptsalign}{%
21 \LWR@print@mbbox{text-align:right} ; %
22 }%
23 }{}%
24 }
25
26 \DeclareDocumentCommand \textsubsuperscript {s O{l} mm} {%
27 \LWR@setrealscriptsalign{#2}%

```

```

28 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
29 #4\textsubscript{#3}%
30 }%
31 }
32
33 \DeclareDocumentCommand \textsupersubscript {s 0{l} mm} {%
34 \LWR@setrealscriptsalign{#2}%
35 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
36 \textsubscript{#4}#3%
37 }%
38 }

```

---

File 343 **lwarp-refcheck.sty**

§ 443 Package **refcheck**

Pkg refcheck 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\checkunlbd{}
9 \def\ignoreunlbd{}
10 \newcommand*{\refcheckxrdoc}[2][{}]{

```

---

File 344 **lwarp-register.sty**

§ 444 Package **register**

*(Emulates or patches code by MATTHEW LOVELL.)*

Pkg register register is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{register}[2019/01/01]

```

2 \patchcmd{\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 345 **lwarp-reysize.sty**

§ 445 Package **reysize**

*(Emulates or patches code by DONALD ARSENEAU, BERNIE COSELL, MATT SWIFT.)*

Pkg reysize reysize is patched for use by lwarp, 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.

`\reysize`, `\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{reysize}[2013/03/29]

2 \let\LWR@origreysize\reysize
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@relscale%
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][1]{%
24 \renewcommand*\smaller[1][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 346 **lwarp-repeatindex.sty**

§ 446 Package **repeatindex**

Pkg repeatindex repeatindex is emulated for lwarp.

 **style file** lwarp must be used with a special style file:

```
\usepackage[makeindex,makeindexStyle={lwarp-repeatindex}]{lwarp}
```

where `lwarp_repeatindex.ist` may be copied from the following modified version of `lwarp.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 347 **lwarp-resizegather.sty**

§ 447 Package **resizegather**

Pkg `resizegather` `resizegather` is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{resizegather}[2016/05/16]

```
2 \newcommand*\resizegathersetup[1]{}

```

---

File 348 **lwarp-returntogrid.sty**

§ 448 Package **returntogrid**

Pkg returntogrid returntogrid is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{returntogrid}[2018/08/21]

2 \NewDocumentCommand\returntogrid{ 0 {} }{}
3 \NewDocumentCommand\returntogridsetup { m } {}
4 \NewDocumentCommand\showdebugpagegrid {} {}
```

---

File 349 **lwarp-rmathbr.sty**

§ 449 Package **rmathbr**

*(Emulates or patches code by DENIS RYABOV.)*

Pkg rmathbr rmathbr is used as-is for SVG math, and emulated for MATHJAX.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{rmathbr}[2016/04/10]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\def*{~}}
4 \CustomizeMathJax{\newcommand{\cdott}{\cdot}}
5 \CustomizeMathJax{\newcommand{\nobr}{}}
6 \end{warpMathJax}
```

---

File 350 **lwarp-rmpage.sty**

§ 450 Package **rmpage**

Pkg rmpage rmpage is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{rmpage}[1997/09/29]
```

---

File 351 **lwarp-romanbar.sty**

§ 451 Package **romanbar**

*(Emulates or patches code by H.-MARTIN MÜNCH.)*

Pkg romanbar romanbar is patched for use by lwarp.

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]{% #1 is in Roman, i.e. MMXII
3 \InlineClass[%
4 text-decoration: overline underline ;
5]{romanbar}{#1}%
6 }
```

---

File 352 **lwarp-romanbarpagenumber.sty**

§ 452 Package **romanbarpagenumber**

Pkg romanbarpagenumber romanbarpagenumber is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{romanbarpagenumber}[2015/02/06]
```

---

File 353 **lwarp-rotating.sty**

§ 453 Package **rotating**

*(Emulates or patches code by ROBIN FAIRBAIRNS, SEBASTIAN RAHTZ, LEONOR BARROCA.)*

Pkg rotating rotating is emulated.

All rotations are ignored in HTML output.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{rotating}[2016/08/11]
2 \RequirePackage{graphicx}

3 \LetLtxMacro\sidewaystable\table
4 \let\endsidewaystable\endtable
5
6 \LetLtxMacro\sidewaysfigure\figure
7 \let\endsidewaysfigure\endfigure
8
9 \newenvironment*{sideways}{}{}
10 \newenvironment*{turn}[1]{}{}
11 \newenvironment*{rotate}[1]{}{}
12 \NewDocumentCommand{\turnbox}{m +m}{#2}
13 \let\rotcaption\caption
14 \let\@makerotcaption\@makecaption
```

File 354 **lwarp-rotfloat.sty**

§ 454 Package **rotfloat**

(Emulates or patches code by AXEL SOMMERFELDT.)

Pkg rotfloat rotfloat is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{rotfloat}[2004/01/04]
2
3 \RequirePackage{float}

```

`\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.

```

4 \RenewDocumentCommand{\newfloat}{m m m o}{%
5 \IfValueTF{#4}%
6 {%
7 \DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}%
8 }%
9 {%
10 \DeclareFloatingEnvironment[fileext=#3]{#1}%
11 }%
12 \csletcs{sideways#1}{#1}%
13 \csletcs{endsideways#1}{end#1}%

```

Remember the float style:

```

14 \csedef{LWR@floatstyle@#1}{\LWR@floatstyle}%
15 \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:

```

16 \cslet{listof#1s}\relax%
17 \cslet{listof#1es}\relax%
18 \cslet{listofsideways#1s}\relax%
19 \cslet{listofsideways#1es}\relax%
20 }

```

---

File 355 **lwarp-rviewport.sty**

§ 455 Package **rviewport**

Pkg rviewport 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 356 **lwarp-savetrees.sty**

§ 456 Package **savetrees**

Pkg savetrees savetrees is ignored.

**for HTML output:** Discard all options for lwarp-savetrees:

```
1 \LWR@ProvidesPackageDrop{savetrees}[2016/04/13]

```

---

File 357 **lwarp-scalefnt.sty**

§ 457 Package **scalefnt**

*(Emulates or patches code by D. CARLISLE.)*

Pkg scalefnt scalefnt is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{scalefnt}
2 \DeclareRobustCommand\scalefont[1]{}

```

---

File 358 **lwarp-schemata.sty**

§ 458 Package **schemata**

*(Emulates or patches code by CHARLES P. SCHAUM.)*

Pkg schemata schemata is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{schemata}[2016/01/25]

```

```

2 \LetLtxMacro\LWR@schemata@origschema\schema
3 \LetLtxMacro\LWR@schemata@origSchema\Schema
4
5 \renewcommand{\schema}[3][open]{%
6 \begin{lateximage}%
7 \LWR@print@normalsize
8 \LWR@schemata@origschema[#1]{#2}{#3}%
9 \end{lateximage}%
10 }
11
12 \renewcommand{\Schema}[5][open]{%
13 \begin{lateximage}%
14 \LWR@print@normalsize
15 \LWR@schemata@origSchema[#1]{#2}{#3}{#4}{#5}%
16 \end{lateximage}%
17 }

```

---

File 359 **lwarp-scrextend.sty**

§ 459 Package **scrextend**

Pkg scrextend 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}[2018/03/30]
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 \AtBeginDocument{
14 \let\LWR@koma@orig@maketitle\maketitle
15 \DeclareDocumentCommand{\maketitle}{o}{\LWR@koma@orig@maketitle}
16 }
17
18 \DeclareDocumentCommand{\extratitle}{m}{}
19 \DeclareDocumentCommand{\titlehead}{m}{}
20 \DeclareDocumentCommand{\subject}{m}{}
21 \DeclareDocumentCommand{\publishers}{m}{\published{#1}}
22 \DeclareDocumentCommand{\uppertitleback}{m}{}
23 \DeclareDocumentCommand{\lowertitleback}{m}{}
24 \DeclareDocumentCommand{\dedication}{m}{}

```

```

25
26 \DeclareDocumentCommand{\ifthispageodd}{m m}{#1}
27
28 \DeclareDocumentCommand{\titlepagestyle}{}{}
29
30 \DeclareDocumentCommand{\cleardoublepageusingstyle}{m}{}
31 \DeclareDocumentCommand{\cleardoubleemptypage}{}{}
32 \DeclareDocumentCommand{\cleardoubleplainpage}{}{}
33 \DeclareDocumentCommand{\cleardoublestandardpage}{}{}
34 \DeclareDocumentCommand{\cleardoubleoddpge}{}{}
35 \DeclareDocumentCommand{\cleardoubleoddpgeusingstyle}{m}{}
36 \DeclareDocumentCommand{\cleardoubleoddpgeemptypage}{}{}
37 \DeclareDocumentCommand{\cleardoubleoddpgeplainpage}{}{}
38 \DeclareDocumentCommand{\cleardoubleoddpgestandardpage}{}{}
39 \DeclareDocumentCommand{\cleardoubleevenpage}{}{}
40 \DeclareDocumentCommand{\cleardoubleevenpageusingstyle}{m}{}
41 \DeclareDocumentCommand{\cleardoubleevenemptypage}{}{}
42 \DeclareDocumentCommand{\cleardoubleevenplainpage}{}{}
43 \DeclareDocumentCommand{\cleardoubleevenstandardpage}{}{}
44
45 \DeclareDocumentCommand{\multiplefootnoteseparator}{}{}%
46 \begin{group}\let\thefootnotemark\multfootsep\@makefnmark\endgroup
47 }
48
49 \DeclareDocumentCommand{\multfootsep}{}{, }
50
51 \DeclareDocumentCommand{\footref}{m}{}%
52 \begin{group}
53 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
54 \endgroup
55 \@footnotemark
56 }
57
58 \DeclareDocumentCommand{\deffootnote}{o m m m}{}
59 \DeclareDocumentCommand{\deffootnotemark}{m}{}
60 \DeclareDocumentCommand{\setfootnoterule}{o m}{}
61 \DeclareDocumentCommand{\raggedfootnote}{}{}

62 \DeclareDocumentCommand{\dictum}{o m}{
63 \begin{LWR@BlockClassWP}{\LWR@print@mbbox{text-align:right}}{\dictum}
64 #2
65 \IfValueT{#1}
66 {
67 \LWR@stoppars%
68 \ifbool{FormatWP}
69 {\begin{BlockClass}[\LWR@print@mbbox{border-top:} 1px solid gray]{dictumauthor}}
70 {\begin{BlockClass}{dictumauthor}}
71 \dictumauthorformat{#1}
72 \end{BlockClass}
73 }
74 \end{LWR@BlockClassWP}
75 }
76
77 \DeclareDocumentCommand{\dictumwidth}{}{}
78 \DeclareDocumentCommand{\dictumauthorformat}{m}{(#1)}

```

```

79 \DeclareDocumentCommand{\dictumrule}{}{}
80 \DeclareDocumentCommand{\raggeddictum}{}{}
81 \DeclareDocumentCommand{\raggeddictumtext}{}{}
82 \DeclareDocumentCommand{\raggeddictumauthor}{}{}
83
84 \DeclareDocumentEnvironment{labeling}{o m}
85 {%
86 \def\sc@septext{#1}%
87 \list{}{}%
88 \let\makeLabel\labelinglabel%
89 }
90 {
91 \endlist
92 }
93
94 \DeclareDocumentCommand{\labelinglabel}{m}{%
95 #1 \quad \sc@septext%
96 }
97
98 \let\addmargin\relax
99 \let\endaddmargin\relax
100 \cslet{addmargin*}{\relax}
101 \cslet{endaddmargin*}{\relax}

102 \NewDocumentEnvironment{addmargin}{s O{ } m}
103 {
104 \LWR@stoppars%
105 \setlength{\LWR@templengthtwo}{#3}
106 \ifblank{#2}
107 {
108 \begin{BlockClass}[
109 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
110 \LWR@print@mbx{margin-right:\LWR@printlength{\LWR@templengthtwo}}
111]{addmargin}
112 }
113 {
114 \setlength{\LWR@templengthone}{#2}
115 \begin{BlockClass}[
116 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ;
117 \LWR@print@mbx{margin-right:\LWR@printlength{\LWR@templengthtwo}}
118]{addmargin}
119 }
120 }
121 {\end{BlockClass}\LWR@startpars}

Ref to create a starred environment:
https://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment

122
123 \ExplSyntaxOn
124 \cs_new:cpn {addmargin*} {\addmargin*}
125 \cs_new_eq:cN {endaddmargin*} \endaddmargin
126 \ExplSyntaxOff

```

```
127
128 \DeclareDocumentCommand{\marginline}{m}{\marginpar{#1}}
```

---

File 360 **lwarp-scrhack.sty**

§ 460 Package **scrhack**

Pkg scrhack scrhack is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrhack}[2018/03/30]

---

File 361 **lwarp-scrlylayer.sty**

§ 461 Package **scrlylayer**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrlylayer scrlylayer is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrlylayer}[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*{\laryyoffset}{}
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{footheight}{\newlength\footheight}{}
54 \DeclareDocumentCommand{\automark}{s o m}{}
55 \DeclareDocumentCommand{\manualmark}{}{}
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 362 **lwarp-scrLayer-notecolumn.sty**

§ 462 Package **scrLayer-notecolumn**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrLayer-notecolumn scrLayer-notecolumn is emulated.

⚠ **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{sclayer-notecolumn}[2018/02/02]

```

2 \newcommand*\DeclareNoteColumn}[2][{}]{
3 \newcommand*\DeclareNewNoteColumn}[2][{}]{
4 \newcommand*\ProvideNoteColumn}[2][{}]{
5 \newcommand*\RedeclareNoteColumn}[2][{}]{
6 \NewDocumentCommand{\makenote}{s o m}{\marginpar{#3}}
7 \newcommand*\syncwithnotecolumn}[1][{}]{
8 \newcommand*\syncwithnotecolumns}[1][{}]{
9 \newcommand*\clearnotecolumn}[1][{}]{
10 \newcommand*\clearnotecolumns}[1][{}]{

```

File 363 **lwarp-sclayer-scrpage.sty**

§ 463 Package **sclayer-scrpage**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg sclayer-scrpage sclayer-scrpage is ignored.

⚠ **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{sclayer-scrpage}[2018/03/30]

```

2 \@ifundefined{footheight}{\newlength\footheight}{}
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{\cefoot}{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 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
22 \newcommand*\defpairofpagestyles}[3][{}]{
23 \newcommand*\newpairofpagestyles}[3][{}]{
24 \newcommand*\renewpairofpagestyles}[3][{}]{
25 \newcommand*\providepairofpagestyles}[3][{}]{

26 \newcommand*\clearmainofpairofpagestyles}{}

```

```

27 \newcommand*\clearplainofpairstyles{}
28 \newcommand*\clearpairstyles{}
29 \newcommand*\clearscrheadings{}
30 \newcommand*\clearscrheadfoot{}
31 \newcommand*\clearscrplain{}

32 \NewDocumentCommand\deftriplepagestyle{m o o m m m m m m m}{}
33 \NewDocumentCommand\newtriplepagestyle{m o o m m m m m m m}{}
34 \NewDocumentCommand\renewtriplepagestyle{m o o m m m m m m m}{}
35 \NewDocumentCommand\providetripstyle{m o o m m m m m m m}{}
36 \newcommand*\defpagestyle[3]{}
37 \newcommand*\newpagestyle[3]{}
38 \newcommand*\providepagestyle[3]{}
39 \newcommand*\renewpagestyle[3]{}

```

---

File 364 **lwarp-scrpage2.sty**

§ 464 Package **scrpage2**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrpage2 scrpage2 is ignored.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrpage2}[2018/03/30]

```

2 \@ifundefined{footheight}{\newlength\footheight}{}
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\deftriplestyle{m o o m m 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}{}

```

---

File 365 **lwarp-section.sty**

§ 465 Package **section**

Pkg section 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\hdsiZe{\huge}\else
4 \def\chsize{\huge}\def\hdsiZe{\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\fpind\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 366 **lwarp-sectionbreak.sty**

§ 466 Package **sectionbreak**

*(Emulates or patches code by MICHAL HOFTICH.)*

Pkg sectionbreak sectionbreak is patched for use by lwarp.

**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 367 **lwarp-sectsty.sty**

§ 467 Package **sectsty**

*(Emulates or patches code by ROWLAND McDONNELL.)*

Pkg sectsty 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 368 **lwarp-semantic-markup.sty**

§ 468 Package **semantic-markup**

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg semantic-markup semantic-markup is patched for use by lwarp.



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@subsingledollar*%
17 {#1/#2}% alt tag
18 {musfig}% addl' hashing
19 {% contents
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 369 **lwarp-setspace.sty**

§ 469 Package **setspace**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg setspace **setspace** is emulated.

Discard all options for `lwarp-setspace`:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{setspace}[2011/12/19]
2
3 \newcommand*\setstretch[1]{}
4 \newcommand*\SetSingleSpace[1]{}
5 \newcommand*\singlespacing{}
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 370 **lwarp-shadow.sty**

§ 470 Package **shadow**

*(Emulates or patches code by MAURO ORLANDINI.)*

Pkg shadow shadow is emulated.

**for HTML output:** Discard all options for lwarp-shadow:

```

1 \LWR@ProvidesPackageDrop{shadow}[2003/02/19]

2 \newdimen\shboxsep
3 \newdimen\shboxrule
4 \newdimen\shdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8 }

```

---

File 371 **lwarp-shapepar.sty**

§ 471 Package **shapepar**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg shapepar shapepar is patched for use by lwarp. 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 372 **lwarp-showidx.sty**

§ 472 Package **showidx**

Pkg showidx showidx is ignored.

**for HTML output:** Discard all options for lwarp-showidx:

```
1 \LWR@ProvidesPackageDrop{showidx}[2014/09/29]
```

\@wrindex is redefined \@AtBeginDocument by the lwarp core.

---

File 373 **lwarp-showkeys.sty**

§ 473 Package **showkeys**

*(Emulates or patches code by DAVID CARLISLE, MORTEN HØGHOLM.)*

Pkg showkeys showkeys is ignored.

**for HTML output:** Discard all options for lwarp-showkeys:

```
1 \LWR@ProvidesPackageDrop{showkeys}[2014/10/28]
```

```
2 \NewDocumentCommand{\showkeys}{s}{}

```

---

File 374 **lwarp-showtags.sty**

§ 474 Package **showtags**

Pkg showtags showtags is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{showtags}% no version is given

```
2 \newcommand{\thecitetag}[1]{}

```

---

File 375 **lwarp-sidecap.sty**

§ 475 Package **sidecap**

*(Emulates or patches code by ROLF NIEPRASCHK, HUBERT GÄSSLEIN.)*

Pkg sidecap sidecap is emulated.

**for HTML output:** Discard all options for lwarp-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:cpn {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:cpn {SCfigure*} {\SCfigure*}
18 \cs_new_eq:cN {endSCfigure*} \endSCfigure
19 \ExplSyntaxOff
20
21
22 \newenvironment*{wide}{}{}
```

---

File 376 **lwarp-sidenotes.sty**

§ 476 Package **sidenotes**

*(Emulates or patches code by ANDY THOMAS, OLIVER SCHEBAUM.)*

Pkg sidenotes Patched for lwarp.

**for HTML output:** Load the original package:

```
1 \LWR@ProvidesPackagePass{sidenotes}
```

The following patch sidenotes for use with lwarp:

```
\sidecaption * [⟨entry⟩] [⟨offset⟩] {⟨text⟩}
2 \RenewDocumentCommand \sidecaption {s o o +m}
3 {
4 \LWR@stoppars
5 \begingroup
6 \captionsetup{style=sidecaption}
```

```

7 \IfBooleanTF{#1}
8 { % starred
9 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
10 \caption*{#4}
11 \end{BlockClass}
12 }
13 { % unstarred
14 \IfNoValueOrEmptyTF{#2}
15 {\def\@sidenotes@sidecaption@tof{#4}}
16 {\def\@sidenotes@sidecaption@tof{#2}}
17 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
18 \caption[\@sidenotes@sidecaption@tof]{#4}
19 \end{BlockClass}
20 }
21 \endgroup
22 \LWR@startpars
23 }

```

Borrowed from the lwarp version of keyfloat:

```

24 \NewDocumentEnvironment{KFLT@sidenotes@marginfloat}{0{-1.2ex} m}
25 {% start
26 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{\marginblock}%
27 \captionsetup{type=#2}%
28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33 \RenewDocumentEnvironment{marginfigure}{o}
34 {\begin{KFLT@sidenotes@marginfloat}{figure}}
35 {\end{KFLT@sidenotes@marginfloat}}
36
37 \RenewDocumentEnvironment{margintable}{o}
38 {\begin{KFLT@sidenotes@marginfloat}{table}}
39 {\end{KFLT@sidenotes@marginfloat}}

```

The following were changed by sidenotes, and now are reset back to their lwarp-supported originals:

Restoring the definition from the L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> article.cls source:

```

40 \renewenvironment{figure*}
41 {\@dblfloat{figure}}
42 {\enddblfloat}
43
44 \renewenvironment{table*}
45 {\@dblfloat{table}}
46 {\enddblfloat}

```

File 377 **lwarp-SIunits.sty**§ 477 Package **Slunits***(Emulates or patches code by MARCEL HELDOORN.)*Pkg SIunits **Slunits** is patched for use by lwarp.

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  $\LaTeX$  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 \ifbool{mathjax}{
3 \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
4 \LWR@subsingledollar*% lwarp
5 {% alt tag
6 \textbackslash{}unit\{\LWR@HTMLsanitize{#1}\}%
7 \{ \LWR@HTMLsanitize{#2}\}% extra space
8 }%
9 {SIunits}% add'l hashing
10 {%
11 #1\,{#2}%
12 }% contents
13 }
14 }{% not MathJax
15 \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
16 \@inunitcommandtrue% original
17 \LWR@subsingledollar*% lwarp
18 {% alt tag
19 \textbackslash{}unit\{\LWR@HTMLsanitize{#1}\}%
20 \{ \LWR@HTMLsanitize{#2}\}% extra space
21 }%
22 {SIunits}% add'l hashing
23 {%
24 \LWR@origensuredmath{% lwarp modification
25 \SI@fstyle{%
26 {#1}\@qsk\period@active{#2}%
27 }% original
28 }%
29 }% contents

```

```

30 \@inunitcommandfalse% original
31 }
32 }% not MathJax
33 \LWR@formatted{unit}

```

#### For MATHJAX:

```

34 \begin{warpMathJax}
35 \LWR@infoprocessingmathjax{SIunits}
36
37 \CustomizeMathJax{\newcommand{\one}}{}}
38 \CustomizeMathJax{\newcommand{\meter}}{\metre}}
39 \CustomizeMathJax{\newcommand{\deka}}{\deca}}
40 \CustomizeMathJax{\newcommand{\dekad}}{\decad}}
41 \CustomizeMathJax{\newcommand{\per}}{/}}
42 \CustomizeMathJax{\newcommand{\usk}}{\;}}
43 \CustomizeMathJax{\newcommand{\unit}[2]{#1\,{#2}}}
44 \CustomizeMathJax{\newcommand{\power}[2]{#1^{#2}}}
45
46 \AtBeginDocument{%
47 \if@redefsquare
48 \CustomizeMathJax{\renewcommand{\square}[1]{\power{#1}{2}}}
49 \else
50 \if@defsquaren
51 \CustomizeMathJax{\newcommand{\square}[1]{\power{#1}{2}}}
52 \else
53 \CustomizeMathJax{\renewcommand{\square}[1]{\power{#1}{2}}}
54 \fi %\if@defsquaren
55 \fi %\if@redefsquare
56 } %\AtBeginDocument
57
58 \CustomizeMathJax{\newcommand{\squared}}{^2}}
59 \CustomizeMathJax{\newcommand{\cubic}[1]{\power{#1}{3}}}
60 \CustomizeMathJax{\newcommand{\cubed}}{^3}}
61 \CustomizeMathJax{\newcommand{\fourth}[1]{\power{#1}{4}}}
62 \CustomizeMathJax{\newcommand{\reciprocal}[1]{\power{#1}{-1}}}
63 \CustomizeMathJax{\newcommand{\rp}{\reciprocal}}
64 \CustomizeMathJax{\newcommand{\rpsquare}[1]{\power{#1}{-2}}}
65 \CustomizeMathJax{\newcommand{\rpsquared}}{^-2}}
66 \CustomizeMathJax{\newcommand{\rpcubic}[1]{\power{#1}{-3}}}
67 \CustomizeMathJax{\newcommand{\rpcubed}}{^-3}}
68 \CustomizeMathJax{\newcommand{\rpfourth}[1]{\power{#1}{-4}}}
69 \CustomizeMathJax{\newcommand{\yocto}{\mathrm{y}}}
70 \CustomizeMathJax{\newcommand{\zepto}{\mathrm{z}}}
71 \CustomizeMathJax{\newcommand{\atto}{\mathrm{a}}}
72 \CustomizeMathJax{\newcommand{\femto}{\mathrm{f}}}
73 \CustomizeMathJax{\newcommand{\pico}{\mathrm{p}}}
74 \CustomizeMathJax{\newcommand{\nano}{\mathrm{n}}}
75 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
76 \CustomizeMathJax{\newcommand{\milli}{\mathrm{m}}}
77 \CustomizeMathJax{\newcommand{\centi}{\mathrm{c}}}
78 \CustomizeMathJax{\newcommand{\deci}{\mathrm{d}}}
79 \CustomizeMathJax{\newcommand{\deca}{\mathrm{da}}}
80 \CustomizeMathJax{\newcommand{\hecto}{\mathrm{h}}}
81 \CustomizeMathJax{\newcommand{\kilo}{\mathrm{k}}}

```

```
82 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
83 \CustomizeMathJax{\newcommand{\giga}{\mathrm{G}}}
84 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
85 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
86 \CustomizeMathJax{\newcommand{\exa}{\mathrm{E}}}
87 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
88 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
89 \CustomizeMathJax{\newcommand{\yoctod}{\power{10}{-24}}}
90 \CustomizeMathJax{\newcommand{\zeptod}{\power{10}{-21}}}
91 \CustomizeMathJax{\newcommand{\atod}{\power{10}{-18}}}
92 \CustomizeMathJax{\newcommand{\femtod}{\power{10}{-15}}}
93 \CustomizeMathJax{\newcommand{\picod}{\power{10}{-12}}}
94 \CustomizeMathJax{\newcommand{\nanod}{\power{10}{-9}}}
95 \CustomizeMathJax{\newcommand{\microd}{\power{10}{-6}}}
96 \CustomizeMathJax{\newcommand{\millid}{\power{10}{-3}}}
97 \CustomizeMathJax{\newcommand{\centid}{\power{10}{-2}}}
98 \CustomizeMathJax{\newcommand{\decid}{\power{10}{-1}}}
99 \CustomizeMathJax{\newcommand{\decad}{\power{10}{1}}}
100 \CustomizeMathJax{\newcommand{\hectod}{\power{10}{2}}}
101 \CustomizeMathJax{\newcommand{\kilod}{\power{10}{3}}}
102 \CustomizeMathJax{\newcommand{\megad}{\power{10}{6}}}
103 \CustomizeMathJax{\newcommand{\gigad}{\power{10}{9}}}
104 \CustomizeMathJax{\newcommand{\terad}{\power{10}{12}}}
105 \CustomizeMathJax{\newcommand{\petad}{\power{10}{15}}}
106 \CustomizeMathJax{\newcommand{\exad}{\power{10}{18}}}
107 \CustomizeMathJax{\newcommand{\zettad}{\power{10}{21}}}
108 \CustomizeMathJax{\newcommand{\yottad}{\power{10}{24}}}
109 \CustomizeMathJax{\newcommand{\gram}{\mathrm{g}}}
110 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
111 \CustomizeMathJax{\newcommand{\kilogram}{\kilo\gram}}
112 \CustomizeMathJax{\newcommand{\second}{\mathrm{s}}}
113 \CustomizeMathJax{\newcommand{\ampere}{\mathrm{A}}}
114 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}
115 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
116 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
117 \CustomizeMathJax{\newcommand{\radian}{\mathrm{rad}}}
118 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
119 \CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}
120 \CustomizeMathJax{\newcommand{\newton}{\mathrm{N}}}
121 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
122 \CustomizeMathJax{\newcommand{\joule}{\mathrm{J}}}
123 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
124 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
125 \CustomizeMathJax{\newcommand{\volt}{\mathrm{V}}}
126 \CustomizeMathJax{\newcommand{\farad}{\mathrm{F}}}
127 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
128 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
129 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
130 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
131 \CustomizeMathJax{\newcommand{\henry}{\mathrm{H}}}
132 \CustomizeMathJax{\newcommand{\degreecelsius}{\mathrm{\unicode{x2103}}}}
133 \CustomizeMathJax{\newcommand{\celsius}{\degreecelsius}}
134 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
135 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}
136 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
```

```
137 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
138 \CustomizeMathJax{\newcommand{\katal}{\mathrm{kat}}}
139
140 \ifdef{\radianbase}{
141 \CustomizeMathJax{\newcommand{\radianbase}%
142 {\metre\usk\reciprocal\metre}}
143 \CustomizeMathJax{\newcommand{\steradianbase}%
144 {\squaremetre\usk\rpsquare\metre}}
145 \CustomizeMathJax{\newcommand{\hertzbase}%
146 {\reciprocal\second}}
147 \CustomizeMathJax{\newcommand{\newtonbase}%
148 {\metre\usk\kilogram\usk\second\rpsquared}}
149 \CustomizeMathJax{\newcommand{\pascalbase}%
150 {\reciprocal\metre\usk\kilogram\usk\second\rpsquared}}
151 \CustomizeMathJax{\newcommand{\joulebase}%
152 {\squaremetre\usk\kilogram\usk\second\rpsquared}}
153 \CustomizeMathJax{\newcommand{\wattbase}%
154 {\squaremetre\usk\kilogram\usk\rpcubic\second}}
155 \CustomizeMathJax{\newcommand{\coulombbase}%
156 {\ampere\usk\second}}
157 \CustomizeMathJax{\newcommand{\voltbase}%
158 {\squaremetre\usk\kilogram\usk\rpcubic\second\usk\reciprocal\ampere}}
159 \CustomizeMathJax{\newcommand{\faradbase}%
160 {\rpsquare\metre\usk\reciprocal\kilogram\usk\fourth\second\usk\ampere\squared}}
161 \CustomizeMathJax{\newcommand{\ohmbase}%
162 {\squaremetre\usk\kilogram\usk\rpcubic\second\usk\rpsquare\ampere}}
163 \CustomizeMathJax{\newcommand{\siemensbase}%
164 {\rpsquare\metre\usk\reciprocal\kilogram\usk\cubic\second\usk\ampere\squared}}
165 \CustomizeMathJax{\newcommand{\weberbase}%
166 {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
167 \CustomizeMathJax{\newcommand{\teslabase}%
168 {\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
169 \CustomizeMathJax{\newcommand{\henrybase}%
170 {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\rpsquare\ampere}}
171 \CustomizeMathJax{\newcommand{\celsiusbase}%
172 {\kelvin}}
173 \CustomizeMathJax{\newcommand{\lumenbase}%
174 {\candela\usk\squaremetre\usk\rpsquare\metre}}
175 \CustomizeMathJax{\newcommand{\luxbase}%
176 {\candela\usk\squaremetre\usk\rpfourth\metre}}
177 \CustomizeMathJax{\newcommand{\becquerelbase}%
178 {\hertzbase}}
179 \CustomizeMathJax{\newcommand{\graybase}%
180 {\squaremetre\usk\second\rpsquared}}
181 \CustomizeMathJax{\newcommand{\sievertbase}%
182 {\graybase}}
183 \CustomizeMathJax{\newcommand{\katalbase}%
184 {\rp\second\usk\mole }}
185 }{}
186
187 \ifdef{\derradian}{
188 \CustomizeMathJax{\newcommand{\derradian}%
189 {\metre\usk\reciprocal\metre}}
190 \CustomizeMathJax{\newcommand{\dersteradian}%
191 {\squaremetre\usk\rpsquare\metre}}
```

```

192 \CustomizeMathJax{\newcommand{\derhertz}%
193 {\reciprocal\second}}
194 \CustomizeMathJax{\newcommand{\dernewton}%
195 {\metre\usk\kilogram\usk\second\rpsquared}}
196 \CustomizeMathJax{\newcommand{\derpascal}%
197 {\newton\usk\rpsquare\metre}}
198 \CustomizeMathJax{\newcommand{\derjoule}%
199 {\newton\usk\metre}}
200 \CustomizeMathJax{\newcommand{\derwatt}%
201 {\joule\usk\reciprocal\second}}
202 \CustomizeMathJax{\newcommand{\dercoulomb}%
203 {\ampere\usk\second}}
204 \CustomizeMathJax{\newcommand{\dervolt}%
205 {\watt\usk\reciprocal\ampere}}
206 \CustomizeMathJax{\newcommand{\derfarad}%
207 {\coulomb\usk\reciprocal\volt}}
208 \CustomizeMathJax{\newcommand{\derohm}%
209 {\volt\usk\reciprocal\ampere}}
210 \CustomizeMathJax{\newcommand{\dersiemens}%
211 {\ampere\usk\reciprocal\volt}}
212 \CustomizeMathJax{\newcommand{\derweber}%
213 {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
214 \CustomizeMathJax{\newcommand{\dertesla}%
215 {\weber\usk\rpsquare\metre}}
216 \CustomizeMathJax{\newcommand{\derhenry}%
217 {\weber\usk\reciprocal\ampere}}
218 \CustomizeMathJax{\newcommand{\dercelsius}%
219 {\kelvin}}
220 \CustomizeMathJax{\newcommand{\derlumen}%
221 {\candela\usk\steradian}}
222 \CustomizeMathJax{\newcommand{\derlux}%
223 {\lumen\usk\rpsquare\metre}}
224 \CustomizeMathJax{\newcommand{\derbecquerel}%
225 {\derhertz}}
226 \CustomizeMathJax{\newcommand{\dergray}%
227 {\joule\usk\reciprocal\kilogram}}
228 \CustomizeMathJax{\newcommand{\dersievert}%
229 {\dergray}}
230 \CustomizeMathJax{\newcommand{\derkatal}%
231 {\katalbase}}
232 }{}
233
234 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}
235 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}
236 \CustomizeMathJax{\newcommand{\dday}{\mathrm{d}}}
237 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}
238 \CustomizeMathJax{\newcommand{\pminute}{^\prime}}
239 \CustomizeMathJax{\newcommand{\arcminute}{^\prime}}
240 \CustomizeMathJax{\newcommand{\pasecond}{^\prime\prime}}
241 \CustomizeMathJax{\newcommand{\arcsecond}{^\prime\prime}}
242 \CustomizeMathJax{\newcommand{\ton}{\mathrm{t}}}
243 \CustomizeMathJax{\newcommand{\tonne}{\mathrm{t}}}
244 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
245 \CustomizeMathJax{\newcommand{\litre}{\mathrm{L}}}
246 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}

