

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.

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 `perltex` and `pythontex`. A `texlua` script automates compilation, index, glossary, and batch image processing, and also supports `latexmk`. Configuration is semi-automatic at the first manual compile. Support files are self-generated. Print and HTML versions of each document may coexist.

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

Requirements include the commonly-available POPPLER utilities (included with 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.

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).

LuaTeX: Combining the pdfT_EX engine and the Lua language.

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 1073.

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”)	<code>\ImageAltText</code>
<code>\mathimagenam</code>	<code>\MathImageAltText</code>
<code>\pacakgediagramname</code>	<code>\PackageDiagramAltText</code>

- Added `\ImageAltText` for the default HTML alt text for an image. See section 7.6.
- Added `\ThisAltText`, which may be used to assign a one-time HTML alt tag to the very next image generated by `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 qcircuit.
- 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 325.
 - changes: Updated to v3.1.2.
 - Added `autonum`, `changelayout`, `inputtrc`, `mathtools`, `metalogox`.

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`, `tascmac`.
 - 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 \LaTeX `\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, drafftfigure, 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 **pdf \LaTeX 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 8.6.13.
- 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 8.6.19.

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\lchar`. 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
<code>xdyFilename</code>	<code>xindyStyle</code>
<code>IndexLanguage</code>	<code>xindyLanguage</code>
–	<code>xindyCodepage</code>
–	<code>pdftotextEnc</code>

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

floats 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 `$$`, 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, fmlinen, 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, \crr, \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: svgmath 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 scrlltr2, scrjura).
- 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 *pdflatex*, 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:

- Docs: Reorganized HTML customization, added an HTML settings table. See section 7.6.
- footnotes
 - 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 T_EX!
- word-processor conversion
 - Added T_EX development support page. (See page 2.)
 - 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

overpic

math

symbols

load order

- Add: tabbing environment.
- Add: overpic package. See section 360.
- Fix: Text copy/paste of \mathcal{AMS} math environment numbers and names.
- Improved `\ensuremath`.
- `MATHJAX` with `siunitx`: Updated script and documentation.
- `textcomp`: Improved `\textinterrobangdown`.
- `realscripts`: Fix for subscripts in a `lateximage`.
- `morewrites`: Enforces loading before `lwarp`.

v0.41:

tabular

⚠ new syntax

- Added tabular vertical rules, subject to some limitations. See the rules section of section 8.10.1.
- Improved `booktabs`: Width and trim are honored.
- 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 339.2 on page 832.
- 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

`\includegraphics` path

⚠ image file extensions

bigdelim

symbols

fixes

margins

columns

footnotes

tabular

sectioning

- `graphics` and `graphicx` have been moved from the `lwarp` core, and are only loaded if requested with `\usepackage`.
- 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 139.
- Improved `LATEX` and `textcomp` symbols.
- Fix for `LATEX` logos and `\InlineClass`, etc. inside a `lateximage`.
- Fix for `xltextra` with `XƎLATEX`.
- Fixes for `tocbibind` with `\simplechapter`, etc.
- Fixes for `\multicolumnrow` and `\nullfonts` with older versions of `multirow` and `xparse`.
- Added `\underline`.
- Added `adjmulticol`.
- Added `cuted`, `midfloat`.
- Added `pfnote`, `fnpos`, `dblfnote`.
- Added `stabular`, `tabls`.
- 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 339.2.
- 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.

- 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:

⚠ HTML setup changes.

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>lwarpmklang</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 [8.6.20](#).
- 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: `lwarpmklang` 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

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

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 _Ǝ 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 . CJKpunct , 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 , plextcolorobl , 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, pdfcrypt, pdfprivacy, preview, ragged2e , 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 , 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>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> : \mathcal{AMS} 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>autonum</code> , <code>backnaur</code> , <code>bm</code> , <code>braket</code> , <code>breqn</code> , <code>cases</code> , <code>delarray</code> , <code>guass</code> , <code>jkmath</code> , <code>mathspec</code> , <code>mathtools</code> , <code>nicematrix</code> , <code>pb-diagram</code> , <code>resizegather</code> , <code>unicode-math</code> , <code>xfakebold</code> , <code>xy</code> . Many others work as-is.
Display math with <code>\displaymath</code> or <code>\other</code> :	Complicated math objects in display math, such as <code>tikz-cd</code> , etc.
Units and fractions:	<code>nicefrac</code> , <code>Slunits</code> , <code>siunitx</code> , <code>units</code> , <code>unitsdef</code> , <code>xfrac</code> .
Floats:	Appear where declared. <code>capt-of</code> , <code>caption</code> , <code>cutwin</code> , <code>dblfloatfix</code> , <code>endfloat</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> .
Tabular:	tabular environment, <code>array</code> , <code>arydshln</code> , <code>bigdelim</code> , <code>booktabs</code> , <code>colortbl</code> , <code>ctable</code> , <code>diagbox</code> , <code>longtable</code> , <code>ltablex</code> , <code>ltxtable</code> , <code>multirow</code> , <code>supertabular</code> , <code>tabularx</code> , <code>tabulary</code> , <code>threeparttable</code> , <code>threeparttablex</code> , <code>xltabular</code> , <code>xtab</code> .

lwarp Supported Functions — continued

Category	Status
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>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>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> .
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>pdfrender</code> , <code>realscripts</code> , <code>resize</code> , <code>scalefnt</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> .

lwarp Supported Functions — continued

Category	Status
Text ligatures:	Ligatures for symbols are supported. Ligatures for f, q, t are intentionally turned off because many simpler browsers do not display them correctly. Modern full-featured browsers re-create these ligatures on-the-fly.
Horizontal space:	HTML output for thin-unbreakable, unbreakable, \enskip, \quad, \qqquad, \hspace.
Rules:	\rule with width, height, raise, text color.
HTML reserved characters:	\&, \textless, and \textgreater are converted to HTML entities.
Fonts:	Used as-is. Appear in svg math expressions or embedded image environments. fontaxes , nfssect-cfr , slantsc , tabfigures . Tested to work as-is: Special font macros in cfr-lm and others which use nfssect-cfr .
Symbols:	Native L ^A T _E X diacriticals, academicons , bbding , chemgreek , dingbat , euro , eurosymb , fontawesome , fontawesome5 , gensymb , marvosymb , metalogo , metalogox , pifont , textalpha , textcomp , textgreek , typicons , xunicode .
Files:	attachfile , attachfile2 , hyperxmp , inputtrc , intopdf , pdfpages , pdfx , xmpincl .
Science and engineering:	algorithm2e , algorithmicx , ar , askmaps , axodraw2 , bitpattern , blochsphere , bodegraph , bohr , bytefield , chemfig , chemformula , chemgreek , chemmacros , chemnum , circuitikz , elements , engtlc , fast-diagram , hepnicenames , heppenames , karnaughmap , karnaugh-map , listings , linop , mhchem , pgfgantt , phfqit , physics , qcircuit , register , simpler-wick , slashed , structmech , struktex , tikz-karnaugh , tikzcodeblocks
Arts and humanities:	foreign , forest , lyluatex , musicography , nameauth , octave , phonrule , piano , schemata , semantic-markup , tikz-dependency , vowel , xpiano
Admonitions:	notes .
Editorial:	changebar , changelog , changes , easy-todo , easyReview , ed , errata , fixme , fixmetodonotes , pdfcomment , pdfmarginpar , todo , todonotes , tram , xexchangebar .

lwarp Supported Functions — continued

Category	Status
Accessibility:	accsupp, axessibility.
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 <code>calc</code> , <code>fileerr</code> , <code>somedefs</code> , <code>trace</code> , <code>xspace</code> . 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 **LaTeXML**: <http://dlmf.nist.gov/LaTeXML/>
Prog Plastex **PlasTeX**: <https://github.com/tiarno/plastex>
Prog LaTeX2HTML **LaTeX2HTML**: <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 L^AT_EX to HTML conversion. In most cases, these will be available via the standard package-installation tools.

Detailed installation instructions follow.

Table 3: Required software programs

Provided by your L^AT_EX distribution:

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

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

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.

***lua_ltex*:** 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 TeX Live or MiKTeX system you may use

```
Enter ⇒ kpsewhich lwarpmk.lua
```

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

4. Create *lwarpmk*:

Unix: Create a symbolic link and make it executable:

- (a) Locate the TeX Live binaries:

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

This will be something like:

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

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

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

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

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

```
Enter ⇒ ln -s <pathto>lwarpmk.lua lwarpmk
```

- (c) Make the link executable:

```
Enter ⇒ chmod 0755 lwarpmk
```

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

- (a) Locate the TeX Live binaries as shown above for UNIX.
- (b) In the binaries directory, make a *copy* of `runscript.exe` and call it `lwarpmk.exe`. This will call the copy of `lwarpmk.lua` which is in the `scripts` directory of the distribution.

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

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

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

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

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

```
texlua "C:\Program Files\MiKTeX 2.9\scripts\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 programs' version is displayed, then that utility is already installed. See table 3 on page 74.

```
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 74.
2. Download and extract the POPPLER utilities *pdftotext*, *pdfseparate*, and *pdfseparate* to a directory, such as Poppler.
3. In the **Start** window, type "Path" to search for results related to Path. Or, open the control panel and search for "Path".
4. Choose **Edit the system environment variables** in the control panel.
5. Choose the **Environment Variables** button.
6. Choose the **Path** variable, then the **Edit** button.
7. Choose the **New** button to make an additional entry.
8. Enter the bin directory of the POPPLER utilities, such as:

```
C:\Users\<myname>\Desktop\Poppler\poppler-0.5_x86\poppler-0.5\bin
```

Be sure to include \bin.

9. Click **Ok** when done.

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. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A [Troubleshooting](#) section is also available.

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.txt`

This should be in the `doc/latex/lwarp/` directory along with this PDF documentation. Copy `lwarp_tutorial.txt` 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 8.6.11.

⁷Also see section 8.6.14 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 8.6.11.

¹¹Also see section 8.6.14 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 ⇒ lwarpmk limages
```

```
Enter ⇒ lwarpmk html
```

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

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 T_EX 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 L_ATeX

Traditional DVI L_ATeX 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 [8.6.10](#).

5.11.2 `glossaries` package

To process the glossary for the print version:

```
Enter ⇒ lwarpmk printglossary
```



(If `makeglossaries` is not found, see section [8.6.11](#).)

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 [8.6.11](#) 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

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 html -p project_b
```

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](#).

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`, and/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) Possible option clashes with `memoir`. See section 8.13.
- (e) If using indexes, see section 8.6.14.
- (f) If using many indexes, glossaries, `.aux` files, etc., see section 8.6.14 regarding `morewrites`. If `morewrites` is already used, be sure to add the setup with `allocate=10`.
- (g) 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. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A [Troubleshooting](#) section is also available.

⚠ [math in section names](#)

⚠ [scale](#)

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.

`\sitetocname`: Displayed at the head of the sidetoc.

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 8.6.20.

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

⚠ `pdflatex`

⚠ `DVI latex`

Pkg `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](#) and [lualatex](#) \XeTeX and \LuaTeX 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 \XeTeX or \LuaTeX :

Pkg `fontspec`

- `fontspec` and font choices

[ligatures](#)

`lwarp` sets the following to turn off \TeX 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:

File `glyphtounicode.tex`

- i. `\input glyphtounicode.tex`
- ii. `\input glyphtounicode-cmr.tex`% from the `pdfx` package
- iii. `\pdfgentounicode=1`

- | | | |
|-----|----------|--|
| Pkg | cmap | (f) Another option to assist with the PDF-HTML conversion: |
| | | – \usepackage{cmap} |
| Pkg | textcomp | (g) \usepackage{textcomp} |

3. \usepackage{lwarp} (section 7.5) goes 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`.
5. \setmonofont{TeX Gyre Cursor} or similar may be required if using X_YL^AT_EX or Lua^AT_EX 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.

⚠ **fontspec with traditional font packages**

⚠ **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 Default: false	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.
Opt dvips Default: false	dvips: Tells <i>lwarpmk</i> to use <i>dvips</i> and <i>ps2pdf</i> to convert DVI output to PDF.
Opt dvipdfm Default: false	dvipdfm: Tells <i>lwarpmk</i> to use <i>dvipdfm</i> to convert DVI output to PDF.
Opt dvipdfmx Default: false	dvipdfmx: Tells <i>lwarpmk</i> to use <i>dvipdfmx</i> to convert DVI output to PDF.
Opt HomeHTMLFilename Default: {}	HomeHTMLFilename: See section 7.6.
Opt HTMLFilename Default: {}	HTMLFilename: See section 7.6.
Opt ImagesName Default: image-	ImagesName: The prefix for the images automatically generated by lwarp for objects such as SVG math and lateximages.
Opt ImagesDirectory Default: \jobname-images	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>.
Opt PrintLatexCmd Default: <automatic>	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> .
Opt HTMLLatexCmd Default: <automatic>	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> .
Opt makeindex Default: makeindex	makeindex: Sets PrintIndexCmd, HTMLIndexCmd, and LatexmkImageCmd to use <i>makeindex</i>

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 8.6.14) and glossaries (section 8.6.11):	
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 8.6.14.
 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 8.6.14.
 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 8.6.14.

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 8.6.11.

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`

filename underscores

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

`\item [\href{file_name.pdf}{text}] \`

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

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.

Ctrl `tocdepth` **tocdepth:** Sectioning depth of the table of contents. See section 16 for a list of \LaTeX stack depths.

Ctrl `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.

`\sidedotocname`
Default: Contents

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

Ctrl `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: `{\language}` 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` **\AltTextOpen:** Redefine with `\renewcommand`.

Default: (`\AltTextClose`
Default:) **\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>{\langle contents \rangle}</code> A macro version of the warpprint environment.
	<code>\warpHTMLonly</code>	\warpHTMLonly: <code>{\langle contents \rangle}</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` `{\langle filename \rangle}`
 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	
Opt	OSWindows	When detected or specified, the operating-system path separator used by <code>lwarp</code> is modified, and the boolean <code>usingOSWindows</code> is set <code>true</code> . This boolean may be tested by the user for later use.

7.9 Selecting actions for print or HTML 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.

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.

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` `{\langle title \rangle}`

⚠ **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` `{\langle author \rangle}`

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` `{\langle date \rangle}`

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

`\thanks` `{\langle text \rangle}`

`\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` `{\langle A description of the web page. \rangle}`
 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 \LaTeX 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. The [Index of Objects](#) contains automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A [Troubleshooting](#) section is also available.

8.1 Things to avoid

In the document, avoid the following:

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 `\quad`.

`\`, `~` 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.

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 \LaTeX accents such as `\`" will work, but many more kinds of accents are available when using Unicode-aware $X\LaTeX$ and $\text{Lua}\LaTeX$.

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 $\text{\$}^{\text{x}}\text{\$}$

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** T_EX 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>` can-

not 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 `\linewidth`, `\textwidth`, and `\textheight`, widths and heights in HTML are scaled proportionally to a 6×9 inch text area, and inside a `multicols` `\linewidth` is divided by the specified number of columns.

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.

`\UseMinipageWidths`
`\IgnoreMinipageWidths`

 **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`, `\qqquad`, `\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.

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`

For inline text:

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 L^AT_EX code, the result in HTML is problematic since a table is a <div> not a , so use \fboxBlock around a tabular, or else place the tabular inside a minipage, or use fminipage, described next. Also see below regarding the “Misplaced alignment tab character &.” error.

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 514 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 217 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 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` $\{\langle macros \rangle\}$

-  **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** 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).

-  **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 467.

8.5.2 cleveref and varioref packages

Pkg `cleveref` `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”.

⚠ cleveref page numbers

Ex:

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

See `\cpagerefFor` at page 541 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 L^AT_EX footnote code, although with its own `\box` to avoid the L^AT_EX output routine. The usual functions mostly work as-is.

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

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

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

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

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

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+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.

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 `pdfLATEX`. 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 `XƎLATEX` or `LuaLATEX` instead of `pdfLATEX`.

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\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
```

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 gloss package

Pkg `gloss` To process the HTML glossary:

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

8.6.11 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.

8.6.12 nomencl package

Pkg `nomencl` To process the HTML nomenclature:

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

8.6.13 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 [8.6.19](#) and [8.6.20](#).

[source code](#) See section 76 for lwarp’s core index and glossary code, section 283 for index, section 441 for splitidx, section 282 for imakeidx, section 477 for tocbibind, and section 534.17 for memoir’s indexing patches.

8.6.14 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.

8.6.15 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>.sind <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.

8.6.16 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 534.17 in the `lwarp-patch-memoir` package for the `\@wrsindexhyp` 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.

8.6.17 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 8.6.19 and 8.6.20. The `splitindex` option is also available of 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.

8.6.18 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.

8.6.19 Using a custom *makeindex* style file

Prog makeindex When using *makeindex*, *lwarpmk* uses the file *lwarp.ist* to process the index. This file
File lwarp.ist is over-written by *lwarp* 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`.

8.6.20 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`.

8.6.21 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.

8.6.22 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 \LaTeX 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`

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 \LaTeX commands to create the titles, allowing other packages to work with it.

 [tocloft & other packages](#)

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{AMS} environments with multiple numbers in the same environment, only the first and last is copy/pasted, as a range. No tags are listed inside a starred \mathcal{AMS} environment, although the \tag macro will still appear inside the L^AT_EX math expression.

 **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
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

¹⁴See section 519 regarding fonts and fractions.

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

MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```
\CustomizeMathJax{
  \newcommand{\expval}[1]{\langle#1\rangle}
  \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
```

8.7.6 MATHJAX limitations

MATHJAX limitations

Limitations when using MATHJAX include:

Prog MathJax

subequations

- MATHJAX itself 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.

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

- Usage of siunitx inside a math equation is supported via a third-party MATHJAX extension. While inside a math expression, do not use \SI or \si inside \text, where it will be rendered as normal text.

⚠ siunitx inside an equation

<https://github.com/burnpanck/MathJax-siunitx>

Also see section 8.7.11.

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 supported by MATHJAX, including \ensuremath and bigdelim, along with occasionally-used macros such as \relax. lwarp emulates footnotes, units, and nicefrac for MathJax.

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` MathJax unsupported complicated alt tag

When selecting `\displaymathother`, it is assumed that the contents are more complicated than “pure” math. An example is an elaborate Tikz picture, which will not render in `MATHJAX` and will not make sense as an HTML alt tag. In this mode, `MATHJAX` is turned off, math display environments become SVG images, even if `MATHJAX` is selected, and the HTML alt tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as Tikz pictures are more likely to compile successfully.

8.7.10 ntheorem package

Pkg ntheorem

This conversion is not total. Font control is via CSS, and the custom \LaTeX 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 `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.

NOTE: As of this writing, the `siunitx` extension for `MATHJAX` is not currently hosted at any public CDN, thus `siunitx` is not usable with `MATHJAX` unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom `MathJax` script.

- ⚠ **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`.

8.7.12 `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`

8.7.13 `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 *pdflaTeX*, *luaLaTeX*, or *xLaTeX*, 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 L<sup>A</sup>T<sub>E</sub>X, so expect some ugly results for scaling and rotating.

### 8.8.1 tikz package

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

```
\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}
```

and each instance of `&` in the `tikz` expression must be replaced with `\&`.

### 8.8.2 grffile package

 **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 superseded 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`** `\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.

|                                                 |                                                                                                                                                                              |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>background: none</code>                   | <code>\colorbox</code> and <code>\fcolorboxBlock</code> allow a background color of <code>none</code> , in which case only the frame is drawn, which can be useful for HTML. |
| <code>color support</code>                      | Color definitions, models, and mixing are fully supported without any changes required.                                                                                      |
| <code>colored tables</code>                     | <code>\rowcolors</code> is supported, except that the optional argument is ignored so far.                                                                                   |
| <code>colored text and boxes</code>             | <code>\textcolor</code> , <code>\colorbox</code> , and <code>\fcolorbox</code> are supported.                                                                                |
| <code>\color</code> and <code>\pagecolor</code> | <code>\color</code> and <code>\pagecolor</code> are ignored. Use <code>css</code> or <code>\textcolor</code> where possible.                                                 |

### 8.8.5 epstopdf package

 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

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

### 8.8.7 pdftricks package

 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

 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

Pkg pstool \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
```

### 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 `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/...`

## 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.

⚠ \newcolumntype

- \newcolumntype 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.

## full-width rules

- \toprule, \midrule, \bottomrule, and \hline ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

## combined rules

- If you wish to use \cmidrule followed by \bottomrule, it may be necessary to use:

```
\cmidrule{2-3} \[-2ex]
\bottomrule
```

The optional -2ex is ignored in HTML, but improves the visual formatting in the print output.

- For \toprule and \bottomrule, when combined with a warpprint or warpHTML environment, if a “Misplaced \noalign” error occurs, change

```
This & That \endhead
```

to

```
\warpprintonly{This & That \endhead}
```

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

⚠ \warpprintonly

⚠ Misplaced \noalign

**Other:**

- tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.

## longtable headings

- For longtable, place headings and footings which do not apply to HTML inside \warpprintonly{ }.

⚠ S columns

- 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 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>. If this situation is detected, a warning is printed instructing the user to isolate the <span> using \warpprintonly or the warpprint environment.

⚠ tabular inside a <span>

**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 339.2 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 & ...
```

### 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 `threeparttable`.)

```
\begin{longtable}{ [column specifiers] }
[...] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[...] \endhead % or \endfirsthead
[...] \endfoot
[<lastfoot macros>] \endlastfoot
}
... table contents ...
\warpHTMLonly{
[<lastfoot macros>] % HTML last footer, without \endfoot
% or \endlastfoot.
}
\end{longtable}
```

⚠ Misplaced `\noalign` Use the `\warpprintonly` macro instead of the `warpprint` environment. Doing so helps avoid “Misplaced `\noalign`.” when using `\begin{warpprint}`.

⚠ `\kill` `\kill` is ignored, place a `\kill` line inside

```
\begin{warpprint} ... \end{warpprint}
```

or place it inside `\warpprintonly`.

⚠ `lateximage` `longtable` is not supported inside a `lateximage`.

### 8.10.4 threeparttablex package

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 { c d  
e f  
g h  
 $\rightarrow$  i j

---

## 8.11 Floats

### 8.11.1 Float contents alignment

 Pkg `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 [488.1](#).  
Pkg `trivfloat`

 Pkg `algorithmicx` **8.11.3 caption and subcaption packages**  
**package conflicts**

Pkg `caption` To pass options to `caption`, select the options before loading `lwarp`:  
Pkg `subcaption`

 **options**

```

\documentclass{article}
. . .
\PassOptionsToPackage{options_list}{caption}
. . .
\usepackage{lwarp}
. . .
\usepackage{caption}

```

⚠ **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 `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.)

⚠ keywrap

## 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 534.1). 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`:

⚠ options clash

```
\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 `\HTMLleftmargin` 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 `\HTMLleftmargin` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargin` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

Len `\leftmargin`

Len `\HTMLvleftskip`

Len `\HTMLleftmargin`

 **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 `\HTMLleftmargin` or `\HTMLleftskip` 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

⚠ **loading** `lwarp` is loaded:

```
\documentclass{article}
...
\usepackage{newclude}
\usepackage[warpHTML]{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`, `\FBguillemet`, `\FBmedkern`, `\FBthickkern`, `\FBtextellipsis`, and the tilde. If the user's document also changes these parameters,

⚠ **customized spacing**

the user's changes should be placed inside a `warpprint` environment so that the user's changes do not affect the HTML output.

### 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` 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 [325](#).

### 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<sub>l</sub>atex* 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<sub>E</sub>X 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 `perltext` 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<sub>E</sub>X, 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 `\lwarpsetup` must be used to set `PrintLatexCmd` and `HTMLLatexCmd`:

---

```

\usepackage[...]{lwarp}
\lwarpsetup{
 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 inside a `lateximage` environment to prevent `<`, `>` and similar from being interpreted by the browser as HTML entities.

⚠ HTML look-alike

## 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 $\LaTeX$  and *ditaa*. To use Lua $\LaTeX$  instead, the locale change would have to be made inside the *ditaa* package where its 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}
```

to the project's source preamble after lwarp is loaded. The following changes are then made to the HTML output:

[formatting adjustments](#)

- 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  $\LaTeX$  code instead of creating SVG images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

When using the `siunitx` package, enter

```
\usepackage{siunitx}
```

in the *TeXMaths* preamble. Equation numbering is problematic for  $\mathcal{AMS}$  math environments.

---

Table 8: Section HTML headings for word-processor conversion

| Section       | HTML headings*         |                         |                        |                         |
|---------------|------------------------|-------------------------|------------------------|-------------------------|
|               | With \chapter          |                         | Without \chapter       |                         |
|               | WPTitleHeading<br>true | WPTitleHeading<br>false | WPTitleHeading<br>true | WPTitleHeading<br>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 | <span>                 | <h6>                    | <h6>                   | <h5>                    |

\* For default depths when not FormatWP, see table 9 on page 187.

### 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 171.

## 11.3 Recommendations

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

1. Set `\booltrue{FormatWP}`
2. Set `\booltrue{WPMarkTOC}` and `\boolfalse{WPMarkLOFT}`
3. Use `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 L<sup>A</sup>T<sub>E</sub>X and HTML versions.

Equation numbering is not automatic, but the equation numbers in SVG math will match the L<sup>A</sup>T<sub>E</sub>X and HTML output. SVG math is recommended when using the  $\mathcal{AMS}$  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<sup>A</sup>T<sub>E</sub>X 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<sup>A</sup>T<sub>E</sub>X 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 358 (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  $\LaTeX$ , Xe $\LaTeX$ , 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.

### 13.1.5 Compiling

**SideTOCDepth < FileDepth:** A warning is displayed if these counters are set such that the `sidetoc` will not be able to access all pages of the website.

**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 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<sub>La</sub>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 L<sup>A</sup>T<sub>E</sub>X.

## 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 >.

**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 L<sup>A</sup>T<sub>E</sub>X code is correct, before attempting to generate an HTML version.

**\end{warppHTML}, \end{warpprint}, \end{warppall}:** Each of these must be without any other characters on the same line.

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

**“No room for a new \write.”:** Before \usepackage{lwarp}, add:

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

**“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 `\@<floattype>` or `\@<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, 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:**

⚠ macros in section,table,figure names

⚠ BibTeX

⚠ polyglossia

⚠ custom macros for environments

⚠ `\LWR@formatted`

⚠ “impure” math objects

⚠ MATHJAX

## labels

⚠ label characters

\nameref

⚠ empty link

⚠ cleveref page numbers

- 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 541 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 `XLaTeX` or `LuaLaTeX`.

**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:**

- 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.<sup>15</sup> 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

<sup>15</sup>This becomes important when dealing with a document containing thousands of images.

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<sup>A</sup>T<sub>E</sub>X 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<sup>A</sup>T<sub>E</sub>X 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 `\CSSFilename` statements point to a valid CSS file.

### ⚠ HTML corrupted

#### Broken fragments of HTML:

- Check the PDF file used to create HTML to see if the tags overflowed the margin. (This is why such large page size and margins are used.)

#### Changes do not seem to be taking effect:

- Be sure to `lwarpmk clean`, recompile, then start by reloading the home page. You may have been looking at an older version of the document. If you changed a section name, you may have been looking at the file for the old name.
- See the warning regarding changes to the HTML settings at section 7.6.
- Verify that the proper CSS is actually being used.
- The browser may compensate for some subtle changes, such as automatically generating ligatures, reflowing text, etc.

#### Un-matched conditional compiles:

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

### 13.2.1 Debug tracing output

`\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}`

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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-hacks~~ clever tricks. Reference sources are given for many of the solutions, and a quick internet search will provide additional possibilities.

Judgement calls were made, and are often commented. Improvements are possible. The author is open to ideas and suggestions.

Packages were patched for re-use where they provided significant functionality. Examples include `xcolor` with its color models and conversion to HTML color output, and `siunitx` which provides many number and unit-formatting options, almost all of which are available in pure-text form, and thus easily used by *pdftotext*.

Packages were emulated where their primary purpose was visual formatting which is not relevant to HTML output. For example, packages related to sectioning are already patched by numerous other packages, creating a difficult number of combinations to try to support, and yet in HTML output all of the formatting is thrown away, so these packages are merely emulated.

Packages with graphical output are allowed as-is, but must be nested inside a `lateximage` environment to preserve the graphics.

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

Table 9: Section depths and HTML headings

| Section                     | L <sup>A</sup> T <sub>E</sub> X<br>depth | HTML headings *                           |
|-----------------------------|------------------------------------------|-------------------------------------------|
| Title of the entire website |                                          | <h1>                                      |
| (none)                      | -5                                       | new for this package                      |
| book                        | -2                                       | <div class = "book">                      |
| part                        | -1                                       | <h2>                                      |
| chapter                     | 0                                        | <h3>                                      |
| section                     | 1                                        | <h4>                                      |
| subsection                  | 2                                        | <h5>                                      |
| subsubsection               | 3                                        | <h6>                                      |
| paragraph                   | 4                                        | <span class = "paragraph">                |
| subparagraph                | 5                                        | <span class = "subparagraph">             |
| 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 171.

## 16 Section depths and HTML headings

Stacks are created to track depth inside the L<sup>A</sup>T<sub>E</sub>X 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 L<sup>A</sup>T<sub>E</sub>X 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<sub>E</sub>X engine — *pdf<sub>l</sub>atex*, *lua<sub>l</sub>atex*, *xel<sub>l</sub>atex*

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

Detects X<sub>l</sub>T<sub>E</sub>X and Lua<sub>L</sub>T<sub>E</sub>X:

```

1 \RequirePackage{iftex}
2 \newif\ifxetexorluatex
3 \ifXeTeX
4 \xetexorluatextrue
5 \else
6 \ifLuaTeX
7 \xetexorluatextrue
8 \else
9 \xetexorluatexfalse
10 \fi
11 \fi
12
13 \ifLuaTeX
14 \RequirePackage{luatex85}% until the geometry package is updated
15 \fi
16
17 \RequirePackage{ifpdf}

18 \RequirePackage{ifptex}

```

## 19 Early package requirements

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

Pkg `xpatch` Patches macros with optional arguments.

```

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

```

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

```

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

```

Pkg `letltxmacro`

```

22 \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`.

```

23 \newcommand*\LWR@loadafter}[1]{%
24 \@ifpackageloaded{#1}
25 {
26 \PackageError{lwarp}
27 {%
28 Package #1,\MessageBreak
29 or one which uses #1,\MessageBreak
30 must be loaded after lwarp
31 }
32 {\Move \detokenize{\usepackage}{#1} after
33 \detokenize{\usepackage}{lwarp}.\MessageBreak
34 Package #1 may also be loaded by something else,\MessageBreak
35 which must also be moved after lwarp.}
36 }
37 {}
38 }

```

`\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.

```

39 \@ifclassloaded{memoir}
40 {\newcommand*\LWR@notmemoirloadafter}[1]{}
41 {\LetLtxMacro\LWR@notmemoirloadafter\LWR@loadafter}

```

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

```

42 \LetLtxMacro\LWR@notltjloadafter\LWR@loadafter
43
44 \@ifclassloaded{ltjarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
45 \@ifclassloaded{ltjbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
46 \@ifclassloaded{ltjreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
47 \@ifclassloaded{ltjsarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
48 \@ifclassloaded{ltjsbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}

```

```

49 \@ifclassloaded{ltjsreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
50 \@ifclassloaded{ltjspf}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
51 \@ifclassloaded{ltjskiyou}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
52 \@ifclassloaded{ltjtarticle}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
53 \@ifclassloaded{ltjtbook}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}
54 \@ifclassloaded{ltjtreport}{\renewcommand*\LWR@notltjloadafter}[1]{}{}}

```

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

```

55 \newcommand*\LWR@loadbefore}[1]{%
56 \@ifpackageloaded{#1}
57 {}
58 {
59 \PackageError{lwarp}
60 {Package #1 must be loaded before lwarp}
61 {Move \detokenize{\usepackage}{#1} before \detokenize{\usepackage}{lwarp}.}
62 }
63 }

```

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

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

```

64 \newcommand*\LWR@checkloadbefore}[2]{%
65 \edef\LWR@tempone{#1}%
66 \ifdefstring{\LWR@tempone}{#2}{%
67 \LWR@loadbefore{#1}%
68 }{}%
69 }

```

`\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.

```

70 \newcommand*\LWR@loadnever}[2]{%
71 \PackageError{lwarp}
72 {%
73 Package #1 is not supported\MessageBreak
74 by lwarp's HTML conversion.\MessageBreak
75 Package(s) #2 may be useful instead
76 }
77 {%
78 Package #1 might conflict with lwarp in some way,\MessageBreak
79 or is superceded by another package.\MessageBreak
80 For a possible alternative, see package(s) #2.
81 }
82 }

```

`\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.

```

83 \newcommand*{\LWR@checkloadnever}[3]{%
84 \edef\LWR@tempone{#1}%
85 \ifdefstring{\LWR@tempone}{#2}{%
86 \LWR@loadnever{#2}{#3}%
87 }{}%
88 }

```

`\LWR@earlyloadnever`  $\langle\{badpackagename\}\rangle$   $\langle\{replacementpkgname\}\rangle$

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.

```

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

```

`\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.