```

```
247 \CustomizeMathJax{\newcommand{\bel}{\mathrm{B}}}
248 \CustomizeMathJax{\newcommand{\curie}{\mathrm{Ci}}}
249 \CustomizeMathJax{\newcommand{\rad}{\mathrm{rad}}}
250 \CustomizeMathJax{\newcommand{\arad}{\mathrm{rd}}}
251 \CustomizeMathJax{\newcommand{\rem}{\mathrm{rem}}}
252 \CustomizeMathJax{\newcommand{\roentgen}{\mathrm{R}}}
253 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{\mathrm{eV}}}}
254 \CustomizeMathJax{\newcommand{\atomicmass}{\mathrm{u}}}
255 \CustomizeMathJax{\newcommand{\atomicmassunit}{\mathrm{u}}}
256 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{Da}}}
257 \CustomizeMathJax{\newcommand{\are}{\mathrm{a}}}
258 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{\hecto\are}}}
259 \CustomizeMathJax{\newcommand{\barn}{\mathrm{b}}}
260 \CustomizeMathJax{\newcommand{\bbar}{\mathrm{\bar{b}}}}
261 \CustomizeMathJax{\newcommand{\gal}{\mathrm{Gal}}}
262 \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\unicode{x00C5}}}}
263 \CustomizeMathJax{\newcommand{\rperminute}{\mathrm{r\per\minute}}}
264 \CustomizeMathJax{\newcommand{\rpersecond}{\mathrm{r\per\second}}}
265 \CustomizeMathJax{\newcommand{\squaremetre}{\power{\metre}{2}}}
266 \CustomizeMathJax{\newcommand{\cubicmetre}{\cubic\metre}}
267 \CustomizeMathJax{\newcommand{\graypersecond}{\gray\per\second}}
268 \CustomizeMathJax{\newcommand{\graypersecondnp}{\gray\usk\reciprocal\second}}
269 \CustomizeMathJax{\newcommand{\metrepersquaresecond}{\metre\per\second\squared}}
270 \CustomizeMathJax{\newcommand{\metrepersquaresecondnp}{\metre\usk\second\rpsquared}}
271 \CustomizeMathJax{\newcommand{\joulepermole}{\joule\per\mole}}
272 \CustomizeMathJax{\newcommand{\joulepermolenp}{\joule\usk\reciprocal\mole}}
273 \CustomizeMathJax{\newcommand{\molepercubicmetre}{\mole\per\cubic\metre}}
274 \CustomizeMathJax{\newcommand{\molepercubicmetrenp}{\mole\usk\rpcubic\metre}}
275 \CustomizeMathJax{\newcommand{\radianpersquaresecond}{\radian\per\second\squared}}
276 \CustomizeMathJax{\newcommand{\radianpersquaresecondnp}{\radian\usk\second\rpsquared}}
277 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecond}{\kilogram\usk\squaremetre\per\second}}
278 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecondnp}{\kilogram\usk\squaremetre\usk\reciproca}}
279 \CustomizeMathJax{\newcommand{\radianpersecond}{\radian\per\second}}
280 \CustomizeMathJax{\newcommand{\radianpersecondnp}{\radian\usk\reciprocal\second}}
281 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetre}{\squaremetre\per\cubic\metre}}
282 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetrenp}{\squaremetre\usk\rpcubic\metre}}
283 \CustomizeMathJax{\newcommand{\katalpercubicmetre}{\katal\per\cubic\metre}}
284 \CustomizeMathJax{\newcommand{\katalpercubicmetrenp}{\katal\usk\rpcubic\metre}}
285 \CustomizeMathJax{\newcommand{\coulombpermol}{\coulomb\per\mole}}
286 \CustomizeMathJax{\newcommand{\coulombpermolnp}{\coulomb\usk\reciprocal\mole}}
287 \CustomizeMathJax{\newcommand{\amperepersquaremetre}{\ampere\per\squaremetre}}
288 \CustomizeMathJax{\newcommand{\amperepersquaremetrenp}{\ampere\usk\rpsquare\metre}}
289 \CustomizeMathJax{\newcommand{\kilogrampercubicmetre}{\kilogram\per\cubic\metre}}
290 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrenp}{\kilogram\usk\rpcubic\metre}}
291 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecond}{\squaremetre\per\newton\usk\second}}
292 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecondnp}{\squaremetre\usk\reciprocal\newton\usk\re}}
293 \CustomizeMathJax{\newcommand{\pascalsecond}{\pascal\usk\second}}
294 \CustomizeMathJax{\newcommand{\coulombpercubicmetre}{\coulomb\per\cubic\metre}}
295 \CustomizeMathJax{\newcommand{\coulombpercubicmetrenp}{\coulomb\usk\rpcubic\metre}}
296 \CustomizeMathJax{\newcommand{\ampere metre second}{\ampere\usk\metre\usk\second}}
297 \CustomizeMathJax{\newcommand{\voltpermetre}{\volt\per\metre}}
298 \CustomizeMathJax{\newcommand{\voltpermetrenp}{\volt\usk\reciprocal\metre}}
299 \CustomizeMathJax{\newcommand{\coulombpersquaremetre}{\coulomb\per\squaremetre}}
300 \CustomizeMathJax{\newcommand{\coulombpersquaremetrenp}{\coulomb\usk\rpsquare\metre}}
301 \CustomizeMathJax{\newcommand{\faradpermetre}{\farad\per\metre}}
```

```

302 \CustomizeMathJax{\newcommand{\faradpermetrenp}{\farad\usk\reciprocal\metre}}
303 \CustomizeMathJax{\newcommand{\ohmmetre}{\ohm\usk\metre}}
304 \CustomizeMathJax{\newcommand{\kilowatthour}{\kilo\watt\hour}}
305 \CustomizeMathJax{\newcommand{\wattpersquaremetre}{\watt\per\squaremetre}}
306 \CustomizeMathJax{\newcommand{\wattpersquaremetrenp}{\watt\usk\rpsquare\metre}}
307 \CustomizeMathJax{\newcommand{\joulepersquaremetre}{\joule\per\squaremetre}}
308 \CustomizeMathJax{\newcommand{\joulepersquaremetrenp}{\joule\usk\rpsquare\metre}}
309 \CustomizeMathJax{\newcommand{\newtonpercubicmetre}{\newton\per\cubic\metre}}
310 \CustomizeMathJax{\newcommand{\newtonpercubicmetrenp}{\newton\usk\rpcubic\metre}}
311 \CustomizeMathJax{\newcommand{\newtonperkilogram}{\newton\per\kilogram}}
312 \CustomizeMathJax{\newcommand{\newtonperkilogramnp}{\newton\usk\reciprocal\kilogram}}
313 \CustomizeMathJax{\newcommand{\jouleperkelvin}{\joule\per\kelvin}}
314 \CustomizeMathJax{\newcommand{\jouleperkelvinnp}{\joule\usk\reciprocal\kelvin}}
315 \CustomizeMathJax{\newcommand{\jouleperkilogram}{\joule\per\kilogram}}
316 \CustomizeMathJax{\newcommand{\jouleperkilogramnp}{\joule\usk\reciprocal\kilogram}}
317 \CustomizeMathJax{\newcommand{\coulombperkilogram}{\coulomb\per\kilogram}}
318 \CustomizeMathJax{\newcommand{\coulombperkilogramnp}{\coulomb\usk\reciprocal\kilogram}}
319 \CustomizeMathJax{\newcommand{\squaremetrepersecond}{\squaremetre\per\second}}
320 \CustomizeMathJax{\newcommand{\squaremetrepersecondnp}{\squaremetre\usk\reciprocal\second}}
321 \CustomizeMathJax{\newcommand{\squaremetrepersquaresecond}{\squaremetre\per\second\squared}}
322 \CustomizeMathJax{\newcommand{\squaremetrepersquaresecondnp}{\squaremetre\usk\second\rpsquared}}
323 \CustomizeMathJax{\newcommand{\kilogrammetrepersecond}{\kilogram\usk\metre\per\second}}
324 \CustomizeMathJax{\newcommand{\kilogrammetrepersecondnp}{\kilogram\usk\metre\usk\reciprocal\second}}
325 \CustomizeMathJax{\newcommand{\candelapersquaremetre}{\candela\per\squaremetre}}
326 \CustomizeMathJax{\newcommand{\candelapersquaremetrenp}{\candela\usk\rpsquare\metre}}
327 \CustomizeMathJax{\newcommand{\amperepermetre}{\ampere\per\metre}}
328 \CustomizeMathJax{\newcommand{\amperepermetrenp}{\ampere\usk\reciprocal\metre}}
329 \CustomizeMathJax{\newcommand{\joulepertesla}{\joule\per\tesla}}
330 \CustomizeMathJax{\newcommand{\jouleperteslanp}{\joule\usk\reciprocal\tesla}}
331 \CustomizeMathJax{\newcommand{\henrypermetre}{\henry\per\metre}}
332 \CustomizeMathJax{\newcommand{\henrypermetrenp}{\henry\usk\reciprocal\metre}}
333 \CustomizeMathJax{\newcommand{\kilogrampersecond}{\kilogram\per\second}}
334 \CustomizeMathJax{\newcommand{\kilogrampersecondnp}{\kilogram\usk\reciprocal\second}}
335 \CustomizeMathJax{\newcommand{\kilogrampersquaremetresecond}{\kilogram\per\squaremetre\usk\second}}
336 \CustomizeMathJax{\newcommand{\kilogrampersquaremetresecondnp}{\kilogram\usk\rpsquare\metre\usk\reciprocal\second}}
337 \CustomizeMathJax{\newcommand{\kilogrampersquaremetre}{\kilogram\per\squaremetre}}
338 \CustomizeMathJax{\newcommand{\kilogrampersquaremetrenp}{\kilogram\usk\rpsquare\metre}}
339 \CustomizeMathJax{\newcommand{\kilogrampermetre}{\kilogram\per\metre}}
340 \CustomizeMathJax{\newcommand{\kilogrampermetrenp}{\kilogram\usk\reciprocal\metre}}
341 \CustomizeMathJax{\newcommand{\joulepermolekelvin}{\joule\per\mole\usk\kelvin}}
342 \CustomizeMathJax{\newcommand{\joulepermolekelvinnp}{\joule\usk\reciprocal\mole\usk\reciprocal\kelvin}}
343 \CustomizeMathJax{\newcommand{\kilogramperkilomole}{\kilogram\per\kilo\mole}}
344 \CustomizeMathJax{\newcommand{\kilogramperkilomolenp}{\kilogram\usk\kilo\reciprocal\mole}}
345 \CustomizeMathJax{\newcommand{\kilogramsquaremetre}{\kilogram\usk\squaremetre}}
346 \CustomizeMathJax{\newcommand{\kilogramsquaremetrenp}{\kilogramsquaremetre}}
347 \CustomizeMathJax{\newcommand{\kilogrammetrepersquaresecond}{\kilogram\usk\metre\per\second\squared}}
348 \CustomizeMathJax{\newcommand{\kilogrammetrepersquaresecondnp}{\kilogram\usk\metre\usk\second\rpsquare}}
349 \CustomizeMathJax{\newcommand{\newtonpersquaremetre}{\newton\per\squaremetre}}
350 \CustomizeMathJax{\newcommand{\newtonpersquaremetrenp}{\newton\usk\rpsquare\metre}}
351 \CustomizeMathJax{\newcommand{\persquaremetresecond}{1\per\squaremetre\usk\second}}
352 \CustomizeMathJax{\newcommand{\persquaremetresecondnp}{\rpsquare\metre\usk\reciprocal\second}}
353 \CustomizeMathJax{\newcommand{\wattperkilogram}{\watt\per\kilogram}}
354 \CustomizeMathJax{\newcommand{\wattperkilogramnp}{\watt\usk\reciprocal\kilogram}}
355 \CustomizeMathJax{\newcommand{\wattpercubicmetre}{\watt\per\cubic\metre}}
356 \CustomizeMathJax{\newcommand{\wattpercubicmetrenp}{\watt\usk\rpcubic\metre}}

```

```

357 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradian}{\watt\per\squaremetre\usk\steradian}}
358 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradianp}{\watt\usk\rpsquare\metre\usk\rp\steradia
359 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvin}{\joule\per\kilogram\usk\kelvin}}
360 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvinp}{\joule\usk\reciprocal\kilogram\usk\reciprocal
361 \CustomizeMathJax{\newcommand{\squaremetreperkilogram}{\squaremetre\per\kilogram}}
362 \CustomizeMathJax{\newcommand{\rpsquaremetreperkilogram}{\squaremetre\usk\reciprocal\kilogram}}
363 \CustomizeMathJax{\newcommand{\cubicmetreperkilogram}{\cubic\metre\per\kilogram}}
364 \CustomizeMathJax{\newcommand{\rpcubicmetreperkilogram}{\cubic\metre\usk\reciprocal\kilogram}}
365 \CustomizeMathJax{\newcommand{\newtonpermetre}{\newton\per\metre}}
366 \CustomizeMathJax{\newcommand{\newtonpermetrep}{\newton\usk\reciprocal\metre}}
367 \CustomizeMathJax{\newcommand{\Celsius}{\unicode{x2103}}}
368 \CustomizeMathJax{\newcommand{\wattpermetrekelvin}{\watt\per\metre\usk\kelvin}}
369 \CustomizeMathJax{\newcommand{\wattpermetrekelvinp}{\watt\usk\reciprocal\metre\usk\reciprocal\kelvin}}
370 \CustomizeMathJax{\newcommand{\newtonmetre}{\newton\usk\metre}} \CustomizeMathJax{\newcommand{\newtonmetrep}{\newton\usk\reciprocal\metre}}
371 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecond}{\squaremetre\per\cubic\second}}
372 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecondp}{\squaremetre\usk\rpcubic\second}}
373 \CustomizeMathJax{\newcommand{\metrepersecond}{\metre\per\second}}
374 \CustomizeMathJax{\newcommand{\metrepersecondp}{\metre\usk\reciprocal\second}}
375 \CustomizeMathJax{\newcommand{\joulepercubicmetre}{\joule\per\cubicmetre}}
376 \CustomizeMathJax{\newcommand{\joulepercubicmetrep}{\joule\usk\rpcubic\metre}}
377 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulomb}{\kilogram\per\cubic\metre\usk\coulomb}}
378 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulombp}{\kilogram\usk\rpcubic\metre\usk\reciprocal\coulomb}}
379 \CustomizeMathJax{\newcommand{\cubicmetrepersecond}{\cubicmetre\per\second}}
380 \CustomizeMathJax{\newcommand{\rpcubicmetrepersecond}{\cubicmetre\usk\reciprocal\second}}
381 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetre}{\kilogram\per\second\usk\cubicmetre}}
382 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetrep}{\kilogram\usk\reciprocal\second\usk\rpcubicmetre}}
383 \end{warpMathJax}

```

---

File 378 **lwarp-siunitx.sty**

§ 478 Package **siunitx**

(Emulates or patches code by JOSEPH WRIGHT.)

Pkg siunitx siunitx is patched for use by lwarp.

**fractions** Due to *pdftotext* limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

 **math mode required** Some units will require that the expression be placed inside math mode.

 **tabular** Tabular S columns are rendered as simple c columns, and tabular s columns are not supported. These may be replaced by c columns with each cell contained in `\num` or `\si`.

 **MathJax** For math mode with `svg` display, the original `siunitx` code is used while generating the `svg` image. For text mode, `lwarp` uses an emulation which provides a very effective HTML interpretation of `siunitx`. For math expressions while using `MATHJAX`, a limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. `siunitx` macros with more than one optional value cannot absorb the second optional value, and complicated parsing such as for `\ang` is not supported. The result usually looks fine, and otherwise is enough to get the meaning across.

lwarp's MATHJAX emulation for siunitx is meant to be a stop-gap measure until an extension is included in MATHJAX. As of this writing, the third-party siunitx extension for MATHJAX is not currently hosted at any public CDN, thus siunitx is not usable with this extension unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom MathJax script, but lwarp's emulation would have to be disabled as well.

Document modifications required for MATHJAX:

#### custom units

- Custom units may be added with `\CustomizeMathJax`. See the `lwarp-siunitx` code for examples.

#### ⚠ unit spacing

- 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.

Also see [MATHJAX option](#), section 8.7.4.

#### for HTML output:

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{siunitx}[2018/05/17]
4
5 \AtBeginDocument{% 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 }% AtBeginDocument
```

`\@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@subsingledollar`.

```
12
13 \ExplSyntaxOn
14 %
```

Modified to set set HTML `\textcolor` if not black:

```
15 \cs_undefine:N __siunitx_print_aux:
16 \cs_new_protected:Npn __siunitx_print_aux:
17 {
18 \text
19 {
20 __siunitx_ensure_ltr:n
21 }
```

```

22 \color@begingroup
23 __siunitx_print_color:
24 __siunitx_font_shape:
25 __siunitx_font_weight:
26 \use:c
27 {
28 @_ \l__siunitx_print_type_tl _
29 text \l__siunitx_font_family_tl :
30 }
31 \bool_if:NTF \l__siunitx_font_math_mode_bool
32 { __siunitx_print_math: }
33 {
34 \LWR@findcurrenttextcolor% lwarp
35 \ifdefstring{\LWR@tempcolor}{000000}% lwarp
36 {__siunitx_print_text:}% lwarp
37 {% lwarp
38 \LWR@textcurrentcolor{% lwarp
39 __siunitx_print_text:
40 }% lwarp
41 }% lwarp
42 }
43 \color@endgroup
44 }
45 }
46 }
47
48
49 \cs_undefine:N __siunitx_set_math_fam:n
50 \cs_new_protected:Npn __siunitx_set_math_fam:n #1 {
51 \int_new:c { c__siunitx_math #1 _int }
52 \group_begin:% lwarp
53 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
54 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
55 \hbox_set:Nn \l__siunitx_tmp_box
56 {
57 \ensuremath
58 {
59 \use:c { math #1 }
60 {
61 \int_gset:cn { c__siunitx_math #1 _int } { \fam }
62 }
63 }
64 }
65 \group_end:% lwarp
66 }
67
68 \cs_undefine:N __siunitx_combined_output:n
69 \cs_new_protected:Npn __siunitx_combined_output:n #1 {
70 \group_begin:% lwarp
71 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
72 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
73 \bool_if:NTF \l__siunitx_number_parse_bool
74 {
75 \tl_clear:N \l__siunitx_number_out_tl
76 \bool_set_false:N \l__siunitx_number_compound_bool

```

```

77 __siunitx_number_output_parse:n {#1}
78 }
79 {

```

For parse-numbers=false:

```

80 __siunitx_unit_output_pre_print:
81 \begingroup% lwarp
82 \boolfalse{mathjax}% lwarp
83 % __siunitx_print:nn { number } { \ensuremath {#1} }
84 \LWR@subsingledollar{% lwarp
85 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
86 }{siunitx}{%
87 __siunitx_print:nn { number } {%
88 \LWR@origensuredmath{#1}%
89 }%
90 }% lwarp
91 \endgroup% lwarp
92 __siunitx_unit_output_print:
93 }
94 \group_end:% lwarp
95 }

```

For parse-numbers=false:

```

96 \cs_set_protected:Npn __siunitx_range_numbers_aux:n #1
97 {
98 \bool_if:NTF \l__siunitx_number_parse_bool
99 {
100 \tl_clear:N \l__siunitx_number_out_tl
101 \tl_clear:N \l__siunitx_number_out_saved_tl
102 \bool_set_false:N \l__siunitx_number_compound_bool
103 __siunitx_number_output_parse:n {#1}
104 \bool_if:NT \l__siunitx_number_compound_bool
105 { \msg_error:nx { siunitx } { multi-part-range } {#1} }
106 }
107 {
108 __siunitx_unit_output_pre_print:
109 \begingroup% lwarp
110 \boolfalse{mathjax}% lwarp
111 % __siunitx_print:nn { number } {#1}
112 \LWR@subsingledollar{% lwarp
113 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
114 }{siunitx}{%
115 __siunitx_print:nn { number } {
116 \LWR@origensuredmath{#1}%
117 } % lwarp
118 }% lwarp
119 \endgroup% lwarp
120 __siunitx_unit_output_print:
121 }
122 }

```

For parse-numbers=false:

```

123 \cs_set_protected:Npn __siunitx_angle_print_direct_aux:nn #1#2 {
124 \tl_if_empty:nF {#1}
125 {
126 \tl_set:Nn \l__siunitx_unit_tl {#2}
127 \begingroup% lwarp
128 \boolfalse{mathjax}% lwarp
129 __siunitx_print:nn { number } {#1}
130 \LWR@subsingledollar{% lwarp
131 \textbackslash(\LWR@HTMLSanitize{#1} \textbackslash)% lwarp
132){siunitx}{%
133 __siunitx_print:nn { number } {
134 \LWR@origensuredmath{#1}%
135 } % lwarp
136 }% lwarp
137 \endgroup% lwarp
138 __siunitx_unit_output_print:
139 }
140 }
141 %

```

For quotients, the fraction code is replaced by the symbol code:

```

142 \cs_undefine:N __siunitx_number_output_quotient_fraction:
143 \cs_new_protected:Npn __siunitx_number_output_quotient_fraction: {
144 \bool_set_true:N \l__siunitx_number_compound_bool
145 __siunitx_number_output_quotient_aux_i:
146 \tl_set_eq:NN \l__siunitx_number_out_tl
147 \l__siunitx_number_numerator_tl
148 \tl_put_right:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
149 \tl_put_right:NV \l__siunitx_number_out_tl
150 \l__siunitx_number_denominator_tl
151 __siunitx_number_output_single_aux:
152 }

```

For units, the fraction code is replaced by the symbol code:

```

153 \cs_undefine:N __siunitx_unit_format_fraction_fraction:
154 \cs_new_protected:Npn __siunitx_unit_format_fraction_fraction: {
155 __siunitx_unit_format_fraction_symbol_aux:
156 \int_compare:nNnT { \l__siunitx_unit_denominator_int } > { 1 }
157 {
158 \bool_if:NT \l__siunitx_unit_denominator_bracket_bool
159 {
160 \tl_put_left:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_open_tl
161 \tl_put_right:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_close_tl
162 }
163 }
164 \tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
165 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
166 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_unit_denominator_tl
167 }

```

```

168 \cs_undefine:N __siunitx_angle_print_astronomy_aux:
169 \cs_new_protected:Npn __siunitx_angle_print_astronomy_aux: {
170 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer }

```

```

171 \l__siunitx_tmpa_tl
172 { \l__siunitx_print:nV { number } \l__siunitx_tmpa_tl }
173 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
174 {% lateximage
175 \hbox_set:Nn \l__siunitx_angle_marker_box
176 {
177 \l__siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
178 }
179 \hbox_set:Nn \l__siunitx_angle_unit_box
180 {
181 \l__siunitx_print:nV { unit } \l__siunitx_unit_tl
182 \skip_horizontal:n { -\scriptspace }
183 }
184 \l__siunitx_angle_print_astronomy_aux:n { marker }
185 \l__siunitx_angle_print_astronomy_aux:n { unit }
186 \hbox_set:Nn \l__siunitx_angle_marker_box
187 {
188 \box_use:N \l__siunitx_angle_marker_box
189 \box_use:N \l__siunitx_angle_unit_box
190 }
191 \dim_compare:nNnTF
192 { \l__siunitx_angle_marker_dim } > { \l__siunitx_angle_unit_dim }
193 { \l__siunitx_angle_print_astronomy_marker: }
194 { \l__siunitx_angle_print_astronomy_unit: }
195 }% lateximage
196 {% not a lateximage
197 \l__siunitx_print:nV { unit } \l__siunitx_unit_tl
198 \l__siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
199 }% not a lateximage
200 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-decimal }
201 \l__siunitx_tmpa_tl
202 { \l__siunitx_print:nV { number } \l__siunitx_tmpa_tl }
203 }

204 \cs_undefine:N \l__siunitx_textsuperscript:n
205 \cs_new_protected:Npn \l__siunitx_textsuperscript:n #1 {#1}

206 \RenewDocumentCommand \num { o m } {
207 \leavevmode
208 \group_begin:% lwarp
209 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
210 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
211 \bool_set_false:N \l__siunitx_font_set_bool
212 \IfNoValueF {#1}
213 { \keys_set:nn { siunitx } {#1} }
214 \l__siunitx_number_output:n {#2}
215 \group_end:% lwarp
216 }
217
218 \RenewDocumentCommand \numrange { o m m } {
219 \leavevmode
220 \group_begin:% lwarp
221 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
222 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
223 \bool_set_false:N \l__siunitx_font_set_bool

```

```

224 \IfNoValueF {#1}
225 { \keys_set:nn { siunitx } {#1} }
226 __siunitx_range_numbers:nn {#2} {#3}
227 \group_end:% lwarp
228 }
229
230 \RenewDocumentCommand \ang { o > { \SplitArgument { 2 } { ; } } m } {
231 \group_begin:% lwarp
232 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
233 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
234 \IfNoValueF {#1}
235 { \keys_set:nn { siunitx } {#1} }
236 __siunitx_angle_output:nnn #2
237 \group_end:% lwarp
238 }
239
240 \RenewDocumentCommand \si { o m } {
241 \leavevmode
242 \group_begin:% lwarp
243 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
244 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
245 \bool_set_false:N \l__siunitx_font_set_bool
246 \IfNoValueTF {#1}
247 { __siunitx_unit_output:nn {#2} { } }
248 {
249 \keys_set:nn { siunitx } {#1}
250 __siunitx_unit_output:nn {#2} {#1}
251 }
252 \group_end:% lwarp
253 }
254
255
256 \RenewDocumentCommand{\SIRange}{o m m m}
257 {%
258 \leavevmode
259 \group_begin:% lwarp
260 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
261 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
262 \bool_set_false:N \l__siunitx_font_set_bool
263 \IfNoValueTF {#1}
264 { __siunitx_range_unit:nnnn {#4} { } {#2} {#3} }
265 {
266 \keys_set:nn { siunitx } {#1}
267 __siunitx_range_unit:nnnn {#4} {#1} {#2} {#3}
268 }
269 \group_end:% lwarp
270 }
271
272 \ExplSyntaxOff

```

For MATHJAX. (The following runs much faster as separate `\CusomizeMathJax` calls instead of one single call.)

```

273 \begin{warpMathJax}
274 \LWR@infoprocessingmathjax{siunitx}

```

```

275
276 \CustomizeMathJax{\newcommand{\ang}[2][]{(\mathrm{#2})\degree}}
277 \CustomizeMathJax{\newcommand{\num}[2][]{\mathrm{#2}}}
278 \CustomizeMathJax{\newcommand{\si}[2][]{\mathrm{#2}}}
279 %
280 % \SI[opt]{num}[preunit]{unit}
281 \CustomizeMathJax{\newcommand{\LWRSI}[2][]{\mathrm{#1\LWRSInumber\, #2}}}
282 \CustomizeMathJax{\newcommand{\SI}[2][]{\def\LWRSInumber{#2}\LWRSI}}
283 %
284 \CustomizeMathJax{\newcommand{\numlist}[2][]{\mathrm{#2}}}
285 \CustomizeMathJax{\newcommand{\numrange}[3][]{\mathrm{#2-- #3}}}
286 \CustomizeMathJax{\newcommand{\SIlist}[3][]{\mathrm{#2\, #3}}}
287 \CustomizeMathJax{\newcommand{\SIrange}[4][]{\mathrm{#2\, #4-- #3\, #4}}}
288 \CustomizeMathJax{\newcommand{\tablenum}[2][]{\mathrm{#2}}}
289 %
290 \CustomizeMathJax{\newcommand{\ampere}{\mathrm{A}}}
291 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
292 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}
293 \CustomizeMathJax{\newcommand{\kilogram}{\mathrm{kg}}}
294 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
295 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
296 \CustomizeMathJax{\newcommand{\second}{\mathrm{s}}}
297 %
298 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
299 \CustomizeMathJax{\newcommand{\degreeCelsius}{\unicode{x2103}}}
300 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
301 \CustomizeMathJax{\newcommand{\farad}{\mathrm{F}}}
302 \CustomizeMathJax{\newcommand{\gray}{\mathrm{Gy}}}
303 \CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}
304 \CustomizeMathJax{\newcommand{\henry}{\mathrm{H}}}
305 \CustomizeMathJax{\newcommand{\joule}{\mathrm{J}}}
306 \CustomizeMathJax{\newcommand{\katal}{\mathrm{kat}}}
307 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
308 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}
309 \CustomizeMathJax{\newcommand{\newton}{\mathrm{N}}}
310 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
311 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
312 \CustomizeMathJax{\newcommand{\radian}{\mathrm{rad}}}
313 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
314 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
315 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
316 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
317 \CustomizeMathJax{\newcommand{\volt}{\mathrm{V}}}
318 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
319 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
320 \CustomizeMathJax{\newcommand{\day}{\mathrm{d}}}
321 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}
322 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{ha}}}
323 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}
324 \CustomizeMathJax{\newcommand{\litre}{\mathrm{l}}}
325 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
326 \CustomizeMathJax{\newcommand{\arcminute}{\mathrm{^\prime}}}
327 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}
328 \CustomizeMathJax{\newcommand{\arcsecond}{\mathrm{^\prime\prime}}}
329 \CustomizeMathJax{\newcommand{\tonne}{\mathrm{t}}}

```

```

330 \CustomizeMathJax{\newcommand{\astronomicalunit}{au}}
331 \CustomizeMathJax{\newcommand{\atomicmassunit}{u}}
332 \CustomizeMathJax{\newcommand{\bohr}{\mathit{a}_0}}
333 \CustomizeMathJax{\newcommand{\clight}{\mathit{c}_0}}
334 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{D}_\mathrm{a}}}
335 \CustomizeMathJax{\newcommand{\electronmass}{\mathit{m}_\mathrm{e}}}
336 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{eV}}}
337 \CustomizeMathJax{\newcommand{\elementarycharge}{\mathit{e}}}
338 \CustomizeMathJax{\newcommand{\hartree}{\mathit{E}_\mathrm{h}}}
339 \CustomizeMathJax{\newcommand{\planckbar}{\mathit{\unicode{x0127}}}}
340 \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\unicode{x00C5}}}}
341 \CustomizeMathJax{\let\LWRorigbar\bar}
342 \CustomizeMathJax{\newcommand{\bar}{\mathrm{bar}}}
343 \CustomizeMathJax{\newcommand{\barn}{\mathrm{b}}}
344 \CustomizeMathJax{\newcommand{\bel}{\mathrm{B}}}
345 \CustomizeMathJax{\newcommand{\decibel}{\mathrm{dB}}}
346 \CustomizeMathJax{\newcommand{\knot}{\mathrm{kn}}}
347 \CustomizeMathJax{\newcommand{\mmHg}{\mathrm{mmHg}}}
348 \CustomizeMathJax{\newcommand{\nauticalmile}{\mathrm{M}}}
349 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}
350 %
351 \CustomizeMathJax{\newcommand{\yocto}{\mathrm{y}}}
352 \CustomizeMathJax{\newcommand{\zepto}{\mathrm{z}}}
353 \CustomizeMathJax{\newcommand{\atto}{\mathrm{a}}}
354 \CustomizeMathJax{\newcommand{\femto}{\mathrm{f}}}
355 \CustomizeMathJax{\newcommand{\pico}{\mathrm{p}}}
356 \CustomizeMathJax{\newcommand{\nano}{\mathrm{n}}}
357 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
358 \CustomizeMathJax{\newcommand{\milli}{\mathrm{m}}}
359 \CustomizeMathJax{\newcommand{\centi}{\mathrm{c}}}
360 \CustomizeMathJax{\newcommand{\deci}{\mathrm{d}}}
361 \CustomizeMathJax{\newcommand{\deca}{\mathrm{da}}}
362 \CustomizeMathJax{\newcommand{\hecto}{\mathrm{h}}}
363 \CustomizeMathJax{\newcommand{\kilo}{\mathrm{k}}}
364 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
365 \CustomizeMathJax{\newcommand{\giga}{\mathrm{G}}}
366 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
367 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
368 \CustomizeMathJax{\newcommand{\exa}{\mathrm{E}}}
369 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
370 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
371 %
372 \CustomizeMathJax{\newcommand{\percent}{\mathrm{\%}}}
373 %
374 \CustomizeMathJax{\newcommand{\meter}{\mathrm{m}}}
375 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
376 %
377 \CustomizeMathJax{\newcommand{\gram}{\mathrm{g}}}
378 \CustomizeMathJax{\newcommand{\kg}{\kilo\gram}}
379 \CustomizeMathJax{\newcommand{\of}[1]_{\mathrm{\#1}}}
380 \CustomizeMathJax{\newcommand{\squared}{^2}}
381 \CustomizeMathJax{\newcommand{\square}[1]{\mathrm{\#1}^2}}
382 \CustomizeMathJax{\newcommand{\cubed}{^3}}
383 \CustomizeMathJax{\newcommand{\cubic}[1]{\mathrm{\#1}^3}}
384 \CustomizeMathJax{\newcommand{\per}{/}}

```

```
385 \CustomizeMathJax{\newcommand{\celsius}{\unicode{x2103}}}
386 %
387 \CustomizeMathJax{\newcommand{\fg}{\femto\gram}}
388 \CustomizeMathJax{\newcommand{\pg}{\pico\gram}}
389 \CustomizeMathJax{\newcommand{\ng}{\nano\gram}}
390 \CustomizeMathJax{\newcommand{\ug}{\micro\gram}}
391 \CustomizeMathJax{\newcommand{\mg}{\milli\gram}}
392 \CustomizeMathJax{\newcommand{\g}{\gram}}
393 \CustomizeMathJax{\newcommand{\kg}{\kilo\gram}}
394 %
395 \CustomizeMathJax{\newcommand{\amu}{\mathrm{u}}}
396 %
397 \CustomizeMathJax{\newcommand{\pm}{\pico\metre}}
398 \CustomizeMathJax{\newcommand{\nm}{\nano\metre}}
399 \CustomizeMathJax{\newcommand{\um}{\micro\metre}}
400 \CustomizeMathJax{\newcommand{\mm}{\milli\metre}}
401 \CustomizeMathJax{\newcommand{\cm}{\centi\metre}}
402 \CustomizeMathJax{\newcommand{\dm}{\deci\metre}}
403 \CustomizeMathJax{\newcommand{\m}{\metre}}
404 \CustomizeMathJax{\newcommand{\km}{\kilo\metre}}
405 %
406 \CustomizeMathJax{\newcommand{\as}{\atto\second}}
407 \CustomizeMathJax{\newcommand{\fs}{\femto\second}}
408 \CustomizeMathJax{\newcommand{\ps}{\pico\second}}
409 \CustomizeMathJax{\newcommand{\ns}{\nano\second}}
410 \CustomizeMathJax{\newcommand{\us}{\micro\second}}
411 \CustomizeMathJax{\newcommand{\ms}{\milli\second}}
412 \CustomizeMathJax{\newcommand{\s}{\second}}
413 %
414 \CustomizeMathJax{\newcommand{\fmol}{\femto\mol}}
415 \CustomizeMathJax{\newcommand{\pmol}{\pico\mol}}
416 \CustomizeMathJax{\newcommand{\nmol}{\nano\mol}}
417 \CustomizeMathJax{\newcommand{\umol}{\micro\mol}}
418 \CustomizeMathJax{\newcommand{\mmol}{\milli\mol}}
419 \CustomizeMathJax{\newcommand{\mol}{\mol}}
420 \CustomizeMathJax{\newcommand{\kmol}{\kilo\mol}}
421 %
422 \CustomizeMathJax{\newcommand{\pA}{\pico\ampere}}
423 \CustomizeMathJax{\newcommand{\nA}{\nano\ampere}}
424 \CustomizeMathJax{\newcommand{\uA}{\micro\ampere}}
425 \CustomizeMathJax{\newcommand{\mA}{\milli\ampere}}
426 \CustomizeMathJax{\newcommand{\A}{\ampere}}
427 \CustomizeMathJax{\newcommand{\kA}{\kilo\ampere}}
428 %
429 \CustomizeMathJax{\newcommand{\ul}{\micro\litre}}
430 \CustomizeMathJax{\newcommand{\ml}{\milli\litre}}
431 \CustomizeMathJax{\newcommand{\l}{\litre}}
432 \CustomizeMathJax{\newcommand{\hl}{\hecto\litre}}
433 \CustomizeMathJax{\newcommand{\uL}{\micro\liter}}
434 \CustomizeMathJax{\newcommand{\mL}{\milli\liter}}
435 \CustomizeMathJax{\newcommand{\L}{\liter}}
436 \CustomizeMathJax{\newcommand{\hL}{\hecto\liter}}
437 %
438 \CustomizeMathJax{\newcommand{\mHz}{\milli\hertz}}
439 \CustomizeMathJax{\newcommand{\Hz}{\hertz}}
```

```
440 \CustomizeMathJax{\newcommand{\kHz}{\kilo\hertz}}
441 \CustomizeMathJax{\newcommand{\MHz}{\mega\hertz}}
442 \CustomizeMathJax{\newcommand{\GHz}{\giga\hertz}}
443 \CustomizeMathJax{\newcommand{\THz}{\tera\hertz}}
444 %
445 \CustomizeMathJax{\newcommand{\mN}{\milli\newton}}
446 \CustomizeMathJax{\newcommand{\N}{\newton}}
447 \CustomizeMathJax{\newcommand{\kN}{\kilo\newton}}
448 \CustomizeMathJax{\newcommand{\MN}{\mega\newton}}
449 %
450 \CustomizeMathJax{\newcommand{\Pa}{\pascal}}
451 \CustomizeMathJax{\newcommand{\kPa}{\kilo\pascal}}
452 \CustomizeMathJax{\newcommand{\MPa}{\mega\pascal}}
453 \CustomizeMathJax{\newcommand{\GPa}{\giga\pascal}}
454 %
455 \CustomizeMathJax{\newcommand{\mohm}{\milli\ohm}}
456 \CustomizeMathJax{\newcommand{\kohm}{\kilo\ohm}}
457 \CustomizeMathJax{\newcommand{\Mohm}{\mega\ohm}}
458 %
459 \CustomizeMathJax{\newcommand{\pV}{\pico\volt}}
460 \CustomizeMathJax{\newcommand{\nV}{\nano\volt}}
461 \CustomizeMathJax{\newcommand{\uV}{\micro\volt}}
462 \CustomizeMathJax{\newcommand{\mV}{\milli\volt}}
463 \CustomizeMathJax{\newcommand{\V}{\volt}}
464 \CustomizeMathJax{\newcommand{\kV}{\kilo\volt}}
465 %
466 \CustomizeMathJax{\newcommand{\W}{\watt}}
467 \CustomizeMathJax{\newcommand{\uW}{\micro\watt}}
468 \CustomizeMathJax{\newcommand{\mW}{\milli\watt}}
469 \CustomizeMathJax{\newcommand{\kW}{\kilo\watt}}
470 \CustomizeMathJax{\newcommand{\MW}{\mega\watt}}
471 \CustomizeMathJax{\newcommand{\GW}{\giga\watt}}
472 %
473 \CustomizeMathJax{\newcommand{\J}{\joule}}
474 \CustomizeMathJax{\newcommand{\uJ}{\micro\joule}}
475 \CustomizeMathJax{\newcommand{\mJ}{\milli\joule}}
476 \CustomizeMathJax{\newcommand{\kJ}{\kilo\joule}}
477 %
478 \CustomizeMathJax{\newcommand{\eV}{\electronvolt}}
479 \CustomizeMathJax{\newcommand{\meV}{\milli\electronvolt}}
480 \CustomizeMathJax{\newcommand{\keV}{\kilo\electronvolt}}
481 \CustomizeMathJax{\newcommand{\MeV}{\mega\electronvolt}}
482 \CustomizeMathJax{\newcommand{\GeV}{\giga\electronvolt}}
483 \CustomizeMathJax{\newcommand{\TeV}{\tera\electronvolt}}
484 %
485 \CustomizeMathJax{\newcommand{\kWh}{\kilo\watt\hour}}
486 %
487 \CustomizeMathJax{\newcommand{\F}{\farad}}
488 \CustomizeMathJax{\newcommand{\fF}{\femto\farad}}
489 \CustomizeMathJax{\newcommand{\pF}{\pico\farad}}
490 %
491 \CustomizeMathJax{\newcommand{\K}{\mathrm{K}}}
492 %
493 \CustomizeMathJax{\newcommand{\dB}{\mathrm{dB}}}
494 %
```

---

```

495 \CustomizeMathJax{\newcommand{\kibi}{\mathrm{Ki}}}
496 \CustomizeMathJax{\newcommand{\mebi}{\mathrm{Mi}}}
497 \CustomizeMathJax{\newcommand{\gibi}{\mathrm{Gi}}}
498 \CustomizeMathJax{\newcommand{\tebi}{\mathrm{Ti}}}
499 \CustomizeMathJax{\newcommand{\pebi}{\mathrm{Pi}}}
500 \CustomizeMathJax{\newcommand{\exbi}{\mathrm{Ei}}}
501 \CustomizeMathJax{\newcommand{\zebi}{\mathrm{Zi}}}
502 \CustomizeMathJax{\newcommand{\yobi}{\mathrm{Yi}}}
503 \end{warpMathJax}

```

---

File 379 **lwarp-slantsc.sty**

§ 479 Package **slantsc**

*(Emulates or patches code by HARALD HARDERS.)*

Pkg slantsc **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@noscsshape}{}
3 \LWR@formatted{noscsshape}
4
5 \newcommand*{\LWR@null@noscsshape}{}
6
7 \appto{\LWR@nullfonts}{%
8 \LetLtxMacro\noscsshape\LWR@null@noscsshape%
9 }

```

---

File 380 **lwarp-slashed.sty**

§ 480 Package **slashed**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg slashed **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 381 **lwarp-soul.sty**

§ 481 Package **soul**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg soul 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 \ifcsemt{#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@soulhlcolor}{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]{}

```

#### Set colors:

```

55 \newcommand*\setulcolor}[1]{\renewcommand{\LWR@soululcolor}{#1}}
56 \newcommand*\setstcolor}[1]{\renewcommand{\LWR@soulstcolor}{#1}}
57 \newcommand*\sethlcolor}[1]{\renewcommand{\LWR@soulhlcolor}{#1}}

```

#### Long versions of the user-level macros:

```

58 \let\textso\so
59 \let\textul\ul
60 \let\texthl\hl
61 \let\textcaps\caps

```

File 382 **lwarp-soulpos.sty**

§ 482 Package **soulpos**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg soulpos 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\ifulendtype[1]{%
13 \expandafter\@secondoftwo%
14 }
15
16 \newcommand{\ulstarttype}{0}
17 \newcommand{\ulendtype}{0}
18 \newcommand\ulpostolerance{0}%

```

---

File 383 **lwarp-soulutf8.sty**

§ 483 Package **soulutf8**

Pkg soulutf8 soulutf8 is emulated.

lwarp's HTML output naturally supports UTF-8 encoding.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{soulutf8}[2016/05/16]
2 \RequirePackage{soul}

```

---

File 384 **lwarp-splitidx.sty**

§ 484 Package **splitidx**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg splitidx splitidx is patched for use by lwarp.

If the `latexmk` option is selected for lwarp, `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 587.17 in the `lwarp-patch-memoir` package for the `\@wrsindexhyp` macro as an example.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{splitidx}[2016/02/18]

```

```

2 \catcode'_ =12%
3 \xpatchcmd{\newindex}
4 {\jobname-#2.idx}
5 {\jobname-#2_html.idx}
6 {}
7 {\LWR@patcherror{splitidx}{@newindex}}
8 \catcode'_ =8%

```

Patched to use `lwarp`'s automatic indexing counter instead of `\thepage`:

```

9 \renewcommand*{\@wrsindex}[2][]{%
10 \ifx\relax#1\relax
11 \if@splitidx
12 \@wrsindex[idx]{#2}%
13 \else
14 \def\@tempa{#2}%
15 \if@verbindindex\@onelevel@sanitize\@tempa\fi
16 \wrindex{\@tempa}%
17 \fi
18 \else
19 \def\@tempa{#2}%
20 \csname index@#1@hook\endcsname
21 \expandafter\ifx\csname @@wrsindex\endcsname\relax
22 \addtocounter{LWR@autoindex}{1}% lwarp
23 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}% lwarp
24 \@@@wrsindex{#1}{\@tempa}{\thepage}%
25 \@@@wrsindex{#1}{\@tempa}{\arabic{LWR@autoindex}}%
26 \else
27 \def\@tempb{\@wrsindex{#1}}%
28 \expandafter\@tempb\@tempa||\%
29 \fi
30 \endgroup
31 \esphack
32 \fi
33 }

```

`lwarp` defines sectioning commands with `xparse`, so the below patches are done as temporary redefinitions instead of being `\let`.

```

34 \xpatchcmd{\printsubindex}
35 {\let\section\subsection}
36 {\renewcommand*{\section}{\subsection}}
37 {}
38 {\LWR@patcherror{splitidx}{printsubindex-section}}
39
40 \xpatchcmd{\printsubindex}
41 {\let\chapter\section}
42 {\renewcommand*{\chapter}{\section}}
43 {}
44 {\LWR@patcherror{splitidx}{printsubindex-chapter}}
45
46 \xpatchcmd{\printsubindex}
47 {\let\@makechapterhead\section}
48 {\def\@makechapterhead{\section}}
49 {}

```

---

```
50 {\LWR@patcherror{splitidx}{printsubindex-chapter}}
```

---

File 385 **lwarp-srcltx.sty**

§ 485 Package **srcltx**

Pkg srcltx 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 386 **lwarp-srctex.sty**

§ 486 Package **srctex**

Pkg srctex srctex is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{srctex}[2006/11/12]
2 \LWR@origRequirePackage{lwarp-srcltx}
```

---

File 387 **lwarp-stabular.sty**

§ 487 Package **stabular**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg stabular 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}[1]{}
6 }
7 {\end{tabular}}
```

Env `stabular`  $\{\langle width \rangle\} [\langle vpos \rangle] \{\langle colspec \rangle\}$

```

8 \NewDocumentEnvironment{stabular*}{m o m}
9 {
10 \begin{tabular}[#2]{#3}
11 \renewcommand{\noalign}[1]{}
12 }
13 \end{tabular}}

```

File 388 **lwarp-stackengine.sty**

§ 488 Package **stackengine**

*(Emulates or patches code by STEVEN B. SEGLETES.)*

Pkg `stackengine` `stackengine` is patched for use by `lwarp`.

**for HTML output:** 1 \LWR@ProvidesPackagePass{stackengine}[2017/02/13]

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 \ifstrequal{#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
12 \xpatchcmd{\LWR@orig@@stack}{\stackengine}{\LWR@orig@stackengine}
13 {}
14 {\LWR@patcherror{stackengine}{\LWR@orig@@stack}}
15
16 \renewcommand*{\@stack}[4]{%
17 \ifstrequal{#3}{0}%
18 {\begin{lateximage}[\ImageAltText]}%
19 {\begin{lateximage}[\ImageAltText][][vertical-align:top]}%
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 \renewcommand*\savestack[2]{%
50 \xdef\sv@name{\stack@macro@name{#1}}%
51 \ifundefined{sv@name content}{%
52 \expandafter\newsavebox\expandafter{\csname\sv@name content\endcsname}%
53 }{}%
54 \begingroup% lwarp
55 \LWR@restoreorigformatting% lwarp
56 \RenewDocumentEnvironment{lateximage}{s o s o o}{}{}% lwarp: inside group
57 \expandafter\LWR@gsavebox\csname\sv@name content\endcsname{#2}%
58 \expandafter\gdef\expandafter#1\expandafter{%
59 \expandafter\begin\expandafter{lateximage\expandafter}% lwarp
60 \expandafter\usebox\expandafter%
61 {\csname\sv@name content\endcsname}%
62 \expandafter\end\expandafter{lateximage\expandafter}% lwarp
63 }%
64 \endgroup% lwarp
65 }

```

---

File 389 **lwarp-stackrel.sty**

§ 489 Package **stackrel**

(Emulates or patches code by HEIKO OBERDIEK.)

Pkg stackrel 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}[3][[]]{%
4 \mathrel{\mathop{#3}\limits_{#1}^{#2}}}%
5 }}
6
7 \CustomizeMathJax{\newcommand{\stackbin}[3][[]]{%
8 \mathbin{\mathop{#3}\limits_{#1}^{#2}}}%
9 }}
10 \end{warpMathJax}

```

---

File 390 **lwarp-statex2.sty**

§ 490 Package **statex2**

(Emulates or patches code by RODNEY A SPARAPANI.)

Pkg statex2 statex2 is patched for use by lwarp, 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\STATEXand%
 \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{\mathrm{#1}}}}
24 \CustomizeMathJax{\newcommand{\sfs}[1]{\mathsf{#1}}}% not slanted
25
26 \if@manualbold
27 \CustomizeMathJax{\newcommand{\mb}[1]{#1}}
28 \else
29 \CustomizeMathJax{\newcommand{\mb}[1]{\boldsymbol{#1}}}
30 \fi
31
32 \CustomizeMathJax{\newcommand{\diag}{\mb{\mathrm{diag}}}}
33 \CustomizeMathJax{\newcommand{\blockdiag}{\mb{\mathrm{blockdiag}}}}
34 \CustomizeMathJax{\newcommand{\erf}{\mb{\mathrm{erf}}}}
35 \CustomizeMathJax{\newcommand{\logit}{\mb{\mathrm{logit}}}}
36 \CustomizeMathJax{\newcommand{\trace}{\mb{\mathrm{trace}}}}
37
38 \CustomizeMathJax{\newcommand{\chisq}{\mb{\chi^2}}}
39 \CustomizeMathJax{\newcommand{\deriv}[2]{\mb{\frac{d}{d{#1}}}\wrap{\mb{#2}}}}
40 \CustomizeMathJax{\newcommand{\deriv}[2]{\mb{\frac{d}{d{#2}}}\wrap{\mb{#1}}}}
41 \CustomizeMathJax{\newcommand{\e}[1]{\mb{\mathrm{e}^{#1}}}}
42 \CustomizeMathJax{\newcommand{\E}[2][{}]{\mb{\mathrm{E}}_{\mb{#1}} \wrap{\mb{#2}}}}
43 \CustomizeMathJax{\newcommand{\ha}{\mb{\frac{\alpha}{2}}}}
44 \CustomizeMathJax{\newcommand{\I}[2][{}]{%
45 \mb{\mathrm{I}}_{\mb{#1}} \LWRwrapparen{\mb{#2}}%
46 }}
47 \CustomizeMathJax{\newcommand{\IBeta}[2][{}]{%
48 \mb{\frac{\Gamma[#+#2]}{\Gamma[#+1]\Gamma[#+2]}}%
49 }}
50 \CustomizeMathJax{\newcommand{\If}{\; \mb{\mathrm{if}} \; ;}}
51 \CustomizeMathJax{\newcommand{\im}{\mb{\mathrm{i}}}}
52 \CustomizeMathJax{\newcommand{\ol}{\overline{}}}
53 \CustomizeMathJax{\newcommand{\ow}{\; \mb{\mathrm{otherwise}} \; ;}}
54 \CustomizeMathJax{\newcommand{\pderiv}[2][{}]{%

```

```

55 \mb{\frac{\partial}{\partial #1}}\wrap{\mb{#2}}%
56 }}
57 \CustomizeMathJax{\newcommand{\pderivf}[2]{%
58 \mb{\frac{\partial}{\partial #2}}\wrap{\mb{#1}}%
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)]}% lwarp
67
68 % \CustomizeMathJax{\renewcommand{\sim}{\mb{\sim}}}% doesn't work,
69 % replace <space>~<space> with <space>\sim<space>
70
71 \CustomizeMathJax{\newcommand{\iid}{\; \stackrel{\mb{\mathrm{iid}}}{\sim}} \;};}
72 \CustomizeMathJax{\newcommand{\ind}{\; \stackrel{\mb{\mathrm{ind}}}{\sim}} \;};}
73 \CustomizeMathJax{\newcommand{\indpr}{%
74 \; \stackrel{\mb{\mathrm{ind}}}{\stackrel{\mb{\mathrm{prior}}}{\sim}} \; \; %
75 }}
76 \CustomizeMathJax{\newcommand{\post}{\; \stackrel{\mb{\mathrm{post}}}{\sim}} \;};}
77 \CustomizeMathJax{\newcommand{\prior}{\; \stackrel{\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{\|}{\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}}]\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 \mb{\frac{\Gamma[#+1]\Gamma[#+1]\Gamma[#+4-#1]\Gamma[#+4]}{\Gamma[#+1]\Gamma[#+1+1]\Gamma[#+3+4]\Gamma[#+3]\Gamma[#+4]}}%
106 \I[#+1]{\{0, 1, \dots, #2\}}, \where #3>0, \; #4>0 \and n=1, 2, \dots}%
107
108 }}
109 \CustomizeMathJax{\newcommand{\pBin}[3][x]{%

```

```

110 \mb{\binom{#2}{#1}#3^#1} \LWRwrapparen{\mb{{1-#3}^{#2-#1}}}%
111 \mb{\I[#1]{\{0,1,\.,#2\}}, \where p \in (0, 1) \and n=1, 2,\.%}
112 }}
113 \CustomizeMathJax{\newcommand{\pPoi}[2][x]{%
114 \mb{\frac{1}{#1!}#2^{#1}e^{-#2}\I[#1]{\{0, 1,\.\}}, \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][x]{%
120 \chisq_{\mb{#1}}\LWRwrapparen{\mb{#2}}}%
121 }}
122 \CustomizeMathJax{\let\Chisq=\Chi}
123 \CustomizeMathJax{\newcommand{\Bet}[2]{\mb{\mathrm{Beta}}\LWRwrapparen{\mb{#1, \ #2}}}}
124 \CustomizeMathJax{\let\Beta=\Bet}
125 \CustomizeMathJax{\newcommand{\Exp}[1]{\mb{\mathrm{Exp}}\LWRwrapparen{\mb{#1}}}}
126 \CustomizeMathJax{\newcommand{\F}[2]{\mb{\mathrm{F}}\LWRwrapparen{\mb{#1, \ #2}}}}
127 \CustomizeMathJax{\newcommand{\Gam}[2]{\mb{\mathrm{Gamma}}\LWRwrapparen{\mb{#1, \ #2}}}}
128 \CustomizeMathJax{\newcommand{\IC}[1]{\mb{\mathrm{\chi^{-2}}}\LWRwrapparen{\mb{#1}}}}
129 \CustomizeMathJax{\newcommand{\IG}[2]{%
130 \mb{\mathrm{Gamma}^{-1}}\LWRwrapparen{\mb{#1, \ #2}}}%
131 }}
132 \CustomizeMathJax{\newcommand{\IW}[2]{%
133 \mb{\mathrm{Wishart}^{-1}}\LWRwrapparen{\mb{#1, \ #2}}}%
134 }}
135 \CustomizeMathJax{\newcommand{\Log}[2]{%
136 \mb{\mathrm{Logistic}}\LWRwrapparen{\mb{#1, \ #2}}}%
137 }}
138 \CustomizeMathJax{\newcommand{\LogN}[2]{%
139 \mb{\mathrm{Log}\!-\!N}}\LWRwrapparen{\mb{#1, \ #2}}}%
140 }}
141 \CustomizeMathJax{\newcommand{\N}[3][x]{%
142 \mb{\mathrm{N}}_{\mb{#1}}\LWRwrapparen{\mb{#2, \ #3}}}%
143 }}
144 \CustomizeMathJax{\newcommand{\Par}[2]{\mb{\mathrm{Pareto}}\LWRwrapparen{\mb{#1, \ #2}}}}
145 \CustomizeMathJax{\let\Pareto=\Par}
146 \CustomizeMathJax{\newcommand{\Tsq}[2]{\mb{\mathrm{T}^2}\LWRwrapparen{\mb{#1, \ #2}}}}
147 \CustomizeMathJax{\newcommand{\U}[1]{\mb{\mathrm{U}}\LWRwrapparen{\mb{#1}}}}
148 \CustomizeMathJax{\newcommand{\W}[2]{\mb{\mathrm{Wishart}}\LWRwrapparen{\mb{#1, \ #2}}}}
149
150 \CustomizeMathJax{\renewcommand{\t}[1]{\mb{\mathrm{t}}\LWRwrapparen{\mb{#1}}}}
151
152 \CustomizeMathJax{\newcommand{\pBet}[3][x]{%
153 \IBeta{#2}{#3}%
154 #1^{#2-1}\LWRwrapparen{1-#1}^{#3-1}\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}\LWRwrapparen{1+#1}^2}}%
158 {\frac{1}{#3\cpi}\left\{1+\wrap{\LWRwrapparen{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[#2/2]}#1^{#2/2-1}e^{-#1/2}}%
162 \I[#1]{0, \infty}, \where #2>0%
163 }}
164 \CustomizeMathJax{\newcommand{\pExp}[2][x]{%

```

```

165 \frac{1}{#2}\e^{-#1/#2}\I[#1]{0,\infty},%
166 \where #2>0%
167 }}
168 \CustomizeMathJax{\newcommand{\pGam}[3][x]{%
169 \frac{#3^{#2}}{\Gamma[#2]}#1^{#2-1}\e^{-#3#1}%
170 \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}}\e^{-#1^2/2}}%
175 % {\frac{1}{\sqrt{2\cpi \cdot #3}}\e^{-\LWRwrapparen{#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\LWRwrapparen{1+#1/#2}^{#3+1}}\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]{\LWRwrapparen{\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 391 **lwarp-statmath.sty**

§ 491 Package **statmath**

(Emulates or patches code by SEBASTIAN ANKARGREN.)

Pkg statmath statmath is used as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:** 1 \LWR@ProvidesPackagePass{statmath}[2018/03/08]

```

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{statmath}
4
5 \CustomizeMathJax{\let\abcbf\mathbf}
6 \CustomizeMathJax{\newcommand{\greekbf}[1]{\boldsymbol{#1}}}
7 \CustomizeMathJax{\newcommand{\bfA}{\abcbf A}}
8 \CustomizeMathJax{\newcommand{\bfB}{\abcbf B}}
9 \CustomizeMathJax{\newcommand{\bfC}{\abcbf C}}
10 \CustomizeMathJax{\newcommand{\bfD}{\abcbf D}}
11 \CustomizeMathJax{\newcommand{\bfE}{\abcbf E}}
12 \CustomizeMathJax{\newcommand{\bfF}{\abcbf F}}
13 \CustomizeMathJax{\newcommand{\bfG}{\abcbf G}}

```

```
14 \CustomizeMathJax{\newcommand{\bfH}{\abcbf H}}
15 \CustomizeMathJax{\newcommand{\bfI}{\abcbf I}}
16 \CustomizeMathJax{\newcommand{\bfJ}{\abcbf J}}
17 \CustomizeMathJax{\newcommand{\bfK}{\abcbf K}}
18 \CustomizeMathJax{\newcommand{\bfL}{\abcbf L}}
19 \CustomizeMathJax{\newcommand{\bfM}{\abcbf M}}
20 \CustomizeMathJax{\newcommand{\bfN}{\abcbf N}}
21 \CustomizeMathJax{\newcommand{\bfO}{\abcbf O}}
22 \CustomizeMathJax{\newcommand{\bfP}{\abcbf P}}
23 \CustomizeMathJax{\newcommand{\bfQ}{\abcbf Q}}
24 \CustomizeMathJax{\newcommand{\bfR}{\abcbf R}}
25 \CustomizeMathJax{\newcommand{\bfS}{\abcbf S}}
26 \CustomizeMathJax{\newcommand{\bfT}{\abcbf T}}
27 \CustomizeMathJax{\newcommand{\bfU}{\abcbf U}}
28 \CustomizeMathJax{\newcommand{\bfV}{\abcbf V}}
29 \CustomizeMathJax{\newcommand{\bfW}{\abcbf W}}
30 \CustomizeMathJax{\newcommand{\bfX}{\abcbf X}}
31 \CustomizeMathJax{\newcommand{\bfY}{\abcbf Y}}
32 \CustomizeMathJax{\newcommand{\bfZ}{\abcbf Z}}
33 \CustomizeMathJax{\newcommand{\bfa}{\abcbf a}}
34 \CustomizeMathJax{\newcommand{\bfb}{\abcbf b}}
35 \CustomizeMathJax{\newcommand{\bfc}{\abcbf c}}
36 \CustomizeMathJax{\newcommand{\bfd}{\abcbf d}}
37 \CustomizeMathJax{\newcommand{\bfe}{\abcbf e}}
38 \CustomizeMathJax{\newcommand{\bff}{\abcbf f}}
39 \CustomizeMathJax{\newcommand{\bfg}{\abcbf g}}
40 \CustomizeMathJax{\newcommand{\bfh}{\abcbf h}}
41 \CustomizeMathJax{\newcommand{\bfi}{\abcbf i}}
42 \CustomizeMathJax{\newcommand{\bfj}{\abcbf j}}
43 \CustomizeMathJax{\newcommand{\bfk}{\abcbf k}}
44 \CustomizeMathJax{\newcommand{\bfl}{\abcbf l}}
45 \CustomizeMathJax{\newcommand{\bfm}{\abcbf m}}
46 \CustomizeMathJax{\newcommand{\bfn}{\abcbf n}}
47 \CustomizeMathJax{\newcommand{\bfo}{\abcbf o}}
48 \CustomizeMathJax{\newcommand{\bfp}{\abcbf p}}
49 \CustomizeMathJax{\newcommand{\bfq}{\abcbf q}}
50 \CustomizeMathJax{\newcommand{\bfr}{\abcbf r}}
51 \CustomizeMathJax{\newcommand{\bfs}{\abcbf s}}
52 \CustomizeMathJax{\newcommand{\bft}{\abcbf t}}
53 \CustomizeMathJax{\newcommand{\bfu}{\abcbf u}}
54 \CustomizeMathJax{\newcommand{\bfv}{\abcbf v}}
55 \CustomizeMathJax{\newcommand{\bfw}{\abcbf w}}
56 \CustomizeMathJax{\newcommand{\bfx}{\abcbf x}}
57 \CustomizeMathJax{\newcommand{\bfy}{\abcbf y}}
58 \CustomizeMathJax{\newcommand{\bfz}{\abcbf z}}
59 \CustomizeMathJax{\newcommand{\bfalpha}{\greekbf \alpha}}
60 \CustomizeMathJax{\newcommand{\bfbeta}{\greekbf \beta}}
61 \CustomizeMathJax{\newcommand{\bfdelta}{\greekbf \delta}}
62 \CustomizeMathJax{\newcommand{\bfepsilon}{\greekbf \epsilon}}
63 \CustomizeMathJax{\newcommand{\bfvarepsilon}{\greekbf \varepsilon}}
64 \CustomizeMathJax{\newcommand{\bfzeta}{\greekbf \zeta}}
65 \CustomizeMathJax{\newcommand{\bfeta}{\greekbf \eta}}
66 \CustomizeMathJax{\newcommand{\bftheta}{\greekbf \theta}}
67 \CustomizeMathJax{\newcommand{\bfvartheta}{\greekbf \vartheta}}
68 \CustomizeMathJax{\newcommand{\bfgamma}{\greekbf \gamma}}
```

```

69 \CustomizeMathJax{\newcommand{\bfkappa}{\greekbf \kappa}}
70 \CustomizeMathJax{\newcommand{\bflambda}{\greekbf \lambda}}
71 \CustomizeMathJax{\newcommand{\bfmu}{\greekbf \mu}}
72 \CustomizeMathJax{\newcommand{\bfnu}{\greekbf \nu}}
73 \CustomizeMathJax{\newcommand{\bfxi}{\greekbf \xi}}
74 \CustomizeMathJax{\newcommand{\bfpi}{\greekbf \pi}}
75 \CustomizeMathJax{\newcommand{\bfvarpi}{\greekbf \varpi}}
76 \CustomizeMathJax{\newcommand{\bfrho}{\greekbf \rho}}
77 \CustomizeMathJax{\newcommand{\bfvarrho}{\greekbf \varrho}}
78 \CustomizeMathJax{\newcommand{\bfsigma}{\greekbf \sigma}}
79 \CustomizeMathJax{\newcommand{\bfvarsigma}{\greekbf \varsigma}}
80 \CustomizeMathJax{\newcommand{\bftau}{\greekbf \tau}}
81 \CustomizeMathJax{\newcommand{\bfupsilon}{\greekbf \upsilon}}
82 \CustomizeMathJax{\newcommand{\bfphi}{\greekbf \phi}}
83 \CustomizeMathJax{\newcommand{\bfvarphi}{\greekbf \varphi}}
84 \CustomizeMathJax{\newcommand{\bfchi}{\greekbf \chi}}
85 \CustomizeMathJax{\newcommand{\bfpsi}{\greekbf \psi}}
86 \CustomizeMathJax{\newcommand{\bfomega}{\greekbf \omega}}
87 \CustomizeMathJax{\newcommand{\bfiota}{\greekbf \iota}}
88 \CustomizeMathJax{\newcommand{\bfGamma}{\greekbf \Gamma}}
89 \CustomizeMathJax{\newcommand{\bfDelta}{\greekbf \Delta}}
90 \CustomizeMathJax{\newcommand{\bfTheta}{\greekbf \Theta}}
91 \CustomizeMathJax{\newcommand{\bfLambda}{\greekbf \Lambda}}
92 \CustomizeMathJax{\newcommand{\bfXi}{\greekbf \Xi}}
93 \CustomizeMathJax{\newcommand{\bfPi}{\greekbf \Pi}}
94 \CustomizeMathJax{\newcommand{\bfSigma}{\greekbf \Sigma}}
95 \CustomizeMathJax{\newcommand{\bfUpsilon}{\greekbf \Upsilon}}
96 \CustomizeMathJax{\newcommand{\bfPhi}{\greekbf \Phi}}
97 \CustomizeMathJax{\newcommand{\bfPsi}{\greekbf \Psi}}
98 \CustomizeMathJax{\newcommand{\bfOmega}{\greekbf \Omega}}
99 \CustomizeMathJax{\newcommand{\bfzero}{\greekbf \emptyset}}
100 \CustomizeMathJax{\DeclareMathOperator{\cov}{Cov}}
101 \CustomizeMathJax{\DeclareMathOperator{\E}{E}}
102 \CustomizeMathJax{\DeclareMathOperator{\V}{V}}
103 \CustomizeMathJax{\newcommand{\inas}{\overset{a. s.}{\to}}}
104 \CustomizeMathJax{\newcommand{\indist}{\overset{d}{\to}}}
105 \CustomizeMathJax{\newcommand{\inprob}{\overset{p}{\to}}}
106 \CustomizeMathJax{\DeclareMathOperator{\plim}{plim}}
107 \CustomizeMathJax{\DeclareMathOperator{\tr}{tr}}
108 \CustomizeMathJax{\DeclareMathOperator{\vc}{vec}}
109 \CustomizeMathJax{\DeclareMathOperator{\vcs}{vecs}}
110 \CustomizeMathJax{\DeclareMathOperator{\vch}{vech}}
111 \CustomizeMathJax{\DeclareMathOperator{\diag}{diag}}
112 \CustomizeMathJax{\DeclareMathOperator{\argmin}{arg\,min}}
113 \CustomizeMathJax{\DeclareMathOperator{\argmax}{arg\,max}}
114 \end{warpMathJax}

```

---

File 392 **lwarp-steinmetz.sty**

§ 492 Package **steinmetz**

(Emulates or patches code by ENRICO GREGORIO.)