```

104 \newcommand*{\LWR@earlyclassloadnever}[2]{%
105 \@ifclassloaded{#1}{%
106 \PackageError{lwarp}
107 {%
108 Class #1 is not supported\MessageBreak
109 by lwarp's HTML conversion.\MessageBreak
110 Class(es) #2 may be useful instead
111 }
112 {%
113 Class #1 might conflict with lwarp in some way,\MessageBreak
114 or is superceded by another class.\MessageBreak
115 For a possible alternative, see class(es) #2.
116 }
117 }{}%
118 }

```

## 20.2 Error for disallowed packages and classes loaded before lwarp

```

119 \LWR@earlyclassloadnever{jarticle}{ujarticle}

```

```

120 \LWR@earlyclassloadnever{jbook}{ujbook}
121 \LWR@earlyclassloadnever{jreport}{ujreport}
122 \LWR@earlyclassloadnever{tarticle}{utarticle}
123 \LWR@earlyclassloadnever{tbook}{utbook}
124 \LWR@earlyclassloadnever{treport}{utreport}
125 \LWR@earlyloadnever{ae}{cm-super, lmodern}
126 \LWR@earlyloadnever{aecompl}{cm-super, lmodern}
127 \LWR@earlyloadnever{aecc}{cm-super, lmodern}
128 \LWR@earlyloadnever{alg}{algorithm2e, algorithmicx}
129 \LWR@earlyloadnever{algorithmic}{algorithm2e, algorithmicx}
130 \LWR@earlyloadnever{boxedminipage}{boxedminipage2e}
131 \LWR@earlyloadnever{caption2}{caption}
132 % \LWR@earlyloadnever{ccaption}{caption}% might be preloaded by memoir

```

The older CJK and CJKutf8 only work with xeCJK:

```

133 \@ifpackageloaded{xeCJK}{}{
134 \LWR@earlyloadnever{CJK}{ctex, xeCJK}
135 \LWR@earlyloadnever{CJKutf8}{ctex, xeCJK}
136 }

```

bxckatype is based on CJK:

```

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

```

hangul is not in TeXLive, and is not tested:

```

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

```

Others:

```

139 \LWR@earlyloadnever{colortab}{colortbl}
140 \LWR@earlyloadnever{epsf}{graphicx}
141 \LWR@earlyloadnever{fancyheadings}{fancyhdr}
142 \LWR@earlyloadnever{fncylab}{cleveref}
143 \LWR@earlyloadnever{glossary}{glossaries}
144 \LWR@earlyloadnever{hyper}{hyperref}
145 \LWR@earlyloadnever{pdfcpot}{microtype}
146 \LWR@earlyloadnever{picinpar}{floatflt, wrapfig}
147 \LWR@earlyloadnever{picins}{floatflt, wrapfig}
148 \LWR@earlyloadnever{sistyle}{siunitx}
149 \LWR@earlyloadnever{tlenc}{fontenc, inputenc, inputenx}
150 \LWR@earlyloadnever{ucs}{inputenc, inputencx}
151 \LWR@earlyloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}

```

## 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:

```

152 \LWR@loadafter{2in1}
153 \LWR@loadafter{2up}

```

```
154 \LWR@loadafter{a4}
155 \LWR@loadafter{a4wide}
156 \LWR@loadafter{a5comb}
157 \LWR@notmemoirloadafter{abstract}
158 \LWR@loadafter{academicons}
159 \LWR@loadafter{accsupp}
160 \LWR@loadafter{acro}
161 \LWR@loadafter{acronym}
162 \LWR@loadafter{adjmulticol}
163 \LWR@loadafter{addlines}
164 \LWR@loadafter{ae}
165 \LWR@loadafter{aecc}
166 \LWR@loadafter{afterpage}
167 \LWR@loadafter{algorithm2e}
168 \LWR@loadafter{algorithmicx}
169 \LWR@loadafter{alltt}
170 \LWR@loadafter{amsmath}
171 \LWR@loadafter{amsthm}
172 \LWR@loadafter{anonchp}
173 \LWR@loadafter{anysize}
174 \LWR@notmemoirloadafter{appendix}
175 \LWR@loadafter{ar}
176 \LWR@loadafter{arabicfront}
177 \LWR@notmemoirloadafter{array}
178 \LWR@loadafter{arydshln}
179 \LWR@loadafter{asymptote}
180 % \LWR@loadafter{atbegshi}% used by morewrites
181 \LWR@loadafter{attachfile}
182 \LWR@loadafter{attachfile2}
183 \LWR@loadafter{authblk}
184 \LWR@loadafter{autonum}
185 \LWR@loadafter{axessibility}
186 \LWR@loadafter{axodraw2}
187 \LWR@loadafter{backnaur}
188 \LWR@loadafter{backref}
189 \LWR@loadafter{balance}
190 \LWR@loadafter{bbding}
191 \LWR@loadafter{bigdelim}
192 \LWR@loadafter{bigfoot}
193 \LWR@loadafter{bigstrut}
194 \LWR@loadafter{bitpattern}
195 \LWR@loadafter{blowup}
196 \LWR@loadafter{booklet}
197 \LWR@loadafter{bookmark}
198 \LWR@notmemoirloadafter{booktabs}
199 \LWR@loadafter{bophook}
200 \LWR@loadafter{bounddvi}
201 \LWR@loadafter{boxedminipage}
202 \LWR@loadafter{boxedminipage2e}
203 \LWR@loadafter{breakurl}
204 \LWR@loadafter{breqn}
205 \LWR@loadafter{bsheaders}
206 \LWR@loadafter{bypapersize}
207 \LWR@loadafter{byfield}
208 \LWR@loadafter{cancel}
```

209 \LWR@loadafter{canoniclayout}  
210 \LWR@loadafter{caption}  
211 \LWR@loadafter{caption2}  
212 \LWR@loadafter{cases}  
213 % \LWR@loadafter{ccaption}% may be preloaded by memoir  
214 \LWR@loadafter{changebar}  
215 \LWR@loadafter{changelayout}  
216 \LWR@notmemoirloadafter{changepage}  
217 \LWR@loadafter{changes}  
218 \LWR@loadafter{chappg}  
219 \LWR@loadafter{chapterbib}  
220 \LWR@loadafter{chemfig}  
221 \LWR@loadafter{chemformula}  
222 \LWR@loadafter{chemgreek}  
223 \LWR@loadafter{chemmacros}  
224 \LWR@loadafter{chemnum}  
225 \LWR@loadafter{chkfloat}  
226 \LWR@notmemoirloadafter{chnpage}  
227 \LWR@loadafter{cite}  
228 \LWR@loadafter{cmdtrack}  
229 \LWR@loadafter{color}  
230 \LWR@loadafter{colortbl}  
231 \LWR@loadafter{continue}  
232 \LWR@loadafter{copyrightbox}  
233 \LWR@notmemoirloadafter{crop}  
234 % ctex must be loaded before lwarp  
235 \LWR@loadafter{ctable}  
236 \LWR@loadafter{cuted}  
237 \LWR@loadafter{cutwin}  
238 \LWR@loadafter{dblfloatfix}  
239 \LWR@loadafter{dblfnote}  
240 \LWR@notmemoirloadafter{dcolumn}  
241 \LWR@loadafter{diagbox}  
242 \LWR@loadafter{dingbat}  
243 \LWR@loadafter{dprogress}  
244 \LWR@loadafter{draftcopy}  
245 \LWR@loadafter{draftfigure}  
246 \LWR@loadafter{draftwatermark}  
247 \LWR@loadafter{easy-todo}  
248 \LWR@loadafter{ebook}  
249 \LWR@loadafter{ed}  
250 \LWR@loadafter{ellipsis}  
251 \LWR@loadafter{embrac}  
252 \LWR@loadafter{emptypage}  
253 \LWR@loadafter{endfloat}  
254 \LWR@loadafter{endheads}  
255 \LWR@loadafter{endnotes}  
256 \LWR@notmemoirloadafter{enumerate}  
257 \LWR@loadafter{enumitem}  
258 \LWR@notmemoirloadafter{epigraph}  
259 \LWR@loadafter{epsfig}  
260 \LWR@loadafter{epstopdf}  
261 \LWR@loadafter{epstopdf-base}  
262 \LWR@loadafter{eqlist}  
263 \LWR@loadafter{eqparbox}

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

```
319 % \LWR@loadafter{graphicx}% pre-loaded by xunicode
320 \LWR@loadafter{gloss}
321 \LWR@loadafter{glossary}
322 \LWR@loadafter{grffile}
323 \LWR@loadafter{grid}
324 \LWR@loadafter{grid-system}
325 \LWR@loadafter{gridset}
326 \LWR@loadafter{hang}
327 \LWR@loadafter{hanging}
328 \LWR@loadafter{hybmsec}
329 \LWR@loadafter{hypcap}
330 \LWR@loadafter{hypdestopt}
331 \LWR@loadafter{hypernat}
332 \LWR@loadafter{hyperref}
333 \LWR@loadafter{hyperxmp}
334 \LWR@loadafter{hyphenat}
335 \LWR@loadafter{idxlayout}
336 \LWR@loadafter{ifoddpape}
337 \LWR@loadafter{imakeidx}
338 \LWR@notmemoirloadafter{index}
339 % inputenc must be loaded before lwarp
340 % inputenx must be loaded before lwarp
341 % inputtrc may be loaded before lwarp
342 \LWR@loadafter{intopdf}
343 \LWR@loadafter{karnaugh-map}
344 \LWR@loadafter{keyfloat}
345 \LWR@loadafter{layaureo}
346 \LWR@loadafter{layout}
347 \LWR@loadafter{layouts}
348 \LWR@loadafter{leading}
349 \LWR@loadafter{letterspace}
350 \LWR@loadafter{lettrine}
351 \LWR@loadafter{lineno}
352 \LWR@loadafter{lips}
353 \LWR@loadafter{listings}
354 \LWR@loadafter{listliketab}
355 \LWR@loadafter{longtable}
356 \LWR@loadafter{lscapex}
357 \LWR@loadafter{ltablex}
358 \LWR@loadafter{ltcaption}
359 \LWR@loadafter{ltxgrid}
360 \LWR@loadafter{ltxtable}
361 \LWR@loadafter{lua-check-hyphen}
362 \LWR@loadafter{lua-visual-debug}
363 \LWR@loadafter{luacolor}
364 \LWR@loadafter{luatodonotes}
365 \LWR@loadafter{lyluatex}
366 \LWR@loadafter{magaz}
367 \LWR@notmemoirloadafter{makeidx}
368 \LWR@loadafter{manyfoot}
369 \LWR@loadafter{marginfit}
370 \LWR@loadafter{marginfix}
371 \LWR@loadafter{marginnote}
372 \LWR@loadafter{marvosym}
373 \LWR@loadafter{mathtools}
```

```
374 \LWR@loadafter{mcaption}
375 \LWR@loadafter{mdframed}
376 \LWR@loadafter{media9}
377 \LWR@loadafter{memhfixc}
378 \LWR@loadafter{metalogo}
379 \LWR@loadafter{metalogoX}
380 \LWR@loadafter{mhchem}
381 \LWR@loadafter{microtype}
382 \LWR@loadafter{midfloat}
383 \LWR@loadafter{midpage}
384 \LWR@loadafter{minibox}
385 \LWR@loadafter{minitoc}
386 % morefloats must be allowed early for print mode
387 \LWR@notmemoirloadafter{moreverb}
388 % morewrites must be loaded before lwarp
389 \LWR@notmemoirloadafter{movie15}
390 \LWR@notmemoirloadafter{mparhack}
391 \LWR@loadafter{multicap}
392 %\LWR@loadafter{multicol}% loaded by ltxdoc
393 \LWR@loadafter{multicolrule}
394 \LWR@loadafter{multimedia}
395 \LWR@loadafter{multirow}
396 \LWR@loadafter{multitoc}
397 \LWR@loadafter{musicography}
398 \LWR@loadafter{nameauth}
399 \LWR@loadafter{nameref}
400 \LWR@loadafter{natbib}
401 \LWR@notmemoirloadafter{nccfancyhdr}
402 \LWR@notmemoirloadafter{needspace}
403 % newclude must be loaded before lwarp
404 \LWR@loadafter{newtxmath}
405 % newunicodechar must be loaded before lwarp
406 \LWR@notmemoirloadafter{nextpage}
407 \LWR@loadafter{nicefrac}
408 \LWR@loadafter{niceframe}
409 \LWR@loadafter{nomenc1}
410 \LWR@loadafter{nonfloat}
411 \LWR@loadafter{nonumonpart}
412 \LWR@loadafter{nopageno}
413 \LWR@loadafter{notes}
414 \LWR@loadafter{notespages}
415 \LWR@loadafter{nowidow}
416 \LWR@loadafter{ntheorem}
417 \LWR@loadafter{octave}
418 \LWR@loadafter{overpic}
419 \LWR@loadafter{pagegrid}
420 \LWR@notmemoirloadafter{pagenote}
421 \LWR@loadafter{pagesel}
422 \LWR@loadafter{paralist}
423 \LWR@loadafter{parnotes}
424 \LWR@notmemoirloadafter{parskip}
425 \LWR@loadafter{pbox}
426 \LWR@loadafter{pdfcomment}
427 \LWR@loadafter{pdfcrypt}
428 \LWR@loadafter{pdfscape}
```

```
429 \LWR@loadafter{pdfmarginpar}
430 \LWR@loadafter{pdfpages}
431 \LWR@loadafter{pdfprivacy}
432 \LWR@loadafter{pdfrender}
433 \LWR@loadafter{pdfsync}
434 \LWR@loadafter{pdftricks}
435 \LWR@loadafter{pdfx}
436 \LWR@loadafter{perpage}
437 \LWR@loadafter{pfnote}
438 \LWR@loadafter{phfqit}
439 \LWR@loadafter{pifont}
440 \LWR@loadafter{placeins}
441 \LWR@loadafter{plarray}
442 \LWR@loadafter{plarydshln}
443 \LWR@loadafter{plextarray}
444 \LWR@loadafter{plextarydshln}
445 \LWR@loadafter{plcolortbl}
446 \LWR@loadafter{plextdelarray}
447 \LWR@loadafter{prelim2e}
448 \LWR@loadafter{prettyref}
449 \LWR@loadafter{preview}
450 \LWR@loadafter{psfrag}
451 \LWR@loadafter{psfragx}
452 \LWR@loadafter{pst-eps}
453 \LWR@loadafter{pstool}
454 \LWR@loadafter{pstricks}
455 % \LWR@loadafter{pxatbegshi}% may be used by morewrites
456 \LWR@loadafter{pxeveryshi}
457 \LWR@loadafter{pxftnright}
458 \LWR@loadafter{pxjahyper}
459 \LWR@loadafter{quotchap}
460 \LWR@loadafter{quoting}
461 \LWR@loadafter{ragged2e}
462 \LWR@loadafter{realscripts}
463 \LWR@loadafter{refcheck}
464 \LWR@loadafter{register}
465 \LWR@loadafter{relsize}
466 \LWR@loadafter{repeatindex}
467 \LWR@loadafter{resizegather}
468 \LWR@loadafter{rmpage}
469 \LWR@loadafter{romanbar}
470 \LWR@loadafter{romanbarpagenumber}
471 \LWR@loadafter{rotating}
472 \LWR@loadafter{rotfloat}
473 \LWR@loadafter{rviewport}
474 \LWR@loadafter{savetrees}
475 % scalefnt is loaded by babel-french
476 \LWR@loadafter{schemata}
477 \LWR@loadafter{scrextend}
478 \LWR@loadafter{scrhack}
479 \LWR@loadafter{scrlayer}
480 \LWR@loadafter{scrlayer-notecolumn}
481 \LWR@loadafter{scrlayer-scrpage}
482 \LWR@loadafter{scrpage2}
483 \LWR@loadafter{section}
```

```
484 \LWR@loadafter{sectionbreak}
485 \LWR@loadafter{sectsty}
486 \LWR@loadafter{semantic-markup}
487 \LWR@notmemoirloadafter{setspace}
488 \LWR@loadafter{shadow}
489 \LWR@loadafter{shapepar}
490 \LWR@notmemoirloadafter{showidx}
491 \LWR@loadafter{showkeys}
492 \LWR@loadafter{showtags}
493 \LWR@loadafter{sidecap}
494 \LWR@loadafter{sidenotes}
495 \LWR@loadafter{SIunits}
496 \LWR@loadafter{siunitx}
497 \LWR@loadafter{slantsc}
498 \LWR@loadafter{soul}
499 \LWR@loadafter{soulpos}
500 \LWR@loadafter{soulutf8}
501 \LWR@loadafter{splitidx}
502 \LWR@loadafter{srcltx}
503 \LWR@loadafter{srctex}
504 \LWR@loadafter{stabular}
505 \LWR@loadafter{stackengine}
506 \LWR@notltjloadafter{stfloats}
507 \LWR@loadafter{struktex}
508 \LWR@loadafter{subcaption}
509 \LWR@loadafter{subfig}
510 \LWR@loadafter{subfigure}
511 \LWR@loadafter{supertabular}
512 \LWR@loadafter{t1inc}
513 \LWR@loadafter{tabfigures}
514 \LWR@loadafter{tabls}
515 \LWR@loadafter{tablefootnote}
516 \LWR@notmemoirloadafter{tabularx}
517 \LWR@loadafter{tabulary}
518 \LWR@loadafter{tascmac}
519 \LWR@loadafter{textarea}
520 % \LWR@loadafter{textcomp}% maybe before lwarp with font packages
521 \LWR@loadafter{textfit}
522 \LWR@loadafter{textpos}
523 \LWR@loadafter{theorem}
524 \LWR@loadafter{thinsp}
525 \LWR@loadafter{threadcol}
526 \LWR@loadafter{threparttable}
527 \LWR@loadafter{threparttablex}
528 \LWR@loadafter{thumb}
529 \LWR@loadafter{thumbs}
530 \LWR@loadafter{tikz}
531 \LWR@loadafter{titleps}
532 \LWR@loadafter{titlesec}
533 \LWR@loadafter{titletoc}
534 \LWR@notmemoirloadafter{titling}
535 % \LWR@loadafter{tocbasic}% preloaded by koma-script classes
536 \LWR@notmemoirloadafter{tocbibind}
537 \LWR@loadafter{tocdata}
538 \LWR@loadafter{tocenter}
```

```
539 \LWR@notmemoirloadafter{tocloft}
540 \LWR@loadafter{tocstyle}
541 \LWR@loadafter{todo}
542 \LWR@loadafter{todonotes}
543 \LWR@loadafter{topcapt}
544 \LWR@loadafter{tram}
545 \LWR@loadafter{transparent}
546 \LWR@loadafter{trimclip}
547 \LWR@loadafter{trivfloat}
548 \LWR@loadafter{truncate}
549 \LWR@loadafter{turnthepage}
550 \LWR@loadafter{twoup}

551 % \LWR@loadafter{typearea}% preloaded by koma-script classes
552 \LWR@loadafter{typicons}
553 % \LWR@loadafter{ulem}% preloaded by ctexart and related classes
554 \LWR@loadafter{umoline}
555 \LWR@loadafter{underscore}
556 \LWR@loadafter{units}
557 \LWR@loadafter{unitsdef}
558 \LWR@loadafter{upref}
559 \LWR@loadafter{url}
560 \LWR@loadafter{uspace}
561 \LWR@loadafter{varioref}% no lwarp package provided
562 \LWR@notmemoirloadafter{verse}
563 \LWR@loadafter{versonotes}
564 \LWR@loadafter{vertbars}
565 \LWR@loadafter{vmargin}
566 \LWR@loadafter{vowel}
567 \LWR@loadafter{vpe}
568 \LWR@loadafter{vwcol}
569 \LWR@loadafter{wallpaper}
570 \LWR@loadafter{watermark}
571 \LWR@loadafter{widows-and-orphans}
572 \LWR@loadafter{wrapfig}
573 \LWR@loadafter{xbmks}
574 \LWR@loadafter{xcolor}
575 \LWR@loadafter{xexchangebar}
576 \LWR@loadafter{xellipsis}
577 % xetexko-vertical must be loaded before lwarp
578 \LWR@loadafter{xfakebold}
579 \LWR@loadafter{xfrac}
580 \LWR@loadafter{xltabular}
581 \LWR@loadafter{xltextra}
582 \LWR@loadafter{xmpincl}
583 \LWR@loadafter{xpiano}
584 \LWR@loadafter{xpinyin}
585 \LWR@loadafter{xr}
586 \LWR@loadafter{xr-hyper}
587 \LWR@loadafter{xtab}
588 % xunicode must be loaded before lwarp
589 \LWR@loadafter{xurl}
590 \LWR@loadafter{xy}
591 \LWR@loadafter{zwpageLayout}
```

## 21 MD5 hashing

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

```
592 \newcommand{\LWR@mdfive}[1]{%
593 \PackageError{lwarp}
594 {No MD5 macro was found}
595 {Lwarp must find the macros pdfmdfivesum or mdfivesum.}
596 }
```

The default for `pdfLATEX`, `DVIATEX`, `upLATEX`, etc:

```
597 \let\LWR@mdfive\pdfmdfivesum
```

For `LuaATEX`:

```
598 \ifLuaTeX
599 \RequirePackage{pdftexcmds}
600 \let\LWR@mdfive\pdf@mdfivesum
601 \fi
```

For `XYLATEX`:

```
602 \ifXeTeX
603 \@ifundefined{pdfdfivesum}{}
604 {\let\LWR@mdfive\pdfmdfivesum}
605 \@ifundefined{mdfivesum}{}
606 {\let\LWR@mdfive\mdfivesum}
607 \fi
```

## 22 pdfL<sup>A</sup>T<sub>E</sub>X T1 and UTF-8 encoding

When using `pdfLATEX`, `lwarp` requires T1 encoding, and recommends UTF-8 encoding.

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

`XYLATEX` and `LuaATEX` are both UTF-8 by nature.

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

```
608 \newcommand*{\LWR@pdfencoding}{%
609 \RequirePackage[T1]{fontenc}
610
611 \@ifpackageloaded{inputenc}{%
612 \@ifpackageloaded{inputenx}{%
613 \RequirePackage[utf8]{inputenc}
614 }
615 }
616 }
```

```

617 \ifPDFTeX% pdflatex or dvi latex
618 \LWR@pdfencoding
619 \fi
620
621 \ifpTeX
622 \LWR@pdfencoding
623 \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.

```

624 \ifpTeX
625 \else
626 \RequirePackage{newunicodechar}
627
628 \newunicodechar{*}{\texttimes}
629
630 \ifPDFTeX% pdflatex or dvi latex
631 \newunicodechar{ff}{ff}% the first arguments are ligatures
632 \newunicodechar{fi}{fi}
633 \newunicodechar{fl}{fl}
634 \newunicodechar{ffi}{ffi}
635 \newunicodechar{ffl}{ffl}
636 \newunicodechar{-}{---}
637 \newunicodechar{-}{--}
638 \fi
639
640 \fi

```

## 24 Avoid a bitmapped font

If DVI or PDF L<sup>A</sup>T<sub>E</sub>X, and if the default Computer Modern is the selected font family, ensure that `cm-super` or `lmodern` is used to provide a vector font.

```

641 \ifxetexorluatex
642 \else
643 \ifdefstring{\f@family}{cmr}{
644 \IfFileExists{type1ec.sty}% found in cm-super
645 {}
646 {% cm-super not installed
647 \IfFileExists{lmodern.sty}{
648 \PackageInfo{lwarp}{cm-super not installed, loading lmodern}
649 \RequirePackage{lmodern}

```

```

650 }{
651 \PackageError{lwarp}
652 {%
653 Lwarp requires a vector font.\MessageBreak
654 Install and load cm-super, lmodern, or another\MessageBreak
655 Type-1 vector font before loading lwarp%
656 }
657 {%
658 Install cm-super or lmodern.\MessageBreak
659 If lmodern, load it before lwarp:\MessageBreak
660 \space\space\protect\usepackage{lmodern}\MessageBreak
661 \space\space\protect\usepackage{lwarp}%
662 }
663 }
664 }% cm-super not installed
665 }{}% f@family
666 \fi

```

## 25 Upright quotes

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

```

667 \ifPDFTeX
668 \RequirePackage{upquote}
669 \fi
670
671 \ifpTeX
672 \RequirePackage{upquote}
673 \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.

```

674 \newcommand*\LWR@providelength[1]{%
675 \ifdeflength{#1}{\newlength{#1}}%
676 }

```

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

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

```

677 \newcommand*\LWR@convertto[2]{\strip@pt\dimexpr #2*65536/\number\dimexpr 1#1}

```

`\LWR@printpercentlength`  $\{\langle smaller \rangle\} \{\langle larger \rangle\}$

Prints a percent ratio of the two lengths.

```
678 \newcommand*\LWR@printpercentlength[2]{%
679 \setcounter{LWR@tempcountone}{100*\ratio{#1}{#2}}%
680 \arabic{LWR@tempcountone}%
681 }
```

## 26.2 Patching

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

Prints an error if could not patch a macro.

```
682 \newcommand*\LWR@patcherror[2]{%
683 \PackageError{lwarp}
684 {Unable to patch package #1, macro #2}
685 {Please contact the author of the lwarp package.}
686 }
```

## 26.3 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.

```
687 \newcommand{\LWR@isolate}[1]{#1}%
688
689 \ifpackageloaded{ctexpatch}{
690 \renewcommand{\LWR@isolate}[1]{\null#1\null}%
691 }{}
692
693 \ifpackageloaded{xeCJK}{
694 \renewcommand{\LWR@isolate}[1]{\null#1\null}%
695 }{}
```

## 26.4 Inserting vertical space

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

```
696 \newcommand*\LWR@forceemptyline{%
697 \LWR@origrule{0pt}{1\baselineskip}%
698 \LWR@orignewline%
699 }
```

## 26.5 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 {\langle first\rangle} {\langle second\rangle} {\langle third\rangle} {\langle fourth\rangle}

\LWR@fourthoffour {\langle first\rangle} {\langle second\rangle} {\langle third\rangle} {\langle fourth\rangle}

```

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

```

700 \long\def\LWR@firstoffour#1#2#3#4{#1}
701 \long\def\LWR@secondoffour#1#2#3#4{#2}
702 \long\def\LWR@thirdoffour#1#2#3#4{#3}
703 \long\def\LWR@fourthoffour#1#2#3#4{#4}

```

## 26.6 Global boxes

```

\LWR@gsavebox {\langle macroname\rangle} {\langle contents\rangle}

```

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

```

704 \DeclareRobustCommand\LWR@gsavebox[1]{%
705 \ifnextchar(%)
706 {\LWR@@gsavepicbox#1}{\ifnextchar[{\LWR@gsavebox#1}{\LWR@gsbox#1}}}%
707 \long\def\LWR@gsbox#1#2{\global\setbox#1\hbox{%
708 \color@setgroup#2\color@endgroup}}
709 \def\LWR@gsavebox#1[#2]{%
710 \ifnextchar [{\LWR@igsavebox#1[#2]}{\LWR@igsavebox#1[#2][c]}}
711 \long\def\LWR@igsavebox#1[#2][#3]#4{%
712 \LWR@gsbox#1{\@imakebox[#2][#3]{#4}}}
713 \def\LWR@gsavepicbox#1(#2,#3){%
714 \ifnextchar[%]
715 {\LWR@igsavepicbox#1(#2,#3)}{\LWR@igsavepicbox#1(#2,#3)[]}}
716 \long\def\LWR@igsavepicbox#1(#2,#3)[#4]#5{%
717 \LWR@gsbox#1{\@imakepicbox(#2,#3)[#4]{#5}}}

```

```

Env LWR@glrbox {\langle macroname\rangle}

```

```

718 \def\LWR@glrbox#1{%
719 \edef\reserved@a{%
720 \endgroup
721 \global\setbox#1\hbox{%
722 \begingroup\aftergroup%
723 \def\noexpand\@currentenv{\@currentenv}%
724 \def\noexpand\@currentline{\on@line}}%
725 \reserved@a
726 \@endpfalse

```

```

727 \color@setgroup
728 \ignorespaces}
729 \let\LWR@endg\lrbbox\LWR@end\lrbbox

```

## 27 Operating-System portability

|                 |                                                                                                                                                                                                                  |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prog Unix       | <b>lwarp</b> 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 <b>lwarp</b> option <code>OSWindows</code> .                                                                                                                    |
| Prog Windows    |                                                                                                                                                                                                                  |
| Opt OSWindows   | When detected or specified, the operating-system path separator used by <b>lwarp</b> is modified, and the boolean <code>usingOSWindows</code> 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:

```
730 \let\LWRpercent\@percentchar
```

The literal `$` character:

```

731 \catcode'\$=12
732 \def\LWRdollar{\$}
733 \catcode'\$=3

```

The literal `&` character:

```

734 \catcode'\&=12
735 \def\LWRamp{&}
736 \catcode'\&=4

```

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

```

737 \catcode'\&=0
738 &catcode'\&=12
739 &def&LWRbackslash{\}
740 &catcode'\&=0
741 \catcode'\&=4

```

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

```

742 \catcode'\&=1
743 \catcode'\{=12
744 \def\LWRleftbrace&{}
745 \catcode'\{=1
746 \catcode'\&=4

```

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

```

747 \catcode'\&=2
748 \catcode'\}=12
749 \def\LWRrightbrace{}&
750 \catcode'\}=2
751 \catcode'\&=4

```

The literal # character:

```

752 \catcode'\#=12
753 \def\LWRhash{#}
754 \catcode'\#=6

```

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

```
755 \def\LWRopquote{'}
```

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

```
756 \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.

```

757 \newbool{usingOSWindows}
758 \boolfalse{usingOSWindows}

```

## 27.3 UNIX, LINUX, and MAC OS

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

```
759 \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.

```
760 \newcommand*{\LWR@setOSWindows}
761 {
762 \booltrue{usingOSWindows}
763 \renewcommand*{\OSPathSymbol}{\@backslashchar}
764 \def\LWRopquote{"}
765 \def\LWRopseq{\space\LWRamp\space\space}
766 }
```

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

```
767 \ifwindows
768 \LWR@setOSWindows
769 \fi
```

## 28 Package options

`Pkg` `kvoptions` Allows key/value package options.

```
770 \RequirePackage{kvoptions}
771 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

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

```
772 \newcommand{\lwarppsetup}[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`.

```
773 \newbool{warpingprint}
774 \newbool{warpingHTML}
775 \newbool{mathjax}
776 \newbool{LWR@origmathjax}
```

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

```
777 \booltrue{warpingprint}%
778 \boolfalse{warpingHTML}%
779 \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.

```
780 \DeclareVoidOption{warpprint}{%
781 \PackageInfo{lwarp}{Using option 'warpprint'}}
782 \booltrue{warpingprint}%
783 \boolfalse{warpingHTML}%
784 }
```

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.

```
785 \DeclareVoidOption{warpHTML}{%
786 \PackageInfo{lwarp}{Using option 'warpHTML'}}
787 \booltrue{warpingHTML}%
788 \boolfalse{warpingprint}%
789 }
```

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.

```
790 \DeclareVoidOption{mathsvg}{%
791 \PackageInfo{lwarp}{Using option 'mathsvg'}}
792 \boolfalse{mathjax}%
793 \boolfalse{LWR@origmathjax}%
794 }
```

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

```
795 \DeclareVoidOption{mathjax}{%
796 \PackageInfo{lwarp}{Using option 'mathjax'}}
797 \booltrue{mathjax}%
798 \booltrue{LWR@origmathjax}%
799 }
```

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.

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

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

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

- Opt `ImagesName` Option `ImagesName` sets the prefix to use for the `lateximage` images.  
 Default: `image-`  
 802 `\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`  
 803 `\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 ")")`  
 804 `\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`  
 805 `\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`  
 806 `\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<sup>A</sup>T<sub>E</sub>X PDF output with HTML tags into a plain-text file with HTML tags.  
 Default: `UTF-8`  
 807 `\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`:  
 808 `\newbool{LWR@creatinglwarpmk}`  
 809 `\boolfalse{LWR@creatinglwarpmk}`  
 810  
 811 `\DeclareVoidOption{lwarpmk}{`  
 812 `\PackageInfo{lwarp}{Using option 'lwarpmk'}`  
 813 `\booltrue{LWR@creatinglwarpmk}`  
 814 `}`
- 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.

```

815 \DeclareVoidOption{OSWindows}{
816 \PackageInfo{lwarp}{Using option 'OSWindows'}
817 \LWR@setOSWindows
818 }

```

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.

```
819 \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.

```
820 \DeclareStringOption[]{HTMLFilename}
```

Opt PrintLatexCmd The shell commands to use to compile the print document.

Default: `<automatic>`

```
821 \DeclareStringOption[]{PrintLatexCmd}
```

Opt HTMLLatexCmd The shell commands to use to compile the HTML document.

Default: `<automatic>`

```
822 \DeclareStringOption[]{HTMLLatexCmd}
```

Opt PrintIndexCmd The shell commands to use to compile the print indexes.

Default: `<empty>`

```
823 \DeclareStringOption[]{PrintIndexCmd}
```

Opt HTMLIndexCmd The shell commands to use to compile the HTML indexes.

Default: `<empty>`

```
824 \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>`

```
825 \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.

```
826 \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.

```
827 \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`

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

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

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

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

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

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

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

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

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

**Execute options** Execute the package options, with the defaults which have been set just above:

```
833 \ProcessKeyvalOptions*\relax
```

## 28.1 Additional options support

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

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

Defaults unless already over-ridden by the user:

```
835 \ifcsemtyp{LWR@HomeHTMLFilename}{
836 \newcommand*\HomeHTMLFilename{\BaseJobname}
837 }{
838 \csedef{HomeHTMLFilename}{\LWR@HomeHTMLFilename}
839 }
840
841 \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.

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

`\LWR@sanitize`  $\{\langle text \rangle\}$

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

```
843 \newcommand*\LWR@sanitize}[1]{%
844 \edef\LWR@sanitized{#1}%
845 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
846 }
```

Sanitize some string options to neutralize underscores.

```
847 \LWR@sanitize{\LWR@BaseJobname}
848 \edef\LWR@BaseJobname{\LWR@sanitized}
849
850 \LWR@sanitize{\LWR@ImagesDirectory}
851 \edef\LWR@ImagesDirectory{\LWR@sanitized}
852
853 \LWR@sanitize{\LWR@ImagesName}
854 \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.

```
855 \ifdefempty{\LWR@PrintIndexCmd}{
856 \renewcommand{\LWR@PrintIndexCmd}{%
857 makeindex -s \LWR@makeindexStyle \space \jobname.idx%
858 }
859 \ifbool{\LWR@xindy}{
860 \renewcommand{\LWR@PrintIndexCmd}{%
861 xindy
862 -M \LWR@xindyStyle \space
863 -L \LWR@xindyLanguage \space
864 -C \LWR@xindyCodepage \space
865 \jobname.idx%
866 }
867 }{}
868 }{}
869
870 \ifdefempty{\LWR@HTMLIndexCmd}{
871 \renewcommand{\LWR@HTMLIndexCmd}{%
872 makeindex -s \LWR@makeindexStyle \space \jobname_html.idx%
873 }
874 \ifbool{\LWR@xindy}{
875 \renewcommand{\LWR@HTMLIndexCmd}{%
876 xindy
877 -M \LWR@xindyStyle \space
878 -L \LWR@xindyLanguage \space
879 -C \LWR@xindyCodepage \space
880 \jobname_html.idx%
881 }
882 }{}
883 }{}
884
```

```

885 \ifdefempty{\LWR@LatexmkIndexCmd}{
886 \renewcommand{\LWR@LatexmkIndexCmd}{%
887 makeindex -s \LWR@makeindexStyle%
888 }
889 \ifbool{LWR@xindy}{
890 \renewcommand{\LWR@LatexmkIndexCmd}{%
891 xindy
892 -M \LWR@xindyStyle \space
893 -L \LWR@xindyLanguage \space
894 -C \LWR@xindyCodepage%
895 }
896 }{}
897 }{}

```

## 28.2 Conditional compilation

`\warpprintonly` {<contents>}

Only process the contents if producing printed output.

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

`\warpHTMLonly` {<contents>}

Only process the contents if producing HTML output.

```
899 \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.

```
900 \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.

```

901 \ifbool{warpingHTML}{
902 \def\DefaultCutFileName{\def\CommentCutFile{comment_html.cut}}
903 }{}
904
905 \ifbool{warpingprint}{
906 \def\DefaultCutFileName{\def\CommentCutFile{comment_print.cut}}
907 }{}

```

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

```
908 \includecomment{warpall}
```

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

For HTML output:

```
909 \ifbool{warpingHTML}
910 {\includecomment{warpHTML}}
911 {\excludecomment{warpHTML}}%

912 \ifbool{warpingprint}
913 {\includecomment{warpprint}}
914 {\excludecomment{warpprint}}
```

Optionally generate a local copy of *lwarpmk*. Default to no.

```
915 \ifbool{LWR@creatinglwarpmk}
916 {\includecomment{LWR@createlwarpmk}}
917 {\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:** 918 \begin{warpHTML}

Load fontspec if necessary:

```
919 \ifxetexorluatex
920 \@ifpackageloaded{fontspec}{\{
921 \usepackage[no-math]{fontspec}
922 }
```

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

```
923 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
924 \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
925 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
926 \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.

```
927 \RequirePackage {microtype}
928
```

```

929 \microtypesetup{
930 protrusion=false,
931 expansion=false,
932 tracking=false,
933 kerning=false,
934 spacing=false}
935
936 \DisableLigatures[f,q,t,T,Q]{encoding = *,family = *}

937 \fi

938 \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: 939 \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.

```

940 \@ifpackageloaded{geometry}
941 {}{
942 \RequirePackage[
943 reset,
944 paperwidth=\paperwidth,
945 paperheight=\paperheight,
946 textwidth=\textwidth,
947 textheight=\textheight,
948 left=\oddsidemargin,
949 top=\topmargin,
950 marginparsep=\marginparsep,
951 marginparwidth=\marginparwidth,
952]{geometry}
953 }

```

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

```

954 \LetLtxMacro\LWR@origgeometry\geometry
955 \LetLtxMacro\LWR@orignewgeometry\newgeometry
956 \LetLtxMacro\LWR@origrestoregeometry\restoregeometry
957 \LetLtxMacro\LWR@origsavegeometry\savegeometry
958 \LetLtxMacro\LWR@origloadgeometry\loadgeometry

```

Bool  
LWR@allowanothergeometry

`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.

```
959 \newbool{LWR@allowanothergeometry}
960 \booltrue{LWR@allowanothergeometry}
```

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

```
961 \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`.

```
962 \LWR@origsavegeometry{LWR@usergeometry}
```

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

```
963 \newlength{\LWR@userspaperwidth}
964 \setlength{\LWR@userspaperwidth}{\paperwidth}
965
966 \newlength{\LWR@userspaperheight}
967 \setlength{\LWR@userspaperheight}{\paperheight}
968
969 \newlength{\LWR@usersmarginparwidth}
970 \setlength{\LWR@usersmarginparwidth}{\marginparwidth}
```

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

```
971 \LWR@origgeometry{
972 reset,
973 paperheight=190in,
974 paperwidth=20in,
975 left=2in,
976 right=6in,
977 top=1in,
978 bottom=1in,
979 heightrounded,%
980 }
```

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

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

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

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

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

```
983 \setlength{\textheight}{0.8\paperheight}
984 \setlength{\textwidth}{0.7\paperwidth}
985
986 \@twosidefalse
987 \mparswitchfalse
988 }% \AtEndPreamble
989
990 \end{warpHTML}
```

**for HTML & PRINT:** 991 \begin{warpall}

Pkg xparse

L<sup>A</sup>T<sub>E</sub>X3 command argument parsing

```
992 \RequirePackage{xparse}
```

Pkg calc

```
993 \RequirePackage{calc}
```

```
994 \end{warpall}
```

**for HTML output:** 995 \begin{warpHTML}

Pkg expl3

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

```
996 \RequirePackage{expl3}
```

Pkg gettitlestring

Used to emulate `\nameref`.

```
997 \RequirePackage{gettitlestring}
```

Pkg everyhook

`everyhook` is used to patch paragraph handling.

```
998 \@ifundefined{bxjs@everypar}{}{\let\everypar\bxjs@everypar}
999
1000 \RequirePackage{everyhook}
1001 \end{warpHTML}
```

**for HTML & PRINT:** 1002 \begin{warpall}

Pkg filecontents

Used to write helper files, done in print mode.

Patched 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>

```
1003 \RequirePackage{filecontents}
1004
1005 \@ifpackagelater{filecontents}{2011/10/09}%
1006 {}
1007 {
1008 \newwrite\fcwrite
1009 \let\LWR@origfilec@ntents\filec@ntents
1010 \def\filec@ntents{\def\chardef##1\write{\let\reserved@cfwrite}\LWR@origfilec@ntents}
1011 }

1012 \end{warpall}
```

**for HTML output:** 1013 \begin{warpHTML}

Pkg xifthen

```
1014 \RequirePackage{xifthen}
```

Pkg verbatim

```
1015 \RequirePackage{verbatim}
```

Pkg refcount

Provides `\setcounterref`, `\setcounterpageref`, etc.

```
1016 \RequirePackage{refcount}
```

Pkg newfloat

```
1017 \RequirePackage{newfloat}
```

```
1018 \end{warpHTML}
```

**for HTML & PRINT:** 1019 \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**

```
1020 \RequirePackage{xstring}[2019/02/01]
```

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

```
1021 \RequirePackage{environ}
```

```
1022 \end{warppall}
```

**for HTML output:** 1023 \begin{warppHTML}

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

```
1024 \RequirePackage{printlen}
```

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

Prints a length using a locally-controlled unit and space. Rounding is used unless the length is small.

```
1025 \newrobustcmd*\LWR@printlength[1]{%
1026 \begingroup%
1027 \uselengthunit{PT}%
1028 \renewcommand*\unitspace}{}%
1029 \ifdimless{#1}{10pt}{%
1030 \printlength{#1}%
1031 }{%
1032 \rndprintlength{#1}%
1033 }%
1034 \endgroup%
1035 }
```

```
1036 \end{warppHTML}
```

**for PRINT output:** 1037 \begin{warpprint}

Pkg varwidth Used for print-mode lateximage.

```
1038 \RequirePackage{varwidth}
```

```
1039 \end{warpprint}
```

## 30 Loading packages

**for HTML & PRINT:** 1040 \begin{warppall}

Remember the original \RequirePackage:

```
1041 \LetLtxMacro\LWR@origRequirePackage\RequirePackage
```

\LWR@requirepackagenames Stores the list of required package names.

```
1042 \newcommand*\LWR@requirepackagenames{}
```

`\LWR@parsedrequirepackagenames` Stores the parsed list of required package names after spaces are removed and `lwarp-` is prepended.

```
1043 \newcommand*{\LWR@parsedrequirepackagenames}{}

```

`\LWR@nullifycomment` Remove the preexisting comment environment. Certain packages define it for their own use.

```
1044 \newcommand*{\LWR@nullifycomment}{%
1045 \PackageInfo{lwarp}%
1046 {Nullifying the comment environment before loading \LWR@strresulttwo,}%
1047 \let\comment\relax%
1048 \let\endcomment\relax%
1049 }

```

`\LWR@findword` [*1: separator*] {*2: list*} {*3: index*} [*4: destination*]

Note that argument 4 is passed directly to `\StrBetween`.

```
1050 \newcommand*\LWR@findword[3][,][%
1051 \StrBetween[#3,\numexpr#3+1]{#1#2#1}{#1}{#1}%
1052 }

```

`\LWR@checkloadfilename` {*filename*} Checks if this filename should be loaded after `lwarp`, or never at all.