Pkg steinmetz steinmetz is patched for use by lwarp. Emulation is provided for MATHJAX

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{steinmetz}[2009/06/14]

2 \begin{warpHTML}
3 \renewcommand{\phase}[2][]{%
4 \begin{lateximage}*{steinmetz\{\detokenize{#2}\}}
5 \ensuremath{\underline{/#2}}
6 \end{lateximage}
7 }
8 \end{warpHTML}
9
10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\phase}[2][]{\underline{/#2}}}
12 \end{warpMathJax}

```

---

File 393 **lwarp-stfloats.sty**

§ 493 Package **stfloats**

Pkg stfloats 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 394 **lwarp-struktex.sty**

§ 494 Package **struktex**

*(Emulates or patches code by JOBST HOFFMANN.)*

Pkg struktex struktex is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{struktex}[2018/06/04]

```

```

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 395 **lwarp-subcaption.sty**

§ 495 Package **subcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg subcaption **subcaption** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{subcaption}[2018/05/01]

Tells **lwarp** 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 \ifdef{\subcaption@minipage}{
3 \xpatchcmd{\subcaption@minipage}
4 {\minipage}
5 {\minipagefullwidth\minipage}
6 {}
7 {\LWR@patcherror{subcaption}{subcaption@minipage}}
8 }{}

```

Likewise for a `\subcaptionbox`:

```

9 \ifdef{\subcaptionbox}{
10 \xpretocmd{\subcaptionbox}
11 {\minipagefullwidth}
12 {}
13 {\LWR@patcherror{subcaption}{subcaptionbox}}
14 }{}

```

File 396 **lwarp-subfig.sty**

§ 496 Package **subfig**

(Emulates or patches code by STEVEN DOUGLAS COCHRAN.)

Pkg subfig subfig is supported and patched by lwarp.

⚠ **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.

In the document source, use `\hfill` and `\hspace* subfig>inline` 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 lwarp-subfig:

```
1 \LWR@ProvidesPackagePass{subfig}[2005/06/28]
```

```
\sf@@@subfloat {<1 type>} [<2 LOF entry>] [<3 caption>] {<4 contents>}
```

The outer minipage allows side-by-side subfloats with `\hfill` between.

```
2 \long\def\sf@@@subfloat#1[#2][#3]#4{%
3 \begin{minipage}{\linewidth}% lwarp

4 \IfValueTF{#2}{%
5 \LWR@setlatestname{#2}%
6 }{%
7 \IfValueTF{#3}{%
8 \LWR@setlatestname{#3}%
9 }{%
10 }%
11 \LWR@stoppars% lwarp
12 \ifundefined{FBsc@max}{}%
13 {\FB@readaux{\let\FBsuboheight\relax}}%
14 \@tempcnta=\@ne
15 \if@minipage
16 \@tempcnta=\z@
17 \else\ifdim \lastskip=\z@ \else
18 \@tempcnta=\tw@
19 \fi\fi
20 \ifmaincaptiontop
21 \sf@top=\sf@nearskip
22 \sf@bottom=\sf@farskip
23 \else
24 \sf@top=\sf@farskip
25 \sf@bottom=\sf@nearskip
26 \fi
27 \leavevmode
```

```

28 % \setbox\@tempboxa \hbox{#4}%
29 % \@tempdima=\wd\@tempboxa
30 % \@ifundefined{FBsc@max}{}%
31 % {\global\advance\Xhsize-\wd\@tempboxa
32 % \dimen@=\ht\@tempboxa
33 % \advance\dimen@\dp\@tempboxa
34 % \ifdim\dimen@>\FBso@max
35 % \global\FBso@max\dimen@
36 % \fi}%

```

Do not use boxes, which interfere with lateximages:

```

37 % \vtop%
38 \bgroup
39 % \vbox%
40 \bgroup
41 \ifcase\@tempcnta
42 \@minipagefalse
43 \or
44 % \vskip\sf@top
45 \or
46 \ifdim \lastskip=\z@ \else
47 % \@tempskipb\sf@top\relax\@xaddvskip
48 \fi
49 \fi
50 \sf@ifpositiontop{%
51 \ifx \@empty#3\relax \else
52 \sf@subcaption{#1}{#2}{#3}%
53 % \vskip\sf@capskip
54 % \vskip\sf@captopadj
55 \fi\egroup
56 % \hrule width0pt height0pt depth0pt
57 \LWR@startpars% lwarp
58 % \box\@tempboxa
59 #4
60 \LWR@stoppars% lwarp
61 }{%
62 \LWR@startpars% lwarp
63 \@ifundefined{FBsc@max}%
64 {
65 % \box\@tempboxa
66 #4
67 }%
68 {\ifx\FBsuboheight\relax
69 % \box\@tempboxa
70 #4
71 \else
72 % \vbox to \FBsuboheight{\FBafil\box\@tempboxa\FBbfil}%
73 #4
74 \fi}%
75 \LWR@stoppars% lwarp
76 \egroup
77 \ifx \@empty#3\relax \else
78 % \vskip\sf@capskip
79 % \hrule width0pt height0pt depth0pt
80 \sf@subcaption{#1}{#2}{#3}%

```

```

81 \fi
82 }%
83 % \vskip\sf@bottom
84 \egroup
85 \@ifundefined{FBsc@max}{}%
86 {\addtocounter{FRobj}{-1}%
87 \ifnum\c@FRobj=0\else
88 \subfloatrowsep
89 \fi}%
90 \ifmaincaptiontop\else
91 \global\advance\@nameuse{c@\@capttype}\m@ne
92 \fi
93 \end{minipage}% lwarp
94 \LWR@startpars% lwarp
95 \endgroup\ignorespaces%
96]%

```

\sf@subcaption {<1 type>} {<2 LOF entry>} {<3 caption>}

```

97 \long\def\sf@subcaption#1#2#3{%
98 \LWR@stoppars% lwarp
99 \ifx \relax#2\relax \else
100 \bgroup
101 \let\label=\@gobble
102 \let\protect=\string
103 \def\@subcaplabel{%
104 \caption@lstfmt{\@nameuse{p@#1}}{\@nameuse{the#1}}}%
105 \sf@updatecaptionlist{#1}{#2}{\the\value{\@capttype}}{\the\value{#1}}%
106 \egroup
107 \fi
108 \bgroup
109 \ifx \relax#3\relax
110 \let\captionlabelsep=\relax
111 \fi
112 % \setbox0\vbox{%
113 % \hbext@the\@tempdima{%
114 %
115 % \hss
116 % \parbox[t]{\the\@tempdima}{%
117 % \caption@make
118 % {\@nameuse{sub\@capttype name}}%
119 % {\@nameuse{thesub\@capttype}}%
120 % {#3}
121 % }%
122 % \hss
123 % }
124 % }%
125 \@ifundefined{FBsc@max}%
126 % {\box0}%
127 % {
128 % \parbox[t]{\the\@tempdima}{%
129 \LWR@traceinfo{sfsubcap B1}% lwarp
130 \LWR@figcaption% lwarp
131 \caption@make
132 {\@nameuse{sub\@capttype name}}%

```

```

133 {\@nameuse{thesub\@capttype}}%
134 {\LWR@isolate{#3}}%

135 \endLWR@figcaption% lwarp
136 \LWR@traceinfo{sfsubcap B2}% lwarp
137 % }%
138 }%
139 {\dimen@ht0%
140 \advance\dimen@dp0%
141 \ifdim\dimen@>\FBsc@max
142 \global\FBsc@max\dimen@
143 \fi
144 \FB@readaux{\let\FBsubcheight\relax}%
145 \ifx\FBsubcheight\relax
146 \def\next{
147 % \parbox[t]{\the\@tempdima}
148 }%
149 \else
150 \def\next{
151 % \parbox[t][\FBsubcheight][t]{\the\@tempdima}
152 }%
153 \fi
154 % \vbox{%
155 % \hbext@\the\@tempdima{%
156
157 % \hss
158 % \next{%
159 \LWR@traceinfo{sfsubcap C1}% lwarp
160 \caption@make
161 {\@nameuse{sub\@capttype name}}%
162 {\@nameuse{thesub\@capttype}}%
163 {#3}
164 \LWR@traceinfo{sfsubcap C1}% lwarp
165 % }%
166 % \hss
167
168 % }
169 % }
170 % }%
171 \egroup
172 \LWR@startpars% lwarp
173 }

```

\subfloat@label Patches for \sf@sub@label:

```

174 \def\subfloat@label{%
175 \LWR@ensuredoingapar% lwarp
176 \ifnnextchar(% %) match left parenthesis
177 {\sf@sub@label}
178 {\sf@sub@label(Sub\@capttype\space
179 \@ifundefined{thechapter}{\@nameuse{thechapter}\space}%
180 \@nameuse{p@sub\@capttype}%
181 \@nameuse{thesub\@capttype}.)}}

```

Patches for \subref.

`\sf@subref`     $\langle label \rangle$

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`     $\langle label \rangle$

The starred version uses the printed `sub@<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.

`\@newsfloat`    [ $\langle keys/values \rangle$ ]  $\langle float name \rangle$

```
186 \LetLtxMacro\LWR@orig@newsfloat\@newsfloat
187
188 \def\@newsfloat[#1]#2{%
189 \LWR@orig@newsfloat[#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`     $\langle text \rangle$   $\langle pagenum \rangle$

```
192 \renewcommand{\l@subfigure}[2]{\hypertocfloat{2}{subfigure}{lof}{#1}{#2}}
```

`\l@subtable`     $\langle text \rangle$   $\langle pagenum \rangle$

```
193 \renewcommand{\l@subtable}[2]{\hypertocfloat{2}{subtable}{lot}{#1}{#2}}
```

File 397    **lwarp-subfigure.sty**

§ 497    Package    **subfigure**

Pkg    subfigure    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\subfigcaptopadj
16 \newskip\subfigbottomskip
17 \newdimen\subfigcapmargin
18 \newskip\subfiglabelskip
19 \newcommand*\subcapsize{}
20 \newcommand*\subcaplabelfont{}
21 \newcommand*\subcapfont{}

```

---

File 398 **lwarp-subsubscripts.sty**

§ 498 Package **subsubscripts**

(Emulates or patches code by RICCARDO BRESCIANI.)

Pkg subsubscripts **subsubscripts** is used as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:** 1 \LWR@ProvidesPackagePass[subsubscripts][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{\lrsuperscriptsC}[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{\lrsubscripts}[3]{\fourscripts{#1}{}{#2}{}{#3}}
25 }
26 \CustomizeMathJax{%
27 \newcommand{\lrsuperscripts}[3]{\fourscripts{#1}{#2}{}{#3}{}{}}
28 }
29 \CustomizeMathJax{%

```

```

30 \newcommand{\twoscripts}[4][-.16ex]{\{}^{\#3}_{\#4}\hspace{\#1}\#2}
31 }
32 \CustomizeMathJax{%
33 \newcommand{\twoscripts}[4][-.07ex]{\#2\hspace{\#1}\{}^{\#3}_{\#4}
34 }
35 \CustomizeMathJax{%
36 \newcommand{\lsubscript}[3][-.16ex]{\twoscripts[\#1]{\#2}\{\}\{\#3}\}
37 }
38 \CustomizeMathJax{%
39 \newcommand{\lsuperscript}[3][-.16ex]{\twoscripts[\#1]{\#2}\{\}\{\#3}\}
40 }
41 \CustomizeMathJax{%
42 \newcommand{\rsubscript}[3][-.07ex]{\twoscripts[\#1]{\#2}\{\}\{\#3}\}
43 }
44 \CustomizeMathJax{%
45 \newcommand{\rsuperscript}[3][-.07ex]{\twoscripts[\#1]{\#2}\{\}\{\#3}\}
46 }
47 \end{warpMathJax}

```

File 399 **lwarp-supertabular.sty**

§ 499 Package **supertabular**

(Emulates or patches code by JOHANNES BRAAMS, THEO JURRIENS.)

Pkg supertabular supertabular is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{supertabular}[2004/02/20]

 **Misplaced alignment** For \tablefirsthead, etc., enclose them as follows:

**tab character &**

```

\StartDefiningTabulars
\tablefirsthead
. . .
\StopDefiningTabulars

```

See section 8.10.1.

 **lateximage** supertabular and xtab are not supported inside a lateximage.

```

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 400 **lwarp-svg.sty**

§ 500 Package **svg**

(Emulates or patches code by PHILIP ILTEN, FALK HANISCH.)

Pkg `svg` `svg` is patched for use by `lwarp`.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{svg}[2019/10/22]

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 401 **lwarp-syntonly.sty**

§ 501 Package **syntonly**

*(Emulates or patches code by FRANK MITTELBACH, RAINER SCHÖPF.)*

Pkg `syntonly` `syntonly` is ignored.

**for HTML output:** Discard all options for `lwarp-syntonly`:

```

1 \LWR@ProvidesPackageDrop{syntonly}[2017/06/30]

2 \newif\ifsyntax@
3 \syntax@false
4
5 \newcommand*{\syntonly}{}
6
7 \@onlypreamble\syntonly
```

File 402 **lwarp-tabfigures.sty**

§ 502 Package **tabfigures**

Pkg `tabfigures` `tabfigures` is ignored.

**for HTML output:** `\LWR@ProvidesPackageDrop{tabfigures}[2012/01/24]`

File 403 **lwarp-tablefootnote.sty**

§ 503 Package **tablefootnote**

Pkg tablefootnote 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 404 **lwarp-tables.sty**

§ 504 Package **tables**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg tables tables is emulated. \LWR@hline is used to handle the optional argument when tables is loaded.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tables}

2 \newdimen\tablinesep  
3 \newdimen\arraylinesep  
4 \newdimen\extrarulesep

File 405 **lwarp-tabularx.sty**

§ 505 Package **tabularx**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg tabularx tabularx is emulated by lwarp.

**for HTML output:** Discard all options for lwarp-tabularx:

1 \LWR@ProvidesPackageDrop{tabularx}[2016/02/03]  
2 \RequirePackage{array}  
  
3 \DeclareDocumentEnvironment{tabularx}{m o m}  
4 {\tabular{#3}}  
5 {\endtabular}  
6  
7 \DeclareDocumentEnvironment{tabularx\*}{m o m}

---

```
8 {\tabular{#3}}
9 {\endtabular}
```

---

File 406 **lwarp-tabulary.sty**

§ 506 Package **tabulary**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg tabulary **tabulary** is emulated by lwarp.

**for HTML output:** Discard all options for lwarp-tabulary.

Column types L, C, R, and J are emulated by lwarp core code.

```
1 \LWR@ProvidesPackageDrop{tabulary}[2014/06/11]
2 \RequirePackage{array}

3 \NewDocumentEnvironment{tabulary}{m o m}
4 {\tabular{#3}}
5 {\endtabular}
6
7 \NewDocumentEnvironment{tabulary*}{m o m}
8 {\tabular{#3}}
9 {\endtabular}
10
11 \newdimen\tymin
12 \newdimen\tymax
13 \def\tyformat{}
```

---

File 407 **lwarp-tagpdf.sty**

§ 507 Package **tagpdf**

Pkg tagpdf **tagpdf** is mostly ignored, but emulates alt text, for images only. (HTML only has alternate text for images.)

(If left enabled for HTML output, tagpdf errors when producing HTML, somehow due to the HTML page numbers.)

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{tagpdf}[2019/07/02]

2 \ExplSyntaxOn
3
4 \tl_new:N \l__uftag_mc_key_label_tl
5
6 \keys_define:nn { uftag / mc }
7 {
8 tag .code:n = % the name (H,P,Span etc
9 {},
```

```

10 raw .code:n =
11 {}
12 ,
13 alttext .code:n = % Alt property
14 {
15 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
16 },
17 alttext-o .code:n = % Alt property
18 {
19 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
20 },
21 actualtext .code:n = % ActualText property
22 {},
23 actualtext-o .code:n = % ActualText property
24 {},
25 label .tl_set:N = \l__uftag_mc_key_label_tl,
26 artifact .code:n = {},
27 artifact .default:n = {notype}
28 }
29
30 \keys_define:nn { uftag / struct }
31 {
32 label .tl_set:N = \l__uftag_struct_key_label_tl,
33 stash .bool_set:N = \l__uftag_struct_elem_stash_bool,
34 tag .code:n = % S property
35 {},
36 title .code:n = % T property
37 {},
38 title-o .code:n = % T property
39 {},
40 alttext .code:n = % Alt property
41 {
42 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
43 },
44 alttext-o .code:n = % Alt property
45 {
46 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
47 },
48 actualtext .code:n = % ActualText property
49 {},
50 actualtext-o .code:n = % ActualText property
51 {},
52 }
53
54 \NewDocumentCommand \tagpdfsetup { m }{}
55
56 \cs_set_eq:NN\tagpdfifluatexTF \sys_if_engine_luatex:TF
57 \cs_set_eq:NN\tagpdfifluatexT \sys_if_engine_luatex:T
58 \cs_set_eq:NN\tagpdfifpdfTeXT \sys_if_engine_pdfTeX:T
59 \cs_new:Npn \tagpdfget #1 {}
60 \cs_new:Npn \uftag_get:n #1 {}
61
62 \NewDocumentCommand \tagmcifinTF { m m }{}
63
64 \NewDocumentCommand \tagmcbegin { m }{\uftag_mc_begin:n {#1}\ignorespaces}

```

```

65 \cs_new_protected:Nn \uftag_mc_begin:n {
66 \group_begin:
67 \keys_set:nn { uftag / mc } {#1}
68 \group_end:
69 }
70
71 \NewDocumentCommand \tagmccend {}{\ThisAltText{}}
72
73 \cs_new_protected:Nn \uftag_mc_end: {\ThisAltText{}}
74
75 \NewDocumentCommand \tagmccuse { m }{}
76
77 \cs_new_protected:Nn \uftag_mc_use:n {}
78
79 \NewDocumentCommand \tagstructbegin { m }{
80 \uftag_struct_begin:n {#1}
81 }
82
83 \cs_new_protected:Nn \uftag_struct_begin:n
84 {
85 \group_begin:
86 \keys_set:nn {uftag / struct} { #1 }
87 \group_end:
88 }
89
90 \NewDocumentCommand \tagstructend { }{\ThisAltText{}}
91
92 \cs_new_protected:Nn \uftag_struct_end: {\ThisAltText{}}
93
94 \NewDocumentCommand \tagstructuse { m }{}
95
96 % \NewDocumentCommand\showtagpdfmccdata { 0 { __uftag_get_mc_abs_cnt: } }{}
97 % What is the second argument?
98
99 \NewDocumentCommand\showtagpdfattributes { }{}
100
101 \sys_if_engine_luatex:T
102 {
103 \NewDocumentCommand\pdffakespace { }
104 {
105 __uftag_fakespace:
106 }
107 }
108
109 \ExplSyntaxOff

```

---

File 408 **lwarp-tascmac.sty**

§ 508 Package **tascmac**

Pkg tascmac 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 409 **lwarp-textarea.sty**

§ 509 Package **textarea**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg `textarea` `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@restorettextarea\@empty

```

---

File 410 **lwarp-textcomp.sty**

§ 510 Package **textcomp**

*(Emulates or patches code by FRANK MITTELBACH, ROBIN FAIRBAIRNS, WERNER LEMBERG.)*

Pkg `textcomp` `textcomp` is patched for use by `lwarp`.

### § 510.1 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.

### § 510.2 Package loading

**for HTML output:** `1 \LWR@ProvidesPackagePass{textcomp}[2017/04/05]`

### § 510.3 HTML symbols

For HTML, use HTML entities or direct Unicode, depending on the engine.

`\AtBeginDocument` improves support for Lua<sup>A</sup>T<sub>E</sub>X and X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X.

#### § 510.3.1 pdf<sup>A</sup>T<sub>E</sub>X 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}}% emdash
12 \newcommand*\LWR@HTML@textthreequartersemdash{\HTMLunicode{2014}}% emdash
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

```

#### § 510.3.2 X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X and Lua<sup>A</sup>T<sub>E</sub>X 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{\C}
27 \newcommand*\LWR@HTML@textohm{\Ω}
28 \newcommand*\LWR@HTML@textmu{\μ}

```

```

29 \newcommand*\LWR@HTML@textlquill}{\l}
30 \newcommand*\LWR@HTML@textrquill}{\r}
31 \newcommand*\LWR@HTML@textcircledP}{\textcircled{P}}
32 \newcommand*\LWR@HTML@texttwelveudash}{\texttwelveudash}
33 \newcommand*\LWR@HTML@textthreequartersemdash}{\textthreequartersemdash}
34 \newcommand*\LWR@HTML@textmho}{\textmho}
35 \newcommand*\LWR@HTML@textnaira}{\textnaira}
36 \newcommand*\LWR@HTML@textpeso}{\textpeso}
37 \newcommand*\LWR@HTML@textrecipe}{\textrecipe}
38 \newcommand*\LWR@HTML@textinterrobang}{\textinterrobang}
39 \newcommand*\LWR@HTML@textinterrobangdown}{\textinterrobangdown}
40 \newcommand*\LWR@HTML@textperthousand}{\textperthousand}
41 \newcommand*\LWR@HTML@textpertenthousand}{\textpertenthousand}
42 \newcommand*\LWR@HTML@textbaht}{\textbaht}
43 \newcommand*\LWR@HTML@textdiscount}{\textdiscount}
44 \newcommand*\LWR@HTML@textservicemark}{\textservicemark}
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}

```

#### § 510.4 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 \LWR@formatted{textcircled}
```

Nullify `textcomp` macros when generating filenames:

```
98 \FilenameNullify{%
99 \renewcommand*\textdegree}{}%
100 \renewcommand*\textcelsius}{}%
101 \renewcommand*\textohm}{}%
102 \renewcommand*\textmu}{}%
103 \renewcommand*\textlquill}{}%
104 \renewcommand*\textrquill}{}%
105 \renewcommand*\textcircledP}{}%
106 \renewcommand*\texttwelveudash}{}%
107 \renewcommand*\textthreequartersemdash}{}%
108 \renewcommand*\textmho}{}%
109 \renewcommand*\textnaira}{}%
110 \renewcommand*\textpeso}{}%
111 \renewcommand*\textrecipe}{}%
112 \renewcommand*\textinterrobang}{}%
113 \renewcommand*\textinterrobangdown}{}%
114 \renewcommand*\textperthousand}{}%
115 \renewcommand*\textpertenthousand}{}%
116 \renewcommand*\textbaht}{}%
117 \renewcommand*\textdiscount}{}%
118 \renewcommand*\textservicemark}{}%
119 \renewcommand*\textcircled}[1]{#1}%
120 \renewcommand*\capitalcedilla}[1]{#1}%
121 \renewcommand*\capitalogonek}[1]{#1}%
122 \renewcommand*\capitalgrave}[1]{#1}%
123 \renewcommand*\capitalacute}[1]{#1}%
124 \renewcommand*\capitalcircumflex}[1]{#1}%
125 \renewcommand*\capitaltilde}[1]{#1}%
126 \renewcommand*\capitaldieresis}[1]{#1}%
```

```

127 \renewcommand*\capitalhungarumlaut[1]{#1}%
128 \renewcommand*\capitalring[1]{#1}%
129 \renewcommand*\capitalcaron[1]{#1}%
130 \renewcommand*\capitalbreve[1]{#1}%
131 \renewcommand*\capitalmacron[1]{#1}%
132 \renewcommand*\capitaldotaccent[1]{#1}%
133 }% FilenameNullify
134
135 }% AtBeginDocument

```

---

File 411 **lwarp-textfit.sty**

§ 511 Package **textfit**

Pkg textfit textfit is emulated.

Text is placed into a <span> 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@templengthtwo}{%
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 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
15 \LWR@textfitscale{#1}{#2}%
16 }
17
18 \newcommand*\scaletohight[2]{%
19 \sbox{\LWR@textfitbox}{#2}%
20 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
21 \LWR@textfitscale{#1}{#2}%
22 }

```

---

File 412 **lwarp-textpos.sty**

§ 512 Package **textpos**

*(Emulates or patches code by NORMAN GRAY.)*

Pkg textpos textpos is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{textpos}[2019/04/15]

2 \NewDocumentEnvironment{textblock}{m o r()}{}{}
3 \NewDocumentEnvironment{textblock*}{m o r()}{}{}
4 \newcommand*{\TPGrid}[3][{}{}
5 \NewDocumentCommand{\TPMargin}{s o}{}
6 \newcommand*{\textblockcolour}[1]{}
7 \newcommand*{\textblockrulecolour}[1]{}
8 \newcommand*{\textblockcolor}[1]{}
9 \newcommand*{\textblockrulecolor}[1]{}
10 \newcommand*{\tekstblokkulur}[1]{}
11 \newcommand*{\tekstblokrulekulur}[1]{}
12 \newlength{\TPHorizModule}
13 \newlength{\TPVertModule}
14 \newlength{\TPboxrulesize}
15 \newcommand{\textblocklabel}[1]{}
16 \newcommand*{\showtextsize}{}
17 \newcommand{\textblockorigin}[2]{}
18 \newcommand*{\TPOptions}[1]{}
19 \newcommand*{\TPReferencePosition}[1]{}

```

---

File 413 **lwarp-theorem.sty**

§ 513 Package **theorem**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg theorem theorem is patched for use by lwarp.

---

Table 16: Theorem package — css styling of theorems and proofs

**Theorem:** <div> of class theorembody<theoremstyle>

**Theorem Header:** <span> of class theoremheader

where <theoremstyle> is plain, break, etc.

---

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{theorem}[2014/10/28]

```

§ 513.1 **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 \gdef\theoremstyle#1{%
4 \@ifundefined{th@#1}{\@warning
5 {Unknown theoremstyle ‘#1’. Using ‘plain’}}%

```

```

6 \theoremstyle{plain}%
7 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
8 }%
9 {%
10 \theoremstyle{#1}%
11 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
12 }%
13 \begingroup
14 \csname th@the\theoremstyle \endcsname
15 \endgroup}

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

16 \gdef\xnthm#1#2[#3]{%
17 \expandafter\ifdefinable\csname #1\endcsname
18 {%
19 \csedef{\LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
20 \@definecounter{#1}\@newctr{#1}[#3]%
21 \expandafter\xdef\csname the#1\endcsname
22 {\expandafter \noexpand \csname the#3\endcsname
23 \@thmcountersep \@thmcounter{#1}}}%
24 \def\@tempa{\global\@namedef{#1}}%
25 \expandafter \@tempa \expandafter{%
26 \csname th@the \theoremstyle
27 \expandafter \endcsname \the \theorem@bodyfont
28 \@thm{#1}{#2}}%
29 \global \expandafter \let \csname end#1\endcsname \@endtheorem
30 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{\LWR@thmstyle#1}}}% lwarp
31 }}
32
33 \gdef\ynthm#1#2{%
34 \expandafter\ifdefinable\csname #1\endcsname
35 {
36 \csedef{\LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
37 \@definecounter{#1}%
38 \expandafter\xdef\csname the#1\endcsname{\@thmcounter{#1}}%
39 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
40 \expandafter{\csname th@the \theoremstyle \expandafter
41 \endcsname \the \theorem@bodyfont \@thm{#1}{#2}}%
42 \global \expandafter \let \csname end#1\endcsname \@endtheorem
43 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{\LWR@thmstyle#1}}}% lwarp
44 }}
45
46 \gdef\othm#1[#2]#3{%
47 \expandafter\ifx\csname c@#2\endcsname\relax
48 \@nocounterr{#2}%
49 \else
50 \expandafter\ifdefinable\csname #1\endcsname
51 {
52 \csedef{\LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
53 \expandafter \xdef \csname the#1\endcsname
54 {\expandafter \noexpand \csname the#2\endcsname}%
55 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
56 \expandafter{\csname th@the \theoremstyle \expandafter

```

```

57 \endcsname \the\theorem@bodyfont \@thm{#2}{#3}}%
58 \global \expandafter \let \csname end#1\endcsname \@endtheorem
59 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
60 }%
61 \fi}

```

## § 513.2 **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.

```

62 \gdef\th@plain{%
63 \def\@begintheorem##1##2{%
64 \item[
65 \InlineClass{theoremheader}{##1\ ##2}
66]
67 }%
68 \def\@opargbegintheorem##1##2##3{%
69 \item[
70 \InlineClass{theoremheader}{##1\ ##2\ (##3)}
71]
72 }
73 }
74
75 \gdef\th@break{%
76 \def\@begintheorem##1##2{%
77 \item[
78 \InlineClass{theoremheader}{##1\ ##2}\newline%
79]
80 }%
81 \def\@opargbegintheorem##1##2##3{%
82 \item[
83 \InlineClass{theoremheader}{##1\ ##2\ (##3)}\newline
84]
85 }
86 }
87
88 \gdef\th@marginbreak{%
89 \def\@begintheorem##1##2{
90 \item[
91 \InlineClass{theoremheader}{##2 \quad ##1}\newline
92]
93 }%
94 \def\@opargbegintheorem##1##2##3{%
95 \item[
96 \InlineClass{theoremheader}{##2 \quad ##1\ %
97 (##3)}\newline
98]
99 }

```

```

100 }
101
102 \gdef\th@changebreak{%
103 \def\@begintheorem##1##2{
104 \item[
105 \InlineClass{theoremheader}{##2\ ##1}\newline
106]
107 }%
108 \def\@opargbegintheorem##1##2##3{%
109 \item[
110 \InlineClass{theoremheader}{ ##2\ ##1\ %
111 (##3)}\newline
112]
113 }
114 }
115
116 \gdef\th@change{%
117 \def\@begintheorem##1##2{
118 \item[
119 \InlineClass{theoremheader}{##2\ ##1}
120]
121 }%
122 \def\@opargbegintheorem##1##2##3{%
123 \item[
124 \InlineClass{theoremheader}{##2\ ##1\ (##3)}
125]
126 }
127 }
128
129 \gdef\th@margin{%
130 \def\@begintheorem##1##2{
131 \item[
132 \InlineClass{theoremheader}{##2 \quad ##1}
133]
134 }%
135 \def\@opargbegintheorem##1##2##3{%
136 \item[
137 \InlineClass{theoremheader}{##2 \quad ##1\ (##3)}
138]
139 }
140 }

```

Patched for css:

```

141 \gdef\@thm#1#2{\refstepcounter{#1}%
142 \LWR@forcenewpage% lwarp
143 \BlockClass{theorembody\LWR@thisthmstyle}% lwarp
144 \trivlist
145 \@topsep \theorempreskipamount % used by first \item
146 \@topsepadd \theorempostskipamount % used by \@endparenv
147 \@ifnextchar [%
148 {\@ythm{#1}{#2}}%
149 {\@begintheorem{#2}{\csname the#1\endcsname}\ignorespaces}}
150
151 \gdef\@endtheorem{%

```

```

152 \endtrivlist
153 \endBlockClass
154 }

```

---

File 414 **lwarp-thinsp.sty**

§ 514 Package **thinsp**

Pkg thinsp thinsp is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{thinsp}[2016/10/02]

2 \AtBeginDocument{
3 \let\thinthispace\relax% defined by some packages
4 \newcommand*\thinthispace{\thinspace}
5 }
6
7 \newcommand*\stretchthinspace{\thinspace}
8 \newcommand*\stretchthinthispace{\thinthispace}
9 \newcommand*\stretchnegthinspace{\negthinspace}

```

---

File 415 **lwarp-threadcol.sty**

§ 515 Package **threadcol**

Pkg threadcol threadcol is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{threadcol}[2013/01/06]

2 \newcommand{\setthreadname}[1]{}

```

---

File 416 **lwarp-threeparttable.sty**

§ 516 Package **threeparttable**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg threeparttable 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 <span> of class `tnoteitemheader`, otherwise they are plain text.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{threeparttable}[2003/06/13]

```

```

Env threeparttable [<alignment>]
2 \newenvironment*{threeparttable}[1][b]
3 {\def\@capttype{table}}
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 417 **lwarp-threeparttablex.sty**

§ 517 Package **threeparttablex**

Pkg threeparttablex threeparttablex is patched for use by lwarp.

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, `lwarp` 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
16 \renewcommand\TPTL@tnotex[2]{\tnote{\nameref{#2}}}

```

---

File 418 **lwarp-thumb.sty**

§ 518 Package **thumb**

Pkg thumb thumb is ignored.

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{thumb}[1997/12/24]`

```

2 \newcommand*\Overviewpage{}
3 \newlength{\thumbheight}
4 \newlength{\thumbwidth}

```

---

File 419 **lwarp-thumbs.sty**

§ 519 Package **thumbs**

Pkg thumbs 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 420 **lwarp-tikz.sty**

§ 520 Package **tikz**

*(Emulates or patches code by TILL TANTAU.)*

Pkg tikz 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 lwarp-tikz:

```

1 \LWR@ProvidesPackagePass{tikz}[2015/08/07]

```

**catcodes** lwarp 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, lwarp 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 \@ifpackagelater{tikz}{2013/12/20}% Test for Tikz version v3.0.0
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}% Test for Tikz version v3.0.0
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
21 \def\pgfutil@font@tiny{\LWR@printtiny}
22 \def\pgfutil@font@scriptsize{\LWR@printscriptsize}
23 \def\pgfutil@font@footnotesize{\LWR@printfootnotesize}
24 \def\pgfutil@font@small{\LWR@print@small}
25 \def\pgfutil@font@normalsize{\LWR@print@normalsize}
26 \def\pgfutil@font@large{\LWR@printlarge}
27 \def\pgfutil@font@Large{\LWR@printLarge}
28 \def\pgfutil@font@huge{\LWR@printhuge}
29 \def\pgfutil@font@Huge{\LWR@printHuge}
30
31 \def\pgfutil@font@itshape{\LWR@origitshape}
32 \def\pgfutil@font@bfseries{\LWR@origbfseries}
33
34 \def\pgfutil@font@normalfont{\LWR@originormalfont}

```

---

File 421 **lwarp-titles.sty**

§ 521 Package **titles**

(Emulates or patches code by JAVIER BEZOS.)

Pkg titlesps titlesps is loaded and used by lwarp during HTML output. All user options and macros are ignored and disabled.

Discard all options for lwarp-titlesps:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titlesps}[2016/03/15]

\pagestyle and \thispagestyle are already disabled in the lwarp 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 m}{}

\setfoot        [<el>] [<ec>] [<er>] {<ol>} {<oc>} {<or>}}  
5 \NewDocumentCommand{\setfoot}{o o o m m m}{}

\settitlemarks  \* {<names>}}  
6 \NewDocumentCommand{\settitlemarks}{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}{}

|                               |                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------------|
| <code>\setmarkboth</code>     | <code>{\code}</code>                                                                      |
|                               | 13 <code>\newcommand{\setmarkboth}[1]{}</code>                                            |
| <code>\widenhead</code>       |                                                                                           |
|                               | 14 <code>\NewDocumentCommand{\widenhead}{s o o m m}{}</code>                              |
| <code>\bottitlemarks</code>   |                                                                                           |
|                               | 15 <code>\newcommand*{\bottitlemarks}{}</code>                                            |
| <code>\toptitlemarks</code>   |                                                                                           |
|                               | 16 <code>\newcommand*{\toptitlemarks}{}</code>                                            |
| <code>\firsttitlemarks</code> |                                                                                           |
|                               | 17 <code>\newcommand*{\firsttitlemarks}{}</code>                                          |
| <code>\nexttitlemarks</code>  |                                                                                           |
|                               | 18 <code>\newcommand*{\nexttoptitlemarks}{}</code>                                        |
| <code>\outertitlemarks</code> |                                                                                           |
|                               | 19 <code>\newcommand*{\outertitlemarks}{}</code>                                          |
| <code>\innertitlemarks</code> |                                                                                           |
|                               | 20 <code>\newcommand*{\innertitlemarks}{}</code>                                          |
| <code>\newtitlemark</code>    | <code>* {\name}</code>                                                                    |
|                               | 21 <code>\NewDocumentCommand{\newtitlemark}{s m}{}</code>                                 |
| <code>\pretitlemark</code>    | <code>* {\section} {\text}</code>                                                         |
|                               | 22 <code>\NewDocumentCommand{\pretitlemark}{s m m}{}</code>                               |
| <code>\ifsamemark</code>      | <code>{\group} {\command} {\true} {\false}</code>                                         |
|                               | 23 <code>\newcommand{\ifsamemark}[4]{}</code>                                             |
| <code>\setfloathead</code>    | <code>* [(&lt;.)] [&lt;.)] [&lt;.)] {\&lt;.)} {\&lt;.)} {\&lt;.)} {\extra} [which]</code> |
|                               | 24 <code>\NewDocumentCommand{\setfloathead}{s o o o m m m m m}{}</code>                   |
| <code>\setfloatfoot</code>    | <code>* [(&lt;.)] [&lt;.)] [&lt;.)] {\&lt;.)} {\&lt;.)} {\&lt;.)} {\extra} [which]</code> |
|                               | 25 <code>\NewDocumentCommand{\setfloatfoot}{s o o o m m m m m}{}</code>                   |

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| <code>\nextfloathead</code>   | <code>* [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]</code> |
|                               | 26 <code>\NewDocumentCommand{\nextfloathead}{s o o m m m m m}{}</code> |
| <code>\nextfloatfoot</code>   | <code>* [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]</code> |
|                               | 27 <code>\NewDocumentCommand{\nextfloatfoot}{s o o m m m m m}{}</code> |
| <code>\newmarkset</code>      | <code>{⟨markset⟩}</code>                                               |
|                               | 28 <code>\newcommand{\newmarkset}[1]{}</code>                          |
| <code>\newextramark</code>    | <code>* {⟨markset⟩} {⟨macro-name⟩}</code>                              |
|                               | 29 <code>\NewDocumentCommand{\newextramarkset}{s m m}{}</code>         |
| <code>\botextramarks</code>   | <code>{⟨markset⟩}</code>                                               |
|                               | 30 <code>\newcommand{\botextramarks}[1]{}</code>                       |
| <code>\topextramarks</code>   | <code>{⟨markset⟩}</code>                                               |
|                               | 31 <code>\newcommand{\topextramarks}[1]{}</code>                       |
| <code>\firstextramarks</code> | <code>{⟨markset⟩}</code>                                               |
|                               | 32 <code>\newcommand{\firstextramarks}[1]{}</code>                     |
| <code>\nextextramarks</code>  | <code>{⟨markset⟩}</code>                                               |
|                               | 33 <code>\newcommand{\nexttopextramarks}[1]{}</code>                   |
| <code>\outerextramarks</code> | <code>{⟨markset⟩}</code>                                               |
|                               | 34 <code>\newcommand{\outerextramarks}[1]{}</code>                     |
| <code>\innerextramarks</code> | <code>{⟨markset⟩}</code>                                               |
|                               | 35 <code>\newcommand{\innerextramarks}[1]{}</code>                     |

---

File 422 **lwarp-titleref.sty**

§ 522 Package **titleref**

Pkg titleref 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 423 **lwarp-titlesec.sty**

§ 523 Package **titlesec**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg titlesec titlesec is emulated. All user options and macros are ignored and disabled.

Discard all options for lwarp-titlesec:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titlesec}[2016/03/21]

```

\titlelabel {\langle label-format \rangle}
2 \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]
3 \newcommand\titleformat{%
4 \ifstar{\ttl@format@s}%
5 {\ttl@format@i}
6 \newcommand{\ttl@format@s}[1]{
7 \NewDocumentCommand{\ttl@format@i}{m o m m m o}{}
```

\chaptertitlename

```

8 \@ifundefined{@chapapp}{\let\@chapapp\chaptername}{}
9 \newcommand\chaptertitlename{\@chapapp}
```

```

\titlespacing * {\langle command \rangle} {\langle left \rangle} {\langle before \rangle} {\langle after \rangle} [\langle right \rangle]
```

```

10 \NewDocumentCommand{\titlespacing}{s m m m m o}{}
```

\filright

```

11 \newcommand*{\filright}{}
```

---

`\filcenter`  
12 `\newcommand*\filcenter{}`

`\filleft`  
13 `\newcommand*\filleft{}`

`\fillast`  
14 `\newcommand*\fillast{}`

`\filinner`  
15 `\newcommand*\filinner{}`

`\filouter`  
16 `\newcommand*\filouter{}`

`\wordsep`  
17 `\newcommand\wordsep{\fontdimen\tw@\font \@plus`  
18 `\fontdimen\thr@\font \@minus \fontdimen4\font}`

`\titleline` \* [*align*] {*material*}  
19 `\NewDocumentCommand\titleline}{s o m}{}`

`\titlerule` [*height*]  
20 `\providecommand*\titlerule{\@ifstar{\ttl@row}{\ttl@rule}}`  
21 `\newcommand*\ttl@rule}[1][{}]`  
22 `\newcommand*\ttl@row}[2][{}]`

`\iftitlemeasuring` {*true*} {*false*}  
23 `\newcommand\iftitlemeasuring}[2]{#2}`

`\assignpagestyle` {*command*} {*pagestyle*}  
24 `\newcommand\assignpagestyle}[2]{#2}`

`\titleclass` {*name*} [*startlevel*] {*class*} [*cmd*]  
25 `\NewDocumentCommand\titleclass}{m o m o}{}`

File 424 **lwarp-titletoc.sty**

§ 524 Package **titletoc**

(Emulates or patches code by JAVIER BEZOS.)

Pkg titletoc titletoc is emulated. All user options and macros are ignored and disabled.

Discard all options for lwarp-titletoc:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titletoc}[2011/12/15]

\dottedcontents {<section>} [<left>] {<above>} {<label>} {<leader>}  
2 \NewDocumentCommand{\dottedcontents}{m o m m m}{}

\titlecontents \* {<section>} [<left>] {<above>} {<numbered>} {<numberless>} {<filler>} [<below or  
begin>] [<separator>] [<end>]  
3 \newcommand{\titlecontents}{\ifstar{\ttl@tcstar}{\ttl@tcnostar}}  
4 \NewDocumentCommand{\ttl@tcstar}{m o m m m o o o}{}  
5 \NewDocumentCommand{\ttl@tcnostar}{m o m m m m o}{}

\contentsmargin [<correction>] {<right>}  
6 \newcommand{\contentsmargin}[2][{}]

\thecontentslabel  
7 \newcommand\*{\thecontentslabel}{thecontentslabel}

\thecontentspage  
8 \newcommand\*{\thecontentspage}{thecontentspage}

\contentslabel [<format>] {<space>}  
9 \newcommand{\contentslabel}[2][{}]{\thecontentslabel}

\contentspage [<format>]  
10 \newcommand{\contentspage}[1][{}]{\thecontentspage}

\contentspush {<text>}  
11 \newcommand{\contentspush}[1]{}

\contentsuse {<name>} {<text>}

---

|                              |    |                                                                                                             |
|------------------------------|----|-------------------------------------------------------------------------------------------------------------|
|                              | 12 | <code>\newcommand{\contentsuse}[2]{}</code>                                                                 |
| <code>\startcontents</code>  |    | <code>[\langle name \rangle]</code>                                                                         |
|                              | 13 | <code>\newcommand*{\startcontents}[1][{}]</code>                                                            |
| <code>\stopcontents</code>   |    | <code>[\langle name \rangle]</code>                                                                         |
|                              | 14 | <code>\newcommand*{\stopcontents}[1][{}]</code>                                                             |
| <code>\resumecontents</code> |    | <code>[\langle name \rangle]</code>                                                                         |
|                              | 15 | <code>\newcommand*{\resumecontents}[1][{}]</code>                                                           |
| <code>\printcontents</code>  |    | <code>[\langle name \rangle] {\langle prefix \rangle} {\langle start \rangle} {\langle code \rangle}</code> |
|                              | 16 | <code>\newcommand{\printcontents}[4][{}]</code>                                                             |
| <code>\startlist</code>      |    | <code>[\langle name \rangle] {\langle list \rangle}</code>                                                  |
|                              | 17 | <code>\newcommand{\startlist}[2][{}]</code>                                                                 |
| <code>\stoplist</code>       |    | <code>[\langle name \rangle] {\langle list \rangle}</code>                                                  |
|                              | 18 | <code>\newcommand{\stoplist}[2][{}]</code>                                                                  |
| <code>\resumelist</code>     |    | <code>[\langle name \rangle] {\langle list \rangle}</code>                                                  |
|                              | 19 | <code>\newcommand{\resumelist}[2][{}]</code>                                                                |
| <code>\printlist</code>      |    | <code>[\langle name \rangle] {\langle list \rangle} {\langle prefix \rangle} {\langle code \rangle}</code>  |
|                              | 20 | <code>\newcommand{\printlist}[4][{}]</code>                                                                 |

---

File 425 **lwarp-titling.sty**

§ 525 Package **titling**

*(Emulates or patches code by PETER WILSON.)*

Pkg titling

[package support](#)  
 [load order](#)

lwarp supports the native L<sup>A</sup>T<sub>E</sub>X 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 66.8.

The various titling footnote restyling commands have no effect.

Pass all options to `lwarp-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 }
```

Env titlingpage

```
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
25 \pretitle{}
26 \posttitle{}
27
28 \preauthor{}
```

```

29 \postauthor{}
30
31 \predate{}
32 \postdate{}

```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```
33 \renewcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```
34 \def\@makefnmark{\@thefnmark}

\thefootnote ⇒ \nameuse{arabic}{footnote}, or
\thefootnote ⇒ \nameuse{fnsymbol}{footnote}

```

Redefine the footnote text:

```
35 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
36 \makethanksmark~%

\makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
\@thefnmark ⇒ \itshape a (or similar)

```

Print the text:

```
37 ##1%
38 }% \@makefntext
39 }

```

`\thanksfootmark`

```
40 \renewcommand{\thanksfootmark}{%
41 % \hb@xt@\thanksmarkwidth{\hfil\normalfont%
42 % \thanksscript{%
43 % \thanksfootpre \tamark \thanksfootpost%
44 % }%
45 % }%
46 }

```

`\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.

```
47 \renewcommand*{\maketitle}{%
```

An HTML titlepage <div> is used for all classes.

```
48 \begin{titlepage}
```

Select which kind of footnote marks to use:

```
49 \@bsmarkseries
```

Set up special patches:

```
50 \LWR@maketitlesetup
```

Typeset the title, etc:

```
51 \@maketitle
```

Immediately generate any \thanks footnotes:

```
52 \LWR@stoppars\@thanks\LWR@startpars
```

Close the HTML titlepage div:

```
53 \end{titlepage}
```

Reset the footnote counter:

```
54 \@bscontmark
55 }
```

`\@maketitle` Typesets the title, etc. Patched for HTML.

```
56 \DeclareDocumentCommand{\@maketitle}{}{%
57 \maketitlehooka
58 {
59 \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}%
60 \@bsprefix \title \@bsprefix
61 \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars%
62 }
63 \maketitlehookb
64 {
65 \begin{BlockClass}{author}
66 \renewcommand{\and}{%
67 \end{BlockClass}%
68 \begin{BlockClass}{oneauthor}%
69 }
70 \begin{BlockClass}{oneauthor}%
71 \@bsprefix \author \@bsprefix
72 \end{BlockClass}%
73 \end{BlockClass}%
74 }
75 \maketitlehookc
76 {
77 \begin{BlockClass}{titledate}%
```

```

78 \@bspredate \@date \@bspostdate%
79 \end{BlockClass}%
80 }
81 \maketitlehookd
82 }

```

`\LWR@titlingmaketitle` \maketitle for use inside an HTML titlingpage environment.

```
83 \renewcommand*\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
84 \LWR@stoppars\@thanks\LWR@startpars
```

Select which kind of footnote marks to use:

```
85 \@bsmarkseries
```

Set up special patches:

```
86 \LWR@maketitlesetup
```

Typeset the title, etc:

```
87 \@maketitle
```

Immediately generate any \thanks footnotes:

```
88 \LWR@stoppars\@thanks\LWR@startpars
```

Reset the footnote counter:

```
89 \@bscontmark
90 }
```

`\thanksmarkseries` `{(series)}`

Sets the type of footnote marks used by \thanks, where type is ‘arabic’, ‘roman’, ‘fn-symbol’, etc.

```

91 \renewcommand{\thanksmarkseries}[1]{%
92 \def\@bsmarkseries{\renewcommand{\thefootnote}{\@nameuse{#1}{footnote}}}%
93 }

```

Set default titlepage thanks footnote marks. See section [66.7](#).

```

94 \@ifclassloaded{memoir}{
95 \thanksmarkseries{arabic}
96 }{% not memoir
97 \if@titlepage
98 \thanksmarkseries{arabic}
99 \else

```

```

100 \thanksmarkseries{fnsymbol}
101 \fi
102 }% not memoir

```

---

File 426 **lwarp-tocbasic.sty**

§ 526 Package **tocbasic**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg tocbasic tocbasic is nullified for lwarp.

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}{}
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 427 **lwarp-tocbibind.sty**

§ 527 Package **tocbibind**

*(Emulates or patches code by PETER WILSON.)*

Pkg tocbibind tocbibind is patched for use by lwarp.

[placement and toc options](#) An index may be placed inline with other HTML text, or on its own HTML page:

Pkg makeidx **Inline, with a manual toc entry:**

A commonly-used method to introduce an index in a  $\LaTeX$  document:

```

\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\printindex

```

Pkg `makeidx` **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
```

Pkg `tocbibind` **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
```

Pkg `tocbibind` **On its own HTML page, with an automatic toc entry:**

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex
```

Opt [tocbibind] `numindex` Use the `tocbibind` `numindex` option to generate a numbered index. Without this option, the index heading has no number.

[numbered index section](#)

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 \let\item\LWR@indexitem%
30 \let\subitem\LWR@indexsubitem%
31 \let\subsubitem\LWR@indexsubsubitem%
32 {}{}

```

The following code is shared by anonchap.

```

33 \DeclareDocumentCommand{\simplechapter}{0{\@empty}}{%
34 \def\@chapcntformat##1{%
35 #1~\csname the##1\endcsname\simplechapterdelim\quad%
36 }%
37 }
38
39 \DeclareDocumentCommand{\restorechapter}{}{%
40 \let\@chapcntformat\@secntformat%
41 }

```

---

File 428 **lwarp-tocdata.sty**

§ 528 Package **tocdata**

*(Emulates or patches code by BRIAN DUNN.)*

Pkg tocdata **tocdata** is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{tocdata}[2019/07/06]

```

2 \renewcommand*{\LWR@maybetocdata}{%
3 \ifdefempty{\TD@thistocdata}}{%
4 \qqquad \InlineClass{authorartist}{\tocdataformat{\TD@thistocdata}}%
5 \def\TD@thistocdata{}
6 }
7 }

8 \renewrobustcmd{\tocdatapartprint}[4]
9 {%
10 \InlineClass{authorartist}{%
11 \qqquad --- %
12 \TDoptionalnameprint{#1}\TDoptionalnameprint{#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{\TDartistauthorprint}[5]{%
36 \LWR@TD@settextalign{#1}%
37 \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
38 \InlineClass{authorartist}{\TDOptionalnameprint{#2}\TDOptionalnameprint{#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{\TDartistauthortextprint}[2]{%
56 \LWR@TD@setnamealign{#1}%
57 \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
58 #2%
59 \end{BlockClass}%
60 }

```

---

File 429 **lwarp-tocenter.sty**

§ 529 Package **tocenter**

Pkg tocenter tocenter 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 430 **lwarp-tocloft.sty**

§ 530 Package **tocloft**

*(Emulates or patches code by PETER WILSON.)*

Pkg tocloft **tocloft** is emulated. Most user options and macros are ignored and disabled. `\newlistof` and `\cftchapterprecis` are supported.

Pkg tocloft 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<sup>A</sup>T<sub>E</sub>X commands to create the titles, allowing other packages to work with it.

⚠ **tocloft & other packages**

Discard all options for **lwarp-tocloft**:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tocloft}[2017/08/31]

`\tocloftpagestyle`  $\langle style \rangle$

```
2 \newcommand{\tocloftpagestyle}[1]{}

```

`\cftmarktoc`

```
3 \newcommand*\cftmarktoc{}

```

`\cfttoctitlefont`

```
4 \newcommand*\cfttoctitlefont{}

```

`\cftaftertocitle`

```
5 \newcommand*\cftaftertocitle{}

```

```
6 \newlength{\cftbeforetoctitleskip}

```

```
7 \newlength{\cftaftertocitleskip}

```

`\cftmarklof`

```
8 \newcommand*\cftmarklof{}

```

`\cftloftitlefont`

```
9 \newcommand*\cftloftitlefont{}

```

`\cftafterloftitle`

```
10 \newcommand*\cftafterloftitle{}

```

11 \newlength{\cftbeforelofttitleskip}  
 12 \newlength{\cftafterlofttitleskip}

\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*\cftchapidotsep}{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{\cftparaindent}
83 \LWR@providelength{\cftparanumwidth}
84 \newcommand*\cftparafont{}
85 \newcommand*\cftparapresnum{}
86 \newcommand*\cftparaaftersnum{}
87 \newcommand*\cftparaaftersnumb{}
88 \newcommand*\cftparaleader{}
89 \newcommand*\cftparadotsep{1}
90 \newcommand*\cftparapagefont{}
91 \newcommand*\cftparaafterpnum{}

92 \LWR@providelength{\cftbeforesubparaskip}
93 \LWR@providelength{\cftsubparaindent}
94 \LWR@providelength{\cftsubparanumwidth}
95 \newcommand*\cftsubparafont{}
96 \newcommand*\cftsubparapresnum{}
97 \newcommand*\cftsubparaaftersnum{}
98 \newcommand*\cftsubparaaftersnumb{}
99 \newcommand*\cftsubparaleader{}
100 \newcommand*\cftsubparadotsep{1}
101 \newcommand*\cftsubparapagefont{}
102 \newcommand*\cftsubparaafterpnum{}

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*\cfttabdotsep{1}
134 \newcommand*\cfttabpagefont{}
135 \newcommand*\cfttabafterpnum{}

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*\cftsubtabdotsep{1}
145 \newcommand*\cftsubtabpagefont{}
146 \newcommand*\cftsubtabafterpnum{}

147 \DeclareDocumentCommand{\cftsetindents}{m m m}{}

148 \newcommand{\pagenumbersoff}[1]{}
149 \newcommand{\pagenumberson}[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}{\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 {
212 \protect\begin{quote}#1\protect\end{quote}}
213 }
214 }

```

---

File 431 **lwarp-tocstyle.sty**

§ 531 Package **tocstyle**

Pkg tocstyle 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\iftochasdepth}[4]{}

```

---

File 432 **lwarp-todo.sty**

§ 532 Package **todo**

*(Emulates or patches code by FEDERICO GARCIA.)*

Pkg todo todo is patched for use by lwarp.

**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\todotmark\else\textbf{#1} \fi}#2%
8 \label{todo:lbl:\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\todotmark\else\textbf{#1} \fi}#2%
18 }
19

```

```

20 \xpatchcmd{\@displaytodo}
21 {\todoformat #1}{\todoformat \textbf{#1}}{}
22 {\PackageWarning{lwarp-todo}{Unable to patch @displaytodo.}}
23
24 \xpatchcmd{\@displayfulltodo}
25 {\todoformat #1}{\todoformat \textbf{#1}}{}
26 {\PackageWarning{lwarp-todo}{Unable to patch @displayfulltodo.}}
27
28 \patchcmd{\todoenv}{\itshape see text.}{\textit{see text.}}{}
29 {\PackageWarning{lwarp-todo}{Unable to patch todoenv.}}
30
31 \patchcmd{\astodos}{\todoformat #1}{\todoformat \textbf{#1}}{}
32 {\PackageWarning{lwarp-todo}{Unable to patch astodos.}}
33
34 \AtBeginDocument{
35 \crefname{todo}{todo}{todos}
36 \Crefname{todo}{Todo}{Todos}
37 }

```

---

File 433 **lwarp-todonotes.sty**

§ 533 Package **todonotes**

(Emulates or patches code by HENRIK SKOV MIDTIBY.)

Pkg todonotes 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}{ldo}{#1}{#2}}
8
9
10 \let\LWRTODONOTES@orig@todotoc\todotoc
11 \renewcommand*\l@todotoc{%
12 \phantomsection%
13 \LWRTODONOTES@orig@todotoc%
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@currentfigcolor}%
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 \begingroup%
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 434 **lwarp-topcapt.sty**

§ 534 Package **topcapt**

Pkg topcapt topcapt is emulated.

**for HTML output:** 1 \LWRE@ProvidesPackageDrop{topcapt}[2004/12/11]

2 \LetLtxMacro\topcaption\caption

---

File 435 **lwarp-tram.sty**

§ 535 Package **tram**

Pkg tram tram is emulated.

 **block only** The HTML emulation uses a <div>, which must not appear inside an HTML <span> 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 \LWRE@ProvidesPackageDrop{tram}[2013/04/04]

```

2 \newenvironment{tram}[1][%
3 {\BlockClass[background:lightgray]{tram}}
4 {\endBlockClass}

```

---

File 436 **lwarp-transparent.sty**

§ 536 Package **transparent**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg transparent transparent is emulated. \texttransparent works for inline objects. \transparent only works for \includegraphics.

 **Not X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X!** Note that `transparent` does not work with X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X.

**for HTML output:** Discard all options for `lwarp-transparent`:

```

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 437 **lwarp-trimclip.sty**

§ 537 Package **trimclip**

Pkg trimclip 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 438 **lwarp-trivfloat.sty**

§ 538 Package **trivfloat**

*(Emulates or patches code by JOSEPH WRIGHT.)*

**Pkg** `trivfloat` `trivfloat` is forced to use the built-in `lwarp` 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 `lwarp-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 `lwarp`.

**for HTML output:** `3 \begin{warpHTML}`

```
4 \AtBeginDocument{\DeclareDocumentCommand{\tfl@chapter@fix}{m m}{}}
```

```
5 \end{warpHTML}
```

### § 538.1 **Combining `\newfloat`, `\trivfloat`, and `algorithmicx`**

**for HTML & PRINT:** `6 \begin{warpall}`

**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
```

---

```
7 \end{warpall}
```

---

File 439 **lwarp-truncate.sty**

§ 539 Package **truncate**

Pkg truncate truncate is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{truncate}[2001/08/20]
2 \providecommand{\TruncateMarker}{}
3 \newcommand{\truncate}[3][\TruncateMarker]{#3}
```

---

File 440 **lwarp-turnthepage.sty**

§ 540 Package **turnthepage**

Pkg turnthepage turnthepage is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{turnthepage}[2011/03/24]
2 \newcommand{\turnthepage}{}
```

---

File 441 **lwarp-twoup.sty**

§ 541 Package **twoup**

Pkg twoup twoup is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{twoup}[2007/02/26]
2 \newcommand{\cleartolastpage}{}
```

---

File 442 **lwarp-typearea.sty**

§ 542 Package **typearea**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg typearea 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{footheight}{\newlength\footheight}{}
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 443 **lwarp-typicons.sty**

§ 543 Package **typicons**

*(Emulates or patches code by ARTHUR VIGIL, XAVIER DANAUX.)*

Pkg typicons typicons is patched for use by lwarp.

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 444 **lwarp-ulem.sty**

§ 544 Package **ulem**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg ulem Patched for use by lwarp.

**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
42 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
43 \InlineClass%
44 (%
45 text-decoration:underline;%
46 text-decoration-skip: auto;%
47 text-decoration-style:dashed%
48)%
49 {dashuline}{\LWR@isolate{#1}}%
50 }
51 \LWR@formatted{xout}
52
53 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
54 \InlineClass%
55 (%
56 text-decoration:underline;%
57 text-decoration-skip: auto;%
58 text-decoration-style: dotted%
59)%
60 {dotuline}{\LWR@isolate{#1}}%
61 }
62 \LWR@formatted{dotuline}

```

Nullified/emulated macros:

```

63 \NewDocumentCommand{\LWR@HTML@markoverwith}{m}{}
64 \LWR@formatted{markoverwith}
65
66 \NewDocumentCommand{\LWR@HTML@ULon}{+m}{\uline{#1}\egroup}
67 \LWR@formatted{ULon}

```

---

File 445 **lwarp-umoline.sty**

§ 545 Package **umoline**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg umoline **umoline** is patched for use by lwarp.

**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@UMonewline}{s}{\newline}
26 \LWR@formatted{UMonewline}

```

---

File 446 **lwarp-underscore.sty**

§ 546 Package **underscore**

Pkg underscore underscore is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{underscore}[2006/09/13]

---

File 447 **lwarp-unicode-math.sty**

§ 547 Package **unicode-math**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg unicode-math unicode-math is supported as-is for HTML with SVGmath.

For MATHJAX, many characters may not be read correctly, such as bold letters, and so are not read correctly by *pdftotext* for HTML. Symbol font commands are emulated, but not all combinations are supported by MathJax.

**for HTML output:** 1 \LWR@ProvidesPackagePass{unicode-math}[2019/09/26]

```

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{unicode-math}
4
5 % Not all are possible in MathJax.
6 \CustomizeMathJax{\let\symnormal\mathit}
7 \CustomizeMathJax{\let\symliteral\mathrm}
8 \CustomizeMathJax{\let\sybbb\mathbb}
9 \CustomizeMathJax{\let\sybbbit\mathbb}% not italic
10 \CustomizeMathJax{\let\symcal\mathcal}
11 \CustomizeMathJax{\let\symscr\mathscr}
12 \CustomizeMathJax{\let\symfrac\mathfrak}
13 \CustomizeMathJax{\let\symsfup\mathsf}

```

```

14
15 % \CustomizeMathJax{\let\symsfit\mathit}% not sans
16 \CustomizeMathJax{\newcommand{\symsfit}[1]{%
17 \mmlToken{mi}[mathvariant="sans-serif-italic"]{#1}}%
18 }
19
20 % \CustomizeMathJax{\let\symsfsf\mathbf}% not sans
21 \CustomizeMathJax{\newcommand{\symsfsf}[1]{%
22 \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}%
23 }
24
25 \CustomizeMathJax{\let\symsfup\mathbf}
26 \CustomizeMathJax{\newcommand{\symsfup}[1]{\boldsymbol{#1}}}
27 \CustomizeMathJax{\let\symsfcal\mathcal}% not bold
28
29 \CustomizeMathJax{\let\symsfscr\mathscr}% not bold
30 % \CustomizeMathJax{\newcommand{\symsfscr}[1]{
31 % \mmlToken{mi}[mathvariant="math-bold-script"]{#1}}
32 % }
33
34 \CustomizeMathJax{\let\symsffrak\mathfrak}% not bold
35 % \CustomizeMathJax{\newcommand{\symsffrak}[1]{%
36 % \mmlToken{mi}[mathvariant="math-bold-fraktur"]{#1}}%
37 % }
38
39 % \CustomizeMathJax{\let\symsfsfup\mathbf}% not sans
40 \CustomizeMathJax{\newcommand{\symsfsfup}[1]{%
41 % \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}%
42 % }
43
44 % \CustomizeMathJax{\let\symsfsfit\mathit}% not bold nor sans
45 \CustomizeMathJax{\newcommand{\symsfsfit}[1]{%
46 % \mmlToken{mi}[mathvariant="sans-serif-bold-italic"]{#1}}%
47 % }
48
49 % Duplicates below are commented out.
50 \CustomizeMathJax{\let\symup\mathrm}
51 \CustomizeMathJax{\let\symsf\mathbf}% \symsfup defined above
52 \CustomizeMathJax{\let\symit\mathit}
53 % \CustomizeMathJax{\let\symsfit\mathit}% not bold
54 \CustomizeMathJax{\let\symsf\mathsf}
55 % \CustomizeMathJax{\let\symsfsfup\mathbf}% not sans
56 % \CustomizeMathJax{\let\symsfsfit\mathit}% not sans
57 % \CustomizeMathJax{\let\symsfsfit\mathit}% not bold nor sans
58 \CustomizeMathJax{\let\symtt\mathtt}
59 % \CustomizeMathJax{\let\symsbb\mathbb}
60 % \CustomizeMathJax{\let\symsbbit\mathbb}% not italic
61 % \CustomizeMathJax{\let\symscr\mathscr}
62 % \CustomizeMathJax{\let\symsfscr\mathscr}% not bold
63 % \CustomizeMathJax{\let\symfrac\mathfrak}
64 \CustomizeMathJax{\let\symsffrac\mathbffrac}
65 \end{warpMathJax}

```

File 448 **lwarp-units.sty**

§ 548 Package **units**

*(Emulates or patches code by AXEL REICHERT.)*

Pkg units units is patched for use by lwarp.

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][]{#1 #2}}
27 \CustomizeMathJax{\newcommand{\unitfrac}[3][]{#1 #2/#3}}
28 \end{warpMathJax}

```

File 449 **lwarp-unitsdef.sty**

§ 549 Package **unitsdef**

*(Emulates or patches code by PATRICK HAPPEL.)*

Pkg unitsdef unitsdef is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{unitsdef}[2005/01/04]
2 \renewcommand{\unitvaluesep}{\,}
3
4 \renewcommand{\unittimes}{\@@setunitsepfalse\HTMLUnicode{22c5}}% \cdot
5
6 \renewunit{\arcmin}{%
7 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8 {\ensuremath{{}^{\prime}}}%
9 {\HTMLUnicode{2032}}% prime
10 }
11
12 \renewunit{\arcsec}{%
13 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
14 {\ensuremath{{}^{\prime\prime}}}%
15 {\HTMLUnicode{2033}}% dbl prime
16 }
17
18 \renewrobustcmd{\SI}[2]{%
19 \begingroup%
20 \let\unit@@xspace\relax%
21 \unitSIdef\selectfont%
22 \LWR@textcurrentfont{#1#2}% lwarp
23 \endgroup%
24 }
```

File 450 **lwarp-upref.sty**

§ 550 Package **upref**

Pkg upref upref is ignored.

**for HTML output:** Discard all options for lwarp-upref:

```

1 \LWR@ProvidesPackageDrop{upref}[2007/03/14]
```

---

File 451 **lwarp-url.sty**

§ 551 Package **url**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg url url is patched for use by lwarp.

**for HTML output:**

```

1 \LetLtxMacro\LWR@url@orig@url?url
2
3 \LWR@ProvidesPackagePass{url}[2013/09/16]

4 \renewcommand*{\Url@FormatString}{%
5 \expandafter\LWR@url@orig@url\expandafter{\Url@String}%
6 }
```

---

File 452 **lwarp-ospace.sty**

§ 552 Package **ospace**

Pkg ospace ospace is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ospace}[2016/11/06]

---

File 453 **lwarp-verse.sty**

§ 553 Package **verse**

*(Emulates or patches code by PETER WILSON.)*

Pkg verse verse is supported and patched by lwarp.

**for HTML output:** Pass all options for lwarp-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. `lwarp` 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}
```

Len `\vleftskip` 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.