The following should never be loaded:

```
1053 \newcommand*{\LWR@checkloadfilename}[1]{%
1054 \LWR@checkloadnever{#1}{ae}{latinmodern}
1055 \LWR@checkloadnever{#1}{aecc}{latinmodern}
1056 \LWR@checkloadnever{#1}{alg}{algorithm2e, algorithmicx}
1057 \LWR@checkloadnever{#1}{algorithmic}{algorithm2e, algorithmicx}
1058 \LWR@checkloadnever{#1}{bitfield}{bytefield}
1059 \LWR@checkloadnever{#1}{boxedminipage}{boxedminipage2e}
1060 \LWR@checkloadnever{#1}{caption2}{caption}
1061 \LWR@checkloadnever{#1}{ccaption}{caption}
1062 \LWR@checkloadnever{#1}{colortab}{colortbl}
1063 \LWR@checkloadnever{#1}{doublespace}{setspace}
1064 \LWR@checkloadnever{#1}{epsf}{graphicx}
1065 \LWR@checkloadnever{#1}{fancyheadings}{fancyhdr}
1066 \LWR@checkloadnever{#1}{fncylab}{cleveref}
1067 \LWR@checkloadnever{#1}{glossary}{glossaries}
1068 \LWR@checkloadnever{#1}{hyper}{hyperref}
1069 \LWR@checkloadnever{#1}{newthm}{ntheorem}
1070 \LWR@checkloadnever{#1}{pdfcprot}{microtype}
1071 \LWR@checkloadnever{#1}{picinpar}{floatflt, wrapfig}
1072 \LWR@checkloadnever{#1}{picins}{floatflt, wrapfig}
1073 \LWR@checkloadnever{#1}{rplain}{fancyhdr}
1074 \LWR@checkloadnever{#1}{si}{siunitx}
1075 \LWR@checkloadnever{#1}{sistyle}{siunitx}
1076 \LWR@checkloadnever{#1}{tlenc}{fontenc, inputenc, inputenx}
1077 \LWR@checkloadnever{#1}{ucs}{inputenc, inputencx}
1078 \LWR@checkloadnever{#1}{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}

```

The following should only be loaded before `lwarp`:

```

1079 \LWR@checkloadbefore{#1}{ctex}
1080 \LWR@checkloadbefore{#1}{fontspec}
1081 \LWR@checkloadbefore{#1}{inputenc}
1082 \LWR@checkloadbefore{#1}{inputenx}
1083 \LWR@checkloadbefore{#1}{nfssect-cfr}
1084 \LWR@checkloadbefore{#1}{fontaxes}
1085 \LWR@checkloadbefore{#1}{kotex}
1086 \LWR@checkloadbefore{#1}{luatexja}
1087 \LWR@checkloadbefore{#1}{luatexja-fontspec}
1088 \LWR@checkloadbefore{#1}{luatexko}
1089 \LWR@checkloadbefore{#1}{morewrites}
1090 \LWR@checkloadbefore{#1}{newclude}
1091 \LWR@checkloadbefore{#1}{newunicodechar}
1092 \LWR@checkloadbefore{#1}{plext}
1093 \LWR@checkloadbefore{#1}{xeCJK}
1094 \LWR@checkloadbefore{#1}{xetexko}
1095 \LWR@checkloadbefore{#1}{zsjatype}
1096 }

```

`\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.

```
1097 \newcommand*{\LWR@lookforpackagename}[1]{%
```

Find the `index`'th package name from the list:

```
1098 \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`.

```
1099 \StrSubstitute[100]{\LWR@strresult}{ }{ }[\LWR@strresulttwo]%
```

See if the package name was found:

```

1100 \IfStrEq{\LWR@strresulttwo}{}%
1101 {}% no filename
1102 {}% 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.

```

1103 \ifdefstring{\LWR@strresulttwo}{easyReview}{\LWR@nullifycomment}{}%
1104 \ifdefstring{\LWR@strresulttwo}{changes}{\LWR@nullifycomment}{}%

```

If HTML, check if the package should be loaded before `lwarp`, or never at all:

```
1105 \ifbool{warpingHTML}{\LWR@checkloadfilename{\LWR@strresulstwo}}{%
```

If HTML, and if found, and if an lwarp-equivalent name exists, use lwarp-\* instead.

```
1106 \ifboolexpr{
1107 bool{warpingHTML} and
1108 test{\IfFileExists{lwarp-\LWR@strresulstwo.sty}}
1109 }%
1110 {% lwarp-* file found
1111 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1112 \edef\LWR@parsedrequirepackagenames{lwarp-\LWR@strresulstwo}%
1113 }{%
1114 \edef\LWR@parsedrequirepackagenames{%
1115 \LWR@parsedrequirepackagenames, lwarp-\LWR@strresulstwo%
1116 }%
1117 }%
1118 }%
1119 {%
```

Otherwise, use the current package name.

```
1120 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1121 \edef\LWR@parsedrequirepackagenames{\LWR@strresulstwo}%
1122 }{%
1123 \edef\LWR@parsedrequirepackagenames{%
1124 \LWR@parsedrequirepackagenames, \LWR@strresulstwo%
1125 }%
1126 }%
1127 }% no lwarp-* file
1128 }% yes filename
1129 }
```

`\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.

```
1130 \RenewDocumentCommand{\RequirePackage}{o m o}{%
```

Redirect up to twenty names:<sup>16</sup>

```
1131 \renewcommand*{\LWR@requirepackagenames}{#2}%
1132 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
1133 \LWR@lookforpackagename{1}%
1134 \LWR@lookforpackagename{2}%
1135 \LWR@lookforpackagename{3}%
1136 \LWR@lookforpackagename{4}%
1137 \LWR@lookforpackagename{5}%
1138 \LWR@lookforpackagename{6}%
1139 \LWR@lookforpackagename{7}%
1140 \LWR@lookforpackagename{8}%
1141 \LWR@lookforpackagename{9}%
```

<sup>16</sup>This was originally nine names, but then I came across a package which used twelve...

```

1142 \LWR@lookforpackagename{10}%
1143 \LWR@lookforpackagename{11}%
1144 \LWR@lookforpackagename{12}%
1145 \LWR@lookforpackagename{13}%
1146 \LWR@lookforpackagename{14}%
1147 \LWR@lookforpackagename{15}%
1148 \LWR@lookforpackagename{16}%
1149 \LWR@lookforpackagename{17}%
1150 \LWR@lookforpackagename{18}%
1151 \LWR@lookforpackagename{19}%
1152 \LWR@lookforpackagename{20}%

```

\RequirePackage depending on the options and version:

```

1153 \IfValueTF{#1}%
1154 {% options given
1155 \IfValueTF{#3}% version given?
1156 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}[#3]}%
1157 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}}%
1158 }%
1159 {% no options given
1160 \IfValueTF{#3}% version given?
1161 {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}[#3]}%
1162 {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}}%
1163 }%
1164 }
1165 \LetLtxMacro\usepackage\RequirePackage

1166 \end{warpall}

```

**for HTML output:** 1167 \begin{warpHTML}

\LWR@ProvidesPackagePass {*{\langle pkgname \rangle} [\langle version \rangle]*}

Uses the original package, including options.

```

1168 \NewDocumentCommand{\LWR@ProvidesPackagePass}{m o}{
1169 \PackageInfo{lwarp}{%
1170 Using package ‘#1’ and adding lwarp modifications,\MessageBreak
1171 including options,}%
1172 \IfValueTF{#2}
1173 {\ProvidesPackage{lwarp-#1}[#2]}
1174 {\ProvidesPackage{lwarp-#1}}
1175 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{#1}}
1176 \ProcessOptions\relax
1177 \IfValueTF{#2}
1178 {\LWR@origRequirePackage{#1}[#2]}
1179 {\LWR@origRequirePackage{#1}}

```

In some cases, the following seems to be required to avoid an “unknown option” error, such as when loading xcolor with options.

```

1180 \DeclareOption*{}%
1181 \ProcessOptions\relax

```

1182 }

`\LWR@ProvidesPackageDropA` {*<name>*} {*<date or -NoValue->*}

Declares the package. Factored for reuse.

```
1183 \newcommand*{\LWR@ProvidesPackageDropA}[2]{%
1184 \PackageInfo{lwarp}{%
1185 Replacing package '#1' with the lwarp version,\MessageBreak
1186 and discarding options,%
1187 }%
1188 \IfValueTF{#2}
1189 {\ProvidesPackage{lwarp-#1}[#2]}
1190 {\ProvidesPackage{lwarp-#1}}
1191 }
```

`\LWR@ProvidesPackageDropB` Nullifies then processes the options.

Seems to be required when options contain curly braces, which were causing “Missing `\begin{document}`”.

```
1192 \newcommand*{\LWR@ProvidesPackageDropB}{%
1193 % \ProcessOptions\relax% original LaTeX code
1194 \let\ds@\empty% from the original \ProcessOptions
1195 \edef\@curroptions{}% lwarp modification to \ProcessOptions
1196 \@process@ptions\relax% from the original \ProcessOptions
1197 }
```

`\LWR@ProvidesPackageDrop` {*<pkgname>*} [*<version>*]

Ignores the original package and uses lwarp’s version instead. Drops/discards all options.

```
1198 \NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{
```

Declare the package:

```
1199 \LWR@ProvidesPackageDropA{#1}{#2}
```

Ignore all options:

```
1200 \DeclareOption*{}
```

Process the options:

```
1201 \LWR@ProvidesPackageDropB
1202 }
```

```
1203 \end{warpHTML}
```

## 31 Additional required packages

**for HTML output:** 1204 \begin{warpHTML}

Pkg caption

```
1205 \LWR@origRequirePackage{caption}
1206 \AtBeginDocument{\RequirePackage{lwarp-caption}}%

1207 \end{warpHTML}
```

## 32 File handles

Defines file handles for writes.

**for HTML & PRINT:** 1208 \begin{warpall}

\LWR@quickfile For quick temporary use only. This is reused in several places.

```
1209 \newwrite\LWR@quickfile%

1210 \end{warpall}
```

**for HTML output:** 1211 \begin{warpHTML}

\LWR@lateximagesfile For <project>-images.txt:

```
1212 \newwrite\LWR@lateximagesfile

1213 \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:** 1214 \begin{warpHTML}

`\@include` `{\filename}` Modified to load `_html_inc` files.

(Below, `\clearpage` caused missing text, and was changed to `\newpage`.)

```

1215 \def\@include#1 {%
1216 \immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp
1217 \immediate\write\LWR@quickfile{\string\input{#1.tex}}% lwarp
1218 \immediate\closeout\LWR@quickfile% lwarp
1219 \LWR@orignewpage% changed from clearpage
1220 \if@filesw
1221 \immediate\write\@mainaux{\string\@input{#1_html_inc.aux}}% changed
1222 \fi
1223 \@tempswtrue
1224 \if@partsw
1225 \@tempswafalse
1226 \edef\reserved@b{#1}%
1227 \@for\reserved@a:=\@partlist\do
1228 {\ifx\reserved@a\reserved@b\@tempswtrue\fi}%
1229 \fi
1230 \if@tempswa
1231 \let\@auxout\@partaux
1232 \if@filesw
1233 \immediate\openout\@partaux #1_html_inc.aux % changed
1234 \immediate\write\@partaux{\relax}%
1235 \fi
1236 \@input@{#1_html_inc.tex}% changed
1237 \LWR@orignewpage% changed from clearpage
1238 \@writeckpt{#1}%
1239 \if@filesw
1240 \immediate\closeout\@partaux
1241 \fi
1242 \else
1243 \deadcycles\z@
1244 \@nameuse{cp@#1}%
1245 \fi
1246 \let\@auxout\@mainaux%
1247 }

1248 \end{warpHTML}

```

## 34 Copying a file

**for HTML output:** 1249 `\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.

```

1250 \newwrite\LWR@copyoutfile % open the file to write to
1251 \newread\LWR@copyinfile % open the file to read from
1252

```

```

1253 \newcommand*{\LWR@copyfile}[2]{%
1254 \LWR@traceinfo{\LWR@copyfile: copying #1 to #2}
1255
1256 \immediate\openout\LWR@copyoutfile=#2
1257 \openin\LWR@copyinfile=#1
1258 \begingroup\endlinechar=-1
1259 \makeatletter
1260
1261 \LWR@traceinfo{\LWR@copyfile: about to loop}
1262
1263 \loop\unless\ifeof\LWR@copyinfile
1264 \LWR@traceinfo{\LWR@copyfile: one line}
1265 \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline
1266 % \LWR@fileline\par % print the content into the pdf
1267 % print the content:
1268 \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
1269 \repeat
1270 \immediate\closeout\LWR@copyoutfile
1271 \LWR@traceinfo{\LWR@copyfile: done}
1272 \endgroup
1273 }

1274 \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:** 1275 \begin{warpall}

Bool LWR@tracinglwarp True if tracing is turned on.

```
1276 \newbool{LWR@tracinglwarp}
```

\tracinglwarp Turns on the debug tracing messages.

```
1277 \newcommand{\tracinglwarp}{\booltrue{LWR@tracinglwarp}}
```

\LWR@traceinfo `{\text}` If tracing is turned on, writes the text to the .log file.

```

1278 \newcommand{\LWR@traceinfo}[1]{%
1279 \ifbool{LWR@tracinglwarp}%
1280 {%
1281 \typeout{*** lwarp: #1}%

```

```
1282 }%
1283 {}%
1284 }
```

Bool HTMLDebugComments Add comments in HTML about closing <div>s, sections, etc.

Default: false

```
1285 \newbool{HTMLDebugComments}
1286 \boolfalse{HTMLDebugComments}
```

If `\tracinglwarp`, show where preamble hooks occur:

```
1287 \AfterEndPreamble{
1288 \LWR@traceinfo{AfterEndPreamble}
1289 }
1290
1291 \AtBeginDocument{
1292 \LWR@traceinfo{AtBeginDocument}
1293 }

1294 \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 L<sup>A</sup>T<sub>E</sub>X 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.

```

\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:** 1295 \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”.

```
1296 \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.

```

1297 \newcommand*{\LWR@formatted}[1]{%
1298 \ifcsundef{\LWR@print@#1}{%
1299 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1300 \csname#1\endcsname%
1301 }{%
1302 \ifcsundef{#1}{%
1303 \expandafter\newrobustcmd\csname #1\endcsname{%
1304 \@nameuse{\LWR@\LWR@formatting @#1}%
1305 }%
1306 }{%
1307 \expandafter\renewrobustcmd\csname #1\endcsname{%
1308 \@nameuse{\LWR@\LWR@formatting @#1}%
1309 }%
1310 }%
1311 }

```

`\LWR@expandableformatted` `{\langle macroname \rangle}` No backslash in the macro name.

An expandable version of `\LWR@formatted`.

```

1312 \newcommand*{\LWR@expandableformatted}[1]{%
1313 \ifcsundef{\LWR@print@#1}{%
1314 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1315 \csname#1\endcsname%
1316 }{%
1317 \ifcsundef{#1}{%
1318 \expandafter\newcommand\csname #1\endcsname{%
1319 \@nameuse{\LWR@\LWR@formatting @#1}%
1320 }%
1321 }{%
1322 \expandafter\renewcommand\csname #1\endcsname{%
1323 \@nameuse{\LWR@\LWR@formatting @#1}%

```

```

1324 }%
1325 }%
1326 }

```

`\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`.

```

1327 \newcommand*{\LWR@formattedenv}[1]{%
1328 \ifcsundef{LWR@print@#1}{%
1329 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1330 \csname#1\endcsname%
1331 \csletcs{endLWR@print@#1}{end#1}%
1332 }{ }%
1333 \DeclareDocumentEnvironment{#1}{ }%
1334 {%
1335 \@nameuse{LWR@\LWR@formatting @#1}%
1336 }%
1337 {%
1338 \@nameuse{endLWR@\LWR@formatting @#1}%
1339 }%
1340 }

```

`\LWR@expandableformattedenv` {*(environmentname)*}

An expandable version of `LWR@formattedenv`.

```

1341 \newcommand*{\LWR@expandableformattedenv}[1]{%
1342 \ifcsundef{LWR@print@#1}{%
1343 \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1344 \csname#1\endcsname%
1345 \csletcs{endLWR@print@#1}{end#1}%
1346 }{ }%
1347 \DeclareExpandableDocumentEnvironment{#1}{ }%
1348 {%
1349 \@nameuse{LWR@\LWR@formatting @#1}%
1350 }%
1351 {%
1352 \@nameuse{endLWR@\LWR@formatting @#1}%
1353 }%
1354 }

1355 \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:** 1356 `\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

```
1357 \newbool{FormatEPUB}
1358 \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

```
1359 \newbool{FormatWP}
1360 \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>

```
1361 \newbool{WPMarkFloats}
1362 \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.

```
1363 \newbool{WPMarkMinipages}
1364 \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.

<sup>17</sup>Perhaps some day word processors will have HTML import options for identifying <figure> and caption tags for figures and tables.

*If set false, the actual TOC is printed instead.*

```
1365 \newbool{WPMarkTOC}
1366 \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.*

```
1367 \newbool{WPMarkLOFT}
1368 \boolfalse{WPMarkLOFT}
```

Bool WPMarkMath While formatting for word processors, prints math as L<sup>A</sup>T<sub>E</sub>X code instead of creating SVG images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

Default: false

```
1369 \newbool{WPMarkMath}
1370 \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 171.

```
1371 \newbool{WPTitleHeading}
1372 \boolfalse{WPTitleHeading}
```

```
1373 \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:** 1374 \begin{warpHTML}

```
1375 \AtBeginDocument{
1376 \ifbool{FormatWP}{
1377 \@ifundefined{chapter}{
1378 \ifbool{WPTitleHeading}{% part and section starting at h2
1379 \renewcommand*{\LWR@tagtitle}{h1}
```

```
1380 \renewcommand*\LWR@tagtitleend}{/h1}
1381 \renewcommand*\LWR@tagpart}{h2}
1382 \renewcommand*\LWR@tagpartend}{/h2}
1383 \renewcommand*\LWR@tagsection}{h3}
1384 \renewcommand*\LWR@tagsectionend}{/h3}
1385 \renewcommand*\LWR@tagsubsection}{h4}
1386 \renewcommand*\LWR@tagsubsectionend}{/h4}
1387 \renewcommand*\LWR@tagsubsubsection}{h5}
1388 \renewcommand*\LWR@tagsubsubsectionend}{/h5}
1389 \renewcommand*\LWR@tagparagraph}{h6}
1390 \renewcommand*\LWR@tagparagraphend}{/h6}
1391 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
1392 \renewcommand*\LWR@tagsubparagraphend}{/span}
1393 }% WPTitleHeading
1394 {% not WPTitleHeading, part and section starting at h1}
1395 \renewcommand*\LWR@tagtitle}{div class="title"}
1396 \renewcommand*\LWR@tagtitleend}{/div}
1397 \renewcommand*\LWR@tagpart}{h1}
1398 \renewcommand*\LWR@tagpartend}{/h1}
1399 \renewcommand*\LWR@tagsection}{h2}
1400 \renewcommand*\LWR@tagsectionend}{/h2}
1401 \renewcommand*\LWR@tagsubsection}{h3}
1402 \renewcommand*\LWR@tagsubsectionend}{/h3}
1403 \renewcommand*\LWR@tagsubsubsection}{h4}
1404 \renewcommand*\LWR@tagsubsubsectionend}{/h4}
1405 \renewcommand*\LWR@tagparagraph}{h5}
1406 \renewcommand*\LWR@tagparagraphend}{/h5}
1407 \renewcommand*\LWR@tagsubparagraph}{h6}
1408 \renewcommand*\LWR@tagsubparagraphend}{/h6}
1409 }% not WPTitleHeading
1410 }% chapter undefined
1411 {% chapter defined
1412 \ifbool{WPTitleHeading}{
1413 {% not WPTitleHeading, part and chapter starting at h1}
1414 \renewcommand*\LWR@tagtitle}{div class="title"}
1415 \renewcommand*\LWR@tagtitleend}{/div}
1416 \renewcommand*\LWR@tagpart}{h1}
1417 \renewcommand*\LWR@tagpartend}{/h1}
1418 \renewcommand*\LWR@tagchapter}{h2}
1419 \renewcommand*\LWR@tagchapterend}{/h2}
1420 \renewcommand*\LWR@tagsection}{h3}
1421 \renewcommand*\LWR@tagsectionend}{/h3}
1422 \renewcommand*\LWR@tagsubsection}{h4}
1423 \renewcommand*\LWR@tagsubsectionend}{/h4}
1424 \renewcommand*\LWR@tagsubsubsection}{h5}
1425 \renewcommand*\LWR@tagsubsubsectionend}{/h5}
1426 \renewcommand*\LWR@tagparagraph}{h6}
1427 \renewcommand*\LWR@tagparagraphend}{/h6}
1428 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
1429 \renewcommand*\LWR@tagsubparagraphend}{/span}
1430 }% not WPTitleHeading
1431 }% chapter defined
1432 }{}% FormatWP
1433 }% AtBeginDocument
```

```
1434 \end{warpHTML}
```

## 38 Remembering original formatting macros

for HTML output: 1435 \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.

```
1436 \chardef\LWR@origpound='\#

1437 \let\LWR@origcomma\,
1438 \let\LWR@origthinspace\thinspace
1439 \let\LWR@orignegthinspace\negthinspace
1440 \let\LWR@origtilde~
1441 \let\LWR@origenskip\enskip
1442 \let\LWR@origquad\quad
1443 \let\LWR@origqqquad\qqquad
1444 \let\LWR@origfil\hfil
1445 \let\LWR@orighss\hss
1446 \let\LWR@origllap\llap
1447 \let\LWR@origrlap\rlap
1448 \let\LWR@origfilneg\hfilneg
1449 \let\LWR@orighspace\hspace
1450
1451 \let\LWR@origrule\rule
1452
1453 \let\LWR@origmedskip\medskip
1454 \let\LWR@origbigskip\bigskip
1455
1456 \let\LWR@origtextellipsis\textellipsis
1457 \let\LWR@orig@textquotedbl\textquotedbl
1458
1459 \LetLtxMacro\LWR@origttfamily\ttfamily
1460
1461 \LetLtxMacro\LWR@origem\em
1462
1463 \LetLtxMacro\LWR@orignormalfont\normalfont
1464
1465 \let\LWR@origonecolumn\onecolumn
1466
1467 \let\LWR@origsp\sp
1468 \let\LWR@origsb\sb
1469 \LetLtxMacro\LWR@origtextsuperscript\textsuperscript
1470 \LetLtxMacro\LWR@orig@textsuperscript\@textsuperscript
1471
1472 \AtBeginDocument{
1473 \LetLtxMacro\LWR@origtextsubscript\textsubscript
```

```

1474 \LetLtxMacro\LWR@orig@textsubscript\@textsubscript
1475 }
1476
1477 \LetLtxMacro\LWR@origunderline\underline

1478 \let\LWR@orignewpage\newpage
1479
1480 \let\LWR@origpagestyle\pagestyle
1481 \let\LWR@origthispagestyle\thispagestyle
1482 \LetLtxMacro\LWR@origpagenumbering\pagenumbering
1483
1484 \let\LWR@orignewline\newline
1485
1486
1487 \AtBeginDocument{% in case packages change definition
1488 \let\LWR@orig@trivlist\@trivlist
1489 \let\LWR@origtrivlist\trivlist
1490 \let\LWR@origendtrivlist\endtrivlist
1491 \LetLtxMacro\LWR@origitem\item
1492 \LetLtxMacro\LWR@origitemize\itemize
1493 \LetLtxMacro\LWR@endorigitemize\enditemize
1494 \LetLtxMacro\LWR@origenumerate\enumerate
1495 \LetLtxMacro\LWR@endorigenumerate\endenumerate
1496 \LetLtxMacro\LWR@origdescription\description
1497 \LetLtxMacro\LWR@endorigdescription\enddescription
1498 \let\LWR@orig@mklab\@mklab
1499 \let\LWR@origmakeLabel\makeLabel
1500 \let\LWR@orig@donoparitem\@donoparitem
1501 \LetLtxMacro\LWR@orig@item\@item
1502 \let\LWR@orig@nbitem\@nbitem
1503 }
1504
1505 \let\LWR@origpar\par
1506
1507 \LetLtxMacro\LWR@origfootnote\footnote
1508 \LetLtxMacro\LWR@orig@mpfootnotetext\@mpfootnotetext
1509
1510
1511 \AtBeginDocument{% in case packages change definition
1512 \LetLtxMacro\LWR@orighline\hline%
1513 \LetLtxMacro\LWR@origcline\cline%
1514 }

1515 \end{warpHTML}

```

## 39 Accents

Native L<sup>A</sup>T<sub>E</sub>X accents such as `\''` will work, but many more kinds of accents are available when using Unicode-aware X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X and LuaL<sup>A</sup>T<sub>E</sub>X.

for HTML output: 1516 `\begin{warpHTML}`

Without `\AtBeginDocument`, `\t` was being re-defined somewhere.

```
1517 \AtBeginDocument{
```

The following are restored for print when inside a `lateximage`.

For Unicode engines, only `\t` needs to be redefined:

```
1518 \LetLtxMacro\LWR@origt\t
```

For `pdfLATEX`, additional work is required:

```
1519 \ifPDFTeX% pdflatex or dvi latex
1520 \LetLtxMacro\LWR@origequalaccent\=
1521 \LetLtxMacro\LWR@origdotaccent\.\
1522 \LetLtxMacro\LWR@origu\u
1523 \LetLtxMacro\LWR@origv\v
1524 \LetLtxMacro\LWR@origc\c
1525 \LetLtxMacro\LWR@origd\d
1526 \LetLtxMacro\LWR@origb\b
```

The `HTML` redefinitions follow.

For `pdfLATEX`, Unicode diacritical marks are used:

```
1527 \renewcommand*{\=} [1]{#1\HTMLUnicode{0305}}
1528 \renewcommand*{\.} [1]{#1\HTMLUnicode{0307}}
1529 \renewcommand*{\u} [1]{#1\HTMLUnicode{0306}}
1530 \renewcommand*{\v} [1]{#1\HTMLUnicode{030C}}
1531 \renewcommand*{\c} [1]{#1\HTMLUnicode{0327}}
1532 \renewcommand*{\d} [1]{#1\HTMLUnicode{0323}}
1533 \renewcommand*{\b} [1]{#1\HTMLUnicode{0331}}
1534 \fi
```

For all engines, a Unicode diacritical tie is used:

```
1535 \def\LWR@t#1#2{#1\HTMLUnicode{0361}#2}
1536 \renewcommand*{\t} [1]{\LWR@t#1}
```

`\LWR@restoreorigaccents` Called from `\restoreoriginalformatting` when a `lateximage` is begun.

```
1537 \ifPDFTeX% pdflatex or dvi latex
1538 \newcommand*{\LWR@restoreorigaccents}{%
1539 \LetLtxMacro\=\LWR@origequalaccent%
1540 \LetLtxMacro\.\LWR@origdotaccent%
1541 \LetLtxMacro\u\LWR@origu%
1542 \LetLtxMacro\v\LWR@origv%
1543 \LetLtxMacro\t\LWR@origt%
1544 \LetLtxMacro\c\LWR@origc%
1545 \LetLtxMacro\d\LWR@origd%
1546 \LetLtxMacro\b\LWR@origb%
1547 }%
1548 \else% XeLaTeX, LuaLaTeX:
1549 \newcommand*{\LWR@restoreorigaccents}{%
```

```

1550 \LetLtxMacro\t\LWR@origt%
1551 }%
1552 \fi%
1553 }% AtBeginDocument

1554 \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:

```
1555 \excludecomment{LWRwriteconf}
```

Generate configuration files if print mode and not -pstool:

```

for PRINT output: 1556 \begin{warpprint}
1557 \fullexpandarg%
1558 \IfSubStr*{\jobname}{-pstool}
1559 {
1560 \PackageInfo{lwarp}{%
1561 Jobname with -pstool is found.\MessageBreak
1562 Not generating lwarp configuration files,%
1563 }
1564 }
1565 {
1566 \PackageInfo{lwarp}{Generating lwarp configuration files,}%
1567 \includecomment{LWRwriteconf}
1568 }
1569 \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: 1570 \begin{LWRwriteconf}
1571 \immediate\openout\LWR@quickfile=\jobname_html.tex
1572 \immediate\write\LWR@quickfile{%
1573 \detokenize{\PassOptionsToPackage}%
1574 {warpHTML,BaseJobname=\jobname}{lwarp}%
1575 }
1576 \immediate\write\LWR@quickfile{%
1577 \detokenize{\input}\string{\jobname.tex}\string }%
1578 }

```

```
1579 \immediate\closeout\LWR@quickfile
1580 \end{LWRwriteconf}
```

### 40.3 *lwarp*mk configuration files

**Config file:** 1581 \begin{LWRwriteconf}

`\LWR@lwarpcnfversion` The version number of the configuration file, allowing *lwarp*mk 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.)

```
1582 \newcommand*{\LWR@lwarpcnfversion}[2]{% also in lwarpmk.lua
```

#### 40.3.1 Helper macros

`\LWR@shellescapecmd` The LaTeX compile option for shell escape, if used.

```
1583 \ifshellescape
1584 \def\LWR@shellescapecmd{--shell-escape }
1585 \else
1586 \def\LWR@shellescapecmd{}
1587 \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 $\textit{latex}$* , etc. Suffix is empty or `_html`

```
1588 \newcommand*{\LWR@compilecmd}[2]{%
1589 #1 \LWR@shellescapecmd \jobname#2%
1590 }
```

`\LWR@addcompilecmd`  $\{\langle cmd \rangle\} \{\langle suffix \rangle\}$

Adds to the compilation command.

Cmd is *dvipdf $\textit{mx}$* , etc. Suffix is empty or `_html`

```
1591 \newcommand*{\LWR@addcompilecmd}[2]{%
1592 \LWRopseq
1593 #1 \jobname#2%
1594 }
```

`\LWR@unknownengine` Error message if not sure which L<sup>A</sup>T<sub>E</sub>X engine is being used.

```
1595 \newcommand*{\LWR@unknownengine}{%
1596 \PackageError{lwarp}
```

```

1597 {Unknown LaTeX engine.}
1598 {Lwarp only knows about pdflatex, dvi latex, xelatex, lualatex, and upLatex.}
1599 }

```

`\LWR@latexmkvar`  $\{\langle varname \rangle\} \{\langle value \rangle\}$

Adds a *latexmk* variable assignment.

```

1600 \newcommand*\LWR@latexmkvar}[2]{%
1601 -e
1602 \LWRopquote%
1603 \LWRdollar #1=q/#2/%
1604 \LWRopquote
1605 }

```

`\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.

```

1606 \newcommand*\LWR@latexmkcmd}[1]{%
1607 latexmk \space \LWR@shellescapecmd \space #1 \space
1608 -recorder \space
1609 \LWR@latexmkvar{makeindex}\LWR@LatexmkIndexCmd}
1610 }

```

`\LWR@latexmkdvipdfm`  $\{\langle dvipdfm \text{ or } dvipdfmx \rangle\}$

Adds the options settings for *dvipdfm* or *dvipdfmx*.

```

1611 \newcommand*\LWR@latexmkdvipdfm}[1]{%
1612 -pdfdvi \space
1613 \LWR@latexmkvar{dvipdf}{%
1614 #1
1615 \@percentchar O
1616 -o \@percentchar D
1617 \@percentchar S%
1618 }
1619 }

```

`\LWR@compileuplatex` Sets compile options for up<sub>L</sub>AT<sub>E</sub>X with *ujarticle* or related classes.

```

1620 \newcommand*\LWR@compileuplatex{%
1621 \def\LWR@tempprintlatexcmd{%
1622 \LWR@compilecmd{uplatex}{%
1623 \LWR@addcompilecmd{dvipdfmx}{%
1624 }
1625 \def\LWR@tempHTMLlatexcmd{%
1626 \LWR@compilecmd{uplatex}{_html}
1627 \LWR@addcompilecmd{dvipdfmx}{_html}
1628 }
1629 }

```

`\LWR@PrintLatexCmd` If not set by the user, the following sets the command to use to compile the source to  
`\LWR@HTMLLatexCmd` PDF form.

If using *latexmk*, a complicated string is created, eventually resulting in something such as:

For *xelatex* with `--shell-escape`:

---

```
[[latexmk -xelatex --shell-escape -recorder
 -e '$makeindex = q/makeindex -s lwarp.ist/' <jobname>_html]]
```

---

For *dvipdfmx*:

---

```
[[latexmk -pdfdvi -e '$dvipdf=q/dvipdfmx %O -o %D %S/'
 -recorder
 -e '$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.

```
1630 \ifbool{LWR@latexmk}{
```

For *latexmk* with *pdflatex* or *lualatex*:

```
1631 \ifpdf
```

For *latexmk* with *pdflatex*:

```
1632 \ifPDFTeX
1633 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi -ps-}}
1634 \else
```

For *latexmk* with *lualatex*:

```
1635 \ifLuaTeX
1636 \def\LWR@latexcmd{\LWR@latexmkcmd{-lualatex}}
1637 \else
1638 \LWR@unknownengine
1639 \fi
1640 \fi
1641 \else% \ifpdf
```

For *latexmk* with *xelatex* or DVI *latex*:

```
1642 \ifXeTeX
```

For *latexmk* with *xelatex*:

```
1643 \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}}
1644 \else% \ifXeTeX
```

For *latexmk* with DVI *latex*:

```

1645 \ifbool{LWR@dvipdfm}{
1646 \def\LWR@latexcmd{%
1647 \LWR@latexmkcmd{%
1648 \LWR@latexmkdvipdfm{dvipdfm}%
1649 }
1650 }
1651 }{
1652 \ifbool{LWR@dvipdfmx}{
1653 \def\LWR@latexcmd{%
1654 \LWR@latexmkcmd{%
1655 \LWR@latexmkdvipdfm{dvipdfmx}%
1656 }
1657 }
1658 }{
1659 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdfps}}
1660 }
1661 }
1662 \fi
1663 \fi% \ifpdf

```

The final assignment if *latexmk*:

```

1664 \def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
1665 \def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
1666 }% latexmk

```

Without *latexmk*, the compiling command is simply the compiler name and the optional shell escape:

```

1667 {% not latexmk
1668 \ifpdf

```

For *pdflatex* or *lualatex*:

```

1669 \ifPDFTeX

```

For *pdflatex*:

```

1670 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdflatex}{}}
1671 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdflatex}{_html}}
1672 \else
1673 \ifLuaTeX

```

For *lualatex*:

```

1674 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{lualatex}{}}
1675 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{lualatex}{_html}}
1676 \else
1677 \LWR@unknownengine
1678 \fi
1679 \fi
1680 \else% \ifpdf

```

For DVI *latex* or *xelatex*:

```
1681 \ifXeTeX
```

For *xelatex*:

```
1682 \def\LWR@tempprintlatexcmd{\LWR@compilecmd{xelatex}{}}
1683 \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{xelatex}{_html}}
1684 \else
```

For DVI *latex*. Default to *dvips*, unless told to use *dvipdfm* or *dvipdfmx*:

```
1685 \ifbool{LWR@dvipdfm}{
```

For DVI *latex* with *dvipdfm*:

```
1686 \def\LWR@tempprintlatexcmd{%
1687 \LWR@compilecmd{latex}{}
1688 \LWR@addcompilecmd{dvipdfm}{}
1689 }
1690 \def\LWR@tempHTMLlatexcmd{%
1691 \LWR@compilecmd{latex}{_html}
1692 \LWR@addcompilecmd{dvipdfm}{_html}
1693 }
1694 }{
1695 \ifbool{LWR@dvipdfmx}{
```

For DVI *latex* with *dvipdfmx*:

```
1696 \def\LWR@tempprintlatexcmd{%
1697 \LWR@compilecmd{latex}{}
1698 \LWR@addcompilecmd{dvipdfmx}{}
1699 }
1700 \def\LWR@tempHTMLlatexcmd{%
1701 \LWR@compilecmd{latex}{_html}
1702 \LWR@addcompilecmd{dvipdfmx}{_html}
1703 }
1704 }{% dvips
```

For DVI *latex* with *dvips* and *ps2pdf*:

```
1705 \def\LWR@tempprintlatexcmd{%
1706 \LWR@compilecmd{latex}{}
1707 \LWR@addcompilecmd{dvips}{}
1708 \LWR@addcompilecmd{ps2pdf}{_ps}
1709 }
1710 \def\LWR@tempHTMLlatexcmd{%
1711 \LWR@compilecmd{latex}{_html}
1712 \LWR@addcompilecmd{dvips}{_html}
1713 \LWR@addcompilecmd{ps2pdf}{_html}_ps
1714 }
1715 }
1716 }
1717 \fi% \ifXeTeX
```

```
1718 \fi% \ifpdf
1719}% latexmk
```

For `ujarticle`, `utarticle`, and related, using up<sup>L</sup>A<sup>T</sup>E<sup>X</sup> and *dvipdfmx*:

```
1720 \@ifclassloaded{ujarticle}{\LWR@compileuplatex}{ }
1721 \@ifclassloaded{ujbook}{\LWR@compileuplatex}{ }
1722 \@ifclassloaded{ujreport}{\LWR@compileuplatex}{ }
1723 \@ifclassloaded{utarticle}{\LWR@compileuplatex}{ }
1724 \@ifclassloaded{utbook}{\LWR@compileuplatex}{ }
1725 \@ifclassloaded{utreport}{\LWR@compileuplatex}{ }
```

Only make the setting permanent if the original was empty:

```
1726 \ifdefempty{\LWR@PrintLatexCmd}{
1727 \def\LWR@PrintLatexCmd{\LWR@tempprintlatexcmd}
1728 }{ }
1729 \ifdefempty{\LWR@HTMLLatexCmd}{
1730 \def\LWR@HTMLLatexCmd{\LWR@tempHTMLlatexcmd}
1731 }{ }
```

`\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.

```
1732 \newcommand{\LWR@writeconf}[1]{
1733 \ifcsdef{LWR@quickfile}{ }\newwrite{\LWR@quickfile}
1734 \immediate\openout\LWR@quickfile=#1
1735 \immediate\write\LWR@quickfile{confversion = [[\LWR@lwarpcnfversion]]}
1736 \ifbool{usingOSWindows}{
1737 \immediate\write\LWR@quickfile{opsystem = [[Windows]]}
1738 }{
1739 \immediate\write\LWR@quickfile{opsystem = [[Unix]]}
1740 }
1741 \immediate\write\LWR@quickfile{sourcename = [[\jobname]]}
1742 \immediate\write\LWR@quickfile{homehtmlfilename = [[\HomeHTMLFilename]]}
1743 \immediate\write\LWR@quickfile{htmlfilename = [[\HTMLFilename]]}
1744 \immediate\write\LWR@quickfile{imagesdirectory = [[\LWR@ImagesDirectory]]}
1745 \immediate\write\LWR@quickfile{imagesname = [[\LWR@ImagesName]]}
1746 \immediate\write\LWR@quickfile{latexmk = [[\ifbool{LWR@latexmk}{true}{false}]]}
1747 \immediate\write\LWR@quickfile{printlatexcmd = [[\LWR@PrintLatexCmd]]}
1748 \immediate\write\LWR@quickfile{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}
1749 \immediate\write\LWR@quickfile{printindexcmd = [[\LWR@PrintIndexCmd]]}
1750 \immediate\write\LWR@quickfile{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}
1751 \immediate\write\LWR@quickfile{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}
1752 \immediate\write\LWR@quickfile{glossarycmd = [[\LWR@GlossaryCmd]]}
1753 \immediate\write\LWR@quickfile{pdftotextenc = [[\LWR@pdftotextEnc]]}
1754 \immediate\closeout\LWR@quickfile
1755 }
1756

1757 \end{LWRwriteconf}
```

### 40.3.2 lwarpmk.conf

File `lwarpmk.conf` `lwarpmk.conf` is automatically (re-)created by the `lwarp` package when executing `pdflatex <project.tex>`, or similar for `xelatex` or `lualatex`, in print-document generation mode, which is the default unless the `warpHTML` option is given. `lwarpmk.conf` is then used by the utility `lwarpmk`.

**Config file:** 1758 `\begin{LWRwriteconf}`  
 1759  
 1760 `\AtBeginDocument{\LWR@writeconf{lwarpmk.conf}}`  
 1761  
 1762 `\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:** 1763 `\begin{LWRwriteconf}`  
 1764  
 1765 `\AtBeginDocument{\LWR@writeconf{\jobname.lwarpmkconf}}`  
 1766  
 1767 `\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:** 1768 `\begin{LWRwriteconf}`  
 1769 `\begin{filecontents*}{lwarp.css}`  
 1770 `/*`  
 1771 CSS stylesheet for the LaTeX lwarp package  
 1772 Copyright 2016-2019 Brian Dunn – BD Tech Concepts LLC  
 1773 `*/`  
 1774  
 1775  
 1776 `/* a fix for older browsers: */`  
 1777 `header, section, footer, aside, nav, main,`  
 1778 `article, figure { display: block; }`  
 1779  
 1780  
 1781 `A:link {color:#000080 ; text-decoration: none ; }`  
 1782 `A:visited {color:#800000 ; }`  
 1783 `A:hover {color:#000080 ; text-decoration: underline ;}`  
 1784 `A:active {color:#800000 ; }`  
 1785  
 1786 `a.tocbook {display: inline-block ; margin-left: 0em ; }`

```
1787 font-weight: bold ; margin-top: 1ex ; margin-bottom: 1ex ; }
1788 a.tocpart {display: inline-block ; margin-left: 0em ;
1789 font-weight: bold ;}
1790 a.tocchapter {display: inline-block ; margin-left: 0em ;
1791 font-weight: bold ;}
1792 a.tocsection {display: inline-block ; margin-left: 1em ;
1793 text-indent: -.5em ; font-weight: bold ; }
1794 a.tocsubsection {display: inline-block ; margin-left: 2em ;
1795 text-indent: -.5em ; }
1796 a.tocsubsubsection {display: inline-block ; margin-left: 3em ;
1797 text-indent: -.5em ; }
1798 a.tocparagraph {display: inline-block ; margin-left: 4em ;
1799 text-indent: -.5em ; }
1800 a.tocsubparagraph {display: inline-block ; margin-left: 5em ;
1801 text-indent: -.5em ; }
1802 a.tocfigure {margin-left: 0em}
1803 a.tocsubfigure {margin-left: 2em}
1804 a.toctable {margin-left: 0em}
1805 a.tocsubtable {margin-left: 2em}
1806 a.toctheorem {margin-left: 0em}
1807 a.toclstlisting {margin-left: 0em}
1808
1809 body {
1810 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1811 "Lucida Bright", Georgia, serif;
1812 background: #FAF7F4 ;
1813 color: black ;
1814 margin:0em ;
1815 padding:0em ;
1816 font-size: 100% ;
1817 line-height: 1.2 ;
1818 }
1819
1820 p {margin: 1.5ex 0em 1.5ex 0em ;}
1821 table p {margin: .5ex 0em .5ex 0em ;}
1822
1823 /* Holds a section number */
1824 span.sectionnumber { margin-right: 0em }
1825
1826 /* Inserted in front of index lines */
1827 span.indexitem {margin-left: 0em}
1828 span.indexsubitem {margin-left: 2em}
1829 span.indexsubsubitem {margin-left: 4em}
1830
1831 div.hidden, span.hidden { display: none ; }
1832
1833 kbd, span.texttt {
1834 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1835 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1836 "Courier New", monospace;
1837 font-size: 100% ;
1838 }
1839
1840 pre { padding: 3pt ; }
1841
```

```
1842 span.strong, span.textbf, div.strong, div.textbf { font-weight: bold; }
1843
1844 span.textit, div.textit { font-style: italic; }
1845
1846 span.textmd, div.textmd { font-weight: normal; }
1847
1848 span.texteb { font-weight: bolder; }
1849
1850 span.textlg { font-weight: lighter; }
1851
1852 span.textsc, div.textsc {
1853 font-variant: small-caps;
1854 font-variant-numeric: oldstyle-nums ;
1855 }
1856
1857 span.textulc, div.textulc {
1858 font-variant: normal ;
1859 font-variant-numeric: normal ;
1860 }
1861
1862 span.textsl, div.textsl { font-style: oblique; }
1863
1864 span.textup, div.textup {
1865 font-style: normal;
1866 font-variant: normal;
1867 font-variant-numeric: normal ;
1868 }
1869
1870 span.textrm, div.textrm {
1871 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1872 "Lucida Bright", Georgia, serif;
1873 }
1874
1875 span.textsf, div.textsf {
1876 font-family: "DejaVu Sans", "Bitstream Vera Sans",
1877 Geneva, Verdana, sans-serif ;
1878 }
1879
1880 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
1881
1882 span.underline {
1883 text-decoration: underline ;
1884 text-decoration-skip: auto ;
1885 }
1886
1887 span.overline {
1888 text-decoration: overline ;
1889 text-decoration-skip: auto ;
1890 }
1891
1892
1893 /* for vertical text: */
1894 div.verticalrl { writing-mode: vertical-rl }
1895 div.horizontalTB { writing-mode: horizontal-tb }
1896
```

```
1897
1898 /* for diagbox */
1899 div.diagboxtitleN { border-bottom: 1px solid gray }
1900 div.diagboxtitleS { border-top: 1px solid gray }
1901
1902 div.diagboxE {
1903 padding-left: 2em ;
1904 text-align: right ;
1905 }
1906
1907 div.diagboxW {
1908 padding-right: 2em ;
1909 text-align: left ;
1910 }
1911
1912
1913
1914 /* For realscripts */
1915 .supsubscript {
1916 display: inline-block;
1917 text-align:left ;
1918 }
1919
1920 .supsubscript sup,
1921 .supsubscript sub {
1922 position: relative;
1923 display: block;
1924 font-size: .5em;
1925 line-height: 1;
1926 }
1927
1928 .supsubscript sup {
1929 top: .5em;
1930 }
1931
1932 .supsubscript sub {
1933 top: .5em;
1934 }
1935
1936 div.attribution p {
1937 text-align: right ;
1938 font-size: 80%
1939 }
1940
1941 span.poemtitle {
1942 font-size: 120% ; font-weight: bold;
1943 }
1944
1945 pre.tabbing {
1946 font-family: "Linux Libertine Mono O", "Lucida Console",
1947 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
1948 "Liberation Mono", "FreeMono", "Andale Mono",
1949 "Nimbus Mono L", "Courier New", monospace;
1950 }
1951
```

```
1952 blockquote {
1953 display: block ;
1954 margin-left: 2em ;
1955 margin-right: 2em ;
1956 }
1957
1958 /* quotchap is for the quotchap package */
1959 div.quotchap {
1960 display: block ;
1961 font-style: oblique ;
1962 overflow-x: auto ;
1963 margin-left: 2em ;
1964 margin-right: 2em ;
1965 }
1966
1967 blockquote p, div.quotchap p {
1968 line-height: 1.5;
1969 text-align: left ;
1970 font-size: .85em ;
1971 }
1972
1973 /* qauthor is for the quotchap package */
1974 div.qauthor {
1975 display: block ;
1976 text-align: right ;
1977 margin-left: auto ;
1978 margin-right: 2em ;
1979 font-size: 80% ;
1980 font-variant: small-caps;
1981 }
1982
1983 div.qauthor p {
1984 text-align: right ;
1985 }
1986
1987 div.epigraph, div.dictum {
1988 line-height: 1.2;
1989 text-align: left ;
1990 padding: 3ex 1em 0ex 1em ;
1991 /* margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
1992 margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
1993 /* margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
1994 font-size: .85em ;
1995 max-width: 27em ;
1996 }
1997
1998 div.epigraphsource, div.dictumauthor {
1999 text-align:right ;
2000 margin-left:auto ;
2001 /* max-width: 50% ; */
2002 border-top: 1px solid #A0A0A0 ;
2003 padding-bottom: 3ex ;
2004 line-height: 1.2;
2005 }
2006
```

```
2007 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ;}
2008 div.epigraphsource p, div.dictumauthor p { padding: .5ex 0ex 0ex 0ex ; margin: 0ex ;}
2009 div.dictumauthor { font-style:italic }
2010
2011
2012 /* copyrightbox package */
2013 div.copyrightbox { margin: .5ex .5em }
2014 div.copyrightbox p {margin: 0px .5em ; padding: 0px}
2015 div.copyrightboxnote {text-align: left ; font-size: 60%}
2016
2017
2018 /* lettrine package: */
2019 span.lettrine { font-size: 4ex ; float: left ; }
2020 span.lettrinetext { font-variant: small-caps ; }
2021
2022 /* ulem, soul, umoline packages: */
2023 span.uline {
2024 text-decoration: underline ;
2025 text-decoration-skip: auto ;
2026 }
2027
2028 span.uuline {
2029 text-decoration: underline ;
2030 text-decoration-skip: auto ;
2031 text-decoration-style: double ;
2032 }
2033
2034 span.uwave {
2035 text-decoration: underline ;
2036 text-decoration-skip: auto ;
2037 text-decoration-style: wavy ;
2038 }
2039
2040 span.sout {
2041 text-decoration: line-through ;
2042 }
2043
2044 span.oline {
2045 text-decoration: overline ;
2046 text-decoration-skip: auto ;
2047 }
2048
2049 span.xout {
2050 text-decoration: line-through ;
2051 }
2052
2053 span.dashuline {
2054 text-decoration: underline ;
2055 text-decoration-skip: auto ;
2056 text-decoration-style: dashed ;
2057 }
2058
2059 span.dotuline {
2060 text-decoration: underline ;
2061 text-decoration-skip: auto ;
```

```
2062 text-decoration-style: dotted ;
2063 }
2064
2065 span.letterspacing { letter-spacing: .2ex ; }
2066
2067 span.capsspacing {
2068 font-variant: small-caps ;
2069 letter-spacing: .1ex ;
2070 }
2071
2072 span.highlight { background: #F8E800 ; }
2073
2074
2075
2076
2077 html body {
2078 margin: 0 ;
2079 line-height: 1.2;
2080 }
2081
2082
2083 body div {
2084 margin: 0ex;
2085 }
2086
2087
2088 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2089 {
2090 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2091 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2092 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2093 "Times New Roman", serif;
2094 font-style: normal ;
2095 font-weight: bold ;
2096 text-align: left ;
2097 }
2098
2099 h1 { /* title of the entire website, used on each page */
2100 text-align: center ;
2101 font-size: 2.5em ;
2102 padding: .4ex 0em 0ex 0em ;
2103 }
2104
2105 div.book {
2106 text-align: center ;
2107 font-size: 2.325em ;
2108 padding: .4ex 0em 0ex 0em ;
2109 }
2110
2111 h2 { font-size: 2.25em }
2112 h3 { font-size: 2em }
2113 h4 { font-size: 1.75em }
2114 h5 { font-size: 1.5em }
2115 h6 { font-size: 1.25em }
2116 span.paragraph {font-size: 1em ; font-variant: normal ;
```

```
2117 margin-right: 1em ; }
2118 span.subparagraph {font-size: 1em ; font-variant: normal ;
2119 margin-right: 1em ; }
2120
2121 div.minisec {
2122 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2123 Geneva, Verdana, sans-serif ;
2124 font-style: normal ;
2125 font-weight: bold ;
2126 text-align: left ;
2127 }
2128
2129 h1 {
2130 margin: 0ex 0em 0ex 0em ;
2131 line-height: 1.3;
2132 text-align: center ;
2133 }
2134
2135 h2 {
2136 margin: 1ex 0em 1ex 0em ;
2137 line-height: 1.3;
2138 text-align: center ;
2139 }
2140
2141 h3 {
2142 margin: 3ex 0em 1ex 0em ;
2143 line-height: 1.3;
2144 }
2145
2146 h4 {
2147 margin: 3ex 0em 1ex 0em ;
2148 line-height: 1.3;
2149 }
2150
2151 h5 {
2152 margin: 3ex 0em 1ex 0em ;
2153 line-height: 1.3;
2154 }
2155
2156 h6 {
2157 margin: 3ex 0em 1ex 0em ;
2158 line-height: 1.3;
2159 }
2160
2161
2162 div.titlepage {
2163 text-align: center ;
2164 }
2165
2166 .footnotes {
2167 text-align: left ;
2168 font-size: .85em ;
2169 margin: 3ex 2em 0ex 2em ;
2170 border-top: 1px solid silver ;
2171 }
```

```
2172
2173 .marginpar, .marginparblock {
2174 max-width: 50%;
2175 float: right ;
2176 clear: both ;
2177 text-align: left ;
2178 margin: 1ex 0.5em 1ex 1em ;
2179 padding: 1ex 0.5em 1ex 0.5em ;
2180 font-size: 85% ;
2181 border-top: 1px solid silver ;
2182 border-bottom: 1px solid silver ;
2183 overflow-x: auto ;
2184 }
2185
2186 .marginpar br { margin-bottom: 2ex ; }
2187
2188 div.marginblock, div.marginparblock {
2189 max-width:50%;
2190 min-width: 10em; /* room for caption */
2191 float:right;
2192 text-align:left;
2193 margin: 1ex 0.5em 1ex 1em ;
2194 padding: 1ex 0.5em 1ex 0.5em ;
2195 overflow-x: auto;
2196 }
2197
2198 div.marginblock div.minipage,
2199 div.marginparblock div.minipage {
2200 display: inline-block ;
2201 margin: 0pt auto 0pt auto ;
2202 }
2203
2204 div.marginblock div.minipage p ,
2205 div.marginparblock div.minipage p
2206 { font-size: 85%}
2207
2208 div.marginblock br ,
2209 div.marginparblock br
2210 { margin-bottom: 2ex ; }
2211
2212 div.bodycontainer {
2213 float: left ;
2214 width: 80% ;
2215 }
2216
2217 div.bodywithoutsidetoc div.bodycontainer {
2218 float: none ;
2219 width: 100% ;
2220 }
2221
2222 section.textbody div.footnotes{
2223 margin: 3ex 2em 0ex 2em ;
2224 border-bottom: 2px solid silver ;
2225 }
2226
```

```
2227 .footnoteheader {
2228 border-top: 2px solid silver ;
2229 margin-top: 3ex ;
2230 padding-top: 1ex ;
2231 font-weight: bold ;
2232 }
2233
2234 .mpfootnotes {
2235 text-align: left ;
2236 font-size: .85em ;
2237 margin-left: 1em ;
2238 border-top: 1px solid silver ;
2239 }
2240
2241 /* Remove footnote top border in the title page. */
2242 div.titlepage div.mpfootnotes {
2243 border-top: none ;
2244 }
2245
2246
2247
2248 ul, ol {
2249 margin: 1ex 1em 1ex 0em;
2250 line-height: 1.2;
2251 }
2252
2253 body dir, body menu {
2254 margin: 3ex 1em 3ex 0em;
2255 line-height: 1.2;
2256 }
2257
2258 li { margin: 0ex 0em 1ex 0em; }
2259
2260 html {
2261 margin: 0;
2262 padding: 0;
2263 }
2264
2265 .programlisting {
2266 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2267 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2268 "Courier New", monospace;
2269 margin: 1ex 0ex 1ex 0ex ;
2270 padding: .5ex 0pt .5ex 0pt ;
2271 overflow-x: auto;
2272 }
2273
2274 section.textbody>pre.programlisting {
2275 border-top: 1px solid silver ;
2276 border-bottom: 1px solid silver ;
2277 }
2278
2279
2280 div.displaymath {
2281 text-align: center ;
```

```
2282 }
2283
2284 div.displaymathnumbered {
2285 text-align: right ;
2286 margin-left: 5% ;
2287 margin-right: 5% ;
2288 min-width: 2.5in ;
2289 }
2290
2291 @media all and (min-width: 400px) {
2292 div.displaymathnumbered {
2293 margin-left: 10% ;
2294 margin-right: 10% ;
2295 }
2296 }
2297
2298 @media all and (min-width: 800px) {
2299 div.displaymathnumbered {
2300 margin-right: 20% ;
2301 }
2302 }
2303
2304 @media all and (min-width: 1200px) {
2305 div.displaymathnumbered {
2306 margin-right: 30% ;
2307 }
2308 }
2309
2310
2311 .inlineprogramlisting {
2312 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2313 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2314 "Courier New", monospace;
2315 overflow-x: auto;
2316 }
2317
2318 span.listinglabel {
2319 display: inline-block ;
2320 font-size: 70% ;
2321 width: 4em ;
2322 text-align: right ;
2323 margin-right: 2em ;
2324 }
2325
2326 div.abstract {
2327 margin: 2em 5% 2em 5% ;
2328 padding: 1ex 1em 1ex 1em ;
2329 /* font-weight: bold ; */
2330 font-size: 90% ;
2331 text-align: left ;
2332 }
2333
2334 div.abstract dl {line-height:1.5;}
2335 div.abstract dt {color:#304070;}
2336
```

```
2337 div.abstracttitle{
2338 font-family: "URW Classico", Optima, "Linux Biolinum O",
2339 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2340 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2341 font-weight:bold;
2342 font-size:1.25em;
2343 text-align: center ;
2344 }
2345
2346 span.abstractrunintitle{
2347 font-family: "URW Classico", Optima, "Linux Biolinum O",
2348 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2349 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2350 font-weight:bold;
2351 }
2352
2353
2354 .verbatim {
2355 overflow-x: auto ;
2356 }
2357
2358 .alltt {
2359 overflow-x: auto ;
2360 }
2361
2362
2363 .bverbatim {
2364 margin: 1ex 0pt 1ex 0pt ;
2365 padding: .5ex 0pt .5ex 0pt ;
2366 overflow-x: auto ;
2367 }
2368
2369 .lverbatim {
2370 margin: 1ex 0pt 1ex 0pt ;
2371 padding: .5ex 0pt .5ex 0pt ;
2372 overflow-x: auto ;
2373 }
2374
2375 .fancyvrb {
2376 font-size:.85em ;
2377 margin: 3ex 0pt 3ex 0pt
2378 }
2379
2380 .fancyvrblabel {
2381 font-size: .85em ;
2382 text-align: center ;
2383 font-weight: bold ;
2384 margin-top: 1ex ;
2385 margin-bottom: 1ex ;
2386 }
2387
2388
2389 .verse {
2390 font-family: "Linux Libertine Mono O", "Lucida Console",
2391 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
```

```
2392 "Liberation Mono", "FreeMono", "Andale Mono",
2393 "Nimbus Mono L", "Courier New", monospace;
2394 margin-left: 1em ;
2395 }
2396
2397
2398 div.singlespace { line-height: 1.2 ; }
2399 div.onehalfspace { line-height: 1.5 ; }
2400 div.doublespace { line-height: 2 ; }
2401
2402
2403 /* Word processor format output: */
2404 div.wpfigure { border: 1px solid red ; margin: .5ex ; padding: .5ex ; }
2405 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
2406 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ; }
2407
2408
2409
2410
2411 /* Minipage environments, vertically aligned to top, center, bottom: */
2412 .minipage, .fminipage, .fcolorminipage {
2413 /* display: inline-block ; */
2414 /* Mini pages which follow each other will be tiled. */
2415 margin: .25em .25em .25em .25em;
2416 padding: .25em .25em .25em .25em;
2417 display: inline-flex;
2418 flex-direction: column ;
2419 overflow: auto;
2420 }
2421
2422 .inlineminipage {
2423 display: inline-block ;
2424 text-align: left
2425 }
2426
2427 /* Paragraphs in the flexbox did not collapse their margins. */
2428 /* Have not yet researched this. */
2429 .minipage p {margin: .75ex 0em .75ex 0em ;}
2430
2431 .fboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
2432 .fcolorbox .minipage, .fcolorboxBlock .minipage
2433 {border: none ; background: none;}
2434
2435 .fbox, .fboxBlock { border: 1px solid black ; }
2436
2437 .fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
2438 .fminipage, .fcolorminipage
2439 {display: inline-block}
2440
2441 .shadowbox, .shabox {
2442 border: 1px solid black;
2443 box-shadow: 3px 3px 3px #808080 ;
2444 border-radius: 0px ;
2445 padding: .4ex .3em .4ex .3em ;
2446 margin: 0pt .3ex 0pt .3ex ;
```

```
2447 display: inline-block ;
2448 }
2449
2450 .doublebox {
2451 border: 3px double black;
2452 border-radius: 0px ;
2453 padding: .4ex .3em .4ex .3em ;
2454 margin: 0pt .3ex 0pt .3ex ;
2455 display: inline-block ;
2456 }
2457
2458 .ovalbox, .Ovalbox {
2459 border: 1px solid black;
2460 border-radius: 1ex ;
2461 padding: .4ex .3em .4ex .3em ;
2462 margin: 0pt .3ex 0pt .3ex ;
2463 display: inline-block ;
2464 }
2465
2466 .Ovalbox { border-width: 2px ; }
2467
2468 .framebox {
2469 border: 1px solid black;
2470 border-radius: 0px ;
2471 padding: .3ex .2em 0ex .2em ;
2472 margin: 0pt .1ex 0pt .1ex ;
2473 display: inline-block ;
2474 }
2475
2476
2477 .mdframed {
2478 padding: 0ex ;
2479 margin: 2ex 0em 2ex 0em ;
2480 }
2481
2482 .mdframed p { padding: 0ex .5em 0ex .5em ; }
2483
2484 .mdframed dl { padding: 1ex .5em 0ex .5em ; }
2485
2486 .mdframedtitle {
2487 padding: .5ex 0pt 0pt 0pt ;
2488 border-radius: 10pt 10pt 0pt 0pt ;
2489 display: block ;
2490 margin-bottom: 1ex ;
2491 }
2492
2493 .mdframedsubtitle {
2494 display: block ;
2495 }
2496
2497 .mdframedsubsubtitle {
2498 display: block ;
2499 }
2500
2501 .mdtheorem {
```

```
2502 padding: 0ex .5em 0ex .5em ;
2503 margin: 3ex 5% 3ex 5% ;
2504 }
2505
2506
2507 /* framed package */
2508 .framed, pre.boxedverbatim, fcolorbox {
2509 margin: 3ex 0em 3ex 0em ;
2510 border: 1px solid black;
2511 border-radius: 0px ;
2512 padding: .3ex 1em 0ex 1em ;
2513 display: block ;
2514 }
2515
2516 .shaded {
2517 margin: 3ex 0em 3ex 0em ;
2518 padding: .3ex 1em .3ex 1em ;
2519 display: block ;
2520 }
2521
2522 .snugframed {
2523 margin: 3ex 0em 3ex 0em ;
2524 border: 1px solid black;
2525 border-radius: 0px ;
2526 display: block ;
2527 }
2528
2529 .framedleftbar {
2530 margin: 3ex 0em 3ex 0em ;
2531 border-left: 3pt solid black;
2532 border-radius: 0px ;
2533 padding: .3ex .2em .3ex 1em ;
2534 display: block ;
2535 }
2536
2537 .framedtitle {
2538 margin: 0em ;
2539 padding: 0em ;
2540 font-size: 130%
2541 }
2542
2543 .framedtitle p { padding: .3em }
2544
2545
2546 /* For the niceframe package: */
2547
2548 div.niceframe, div.curlyframe, div.artdecoframe, div.generalframe {
2549 padding: 1ex ;
2550 margin: 2ex auto ;
2551 border-radius: 2ex ;
2552 }
2553
2554 div.niceframe {
2555 border: 6px groove black ;
2556 }
```

```
2557
2558 div.curlyframe {
2559 border-left: 3px dotted black ;
2560 border-right: 3px dotted black ;
2561 border-radius: 6ex ;
2562 }
2563
2564 div.artdecoframe {
2565 border-left: 10px double black ;
2566 border-right: 10px double black ;
2567 border-radius: 6ex ;
2568 }
2569
2570 div.generalframe {
2571 border: 6px groove black ;
2572 }
2573
2574
2575
2576 dl {
2577 margin: 1ex 2em 1ex 0em;
2578 line-height: 1.3;
2579 }
2580
2581 dl dt {
2582 display: block ;
2583 float:left ;
2584 font-weight: bold;
2585 padding-right: 1em ;
2586 }
2587
2588 dl dd { display: block ; }
2589
2590 dl dd:after { content: "" ; display: block ; clear: both }
2591
2592 dl dd p { margin-top: 0em; }
2593
2594 dd ul, dd ol, dd dl { clear: both ; padding-top: 1ex }
2595
2596
2597 nav {
2598 font-family: "URW Classico", Optima, "Linux Biolinum O",
2599 "DejaVu Sans", "Bitstream Vera Sans",
2600 Geneva, Verdana, sans-serif ;
2601 margin-bottom: 4ex ;
2602 }
2603
2604 nav p {
2605 line-height: 1.2 ;
2606 margin-top:.5ex ;
2607 margin-bottom:.5ex;
2608 font-size: .9em ;
2609 }
2610
2611
```

```
2612
2613 img, img.hyperimage, img.borderimage {
2614 max-width: 600px;
2615 border: 1px solid silver;
2616 box-shadow: 3px 3px 3px #808080 ;
2617 padding: .5% ;
2618 margin: .5% ;
2619 background: none ;
2620 }
2621
2622 img.inlineimage{
2623 padding: 0px ;
2624 box-shadow: none ;
2625 border: none ;
2626 background: none ;
2627 margin: 0px ;
2628 display: inline-block ;
2629 border-radius: 0px ;
2630 }
2631
2632 img.logoimage{
2633 max-width: 300px ;
2634 box-shadow: 3px 3px 3px #808080 ;
2635 border: 1px solid black ;
2636 background:none ;
2637 padding:0 ;
2638 margin:.5ex ;
2639 border-radius: 10px ;
2640 }
2641
2642
2643 .section {
2644 /*
2645 To have each section float relative to each other:
2646 */
2647 /*
2648 display: block ;
2649 float: left ;
2650 position: relative ;
2651 background: white ;
2652 border: 1px solid silver ;
2653 padding: .5em ;
2654 */
2655 margin: 0ex .5em 0ex .5em ;
2656 padding: 0 ;
2657 }
2658
2659
2660 figure {
2661 margin: 5ex auto 5ex auto ;
2662 padding: 1ex 1em 1ex 1em ;
2663 overflow-x: auto ;
2664 }
2665
2666
```

```
2667 /* To automatically center images in figures: */
2668 /*
2669 figure img.inlineimage {
2670 margin: 0ex auto 0ex auto ;
2671 display: block ;
2672 }
2673 */
2674
2675 /* To automatically center minipages in figures: */
2676 /*
2677 figure div.minipage, figure div.minipage div.minipage {
2678 margin: 1ex auto 1ex auto ;
2679 display: block ;
2680 }
2681 */
2682
2683 figure figure { margin: 0pt }
2684
2685 figure div.minipage p { font-size: 85% ; }
2686
2687 figure.subfigure, figure.subtable {
2688 display: inline-block ; margin: 3ex 1em 3ex 1em ;
2689 }
2690
2691 div.figurecaption .minipage { margin:0 ; padding: 0 }
2692
2693 div.minipage figure { border: none ; box-shadow: none ; }
2694 div.minipage figure.table { margin: 0ex }
2695 div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }
2696
2697 div.floatrow { text-align: center; }
2698
2699 div.floatrow figure { display: inline-block ; margin: 1ex 2% ; }
2700
2701 div.floatfoot { font-size: .85em ;
2702 border-top: 1px solid silver ; line-height: 1.2 ; }
2703
2704 div.figurecaption , .lstlistingtitle {
2705 font-size: .85em ;
2706 text-align: center ;
2707 font-weight: bold ;
2708 margin-top: 1ex ;
2709 margin-bottom: 1ex ;
2710 }
2711
2712 figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
2713 border-bottom: none ; background: none ;
2714 }
2715
2716 div.nonfloatcaption {
2717 margin: 1ex auto 1ex auto ;
2718 font-size: .85em ;
2719 text-align: center ;
2720 font-weight: bold ;
2721 }
```

```
2722
2723 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
2724 figure div.floatrow div.minipage div.figurecaption {
2725 border: none ;
2726 background: none ;
2727 }
2728
2729
2730 /* For packages such as float, rotfloat, and algorithm2e: */
2731
2732 figure.boxed, figure.boxruled {
2733 border: 1px solid black ;
2734 }
2735
2736 figure.ruled {
2737 border-top: 1px solid black ;
2738 border-bottom: 1px solid black ;
2739 border-left: 0px ;
2740 border-right: 0px ;
2741 border-radius: 0px ;
2742 background: none ;
2743 box-shadow: none ;
2744 }
2745
2746 figure.ruled div.figurecaption, figure.boxruled div.figurecaption {
2747 border-top: 1px solid silver ;
2748 border-bottom: 1px solid silver ;
2749 }
2750
2751
2752 table {
2753 margin: 1ex auto 1ex auto ;
2754 border-collapse: separate ;
2755 border-spacing: 0px ;
2756 line-height: 1.3 ;
2757 }
2758
2759 tr.hline td {border-top: 1px solid #808080 ; margin-top: 0ex ;
2760 margin-bottom: 0ex ; } /* for \hline */
2761
2762 tr.tbrule td {border-top: 1px solid black ; margin-top: 0ex ;
2763 margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
2764
2765 td {padding: .5ex .5em .5ex .5em ;}
2766
2767 table td.tdl { text-align: left ; vertical-align: middle ; }
2768 table td.tdc { text-align: center ; vertical-align: middle ; }
2769 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
2770 table td.tdbang { text-align: center ; vertical-align: middle ; }
2771 table td.tdr { text-align: right ; vertical-align: middle ; }
2772 table td.tdp { text-align: left ; vertical-align: bottom ; }
2773 table td.tdm { text-align: left ; vertical-align: middle ; }
2774 table td.tdb { text-align: left ; vertical-align: top ; }
2775 table td.tdP { text-align: center ; vertical-align: bottom ; }
2776 table td.tdM { text-align: center ; vertical-align: middle ; }
```

```
2777 table td.tdB { text-align: center ; vertical-align: top ; }
2778
2779 table td.tvertbarl { border-left: 1px solid black }
2780 table td.tvertbarldouble { border-left: 4px double black }
2781 table td.tvertbarr { border-right: 1px solid black }
2782 table td.tvertbarrdouble { border-right: 4px double black }
2783
2784 table td.tvertbarldash { border-left: 1px dashed black }
2785 table td.tvertbarldoubledash { border-left: 2px dashed black }
2786 table td.tvertbarrdash { border-right: 1px dashed black }
2787 table td.tvertbarrdoubledash { border-right: 2px dashed black }
2788
2789
2790 /* for cmidrules: */
2791 table td.tdrule {
2792 border-top: 1px solid #A0A0A0 ;
2793 }
2794
2795 table td.tdrulel {
2796 border-top-left-radius:.5em ;
2797 border-top: 1px solid #A0A0A0 ;
2798 }
2799
2800 table td.tdruler {
2801 border-top-right-radius:.5em ;
2802 border-top: 1px solid #A0A0A0 ;
2803 }
2804
2805 table td.tdrulelr {
2806 border-top-left-radius:.5em ;
2807 border-top-right-radius:.5em ;
2808 border-top: 1px solid #A0A0A0 ;
2809 }
2810
2811
2812 /* Margins of paragraphs inside table cells: */
2813 td.tdp p , td.tdprule p , td.tdP p , td.tdPrule p { padding-top: 1ex ;
2814 padding-bottom: 1ex ; margin: 0ex ; }
2815 td.tdm p , td.tdmrule p , td.tdM p , td.tdMrule p { padding-top: 1ex ;
2816 padding-bottom: 1ex ; margin: 0ex ; }
2817 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
2818 padding-bottom: 1ex ; margin: 0ex ; }
2819
2820 td.tdp , td.tdprule , td.tdP , td.tdPrule
2821 { padding: 0ex .5em 0ex .5em ; }
2822 td.tdm , td.tdmrule , td.tdM , td.tdMrule
2823 { padding: 0ex .5em 0ex .5em ; }
2824 td.tdb , td.tdbrule , td.tdB , td.tdBrule
2825 { padding: 0ex .5em 0ex .5em ; }
2826
2827
2828 /* table notes: */
2829 .tnotes {
2830 margin: 0ex 5% 1ex 5% ;
2831 padding: 0.5ex 1em 0.5ex 1em;
```

```
2832 font-size:.80em;
2833 text-align: left ;
2834 }
2835
2836 .minipage .tnotes {
2837 margin: 0pt ;
2838 padding: 0pt ;
2839 }
2840
2841 .tnotes dl dt p {margin-bottom:0px;}
2842
2843 .tnoteitemheader {margin-right: 1em;}
2844
2845
2846 /* for colortbl and cell color */
2847 div.cellcolor {
2848 width: 100% ;
2849 padding: .5ex .5em .5ex .5em ;
2850 margin: -.5ex -.5em -.5ex -.5em ;
2851 }
2852
2853
2854 /* for lyluatex */
2855 span.lyluatex {
2856 display: inline-block ;
2857 }
2858
2859 div.lyluatex p span.lateximagesource img {
2860 display: block ;
2861 margin-top: 3ex ;
2862 margin-bottom: 3ex ;
2863 }
2864
2865
2866 /* for bigdelim */
2867 .ldelim, .rdelim { font-size: 200% }
2868
2869
2870 /* center, flushleft, flushright environments */
2871 div.center{text-align:center;}
2872 div.center table {margin-left:auto;margin-right:auto;}
2873 div.flushleft{text-align:left;}
2874 div.flushleft table {margin-left:0em ; margin-right:auto;}
2875 div.flushright{text-align:right;}
2876 div.flushright table {margin-left:auto ; margin-right: 0em ;}
2877
2878
2879 /* Fancybox */
2880 div.Btrivlist table tr td {
2881 padding: .2ex 0em ;
2882 }
2883
2884
2885 /* program listing callouts: */
2886 span.callout {
```

```
2887 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2888 Geneva, Verdana, sans-serif ;
2889 border-radius: .5em;
2890 background-color:black;
2891 color:white;
2892 padding:0px .25em 0px .25em;
2893 margin: 0 ;
2894 font-weight: bold;
2895 font-size:.72em ;
2896 }
2897
2898 div.programlisting pre.verbatim span.callout{
2899 font-size: .85em ;
2900 }
2901
2902 span.verbatim {
2903 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2904 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2905 "Courier New", monospace;
2906 }
2907
2908
2909
2910 div.published
2911 {
2912 text-align: center ;
2913 font-variant: normal ;
2914 font-style: italic ;
2915 font-size: 1em ;
2916 margin: 1ex 0em 1ex 0em ;
2917 }
2918
2919 div.subtitle
2920 {
2921 text-align: center ;
2922 font-variant: normal ;
2923 font-style: italic ;
2924 font-size: 1.25em ;
2925 margin: 1ex 0em 1ex 0em ;
2926 }
2927
2928 div.subtitle p { margin: 1ex ; }
2929
2930 div.author
2931 {
2932 font-variant: normal ;
2933 font-style: normal ;
2934 font-size: 1em ;
2935 margin: 1ex 0em 1ex 0em ;
2936 }
2937
2938 div.oneauthor {
2939 display: inline-block ;
2940 margin: 0ex 1em 0ex 1em ;
2941 }
```

```
2942
2943 /*
2944 div.author table {
2945 margin: 1ex auto 0ex auto ;
2946 background: none ;
2947 }
2948
2949 div.author table tbody tr td { padding: .25ex ; }
2950 */
2951
2952 span.affiliation {font-size: .85em ; font-variant: small-caps; }
2953
2954 div.titledate {
2955 text-align: center ;
2956 font-size: .85em ;
2957 font-style: italic;
2958 margin: 1ex 0em 1ex 0em ;
2959 }
2960
2961
2962 nav.topnavigation{
2963 text-align: left ;
2964 padding: 0.5ex 1em 0.5ex 1em ;
2965 /* margin: 2ex 0em 3ex 0em ; */
2966 margin: 0 ;
2967 border-bottom: 1px solid silver ;
2968 border-top: 1px solid silver ;
2969 clear:both ;
2970 }
2971
2972 nav.botnavigation{
2973 text-align: left ;
2974 padding: 0.5ex 1em 0.5ex 1em ;
2975 /* margin: 3ex 0em 2ex 0em ; */
2976 margin: 0 ;
2977 border-top: 1px solid silver ;
2978 border-bottom: 1px solid silver ;
2979 clear:both ;
2980 }
2981
2982
2983 header {
2984 line-height: 1.2 ;
2985 font-size: 1em ;
2986 border-bottom: 1px solid silver ;
2987 margin: 0px ;
2988 padding: 2ex 1em 2ex 1em ;
2989 text-align:left ;
2990 }
2991
2992
2993 footer {
2994 font-size: .85em ;
2995 line-height: 1.2 ;
2996 margin-top: 1ex ;
```

```
2997 border-top: 1px solid silver ;
2998 padding: 2ex 1em 2ex 1em ;
2999 clear:both ;
3000 text-align:left ;
3001 }
3002
3003
3004 a.linkhome { font-weight:bold ; font-size: 1em ;}
3005
3006
3007 div.lateximagesource { padding: 0px ; margin: 0px ; display: none; }
3008
3009 img.lateximage{
3010 padding: 0pt ;
3011 margin: 0pt ;
3012 box-shadow: none ;
3013 border: none ;
3014 background: none ;
3015 max-width: 100% ;
3016 border-radius: 0ex ;
3017 border: none ;
3018 }
3019
3020
3021 /* The -1px right margin compensates for the 1px right border. */
3022 /* Without this -1px margin, the body container appears below instead */
3023 /* of floating to the side. */
3024 div.sidetoccontainer {
3025 font-family: "DejaVu Serif", "Bitstream Vera Serif",
3026 "Lucida Bright", Georgia, serif;
3027 float: left ;
3028 width: 20%;
3029 margin: 0pt -1px 3ex 0pt ;
3030 border-right: 1px solid silver;
3031 border-bottom: 1px solid silver;
3032 background: #FAF7F4 ;
3033 font-size:.9em ;
3034 border-radius: 0px 0px 20px 0px ;
3035 }
3036
3037 div.sidetoccontents {
3038 overflow-y: auto ;
3039 width: 100% ;
3040 text-align: left ;
3041 }
3042
3043
3044 nav.sidetoc p {line-height:1.2 ; margin: 1ex .5em 1ex .5em ;
3045 text-indent: 0 ; }
3046
3047 nav.sidetoc p a {color:black ; font-size: .7em ;}
3048
3049 div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
3050 border-bottom: 1px solid silver ; }
3051
```

```
3052 nav.sidetoc a:hover {text-decoration: underline ; }
3053
3054
3055
3056 section.textbody { margin: 0ex 1em 0ex 1em ;}
3057
3058
3059 div.multicolsheading { -webkit-column-span: all;
3060 -moz-column-span: all; column-span: all; }
3061 div.multicols { -webkit-columns: 3 380px ;
3062 -moz-columns: 3 380px ; columns: 3 380px ; }
3063 div.multicols p {margin-top: 0ex}
3064
3065
3066 /* Used for xfrac and nicefrac: */
3067 span.numerator {
3068 font-size: 60% ;
3069 vertical-align: .4em ;
3070 }
3071
3072 span.denominator {
3073 font-size: 60%
3074 }
3075
3076
3077 /* Used for algorithm2e: */
3078 div.alg2evline{
3079 margin-left: 1em ;
3080 padding-left: 1em ;
3081 border-left: 1px solid black ;
3082 border-radius: 0px 0px 0px 1ex ;
3083 }
3084
3085 div.alg2evsline{
3086 margin-left: 1em ;
3087 padding-left: 1em ;
3088 border-left: 1px solid black ;
3089 }
3090
3091 div.alg2enoline{
3092 margin-left: 1em ;
3093 padding-left: 1em ;
3094 }
3095
3096 span.alg2elinenumber{
3097 margin-right: .5em ;
3098 font-size: 50% ;
3099 color: red ;
3100 }
3101
3102
3103 /* Used for algorithmicx: */
3104 span.floatright { float: right ; }
3105
3106
```

```
3107 /* keyfloat and tocdata: */
3108 .floatnotes {
3109 margin: 0ex 5% 0ex 5% ;
3110 padding: 0ex 1em 0ex 1em ;
3111 font-size:.80em ;
3112 text-align: left ;
3113 }
3114
3115 .authorartist{
3116 display:block ;
3117 font-size:.70em ;
3118 font-style: italic;
3119 }
3120
3121 nav .authorartist{ display:inline; }
3122
3123
3124
3125 /* Native LaTeX theorems: */
3126
3127 .theoremcontents { font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ; }
3128 .theoremlabel { font-style: normal; font-weight: bold ; margin-right: .5em ; }
3129
3130
3131 /* theorem, amsthm, and ntheorem packages */
3132
3133 span.theoremheader,
3134 span.theoremheaderplain,
3135 span.theoremheaderdefinition,
3136 span.theoremheaderbreak,
3137 span.theoremheadermarginbreak,
3138 span.theoremheaderchangebreak,
3139 span.theoremheaderchange,
3140 span.theoremheadermargin
3141 {
3142 font-style:normal ; font-weight: bold ; margin-right: 1em ;
3143 }
3144
3145 span.amsthmnameplain,
3146 span.amsthmnamedefinition,
3147 span.amsthmnumberplain,
3148 span.amsthmnumberdefinition
3149 {
3150 font-style:normal ; font-weight: bold ;
3151 }
3152
3153
3154 span.amsthmnameremark,
3155 span.amsthmnumberremark
3156 {font-style:italic ; font-weight: normal ; }
3157
3158
3159 span.amsthmnoteplain,
3160 span.amsthmnotedefinition
3161 {font-style:normal ;}
```

```
3162
3163
3164 span.theoremheaderremark,
3165 span.theoremheaderproof,
3166 span.amsthmproofname
3167 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
3168
3169 span.theoremheadersc
3170 {
3171 font-style:normal ;
3172 font-variant: small-caps ;
3173 font-weight: normal ;
3174 margin-right: 1em ;
3175 }
3176
3177 .theoremdemark {float:right}
3178
3179 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
3180 div.theorembodybreak, div.theorembodynonumberbreak,
3181 div.theorembodymarginbreak,
3182 div.theorembodychangebreak,
3183 div.theorembodychange,
3184 div.theorembodymargin
3185 {
3186 font-style:italic;
3187 margin-top: 3ex ; margin-bottom: 3ex ;
3188 }
3189
3190 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
3191 div.theorembodyplainupright, nonumberplainuprightsc,
3192 div.amsthmbodydefinition, div.amsthmbodyremark,
3193 div.amsthmproof
3194 {
3195 font-style: normal ;
3196 margin-top: 3ex ; margin-bottom: 3ex ;
3197 }
3198
3199 span.amsthmnoteremark {}
3200
3201
3202 /* For the backnaur package: */
3203 div.backnaur {
3204 display: block ;
3205 margin: 2ex 2em 2ex 2em ;
3206 }
3207
3208 div.backnaur p {
3209 margin: .25ex 0ex .25ex 0ex ;
3210 }
3211
3212 div.backnaurprod {
3213 display: inline-block ;
3214 min-width: 8em ;
3215 text-align:right ;
3216 }
```

```
3217
3218 div.backnaurdesc {
3219 display: inline-block ;
3220 }
3221
3222
3223 /* For the notes package: */
3224 div.notesimportantnote, div.noteswarningnote, div.notesinformationnote {
3225 clear: both ;
3226 margin: 2ex 2em 2ex 2em ;
3227 border: 1px solid silver ;
3228 }
3229
3230 div.notesicon {
3231 float:left ;
3232 display: inline-block ;
3233 background: gold ;
3234 padding: 0ex 1em 0ex 1em ;
3235 margin-right: 1em ;
3236 font-weight: bold ;
3237 }
3238
3239 div.notescontents { font-style: italic }
3240
3241
3242 /*
3243 For CSS LaTeX and related logos:
3244 Based on spacing demonstrated by the metafont package.
3245 */
3246
3247 .latexlogofont {
3248 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3249 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3250 font-variant: normal ;
3251 }
3252
3253 .latexlogo {
3254 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3255 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3256 font-size: 1.1em;
3257 }
3258
3259 .latexlogosup {
3260 text-transform: uppercase;
3261 letter-spacing: .03em ;
3262 font-size: 0.7em;
3263 vertical-align: 0.25em;
3264 margin-left: -0.4em;
3265 margin-right: -0.15em;
3266 }
3267
3268 .latexlogosub {
3269 text-transform: uppercase;
3270 vertical-align: -0.27ex;
3271 margin-left: -0.08em;
```

```
3272 margin-right: -0.07em;
3273 font-size: 1em;
3274 }
3275
3276 .latexlogotwoe {
3277 text-transform: none ;
3278 font-variant-numeric: oldstyle-nums ;
3279 }
3280
3281 .latexlogotwoesub {
3282 font-style:italic ;
3283 vertical-align: -0.27ex;
3284 margin-left: -0.11em;
3285 margin-right: -0.1em;
3286 font-size: 1em;
3287 }
3288
3289 .xelatexlogo {
3290 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3291 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3292 letter-spacing: .03em ;
3293 font-size: 1.1em;
3294 }
3295
3296 .xelatexlogosub {
3297 vertical-align: -0.27ex;
3298 margin-left: -0.0667em;
3299 margin-right: -.05em;
3300 font-size: 1em;
3301 letter-spacing: .03em ;
3302 }
3303
3304 .amslogo {
3305 font-family: "TeXGyreChorus","URW Chancery L",
3306 "Apple Chancery","ITC Zapf Chancery","Monotype Corsiva",
3307 "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
3308 "Hoefler Text", Times, "Times New Roman", serif ;
3309 font-style: italic ;
3310 }
3311
3312 .lyxlogo {
3313 font-family: "URW Classico", Optima, "Linux Biolinum O",
3314 "DejaVu Sans", "Bitstream Vera Sans", Geneva,
3315 Verdana, sans-serif ;
3316 }
3317
3318
3319 /* Only display top and bottom navigation if a small screen: */
3320 /* Hide the sidetoc if a small screen: */
3321 nav.topnavigation { display:none; }
3322 nav.botnavigation { display:none; }
3323
3324 /* Only display the sidetoc's webpage title if a small screen */
3325 span.sidetocthetitle { display: none }
3326
```

```
3327 @media screen and (max-width: 50em) {
3328 div.sidetoccontainer {
3329 float: none ;
3330 width: 100% ;
3331 padding: 0 ;
3332 border-radius: 0 ;
3333 border-bottom: 1px solid black ;
3334 border-top: 1px solid black ;
3335 box-shadow: none ;
3336 }
3337 span.sidetocthetitle { display: inline }
3338 nav.botnavigation { display:block }
3339 div.bodycontainer { width: 100% }
3340 .marginpar {
3341 max-width: 100%;
3342 float: none;
3343 display:block ;
3344 margin: 1ex 1em 1ex 1em ;
3345 }
3346 }
3347
3348 @media print {
3349 body {
3350 font-family: "Linux Libertine O",
3351 "DejaVu Serif", "Bitstream Vera Serif",
3352 "Liberation Serif", "Nimbus Roman No 9 L",
3353 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3354 }
3355 div.sidetoccontainer { display:none; }
3356 nav.topnavigation { display: none; }
3357 nav.botnavigation { display: none; }
3358 div.bodycontainer { width: 100% }
3359 }
3360
3361 @media handheld {
3362 div.sidetoccontainer { display:none; }
3363 nav.topnavigation { display:block }
3364 nav.botnavigation { display:block }
3365 div.bodycontainer { width: 100% }
3366 }
3367
3368 @media projection {
3369 div.sidetoccontainer { display:none; }
3370 nav.topnavigation { display:block }
3371 nav.botnavigation { display:block }
3372 div.bodycontainer { width: 100% }
3373 }
3374 \end{filecontents*}
3375 % \end{Verbatim}% for syntax highlighting
3376 \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: 3377 \begin{LWRwriteconf}
3378 \begin{filecontents*}{lwarp_sagebrush.css}
3379 @import url("lwarp.css") ;
3380
3381
3382 A:link {color:#105030 ; text-decoration: none ; }
3383 A:visited {color:#705030 ; text-shadow:1px 1px 2px #a0a0a0;}
3384 A:hover {color:#006000 ; text-decoration: underline ; text-shadow:0px 0px 2px #a0a0a0;}
3385 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
3386
3387
3388
3389 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3390 {
3391 font-family: "URW Classico", Optima, "Linux Biolinum 0",
3392 "Linux Libertine 0", "Liberation Serif",
3393 "Nimbus Roman No 9 L", "FreeSerif",
3394 "Hoefler Text", Times, "Times New Roman", serif;
3395 font-variant: small-caps ;
3396 font-weight: normal ;
3397 color: #304070 ;
3398 text-shadow: 2px 2px 3px #808080;
3399 }
3400
3401 h1 { /* title of the entire website, used on each page */
3402 font-variant: small-caps ;
3403 color: #304070 ;
3404 text-shadow: 2px 2px 3px #808080;
3405 background-color: #F7F7F0 ;
3406 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
3407 }
3408
3409 h1 {
3410 border-bottom: 1px solid #304070;
3411 /* border-top: 2px solid #304070; */
3412 }
3413
3414 h2 {
3415 border-bottom: 1px solid #304070;
3416 /* border-top: 2px solid #304070; */
3417 background-color: #F7F7F0 ;
3418 background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
3419 }
3420
3421
3422
3423 div.abstract {
3424 background: #f5f5eb ;
3425 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3426
3427 border: 1px solid silver;
3428 border-radius: 1em ;
3429 }
```

```
3430
3431 div.abstract dl {line-height:1.5;}
3432 div.abstract dt {color:#304070;}
3433
3434 div.abstracttitle{
3435 font-family: "URW Classico", Optima, "Linux Biolinum O",
3436 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3437 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3438 font-weight:bold;
3439 font-variant: small-caps ;
3440 font-size:1.5em;
3441 border-bottom: 1px solid silver ;
3442 color: #304070 ;
3443 text-align: center ;
3444 text-shadow: 1px 1px 2px #808080;
3445 }
3446
3447 span.abstracrunintitle{
3448 font-family: "URW Classico", Optima, "Linux Biolinum O",
3449 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3450 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3451 font-weight:bold;
3452 }
3453
3454
3455 div.epigraph, div.dictum {
3456 background: #f5f5eb ;
3457 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3458
3459 border: 1px solid silver ;
3460 border-radius: 1ex ;
3461 box-shadow: 3px 3px 3px #808080 ;
3462 }
3463
3464
3465 .example {
3466 background-color: #f5f5eb ;
3467 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3468
3469 }
3470
3471 div.exampletitle{
3472 font-family: "URW Classico", Optima, "Linux Biolinum O",
3473 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3474 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3475 font-weight:bold;
3476 font-variant: small-caps ;
3477 border-bottom: 1px solid silver ;
3478 color: #304070 ;
3479 text-align: center ;
3480 text-shadow: 1px 1px 2px #808080;
3481 }
3482
3483
3484 .sidebar {
```

```
3485 background-color: #f5f5eb ;
3486 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3487
3488 }
3489
3490 div.sidebartitle{
3491 font-family: "URW Classico", Optima, "Linux Biolinum O",
3492 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3493 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3494 font-weight:bold;
3495 font-variant: small-caps ;
3496 border-bottom: 1px solid silver ;
3497 color: #304070 ;
3498 text-align: center ;
3499 text-shadow: 1px 1px 2px #808080;
3500 }
3501
3502
3503 .fancyvrblabel {
3504 font-family: "URW Classico", Optima, "Linux Biolinum O",
3505 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3506 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3507 font-weight:bold;
3508 font-variant: small-caps ;
3509 font-size: 1.5em ;
3510 color: #304070 ;
3511 text-align: center ;
3512 text-shadow: 1px 1px 2px #808080;
3513 }
3514
3515 div.minipage {
3516 background-color: #eeeeee7 ;
3517 border: 1px solid silver ;
3518 border-radius: 1ex ;
3519 }
3520
3521 table div.minipage { background: none ; border: none ; }
3522
3523 div.framebox div.minipage {border:none ; background:none}
3524
3525 section.textbody > div.minipage {
3526 box-shadow: 3px 3px 3px #808080 ;
3527 }
3528
3529 div.fboxBlock div.minipage { box-shadow: none ; }
3530
3531 .framed .minipage , .framedleftbar .minipage {
3532 border: none ;
3533 background: none ;
3534 padding: 0ex ;
3535 margin: 0ex ;
3536 }
3537
3538 figure.figure .minipage, div.figurecaption .minipage { border: none; }
3539
```

```
3540 div.marginblock div.minipage ,
3541 div.marginparblock div.minipage
3542 { border: none; }
3543
3544 figure , div.marginblock {
3545 background-color: #eeeeee7 ;
3546 border: 1px solid silver ;
3547 border-radius: 1ex ;
3548 box-shadow: 3px 3px 3px #808080 ;
3549 }
3550
3551 figure figure {
3552 border: 1px solid silver ;
3553 margin: 0em ;
3554 box-shadow: none ;
3555 }
3556
3557 /*
3558 div.figurecaption {
3559 border-top: 1px solid silver ;
3560 border-bottom: 1px solid silver ;
3561 background-color: #e8e8e8 ;
3562 }
3563 */
3564
3565
3566 div.table {
3567 box-shadow: 3px 3px 3px #808080 ;
3568 }
3569
3570 /*
3571 .tnotes {
3572 background: #e8e8e8;
3573 border: 1px solid silver;
3574 }
3575 */
3576
3577
3578 nav.topnavigation{
3579 background-color: #b0b8b0 ;
3580 background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0) ;
3581 }
3582
3583 nav.botnavigation{
3584 background-color: #b0b8b0 ;
3585 background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
3586 }
3587
3588
3589
3590 header{
3591 background-color: #F7F7F0 ;
3592 background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
3593 }
3594
```

```

3595 footer{
3596 background-color: #F7F7F0 ;
3597 background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
3598 }
3599
3600
3601
3602 div.sidetoccontainer {
3603 background-color: #F7F7F0 ;
3604 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
3605 box-shadow: 3px 3px 3px #808080 ;
3606 }
3607
3608 div.sidetocitle {color: #304070 ; }
3609
3610 nav.sidetoc a:hover {
3611 color:#006000 ;
3612 text-decoration: none ;
3613 text-shadow:0px 0px 2px #a0a0a0;
3614 }
3615
3616
3617 @media screen and (max-width: 45em) {
3618 div.sidetoccontainer { border-radius: 0 ; }
3619 }
3620
3621
3622 \end{filecontents*}
3623 % \end{Verbatim}% for syntax highlighting
3624 \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:**