Env `verse` 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%

```

Pkg `verse` The `verse` or `memoir` packages can place stanza numbers to the left with their `\flagverse` command. Do not allow them to go into the left margin, which would cause *pdfcrop* to crop the entire page further to the left:

```

Len \vleftskip
7 \ifdef{\vleftskip}{%
8 \setlength{\vleftskip}{\HTMLvleftskip}
9 \setlength{\leftmargini}{\HTMLleftmargini}
10 }{}
11 \LWR@forcenewpage
12 \LWR@atbeginverbatim{3}{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{1}%
17 }

```

Patch to place `poemtitle` inside an HTML `<span>` of class `poemtitle`:

```

18 \ifdef{\poemtitle}{

```

```

19 \DeclareDocumentCommand{\@vstypeptitle}{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 454 **lwarp-versednotes.sty**

§ 554 Package **versednotes**

*(Emulates or patches code by NORMAN GRAY.)*

Pkg versednotes **versednotes is emulated.**

**for HTML output:** 1 \LWR@ProvidesPackageDrop{versednotes}[2019/07/06]

```

2 \newcommand{\versednote}[1]{\marginpar{#1}}
3 \newdimen\versedtextwidth
4 \newdimen\versedleftmargin
5 \newcommand*{\versedlayout}{}

```

In case the user changed the page number before loading versednotes:

```
6 \setcounter{page}{1}
```

---

File 455 **lwarp-vertbars.sty**

§ 555 Package **vertbars**

*(Emulates or patches code by PETER WILSON.)*

Pkg vertbars **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 456 **lwarp-vmargin.sty**

§ 556 Package **vmargin**

Pkg vmargin vmargin is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{vmargin}[2004/07/15]

```

2 \newcommand*\LWRVM@customsize[2]{}
3 \newcommand*\setpapersize[2][\ifstrequal{#2}{custom}{\LWRVM@customsize}{}
4 \newcommand*\setmargins[8]{}
5 \newcommand*\setmarginsrb[8]{}
6 \newcommand*\setmargnohf[4]{}
7 \newcommand*\setmargnohfrb[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 457 **lwarp-vowel.sty**

§ 557 Package **vowel**

*(Emulates or patches code by FUKUI REI.)*

Pkg vowel vowel is patched for use by lwarp.

This package has been tested with *pdf<sub>l</sub>atex* 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 458 **lwarp-vpe.sty**

§ 558 Package **vpe**

Pkg vpe vpe is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18]

---

File 459 **lwarp-vwcol.sty**

§ 559 Package **vwcol**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg vwcol vwcol is patched for use with lwarp.

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 \ifdequal{\vwcol@justify}{\Centering}{
52 \appto{\LWR@vwcolstyle}{text-align: center ; }
53 }{}

54 \ifdequal{\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 460 **lwarp-wallpaper.sty**

§ 560 Package **wallpaper**

*(Emulates or patches code by MICHAEL H.F. WILKINSON.)*

Pkg wallpaper **wallpaper is ignored.**

**for HTML output:** 1 \LWR@ProvidesPackageDrop{wallpaper}[2005/01/18]

```

2 \newcommand*{\CenterWallPaper}[2]{}
3 \newcommand*{\ThisCenterWallPaper}[2]{}
4 \newcommand*{\TileWallPaper}[3]{}
5 \newcommand*{\ThisTileWallPaper}[3]{}
6 \newcommand*{\TileSquareWallPaper}[2]{}
7 \newcommand*{\ThisTileSquareWallPaper}[2]{}
8 \newcommand*{\ULCornerWallPaper}[2]{}
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 461 **lwarp-watermark.sty**

§ 561 Package **watermark**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg watermark 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 462 **lwarp-widetable.sty**

§ 562 Package **widetable**

*(Emulates or patches code by CLAUDIO BECCARI.)*

Pkg widetable widetable is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{widetable}[2019-06-25]
2 \newenvironment{widetable}{\begin{tabular*}}{\end{tabular*}}

```

File 463 **lwarp-widows-and-orphans.sty**

§ 563 Package **widows-and-orphans**

Pkg widows-and-orphans widows-and-orphans is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{widows-and-orphans}[2018/09/01]
2 \NewDocumentCommand\Wa0setup{m}{}
3 \NewDocumentCommand\Wa0parameters{}{}
4 \NewDocumentCommand\Wa0ignorenext{}{}

```

File 464 **lwarp-witharrows.sty**

§ 564 Package **witharrows**

*(Emulates or patches code by F. PANTIGNY.)*

Pkg witharrows witharrows is patched for use by lwarp. Emulation is provided for MATHJAX.

```

for HTML output: 1 \LWR@ProvidesPackagePass{witharrows}[2019/12/27]

2 \begin{warpHTML}
3 \makeatletter
4 \ifbool{mathjax}{
5 % For the hidden print version in the HTML:
6 \newcommand{\Arrow}[2][{}]{
7 \newcommand{\unicode}[1]{
8 \NewDocumentEnvironment { DispWithArrows } { ! d < > ! 0 { } +b}
9 {
10 \IfValueTF{#1}{
11 \begin{displaymath}
12 #1 \left\lbracket
13 \begin{align}
14 #3
15 \end{align}
16 \right .
17 \end{displaymath}
18 }{
19 \begin{displaymath}
20 \begin{align}
21 #3
22 \end{align}
23 \end{displaymath}
24 }
25 }
26 {}
27 \NewDocumentEnvironment { DispWithArrows* } { ! d < > ! 0 { } +b}
28 {
29 \IfValueTF{#1}{
30 \begin{displaymath}
31 #1 \left\lbracket
32 \begin{align*}
33 #3
34 \end{align*}
35 \right .
36 \end{displaymath}
37 }{
38 \begin{displaymath}
39 \begin{align*}
40 #3
41 \end{align*}
42 \end{displaymath}
43 }
44 }
45 {}
46 }{
47 % If not MathJax, use SVG images.
48 \BeforeBeginEnvironment{WithArrows}{\global\booltrue{LWR@unknownmathsize}}
49 \BeforeBeginEnvironment{DispWithArrows}{%
50 \begin{BlockClass}{displaymathnumbered}%
51 \begin{lateximage}%
52 }

```

```

53 \AfterEndEnvironment{DispWithArrows}\end{lateximage}\end{BlockClass}}
54 \BeforeBeginEnvironment{DispWithArrows*}{%
55 \begin{BlockClass}{displaymath}%
56 \begin{lateximage}%
57 }
58 \AfterEndEnvironment{DispWithArrows*}\end{lateximage}\end{BlockClass}}
59 }
60 \makeatother
61 \end{warpHTML}
62
63 \begin{warpMathJax}
64 \CustomizeMathJax{\newenvironment{WithArrows}[1][\begin{aligned}]{\end{aligned}}}
65 % Unable to make a sized box.
66 \CustomizeMathJax{\newcommand{\Arrow}[2][\&\Large\unicode{x2938}]{\textit{#2}}}
67 \end{warpMathJax}

```

---

File 465 **lwarp-wrapfig.sty**

§ 565 Package **wrapfig**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg wrapfig wrapfig is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{wrapfig}[2003/01/31]
2 \newcommand*\LWR@wrapposition{}
3
4 \newcommand*\LWR@subwrapfigure[2]{%
5 \renewcommand*\LWR@wrapposition}{%
6 \ifthenelse{%
7 \equal{#1}{r}\OR\equal{#1}{R}\OR%
8 \equal{#1}{o}\OR\equal{#1}{O}%
9 }%
10 {\renewcommand*\LWR@wrapposition}{float:right}}%
11 {\renewcommand*\LWR@wrapposition}{float:left}}%
12 \setlength{\LWR@templengthone}{#2}%
13 \LWR@BlockClassWP{%
14 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
15 margin:10pt%
16 }%
17 {%
18 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
19 }%
20 {marginblock}%
21 \setlength{\linewidth}{\LWR@templengthone}%
22 }
23
24
25 \NewDocumentEnvironment{wrapfigure}{o m o m}
26 {%

```

```

27 \begin{LWR@setvirtualpage}*%
28 \LWR@subwrapfigure{#2}{#4}%
29 \captionsetup{type=figure}%
30 }
31 {%
32 \endLWR@BlockClassWP%
33 \end{LWR@setvirtualpage}%
34 }
35
36
37 \NewDocumentEnvironment{wraptable}{o m o m}
38 {%
39 \begin{LWR@setvirtualpage}*%
40 \LWR@subwrapfigure{#2}{#4}%
41 \captionsetup{type=table}%
42 }
43 {%
44 \endLWR@BlockClassWP%
45 \end{LWR@setvirtualpage}%
46 }
47
48
49 \NewDocumentEnvironment{wrapfloat}{m o m o m}
50 {%
51 \begin{LWR@setvirtualpage}*%
52 \LWR@subwrapfigure{#3}{#5}%
53 \captionsetup{type=#1}%
54 }
55 {%
56 \endLWR@BlockClassWP%
57 \end{LWR@setvirtualpage}%
58 }
59
60 \newlength{\wrapoverhang}

```

---

File 466 **lwarp-xbmk.ssty**

§ 566 Package **xbmks**

Pkg xbmks 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 467 **lwarp-xcolor.sty**

§ 567 Package **xcolor**

*(Emulates or patches code by DR. UWE KERN.)*

Pkg xcolor xcolor is supported by lwarp.

### § 567.1 **Limitations**

`\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 `<span>`. These `<div>`s are set to display: `inline-block` so adjacent `\colorboxBlock`s appear side-by-side in HTML, although text is placed before or after each.

Print-mode definitions for `\colorboxBlock` and `\fcolorboxBlock` are created by lwarp's core if xcolor is loaded.

`background: none` `\colorbox` 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 tables` `\rowcolors` is supported, except that the optional argument is ignored so far.

`colored text and boxes` `\textcolor`, `\colorbox`, and `\fcolorbox` are supported.

`\color` and `\pagecolor` `\color` and `\pagecolor` are ignored. Use `css` or `\textcolor` where possible.

### § 567.2 **xcolor definitions: location and timing**

The lwarp core and its lwarp-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 lwarp-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 85. If xcolor has been loaded, the print-mode `\fcolorbox` is modified to accept a background color of none,

and additional definitions are created for `lwarp`'s new macros print-mode macros `\colorboxBlock`, `\fcolorboxBlock`, and `fcolorminipage`. The HTML versions of these macros will already have been created by `lwarp-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 509.

#### `\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 `lwarp-xcolor`, page 1088.

**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 `lwarp-xcolor`, page 1089.

**HTML `lateximage`:** Remembers and reuses the print version.

#### `\colorboxBlock:`

**Print:** Becomes `\colorbox`.

**HTML:** Newly defined by `lwarp-xcolor` to use a `<div>`, page 1089.

**HTML `lateximage`:** Remembers and reuses the print version `\colorbox`.

#### `\fcolorbox:`

**Print:** Modified to allow a background of none.

`\LWR@print@fcolorbox` at section 85

**HTML:** Redefined by `lwarp-xcolor`, page 1090.

**HTML lateximage:** Remembers and reuses the print version.

**\fcolorboxBlock:**

**Print:** Becomes \fcolorbox. Section 85

**HTML:** Newly defined by lwarp-xcolor to use a <div>, page 1090.

**HTML lateximage:** Remembers and reuses the print version \fcolorbox.

**fcolorminipage:**

**Print:** Newly defined in the lwarp core.

LWR@print@fcolorminipage at section 85

**HTML:** Newly defined by lwarp-xcolor, page 1091.

**HTML lateximage:** Uses the print version.

**\boxframe:**

**Print:** Used as-is.

**HTML:** Redefined by lwarp-xcolor, page 1092.

**HTML lateximage:** Remembers and reuses the print version.

### § 567.3 Package loading

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{xcolor}[2016/05/11]
2 \begin{warpHTML}
```

### § 567.4 Remembering and restoring original definitions

Remember the following print-mode actions to be restored when inside a lateximage environment:

```
3 \LetLtxMacro\LWR@print@pagecolor\pagecolor
4 \LetLtxMacro\LWR@print@nopagecolor\nopagecolor
```

**\LWR@restoreorigformatting** Inside a lateximage 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 }
```

§ 567.5 **\normalcolor**`\normalcolor`

```

9 \DeclareRobustCommand{\LWR@HTML@normalcolor}{\color{black}}%
10
11 \LWR@formatted{normalcolor}

```

§ 567.6 **HTML color style**`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```

12 \renewcommand*{\LWR@findcurrenttextcolor}{%
13 \protect\colorlet{\LWR@current@color}{.}%
14 \protect\convertcolorspec{named}{\LWR@current@color}{HTML}\LWR@tempcolor%
15 }

```

Prints a color style for the current color.

```

\LWR@currenttextcolorstyle
16 \newcommand*{\LWR@currenttextcolorstyle}{%
17 \LWR@findcurrenttextcolor%
18 \ifdefstring{\LWR@tempcolor}{000000}%
19 {}%
20 {color: \LWR@origpound\LWR@tempcolor ; }%
21 }

```

`\LWR@textcurrentcolor` `{<text>}` Like `\textcolor` but uses the current `\color` instead.

```

22 \DeclareDocumentCommand{\LWR@textcurrentcolor}{m}{%
23 \begingroup%
24 \LWR@FBcancel%
25 \LWR@findcurrenttextcolor%
26 \InlineClass[color:\LWR@origpound\LWR@tempcolor]{textcolor}{%
27 \renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
28 #1%
29 }%
30 \endgroup%
31 }

```

`\LWR@colorstyle` `{<2: model>} {<3: color>}`

For a color style, prints the color converted to HTML colors.

```

32 \NewDocumentCommand{\LWR@colorstyle}{m m}{%
33 \begingroup%
34 \LWR@FBcancel%

```

Use the `xcolor` package to convert to an HTML color space:

```

35 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%

```

Print the converted color:

```

36 \LWR@origpound\LWR@tempcolor%
37 \endgroup%
38 }

```

`\LWR@backgroundcolor` [*model*] {*color*} {*text*}

Similar to `\textcolor`, but prints black text against a color background.

Converted into an HTML hex color span.

```
39 \NewDocumentCommand{\LWR@backgroundcolor}{O{named} m m}{%
40 \begingroup%
41 \LWR@FBcancel%
42 \InlineClass[background:\LWR@colorstyle{#1}{#2}]{backgroundcolor}{%
43 #3%
44 }%
45 \endgroup%
46 }
```

### § 567.7 HTML border

`\LWR@borderpadding` {*colorstyle*} {*color*} Prints the HTML attributes for a black border and padding.

`\LWR@forceminwidth` must be used first in order to set the border width.

```
47 \newcommand*{\LWR@borderpadding}[2]{%
48 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@colorstyle{#1}{#2} ; %
49 padding:\LWR@printlength{\fboxsep}%
50 }
```

### § 567.8 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.

```
51 \NewDocumentCommand{\LWR@HTML@color}{o m}{%
52 \IfValueTF{#1}{%
53 \LWR@print@color[#1]{#2}%
54 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
55 }{%
56 \LWR@print@color{#2}%
57 \convertcolorspec{named}{#2}{HTML}\LWR@tempcolor%
58 }%
59 \edef\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
60 }
61
62 \LWR@formatted{color}
```

`\textcolor` [*model*] {*color*} {*text*}

Converted into an HTML hex color span.

```
63 \NewDocumentCommand{\LWR@HTML@textcolor}{o m m}{%
64 \begingroup%
65 \IfValueTF{#1}{%
```

```

66 \color[#1]{#2}%
67 }{%
68 \color{#2}%
69 }%
70 \InlineClass[color:\LWR@currenttextcolor]{textcolor}{#3}%
71 \endgroup%
72 }%
73
74 \LWR@formatted{textcolor}

```

`\pagecolor` [*model*] {*color*}

Ignored. Use css instead.

```
75 \renewcommand*{\pagecolor}[2][named]{}
```

`\nopagecolor` Ignored.

```
76 \renewcommand*{\nopagecolor}{}

```

`\colorbox` [*model*] {*color*} {*text*}

Converted into an HTML hex background color `<span>`.

```

77 \NewDocumentCommand{\LWR@HTML@colorbox}{O{named} m +m}{%
78 \begingroup%
79 \LWR@FBcancel%
80 \InlineClass[%
81 background:\LWR@colorstyle{#1}{#2} ; %
82 padding:\LWR@printlength{\fboxsep}%
83]{colorbox}{#3}%
84 \endgroup%
85 }
86
87 \AtBeginDocument{
88 \LWR@formatted{colorbox}
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@FBcancel%
93 \LWR@stoppars%
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 }
103
104 \AtBeginDocument{
105 \LWR@formatted{colorboxBlock}
106 }

```

`\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.

```

107 \NewDocumentCommand{\LWR@HTML@fcolorbox}{O{named} m O{named} m +m}{%
108 \LWR@traceinfo{HTML fcolorbox #2 #4}%
109 \begingroup%
110 \LWR@FBcancel%
111 \LWR@forceminwidth{\fboxrule}%
112 \ifthenelse{\equal{#4}{none}}{%
113 {% no background color
114 \InlineClass[%
115 \LWR@borderpadding{#1}{#2}%
116]{fcolorbox}{#5}%
117 }%
118 {% yes background color
119 \InlineClass[%
120 \LWR@borderpadding{#1}{#2} ; %
121 background:\LWR@colorstyle{#3}{#4}%
122]{fcolorbox}{#5}%
123 }%
124 \endgroup%
125 }
126
127 \AtBeginDocument{
128 \LWR@formatted{fcolorbox}
129 }

```

`\fcolorboxBlock` [*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.

```

130 \NewDocumentCommand{\LWR@HTML@fcolorboxBlock}{O{named} m O{named} m +m}{%
131 \LWR@traceinfo{HTML fcolorboxBlock #2 #4}%
132 \begingroup%
133 \LWR@FBcancel%
134 \LWR@forceminwidth{\fboxrule}%

135 \LWR@stoppars%

136 \ifthenelse{\equal{#4}{none}}{%
137 {% no background color
138 \begin{BlockClass}[%
139 \LWR@borderpadding{#1}{#2}%
140]{fcolorboxBlock}
141 #5
142 \end{BlockClass}%
143 }%
144 {% yes background color
145 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
146 \begin{BlockClass}[%
147 background:\LWR@origpound\LWR@tempcolortwo\ ; %
148 \LWR@borderpadding{#1}{#2}%
149]{fcolorboxBlock}
150 #5
151 \end{BlockClass}%
152 }%
153 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

154 \global\booltrue{LWR@minipagethispar}%
155 \LWR@traceinfo{HTML fcolorboxBlock done}%
156 }
157
158 \AtBeginDocument{
159 \LWR@formatted{fcolorboxBlock}
160 }

```

Creates a framed HTML <div> around its contents.

A print-output version is defined in the lwarp core: [section 85](#)

```

\LWR@subfcolorminipage {<framemodel>} {<framecolor>} {<background tag>} {<height>}

161 \NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%

162 \LWR@stoppars%

163 \begin{BlockClass}[%
164 #3%
165 \LWR@borderpadding{#1}{#2} ; %
166 \IfValueT{#4}{height:\LWR@printlength{\LWR@tempheight} ; }%
167 width:\LWR@printlength{\LWR@tempwidth}%
168]{fcolorminipage}%

```

169 }

Env fcolorminipage [*1:frame*model] {*2:frame*color} [*3:box*model] {*4:box*color} [*5:align*] [*6:height*] [*7:inner-align*] {*8:width*}

```

170 \NewDocumentEnvironment{LWR@HTML@fcolorminipage}{0{named} m 0{named} m 0{c} o o m}
171 {%
172 \LWR@FBcancel%
173 \setlength{\LWR@tempwidth}{#8}%
174 \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}}%
175 \LWR@forceminwidth{\fboxrule}%
176 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
177 \ifthenelse{\equal{#4}{none}}%
178 {\LWR@subfcolorminipage{#1}{#2}{#6}}%
179 {%
180 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
181 \LWR@subfcolorminipage{#1}{#2}%
182 {background:\LWR@origpound\LWR@tempcolortwo\ ; }%
183 {#6}%
184 }%
185 }%
186 {%
187 \end{BlockClass}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

188 \global\booltrue{LWR@minipagethispar}%
189 }
190
191 \AtBeginDocument{
192 \LWR@formattedenv{fcolorminipage}
193 }

```

`\boxframe` {*width*} {*height*} {*depth*}

The depth is added to the height, but the box is not decended below by the depth. `\textcolor` is honored.

```

194 \newcommand*{\LWR@HTML@boxframe}[3]{%
195 {%
196 \setlength{\LWR@tempwidth}{#1}%
197 \setlength{\LWR@tempheight}{#2}%
198 \addtolength{\LWR@tempheight}{#3}%
199 \LWR@forceminwidth{\fboxrule}%
200 \LWR@findcurrenttextcolor%
201 \InlineClass[%
202 display:inline-block ; %
203 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@currenttextcolor{} ; %
204 width:\LWR@printlength{\LWR@tempwidth} ; %
205 height:\LWR@printlength{\LWR@tempheight}%
206]{boxframe}{}%

```

```

207 }%
208 }
209
210 \LWR@formatted{boxframe}

```

### § 567.9 Row colors

```

\rowcol@l@rs [⟨cmds⟩] {⟨startrow⟩} {⟨odd color⟩} {⟨even color⟩}

211 \newcommand*{\LWR@xcolortempcolor}{}
212
213 \def\rowcol@l@rs[#1]#2#3#4%
214 {
215 \rownum=1%
216 \@rowcolorstrue%
217 \@ifxempty{#3}%
218 {\def\@oddrowcolor{\@norowcolor}}%
219 {%
220 \convertcolorspec{named}{#3}{HTML}\LWR@xcolortempcolor%
221 \edef\@oddrowcolor{%
222 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
223 }%
224 }%
225 \@ifxempty{#4}%
226 {\def\@evenrowcolor{\@norowcolor}}%
227 {%
228 \convertcolorspec{named}{#4}{HTML}\LWR@xcolortempcolor%
229 \edef\@evenrowcolor{%
230 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
231 }%
232 }%
233 \if@rowcmd
234 \def\@rowcolors
235 {%
236 % #1%
237 \if@rowcolors
238 % \noalign{%
239 \relax\ifnum\rownum<#2\@norowcolor\else
240 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi\fi%
241 % }%
242 \fi%
243 }%
244 \else
245 \def\@rowcolors
246 {%
247 \if@rowcolors
248 \ifnum\rownum<#2%
249 % \noalign{%
250 \@norowcolor
251 % }
252 \else
253 % #1%
254 % \noalign{%
255 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi%
256 % }%
257 \fi

```

```

258 \fi%
259 }%
260 \fi
261 \ignorespaces%
262 }

```

`\@norowcolor` Turns off color for this row.

```

263 \def\@norowcolor{%
264 \renewcommand{\LWR@xcolorrowHTMLcolor}{}}%
265 }

```

`\@rowc@lors` Executed at the end of each row.

```

266 \def\@rowc@lors{%
267 % \noalign{%
268 \advance\rownum\@ne%
269 % }%
270 \@rowcolors%
271 }

```

```

272 \end{warpHTML}

```

---

File 468 **lwarp-xexchangebar.sty**

§ 568 Package **xexchangebar**

Pkg xexchangebar xexchangebar is ignored

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{xexchangebar}[2017/08/03]
2 \LWR@origRequirePackage{lwarp-changebar}

```

---

File 469 **lwarp-xellipsis.sty**

§ 569 Package **xellipsis**

*(Emulates or patches code by DONALD P. GOODMAN III.)*

Pkg xellipsis xellipsis is patched for use by lwarp.

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@xellipsispace[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{\xelipprebef}%
15 \xelipprechar%
16 \LWR@xellipsespace{\xelippreaft}%
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{\xelippostaft}%
29 }%
30 }%

```

---

File 470 **lwarp-xetexko-vertical.sty**

§ 570 Package **xetexko-vertical**

*(Emulates or patches code by DOHYUN KIM.)*

Pkg xetexko-vertical xetexko-vertical is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@loadbefore{xetexko-vertical}
2
3 \LWR@ProvidesPackagePass{xetexko-vertical}[2018/04/06]

4 \renewcommand{\verticaltypesetting}{}
5 \renewenvironment{vertical}[1]{\BlockClass{verticalrl}}{\endBlockClass}
6 \renewenvironment{horizontal}[1]{\BlockClass{horizontaltb}}{\endBlockClass}
7 \renewcommand{\vertlatin}[1]{#1}

```

---

File 471 **lwarp-xfakebold.sty**

§ 571 Package **xfakebold**

*(Emulates or patches code by HERBERT VOSS.)*

Pkg xfakebold xfakebold is patched for use by lwarp, and additional underlying support is found in the lwarp core.

 **page breaks** Note that the print version resets to unbold at each page break, whereas the HTML version maintains the bold state until it is undone.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xfakebold}[2018/07/25]

2 \let\LWR@orig@setBold\setBold
3 \let\LWR@orig@unsetBold\unsetBold
4 \renewcommand*\setBold{\booltrue\LWR@xfakebold}
5 \renewcommand*\unsetBold{\boolfalse\LWR@xfakebold}
6
7 \renewcommand*\LWR@applyxfakebold{%
8 \ifbool\LWR@xfakebold{\LWR@orig@setBold}{\LWR@orig@unsetBold}%
9 }
```

For MATHJAX, xfakebold is ignored.

```

10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\setBold}[1][{}]}
12 \CustomizeMathJax{\newcommand{\unsetBold}{}}
13 \end{warpMathJax}
```

---

File 472 **lwarp-xfrac.sty**

§ 572 Package **xfrac**

(Emulates or patches code by THE L<sup>A</sup>T<sub>E</sub>X3 PROJECT.)

Pkg xfrac 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, lwarp should be loaded after font-related setup. During HTML conversion, this font is used by lwarp 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 [*instance*] {<num>} [*sep*] {<denom>}

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 lateximage, no adjustments are necessary.

**for HTML & PRINT:**

```

2 \begin{warpall}
```

\xfracHTMLfontsize User-redefinable macro which controls the font size of the fraction.

```
3 \newcommand*\xfracHTMLfontsize{.6em}
```

```
4 \end{warpall}
```

for HTML output: 

```
5 \begin{warpHTML}
```

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.

```
6 \DeclareInstance{xfrac}{default}{text}{
7 numerator-format = {%
8 \begingroup%
9 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
10 \InlineClass{numerator}{#1}\,%
11 \endgroup%
12 },
13 denominator-format = {%
14 \begingroup%
15 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
16 \InlineClass{denominator}{#1}%
17 \endgroup%
18 },
```

For *pdftotext*, do not scale the text:

```
19 scaling = false
20 }
21
22 \DeclareInstance{xfrac}{lmr}{text}{
23 numerator-format = {%
24 \begingroup%
25 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
26 \InlineClass{numerator}{#1}\,%
27 \endgroup%
28 },
29 denominator-format = {%
30 \begingroup%
31 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
32 \InlineClass{denominator}{#1}%
33 \endgroup%
34 },
```

For *pdftotext*, do not scale the text:

```
35 scaling = false
36 }
37
38 \DeclareInstance{xfrac}{lmss}{text}{
39 numerator-format = {%
40 \begingroup%
41 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
```

```

42 \InlineClass{numerator}{#1}\,%
43 \endgroup%
44 },
45 denominator-format = {%
46 \begingroup%
47 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
48 \InlineClass{denominator}{#1}%
49 \endgroup%
50 },

```

For *pdftotext*, do not scale the text:

```

51 scaling = false
52 }
53
54 \DeclareInstance{xfrac}{lmtt}{text}{
55 numerator-format = {%
56 \begingroup%
57 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
58 \InlineClass{numerator}{#1}\,%
59 \endgroup%
60 },
61 denominator-format = {%
62 \begingroup%
63 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
64 \InlineClass{denominator}{#1}%
65 \endgroup%
66 },

```

For *pdftotext*, do not scale the text:

```

67 scaling = false
68 }

```

For MATHJAX:

```

69 \begin{warpMathJax}
70 \CustomizeMathJax{\newcommand{\LWRsfrac}[2][\LWRsfracnumerator\!#1_{#2}]}
71 \CustomizeMathJax{\newcommand{\sfrac}[2][\LWRsfracnumerator\!#2]{\LWRsfrac}}
72 \end{warpMathJax}

73 \end{warpHTML}

```

File 473 **lwarp-xltabular.sty**

§ 573 Package **xltabular**

(Emulates or patches code by ROLF NIEPRASCHK, HERBERT VOSS.)

Pkg xltabular xltabular is emulated by lwarp.

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 474 **lwarp-xltextra.sty**

§ 574 Package **xltextra**

*(Emulates or patches code by WILL ROBERTSON, JONATHAN KEW.)*

Pkg xltextra xltextra is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{xltextra}[2016/01/21]
2 \RequirePackage{realscripts}
3 \RequirePackage{metalogo}
4 \newcommand*\TeX@logo@spacing[6]{}
5
6 \newcommand*\vfrac[2]{%
7 #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 475 **lwarp-xmpincl.sty**

§ 575 Package **xmpincl**

*(Emulates or patches code by MAARTEN SNEEP.)*

Pkg xmpincl xmpincl is ignored.

**for HTML output:** Discard all options for lwarp-xmpincl:

```
1 \LWR@ProvidesPackageDrop{xmpincl}[2008/05/10]
2 \newcommand*\includexp}[1]{}

```

---

File 476 **lwarp-xpiano.sty**

§ 576 Package **xpiano**

*(Emulates or patches code by ENRICO GREGORIO.)*

Pkg xpiano xpiano is patched for use by lwarp.

**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 477 **lwarp-xpinyin.sty**

§ 577 Package **xpinyin**

*(Emulates or patches code by SOBEN LEE.)*

Pkg xpinyin xpinyin is partly supported. \xpinyin and pinyinscope are nullified, but \pinyin works.

**for HTML output:** 1 \LWR@ProvidesPackagePass{xpinyin}[2018/01/28]

---

```

2 \RenewDocumentEnvironment{pinyin}{0}{}{}
3
4 \RenewDocumentCommand{\xpinyin}{s O} m}{%
5 \IfBooleanTF{#1}{#3}{\@firstoftwo#3}%
6 }
7
8 \RenewDocumentCommand{\enablepinyin}{}{}

```

---

File 478 **lwarp-xr.sty**

§ 578 Package **xr**

*(Emulates or patches code by JEAN-PIERRE DRUCBERT, DAVID CARLISLE.)*

Pkg xr xr is patched for use by lwarp. 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 5.17.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xr}[2019/07/22]%
2
3
4 \LetLtxMacro\LWR@orig@externaldocument\externaldocument
5
6 \RenewDocumentCommand{\externaldocument}{O} O} m O}{}{%
7 \ifblank{#1}{%
8 \LWR@orig@externaldocument{#3_html}%
9 }{%
10 \LWR@orig@externaldocument[#1]{#3_html}%
11 }%
12 }

```

---

File 479 **lwarp-xr-hyper.sty**

§ 579 Package **xr-hyper**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg xr-hyper 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 5.17.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{xr-hyper}[2019/10/03]%
2
3 \LWR@origRequirePackage{lwarp-xr}

```

File 480 **lwarp-xtab.sty**

§ 580 Package **xtab**

*(Emulates or patches code by PETER WILSON.)*

Pkg xtab **xtab** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xtab}[2011/07/31]

⚠ Misplaced alignment tab character &

```

For \tablefirsthead, etc., enclose them as follows:
 \StartDefiningTabulars
 \tablefirsthead
 . . .
 \StopDefiningTabulars

```

See section 8.10.1.

⚠ lateximage supertabular and xtab are not supported inside a lateximage.

```

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 481 **lwarp-xunicode.sty**

§ 581 Package **xunicode**

Pkg xunicode Error if xunicode is loaded after lwarp.

Patch lwarp-xunicode, but also verify that it was loaded before lwarp:

**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 482 **lwarp-xurl.sty**

§ 582 Package **xurl**

Pkg xurl xurl is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{xurl}[2020/01/14]
2
3 \def\useOriginalUrlSetting{}

```

File 483 **lwarp-xy.sty**

§ 583 Package **XY**

(Emulates or patches code by KRISTOFFER H. ROSE, ROSS MOORE.)

Pkg xy xy is patched for use by lwarp.