```

3625 \begin{LWRwriteconf}
3626 \begin{filecontents*}{lwarp_formal.css}
3627 @import url("lwarp.css") ;
3628
3629
3630
3631 A:link {color:#802020 ; text-decoration:none; }
3632 A:visited {color:#802020 ; text-shadow:none ;}
3633 A:hover {color:#400000 ; text-shadow:none ;}
3634 A:active {color:#C00000 ; text-shadow:none ;}
3635
3636
3637 body {
3638 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3639 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3640 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,

```

```
3641 "Times New Roman", serif;
3642 background: #fffcf5;
3643 }
3644
3645 span.textrm {
3646 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3647 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3648 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3649 "Times New Roman", serif;
3650 }
3651
3652 span.textsf {
3653 font-family: "DejaVu Sans", "Bitstream Vera Sans",
3654 Geneva, Verdana, sans-serif ;
3655 }
3656
3657
3658
3659 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3660 {
3661 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3662 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3663 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3664 "Times New Roman", serif;
3665 color: #800000 ;
3666 text-shadow: none ;
3667 }
3668
3669 h1, h2 {
3670 background-color: #fffcf5 ;
3671 background-image: none ;
3672 border-bottom: 1px solid #808080;
3673 /* border-top: 2px solid #808080; */
3674 }
3675
3676 div.abstracttitle {
3677 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3678 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3679 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3680 "Times New Roman", serif;
3681 color: black ;
3682 text-shadow: none ;
3683 }
3684
3685 span.abstracruntintitle {
3686 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3687 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3688 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3689 "Times New Roman", serif;
3690 color: black ;
3691 text-shadow: none ;
3692 }
3693
3694 div.abstract { font-size: 100% }
3695
```

```
3696 .sidebar {
3697 background: #fffcf5;
3698 background-image: none ;
3699 margin: 2em 5% 2em 5%;
3700 padding: 0.5em 1em;
3701 border: none ;
3702 border-top : 1px solid silver;
3703 border-bottom : 1px solid silver;
3704 font-size: 90% ;
3705 }
3706
3707 div.sidebartitle{
3708 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3709 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3710 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3711 "Times New Roman", serif;
3712 color: #800000 ;
3713 text-shadow: none ;
3714 border: none ;
3715 }
3716
3717 .example {
3718 background: #fffcf5;
3719 background-image: none ;
3720 margin: 2em 5% 2em 5%;
3721 padding: 0.5em 1em;
3722 border: none ;
3723 border-top : 1px solid silver;
3724 border-bottom : 1px solid silver;
3725 }
3726
3727 div.exampltitle{
3728 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3729 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3730 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3731 "Times New Roman", serif;
3732 color: #800000 ;
3733 text-shadow: none ;
3734 border: none ;
3735 }
3736
3737 div.fancyvrlabel{
3738 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3739 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3740 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3741 "Times New Roman", serif;
3742 color: #800000 ;
3743 text-shadow: none ;
3744 border: none ;
3745 }
3746
3747
3748
3749 figure {
3750 margin: 5ex 5% 5ex 5% ;
```

```
3751 padding: 1ex 1em 1ex 1em ;
3752 background-color: #ffffcf5 ;
3753 overflow-x: auto ;
3754 border: none ;
3755 /* border-top: 1px solid silver; */
3756 /* border-bottom: 1px solid silver; */
3757 }
3758
3759
3760 div.figurecaption , .lstlisting {
3761 border: none ;
3762 /* border-top: 1px solid silver ; */
3763 /* border-bottom: 1px solid silver ; */
3764 background-color: #ffffcf5 ;
3765 }
3766
3767 .tnotes {
3768 background: #ffffcf5 ;
3769 border-top: 1px solid silver ;
3770 border-bottom: 1px solid silver ;
3771 }
3772
3773 .theorem {
3774 background: none ;
3775 }
3776
3777 .minipage {
3778 background-color: #ffffcf5 ;
3779 border: none ;
3780 }
3781
3782 div.floatrow figure { border: none ; }
3783
3784 figure figure { border: none ; }
3785
3786
3787 nav.toc, nav.lof, nav.lot, nav.lol {
3788 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3789 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3790 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3791 "Times New Roman", serif;
3792 }
3793
3794 div.sidetoccontainer {
3795 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3796 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3797 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3798 "Times New Roman", serif;
3799 background-image: linear-gradient(to bottom, #ffffcf5, #C0C0C0);
3800 }
3801
3802 div.sidetoc{
3803 color: #800000 ;
3804 }
3805
```

```

3806 header{
3807 background-color: #e0e0e0 ;
3808 background-image: linear-gradient(to top, #fffcf5, #b0b0b0);
3809 text-align:center ;
3810 }
3811
3812 footer{
3813 background-color: #e0e0e0 ;
3814 background-image: linear-gradient(to bottom, #fffcf5, #b0b0b0);
3815 padding: 2ex 1em 2ex 1em ;
3816 text-align:left ;
3817 }
3818
3819 nav.botnavigation {
3820 background: #dedcd5 ;
3821 border-top: 1px solid black ;
3822 }
3823 \end{filecontents*}
3824 % \end{Verbatim}% for syntax highlighting
3825 \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:**

```

3826 \begin{LWRwriteconf}
3827 \begin{filecontents*}{sample_project.css}
3828 /* (--- Start of project.css ---) */
3829 /* (--- A sample project-specific CSS file for lwarp ---) */
3830
3831 /* Uncomment one of the following: */
3832 @import url("lwarp.css") ;
3833 /* @import url("lwarp_formal.css") ; */
3834 /* @import url("lwarp_sagebrush.css") ; */
3835
3836 /* Project-specific CSS setting follow here. */
3837 /* . . . */
3838
3839 /* (--- End of project.css ---) */
3840 \end{filecontents*}
3841 % \end{Verbatim}% for syntax highlighting
3842 \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: 3843 \begin{LWRwriteconf}
3844 \begin{filecontents*}{lwarp.ist}
3845 preamble
3846 "\begin{theindex}
3847 \providecommand*\lettergroupDefault[1]{}
3848 \providecommand*\lettergroup[1]{%
3849 \par\textbf{#1}\par
3850 \nopagebreak
3851 }
3852 "
3853 headings_flag 1
3854 heading_prefix "
3855 \lettergroup{"
3856 heading_suffix "}
3857 delim_0 ", \hyperindexref{"
3858 delim_1 ", \hyperindexref{"
3859 delim_2 ", \hyperindexref{"
3860 delim_n "}, \hyperindexref{"
3861 delim_r "} -- \hyperindexref{"
3862 delim_t "}"
3863 page_compositor "."
3864 \end{filecontents*}
3865 % \end{Verbatim}% for syntax highlighting
3866 \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: 3867 \begin{LWRwriteconf}
3868 \begin{filecontents*}{lwarp.xdy}
3869 (require "tex/inputenc/latin.xdy")
3870 (merge-rule "\PS *" "Postscript")
3871 (require "texindy.xdy")
3872 (require "page-ranges.xdy")
3873 (require "book-order.xdy")
3874 (define-location-class "arabic-page-numbers"
3875 ("arabic-numbers") :min-range-length 1)
3876 (require "makeindex.xdy")
3877 (define-attributes ("hyperindexref"))
3878 (markup-locref :open "\hyperindexref{" :close "}")
3879 (markup-locref :open "\hyperindexref{" :close "}" :attr "hyperpage")
3880 (markup-locref :open "\textbf{\hyperindexref{" :close "}" :attr "textbf")
3881 (markup-locref :open "\textit{\hyperindexref{" :close "}" :attr "textit")
3882 (define-location-class-order ("roman-page-numbers"

```

```

3883 "arabic-page-numbers"
3884 "alpha-page-numbers"
3885 "Roman-page-numbers"
3886 "Alpha-page-numbers"
3887 "see"
3888 "seealso"))
3889 \end{filecontents*}
3890 % \end{Verbatim}% for syntax highlighting
3891 \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:**

```

3892 \begin{LWRwriteconf}
3893 \immediate\openout\LWR@quickfile=lwarp_one_limage.txt
3894 \immediate\write\LWR@quickfile{%
3895 pdfseparate -f \LWRpercent 1 -l \LWRpercent 1 \LWRpercent 4_html.pdf %
3896 \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent\LWRpercent d.pdf%
3897 }
3898 \immediate\write\LWR@quickfile{%
3899 pdfcrop --hires \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf %
3900 \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
3901 }
3902 \immediate\write\LWR@quickfile{%
3903 pdftocairo -svg -noshrink \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf %
3904 \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.svg%
3905 }
3906 \immediate\write\LWR@quickfile{%
3907 del \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
3908 }
3909 \immediate\write\LWR@quickfile{%
3910 del \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf%
3911 }
3912 \immediate\write\LWR@quickfile{exit}
3913 \immediate\closeout\LWR@quickfile
3914 \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 L<sup>A</sup>T<sub>E</sub>X 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: 3915 \begin{LWRwriteconf}
3916 \begin{filecontents*}{lwarp_mathjax.txt}
3917 <!-- https://groups.google.com/forum/#!topic/
3918 mathjax-users/jUtewUcE2bY -->
3919 <script type="text/x-mathjax-config">
3920 MathJax.Hub.Register.StartupHook("TeX AMSmath Ready",function () {
3921 var seteqsectionDefault = {name: "", num: 0};
3922 var seteqsections = {}, seteqsection = seteqsectionDefault;
3923 var TEX = MathJax.InputJax.TeX, PARSE = TEX.Parse;
3924 var AMS = MathJax.Extension["TeX/AMSmath"];
3925 TEX.Definitions.Add({
3926 macros: {
3927 seteqsection: "mySection",
3928 seteqnumber: "mySetEqNumber"
3929 }
3930 });
3931
3932 PARSE.Augment({
3933 mySection: function (name) {
3934 seteqsection.num = AMS.number;
3935 var n = this.GetArgument(name);
3936 if (n === "") {
3937 seteqsection = seteqsectionDefault;
3938 } else {
3939 if (!seteqsections["_"+n])
3940 seteqsections["_"+n] = {name:n, num:0};
3941 seteqsection = seteqsections["_"+n];
3942 }
3943 AMS.number = seteqsection.num;
3944 },
3945 mySetEqNumber: function (name) {
3946 var n = this.GetArgument(name);
3947 if (!n || !n.match(/^ *[0-9]+ *$/))
3948 n = "";
3949 else
3950 n = parseInt(n)-1;
3951 <!-- $ syntax highlighting -->
3952 if (n === "" || n < 1)
3953 TEX.Error
3954 ("Argument to "+name+" should be a positive integer");
3955 AMS.number = n;
3956 }
3957 });
3958 MathJax.Hub.Config({

```

```
3959 TeX: {
3960 equationNumbers: {
3961 formatTag: function (n) {
3962 <!-- if not numeric, don't include the chapter -->
3963 if (!n.match(/^ *[0-9]+ *$/))
3964 <!-- $ syntax highlighting -->
3965 return "("+n).replace(/\./, "")+"";
3966 else
3967 return "("+(seteqsection.name+"."+n).replace(/\./, "")+"";
3968 },
3969 formatID: function (n) {
3970 n = (seteqsection.name+'.'+n).replace
3971 (/[:"'<>&]/g, "").replace(/\./, "");
3972 return 'mjax-eqn-' + n;
3973 }
3974 }
3975 };
3976 });
3977 });
3978 </script>
3979
3980 <!-- http://docs.mathjax.org/en/latest/options/ThirdParty.html -->
3981 <script type="text/x-mathjax-config">
3982 MathJax.Ajax.config.path["Contrib"] =
3983 "https://cdn.mathjax.org/mathjax/contrib";
3984 </script>
3985
3986 <script type="text/x-mathjax-config">
3987 MathJax.Hub.Config({
3988 TeX: {
3989 extensions: ["autoload-all.js"] ,
3990 equationNumbers: {
3991 autoNumber: "AMS"
3992 }
3993 }
3994 });
3995 </script>
3996
3997 <!-- Alternative CDN provider: -->
3998 <script type="text/javascript" async
3999 src="https://cdnjs.cloudflare.com/ajax/libs/mathjax/2.7.5/MathJax.js?config=TeX-AMS_HTML-full">
4000 </script>
4001
4002 <!-- No longer supported after April 30, 2017: -->
4003 <!--
4004 <script
4005 src="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=TeX-AMS_HTML-full">
4006 </script>
4007 -->
4008
4009 \end{filecontents*}
4010 % \end{Verbatim}% for syntax highlighting
4011 \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.

```
4012 \begin{LWR@createlwarpmk}
4013 \begin{filecontents*}{lwarpmk.lua}
4014 #!/usr/bin/env texlua
4015
4016 -- Copyright 2016-2019 Brian Dunn
4017
4018
4019 printversion = "v0.75"
4020 requiredconfversion = "2" -- also at *lwarpmk.conf
4021
4022 function printhelp ()
4023 print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.");
4024 end
4025
4026
4027 function printusage ()
4028 --
4029 -- Print the usage of the lwarpmk command:
4030 --
4031 print ([[
4032
4033 lwarpmk print [-p project]: Compile the print version if necessary.
4034 lwarpmk print1 [-p project]: Forced single compile of the print version.
4035 lwarpmk printindex [-p project]: Process print indexes.
4036 lwarpmk printglossary [-p project]: Process the glossary for the print version.
4037 lwarpmk html [-p project]: Compile the HTML version if necessary.
4038 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
4039 lwarpmk htmlindex [-p project]: Process HTML indexes.
4040 lwarpmk htmlglossary [-p project]: Process the glossary for the html version.
4041 lwarpmk again [-p project]: Touch the source code to trigger recompiles.
4042 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
4043 lwarpmk pdftohtml [-p project]:
4044 For use with latexmk or a Makefile:
4045 Converts project_html.pdf to project_html.html and individual HTML files.
4046 Finishes the HTML conversion even if there was a compile error.
```

```

4047 lwarpmk pdftosvg <list of file names>: Converts each PDF file to SVG.
4048 lwarpmk epstopdf <list of file names>: Converts each EPS file to PDF.
4049 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
4050 *.idx, *.ind, *.log, *_html_inc.*, .gl*,
4051 *_html.pdf, *_html.html, *_html.sidetoc
4052 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
4053 lwarpmk cleanimages: Removes all images from the "lateximages" directory.
4054 lwarpmk -h: Print this help message.
4055 lwarpmk --help: Print this help message.
4056
4057]])
4058 -- printconf ()
4059 end
4060
4061
4062 function splitfilename (pathandfilename)
4063 --
4064 -- Separates out the path and extension from a filename.
4065 -- Returns path, filename with extension, and extension.
4066 -- Ex: thispath, thisfilename, thisextension = splitfilename ("path/to/filename.ext")
4067 --
4068 -- https://www.fhug.org.uk/wiki/wiki/doku.php?id=plugins:code_snippets:
4069 -- split_filename_in_to_path_filename_and_extension
4070 --
4071 if lfs.attributes(pathandfilename,"mode") == "directory" then
4072 local strPath = pathandfilename:gsub("[\\/]$", "") -- $(syntax highlighting)
4073 return strPath.."\\", "", ""
4074 end
4075 pathandfilename = pathandfilename.."."
4076 return pathandfilename:match("^(-)([^\\"/]-)%.(^[^\\"/].-)?.$")
4077 end
4078
4079
4080 function splitfile (destfile,sourcefile)
4081 --
4082 -- Split one large sourcefile into a number of files,
4083 -- starting with destfile.
4084 -- The file is split at each occurrence of <!--|Start file|newfilename|*
4085 --
4086 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
4087 local sfile = io.open(sourcefile)
4088 io.output(destfile)
4089 for line in sfile:lines() do
4090 i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*)|") ;
4091 if ((i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
4092 -- split the file
4093 io.output(newfilename) ;
4094 else
4095 -- not a splitpoint
4096 io.write (line .. "\n") ;
4097 end
4098 end -- do
4099 io.close(sfile)
4100 end -- function
4101

```

```
4102
4103 function cvalueerror (line, linenum , cvalue)
4104 --
4105 -- Incorrect value, so print an error and exit.
4106 --
4107 print ("lwarpmk: ===")
4108 print ("lwarpmk: " .. linenum .. " : " .. line) ;
4109 print (
4110 "lwarpmk: incorrect variable value \"" .. cvalue ..
4111 "\"" in lwarpmk.conf.\n"
4112) ;
4113 print ("lwarpmk: ===")
4114 -- printconf () ;
4115 os.exit(1) ;
4116 end
4117
4118
4119 function printhowtorecompile ()
4120 -- Tells the user how to recompile to regenerate the configuration files.
4121 print ("lwarpmk: The configuration files lwarpmk.conf and "..sourcename.."lwarpmkconf")
4122 print ("lwarpmk: must be updated. To do so, recompile")
4123 print ("lwarpmk: " , sourcename.."tex")
4124 if (printlatexcmd == "") then
4125 print ("lwarpmk: using xe/luatex/pdflatex,")
4126 else
4127 print ("lwarpmk: using the command:")
4128 print ("lwarpmk: " , printlatexcmd)
4129 end
4130 print ("lwarpmk: then use lwarpmk again.")
4131 end -- printhowtorecompile
4132
4133
4134 function ignoreconf ()
4135 -- Global argument index
4136 argindex = 2
4137 end
4138
4139 function loadconf ()
4140 --
4141 -- Load settings from the project's "lwarpmk.conf" file:
4142 --
4143 -- Default configuration filename:
4144 local conffile = "lwarpmk.conf"
4145 local confroot = "lwarpmk"
4146 -- Global argument index
4147 argindex = 2
4148 -- Optional configuration filename:
4149 if (arg[argindex] == "-p") then
4150 argindex = argindex + 1
4151 confroot = arg[argindex]
4152 conffile = confroot.."lwarpmkconf"
4153 argindex = argindex + 1
4154 end
4155 -- Additional defaults:
4156 confversion = "0"
```

```
4157 opsystem = "Unix"
4158 imagesdirectory = "lateximages"
4159 imagesname = "image-"
4160 latexmk = "false"
4161 printlatexcmd = ""
4162 HTMLlatexcmd = ""
4163 printindexcmd = ""
4164 HTMLindexcmd = ""
4165 latexmkindexcmd = ""
4166 -- to be removed:
4167 -- indexprog = "makeindex"
4168 -- makeindexstyle = "lwarp.ist"
4169 -- xindylanguage = "english"
4170 -- xindycodepage = "utf8"
4171 -- xindystyle = "lwarp.xdy"
4172 -- pdftotextenc = "UTF-8"
4173 glossarycmd = "makeglossaries"
4174 -- Verify the file exists:
4175 if (lfs.attributes(conffile,"mode")==nil) then
4176 -- file not exists
4177 print ("lwarpmk: ===")
4178 print ("lwarpmk: File \"\" .. conffile ..\"\" does not exist.")
4179 print ("lwarpmk: Move to the project's source directory,")
4180 print ("lwarpmk: recompile using pdflatex, xelatex, or lualatex,")
4181 print ("lwarpmk: then try using lwarpmk again.")
4182 if (arg[argindex] ~= nil) then
4183 print (
4184 "lwarpmk: (\"\" .. confroot ..
4185 "\"\" does not appear to be a project name.)"
4186)
4187 end
4188 print ("lwarpmk: ===")
4189 printhelp () ;
4190 os.exit(1) -- exit the entire lwarpmk script
4191 else -- file exists
4192 -- Read the file:
4193 print ("lwarpmk: Reading \" .. conffile ..\".")
4194 local cfile = io.open(conffile)
4195 -- Scan each line, parsing each line as: name = [[string]]
4196 local linenum = 0
4197 for line in cfile:lines() do -- scan lines
4198 linenum = linenum + 1
4199 i,j,cvarname,cvalue = string.find (line,"([%w-]*)%s*=%s*%[[%^]]*%]") ;
4200 -- Error if incorrect enclosing characters:
4201 if (i == nil) then
4202 print ("lwarpmk: ===")
4203 print ("lwarpmk: \" .. linenum .. \" : \" .. line) ;
4204 print ("lwarpmk: Incorrect entry in \" .. conffile ..\".\\n\") ;
4205 print ("lwarpmk: ===")
4206 -- printconf () ;
4207 os.exit(1) ;
4208 end -- nil
4209 if (cvarname == "confversion") then
4210 confversion = cvalue
4211 elseif (cvarname == "opsystem") then
```

```
4212 -- Verify choice of opsystem:
4213 if ((cvalue == "Unix") or (cvalue == "Windows")) then
4214 opsystem = cvalue
4215 else
4216 cvalueerror (line, linenum , cvalue)
4217 end
4218 elseif (cvarname == "sourcename") then sourcename = cvalue
4219 elseif (cvarname == "homehtmlfilename") then homehtmlfilename = cvalue
4220 elseif (cvarname == "htmlfilename") then htmlfilename = cvalue
4221 elseif (cvarname == "imagesdirectory") then imagesdirectory = cvalue
4222 elseif (cvarname == "imagesname") then imagesname = cvalue
4223 elseif (cvarname == "latexmk") then latexmk = cvalue
4224 elseif (cvarname == "printlatexcmd") then printlatexcmd = cvalue
4225 elseif (cvarname == "HTMLlatexcmd") then HTMLlatexcmd = cvalue
4226 elseif (cvarname == "printindexcmd") then printindexcmd = cvalue
4227 elseif (cvarname == "HTMLindexcmd") then HTMLindexcmd = cvalue
4228 elseif (cvarname == "latexmkindexcmd") then latexmkindexcmd = cvalue
4229 elseif (cvarname == "glossarycmd") then glossarycmd = cvalue
4230 elseif (cvarname == "pdftotextenc") then pdftotextenc = cvalue
4231 else
4232 print ("lwarpmk: ===")
4233 print ("lwarpmk: " .. linenum .. " : " .. line);
4234 print (
4235 "lwarpmk: Incorrect variable name \" .. cvarname .. "\" in " ..
4236 conffile .. ".\n"
4237);
4238 print ("lwarpmk: ===")
4239 -- printconf ();
4240 os.exit(1);
4241 end -- cvarname
4242 end -- do scan lines
4243 io.close(cfile)
4244 end -- file exists
4245 -- Error if sourcename is "lwarp".
4246 -- This could happen if a local copy of lwarp has recently been recompiled.
4247 if sourcename=="lwarp" then
4248 print ("lwarpmk: ===")
4249 print ("lwarpmk: lwarp.sty has recently been recompiled in this directory,")
4250 print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
4251 print ("lwarpmk: Recompile your own project using pdf/luaxelatex <projectname>.")
4252 print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
4253 print ("lwarpmk: and you may again use lwarpmk.")
4254 print ("lwarpmk: ===")
4255 os.exit(1)
4256 end -- sourcename of "lwarp"
4257 -- Select some operating-system commands:
4258 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:
4259 rmname = "rm"
4260 mvname = "mv"
4261 cpname = "cp"
4262 touchnamepre = "touch"
4263 touchnamepost = ""
4264 newtouchname = "touch"
4265 dirslash = "/"
4266 opquote= "\""
```

```
4267 cmdgroupopenname = " ("
4268 cmdgroupclosename = ") "
4269 seqname = " && "
4270 bname = " &"
4271 elseif opsystem=="Windows" then -- For Windows
4272 rmname = "DEL"
4273 mvname = "MOVE"
4274 cpname = "COPY"
4275 touchnamepre = "COPY /b"
4276 touchnamepost = "+,,"
4277 newtouchname = "echo empty >"
4278 dirslash = "\\\"
4279 opquote= "\""
4280 cmdgroupopenname = ""
4281 cmdgroupclosename = ""
4282 seqname = " & "
4283 bname = ""
4284 else
4285 print ("lwarpmk: ===")
4286 print ("lwarpmk: Select Unix or Windows for opsystem.")
4287 print ("lwarpmk: ===")
4288 os.exit(1)
4289 end --- for Windows
4290 -- Warning if the operating system does not appear to be correct,
4291 -- in case files were transferred to another system.
4292 if ((package.config:sub(1,1)) ~= dirslash) then
4293 print ("lwarpmk: ===")
4294 print ("lwarpmk: It appears that lwarpmk.conf is for a different operating system.")
4295 printhowtorecompile ()
4296 print ("lwarpmk: ===")
4297 os.exit(1)
4298 end
4299 -- Error if the configuration file's version is not current:
4300 if (confversion ~= requiredconfversion) then
4301 print ("lwarpmk: ===")
4302 printhowtorecompile ()
4303 print ("lwarpmk: ===")
4304 os.exit(1)
4305 end
4306 end -- loadconf
4307
4308
4309 function executecheckerror (executecommands , errormessage)
4310 --
4311 -- Execute an operating system call,
4312 -- and maybe exit with an error message.
4313 --
4314 local err
4315 err = os.execute (executecommands)
4316 if (err ~= 0) then
4317 print ("lwarpmk: ===")
4318 print ("lwarpmk: " .. errormessage)
4319 print ("lwarpmk: ===")
4320 os.exit(1)
4321 end
```

```
4322 end -- executecheckerror
4323
4324
4325 function refreshdate ()
4326 os.execute(touchnamepre .. " " .. sourcename .. ".tex " .. touchnamepost)
4327 end
4328
4329
4330
4331 function reruntoget (filesorce)
4332 --
4333 -- Scan the LaTeX log file for the phrase "Rerun to get",
4334 -- indicating that the file should be compiled again.
4335 -- Return true if found.
4336 --
4337 local fsorce = io.open(filesorce)
4338 for line in fsorce:lines() do
4339 if (string.find(line,"Rerun to get") ~= nil) then
4340 io.close(fsorce)
4341 return true
4342 end -- if
4343 end -- do
4344 io.close(fsorce)
4345 return false
4346 end
4347
4348
4349
4350 function onetime (latexcmd, fsuffix)
4351 --
4352 -- Compile one time, return true if should compile again.
4353 -- fsuffix is "" for print, "_html" for HTML output.
4354 --
4355 print("lwarpmk: Compiling with: " .. latexcmd)
4356 executecheckerror (
4357 latexcmd ,
4358 "Compile error."
4359)
4360 return (reruntoget(sourcename .. fsuffix .. ".log")) ;
4361 end
4362
4363
4364 function manytimes (latexcmd, fsuffix)
4365 --
4366 -- Compile up to five times.
4367 -- fsuffix is "" for print, "_html" for HTML output
4368 --
4369 if onetime(latexcmd, fsuffix) == true then
4370 if onetime(latexcmd, fsuffix) == true then
4371 if onetime(latexcmd, fsuffix) == true then
4372 if onetime(latexcmd, fsuffix) == true then
4373 if onetime(latexcmd, fsuffix) == true then
4374 end end end end end
4375 end
4376
```

```
4377
4378 function verifyfileexists (filename)
4379 --
4380 -- Exit if the given file does not exist.
4381 --
4382 if (lfs.attributes (filename , "modification") == nil) then
4383 print ("lwarpmk: ===")
4384 print ("lwarpmk: " .. filename .. " not found.");
4385 print ("lwarpmk: ===")
4386 os.exit (1) ;
4387 end
4388 end
4389
4390
4391
4392 function pdftohtml ()
4393 --
4394 -- Convert <project>_html.pdf into HTML files:
4395 --
4396 -- Convert to text:
4397 print ("lwarpmk: Converting " .. sourcename
4398 .. "_html.pdf to " .. sourcename .. "_html.html")
4399 os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
4400 .. sourcename .. "_html.pdf " .. sourcename .. "_html.html")
4401 -- Split the result into individual HTML files:
4402 splitfile (homehtmlfilename .. ".html" , sourcename .. "_html.html")
4403 end
4404
4405
4406 function removeaux ()
4407 --
4408 -- Remove auxiliary files:
4409 -- All .aux files are removed since there may be many bbl*.aux files.
4410 -- Also removes sourcename_html.pdf, sourcename_html.html,
4411 -- and sourcename_html.sidetoc.
4412 --
4413 os.execute (rmname .. " *.aux " ..
4414 sourcename .. ".toc " .. sourcename .. "_html.toc " ..
4415 sourcename .. ".lof " .. sourcename .. "_html.lof " ..
4416 sourcename .. ".lot " .. sourcename .. "_html.lot " ..
4417 " *.idx " ..
4418 " *.ind " ..
4419 sourcename .. ".ps " .. sourcename .. "_html.ps " ..
4420 sourcename .. ".log " .. sourcename .. "_html.log " ..
4421 sourcename .. ".gl*" .. sourcename .. "_html.gl*" ..
4422 sourcename .. "_html.pdf " ..
4423 sourcename .. "_html.html " ..
4424 sourcename .. "_html.sidetoc " ..
4425 " *_html_inc.* "
4426)
4427 end
4428
4429 function checkhtmlpdfexists ()
4430 --
4431 -- Error if the HTML document does not exist.
```

```
4432 -- The lateximages are drawn from the HTML PDF version of the document,
4433 -- so "lwarpmk html" must be done before "lwarpmk limages".
4434 --
4435 local htmlpdffile = io.open(sourcename .. "_html.pdf", "r")
4436 if (htmlpdffile == nil) then
4437 print ("")
4438 print ("lwarpmk: ===")
4439 print ("lwarpmk: The HTML version of the document does not exist.")
4440 print ("lwarpmk: Enter \"lwarpmk html\" to compile the HTML version.")
4441 print ("lwarpmk: ===")
4442 os.exit(1)
4443 end
4444 io.close (htmlpdffile)
4445 end -- checkhtmlpdfexists
4446
4447
4448 function warnlimages ()
4449 --
4450 -- Warning of a missing <sourcename>-images.txt file:
4451 print ("lwarpmk: ===")
4452 print ("lwarpmk: \"" .. sourcename .. "-images.txt\" does not exist.")
4453 print ("lwarpmk: Your project does not use SVG math or other lateximages,")
4454 print ("lwarpmk: or the file has been deleted somehow.")
4455 print ("lwarpmk: Use \"lwarpmk html1\" to recompile your project")
4456 print ("lwarpmk: and recreate \"" .. sourcename .. "-images.txt\".")
4457 print ("lwarpmk: If your project does not use SVG math or other lateximages,")
4458 print ("lwarpmk: then \"" .. sourcename .. "-images.txt\" will never exist, and")
4459 print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
4460 print ("lwarpmk: ===")
4461 end -- warnlimages
4462
4463
4464 function warnlimagesrecompile ()
4465 -- Warning if must recompile before creating limages:
4466 print ("")
4467 print ("lwarpmk: ===")
4468 print ("lwarpmk: Cross-references are not yet correct.")
4469 print ("lwarpmk: The document must be recompiled before creating the lateximages.")
4470 print ("lwarpmk: Enter \"lwarpmk html1\" again, then try \"lwarpmk limages\" again.")
4471 print ("lwarpmk: ===")
4472 end --warnlimagesrecompile
4473
4474
4475 function checklimages ()
4476 --
4477 -- Check <sourcename>.txt to see if need to recompile first.
4478 -- If any entry has a page number of zero, then there were incorrect images.
4479 --
4480 print ("lwarpmk: Checking for a valid " .. sourcename .. "-images.txt file.")
4481 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4482 if (limagesfile == nil) then
4483 warnlimages ()
4484 os.exit(1)
4485 end
4486 -- Track warning to recompile if find a page 0
```

```

4487 local pagezerowarning = false
4488 -- Scan <sourcename>.txt
4489 for line in limagesfile:lines() do
4490 -- lwimgpage is the page number in the PDF which has the image
4491 -- lwimghash is true if this filename is a hash
4492 -- lwimgname is the lateximage filename root to assign for the image
4493 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4494 -- For each entry:
4495 if (i~=nil) then
4496 -- If the page number is 0, image references are incorrect
4497 -- and must recompile the source document:
4498 if (lwimgpage == "0") then
4499 pagezerowarning = true
4500 end
4501 end -- if i~=nil
4502 end -- do
4503 -- The last line should be |end|end|end|.
4504 -- If not, the compile must have aborted, and the images are incomplete.
4505 if (lwimgpage ~= "end") then
4506 warnlimagesrecompile()
4507 os.exit(1) ;
4508 end
4509 if (pagezerowarning) then
4510 warnlimagesrecompile()
4511 os.exit(1) ;
4512 end -- pagezerowarning
4513 end -- checklimages
4514
4515
4516 function createuniximage (lwimgfullname)
4517 --
4518 -- Create one lateximage for Unix / Linux / Mac OS.
4519 --
4520 executecheckerror (
4521 cmdgroupopenname ..
4522 "pdfseparate -f " .. lwimgpage .. " -l " .. lwimgpage .. " " ..
4523 sourcename .. "_html.pdf" ..
4524 imagesdirectory .. dirslash .. "lateximagetemp-%d" .. ".pdf" ..
4525 seqname ..
4526 -- Crop the image:
4527 "pdfcrop --hires " .. imagesdirectory .. dirslash .. "lateximagetemp-" ..
4528 lwimgpage .. ".pdf" ..
4529 imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4530 seqname ..
4531 -- Convert the image to svg:
4532 "pdftocairo -svg -noshrink " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4533 imagesdirectory .. dirslash .. lwimgname .. ".svg" ..
4534 seqname ..
4535 -- Remove the temporary files:
4536 rmname .. " " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" .. seqname ..
4537 rmname .. " " .. imagesdirectory .. dirslash .. "lateximagetemp-" .. lwimgpage .. ".pdf" ..
4538 cmdgroupclosename .. " >/dev/null " .. bgnam
4539 ,
4540 "File error trying to convert " .. lwimgfullname
4541)

```

```
4542 -- Every 32 images, wait for completion at below normal priority,
4543 -- allowing other image tasks to catch up.
4544 numimageprocesses = numimageprocesses + 1
4545 if (numimageprocesses > 32) then
4546 numimageprocesses = 0
4547 print ("lwarpmk: waiting")
4548 executecheckerror ("wait" , "File error trying to wait.")
4549 end
4550 end -- createuniximage
4551
4552
4553 function createwindowsimage (lwimgfullname)
4554 --
4555 -- Create one lateximage for Windows.
4556 --
4557 -- Every 32 images, wait for completion at below normal priority,
4558 -- allowing other image tasks to catch up.
4559 numimageprocesses = numimageprocesses + 1
4560 if (numimageprocesses > 32) then
4561 numimageprocesses = 0
4562 thiswaitcommand = "/WAIT /BELOWNORMAL"
4563 print ("lwarpmk: waiting")
4564 else
4565 thiswaitcommand = ""
4566 end
4567 -- Execute the image generation command
4568 executecheckerror (
4569 "start /B " .. thiswaitcommand .. " \"\" lwarp_one_limage " ..
4570 lwimgpage .. " " ..
4571 lwimghash .. " " ..
4572 lwimgname .. " " ..
4573 sourcename .. " <nul >nul"
4574 ,
4575 "File error trying to create image."
4576)
4577 end -- createwindowsimage
4578
4579
4580 function createonelateximage (line)
4581 --
4582 -- Given the next line of <sourcename>.txt, convert a single image.
4583 --
4584 -- lwimgpage is the page number in the PDF which has the image
4585 -- lwimghash is true if this filename is a hash
4586 -- lwimgname is the lateximage filename root to assign for the image
4587 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4588 -- For each entry:
4589 if ((i~=nil)) then
4590 -- Skip if the page number is 0:
4591 if (lwimgpage == "0") then
4592 pagezerowarning = true
4593 -- Skip if the page number is "end":
4594 else if (lwimgpage == "end") then
4595 else
4596 -- Skip is this image is hashed and already exists:
```

```
4597 local lwimgfullname = imagesdirectory .. dirslash .. lwimgname .. ".svg"
4598 if (
4599 (lwimghash ~= "true") or
4600 (lfs.attributes(lwimgfullname,"mode")==nil) -- file not exists
4601)
4602 then -- not hashed or not exists:
4603 -- Print the name of the file being generated:
4604 print ("lwarpmk: " .. lwimgname)
4605 -- Touch/create the dest so that only once instance tries to build it:
4606 executecheckerror (
4607 newtouchname .. " " .. lwimgfullname ,
4608 "File error trying to touch " .. lwimgfullname
4609)
4610 -- Separate out the image into its own single-page pdf:
4611 if opsystem=="Unix" then
4612 createuniximage (lwimgfullname)
4613 elseif opsystem=="Windows" then
4614 createwindowsimage (lwimgfullname)
4615 end
4616 end -- not hashed or not exists
4617 end -- not page "end"
4618 end -- not page 0
4619 end -- not nil
4620 end -- createonelateximage
4621
4622
4623 function createlateximages ()
4624 --
4625 -- Create lateximages based on <sourcename>-images.txt:
4626 --
4627 -- See if the document must be recompiled first:
4628 checklimages ()
4629 -- See if the HTML version exists:
4630 checkhtmlpdfexists ()
4631 -- Attempt to create the lateximages:
4632 print ("lwarpmk: Creating lateximages.")
4633 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4634 if (limagesfile == nil) then
4635 warnlimages ()
4636 os.exit(1)
4637 end
4638 -- Create the lateximages directory, ignore error if already exists
4639 err = os.execute("mkdir " .. imagesdirectory)
4640 -- For Windows, create lwarp_one_limage.cmd from lwarp_one_limage.txt:
4641 if opsystem=="Windows" then
4642 executecheckerror (
4643 cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd" ,
4644 "File error trying to copy lwarp_one_limage.txt to lwarp_one_limage.cmd"
4645)
4646 end -- create lwarp_one_limage.cmd
4647 -- Track the number of parallel processes
4648 numimageprocesses = 0
4649 -- Track warning to recompile if find a page 0
4650 pagezerowarning = false
4651 -- Scan <sourcename>.txt
```

```
4652 for line in limagesfile:lines() do
4653 createonelateximage (line)
4654 end -- do
4655 io.close(limagesfile)
4656 print ("lwarpmk limages: ===")
4657 print ("lwarpmk limages: Wait a moment for the images to complete")
4658 print ("lwarpmk limages: before reloading the page.")
4659 print ("lwarpmk limages: ===")
4660 print ("lwarpmk limages: Done.")
4661 if (pagezerowarning == true) then
4662 print ("lwarpmk limages: WARNING: Images will be incorrect.")
4663 print ("lwarpmk limages: Enter \"lwarpmk cleanlimages\", then")
4664 print ("lwarpmk limages: recompile the document one more time, then")
4665 print ("lwarpmk limages: repeat \"lwarpmk images\" again.")
4666 end -- pagezerowarning
4667 end -- function
4668
4669
4670 function convertepstopdf ()
4671 --
4672 -- Converts EPS files to PDF files.
4673 -- The filenames are arg[argindex] and up.
4674 -- arg[1] is the command "epstopdf".
4675 --
4676 ignoreconf ()
4677 for i = argindex , #arg do
4678 if (lfs.attributes(arg[i],"mode")==nil) then
4679 print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4680 else
4681 print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4682 thispath, thisfilename, thisextension = splitfilename(arg[i])
4683 if (thispath == nil) then
4684 os.execute ("epstopdf " .. arg[i])
4685 else
4686 os.execute (
4687 "epstopdf " ..
4688 thispath .. thisfilename .. "." .. thisextension .. " " ..
4689 thispath .. thisfilename .. ".pdf"
4690)
4691 end
4692 end -- if
4693 end -- do
4694 end --function
4695
4696
4697 function convertpdfptosvg ()
4698 --
4699 -- Converts PDF files to SVG files.
4700 -- The filenames are arg[argindex] and up.
4701 -- arg[1] is the command "pdfptosvg".
4702 --
4703 ignoreconf ()
4704 for i = argindex , #arg do
4705 if (lfs.attributes(arg[i],"mode")==nil) then
4706 print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
```

```
4707 else
4708 print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4709 thispath, thisfilename, thisextension = splitfilename(arg[i])
4710 if (thispath == nil) then
4711 os.execute ("pdftocairo -svg " .. arg[i])
4712 else
4713 os.execute (
4714 "pdftocairo -svg " ..
4715 thispath .. thisfilename .. "." .. thisextension .. " " ..
4716 thispath .. thisfilename .. ".svg"
4717)
4718 end
4719 end -- if
4720 end -- do
4721 end --function
4722
4723
4724 -- Force an update and conclude processing:
4725 function updateanddone ()
4726 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
4727 refreshdate ()
4728 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
4729 print ("lwarpmk: Done.")
4730 end -- function
4731
4732
4733 -- Start of the main code: --
4734
4735
4736 -- lwarpmk --version :
4737
4738 if (arg[1] == "--version") then
4739 print ("lwarpmk: " .. printversion)
4740
4741 else -- not --version
4742
4743
4744 -- print intro:
4745
4746 print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX lwarp package.")
4747
4748
4749 -- lwarpmk print:
4750
4751 if arg[1] == "print" then
4752 loadconf ()
4753 if (latexmk == "true") then
4754 print ("lwarpmk: Compiling with: " .. printlatexcmd)
4755 executecheckerror (
4756 printlatexcmd ,
4757 "Compile error."
4758)
4759 print ("lwarpmk: Done.")
4760 else -- not latexmk
4761 verifyfileexists (sourcename .. ".tex") ;
```

```
4762 -- See if up to date:
4763 if (
4764 (lfs.attributes (sourcename .. ".pdf" , "modification") == nil) or
4765 (
4766 lfs.attributes (sourcename .. ".tex" , "modification") >
4767 lfs.attributes (sourcename .. ".pdf" , "modification")
4768)
4769) then
4770 -- Recompile if not yet up to date:
4771 manytimes(printlatexcmd, "")
4772 print ("lwarpmk: Done.");
4773 else
4774 print ("lwarpmk: " .. sourcename .. ".pdf is up to date.");
4775 end
4776 end -- not latexmk
4777
4778
4779 -- lwarpmk print1:
4780
4781 elseif arg[1] == "print1" then
4782 loadconf ()
4783 verifyfileexists (sourcename .. ".tex");
4784 onetime(printlatexcmd, "")
4785 print ("lwarpmk: Done.");
4786
4787
4788 -- lwarpmk printindex:
4789 -- Compile the index then touch the source
4790 -- to trigger a recompile of the document:
4791
4792 elseif arg[1] == "printindex" then
4793 loadconf ()
4794 os.execute (printindexcmd)
4795 print ("lwarpmk: -----")
4796 updateanddone ()
4797
4798
4799 -- lwarpmk printglossary:
4800 -- Compile the glossary then touch the source
4801 -- to trigger a recompile of the document:
4802
4803 elseif arg[1] == "printglossary" then
4804 loadconf ()
4805 print ("lwarpmk: Processing the glossary.")
4806
4807 os.execute(glossarycmd .. " " .. sourcename)
4808 updateanddone ()
4809
4810
4811 -- lwarpmk html:
4812
4813 elseif arg[1] == "html" then
4814 loadconf ()
4815 if (latexmk == "true") then
4816 print ("lwarpmk: Compiling with: " .. HTMLlatexcmd)
```

```
4817 executecheckerror (
4818 HTMLlatexcmd ,
4819 "Compile error."
4820)
4821 pdftohtml ()
4822 print ("lwarpmk: Done.")
4823 else -- not latexmk
4824 verifyfileexists (sourcename .. ".tex") ;
4825 -- See if exists and is up to date:
4826 if (
4827 (lfs.attributes (homehtmlfilename .. ".html" , "modification") == nil) or
4828 (
4829 lfs.attributes (sourcename .. ".tex" , "modification") >
4830 lfs.attributes (homehtmlfilename .. ".html" , "modification")
4831)
4832) then
4833 -- Recompile if not yet up to date:
4834 manytimes(HTMLlatexcmd, "_html")
4835 pdftohtml ()
4836 print ("lwarpmk: Done.")
4837 else
4838 print ("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
4839 end
4840 end -- not latexmk
4841
4842
4843 -- lwarpmk html1:
4844
4845 elseif arg[1] == "html1" then
4846 loadconf ()
4847 verifyfileexists (sourcename .. ".tex") ;
4848 onetime(HTMLlatexcmd, "_html")
4849 pdftohtml ()
4850 print ("lwarpmk: Done.")
4851
4852
4853 -- lwarpmk pdftohtml:
4854 elseif arg[1] == "pdftohtml" then
4855 loadconf ()
4856 pdftohtml ()
4857
4858
4859 -- lwarpmk htmlindex:
4860 -- Compile the index then touch the source
4861 -- to trigger a recompile of the document:
4862
4863 elseif arg[1] == "htmlindex" then
4864 loadconf ()
4865 os.execute (HTMLindexcmd)
4866 print ("lwarpmk: -----")
4867 updateanddone ()
4868
4869
4870 -- lwarpmk htmlglossary:
4871 -- Compile the glossary then touch the source
```

```
4872 -- to trigger a recompile of the document.
4873 -- The <sourcename>.xdy file is created by the glossaries package.
4874
4875 elseif arg[1] == "htmlglossary" then
4876 loadconf ()
4877 print ("lwarpmk: Processing the glossary.")
4878 os.execute(glossarycmd .. " " .. sourcename .. "_html")
4879 updateanddone ()
4880
4881
4882 -- lwarpmk limages:
4883 -- Scan the <sourcename>.txt file to create lateximages.
4884
4885 elseif arg[1] == "limages" then
4886 loadconf ()
4887 print ("lwarpmk: Processing images.")
4888 createlateximages ()
4889 print ("lwarpmk: Done.")
4890
4891
4892 -- lwarpmk again:
4893 -- Touch the source to trigger a recompile.
4894
4895 elseif arg[1] == "again" then
4896 loadconf ()
4897 updateanddone ()
4898
4899
4900 -- lwarpmk clean:
4901 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
4902
4903 elseif arg[1] == "clean" then
4904 loadconf ()
4905 removeaux ()
4906 print ("lwarpmk: Done.")
4907
4908
4909 -- lwarpmk cleanall
4910 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
4911 -- and also project.pdf, project.dvi, *.html
4912
4913 elseif arg[1] == "cleanall" then
4914 loadconf ()
4915 removeaux ()
4916 os.execute (rmname .. " " ..
4917 sourcename .. ".pdf " .. sourcename .. "_html.pdf " ..
4918 sourcename .. ".dvi " .. sourcename .. "_html.dvi " ..
4919 "*.html"
4920)
4921 print ("lwarpmk: Done.")
4922
4923
4924 -- lwarpmk cleanlimages
4925 -- Remove images from the imagesdirectory.
4926
```

```

4927 elseif arg[1] == "cleanimages" then
4928 loadconf ()
4929 os.execute (rmname .. " " .. imagesdirectory .. dirslash .. "*")
4930 print ("lwarpmk: Done.")
4931
4932 -- lwarpmk epstopdf <list of file names>
4933 -- Convert EPS files to PDF using epstopdf
4934 elseif arg[1] == "epstopdf" then
4935 convertepstopdf ()
4936 print ("lwarpmk: Done.")
4937
4938
4939 -- lwarpmk pdftosvg <list of file names>
4940 -- Convert PDF files to SVG using pdftocairo
4941 elseif arg[1] == "pdftosvg" then
4942 convertpdftosvg ()
4943 print ("lwarpmk: Done.")
4944
4945
4946 -- lwarpmk with no argument :
4947
4948 elseif (arg[1] == nil) then
4949 printhelp ()
4950
4951
4952 -- lwarpmk -h or lwarpmk --help :
4953
4954 elseif (arg[1] == "-h") or (arg[1] == "--help") then
4955 printusage ()
4956
4957
4958 -- Unknown command:
4959
4960 else
4961 printhelp ()
4962 print ("\nlwarpmk: ***** Unknown command \""..arg[1].."\". *****\n")
4963 end
4964
4965 end -- not --version
4966 \end{filecontents*}
4967 % \end{Verbatim}% for syntax highlighting

4968 \end{LWR@createlwarpmk}

```

## 41 Stacks

**for HTML output:** 4969 \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:

```
4970 \newcommand*\LWR@depthnone}{-5}
```

All sectioning depths are deeper than `LWR@depthfinished`:

```
4971 \newcommand*\LWR@depthfinished}{-4}
4972 \newcommand*\LWR@depthbook}{-2}
4973 \newcommand*\LWR@depthpart}{-1}
4974 \newcommand*\LWR@depthchapter}{0}
4975 \newcommand*\LWR@depthsection}{1}
4976 \newcommand*\LWR@depthsubsection}{2}
4977 \newcommand*\LWR@depthsubsubsection}{3}
4978 \newcommand*\LWR@depthparagraph}{4}
4979 \newcommand*\LWR@depthsubparagraph}{5}
```

Used by `\itemize`, `\enumerate`, `\description`:

```
4980 \newcommand*\LWR@depthlist}{6}
```

Used by `\item`:

```
4981 \newcommand*\LWR@depthlistitem}{7}
4982 \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.

```
4983 \newcommand*\LWR@closeone}{% top of the stack
4984 \newcommand*\LWR@closetwo}{
4985 \newcommand*\LWR@closethree}{
4986 \newcommand*\LWR@closefour}{
4987 \newcommand*\LWR@closefive}{
4988 \newcommand*\LWR@closesix}{
4989 \newcommand*\LWR@closeseven}{
4990 \newcommand*\LWR@closeeight}{
4991 \newcommand*\LWR@closenine}{
```

```

4992 \newcommand*\LWR@closeten{}
4993 \newcommand*\LWR@closeeleven{}
4994 \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}

```

---

```

4995 \newcommand*\LWR@closedepthone{\LWR@depthnone}% top of the stack
4996 \newcommand*\LWR@closedepthtwo{\LWR@depthnone}
4997 \newcommand*\LWR@closedepththree{\LWR@depthnone}
4998 \newcommand*\LWR@closedepthfour{\LWR@depthnone}
4999 \newcommand*\LWR@closedepthfive{\LWR@depthnone}
5000 \newcommand*\LWR@closedepthsix{\LWR@depthnone}
5001 \newcommand*\LWR@closedepthseven{\LWR@depthnone}
5002 \newcommand*\LWR@closedeptheight{\LWR@depthnone}
5003 \newcommand*\LWR@closedepthnine{\LWR@depthnone}
5004 \newcommand*\LWR@closedephten{\LWR@depthnone}
5005 \newcommand*\LWR@closedeptheleven{\LWR@depthnone}
5006 \newcommand*\LWR@closedephtwelve{\LWR@depthnone}

```

### 41.4 Pushing and popping the stack

`\LWR@pushclose`  $\{ \langle sectiontype \rangle \}$

Pushes one return action and its L<sup>A</sup>T<sub>E</sub>X depth onto the stacks.

```

5007 \NewDocumentCommand{\LWR@pushclose}{m}
5008 {%
5009 \global\let\LWR@closetwelve\LWR@closeeleven%
5010 \global\let\LWR@closeeleven\LWR@closeten%
5011 \global\let\LWR@closeten\LWR@closenine%
5012 \global\let\LWR@closenine\LWR@closeeight%
5013 \global\let\LWR@closeeight\LWR@closeseven%
5014 \global\let\LWR@closeseven\LWR@closesix%
5015 \global\let\LWR@closesix\LWR@closefive%
5016 \global\let\LWR@closefive\LWR@closefour%
5017 \global\let\LWR@closefour\LWR@closethree%

```

```

5018 \global\let\LWR@closethree\LWR@closetwo%
5019 \global\let\LWR@closetwo\LWR@closeone%
5020 \global\csletcs{LWR@closeone}{LWR@printclose#1}%
5021 \global\let\LWR@closedepthtwelve\LWR@closedeptheleven%
5022 \global\let\LWR@closedeptheleven\LWR@closedepthten%
5023 \global\let\LWR@closedepthten\LWR@closedepthnine%
5024 \global\let\LWR@closedepthnine\LWR@closedeptheight%
5025 \global\let\LWR@closedeptheight\LWR@closedepthseven%
5026 \global\let\LWR@closedepthseven\LWR@closedepthsix%
5027 \global\let\LWR@closedepthsix\LWR@closedepthfive%
5028 \global\let\LWR@closedepthfive\LWR@closedepthfour%
5029 \global\let\LWR@closedepthfour\LWR@closedepththree%
5030 \global\let\LWR@closedepththree\LWR@closedepthtwo%
5031 \global\let\LWR@closedepthtwo\LWR@closedepthone%
5032 \global\csletcs{LWR@closedepthone}{LWR@depth#1}%
5033 }

```

`\LWR@popclose` Pops one action and its depth off the stacks.

```

5034 \newcommand*{\LWR@popclose}
5035 {%
5036 \global\let\LWR@closeone\LWR@closetwo%
5037 \global\let\LWR@closetwo\LWR@closethree%
5038 \global\let\LWR@closethree\LWR@closefour%
5039 \global\let\LWR@closefour\LWR@closefive%
5040 \global\let\LWR@closefive\LWR@closesix%
5041 \global\let\LWR@closesix\LWR@closeseven%
5042 \global\let\LWR@closeseven\LWR@closeeight%
5043 \global\let\LWR@closeeight\LWR@closenine%
5044 \global\let\LWR@closenine\LWR@closeten%
5045 \global\let\LWR@closeten\LWR@closeeleven%
5046 \global\let\LWR@closeeleven\LWR@closetwelve%
5047 \global\let\LWR@closedepthone\LWR@closedepthtwo%
5048 \global\let\LWR@closedepthtwo\LWR@closedepththree%
5049 \global\let\LWR@closedepththree\LWR@closedepthfour%
5050 \global\let\LWR@closedepthfour\LWR@closedepthfive%
5051 \global\let\LWR@closedepthfive\LWR@closedepthsix%
5052 \global\let\LWR@closedepthsix\LWR@closedepthseven%
5053 \global\let\LWR@closedepthseven\LWR@closedeptheight%
5054 \global\let\LWR@closedeptheight\LWR@closedepthnine%
5055 \global\let\LWR@closedepthnine\LWR@closedepthten%
5056 \global\let\LWR@closedepthten\LWR@closedeptheleven%
5057 \global\let\LWR@closedeptheleven\LWR@closedepthtwelve%
5058 }

5059 \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:** 5060 `\begin{warpHTML}`

```
\LWR@setexparray {<name>} {<index>} {<contents>}
```

```
5061 \NewDocumentCommand{\LWR@setexparray}{m m m}{%
5062 \begingroup%
5063 \let\par\relax%
5064 \xdef\LWR@thisexparrayname{#1#2}%
5065 \ifstrempy{#3}%
5066 {\csgdef{\LWR@thisexparrayname}{}}%
5067 {\csxdef{\LWR@thisexparrayname}{#3}}%
5068 \endgroup%
5069 }
```

```
\LWR@getexparray {<name>} {<index>}
```

```
5070 \newcommand*{\LWR@getexparray}[2]{%
5071 \@nameuse{#1#2}%
5072 }
```

```
5073 \end{warpHTML}
```

## 43 Localizing catcodes

**for HTML & PRINT:** 5074 `\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.

```
5075 \newcommand{\StartDefiningTabulars}{%
5076 \LWR@traceinfo{StartDefiningTabulars}%
5077 \warpHTMLonly{\catcode'\&=\active}%
5078 }
```

`\StopDefiningTabulars` Place after defining something with & in it.

```

5079 \newcommand{\StopDefiningTabulars}{%
5080 \LWR@traceinfo{StopDefiningTabulars}%
5081 \warpHTMLonly{\catcode'\&=4}%
5082 }

```

`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.

```

5083 \newbool{LWR@mathmacro}
5084 \boolfalse{LWR@mathmacro}

```

`\StartDefiningMath` Place before defining something with  $$$  in it.

```

5085 \newcommand{\StartDefiningMath}{%
5086 \LWR@traceinfo{StartDefiningMath}%
5087 \warpHTMLonly{\catcode'\$=\active}%
5088 }

```

`\StopDefiningMath` Place after defining something with  $$$  in it.

```

5089 \newcommand{\StopDefiningMath}{%
5090 \LWR@traceinfo{StopDefiningMath}%
5091 \warpHTMLonly{\catcode'\$=3}% math shift
5092 }

5093 \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:** 5094 \begin{warpall}

Bool LWR@dynamicmath True to mark inline math which is dynamic in nature, thus should not be hashed for reuse.  
 Default: false

```
5095 \newbool{LWR@dynamicmath}
5096 \boolfalse{LWR@dynamicmath}
```

\inlinemathother Place before using \$ ... \$ or \ ( ... \) if the contents of the math are not static, depending on counters or dynamic macros.

```
5097 \newcommand{\inlinemathother}{%
5098 \LWR@traceinfo{inlinemathother}%
5099 \booltrue{LWR@dynamicmath}%
5100 }
```

\inlinemathnormal Place after using \$ ... \$ or \ ( ... \) with dynamic contents.

```
5101 \newcommand{\inlinemathnormal}{%
5102 \LWR@traceinfo{inlinemathnormal}%
5103 \boolfalse{LWR@dynamicmath}%
5104 }
```

```
5105 \end{warpall}
```

## 45 HTML entities

**for HTML output:** 5106 \begin{warpHTML}

HTML Unicode entities:

```
5107 \let\LWR@origampersand\&
```

\HTMLentity {<entitytag>}

```
5108 \newcommand*{\HTMLentity}[1]{%
5109 % \LWR@traceinfo{HTMLentity \detokenize{#1}}%
5110 \begingroup%
5111 \LWR@FBcancel%
5112 \LWR@origampersand#1;%
5113 \endgroup%
5114 % \LWR@traceinfo{HTMLentity done}%
5115 }
```

`\HTMLUnicode` {*<hex\_unicode>*}

5116 `\newcommand*{\HTMLUnicode}[1]{\HTMLentity{\LWR@origpound{ }x#1}}`

`\&`

5117 `\renewrobustcmd*{\&}{\HTMLentity{amp}}`

`\textless`

5118 `\let\LWR@origtextless\textless`

5119 `\renewrobustcmd*{\textless}{\HTMLentity{lt}}`

`\textgreater`

5120 `\let\LWR@origtextgreater\textgreater`

5121 `\renewrobustcmd*{\textgreater}{\HTMLentity{gt}}`

5122 `\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:** 5123 `\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.

5124 `\providecommand*{\BaseJobname}{\jobname}`

`\HTMLFilename` The prefix for all generated HTML files other than the home page, defaulting to empty. See section [7.6.1](#).

5125 `\providecommand*{\HTMLFilename}{}`

`\HomeHTMLFilename` The filename of the home page, defaulting to the `\BaseJobname`. See section [7.6.1](#).

5126 `\providecommand*{\HomeHTMLFilename}{\BaseJobname}`

`\SetHTMLFileNumber` {*<number>*}

Sets the file number for the next file to be generated. 0 is the home page. Use just before the next sectioning command, and set it to one less than the desired number

of the next section. May be used to generate numbered groups of nodes such as 100+ for one chapter, 200+ for another chapter, etc.