**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
12 \renewcommand*{\endxy}{%
13 \LWR@orig@endxy%
14 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%
15 {\addtocounter{LWR@lateximagedepth}{-1}}%
16 {\end{lateximage}}%
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 484 **lwarp-zhlineskip.sty**

§ 584 Package **zhlineskip**

Pkg zhlineskip 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 485 **lwarp-zwpagelayout.sty**

§ 585 Package **zwpagelayout**

*(Emulates or patches code by ZDENĚK WAGNER.)*

Pkg zwpagelayout 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@redefinetcmyk
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\OverprintXeTeXExtGState\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][1]{}
37 \NewDocumentCommand{\NewOddPage}{* o}{}
38 \NewDocumentCommand{\NewEvenPage}{* o}{}
39 \def\SetOddPageMessage#\gdef\ZW@oddwarning}
40 \def\SetEvenPageMessage#\gdef\ZW@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 486 **lwarp-patch-komascript.sty**

§ 586 Package **patch-komascript**

Pkg lwarp-patch-komascript Patches for komascript classes.

lwarp loads this package when scrbook, scartcl, or screprt classes are detected.

Many features are ignored during the HTML conversion. The goal is source-level compatibility.

`\titlehead`, `\subject`, `\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{lwarp-patch-komascript}`

`typearea` is emulated.

`2 \RequirePackage{lwarp-typearea}`

`tocbasic` is emulated.

`3 \RequirePackage{lwarp-tocbasic}`

`scrextend` patches most of the new macros.

`4 \RequirePackage{lwarp-scrextend}`

Indexing macros, simplified for `lwarp`:

```

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 \let\item\LWR@indexitem%
15 \let\subitem\LWR@indexsubitem%
16 \let\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 }

```

Simple captions are used in all cases.

```

39 \AtBeginDocument{
40 \LetLtxMacro\captionbelow\caption
41 \LetLtxMacro\captionabove\caption
42
43 \LetLtxMacro\captionofbelow\captionof
44 \LetLtxMacro\captionofabove\captionof
45 }
46
47 \RenewDocumentEnvironment{captionbeside}{o m o o o s}
48 {}
49 {%
50 \IfValueTF{#1}%
51 {\caption[#1]{#2}}%
52 {\caption{#2}}%
53 }
54
55 \RenewDocumentEnvironment{captionofbeside}{m o m o o o s}
56 {}
57 {%
58 \IfValueTF{#2}%
59 {\captionof{#1}[#2]{#3}}%
60 {\captionof{#1}{#3}}%
61 }
62
63 \RenewDocumentCommand{\setcapindent}{s m}{}
64 \renewcommand*\setcaphanging{}
65 \renewcommand*\setcapwidth[2][{}]{
66 \renewcommand*\setcapdynwidth[2][{}]{
67 \RenewDocumentCommand{\setcapmargin}{s o m}{}

```

---

File 487 **lwarp-patch-memoir.sty**

§ 587 Package **patch-memoir**

*(Emulates or patches code by PETER WILSON.)*

Pkg lwarp-patch-memoir Patches for memoir class.

 **Not fully tested! Please send bug reports!**

lwarp loads this package when the memoir class is detected.

⚠ options clash

While emulating memoir, lwarp pre-loads a number of packages (section 587.1). 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 lwarp:

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{lwarp}
...
\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 lwarp 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.

\verbfootnote is not supported.

\newfootnoteseries, etc. are not supported.

lwarp loads pagenote to perform memoir's pagenote functions, but there are minor differences in \pagenotesubhead and related macros.

Poem numbering is not supported.

The verbatim environment does not yet support the memoir enhancements. It is currently recommended to load and use fancyvrb instead.

The memoir glossary system is not yet supported by *lwarpmk*. The glossaries package 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{lwarp-patch-memoir}

## § 587.1 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 lwarp is directly loading the "lwarp-" version of each, which happens to avoid memoir's emulation system.

```
2 \RequirePackage{lwarp-abstract}% req'd
3 \RequirePackage{lwarp-array}% req'd
4 \RequirePackage{lwarp-booktabs}% req'd
5 % \RequirePackage{lwarp-ccaption}% emulated below
6 \RequirePackage{lwarp-change page}% req'd
7 \RequirePackage{lwarp-crop}
8 \RequirePackage{lwarp-dcolumn}% req'd
9 \RequirePackage{lwarp-enumerate}% req'd
10 \RequirePackage{lwarp-epigraph}% req'd
11 \RequirePackage{lwarp-fancyvrb}% req'd
```

```

12 \RequirePackage{lwarp-footmisc}% req'd
13 \RequirePackage{lwarp-framed}% req'd
14 \RequirePackage{lwarp-hanging}% req'd
15 \RequirePackage{lwarp-makeidx}% req'd
16 \DisemulatePackage{moreverb}
17 \RequirePackage{lwarp-moreverb}
18 \RequirePackage{lwarp-mparhack}
19 \RequirePackage{lwarp-needspace}% req'd
20 \RequirePackage{lwarp-nextpage}% req'd
21 \RequirePackage{lwarp-pagenote}% req'd
22 \RequirePackage{lwarp-parskip}
23 \RequirePackage{lwarp-setspace}% req'd
24 \RequirePackage{lwarp-showidx}

```

Avoids a conflict with memoir:

```

25 \AtBeginDocument{%
26 \ifpackageloaded{subcaption}{}{
27 \RequirePackage{lwarp-subfigure}
28 \let\subfigure\subbottom
29 \let\subtable\subtop
30 }%
31 }%

```

```
32 \makeindex
```

subfigure is emulated via subfig, which pre-defines subfigure and subtable, but memoir does not, so they must be tested for here:

```

33 \LetLtxMacro\LWR@memorignewsfloat\newsfloat
34 \RenewDocumentCommand{\newsfloat}{0{} m}{%
35 \ifundefined{c@sub#2}{%
36 \LWR@memorignewsfloat[#1]{#2}%
37 }{}%
38 }
39
40 \RequirePackage{lwarp-tabularx}% req'd
41 \RequirePackage{lwarp-titling}% req'd
42 % \RequirePackage{lwarp-tocbibind}% not emulated by memoir
43 \RequirePackage{lwarp-tocloft}% req'd
44 \RequirePackage{lwarp-verse}% req'd

```

## § 587.2 Preliminary setup

Bypass the memoir package mechanism:

```
45 \LetLtxMacro\LWR@orig@label\@mem@old@label
```

memoir already set the page size to a default, so it must be forced large for lwarp's use, to avoid tag overflows off the page.

```

46 \setstocksize{190in}{20in}
47 \setlrmarginsandblock{2in}{2in}{*}
48 \setulmarginsandblock{1in}{1in}{*}

```

§ 587.3 **Page layout**

```

49 \renewcommand*\stockavi{}
50 \renewcommand*\stockav{}
51 \renewcommand*\stockaiv{}
52 \renewcommand*\stockaiii{}
53 \renewcommand*\stockbvi{}
54 \renewcommand*\stockbv{}
55 \renewcommand*\stockbiv{}
56 \renewcommand*\stockbiii{}
57 % \renewcommand*\stockmetriccrownvo{}% in docs but not in the package
58 \renewcommand*\stockmlargecrownvo{}
59 \renewcommand*\stockmdemyvo{}
60 \renewcommand*\stocksmallroyalvo{}
61 \renewcommand*\pageavi{}
62 \renewcommand*\pageav{}
63 \renewcommand*\pageaiv{}
64 \renewcommand*\pageaiii{}
65 \renewcommand*\pagebvi{}
66 \renewcommand*\pagebv{}
67 \renewcommand*\pagebiv{}
68 \renewcommand*\pagebiii{}
69 % \renewcommand*\pagemetriccrownvo{}% in docs but not in the package
70 \renewcommand*\pagemlargecrownvo{}
71 \renewcommand*\pagemdemyvo{}
72 \renewcommand*\pagemsmallroyalvo{}
73
74 \renewcommand*\stockdbill{}
75 \renewcommand*\stockstatement{}
76 \renewcommand*\stockexecutive{}
77 \renewcommand*\stockletter{}
78 \renewcommand*\stockold{}
79 \renewcommand*\stocklegal{}
80 \renewcommand*\stockledger{}
81 \renewcommand*\stockbroadsheet{}
82 \renewcommand*\pagedbill{}
83 \renewcommand*\pagestatement{}
84 \renewcommand*\pageexecutive{}
85 \renewcommand*\pageletter{}
86 \renewcommand*\pageold{}
87 \renewcommand*\pagelegal{}
88 \renewcommand*\pageledger{}
89 \renewcommand*\pagebroadsheet{}
90
91 \renewcommand*\stockpottvo{}
92 \renewcommand*\stockfoolscapvo{}
93 \renewcommand*\stockcrownvo{}
94 \renewcommand*\stockpostvo{}
95 \renewcommand*\stocklargecrownvo{}
96 \renewcommand*\stocklargepostvo{}
97 \renewcommand*\stocksmalldemyvo{}
98 \renewcommand*\stockdemyvo{}
99 \renewcommand*\stockmediumvo{}
100 \renewcommand*\stocksmallroyalvo{}
101 \renewcommand*\stockroyalvo{}
102 \renewcommand*\stocksuperroyalvo{}

```

```
103 \renewcommand*\stockimperialvo{}
104 \renewcommand*\pagepottvo{}
105 \renewcommand*\pagefoolscapvo{}
106 \renewcommand*\pagecrownvo{}
107 \renewcommand*\pagepostvo{}
108 \renewcommand*\pagelargecrownvo{}
109 \renewcommand*\pagelargepostvo{}
110 \renewcommand*\pagesmalldemyvo{}
111 \renewcommand*\pagedemyvo{}
112 \renewcommand*\pagemediumvo{}
113 \renewcommand*\pagesmallroyalvo{}
114 \renewcommand*\pageroyalvo{}
115 \renewcommand*\pagesuperroyalvo{}
116 \renewcommand*\pageimperialvo{}
117
118 \renewcommand*\memfontfamily{}
119 \renewcommand*\memfontenc{}
120 \renewcommand*\memfontpack{}
121
122 \renewcommand*\anyptfilebase{}
123 \renewcommand*\anyptsizesize{10}
124
125 \renewcommand*\setstocksize[2]{}
126 \renewcommand*\settrimmedsize[3]{}
127 \renewcommand*\settrims[2]{}
128
129 % \newlength{\lxvchars}
130 % \setlength{\lxvchars}{305pt}
131 % \newlength{\xlvcchars}
132 % \setlength{\xlvcchars}{190pt}
133 \renewcommand*\setxlvcchars[1]{}
134 \renewcommand*\setlxvcchars[1]{}
135
136 \renewcommand*\settypeblocksize[3]{}
137 \renewcommand*\setlrmargins[3]{}
138 \renewcommand*\setlrmarginsandblock[3]{}
139 \renewcommand*\setbinding[1]{}
140 \renewcommand*\setulmargins[3]{}
141 \renewcommand*\setulmarginsandblock[3]{}
142 \renewcommand*\setcolsepandrulere[2]{}
143
144 \renewcommand*\setheadfoot[2]{}
145 \renewcommand*\setheaderspaces[3]{}
146 \renewcommand*\setmarginnotes[3]{}
147 \renewcommand*\setfootins[2]{}
148 \renewcommand*\checkandfixthelayout[1][1]{}
149 \renewcommand*\checkthelayout[1]{}
150 \renewcommand*\fixthelayout{}
151 %
152 % \newlength{\stockheight}
153 % \newlength{\trimtop}
154 % \newlength{\trimedge}
155 % \newlength{\stockwidth}
156 % \newlength{\spinemargin}
157 % \newlength{\foremargin}
```

```

158 % \newlength{\uppermargin}
159 % \newlength{\headmargin}
160 %
161 \renewcommand*\typeoutlayout{}
162 \renewcommand*\typeoutstandardlayout{}
163 \renewcommand*\settypeoutlayoutunit[1]{}
164 \renewcommand*\fixpdflayout{}
165 \renewcommand*\fixdvipslayout{}
166
167 \renewcommand*\medievalpage[1][{}
168 \renewcommand*\isopage[1][{}
169 \renewcommand*\semiisopage[1][{}
170
171 \renewcommand{\setpagebl}[3]{
172 \renewcommand{\setpageml}[3]{
173 \renewcommand{\setpagetl}[3]{
174 \renewcommand{\setpagetm}[3]{
175 \renewcommand{\setpagetr}[3]{
176 \renewcommand{\setpagemr}[3]{
177 \renewcommand{\setpagebr}[3]{
178 \renewcommand{\setpagebm}[3]{
179 \renewcommand{\setpagecc}[3]{

```

#### § 587.4 Text and fonts

```

180 \let\miniscule\tiny
181 \let\HUGE\Huge
182
183 \renewcommand*\abnormalparskip[1]{}
184 \renewcommand*\nonzeroparskip{}
185 \renewcommand*\traditionalparskip{}
186
187 \let\onelineskip\baselineskip
188
189 \let\OnehalfSpacing\onehalfspacing
190 \let\DoubleSpacing\doublespacing
191 \renewcommand*\setPagenoteSpacing[1]{}
192 \renewcommand*\setFloatSpacing[1]{}
193 \let\SingleSpacing\singlespacing
194 \let\setSingleSpace\SetSinglespace
195 \let\SingleSpace\singlespace
196 \let\endSingleSpace\endsinglespace
197 \let\Spacing\spacing
198 \let\endSpacing\endspacing
199 \let\OnehalfSpace\onehalfspace
200 \let\endOnehalfSpace\endonehalfspace
201 \csletcs{OnehalfSpace*}{onehalfspace}
202 \csletcs{endOnehalfSpace*}{endonehalfspace}
203 \let\DoubleSpace\doublespace
204 \let\endDoubleSpace\enddoublespace
205 \csletcs{DoubleSpace*}{doublespace}
206 \csletcs{endDoubleSpace*}{enddoublespace}
207 \renewcommand*\setDisplayskipStretch[1]{}
208 \renewcommand*\memdskipstretch{}
209 \renewcommand*\noDisplayskipStretch{}
210 \renewcommand*\memdskips{}

```

```

211
212 \renewcommand*{\midsloppy}{}
213 \renewenvironment*{midsloppy}{\relax}{}
214
215 \renewcommand*{\sloppybottom}{}

```

### § 587.5 Titles

```

216 \csletcs{titlingpage*}{titlingpage}
217 \csletcs{endtitlingpage*}{endtitlingpage}
218 \let\titlingpageend\relax
219 \newcommand{titlingpageend}[2]{}
220 \let\andnext\and
221 \renewcommand*{\thanksmarkstyle}[1]{}
222
223 \renewcommand{\thanksfootmark}{%
224 \thanksscript{\tamark}%
225 }
226
227 % \newlength{\thanksmarksep}% already provided by memoir

```

### § 587.6 Abstracts

```

228 \renewcommand*{\abstractcol}{}
229 \renewcommand*{\abstractintoc}{}
230 \renewcommand*{\abstractnum}{}
231 \renewcommand*{\abstractrunin}{}

```

### § 587.7 Document divisions

`\book` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

232 \DeclareDocumentCommand{\book}{s d() o o d() m}{%
233 \LWR@section{#1}{#3}{#6}{book}%
234 }

```

```

235 \def\@appage{%
236 \part*{\appendixpagename}
237 }
238 \renewcommand\mempreaddappagetotochook{}
239 \renewcommand\mempostaddappagetotochook{}
240
241 \def\@sappage{%
242 \part*{\appendixpagename}
243 }

```

```

244 \DeclareDocumentCommand{\mainmatter}{s}{%
245 \booltrue{LWR@mainmatter}%
246 }
247
248 \DeclareDocumentCommand{\frontmatter}{s}{%
249 \boolfalse{LWR@mainmatter}%
250 }

```

```
251 \renewcommand*{\raggedbottomsection}{}
252 \renewcommand*{\normalbottomsection}{}
253 \renewcommand*{\bottomsectionskip}{}
254 \renewcommand*{\bottomsectionpenalty}{}
255 \csletcs{appendixpage*}{appendixpage}
256 \renewcommand*{\namedsubappendices}{}
257 \renewcommand*{\unnamedsubappendices}{}
258 \renewcommand*{\setsecnumdepth}[1]{}% todo tocvsec2
259 \renewcommand*{\maxsecnumdepth}[1]{}% todo tocvsec2
260 \renewcommand*{\beforebookskip}{}
261 \renewcommand*{\afterbookskip}{}
262 \renewcommand*{\beforepartskip}{}
263 \renewcommand*{\afterpartskip}{}
264 \renewcommand*{\midbookskip}{}
265 \renewcommand*{\midpartskip}{}
266 \renewcommand*{\printbookname}{}
267 \renewcommand*{\booknamefont}{}
268 \renewcommand*{\booknamenum}{}
269 \renewcommand*{\printbooknum}{}
270 \renewcommand*{\booknumfont}{}
271 \renewcommand*{\printpartname}{}
272 \renewcommand*{\partnamefont}{}
273 \renewcommand*{\partnamenum}{}
274 \renewcommand*{\printpartnum}{}
275 \renewcommand*{\partnumfont}{}
276 \renewcommand*{\printbooktitle}[1]{}
277 \renewcommand*{\booktitlefont}{}
278 \renewcommand*{\printparttitle}[1]{}
279 \renewcommand*{\parttitlefont}{}
280 \renewcommand*{\bookpageend}{}
281 \renewcommand*{\bookblankpage}{}
282 \renewcommand*{\nobookblankpage}{}
283 \renewcommand*{\partpageend}{}
284 \renewcommand*{\partblankpage}{}
285 \renewcommand*{\nopartblankpage}{}
286 \RenewDocumentCommand{\newleadpage}{s o m m}{}% todo
287 \RenewDocumentCommand{\renewleadpage}{s o m m}{}% todo
288 \renewcommand*{\leadpagetoclevel}{chapter}
289
290 \renewcommand*{\openright}{}
291 \renewcommand*{\openleft}{}
292 \renewcommand*{\openany}{}
293 \renewcommand*{\clearforchapter}{}
294 \renewcommand*{\memendofchapterhook}{}
295 \renewcommand*{\chapterheadstart}{}
296 % \newlength{\beforechapskip}
297 \renewcommand*{\afterchapternum}{}
298 % \newlength{\midchapskip}
299 \renewcommand*{\afterchaptertitle}{}
300 % \newlength{\afterchapskip}
301 \renewcommand*{\printchaptername}{}
302 \renewcommand*{\chapnamefont}{}
303 \renewcommand*{\chapternamenum}{}
304 \renewcommand*{\printchapternum}{}
305 \renewcommand*{\chapnumfont}{}

```

```
306 \renewcommand{\printchaptertitle}[1]{
307 \renewcommand*\chaptitelfont{
308 \renewcommand*\printchapternonum{
309 \renewcommand*\indentafterchapter{
310 \renewcommand*\noindentafterchapter{
311 \renewcommand*\insertchapterspace{
312
313 \renewcommand*\chapterstyle}[1]{
314 \renewcommand\makechapterstyle}[2]{
315 \renewcommand*\chapindent{
316 \let\chapterprecis\cftchapterprecis
317 \let\chapterprecishere\cftchapterprecishere
318 \let\chapterprecistoc\cftchapterprecistoc
319 \renewcommand*\precisfont{
320 \renewcommand*\prechapterprecis{
321 \renewcommand*\postchapterprecis{
322 \renewcommand{\precistoc}[1]{
323 \renewcommand*\precistocfont{
324 \renewcommand*\precistocformat{
325 % \newlength{\prechapterprecisshift}
326
327 \renewcommand*\setbeforesecskip}[1]{
328 \renewcommand*\setaftersecskip}[1]{
329 \renewcommand*\setsecindent}[1]{
330 \renewcommand*\setsecheadstyle}[1]{
331 \renewcommand*\setbeforesubsecskip}[1]{
332 \renewcommand*\setaftersubsecskip}[1]{
333 \renewcommand*\setsubsecindent}[1]{
334 \renewcommand*\setsubseheadstyle}[1]{
335 \renewcommand*\setbeforesubsubsecskip}[1]{
336 \renewcommand*\setaftersubsubsecskip}[1]{
337 \renewcommand*\setsubsubsecindent}[1]{
338 \renewcommand*\setsubsubseheadstyle}[1]{
339 \renewcommand*\setbeforeparaskip}[1]{
340 \renewcommand*\setafterparaskip}[1]{
341 \renewcommand*\setparaindent}[1]{
342 \renewcommand*\setparaheadstyle}[1]{
343 \renewcommand*\setbeforesubparaskip}[1]{
344 \renewcommand*\setaftersubparaskip}[1]{
345 \renewcommand*\setsubparaindent}[1]{
346 \renewcommand*\setsubparaheadstyle}[1]{
347 \renewcommand{\@hangfrom}[1]{#1}
348 \renewcommand{\sethangfrom}[1]{
349 \renewcommand{\setsecnumformat}[1]{
350
351 \renewcommand*\hangsecnum{
352 \renewcommand*\defaultsecnum{
353
354 \renewcommand*\sechook{
355 \renewcommand{\setsechook}[1]{
356 \renewcommand*\subsechook{
357 \renewcommand{\setsubsechook}[1]{
358 \renewcommand*\subsubsechook{
359 \renewcommand{\setsubsubsechook}[1]{
360 \renewcommand*\parahook{
```

```

361 \renewcommand{\setparahook}[1]{}
362 \renewcommand*\subparahook{}
363 \renewcommand{\setsubparahook}[1]{}
364
365 \RenewDocumentCommand{\plainbreak}{s m}{\begin{center}~\end{center}}
366
367 \RenewDocumentCommand{\fancybreak}{s +m}{%
368 \begin{center}#2\end{center}%
369 }
370
371 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
372 \begin{center}#4\end{center}%
373 }
374
375 \RenewDocumentCommand{\pfbreak}{s}{%
376 \begin{center}
377 \pfbreakdisplay
378 \end{center}
379 }
380
381 % \newlength{\pfbreakskip}
382 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
383
384 \renewcommand{\makeheadstyles}[2]{}
385 \renewcommand*\headstyles[1]{}

```

## § 587.8 **Pagination and headers**

```

386 \renewcommand*\savepagenumber{}
387 \renewcommand*\restorepagenumber{}
388 \renewcommand*\uppercaseheads{}
389 \renewcommand*\nouppercaseheads{}
390
391 \renewcommand*\bookpagemark[1]{}
392 \renewcommand*\partmark[1]{}
393 \renewcommand*\bibmark{}
394 \renewcommand*\indexmark{}
395 \renewcommand*\glossarymark{}
396
397 \LWR@origpagestyle{empty}
398 \renewcommand*\ps@empty{}
399 \renewcommand*\makepagestyle[1]{}
400 \renewcommand*\emptyppshook{}%
401 % \renewcommand*\empty@oddhead{}
402 % \renewcommand*\empty@oddfoot{}
403 % \renewcommand*\empty@evenhead{}
404 % \renewcommand*\empty@evenfoot{}
405 \renewcommand*\@oddhead{}
406 \renewcommand*\@oddfoot{}
407 \renewcommand*\@evenhead{}
408 \renewcommand*\@evenfoot{}
409 \renewcommand*\aliaspagestyle[2]{}
410 \renewcommand*\copypagestyle[2]{}
411
412 \renewcommand*\makeevenhead[4]{}
413 \renewcommand*\makeoddhead[4]{}

```

```

414 \renewcommand*\makeevenfoot}[4]{}
415 \renewcommand*\makeoddfoot}[4]{}
416 \renewcommand*\makerunningwidth}[3]{}
417 % \newlength{\headwidth}
418 \renewcommand*\makeheadrule}[3]{}
419 \renewcommand*\makefootrule}[3]{}
420 \renewcommand*\makeheadfootruleprefix}[3]{}
421 % \newlength{\normalrulethickness}
422 % \setlength{\normalrulethickness}{.4pt}
423 % \newlength{\footruleheight}
424 % \newlength{\footruleskip}
425 \renewcommand*\makeheadposition}[5]{}
426 \renewcommand{\makepsmarks}[2]{}
427 \renewcommand*\makeheadfootstrut}[3]{}
428
429 \renewcommand{\createplainmark}[3]{}
430 \renewcommand{\memUchead}[1]{}
431 \renewcommand{\createmark}[5]{}
432 \renewcommand*\clearplainmark}[1]{}
433 \renewcommand*\clearmark}[1]{}
434 \renewcommand{\addtopsmarks}[3]{}
435 \renewcommand{\ifonlyfloats}[2]{#2}
436 \renewcommand*\mergepagefloatstyle}[3]{}
437
438 \renewcommand*\framepichead{}
439 \renewcommand*\framepictextfoot{}
440 \renewcommand*\framepichook{}
441 \renewcommand*\showheadfootlocoff{}
442 \renewcommand*\showtextblocklocoff{}

```

## § 587.9 Paragraphs and lists

```

443 \renewcommand{\hangfrom}[1]{#1}
444 \let\centerfloat\centering
445 \renewcommand*\raggedyright}[1][{}
446 % \newlength{\ragrparindent}
447 \renewcommand{\sourceatright}[2][{\attribution{#2}}
448 \let\memorigdbs\LWR@endofline
449 \let\memorigpar\par
450 \let\atcentercr\LWR@endofline
451
452 \renewcommand*\linenottooshort}[1][{}
453 \renewcommand*\russianpar{}
454 \renewcommand*\lastlinerulefill{}
455 \renewcommand*\lastlineparrule{}
456 \renewcommand*\justlastraggedleft{}
457 \renewcommand*\raggedrightthenleft{}
458 \renewcommand*\leftcenterright{}
459
460 \renewcommand{\leftspringright}[4]{%
461 \begin{minipage}{#1\linewidth}#3\end{minipage}\quad%
462 \begin{minipage}{#2\linewidth}\begin{flushright}#4\end{flushright}\end{minipage}%
463 }
464
465 \renewenvironment*{blockdescription}
466 {\LWR@descriptionstart\LWR@origdescription}

```

```

467 {\enddescription}
468
469 \renewcommand*{\blockdescriptionlabel}[1]{\textbf{#1}}
470 \renewenvironment*{labelled}[1]{\begin{description}}{\end{description}}
471 \renewenvironment*{flexlabelled}[6]{\begin{description}}{\end{description}}
472 \renewcommand*{\tightlists}{}
473 \renewcommand*{\defaultlists}{}
474 \RenewDocumentCommand{\firmlists}{s}{}
475 \renewcommand*{\firmlist}{}
476 \renewcommand*{\tightlist}{}
477 \renewcommand*{\zerotrivseps}{}
478 \renewcommand*{\savetrivseps}{}
479 \renewcommand*{\restoretrivseps}{}

```

## § 587.10 Contents lists

```

480 \csletcs{tableofcontents*}{tableofcontents}
481 \csletcs{listoffigures*}{listoffigures}
482 \csletcs{listoftables*}{listoftables}
483 \renewenvironment{KeepFromToc}{}{}
484 \renewcommand*{\onecoltocetc}{}
485 \renewcommand*{\twocoltocetc}{}
486 \renewcommand*{\ensureonecol}{}
487 \renewcommand*{\restorefromonecol}{}
488 \renewcommand*{\doccoltocetc}{}
489 \renewcommand*{\maxtocdepth}[1]{}% tocvsec2
490 \renewcommand*{\settocdepth}[1]{}% tocvsec2
491
492 \renewcommand{\toheadstart}{}
493 \renewcommand{\printtoctitle}[1]{}
494 \renewcommand{\tocmark}{}
495 \renewcommand{\aftertocitle}{}
496 \renewcommand{\lofheadstart}{}
497 \renewcommand{\printloftitle}[1]{}
498 \renewcommand{\lofmark}{}
499 \renewcommand{\afterloftitle}{}
500 \renewcommand{\lotheadstart}{}
501 \renewcommand{\printlottitle}[1]{}
502 \renewcommand{\lotmark}{}
503 \renewcommand{\afterlottitle}{}
504
505 \renewcommand*{\setpnumwidth}[1]{}
506 \renewcommand*{\setrmarg}[1]{}
507 \renewcommand*{\cftbookbreak}{}
508 \renewcommand*{\cftpartbreak}{}
509 \renewcommand*{\cftchapterbreak}{}

510 % \newlength{\cftbeforebookskip}
511 % \newlength{\cftbookindent}
512 % \newlength{\cftbooknumwidth}
513 \renewcommand*{\cftbookfont}{}
514 \renewcommand*{\cftbookname}{}
515 \renewcommand*{\cftbookpresnum}{}
516 \renewcommand*{\cftbookaftersnum}{}
517 \renewcommand*{\cftbookaftersnumb}{}
518 \renewcommand*{\cftbookleader}{}

```

```

519 \renewcommand*\cftbookdotsep}{1}
520 \renewcommand*\cftbookpagefont}{}
521 \renewcommand*\cftbookafterpnum}{}
522 \renewcommand*\cftbookformatpnum}[1]{}
523 \renewcommand*\cftbookformatpnumhook}[1]{}

```

Part is already defined by tocloft.