```
5127 \newcommand*{\SetHTMLFileNumber}[1]{%
5128 \setcounter{LWR@htmlfilenumber}{#1}%
5129 }
```

Bool FileSectionNames Selects how to create HTML file names.

Defaults to use section names in the filenames.

```
5130 \newbool{FileSectionNames}
5131 \booltrue{FileSectionNames}

5132 \end{warpall}
```

**for HTML output:** 5133 \begin{warpHTML}

Ctrl LWR@htmlfilenumber Records the number of each HTML file as it is being created. Number 0 is the home page.

```
5134 \newcounter{LWR@htmlfilenumber}
5135 \setcounter{LWR@htmlfilenumber}{0}
```

\LWR@htmlsectionfilename {*<htmlfilenumber or name>*}

Prints the filename for a given section: \HTMLFilename{}filenumber/name.html

```
5136 \newcommand*{\LWR@htmlsectionfilename}[1]{%
5137 \LWR@traceinfo{LWR@htmlsectionfilename A !\detokenize{#1}!}%
```

Section 0 or empty is given the home filename. The filename must be detokenized for underscores.

```
5138 % \LWR@traceinfo{about to assign temp}%
5139 \LWR@sanitize{#1}%
5140 \LWR@traceinfo{about to compare with ??}%
5141 \ifthenelse{\equal{\LWR@sanitized}{??}}{%
5142 {\LWR@traceinfo{found ??}}%
5143 {\LWR@traceinfo{not found ??}}%
5144 \LWR@traceinfo{about to compare with zero or empty}%
5145 \ifthenelse{%
5146 \equal{\LWR@sanitized}{0}%
5147 \OR \equal{\LWR@sanitized}{}}%
5148 \OR \equal{\LWR@sanitized}{??}}%
5149 }%
5150 {%
5151 \LWR@traceinfo{LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
5152 \HomeHTMLFilename.html%
5153 }%
```

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`:

```

5154 {%
5155 \LWR@traceinfo{LWR@htmlsectionfilename C \LWR@sanitized}%
5156 \ifthenelse{%
5157 \equal{\HTMLFilename}{ } \AND
5158 \equal{\LWR@sanitized}{Index} \OR
5159 \equal{\LWR@sanitized}{index}%
5160 }%
5161 {%
5162 \LWR@traceinfo{Prefixing the index name with an underscore.}%
5163 _\LWR@sanitized.html%
5164 }%

```

Otherwise, create a filename with the chosen prefix:

```

5165 {%
5166 \HTMLFilename\LWR@isolate{\LWR@sanitized}.html%
5167 }%
5168 }%
5169 \LWR@traceinfo{LWR@htmlsectionfilename Z}%
5170 }

```

`\LWR@htmlrefsectionfilename` {<label>}

Prints the filename for the given label

```

5171 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
5172 \LWR@traceinfo{LWR@htmlrefsectionfilename: !\detokenize{#1}!}%

```

`\LWR@nullfonts` to allow math in a section name.

```

5173 \begingroup%
5174 \LWR@nullfonts%
5175 \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
5176 \endgroup%
5177 \LWR@traceinfo{LWR@htmlrefsectionfilename: done}%
5178 }

```

```

5179 \end{warpHTML}

```

## 47 Homepage link

**for HTML & PRINT:** 5180 `\begin{warpall}`

`\linkhomename` Holds the default name for the home link.

```

5181 \newcommand{\linkhomename}{Home}

```

```
5182 \end{warpall}
```

**for HTML output:** 5183 \begin{warpHTML}

`\LinkHome` May be used wherever you wish to place a link back to the homepage. The filename must be detokenized for underscores.

```
5184 \newcommand*\LinkHome}{%
5185 \LWR@subhyperrefclass{\HomeHTMLFilename.html}{\linkhomename}{linkhome}%
5186 }
```

```
5187 \end{warpHTML}
```

**for PRINT output:** 5188 \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.

```
5189 \AtBeginDocument{
5190 \ifundefined{hyperref}{
5191 \newcommand*\LinkHome}{%
5192 \linkhomename\ --- page \pageref{\BaseJobname-page-LWRfirstpage}%
5193 }
5194 }{
5195 \newcommand*\LinkHome}{%
5196 \hyperref[\BaseJobname-page-LWRfirstpage]{\linkhomename}%
5197 }
5198 }
5199 }
5200
5201 \AfterEndPreamble{\label{\BaseJobname-page-LWRfirstpage}}
```

```
5202 \end{warpprint}
```

**for HTML output:** 5203 \begin{warpHTML}

`\LWR@topnavigation` Creates a link to the homepage at the top of the page for use when the window is too narrow for the sideroc.

```
5204 \newcommand*\LWR@topnavigation}{
5205 \LWR@htmlElementclassline{nav}{topnavigation}{\LinkHome}
5206 }
```

`\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.

```

5207 \newcommand*{\LWR@botnavigation}{
5208 \LWR@htmlclassline{nav}{botnavigation}{\LinkHome}
5209 }

5210 \end{warpHTML}

```

## 48 \LWRPrintStack diagnostic tool



Diagnostics tool: Prints the L<sup>A</sup>T<sub>E</sub>X 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:** 5211 \begin{warpHTML}

\LWRPrintStack Prints the closedepth stack.

```

5212 \newcommand*{\LWR@subprintstack}{
5213 \LWR@closedepthone\ \LWR@closedepthtwo\ \LWR@closedepththree\
5214 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\
5215 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\
5216 \LWR@closedephten\ \LWR@closedeptheleven\ \LWR@closedephtwelve\
5217 }
5218
5219 \newcommand*{\LWRPrintStack}{
5220 \LWR@startpars
5221 \LWR@subprintstack
5222 }

5223 \end{warpHTML}

```

**for PRINT output:** 5224 \begin{warpprint}

```

5225 \newcommand*{\LWRPrintStack}{}

5226 \end{warpprint}

```

## 49 Closing stack levels

**for HTML output:** 5227 \begin{warpHTML}

Close one nested level:

```

5228 \newcommand*{\LWR@closeoneprevious}{%
5229
5230 \LWR@closeone
5231
5232 \LWR@popclose
5233 }

```

`\LWR@closeprevious`  $\langle \textit{sectintype} \rangle$  Close everything up to the given depth:

```
5234 \newcommand*\LWR@closeprevious}[1]{
5235 \LWR@traceinfo{%
5236 \LWR@closeprevious to depth \csuse{LWR@depth#1}, %
5237 depths are \LWR@subprintstack%
5238 }%
```

Close any pending paragraph:

```
5239 \LWR@stoppars%
```

Close anything nested deeper than the desired depth. First close anything deeper, then at most one of the same level.

```
5240 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{>}{\csuse{LWR@depth#1}}}}%
5241 {%
5242 \LWR@traceinfo{LWR@closeprevious: closing out depth \LWR@closedepthone}%
5243 \LWR@closeoneprevious%
5244 }%
5245 \ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}{\csuse{LWR@depth#1}}}}%
5246 {%
5247 \LWR@traceinfo{LWR@closeprevious: closing out depth \LWR@closedepthone}%
5248 \LWR@closeoneprevious%
5249 }{}%
5250 \LWR@traceinfo{LWR@closeprevious: done, depths are \LWR@subprintstack}%
5251 }

5252 \end{warpHTML}
```

## 50 PDF pages and styles

**for HTML output:** `5253 \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.

```
5254 \newcommand{\LWR@forcenewpage}{%
5255 \LWR@traceinfo{LWR@forcenewpage}%
5256 \ifinner\else%
5257 \LWR@stoppars\LWR@orignewpage\LWR@startpars%
5258 \fi%
5259 }
```

`\pagestyle`, etc. are nullified for HTML output.

`\pagestyle`  $\langle \textit{style} \rangle$

```
5260 \renewcommand*\pagestyle}[1]{}%
```

```

\thispagestyle {\langle style \rangle}

5261 \renewcommand*\thispagestyle}[1]{}

\markboth {\langle left \rangle} {\langle right \rangle}

5262 \renewcommand*\markboth}[2]{}

\markright {\langle right \rangle}

5263 \renewcommand*\markright}[1]{}

\raggedbottom

5264 \renewcommand*\raggedbottom{}

\flushbottom

5265 \renewcommand*\flushbottom{}

\sloppy

5266 \renewcommand*\sloppy{}

\fussy

5267 \renewcommand*\fussy{}

\pagenumbering * {\langle commands \rangle}

5268 \RenewDocumentCommand{\pagenumbering}{s m}{}

5269 \end{warpHTML}

```

## 51 HTML tags, spans, divs, elements

**for HTML output:** 5270 \begin{warpHTML}

### 51.1 Mapping L<sup>A</sup>T<sub>E</sub>X sections to HTML sections

```

5271 \newcommand*\LWR@tagtitle}{h1}
5272 \newcommand*\LWR@tagtitleend}{/h1}
5273 \newcommand*\LWR@tagbook}{div class="book"}
5274 \newcommand*\LWR@tagbookend}{/div}
5275 \newcommand*\LWR@tagpart}{h2}

```

```

5276 \newcommand*\LWR@tagpartend{/h2}
5277 \newcommand*\LWR@tagchapter{/h3}
5278 \newcommand*\LWR@tagchapterend{/h3}
5279 \newcommand*\LWR@tagsection{/h4}
5280 \newcommand*\LWR@tagsectionend{/h4}
5281 \newcommand*\LWR@tagsubsection{/h5}
5282 \newcommand*\LWR@tagsubsectionend{/h5}
5283 \newcommand*\LWR@tagsubsubsection{/h6}
5284 \newcommand*\LWR@tagsubsubsectionend{/h6}
5285 \newcommand*\LWR@tagparagraph[span class="paragraph"]
5286 \newcommand*\LWR@tagparagraphend{/span}
5287 \newcommand*\LWR@tagsubparagraph[span class="subparagraph"]
5288 \newcommand*\LWR@tagsubparagraphend{/span}
5289
5290 \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.)*

```

5291 \providecommand*\LWR@FBcancel{}
5292
5293 \AtBeginDocument{%
5294 \ifundefined{frenchbsetup}%
5295 {}%
5296 {%
5297 \frenchbsetup{FrenchFootnotes=false}%

5298 %
5299 \LetLtxMacro\LWR@FBcancel\NoAutoSpacing%
5300 \renewrobustcmd*\FBcolonspace{%
5301 \begingroup%
5302 \LWR@FBcancel%
5303 \LWR@origampersand{}nbsp;%
5304 \endgroup%
5305 }%
5306 \renewrobustcmd*\FBthinspace{%
5307 \begingroup%
5308 \LWR@FBcancel%
5309 \LWR@origampersand\LWR@origpound{x202f;% \,
5310 \endgroup%
5311 }%
5312 \renewrobustcmd*\FBguillspace{%
5313 \begingroup%
5314 \LWR@FBcancel%
5315 \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}
5316 \endgroup%
5317 }%
5318 \DeclareDocumentCommand\FBmedkern{}{%
5319 \begingroup%
5320 \LWR@FBcancel%
5321 \LWR@origampersand\LWR@origpound{x202f;% \,

```

```

5322 \endgroup%
5323 }%
5324 \DeclareDocumentCommand{\FBthickkern}{}{%
5325 \begingroup%
5326 \LWR@FBcancel%
5327 \LWR@origampersand{}nbsp;% ~
5328 \endgroup%
5329 }%
5330 \renewrobustcmd*{~}{\HTMLentity{nbsp}}% was overwritten by babel-french
5331 \ifBUnicode%
5332 \else%
5333 \DeclareTextSymbol{\FBtextellipsis}{LY1}{133}%
5334 \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
5335 \fi%
5336 }%
5337 }

```

### 51.3 HTML output formatting

Helps format the output HTML code for human readability.

`\LWR@indentHTML` Newline and indent the output HTML code.

```

5338 \newcommand*\LWR@indentHTML{%
5339 \LWR@orignewline\LWR@origrule{2em}{0pt}%
5340 }

```

`\LWR@indentHTMLtwo` Newline and indent the output HTML code.

```

5341 \newcommand*\LWR@indentHTMLtwo{%
5342 \LWR@orignewline\LWR@origrule{4em}{0pt}%
5343 }

```

### 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.

```

5344 \newcommand*\LWR@htmltagc[1]{%
5345 \LWR@traceinfo{\LWR@htmltagc !\detokenize{#1}!}%
5346 \begingroup%
5347 \LWR@FBcancel%
5348 \ifmmode\else\protect\LWR@origttfamily\fi%
5349 \protect\LWR@origtextless%
5350 \LWR@isolate{#1}%
5351 \protect\LWR@origtextgreater%
5352 \endgroup%
5353 }

```

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.

```

5354 \newcommand*{\LWR@nestspanitem}{%
5355 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
5356 \LWR@origitem%
5357 }
5358
5359 \newenvironment*{LWR@nestspan}
5360 {%
5361 \LWR@traceinfo{LWR@nestspan starting}%
5362 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5363 {%
5364 \LWR@traceinfo{LWR@nestspan: inside a lateximage}%
5365 }%
5366 {% not in a lateximage
5367 \LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
5368 \addtocounter{LWR@spandepth}{1}%
5369 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}%
5370 {\LWR@subhtmltagc{span}{inlineminipage}}%
5371 {\LWR@htmltagc{/span}}%
5372 \RenewDocumentEnvironment{BlockClass}{o m}{}{}%
5373 \renewcommand{\BlockClassSingle}[2]{##2}%
5374 \renewcommand{\LWR@forcenewpage}{}%
5375 \renewcommand{\LWR@liststart}{}%
5376 \let\item\LWR@nestspanitem%
5377 }%
5378 \renewcommand{\LWR@listend}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
5379 \renewenvironment{quote}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
5380 \renewenvironment{quotation}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
5381 }% not in a lateximage
5382 \LWR@traceinfo{LWR@nestspan starting: done}%
5383 }% starting env
5384 {% ending env
5385 \LWR@traceinfo{LWR@nestspan ending}%
5386 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5387 }%
5388 {\addtocounter{LWR@spandepth}{-1}}%
5389 \LWR@traceinfo{LWR@nestspan ending: done}%
5390 }
5391
5392 \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.

```

5393 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
5394 \LWR@ensuredoingapar%

```

```

5395 \LWR@htmltagc{#1}%
5396 \begin{LWR@nestspan}%
5397 #2%
5398 \LWR@htmltagc{/#1}%
5399 \end{LWR@nestspan}%
5400 }

```

`\LWR@htmlspanclass` [*<style>*] {*<class>*} {*<text>*}

```

5401 \NewDocumentCommand{\LWR@htmlspanclass}{o m +m}{%
5402 \LWR@traceinfo{LWR@htmlspanclass |#1|#2|}%
5403 \LWR@ensuredoingapar%
5404 \LWR@subhtmlclass{span}[#1][#2}%
5405 \begin{LWR@nestspan}%
5406 #3%
5407 \LWR@htmltagc{/span}%
5408 \LWR@traceinfo{LWR@htmlspanclass done}%
5409 \end{LWR@nestspan}%
5410 }

```

`\LWR@htmltag` {*<tag>*}

Print an HTML tag: <tag>

```

5411 \newcommand*{\LWR@htmltag}[1]{%
5412 % \LWR@traceinfo{LWR@htmltagb !\detokenize{#1}!}%
5413 \LWR@htmltagc{#1}%
5414 % \LWR@traceinfo{LWR@htmltagb: done}%
5415 }

```

## 51.5 Block tags and comments

In the following, `\origttfamily` breaks ligatures, which may not be used for HTML codes:

`\LWR@htmlopencomment`  
`\LWR@htmlclosecomment`

```

5416 \newcommand*{\LWR@htmlopencomment}{%
5417 {%
5418 % \LWR@traceinfo{LWR@htmlopencomment}%
5419 \begingroup%
5420 \LWR@FBcancel%
5421 \ifmode\else\protect\LWR@origttfamily\fi%
5422 \LWR@print@mbx{\LWR@origtextless{}!-\/-}%
5423 \endgroup%
5424 }%
5425 }
5426
5427 \newcommand*{\LWR@htmlclosecomment}{%
5428 {%
5429 % \LWR@traceinfo{LWR@htmlclosecomment}%

```

```

5430 \begingroup%
5431 \LWR@FBcancel%
5432 \ifmode\else\protect\LWR@origttfamily\fi%
5433 \LWR@print@mbox{-\/-\LWR@origtextgreater}%
5434 \endgroup%
5435 }%
5436 }

```

`\LWR@htmlcomment` {*comment*}

```

5437 \newcommand{\LWR@htmlcomment}[1]{%
5438 \LWR@htmlopencomment}%
5439 {%
5440 \LWR@origttfamily% break ligatures
5441 #1%
5442 }%
5443 \LWR@htmlclosecomment{}}

```

`\LWR@htmlblockcomment` {*comment*}

```

5444 \newcommand{\LWR@htmlblockcomment}[1]
5445 {\LWR@stoppars\LWR@htmlcomment{#1}\LWR@startpars}

```

`\LWR@htmlblocktag` {*tag*} print a stand-alone HTML tag

```

5446 \newcommand*\LWR@htmlblocktag}[1]{%
5447 \LWR@stoppars%
5448 \LWR@htmltag{#1}%
5449 \LWR@startpars%
5450 }

```

## 51.6 Div class and element class

`\LWR@subhtmlElementclass` {*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.

```

5451 \NewDocumentCommand{\LWR@subhtmlElementclass}{m O{} m}{%
5452 \LWR@traceinfo{\LWR@subhtmlElementclass !#1!#2!#3!}%
5453 \ifblank{#2}%
5454 {% empty option
5455 \LWR@htmltag{%
5456 #1 % space
5457 class=\textquotedbl#3\textquotedbl\ % space
5458 }%
5459 }%
5460 {% non-empty option

```

```

5461 \LWR@htmltag{%
5462 #1\LWR@indentHTML%
5463 class=\textquotedbl#3\textquotedbl\LWR@indentHTML%
5464 style=\textquotedbl#2\textquotedbl\LWR@orignewline%
5465 }%
5466 }%
5467 \LWR@traceinfo{LWR@subhtmlclass done}%
5468 }

```

`\LWR@htmlclass` {*element*} {*class*} [*style*]

```

5469 \NewDocumentCommand{\LWR@htmlclass}{m o m}{%
5470 \LWR@stoppars%
5471 \LWR@forceemptyline%
5472 \LWR@subhtmlclass{#1}[#2]{#3}%
5473 \LWR@startpars%
5474 }

```

`\LWR@htmlclassend` {*element*} {*class*}

```

5475 \newcommand*{\LWR@htmlclassend}[2]{%
5476 \LWR@stoppars%
5477 \LWR@htmltag{/#1}%
5478 \ifbool{HTMLDebugComments}{%
5479 \LWR@htmlcomment{End of #1 ‘#2’}%
5480 }{}%
5481 \LWR@startpars%
5482 }

```

`\LWR@htmldivclass` [*style*] {*class*}

```

5483 \NewDocumentCommand{\LWR@htmldivclass}{o m}{%
5484 \LWR@htmlclass{div}[#1]{#2}%
5485 }

```

`\LWR@htmldivclassend` {*class*}

```

5486 \newcommand*{\LWR@htmldivclassend}[1]{%
5487 \LWR@htmlclassend{div}{#1}%
5488 }

```

## 51.7 Single-line elements

A single-line element, without a paragraph tag for the line of text:

`\LWR@htmlclassline` {*element*} [*style*] {*class*} {*text*}

```

5489 \NewDocumentCommand{\LWR@htmlclassline}{m o m +m}{%
5490 \LWR@stoppars

```

```

5491 \LWR@forceemptyline%
5492 \LWR@subhtmlElementclass{#1}[#2]{#3}%
5493 #4%
5494 \LWR@htmltag{/#1}
5495 \LWR@startpars
5496 }

```

## 51.8 HTML5 semantic elements

`\LWR@htmlElement` {<*element*>}

```

5497 \newcommand*{\LWR@htmlElement}[1]{%
5498 \LWR@htmlblocktag{#1}
5499 }

```

`\LWR@htmlElementend` {<*element*>}

```

5500 \newcommand*{\LWR@htmlElementend}[1]{%
5501 \LWR@stoppars
5502 \LWR@htmltag{/#1}
5503 \LWR@startpars
5504 }
5505
5506 \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` [*<style>*] {<*class*>} High-level interface for <div> classes.

Ex: `\begin{BlockClass}{class} text \end{BlockClass}`

**for PRINT output:** `5507 \begin{warpprint}`  
`5508 \NewDocumentEnvironment{BlockClass}{o m}{\}\%`  
`5509 \end{warpprint}`

**for HTML output:** `5510 \begin{warpHTML}`  
`5511 \NewDocumentEnvironment{LWR@print@BlockClass}{o m}{\}\%`  
`5512 \NewDocumentEnvironment{LWR@HTML@BlockClass}{o m}%`  
`5513 {%`  
`5514 \LWR@htmldivclass[#1]{#2}%`  
`5515 }`  
`5516 {\LWR@htmldivclassend{#2}}`  
`5517`

```
5518 \LWR@formattedenv{BlockClass}
5519 \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:**

```
5520 \begin{warpall}
5521 \newcommand{\BlockClassSingle}[2]{#2}
5522 \end{warpall}
```

**for HTML output:**

```
5523 \begin{warpHTML}
5524 \newcommand{\LWR@HTML@BlockClassSingle}[2]{%
5525 \LWR@html@element@classLine{div}{#1}{#2}%
5526 }
5527
5528 \LWR@formatted{BlockClassSingle}
5529 \end{warpHTML}
```

`\InlineClass`  $(\langle WP \ style \rangle) [\langle style \rangle] \langle class \rangle \langle text \rangle$

High-level interface for inline span classes.

$(\langle WP \ style \rangle)$  is CSS styling to add when formatting for a word processor import.

$[\langle style \rangle]$  is the CSS styling to add when not formatting for a word processor.

**for PRINT output:**

```
5530 \begin{warpprint}
5531 \NewDocumentCommand{\InlineClass}{D{()}{} o m +m}{#4}%
5532 \end{warpprint}
```

**for HTML output:**

```
5533 \begin{warpHTML}
5534 \NewDocumentCommand{\LWR@print@InlineClass}{D{()}{} o m +m}{#4}%
5535
5536 \NewDocumentCommand{\LWR@HTML@InlineClass}{D{()}{} o m +m}{%
5537 \ifbool{FormatWP}{%
5538 \LWR@htmlspanclass[#1]{#3}{#4}%
5539 }{%
5540 \LWR@htmlspanclass[#2]{#3}{#4}%
5541 }%
5542 }
5543
5544 \LWR@formatted{InlineClass}
5545 \end{warpHTML}
```

`Env` `LWR@BlockClassWP`  $\langle WPstyle \rangle \langle HTMLstyle \rangle \langle class \rangle$  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:**

```
5546 \begin{warpprint}
5547 \NewDocumentEnvironment{LWR@BlockClassWP}{m m m}{ }{}%
5548 \end{warpprint}
```

**for HTML output:**

```
5549 \begin{warpHTML}
```

```

5550 \NewDocumentEnvironment{LWR@print@LWR@BlockClassWP}{m m m}{}{}%
5551 \NewDocumentEnvironment{LWR@HTML@LWR@BlockClassWP}{m m m}%
5552 {%
5553 \LWR@stoppars%
5554 \ifbool{FormatWP}%
5555 {%
5556 \addtocounter{LWR@thisautoidWP}{1}%

5557 \LWR@htmltag{%
5558 div class=\textquotedbl#3\textquotedbl\ % space
5559 id=\textquotedbl%
5560 \LWR@print@mbbox{autoidWP-\arabic{LWR@thisautoidWP}}%
5561 \textquotedbl%
5562 \ifblank{#1}{}{ style=\textquotedbl#1\textquotedbl}%
5563 }%
5564 }% FormatWP
5565 {% not FormatWP
5566 \LWR@htmltag{%
5567 div class=\textquotedbl#3\textquotedbl%
5568 \ifblank{#2}{}{ style=\textquotedbl#2\textquotedbl}%
5569 }%
5570 }% not FormatWP
5571 \LWR@startpars%
5572 }
5573 {\LWR@htmldivclassend{#3}}
5574
5575 \LWR@formattedenv{LWR@BlockClassWP}
5576 \end{warpHTML}

```

## 51.10 Closing HTML tags

**for HTML output:** 5577 \begin{warpHTML}

Sections H1, H2, etc. do not need a closing HTML tag, but we add a comment for readability:

```

5578 \newcommand*{\LWR@printclosebook}
5579 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing book}}{}}
5580 \newcommand*{\LWR@printclosepart}
5581 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{}}
5582 \newcommand*{\LWR@printclosechapter}
5583 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
5584 \newcommand*{\LWR@printclosesection}
5585 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
5586 \newcommand*{\LWR@printclosesubsection}
5587 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
5588 \newcommand*{\LWR@printclosesubsubsection}
5589 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsubsection}}{}}
5590 \newcommand*{\LWR@printcloseparagraph}
5591 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
5592 \newcommand*{\LWR@printclose subparagraph}
5593 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}

```

Lists require closing HTML tags:

```

5594 \newcommand*{\LWR@printcloseitem}
5595 {\LWR@htmltag{/li}}
5596 \newcommand*{\LWR@printclosedescitem}
5597 {\LWR@htmltag{/dd}}
5598 \newcommand*{\LWR@printcloseitemize}
5599 {\LWR@htmltag{/ul}}
5600 \newcommand*{\LWR@printcloseenumerate}
5601 {\LWR@htmltag{/ol}}
5602 \newcommand*{\LWR@printclosedescription}
5603 {\LWR@htmltag{/dl}}

5604 \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:** `5605 \begin{warpHTML}`

**Ctrl** `LWR@spandepth` Do not create paragraph tags inside of an HTML span.

```

5606 \newcounter{LWR@spandepth}
5607 \setcounter{LWR@spandepth}{0}

```

**Bool** `LWR@doingstartpars` Tells whether paragraphs may be generated.

```

5608 \newbool{LWR@doingstartpars}
5609 \boolfalse{LWR@doingstartpars}

```

**Bool** `LWR@doingapar` Tells whether have actually generated and are currently processing paragraph text.

```

5610 \newbool{LWR@doingapar}
5611 \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:

```

5612 \newcommand*{\LWR@ensuredoingapar}{%
5613 \ifbool{LWR@doingstartpars}%
5614 {\global\booltrue{LWR@doingapar}}%
5615 }%
5616 }

```

`\PN@parnotes@auto` Redefined by `parnotes` to print paragraph notes at the end of each paragraph.

```
5617 \def\PN@parnotes@auto{}
```

`\LWR@openparagraph`

```
5618 \newcommand*\LWR@openparagraph{
5619 {%
```

See if paragraph handling is enabled:

```
5620 \ifbool{LWR@doingstartpars}%
5621 {% handling pars
```

See if have already started a `lateximage` or a `<span>`. If so, do not generate nested paragraph tags.

```
5622 \ifboolexpr{
5623 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5624 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5625 }% 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>`.

```
5626 {}% no nested par tags
```

Else: No `lateximage` or `<span>` has been started yet, so it's OK to generate paragraph tags.

```
5627 {% yes nest par tags
```

If `parnotes` is used, paragraph notes are inserted before starting the next paragraph:

```
5628 \PN@parnotes@auto%
```

The opening paragraph tag:

```
5629 \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@originewline%
```

Now have started a paragraph.

```
5630 \global\booltrue{LWR@doingapar}%
```

At the end of each paragraph, generate closing tag and do regular `/par` stuff. (Attempting to use the `everyhook` `cr` hook for `\LWR@closeparagraph` does not work well.)

```
5631 \let\par\LWR@closeparagraph%
5632 }% end of yes nest par tags
5633 }% end of handling pars
5634 {}% not handling pars
5635 }
```

`\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`.

```

5636 \newcommand*{\LWR@closeparagraph@br}
5637 {%
5638 \ifboolexpr{
5639 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
5640 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} and
5641 not bool {LWR@intabularmetadata}
5642 }%
5643 {\unskip\LWR@htmltagc{br /}}%
5644 }%
5645 }

```

`\LWR@closeparagraph`

```

5646 \newcommand*{\LWR@closeparagraph}
5647 {%
5648 % \LWR@traceinfo{LWR@closeparagraph}%

```

See if paragraph handling is enabled:

```
5649 \ifbool{LWR@doingapar}%
```

If currently in paragraph mode:

```
5650 {% handling pars
```

See if already started a lateximage or a <span>:

```

5651 \ifboolexpr{
5652 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5653 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5654 }%

```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```

5655 {% no nested par tags
5656 \LWR@closeparagraph@br%
5657 }% no nested par tags

```

If have not already started a lateximage or a <span>:

```
5658 {% 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.)

```

5659 \@hspacer{\fill}% \hspace*{\fill}
5660 \leavevmode\LWR@orignewline%
5661 \LWR@htmltagc{/\LWR@tagregularparagraph}%

```

No longer doing a paragraph:

```
5662 \global\boolfalse{LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
5663 \global\boolfalse{LWR@minipagethispar}%
```

If `parnotes` is used, paragraph notes are inserted after ending the previous paragraph:

```
5664 \PN@parnotes@auto%
5665 }% end of yes nest par tags
5666 }% end of handling pars
```

Add a `parbreak` if in a span, not in a `lateximage`, and not in table metadata.

```
5667 {% not handling pars
5668 \LWR@closeparagraph@br%
5669 }% 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:

```
5670 \ifboolexpr{%
5671 not bool {LWR@doingapar} and
5672 test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
5673 test {
5674 \ifnumcomp{\value{LWR@tabulardepth}}{=}{\value{LWR@tabularpardepth}}
5675 } and
5676 bool {LWR@intabularmetadata} and
5677 not bool {LWR@tableparcell} and
5678 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}}
5679 }%
5680 {%
5681 \LWR@getmynexttoken%
5682 }{%
5683 \LWR@origpar%
5684 }%
5685 }

5686 \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: 5687 \begin{warpHTML}

`\LWR@startpars` Begin handling HTML paragraphs. This allows an HTML paragraph to start, but one has not yet begun.

```
5688 \newcommand*{\LWR@startpars}%
5689 {%
5690 % \LWR@traceinfo{\LWR@startpars}%
```

Ignore if inside a span:

```
5691 \ifnumcomp{\value{\LWR@spandepth}}{>}{0}%
5692 {%
5693 {%
```

See if currently handling HTML paragraphs:

```
5694 \ifbool{\LWR@doingstartpars}%
```

If already in paragraph mode, do nothing.

```
5695 }%
```

If not currently in paragraph mode:

```
5696 {%
```

At the start of each paragraph, generate an opening tag:

```
5697 \PushPreHook{par}{\LWR@openparagraph}%
```

At the end of each paragraph, generate closing tag then do regular /par actions:

```
5698 \let\par\LWR@closeparagraph
5699
5700 }% an intentionally blank line
```

Are now handling paragraphs, but have not yet actually started one:

```
5701 \global\setbool{\LWR@doingstartpars}{true}%
```

No `<par>` tag yet to undo:

```
5702 \global\boolfalse{\LWR@doingapar}%
5703 }% nestspan
5704 % \LWR@traceinfo{\LWR@startpars: done}%
5705 }
```

`\LWR@stoppars` Stop handling HTML paragraphs. Any currently open HTML paragraph is closed, and no more will be opened.

```
5706 \newcommand*{\LWR@stoppars}%
5707 {%
```

Ignore if inside a span:

```
5708 \ifnumcomp{\value{LWR@spandepth}}{>}{0}%
5709 {}%
5710 {%
```

See if currently handling HTML paragraphs:

```
5711 \ifbool{LWR@doingapar}%
```

if currently in an HTML paragraph:

```
5712 {%
```

Print a closing tag:

```
5713 \leavevmode\LWR@orignewline%
5714 \LWR@htmltagc{/\LWR@tagregularparagraph}%
5715 \LWR@orignewline%
```

No longer have an open HTML paragraph:

```
5716 \global\boolfalse{LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
5717 \global\boolfalse{LWR@minipagethispar}
5718 }%
```

If was not in an HTML paragraph:

```
5719 {}%
```

See if currently allowing HTML paragraphs:

```
5720 \ifbool{LWR@doingstartpars}%
```

If so: clear the par hook to no longer catch paragraphs:

```
5721 {\ClearPreHook{par}}%
```

Else: Do nothing:

```
5722 {}%
```

No longer in paragraph mode:

```
5723 \global\setbool{LWR@doingstartpars}{false}%
```

No <p> tag to undo:

```
5724 \global\boolfalse{LWR@doingapar}%
5725 }% nestspan
5726 }
```

```
5727 \end{warpHTML}
```

## 54 Indentfirst

Pkg indentfirst indentfirst redefines \@afterindentfalse to be \@afterindenttrue. This is reversed \@AtBeginDocument here.

**for HTML output:** 5728 \begin{warpHTML}

```
5729 \AtBeginDocument{
5730 \def\@afterindentfalse{\let\if@afterindent\iffalse}
5731 \@afterindentfalse
5732 }
5733 \let\LWR@afterindent@syntaxhighlight\fi% syntax highlighting

5734 \end{warpHTML}
```

## 55 Page headers and footers

**for HTML & PRINT:** 5735 \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.

```
5736 \newcommand{\LWR@firstpagetop}{} % for the home page alone
5737 \newcommand{\LWR@pagetop}{} % for all other pages
5738 \newcommand{\LWR@pagebottom}{}

```

\HTMLFirstPageTop {*(text and logos)*}

```
5739 \newcommand{\HTMLFirstPageTop}[1]{%
5740 \renewcommand{\LWR@firstpagetop}{#1}%
5741 }
```

\HTMLPageTop {*(text and logos)*}

```
5742 \newcommand{\HTMLPageTop}[1]{%
5743 \renewcommand{\LWR@pagetop}{#1}%
5744 }
```

\HTMLPageBottom {*(text and logos)*}

```
5745 \newcommand{\HTMLPageBottom}[1]{%
5746 \renewcommand{\LWR@pagebottom}{#1}%
5747 }
```

```
5748 \end{warpall}
```

## 56 CSS

**for HTML output:** 5749 `\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.

```
5750 \newcommand*{\LWR@currentcss}{lwarp.css}
```

`\CSSFilename` `{(new-css-filename.css)}` Assigns the css file to be used by the following HTML pages.

```
5751 \newcommand*{\CSSFilename}[1]{%
5752 \renewcommand*{\LWR@currentcss}{#1}%
5753 \@onelevel@sanitize\LWR@currentcss%
5754 }
5755
5756 \end{warpHTML}
```

**for PRINT output:** 5757 `\begin{warpprint}`  
5758 `\newcommand*{\CSSFilename}[1]{}`  
5759 `\end{warpprint}`

## 57 MathJax script

**for HTML output:** 5760 `\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.

```
5761 \newcommand*{\LWR@mathjaxfilename}{lwarp_mathjax.txt}
```

`\MathJaxFilename` `{(filename)}` Assigns the MathJax script file to be used by the following HTML pages.

```
5762 \newcommand*{\MathJaxFilename}[1]{%
5763 \renewcommand*{\LWR@mathjaxfilename}{#1}%
5764 \@onelevel@sanitize\LWR@mathjaxfilename%
5765 }
5766
5767 \end{warpHTML}
```

**for PRINT output:** 5768 `\begin{warpprint}`  
5769 `\newcommand*{\MathJaxFilename}[1]{}`  
5770 `\end{warpprint}`

## 58 Title, HTML meta author, HTML meta description

**for HTML output:** 5771 `\begin{warpHTML}`

`\title`  $\langle\textit{title}\rangle$  Modified to remember `\thetitle`, which is used to set the HTML page titles.

```
5772 \let\LWR@origtitle\title
5773
5774 \renewcommand*\title[1]{%
5775 \LWR@origtitle{#1}%
5776 \begingroup%
5777 \renewcommand{\thanks}[1]{%
5778 \protected@xdef\thetitle{#1}%
5779 \endgroup%
5780 }
```

```
5781 \end{warpHTML}
```

**for HTML & PRINT:** 5782 `\begin{warpall}`

`\HTMLTitle`  $\langle\textit{Titlename}\rangle$  The Title to place into an HTML meta tag. The default is to use the document `\title`'s setting.

```
5783 \providecommand{\thetitle}{\BaseJobname}
5784
5785 \newcommand{\theHTMLTitle}{\thetitle}
5786
5787 \newcommand{\HTMLTitle}[1]{\renewcommand{\theHTMLTitle}{#1}}
```

`\HTMLAuthor`  $\langle\textit{authorname}\rangle$  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.

```
5788 \providecommand{\theauthor}{}
5789
5790 \newcommand{\theHTMLAuthor}{\theauthor}
5791
5792 \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`  $\langle\textit{New HTML meta description.}\rangle$  Assigns the HTML file's description meta tag.

```
5793 \newcommand{\LWR@currentHTMLDescription}{}
5794
5795 \newcommand{\HTMLDescription}[1]{%
```

```

5796 \renewcommand{\LWR@currentHTMLDescription}{#1}
5797 }
5798
5799 \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 89.3 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:** 5800 `\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.

```
5801 \newcounter{FootnoteDepth}
5802 \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.)

```
5803 \newcounter{footnoteReset}
5804 \setcounter{footnoteReset}{0}
```

```
5805 \end{warpall}
```

**for HTML output:** 5806 `\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.

```
5807 \newbox\LWR@footnotebox
```

Much of the following has unneeded print-mode formatting removed.

`\@makefntext` `{\langle text \rangle}`

```
5808 \long\def\@makefntext#1{\@thefnmark~#1}
```

`\@makefnmark`

```
5809 \def\@makefnmark{%
5810 \@thefnmark%
5811 }
```

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`.