```

524 % \newlength{\cftbeforechapterskip}
525 % \newlength{\cftchapterindent}
526 % \newlength{\cftchapternumwidth}
527 \renewcommand*\cftchapterfont}{}
528 \renewcommand*\cftchaptername}{}
529 \renewcommand*\cftchapterpresnum}{}
530 \renewcommand*\cftchapteraftersnum}{}
531 \renewcommand*\cftchapteraftersnumb}{}
532 \renewcommand*\cftchapterleader}{}
533 \renewcommand*\cftchapterdotsep}{1}
534 \renewcommand*\cftchapterpagefont}{}
535 \renewcommand*\cftchapterafterpnum}{}
536 \renewcommand*\cftchapterformatpnum}[1]{}
537 \renewcommand*\cftchapterformatpnumhook}[1]{}

```

```

538 % \newlength{\cftbeforesectionsip}
539 % \newlength{\cftsectionindent}
540 % \newlength{\cftsectionnumwidth}
541 \renewcommand*\cftsectionfont}{}
542 \renewcommand*\cftsectionname}{}
543 \renewcommand*\cftsectionpresnum}{}
544 \renewcommand*\cftsectionaftersnum}{}
545 \renewcommand*\cftsectionaftersnumb}{}
546 \renewcommand*\cftsectionleader}{}
547 \renewcommand*\cftsectiondotsep}{1}
548 \renewcommand*\cftsectionpagefont}{}
549 \renewcommand*\cftsectionafterpnum}{}
550 \renewcommand*\cftsectionformatpnum}[1]{}
551 \renewcommand*\cftsectionformatpnumhook}[1]{}

```

```

552 % \newlength{\cftbeforesubsectionskip}
553 % \newlength{\cftsubsectionindent}
554 % \newlength{\cftsubsectionnumwidth}
555 \renewcommand*\cftsubsectionfont}{}
556 \renewcommand*\cftsubsectionname}{}
557 \renewcommand*\cftsubsectionpresnum}{}
558 \renewcommand*\cftsubsectionaftersnum}{}
559 \renewcommand*\cftsubsectionaftersnumb}{}
560 \renewcommand*\cftsubsectionleader}{}
561 \renewcommand*\cftsubsectiondotsep}{1}
562 \renewcommand*\cftsubsectionpagefont}{}
563 \renewcommand*\cftsubsectionafterpnum}{}
564 \renewcommand*\cftsubsectionformatpnum}[1]{}
565 \renewcommand*\cftsubsectionformatpnumhook}[1]{}

```

```

566 % \newlength{\cftbeforesubsubsectionskip}
567 % \newlength{\cftsubsubsectionindent}
568 % \newlength{\cftsubsubsectionnumwidth}

```

```
569 \renewcommand*\cftsubsubsectionfont{}
570 \renewcommand*\cftsubsubsectionname{}
571 \renewcommand*\cftsubsubsectionpresnum{}
572 \renewcommand*\cftsubsubsectionaftersnum{}
573 \renewcommand*\cftsubsubsectionaftersnumb{}
574 \renewcommand*\cftsubsubsectionleader{}
575 \renewcommand*\cftsubsubsectiondotsep}{1}
576 \renewcommand*\cftsubsubsectionpagefont{}
577 \renewcommand*\cftsubsubsectionafterpnum{}
578 \renewcommand*\cftsubsubsectionformatpnum}[1]{}
579 \renewcommand*\cftsubsubsectionformatpnumhook}[1]{}

580 % \newlength{\cftbeforeparagraphskip}
581 % \newlength{\cftparagraphindent}
582 % \newlength{\cftparagraphnumwidth}
583 \renewcommand*\cftparagraphfont{}
584 \renewcommand*\cftparagraphname{}
585 \renewcommand*\cftparagraphpresnum{}
586 \renewcommand*\cftparagraphaftersnum{}
587 \renewcommand*\cftparagraphaftersnumb{}
588 \renewcommand*\cftparagraphleader{}
589 \renewcommand*\cftparagraphdotsep}{1}
590 \renewcommand*\cftparagraphpagefont{}
591 \renewcommand*\cftparagraphafterpnum{}
592 \renewcommand*\cftparagraphformatpnum}[1]{}
593 \renewcommand*\cftparagraphformatpnumhook}[1]{}

594 % \newlength{\cftbefore subparagraphskip}
595 % \newlength{\cftsubparagraphindent}
596 % \newlength{\cftsubparagraphnumwidth}
597 \renewcommand*\cftsubparagraphfont{}
598 \renewcommand*\cftsubparagraphname{}
599 \renewcommand*\cftsubparagraphpresnum{}
600 \renewcommand*\cftsubparagraphaftersnum{}
601 \renewcommand*\cftsubparagraphaftersnumb{}
602 \renewcommand*\cftsubparagraphleader{}
603 \renewcommand*\cftsubparagraphdotsep}{1}
604 \renewcommand*\cftsubparagraphpagefont{}
605 \renewcommand*\cftsubparagraphafterpnum{}
606 \renewcommand*\cftsubparagraphformatpnum}[1]{}
607 \renewcommand*\cftsubparagraphformatpnumhook}[1]{}

608 % \newlength{\cftbefore figureskip}
609 % \newlength{\cftfigureindent}
610 % \newlength{\cftfigurenumwidth}
611 \renewcommand*\cftfigurefont{}
612 \renewcommand*\cftfigurename{}
613 \renewcommand*\cftfigurepresnum{}
614 \renewcommand*\cftfigureaftersnum{}
615 \renewcommand*\cftfigureaftersnumb{}
616 \renewcommand*\cftfigureleader{}
617 \renewcommand*\cftfiguredotsep}{1}
618 \renewcommand*\cftfigurepagefont{}
619 \renewcommand*\cftfigureafterpnum{}
620 \renewcommand*\cftfigureformatpnum}[1]{}
621 \renewcommand*\cftfigureformatpnumhook}[1]{}

```

```
622 % \newlength{\cftbeforesubfigureskip}
623 % \newlength{\cftsubfigureindent}
624 % \newlength{\cftsubfigureenumwidth}
625 \newcommand*\cftsubfigurefont{}
626 \newcommand*\cftsubfigurename{}
627 \newcommand*\cftsubfigurepresnum{}
628 \newcommand*\cftsubfigureaftersnum{}
629 \newcommand*\cftsubfigureaftersnumb{}
630 \newcommand*\cftsubfigureleader{}
631 \newcommand*\cftsubfiguredotsep}{1}
632 \newcommand*\cftsubfigurepagefont{}
633 \newcommand*\cftsubfigureafterpnum{}
634 \newcommand*\cftsubfigureformatpnum}[1]{}
635 \newcommand*\cftsubfigureformatpnumhook}[1]{}

636 % \newlength{\cftbeforetableskip}
637 % \newlength{\cfttableindent}
638 % \newlength{\cfttableenumwidth}
639 \renewcommand*\cfttablefont{}
640 \renewcommand*\cfttablename{}
641 \renewcommand*\cfttablepresnum{}
642 \renewcommand*\cfttableaftersnum{}
643 \renewcommand*\cfttableaftersnumb{}
644 \renewcommand*\cfttableleader{}
645 \renewcommand*\cfttabledotsep}{1}
646 \renewcommand*\cfttablepagefont{}
647 \renewcommand*\cfttableafterpnum{}
648 \renewcommand*\cfttableformatpnum}[1]{}
649 \renewcommand*\cfttableformatpnumhook}[1]{}

650 % \newlength{\cftbeforesubtableskip}
651 % \newlength{\cftsubtableindent}
652 % \newlength{\cftsubtableenumwidth}
653 \newcommand*\cftsubtablefont{}
654 \newcommand*\cftsubtablename{}
655 \newcommand*\cftsubtablepresnum{}
656 \newcommand*\cftsubtableaftersnum{}
657 \newcommand*\cftsubtableaftersnumb{}
658 \newcommand*\cftsubtableleader{}
659 \newcommand*\cftsubtabledotsep}{1}
660 \newcommand*\cftsubtablepagefont{}
661 \newcommand*\cftsubtableafterpnum{}
662 \newcommand*\cftsubtableformatpnum}[1]{}
663 \newcommand*\cftsubtableformatpnumhook}[1]{}

664 \renewcommand*\booknumberline}[1]{}
665 \renewcommand*\partnumberline}[1]{}
666 \renewcommand*\chapternumberline}[1]{}
667 \renewcommand*\numberlinehook}[1]{}
668 % \renewcommand*\cftwhatismyname}{}%
669 \renewcommand*\booknumberlinehook}[1]{}
670 \renewcommand*\partnumberlinehook}[1]{}
671 \renewcommand*\chapternumberlinehook}[1]{}
672 \renewcommand*\numberlinebox}[2]{}
673 \renewcommand*\booknumberlinebox}[2]{}
674 \renewcommand*\partnumberlinebox}[2]{}

```

```

675 \renewcommand{\chapternumberlinebox}[2]{}
676 %
677 % \newlength{\cftparfillskip}
678 \renewcommand*\cftpagenumbersoff}[1]{}
679 \renewcommand*\cftpagenumberon}[1]{}
680 \renewcommand*\cftlocalchange}[3]{}
681 \renewcommand*\cftaddtitleline}[4]{}
682 \renewcommand*\cftaddnumtitleline}[4]{}
683 \renewcommand{\cftinsertcode}[2]{}
684 \renewcommand{\cftinserthook}[2]{}
685 \renewcommand{\settocpreprocessor}[2]{}
686 \DeclareRobustCommand{\cftpagenumbersoff}[1]{}
687 \DeclareRobustCommand{\cftpagenumberon}[1]{}

```

### § 587.11 Floats and captions

`\newfloat` [*(1: within)*] [*(2: type)*] [*(3: ext)*] [*(4: capname)*]

```

688 \RenewDocumentCommand{\newfloat}{o m m m}{%
689 \IfValueTF{#1}%
690 {\DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
691 {\DeclareFloatingEnvironment[fileext=#3,name={#4}]{#2}}%

```

`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.

```

692 \cslet{listof#2s}\relax%
693 \cslet{listof#2es}\relax%
694 }

```

`\newlistof` [*(within)*] [*(type)*] [*(ext)*] [*(listofname)*]

Emulated through the `\newfloat` mechanism. Note that `memoir` uses a different syntax than `tocloft` for the name.

```

695 \RenewDocumentCommand{\newlistof}{o m m m}
696 {%
697 \IfValueTF{#1}%
698 {\newlistentry[#1]{#2}{#3}{0}}%
699 {\newlistentry{#2}{#3}{0}}%
700 \@namedef{ext@#2}{#3}%
701 \ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
702 \setcounter{#3depth}{1}%
703 \@namedef{#3mark}{}%
704 \@namedef{#2}{\listof{#2}{#4}}%
705 \@namedef{@cftmake#3title}{}%
706 \ifundefined{cftbefore#3titleskip}{%
707 \expandafter\newlength\csname cftbefore#3titleskip\endcsname%
708 \expandafter\newlength\csname cftafter#3titleskip\endcsname%
709 }{}%
710 \@namedef{cft#3titlefont}{}%
711 \@namedef{cftafter#3title}{}%
712 \@namedef{cft#3prehook}{}%
713 \@namedef{cft#3posthook}{}%
714 }

```

715 \renewcommand{\setfloatadjustment}[2]{}

Borrowed from the lwarp version of keyfloat:

```

716 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{0{-1.2ex} m}
717 {% start
718 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}}{marginblock}%
719 \captionsetup{type=#2}%
720 }
721 {%
722 \endLWR@BlockClassWP%
723 }
724
725 \DeclareDocumentEnvironment{marginfigure}{o}
726 {\begin{KFLTmemoir@marginfloat}{figure}}
727 {\end{KFLTmemoir@marginfloat}}
728
729 \DeclareDocumentEnvironment{margintable}{o}
730 {\begin{KFLTmemoir@marginfloat}{table}}
731 {\end{KFLTmemoir@marginfloat}}

732 \renewcommand{\setmarginfloatcaptionadjustment}[2]{}
733 \renewcommand{\setmpjustification}[2]{}
734 \renewcommand*\setmpjustification{}
735 \renewcommand*\setfloatlocations}[2]{}
736 \DeclareDocumentCommand\suppressfloats{o}{}
737 \renewcommand*\FloatBlock{}
738 \renewcommand*\FloatBlockAllowAbove{}
739 \renewcommand*\FloatBlockAllowBelow{}
740 \renewcommand*\setFloatBlockFor{}
741
742 \renewcommand{\captiontitlefinal}[1]{}
743
744 \renewcommand{\flegtable}{\tablename}
745 \renewcommand{\flegfigure}{\figurename}
746 \renewcommand{\flegtocfigure}{}
747 \renewcommand{\flegtocfigure}{}
748
749
750 \renewcommand{\subcaption}[2][{}%
751 \ifblank{#1}{\subfloat[#2]}{\subfloat[#1][#2]}]%
752 }
753
754 \renewcommand{\contsubcaption}{\ContinuedFloat\subcaption}
755
756 \LetLtxMacro\subcaptionref\subref
757
758 \renewcommand*\tightsubcaptions{}
759 \renewcommand*\loosesubcaptions{}
760
761 \renewcommand*\subcaptionsize[1]{}
762 \renewcommand*\subcaptionlabelfont[1]{}
763 \renewcommand*\subcaptionfont[1]{}
764 \renewcommand*\subcaptionstyle[1]{}
765
766 \renewcommand*\hangsubcaption{}
767 \renewcommand*\shortsubcaption{}

```

```

768 \renewcommand*\normalsubcaption{}
769
770 \RenewDocumentEnvironment{sidecaption}{o m o}
771 {}
772 {%
773 \IfValueTF{#1}{\caption[#1]{#2}}{\caption{#2}}%
774 \IfValueT{#3}{\label{#3}}%
775 }
776
777 % \newlength{\sidecapwidth}
778 % \newlength{\sidecapsep}
779 \renewcommand*\setsidecaps}[2]{}
780 \renewcommand*\sidecapmargin}[1]{}
781 % \newif\ifscapmargleft
782 \scapmargleftfalse
783 \renewcommand*\setsidecappos}[1]{}
784
785 \RenewDocumentEnvironment{sidecontcaption}{m o}
786 {}
787 {%
788 \ContinuedFloat%
789 \caption{#1}%

```

Without \@capttype, the section is referred to instead.

```

790 \IfValueT{#2}{\label[\@capttype]{#2}}%
791 }

```

\sidenamedlegend does not appear to use the roc argument.

```

792 \renewenvironment{sidenamedlegend}[2][[]]{
793 \begin{center}
794 \@nameuse{\@capttype name}\CaptionSeparator#2
795 \end{center}
796 }
797 {}
798
799 \renewenvironment{sidelegend}[1]
800 {\begin{center}
801 #1
802 }
803 }
804 {\end{center}}
805
806 \renewcommand*\sidecapstyle{}
807 \renewcommand*\overridescapmargin}[1]{}
808 % \newlength{\sidecapraise}
809 \renewcommand*\sidecapfloatwidth}{\linewidth}
810
811 \LetLtxMacro\ctabular\tabular
812 \LetLtxMacro\endctabular\endtabular
813
814 \renewcommand{\autorows}[5][[]]{%
815 #5%
816 }

```

```

817
818 \renewcommand{\autocol}[5][]{%
819 #5%
820 }

```

## § 587.12 Page notes

```

821 \renewcommand*\feetabovelfloat{}
822 \renewcommand*\feetbelowfloat{}
823 \renewcommand*\feetatbottom{}
824
825 \renewcommand*\verbfootnote[2][]{%
826 \PackageError{lwarp, memoir}%
827 {Verbatim footnotes are not yet supported by lwarp.}%
828 {This may be improved some day.}%
829 }
830
831 \renewcommand*\plainfootnotes{}
832 \renewcommand*\twocolumnfootnotes{}
833 \renewcommand*\threecolumnfootnotes{}
834 \renewcommand*\paragraphfootnotes{}
835 \renewcommand*\footfudgefiddle{}
836
837 \renewcommand*\newfootnoteseries[1]{%
838 \PackageError{lwarp, memoir}%
839 {Memoir footnote series are not yet supported by lwarp.}%
840 {This may be improved some day.}%
841 }
842
843 \renewcommand*\plainfootstyle[1]{}
844 \renewcommand*\twocolumnfootstyle[1]{}
845 \renewcommand*\threecolumnfootstyle[1]{}
846 \renewcommand*\paragraphfootstyle[1]{}
847
848 \renewcommand*\footfootmark{}
849 \renewcommand*\footmarkstyle[1]{}
850
851 % \newlength{\footmarkwidth}
852 % \newlength{\footmarksep}
853 % \newlength{\footparindent}
854
855 \renewcommand*\foottextfont{}
856
857 \renewcommand*\marginparmargin[1]{}
858 \renewcommand*\sideparmargin[1]{}
859
860 \LetLtxMacro\sidepar\marginpar
861 \renewcommand*\sideparfont{}
862 \renewcommand*\sideparform{}
863 \LWR@providelength{\sideparvshift}
864
865 \renewcommand*\parnopar{}
866
867 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
868 \renewcommand*\sidebarmargin[1]{}

```

```

869 \renewcommand*\sidebarfont{}
870 \renewcommand*\sidebarform{}
871 % \newlength{\sidebarhsep}
872 % \newlength{\sidebarvsep}
873 % \newlength{\sidebarwidth}
874 % \newlength{\sidebartopsep}
875 \renewcommand{\setsidebarheight}[1]{}
876 \renewcommand*\setsidebars[6]{}
877 \renewcommand*\footnotesatfoot{}
878 \renewcommand*\footnotesinmargin{}
879
880 \LetLtxMacro\sidefootnote\footnote
881 \LetLtxMacro\sidefootnotemark\footnotemark
882 \LetLtxMacro\sidefootnotetext\footnotetext
883
884 \renewcommand*\sidefootmargin[1]{}
885 % \newlength{\sidefoothsep}
886 % \newlength{\sidefootvsep}
887 % \newlength{\sidefootwidth}
888 % \newlength{\sidefootadjust}
889 % \newlength{\sidefootheight}
890 \renewcommand*\setsidefootheight[1]{}
891 % \renewcommand*\sidefootfont{}% in docs but not in the package
892 \renewcommand*\setsidefeet[6]{}
893 \renewcommand*\sidefootmarkstyle[1]{}
894 \renewcommand*\sidefoottextfont{}
895 \renewcommand*\sidefootform{}
896
897 \renewcommand*\continuousnotenums{\pncontopttrue}% from pagenote
898 \renewcommand*\notepageref{}
899 \renewcommand*\prenotetext{}
900 \renewcommand*\postnotetext{}
901 \renewcommand*\idtextinnotes[1]{}
902 \renewcommand*\printpageinnotes[1]{}
903 \renewcommand*\printpageinnoteshyperref[1]{}
904 \renewcommand*\foottopagenote{}
905 \renewcommand*\pagetofootnote{}

```

### § 587.13 **Decorative text**

```

906 \renewcommand*\epigraphposition[1]{}
907 \renewcommand*\epigraphtextposition[1]{}
908 \renewcommand*\epigraphsourceposition[1]{}
909 \renewcommand*\epigraphfontsize[1]{}
910 \renewcommand*\epigraphforheader[2]{}
911 \renewcommand*\epigraphpicture{}

```

### § 587.14 **Poetry**

```

912 \renewcommand*\vinphantom{}
913 \renewcommand*\vleftofline[1][#1]
914 % \let\linenumberfrequency\poemlines
915 % \renewcommand*\linenumberfont[1]{}
916
917 \DeclareDocumentCommand{\PoemTitle}{s o m}{%

```

```

918 \IfValueTF{#2}%
919 {\poemtitle[#2]{#4}}%
920 {\poemtitle{#4}}%
921 }
922
923 \renewcommand*\NumberPoemTitle{}
924 \renewcommand*\PlainPoemTitle{}
925 \renewcommand*\poemtitlepstyle{}
926 \renewcommand*\poemtitlestarmark}[1]{}
927 \renewcommand*\poemtitlestarpstyle{}
928 \renewcommand*\PoemTitleheadstart{}
929 \renewcommand*\printPoemTitlenonum{}
930 \renewcommand*\printPoemTitlenum{}
931 \renewcommand*\afterPoemTitlenum{}
932 \renewcommand*\printPoemTitletitle}[1]{}
933 \renewcommand*\afterPoemTitle{}
934 \newlength{\midpoemtitleskip}
935 \renewcommand*\PoemTitlenumfont{}
936 \renewcommand*\PoemTitlefont{}

```

### § 587.15 **Boxes, verbatims and files**

```

937 \renewenvironment{qframe}{\framed}\endframed}
938 \renewenvironment{qshade}{\shaded}\endshaded}

```

Use the comment package:

```

939 \renewcommand*\commentsoff}[1]{\includecomment{#1}}
940 \renewcommand*\commentson}[1]{\excludecomment{#1}}
941 \LetLtxMacro\renewcomment\commentson
942
943 \renewcommand*\setverbatimfont}[1]{}
944 \renewcommand*\tabson}[1]{}
945 \renewcommand*\tabsoff{}
946 \renewcommand*\wrappingon{}
947 \renewcommand*\wrappingoff{}
948 \renewcommand*\verbatimindent{}
949 \renewcommand*\verbatimbreakchar}[1]{}

```

950 \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.

```

951 \renewcommand*\bvbox{}
952 \renewcommand*\bvtopandtail{}
953 \renewcommand*\bvside{}
954 \renewcommand*\nobvbox{}
955 % \newlength\bvboxsep
956 \renewcommand*\bvtoprulehook{}
957 \renewcommand*\bvtopmidhook{}
958 \renewcommand*\bvendrulehook{}
959 \renewcommand*\bvleftsidehook{}
960 \renewcommand*\bvrightsidehook{}
961 \renewcommand*\bvperpagetrue{}

```

```

962 \renewcommand*\bvperpagefalse{}
963 \renewcommand{\bvtopofpage}[1]{}
964 \renewcommand{\bvendofpage}[1]{}
965 \renewcommand*\linenumberfrequency[1]{}
966 \renewcommand*\resetbvlinenumber{}
967 \renewcommand*\setbvlinenums[2]{}
968 \renewcommand*\linenumberfont[1]{}
969 \renewcommand*\bvnumbersinside{}
970 \renewcommand*\bvnumbersoutside{}

```

## § 587.16 Cross referencing

```

971 \renewcommand*\fref[1]{\cref{#1}}
972 \renewcommand*\tref[1]{\cref{#1}}
973 \renewcommand*\pref[1]{\cpageref{#1}}
974 \renewcommand*\Aref[1]{\cref{#1}}
975 \renewcommand*\Bref[1]{\cref{#1}}
976 \renewcommand*\Pref[1]{\cref{#1}}
977 \renewcommand*\Sref[1]{\cref{#1}}
978 \renewcommand*\figurerefname{Figure}
979 \renewcommand*\tablerefname{Table}
980 \renewcommand*\pagerefname{page}
981 \renewcommand*\bookrefname{Book~}
982 \renewcommand*\partrefname{Part~}
983 \renewcommand*\chapterrefname{Chapter~}
984 \renewcommand*\sectionrefname{\S}
985 \renewcommand*\appendixrefname{Appendix~}
986 \LetLtxMacro\titleref\nameref
987 \renewcommand*\headnameref{}
988 \renewcommand*\tocnameref{}
989
990 \providecounter{LWR@currenttitle}
991
992 \renewcommand*\currenttitle{%
993 \addtocounter{LWR@currenttitle}{1}%
994 \label{currenttitle\arabic{LWR@currenttitle}}%
995 \nameref{currenttitle\arabic{LWR@currenttitle}}%
996 }
997
998 \renewcommand*\theTitleReference[2]{}
999 \renewcommand*\namerefon{}
1000 \renewcommand*\namerefoff{}

```

## § 587.17 Back matter

Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.

```

1001 \AtBeginDocument{
1002
1003 \def\@@wrindexhyp#1||\{\%
1004 \addtocounter{LWR@autoindex}{1}%
1005 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
1006 % \ifshowindexmark\showidx{#1}\fi
1007 \protected@write\@auxout{}%

```

```

1008 {\string\@wrintexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%
1009 \endgroup
1010 \@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.

```

1011 \def\@wrspindexhyp#1||\{\%
1012 \addtocounter{LWR@autoindex}{1}%
1013 \LWR@new@Label{LWRindex-\arabic{LWR@autoindex}}%
1014 % \ifshowindexmark\@showidx{#1}\fi
1015 \protected@write\@auxout{\%
1016 {\%
1017 % \string\@wrintexm@m{\@idxfile}{#1}{\@nameuse{the\@sptheid}}%
1018 \string\@wrintexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}%
1019 }%
1020 \endgroup
1021 \@esphack}%
1022
1023 }% \AtBeginDocument

```

Patched to use `_html` filename and `\BaseJobname`:

```

1024 \catcode'_ =12%
1025 \renewcommand*\makeindex}[1][\BaseJobname]{%
1026 \if@filesw
1027 \def\gindex{\@bsphack%
1028 \@ifnextchar [{\@index} {\@index[\BaseJobname]} }
1029 \def\specialindex{\@bsphack\@spindex}%
1030 \makememindexhook
1031 \expandafter\newwrite\csname #1@idxfile\endcsname
1032 \expandafter\immediate\openout \csname #1@idxfile\endcsname #1_html.idx\relax
1033 \typeout{Writing index file #1_html.idx }%
1034 \fi}
1035 \catcode'_ =8%

```

Patched to use `_html` filename and `\BaseJobname`. This will later be patched by the **lwarp** core.

```

1036 \catcode'_ =12%
1037 \renewcommand{\printindex}[1][\BaseJobname]{\input@{#1_html.ind}}
1038 \catcode'_ =8%

1039 \DeclareDocumentCommand{\newblock}{}{}
1040 %
1041 \renewcommand*\showindexmarks{}
1042 \renewcommand*\hideindexmarks{}
1043
1044 \renewcommand*\xindyindex{}

```

§ 587.18 **Miscellaneous**

```

1045 \renewcommand*\changemarks{}
1046 \renewcommand*\nochangemarks{}
1047 \renewcommand*\added[1]{}
1048 \renewcommand*\deleted[1]{}
1049 \renewcommand*\changed[1]{}
1050
1051 \renewcommand*\showtrimsoff{}
1052 \renewcommand*\showtrimson{}
1053 \renewcommand*\trimXmarks{}
1054 \renewcommand*\trimLmarks{}
1055 \renewcommand*\trimFrame{}
1056 \renewcommand*\trimNone{}
1057 \renewcommand*\trimmarkscolor{}
1058 \renewcommand*\trimmarks{}
1059 \renewcommand*\tmarktl{}
1060 \renewcommand*\tmarktr{}
1061 \renewcommand*\tmarkbr{}
1062 \renewcommand*\tmarkbl{}
1063 \renewcommand*\tmarktm{}
1064 \renewcommand*\tmarkmr{}
1065 \renewcommand*\tmarkbm{}
1066 \renewcommand*\tmarkml{}
1067 \renewcommand*\trimmark{}
1068 \renewcommand*\quarkmarks{}
1069 \renewcommand*\registrationColour[1]{}
1070
1071 \renewcommand*\leavespergathering[1]{}
1072
1073 \renewcommand*\noprelistbreak{}
1074
1075 \renewcommand*\cleartorecto{}
1076 \renewcommand*\cleartoverso{}
1077
1078 \renewenvironment{vplace}[1][1]{}{}

```

§ 587.19 **caption emulation**

```

1079 \renewcommand*\captiondelim[1]{\renewcommand*\CaptionSeparator}{#1}}
1080 \renewcommand*\captionnamefont[1]{}
1081 \renewcommand*\captiontitlefont[1]{}
1082 \renewcommand*\flushleftright{}
1083 \renewcommand*\centerlastline{}
1084 \renewcommand*\captionstyle[2][1]{}
1085 \DeclareDocumentCommand\captionwidth{m}{}
1086 \renewcommand*\changecaptionwidth{}
1087 \renewcommand*\normalcaptionwidth{}
1088 \renewcommand*\hangcaption{}
1089 \renewcommand*\indentcaption[1]{}
1090 \renewcommand*\normalcaption{}
1091 \renewcommand*\precaption[1]{}
1092 \renewcommand*\postcaption[1]{}
1093 \renewcommand*\midbication[1]{}
1094 \renewcommand*\contcaption[1]{%
1095 % \ContinuedFloat%

```

```

1096 % \caption{#1}%
1097 \begin{LWR@figcaption}% later becomes \caption*
1098 \LWR@isolate{\@nameuse{\@capttype name}}~%
1099 \thechapter.\the\value{\@capttype}\CaptionSeparator\LWR@isolate{#1}%
1100 \end{LWR@figcaption}%
1101 }

1102 \newlength{\abovelegendskip}
1103 \setlength{\abovelegendskip}{0.5\baselineskip}
1104 \newlength{\belowlegendskip}
1105 \setlength{\belowlegendskip}{\abovelegendskip}

```

The extra `\\` here forces a `<br>` in HTML when `\legend` is used in a `\marginpar`.

```

1106 \renewcommand{\legend}[1]{\begin{center}#1\\end{center}}
1107
1108 \renewcommand{\namedlegend}[2][]{%
1109 \begin{center}
1110 \nameuse{fleg\@capttype}\CaptionSeparator#2\\
1111 \end{center}
1112 \@nameuse{flegtoc\@capttype}{#1}
1113 }
1114
1115 \renewcommand{\newfixedcaption}[3][\caption]{%
1116 \renewcommand{#2}{\def\@capttype{#3}#1}}
1117 \renewcommand{\renwfixedcaption}[3][\caption]{%
1118 \renewcommand{#2}{\def\@capttype{#3}#1}}
1119 \renewcommand{\providfixedcaption}[3][\caption]{%
1120 \providecommand{#2}{\def\@capttype{#3}#1}}
1121
1122 \renewcommand{\bitwonumcaption}[6][]{%
1123 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1124 \addtocounter{\@capttype}{-1}%
1125 \begingroup%
1126 \csdef{\@capttype name}{#4}%
1127 \ifblank{#5}{\caption{#6}}{\caption[#5]{#6}}%
1128 \endgroup%
1129 \ifblank{#1}{}\{\label{#1}}}%
1130 }
1131
1132 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo
1133
1134 \renewcommand{\bicaption}[5][]{%
1135 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1136 \begin{LWR@figcaption}% later becomes \caption*
1137 \LWR@isolate{#4} % space
1138 \thechapter.\the\value{\@capttype}\CaptionSeparator\LWR@isolate{#5}%
1139 \end{LWR@figcaption}%
1140 \ifblank{#1}{}\{\label{#1}}}%
1141 }
1142
1143 \renewcommand{\bicontcaption}[3]{%
1144 \contcaption{#1}%
1145 \begingroup%
1146 \csdef{\@capttype name}{#2}%
1147 \contcaption{#3}%

```

```

1148 \endgroup%
1149 }

1150 % only in ccaption, not in memoir:
1151 % \LetLtxMacro\longbitwonumcaption\bitwonumcaption%
1152 % \LetLtxMacro\longbionenumcaption\bitwonumcaption%
1153 % \LetLtxMacro\longbicaption\bicaption%
1154
1155 \RenewDocumentCommand{\subtop}{O{} O{} m}{%
1156 \subfloat[#1][#2]{#3}%
1157 }
1158
1159 \RenewDocumentCommand{\subbottom}{O{} O{} m}{%
1160 \subfloat[#1][#2]{#3}%
1161 }
1162
1163 \renewcommand{\contsubtop}{%
1164 \ContinuedFloat\addtocounter{\@captype}{1}%
1165 \subtop%
1166 }
1167
1168 \renewcommand{\contsubbottom}{%
1169 \ContinuedFloat\addtocounter{\@captype}{1}%
1170 \subbottom%
1171 }
1172
1173 \renewcommand{\subconcluded}{}
1174
1175 \let\contsubtable\contsubtop
1176 \let\contsubfigure\contsubbottom

1177 \newcommand{\newfloatentry}[4][\@empty]{TODO: newfloatentry}
1178 \newcommand{\newfloatlist}[5][\@empty]{TODO: newfloatlist}
1179 \newcommand{\newfloatenv}[4][\@empty]{TODO: newfloatenv}
1180 \DeclareRobustCommand{\newfloatpagesoff}[1]{}
1181 \DeclareRobustCommand{\newfloatpageson}[1]{}
1182 \newcommand{\setnewfloatindents}[3]{}

```

## § 587.20 Final patchwork

```

1183 \newlistof{tableofcontents}{toc}{\contentsname}
1184 \newlistof{listoffigures}{lof}{\listfigurename}
1185 \newlistof{listoftables}{lot}{\listtablename}

```

---

File 488 **lwarp-common-multimedia.sty**

§ 588 Package **common-multimedia**

Pkg lwarp-common-multimedia 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 `addressource=`, 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{lwarp-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@printsiz`

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@printsiz}{%
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 L<sup>A</sup>T<sub>E</sub>X 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]%

```

The container <div> is sized as desired.

```

33 \ifstrequal{#3}{audio}{%
34 \begin{BlockClass}{AVviewport}
35 }{%
36 \begin{BlockClass}[\LWR@multimedia@printsizel margin:auto]{AVviewport}
37 }

```

Paragraph tags are unnecessary for the A/V tags.

```

38 \LWR@stoppars

```

The A/V element is 100% of the container.

```

39 \LWR@htmltag{%
40 #3\ % space
41 \ifstrequal{#3}{audio}{}{%
42 width=\textquotedbl{}100%\textquotedbl\ % space
43 height=\textquotedbl{}100%\textquotedbl\ % space
44 }%
45 controls%
46 }\LWR@orignewLine

```

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 \href{\LWR@parsedfilename}{#1}
54 \LWR@stoppars
```

Finish.

```
55 \LWR@htmltag{/#3}\LWR@orignewline
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 \ifstrequal{#3}{audio}{%
65 \begin{BlockClass}{AVviewport}
66 }{%
67 \begin{BlockClass}[\LWR@multimedia@printsizel\ margin:auto]{AVviewport}
68 }
```

Paragraph tags are unnecessary for the A/v tags.

```
69 \LWR@stoppars
```

The A/v element is 100% of the container.

```
70 \LWR@htmltag{%
71 #3\ % space
72 \ifstrequal{#3}{audio}{%
73 width=\textquotedbl{}100%\textquotedbl\ % space
74 height=\textquotedbl{}100%\textquotedbl\ controls%
75 }%
76 }\LWR@orignewline
```

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 \href{#2}{#1}
83 \LWR@stoppars
```

Finish.

```
84 \LWR@htmltag{/#3}\LWR@orignewline
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@b`.

`\LWR@multimedia@percenterror`

```
108 \newcommand*\LWR@multimedia@percenterror{%
109 \PackageError{lwarp-media9}
110 {%
111 Do not use a percent comment
112 between\MessageBreak
113 \protect\includemedia\space arguments%
114 }
115 {Percent is changed to a regular character to allow its use inside a URL.}
116 }
```

`\LWR@multimedia@b` [*<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.

```
117 \newcommand*\LWR@multimedia@b[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.

```
118 \if#1\@percentchar\LWR@multimedia@percenterror\fi%
119 \if#2\@percentchar\LWR@multimedia@percenterror\fi%
```

```
120 \if#3\@percentchar\LWR@multimedia@percenterror\fi%
```

Paragraph handling:

```
121 \LWR@stoppars%
```

Record the desired size.

```
122 \setlength{\LWR@multimedia@width}{0pt}%
123 \setlength{\LWR@multimedia@height}{0pt}%
124 \setkeys*LWR@multimedia}{#1}%
```

If a known A/V type, create an HTML5 <video> or <audio>.

```
125 \IfEndWith{#3}{.mp4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
126 \IfEndWith{#3}{.MP4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
127 \IfEndWith{#3}{.mp3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%
128 \IfEndWith{#3}{.MP3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%
```

If an arbitrary URL, embed it.

```
129 \IfBeginWith{#3}{http}{\LWR@multimedia@embed{#2}{#3}}{%
130 \IfBeginWith{#3}{HTTP}{\LWR@multimedia@embed{#2}{#3}}{%
131 \IfBeginWith{#3}{ftp}{\LWR@multimedia@embed{#2}{#3}}{%
132 \IfBeginWith{#3}{FTP}{\LWR@multimedia@embed{#2}{#3}}{%
```

If unknown, create a link to it.

```
133 \href{#3}{#2}% unknown format
134 }}}}}}}%
```

Paragraph handling:

```
135 \LWR@startpars%
136 \endgroup%
137 }
```

Catcodes which may appear in a URL.

```
138 \newrobustcmd*LWR@multimedia}{%
139 \begingroup%
140 \LWR@linkmediacatcodes%
141 \LWR@multimediaab%
142 }
```

# Change History

## § 589 Chg Hist

For the most recent changes, see page 1171.

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| v0.10 | General: 2016/03/08 Initial version . . . 1                                        | Test Suite: Assigned cleveref name for Test Float. . . . . 1 |
| v0.11 | General: 2016/03/11 . . . . . 1                                                    | Test Suite: Floatrow . . . . . 1                             |
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|       | Test Suite: MS-WINDOWS in README.txt . . . . . 1                                   |                                                              |
|       | Test Suite: limages and index in README.txt . . . . . 1                            |                                                              |
| v0.12 | \LWR@newhtmlfile: Bugfix: toc with numbered files. . . . . 370                     |                                                              |
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|       | Global: Uses \p@(type) in float captions. . . . . 1                                |                                                              |
|       | Test Suite: Sub-figures . . . . . 1                                                |                                                              |
| v0.13 | \CaptionSeparator: Fix for newer babel package. . . . . 493                        |                                                              |
|       | \LWR@LwarpStart: \up and \fup . . . 388                                            |                                                              |
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|       | Removed package: subfig . . . . . 1                                                |                                                              |
|       | Test Suite: Ordinals, Subcaption . . . 1                                           |                                                              |
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|       | Docs: Added warning icons for items needing special attention. 198                 |                                                              |
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|       | Fix: steps counter . . . . . 758                                                   |                                                              |
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|       | Test Suite: test_suite_formal.css file added. . . . . 1                            |                                                              |
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| graphics: Fix: \linewidth, \textwidth, \textheight inside a minipage. . . . . | 785  | multirow: Added optional args. . . . .                                           | 881  |
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# General Index

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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.

Entries with higher page numbers are often duplicates of entries with lower page numbers, as the same warning may occur within the user manual and again within the source code for a given package.

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