```
5812 \long\def\LWR@@footnotetext#1#2{%
5813 \LWR@traceinfo{LWR@footnotetext}%
5814 \global\setbox\csname #2\endcsname=\vbox{%
```

Add to any current footnotes:

```
5815 \unvbox\csname #2\endcsname%
```

Remember the footnote number for `\ref`:

```
5816 \protected@edef\@currentlabel{%
5817 \csname p@footnote\endcsname\@thefnmark%
5818 }% @currentlabel
```

Open a group:

```
5819 \color@begingroup%
```

Use HTML superscripts in the footnote even inside a lateximage:

```
5820 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a lateximage:

```
5821 \ifthenelse{%
5822 \boolean{LWR@doingstartpars} \AND%
5823 \cnttest{\value{LWR@Lateximagedepth}}{=}{0}%
5824 }%
5825 {}%
5826 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%
```

Append the footnote to the list:

```
5827 \@makefntext{#1}%
```

Closing paragraph tag:

```
5828 \ifthenelse{%
5829 \boolean{LWR@doingstartpars} \AND%
5830 \cnttest{\value{LWR@Lateximagedepth}}{=}{0}%
5831 }%
5832 {\par}%
5833 {%
5834 \LWR@htmltagc{/\LWR@tagregularparagraph}%
5835 \LWR@orignewLine%
5836 }%
```

Close the group:

```
5837 \color@endgroup%
5838 }% \vbox
```

Paragraph handling:

```
5839 \LWR@ensuredoingapar%
5840 }%
```

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

```
5841 \long\def\LWR@footnotetext#1{\LWR@@footnotetext{#1}{\LWR@footnotebox}}
```

```
\@footnotetext {<text>}
```

```
5842 \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.

```
5843 \newbox\LWR@mpfootnotes
```

```
\@mpfootnotetext {{text}}
```

```
5844 \long\def\@mpfootnotetext#1{%
5845 \LWR@traceinfo{\@mpfootnotetext}%
5846 \global\setbox\LWR@mpfootnotes\vbox{%
5847 \unvbox\LWR@mpfootnotes%
5848 \reset@font\footnotesize%
5849 \hsize\columnwidth%
5850 \@parboxrestore%
5851 \protected@edef\@currentlabel%
5852 {\csname p@mpfootnote\endcsname\@thefnmark}%
5853 \color@begingroup%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
5854 \ifthenelse{%
5855 \boolean{LWR@doingstartpars} \AND%
5856 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
5857 }%
5858 {}%
5859 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

5860 \@makefnstext{%
5861 \ignorespaces#1%
5862 }%
```

Don't add the closing paragraph tag if are inside a `lateximage`:

```
5863 \ifthenelse{\cnttest{\value{LWR@lateximagedepth}}{>}{0}}%
5864 {}%
5865 {%
5866 \leavevmode\LWR@orignewline%
5867 \LWR@htmltagc{/\LWR@tagregularparagraph}%
5868 \LWR@origpar%
5869 }%
5870 \color@endgroup%
5871 }% vbox
```

Paragraph handling:

```
5872 \LWR@ensuredoingapar%
5873 \LWR@traceinfo{\@mpfootnotetext: done}%
5874 }
```

`\thempfootnote` Redefined to remove the `\itshape`, which caused an obscure compiling error in some situations.

```
5875 \AtBeginDocument{
5876 \def\thempfootnote{\@alph\c@mpfootnote}
5877 }
```

## 59.6 Printing pending footnotes

`\LWR@printpendingfootnotes`  $\{(\textit{footnote counter name})\}$

```
5878 \newcommand*\LWR@printpendingfootnotes[1]{%
5879 \expandafter\ifvoid\csname LWR@#1box\endcsname\else
5880 \LWR@forcenewpage
5881 \begin{BlockClass}{footnotes}
5882 \LWR@origmedskip
5883 \unvbox\csuse{LWR@#1box}
5884 \setbox\csuse{LWR@#1box}=\vbox{}
5885 \end{BlockClass}
5886 \ifltxcounter{#1Reset}{%
5887 \ifnumgreater{\value{#1Reset}}{0}{%
5888 \setcounter{#1}{\value{#1Reset}}%
5889 \addtocounter{#1}{-1}%
5890 }{}%
5891 }{}%
5892 \fi
5893 }
```

`\LWR@printpendingfootnotes` Enclose the footnotes in a class, print, then clear. For manyotes, new footnotes may be added via `\appto`.

```
5894 \newcommand*\LWR@printpendingfootnotes{%
5895 \LWR@printpendingfootnotes{footnote}%
5896 }
```

`LWR@maybeprintpendingfootnotes`  $\{(\textit{depth})\}$  Used to print footnotes before sections only if formatting for an EPUB or word processor:

```
5897 \newcommand*\LWR@maybeprintpendingfootnotes[1]{%
5898 \ifboolexpr{
5899 not test{\ifnumcomp{#1}{>}{\value{FootnoteDepth}}} or
5900 bool{FormatEPUB} or
5901 bool{FormatWP}
5902 }%
5903 {\LWR@printpendingfootnotes}%
5904 {}%
5905 }
```

`\LWR@printpendingmpfootnotes` Enclose the minipage footnotes in a class, print, then clear.

```

5906 \newcommand*\LWR@printpendingmpfootnotes}{%
5907 \ifvoid\LWR@mpfootnotes\else
5908 \LWR@forcenewpage
5909 \begin{BlockClass}{footnotes}
5910 \LWR@print@vspace*\baselineskip}
5911 \unvbox\LWR@mpfootnotes
5912 \setbox\LWR@mpfootnotes=\vbox{}
5913 \end{BlockClass}
5914 \fi
5915 }

5916 \end{warpHTML}

```

## 60 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 `<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:** 5917 `\begin{warpHTML}`

`\marginpar` [*<left>*] [*<right>*]

```

5918 \renewcommand{\marginpar}[2][]{%
5919 \ifbool{FormatWP}%
5920 {%
5921 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
5922 #2
5923 \end{LWR@BlockClassWP}
5924 }%
5925 {%
5926 \LWR@htmlspanclass{marginpar}{#2}%
5927 }%
5928 }

```

`\marginparBlock` [*<left>*] [*<right>*]

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

HTML version.

```

5929 \newcommand{\marginparBlock}[2][]{%
5930 \LWR@stoppars%
5931 \ifbool{FormatWP}%
5932 {%
5933 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}

```

```

5934 #2
5935 \end{LWR@BlockClassWP}
5936 }{%
5937 \begin{BlockClass}[width:2in; float:right; margin:10pt]{marginparblock}
5938 #2
5939 \end{BlockClass}
5940 }%
5941 \LWR@startpars%
5942 }

```

`\reversemarginpar`

```
5943 \renewcommand*{\reversemarginpar}{}

```

`\normalmarginpar`

```
5944 \renewcommand*{\normalmarginpar}{}

```

```
5945 \end{warpHTML}

```

**for PRINT output:** `5946 \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.

```
5947 \LetLtxMacro\marginparBlock\marginpar

```

```
5948 \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:** `5949 \begin{warppall}`

`Ctrl FileDepth` [*section depth*] determines how deeply to break into new HTML files, similar to `tocdepth`. The default of `-5` produces one large HTML file.

```
5950 \newcounter{FileDepth}

```

```
5951 \setcounter{FileDepth}{-5}

```

Bool CombineHigherDepths Combile higher-level sections together into one file?

```
5952 \newbool{CombineHigherDepths}
5953 \booltrue{CombineHigherDepths}
```

\FilenameLimit Maximum length of the generated filenames.

```
5954 \newcommand*{\FilenameLimit}{80}

5955 \end{warpall}
```

**for HTML output:** 5956 \begin{warpHTML}

\LWR@thisfilename The currently-active filename or number. At first, this is the homepage.

```
5957 \AtBeginDocument{
5958 \ifbool{FileSectionNames}%
5959 {\newcommand*{\LWR@thisfilename}{\HomeHTMLFilename}}
5960 {\newcommand*{\LWR@thisfilename}{0}}
5961 }
```

\LWR@thisnewfilename The filename being sanitized.

```
5962 \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.

```
5963 \NewDocumentCommand{\LWR@simplifiname}{s m}{%
5964 \IfBooleanTF{#1}{%
5965 \StrSubstitute{\LWR@thisnewfilename}%
5966 {\detokenize{#2}}%
5967 {\detokenize{-}}[\LWR@thisnewfilename]%
5968 }{%
5969 \StrSubstitute{\LWR@thisnewfilename}%
5970 {#2}%
5971 {\detokenize{-}}[\LWR@thisnewfilename]%
5972 }
5973 }
```

\LWR@simplifycustom User-defined filename simplifications. Redefine with \newcommand.

```
5974 \newcommand*{\LWR@simplifycustom}{}
```

\FilenameSimplify \*{\langle*phrase*\rangle} Assign a user-defined filename simplification. Appends to \LWR@simplifycustom.

```
5975 \NewDocumentCommand{\FilenameSimplify}{s m}{%
```

```

5976 \IfBooleanTF{#1}{%
5977 \appto{\LWR@simplifycustom}{%
5978 \LWR@simplifiname*{#2}%
5979 }%
5980 }{%
5981 \appto{\LWR@simplifycustom}{%
5982 \LWR@simplifiname{#2}%
5983 }%
5984 }%
5985 }

```

`\LWR@filenamenoblanks` `{(filename)}`

Convert blanks into dashes, removes short words, store result in `\LWR@thisfilename`.

Also see `\LWR@nullfonts` for nullified macros.

```

5986 \newcommand*\LWR@filenamenoblanks[1]{%
5987 \begingroup

```

Locally temporarily disable direct-formatting commands, not used in filenames:

```

5988 \LWR@nullfonts%
5989 \renewcommand*\LWR@htmltagc[1]{%

```

```

5990 \edef\LWR@thisnewfilename{#1}%

```

Replaces common macros with hyphens. (`\&` is done by `\LWR@nullfonts`.)

```

5991 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
5992 \LWR@simplifiname{_}
5993 \LWR@simplifiname{\#}
5994 \LWR@simplifiname{\textbackslash}
5995 \LWR@simplifiname{\protect}
5996 \LWR@simplifiname{\ }
5997 \LWR@simplifiname{\textless}
5998 \LWR@simplifiname{\textgreater}

```

```

5999 \edef\LWR@thisnewfilename{\detokenize\expandafter{\LWR@thisnewfilename}}%

```

```

6000 \LWR@traceinfo{\LWR@filenamenoblanks edef: !\LWR@thisnewfilename!}%
6001 \fullexpandarg%

```

Convert spaces into hyphens:

```

6002 \LWR@simplifiname*{ }

```

Convert punctutation into hyphens:

```

6003 \LWR@simplifiname*{!}
6004 \LWR@simplifiname*{,}

```

```

6005 \LWR@simplifiname*{'}
6006 \LWR@simplifiname*{+}
6007 \LWR@simplifiname*{,}
6008 \LWR@simplifiname*{/}
6009 \LWR@simplifiname*{:}
6010 \LWR@simplifiname*{;}
6011 \LWR@simplifiname*{=}
6012 \LWR@simplifiname*{?}
6013 \LWR@simplifiname*{@}
6014 \LWR@simplifiname*{^}
6015 \LWR@simplifiname*{&}
6016 \LWR@simplifiname*{"}
6017 \LWR@simplifiname*{<}
6018 \LWR@simplifiname*{>}

6019 \LWR@simplifiname{\LWRbackslash}

```

Braces are removed entirely to avoid extra dashes in the result.

```

6020 \StrSubstitute{\LWR@thisnewfilename}%
6021 {\LWRleftbrace}{\LWR@thisnewfilename}%
6022 \StrSubstitute{\LWR@thisnewfilename}%
6023 {\LWRrightbrace}{\LWR@thisnewfilename}%

6024 \LWR@simplifiname{\LWRpercent}
6025 \LWR@simplifiname{\LWRdollar}

6026 \LWR@simplifiname*{|}
6027 \LWR@simplifiname*{^}
6028 \LWR@simplifiname*{~}
6029 \LWR@simplifiname*{[}
6030 \LWR@simplifiname*{]}
6031 \LWR@simplifiname*{'}

```

Convert short words:

```

6032 \LWR@simplifiname*{-s-}
6033 \LWR@simplifiname*{-S-}
6034 \LWR@simplifiname*{-a-}
6035 \LWR@simplifiname*{-A-}
6036 \LWR@simplifiname*{-an-}
6037 \LWR@simplifiname*{-AN-}
6038 \LWR@simplifiname*{-to-}
6039 \LWR@simplifiname*{-TO-}
6040 \LWR@simplifiname*{-by-}
6041 \LWR@simplifiname*{-BY-}
6042 \LWR@simplifiname*{-of-}
6043 \LWR@simplifiname*{-OF-}
6044 \LWR@simplifiname*{-and-}
6045 \LWR@simplifiname*{-AND-}
6046 \LWR@simplifiname*{-for-}
6047 \LWR@simplifiname*{-FOR-}
6048 \LWR@simplifiname*{-the-}
6049 \LWR@simplifiname*{-THE-}

```

Convert custom words:

```
6050 \LWR@simplifycustom%
```

Convert multiple hyphens:

```
6051 \LWR@simplifynam*{-----}
6052 \LWR@simplifynam*{----}
6053 \LWR@simplifynam*{---}
6054 \LWR@simplifynam*{--}
```

If pdfL<sup>A</sup>T<sub>E</sub>X and not utf8 encoding, don't try to convert emdash, endash:

```
6055 \ifPDFTeX% pdflatex or dvi latex
6056 \ifdefstring{\inputencodingname}{utf8}{%
6057 \LWR@simplifynam*{-}
6058 % emdash
6059 \LWR@simplifynam*{-}
6060 % endash
6061 }{}%
6062 \else% not PDFTeX
6063 \LWR@simplifynam*{-}
6064 \LWR@simplifynam*{-}
6065 \fi%
```

If starts with a dash, remove the leading dash:

```
6066 \IfBeginWith{\LWR@thisnewfilename}{\detokenize{-}}{%
6067 \StrGobbleLeft{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
6068 }{}%
```

If ends with a dash, remove the trailing dash:

```
6069 \IfEndWith{\LWR@thisnewfilename}{\detokenize{-}}{%
6070 \StrGobbleRight{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
6071 }{}%
```

Limits the length of the filename:

```
6072 \StrLeft{\LWR@thisnewfilename}{\FilenameLimit}[\LWR@thisnewfilename]%
```

Return the global result:

```
6073 \global\let\LWR@thisfilename\LWR@thisnewfilename%
6074 \endgroup%
6075 \LWR@traceinfo{LWR@filenamoblanks: result is \LWR@thisfilename}%
6076 }
```

Ctrl Remembers which autopage label was most recently generated. Used to avoid duplicates.  
LWR@previousautopageLabel

```
6077 \newcounter{LWR@previousautopageLabel}
6078 \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.

```
6079 \newcommand*\LWR@newautopagelabel[1]{%
6080 \ifnumequal{\value{LWR@previousautopagelabel}}{\value{page}}%
6081 {}% no action if this autopage label has already been defined
6082 {%
6083 \label{\BaseJobname-autopage-\arabic{#1}}%
6084 \setcounter{LWR@previousautopagelabel}{\value{page}}
6085 }%
6086 }
```

## 61.1 Customizing MATHJAX

`\LWR@customizedMathJax` Additional MATHJAX definitions to be added to the start of each HTML page.

```
6087 \newcommand*\LWR@customizedMathJax{}
```

`\CustomizeMathJax` MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```
\CustomizeMathJax{
 \newcommand{\expval}[1]{\langle#1\rangle}
 \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
```

```
6088 \newcommand*\CustomizeMathJax[1]{%
6089 \appto{\LWR@customizedMathJax}{%
6090 \(#1)\par
6091 }%
6092 }
```

`\LWR@customizeMathJax` Prints MathJax commands to the HTML output.

```
6093 \newcommand{\LWR@customizeMathJax}{%
6094 \ifbool{mathjax}{
6095 \LWR@stoppars
6096 \LWR@htmlcomment{Nullify \textbackslash{}ensuremath, footnotes for MathJax:}
```

```

6097
6098 \(\newcommand\ensuremath[1]{##1}\)
6099
6100 \(\newcommand\footnote[2][\]{\text{(Footnote ##1)}}\)\
6101
6102 \(\newcommand\footnotemark[1][\]{\text{(Footnote ##1)}}\)\
6103
6104 \LWR@htmlcomment{Additional customizations for MathJax;}
6105
6106 \LWR@customizedMathJax
6107
6108 \LWR@startpars
6109 }{}
6110 }

6111 \end{warpHTML}

```

**for PRINT output:** 6112 \begin{warpprint}

\CustomizeMathJax The print-mode version:

```
6113 \newcommand*\CustomizeMathJax[1]{}
```

\FilenameSimplify \* {*expression*}

```
6114 \NewDocumentCommand{\FilenameSimplify}{s m}{}

```

```
6115 \end{warpprint}
```

**for HTML output:** 6116 \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.

```
6117 \newcommand*\LWR@newhtmlfile[1]{
```

```
6118 \LWR@traceinfo{\LWR@newhtmlfile}
```

At the bottom of the ending file:

```

6119 \LWR@htmlclassend{section}{tbody}
6120 \LWR@htmlclassend{div}{bodycontainer}
6121 \LWR@htmlclassend{div}{bodyandsidetoc}
6122
6123 \LWR@printpendingfootnotes
6124

```

No footer between files if EPUB:

```

6125 \ifbool{FormatEPUB}
6126 {}
6127 {

6128 \ifdefempty{\LWR@pagebottom}{}{%
6129 \LWR@htmlElement{footer}
6130
6131 \LWR@pagebottom
6132
6133 \LWR@htmlElementend{footer}
6134 }
6135 }

```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```

6136 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6137 {}
6138 {\ifnumcomp{\value{\LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}}

```

End of this HTML file:

```

6139 \LWR@stoppars
6140 \LWR@htmltag{/body}\LWR@orignewline
6141 \LWR@htmltag{/html}\LWR@orignewline
6142 \LWR@traceinfo{\LWR@newhtmlfile: about to LWR@orignewpage}
6143 \LWR@orignewpage
6144
6145 \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.

```

6146 \ifbool{FileSectionNames}%
6147 {%

```

Convert the section name to a filename with blanks and common words removed. The resulting filename is in `\LWR@thisfilename`.

```

6148 \LWR@filenamenoblanks{#1}%

```

Create a macro name from the MD5 hash of the file name, to detect duplicates:

```

6149 \edef\LWR@hashedname{\LWR@mdfive{\LWR@thisfilename}}%

```

If the macro name is not yet defined, this filename is unique.

```

6150 \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.

```
6151 \csdef{LWR@filename\LWR@hashedname}{}%
6152 }{%
```

If the filename is not unique, create an error.

```
6153 \PackageError{lwarp}
6154 {%
6155 Section name\MessageBreak
6156 ‘‘#1’’,\MessageBreak
6157 at the line number listed below,\MessageBreak
6158 generates the filename\MessageBreak
6159 ‘‘\LWR@thisfilename’’,\MessageBreak
6160 which appears to be a duplicate.\MessageBreak
6161 There is a previous section with an\MessageBreak
6162 identical or similar name%
6163 }
6164 {%
6165 Lwarp sanitizes most symbols and a few common short words
6166 when generating file names, and this may cause a conflict.
6167 }
6168 }
6169 }
```

If using file numbers instead of names, the name is set to the next file number.

```
6170 {\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.

```
6171 \LWR@traceinfo{LWR@newhtmlfile: about to print start file}%
```

`\LWR@nullfonts` to allow math in a section name.

```
6172 \begingroup%
6173 \LWR@nullfonts%
6174 \LWR@htmlblockcomment{%
6175 |Start file|%
6176 \LWR@htmlsectionfilename{\LWR@thisfilename}|%
6177 }
6178 \endgroup%
```

At the top of the starting file:

```
6179 \LWR@stoppars
6180
```

Start a new file with the given section name:

```
6181 \LWR@filestart[#1]
6182
```

Track the page numbers:

```
6183 \setcounter{LWR@latestautopage}{\value{page}}%
6184 \LWR@newautopagelabel{LWR@latestautopage}%
```

No navigation between files if formatting for an EPUB or word processor:

```
6185 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6186 {}
6187 {\LWR@topnavigation}
6188
```

No header if between files if formatting for an EPUB or word processor:

```
6189 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6190 {}
6191 {
6192 \ifdefempty{\LWR@pagetop}{{}
6193 \LWR@htmlElement{header}
6194
6195 \LWR@pagetop
6196
6197 \LWR@htmlElementend{header}
6198 }
6199 }
6200
```

The container for the sidetoc and text body:

```
6201 \LWR@htmlElementclass{div}{bodyandsidetoc}
```

No sideroc if formatting for an EPUB or word processor:

```
6202 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6203 {}
6204 {\LWR@sidetoc}
6205
```

Start of the <textbody>:

```
6206 \LWR@htmlElementclass{div}{bodycontainer}
6207 \LWR@htmlElementclass{section}{textbody}
6208
```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```
6209 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}%
6210 {}%
6211 {%
```

```

6212 \ifcsvoid{thetitle}{}{%
6213 \LWR@printthetitle%
6214 }%
6215 }%

```

Keep paragraph tags disabled for now:

```

6216 \LWR@stoppars
6217

```

If using `MATHJAX`, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```

6218 \LWR@customizeMathJax

6219 \LWR@traceinfo{LWR@newhtmlfile: done}
6220 }

6221 \end{warpHTML}

```

## 62 Sectioning

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing  $\LaTeX$  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 *pdf $\LaTeX$*  to generate characters and *pdf $\text{to}\text{text}$*  to read them. If extra symbols appear in the text, it may be that *pdf $\LaTeX$*  is actually producing a symbol over or under a character, resulting in *pdf $\text{to}\text{text}$*  picking up the accent symbol separately.

X $\LaTeX$  and Lua $\LaTeX$  directly support accented section and file names.

**for HTML output:** 6222 `\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.

```

6223 \newbool{LWR@forcinghtmlpage}
6224 \boolfalse{LWR@forcinghtmlpage}
6225
6226 \newcommand*{\ForceHTMLPage}{%
6227 \global\booltrue{LWR@forcinghtmlpage}%
6228 }

```

`\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 `tocbibind`. Also see `\ForceHTMLPage`.

For print output, no effect.

```
6229 \newbool{LWR@forcinghtmltoc}
6230 \boolfalse{LWR@forcinghtmltoc}
6231
6232 \newcommand*{\ForceHTMLTOC}{%
6233 \global\booltrue{LWR@forcinghtmltoc}%
6234 }
```

```
6235 \end{warpHTML}
```

**for PRINT output:**

```
6236 \begin{warpprint}
6237 \newcommand*{\ForceHTMLPage}{}
6238 \newcommand*{\ForceHTMLTOC}{}
6239 \end{warpprint}
```

**for HTML output:**

```
6240 \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.

```
6241 \newbool{LWR@mainmatter}
6242 \DeclareDocumentCommand{\mainmatter}{}{}%
6243 \booltrue{LWR@mainmatter}%
6244 }
```

`\frontmatter` Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```
6245 \DeclareDocumentCommand{\frontmatter}{}{}%
6246 \boolfalse{LWR@mainmatter}%
6247 }
```

`\backmatter` Declare the back matter section of the document. Does not reset the page number.

```
6248 \DeclareDocumentCommand{\backmatter}{}{}%
6249 \boolfalse{LWR@mainmatter}
6250 }
```

## 62.3 Sectioning support macros

`\LWR@sectionnumber`  $\langle section\ type \rangle$

Typeset a section number and its trailing space with css formatting:

```
6251 \newcommand*{\LWR@sectionnumber}[1]{%
6252 \InlineClass{sectionnumber}{#1}%
6253 }
```

autosec A tag used by the toc and index.

`\LWR@createautosec` {<*section type*>}

Create an autosection tag.

```
6254 \newcommand*{\LWR@createautosec}[1]{%
6255 \LWR@htmltag{%
6256 #1 % space
6257 id=\textquotedbl\LWR@print@mbox{autosec-\arabic{page}}\textquotedbl%
6258 }%
6259 }
```

`\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.

```
6260 \NewDocumentCommand{\LWR@pushoneclose}{m}{%
6261 \LWR@traceinfo{\LWR@pushoneclose #1}%
6262 \LWR@pushclose{#1}%
6263 }
```

`\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.

```
6264 \NewDocumentCommand{\LWR@startnewdepth}{m}{%
```

Close any stacked sections up to this new one.

```
6265 \LWR@closeprevious{#1}%
```

Push a new section depth:

```
6266 \LWR@pushoneclose{#1}%
6267 }
```

Ctrl `\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.

```
6268 \newcounter{LWR@prevFileDepth}
6269 \setcounter{LWR@prevFileDepth}{\LWR@depthsubparagraph}
```

`\@secntformat`  $\{\langle sectiontype \rangle\}$

```
6270 \def\@secntformat#1{\csname the#1\endcsname\quad}
```

`\simplechapterdelim` Used by `tocbibind` and `anonchap`.

```
6271 \newcommand*\simplechapterdelim{}
```

`\@chapcntformat`  $\{\langle sectiontype \rangle\}$

\let to `\@secntformat` by default, but may be redefined by `\simplechapter` and `\restorechapter` from `tocbibind` or `anonchap`.

```
6272 \let\@chapcntformat\@secntformat
```

`\@partcntformat`  $\{\langle sectiontype \rangle\}$

\let to `\@secntformat` by default, but may be redefined by `ctex`.

```
6273 \let\@partcntformat\@secntformat
```

`\@partnameformat` Prints “Part” for part sections.

Nullified by `ctex`.

```
6274 \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.

```
6275 \newcounter{LWR@currentautosec}
6276 \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.

```
6277 \DeclareDocumentCommand{\LWR@section}{m m m m}{%
6278 \IfValueTF{#2}%
6279 {\LWR@traceinfo{LWR@section: starting #4 #2}}%
6280 {\LWR@traceinfo{LWR@section: starting #4 #3}}%
6281 \LWR@maybeprintpendingfootnotes{\csuse{LWR@depth#4}}%
6282 \LWR@stoppars%
6283 \LWR@startnewdepth{#4}%
```

Cancel special minipage horizontal space interaction:

```
6284 \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:

```
6285 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}%
6286 \IfBooleanT{#1}{\LWR@traceinfo{LWR@section: starred}}%
6287 \ifbool{LWR@forcinghtmlpage}{\LWR@traceinfo{LWR@section: forcinghtmlpage}}{}%
6288 \ifthenelse{%
6289 \(%
6290 \(\NOT\equal{#1}{\BooleanTrue})\OR%
6291 \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart})\OR%
6292 \(\boolean{LWR@forcinghtmlpage})\)%
6293 \)%
6294 \AND%
6295 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{FileDepth}}%
6296 \AND%
6297 \(%
6298 \NOT\boolean{CombineHigherDepths}\OR%
6299 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{LWR@prevFileDepth}}%
6300 \)%
6301 \AND%

6302 \(% phantomsection
6303 \NOT\isempty{#3}%
6304 \OR%
6305 \(\NOT\equal{#1}{\BooleanTrue})\)%
6306 \)%
6307 }%
```

If so: start a new HTML file:

```
6308 {% new file
6309 \LWR@traceinfo{LWR@section: new HTML file}%
```

See if there was an optional toc name entry:

```
6310 \IfNoValueTF{#2}%
```

If no optional entry

```
6311 {\LWR@newhtmlfile{#3}}%
```

If yes an optional entry

```
6312 {\LWR@newhtmlfile{#2}}%
6313 }% new file
```

Else: No new HTML file:

```
6314 {% 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:

```
6315 \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
6316 \LWR@orignewpage%
6317 }% not new file
6318
```

Remember this section's name for \nameref:

```
6319 \IfValueT{#3}{%
6320 \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
6321 \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
6322 }%
```

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.

```
6323 \ifbool{HTMLDebugComments}{%
6324 \begingroup%
6325 \LWR@nullfonts%
6326 \IfBooleanTF{#1}% starred
6327 {\LWR@htmlcomment{Opening #4*}}%
6328 {%
6329 \IfNoValueTF{#2}% short TOC
6330 {\LWR@htmlcomment{Opening #4 ‘#3’}}%
6331 {\LWR@htmlcomment{Opening #4 ‘#2’}}%
6332 }\LWR@orignewline%
6333 \endgroup%
6334 }{}
```

For inline sections paragraph and subparagraph, start a new paragraph now:

```
6335 \ifthenelse{%
6336 \cinttest{\@nameuse{LWR@depth#4}}{>=}{\LWR@depthparagraph}%
6337 }%
6338 {\LWR@startpars}%
6339 }%
```

Create the opening tag with an autosec:

```
6340 \LWR@traceinfo{LWR@section: about to LWR@createautosec}%
6341 \LWR@createautosec{\@nameuse{LWR@tag#4}}%
```

```
6342 \setcounter{LWR@currentautosec}{\value{page}}%
```

Check if starred:

```
6343 \IfBooleanTF{#1}%
6344 {%
6345 \LWR@traceinfo{LWR@section: starred}%
```

Starred, but also forcing a toc entry, so add unnumbered toc name or regular name:

```
6346 \ifbool{LWR@forcinghtmltoc}%
6347 {%
6348 \addcontentsline{toc}{#4}{%
6349 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6350 }%
6351 }%
6352 {%}%
6353 }% starred
```

Not starred, so step counter and add to toc:

```
6354 {% not starred
```

Only add a numbered toc entry if section number is not too deep:

```
6355 \ifthenelse{%
6356 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
6357 }%
6358 {% if secnumdepth
```

If in the main matter, step the counter and add the toc entry. For article class, lwarp assumes that all is mainmatter.

```
6359 \LWR@traceinfo{LWR@section: about to test main matter}%
6360 \ifbool{LWR@mainmatter}%
6361 {%
6362 \LWR@traceinfo{LWR@section: yes mainmatter}%
6363 \refstepcounter{#4}%
```

Add main matter numbered toc entry with the toc name or the regular name:

```
6364 \LWR@traceinfo{LWR@section: about to addcontentsline}%
6365 \addcontentsline{toc}{#4}%
6366 {%
6367 \protect\numberline{%
6368 \@nameuse{pre#4name}%
6369 \@nameuse{the#4}%
6370 \@nameuse{post#4name}%
6371 }%
6372 {%
6373 \ignorespaces%
6374 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}\protect\relax%
6375 }%
6376 }%
6377 \LWR@traceinfo{LWR@section: finished addcontentsline}%
6378 }% end of if main matter
```

If not main matter, add unnumbered toc name or regular name:

```

6379 {% not main matter
6380 \LWR@traceinfo{LWR@section: no main matter}%
6381 \addcontentsline{toc}{#4}{%
6382 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6383 }%
6384 }% end of not main matter
6385 }% end of secnumdepth

```

Deeper than secnumdepth, so add an unnumbered toc entry:

```

6386 {%
6387 \addcontentsline{toc}{#4}{%
6388 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6389 }%
6390 }%

```

For part, print "Part":

```

6391 \ifbool{LWR@mainmatter}%
6392 {%
6393 \ifthenelse{%
6394 \(\cnttest{\@nameuse{LWR@depth#4}}{<=} %
6395 {\value{secnumdepth}}\)\ \AND %
6396 \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}\)%
6397 }%
6398 {\@partnameformat}%
6399 {}%

```

Print the section number:

```

6400 \LWR@traceinfo{LWR@section: about to print section number}%
6401 \ifthenelse{%
6402 \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
6403 }%
6404 {%
6405 \ifstrequal{#4}{part}%
6406 {\protect\LWR@sectionnumber{\@partcntformat{#4}}}%
6407 {%
6408 \ifstrequal{#4}{chapter}%
6409 {\protect\LWR@sectionnumber{\@chappcntformat{#4}}}%
6410 {\protect\LWR@sectionnumber{\@secntformat{#4}}}%
6411 }%
6412 }%
6413 {}%
6414 \LWR@traceinfo{LWR@section: finished print section number}%
6415 }{%}%
6416 }% end of not starred

```

Print the section name:

```

6417 \LWR@traceinfo{LWR@section: about to print the section name}%
6418 \LWR@isolate{#3}%

```

Close the heading tag, such as /H2:

```
6419 \LWR@traceinfo{LWR@section: about to close the heading tag}%
6420 \LWR@htmltag{\@nameuse{LWR@tag#4end}}%
6421 \LWR@orignewline%
```

Generate a L<sup>A</sup>T<sub>E</sub>X label:

```
6422 \LWR@traceinfo{LWR@section: about to create the LaTeX label}%
6423 \setcounter{LWR@latestautopage}{\value{page}}%
6424 \LWR@newautopagelabel{LWR@currentautosec}\LWR@orignewline%
```

Start paragraph handing unless is an inline paragraph or subparagraph:

```
6425 \ifthenelse{%
6426 \cnttest{\@nameuse{LWR@depth#4}}{<}{\LWR@depthparagraph}%
6427 }%
6428 {\LWR@startpars}%
6429 {}%
```

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.

```
6430 \ifthenelse{%
6431 \NOT\equal{#1}{\BooleanTrue}\OR%
6432 \cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}%
6433 }%
6434 {% not starred
6435 \setcounter{LWR@prevFileDepth}{\@nameuse{LWR@depth#4}}%
6436 }% not starred
6437 {}%
```

Reset to defaults if not a phantomsection:

```
6438 \ifstrempy{#3}%
6439 {}%
6440 {%
6441 \global\boolfalse{LWR@forcinghtmlpage}%
6442 \global\boolfalse{LWR@forcinghtmltoc}%
6443 }%
6444 %
6445 \LWR@traceinfo{LWR@section: done}%
6446 }
```

## 62.4 Pre- and post- sectioning names

`\prebookname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postbookname`

```
6447 \providecommand*\prebookname{}
```

```
6448 \providecommand*\postbookname{}
```

`\prepartname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postpartname`

```
6449 \providecommand*\prepartname{}
```

```
6450 \providecommand*\postpartname{}
```

`\prechaptername` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postchaptername`

```
6451 \providecommand*\prechaptername{}
```

```
6452 \providecommand*\postchaptername{}
```

`\presectionname` Always null, but provided here for algorithmic simplicity in `\LWR@section`.

`\postsectionname`

```
6453 \providecommand*\presectionname{}
```

```
6454 \let\postsectionname\presectionname
```

```
6455
```

```
6456 \let\presubsectionname\presectionname
```

```
6457 \let\postsubsectionname\postsectionname
```

```
6458
```

```
6459 \let\presubsubsectionname\presectionname
```

```
6460 \let\postsubsubsectionname\postsectionname
```

```
6461
```

```
6462 \let\preparagraphname\presectionname
```

```
6463 \let\postparagraphname\postsectionname
```

```
6464
```

```
6465 \let\presubparagraphname\presectionname
```

```
6466 \let\postsubparagraphname\postsectionname
```

## 62.5 `\section` and friends

For `memoir`, a second optional argument is allowed.

For `hypermsec`, 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>}
```

```
6467 \newcommand{\part@preamble}{}% for koma-script
```

```
6468
```

```
6469 \DeclareDocumentCommand{\part}{s d() o o d() m}{%
```

```
6470 \LWR@section{#1}{#3}{#6}{part}%
```

```

6471
6472 \part@preamble% for koma-script
6473 \renewcommand{\part@preamble}{}%
6474 }

```

`\chapter` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6475 \let\@printcites\relax% for quotchap package
6476
6477 \newcommand{\chapter@preamble}{}% for koma-script
6478
6479 \@ifundefined{chapter}
6480 {}
6481 {%
6482 \DeclareDocumentCommand{\chapter}{s d() o o d() m}{%
6483 \LWR@section{#1}{#3}{#6}{chapter}%
6484
6485 \@printcites% for quotchap package
6486
6487 \chapter@preamble% for koma-script
6488 \renewcommand{\chapter@preamble}{}%
6489 }
6490 }

```

`\section` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6491 \DeclareDocumentCommand{\section}{s d() o o d() m}{%
6492 \LWR@section{#1}{#3}{#6}{section}%
6493 }

```

`\subsection` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6494 \DeclareDocumentCommand{\subsection}{s d() o o d() m}{%
6495 \LWR@section{#1}{#3}{#6}{subsection}%
6496 }

```

`\subsubsection` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6497 \DeclareDocumentCommand{\subsubsection}{s d() o o d() m}{%
6498 \LWR@section{#1}{#3}{#6}{subsubsection}%
6499 }

```

`\paragraph` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6500 \DeclareDocumentCommand{\paragraph}{s d() o o d() m}{%
6501 \LWR@section{#1}{#3}{#6}{paragraph}%
6502 }

```

`\subparagraph` \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6503 \DeclareDocumentCommand{\subparagraph}{s d() o o d() m}{%
6504 \LWR@section{#1}{#3}{#6}{subparagraph}%
6505 }

6506 \end{warpHTML}

```

## 63 Starting a new file

**for HTML & PRINT:** 6507 \begin{warpall}

\HTMLLanguage Default language for the HTML lang tag.

```

6508 \newcommand*{\LWR@currentHTMLLanguage}{en-US}
6509
6510 \newcommand*{\HTMLLanguage}[1]{%
6511 \renewcommand*{\LWR@currentHTMLLanguage}{#1}%
6512 }

```

\theHTMLTitleSeparator May be used inside \theHTMLTitleSection to separate the website's overall HTML title and the particular page's section name.

```

6513 \ifPDFTeX% pdflatex or dvi latex
6514 \ifdefstring{\inputencodingname}{utf8}{%
6515 \newcommand*{\theHTMLTitleSeparator}{ - }% Emdash
6516 }{%
6517 \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
6518 }%
6519 \else%
6520 \ifpTeX
6521 \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
6522 \else
6523 \newcommand*{\theHTMLTitleSeparator}{ - }% Emdash
6524 \fi%
6525 \fi%

```

\HTMLTitleBeforeSection Sets the HTML page's meta title tag to show the website title before the section name.

```

6526 \newcommand*{\HTMLTitleBeforeSection}{%
6527 \def\theHTMLTitleSection{%
6528 \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
6529 }%
6530 }

```

\HTMLTitleAfterSection Sets the HTML page's meta title tag to show the section name before the website title.

```

6531 \newcommand*{\HTMLTitleAfterSection}{%
6532 \def\theHTMLTitleSection{%
6533 \theHTMLSection\theHTMLTitleSeparator\theHTMLTitle%
6534 }%
6535 }

```

`\theHTMLTitleSection` Forms the HTML page's meta title tag. The default is to show the website title before the section name.

```
6536 \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.

```
6537 \newcommand*{\theHTMLSection}{}
```

```
6538 \end{warpall}
```

**for HTML output:** `6539 \begin{warpHTML}`

`\LWR@filestart` [*sectionname*] Creates the opening HTML tags.

```
6540 \newcommand*{\LWR@filestart}[1][\%
6541 \LWR@traceinfo{\LWR@filestart !#1!}%
```

Locally temporarily disable direct-formatting commands:

```
6542 \begingroup%
6543 \LWR@nullfonts%
```

Save the section name for use while creating the HTML meta title tag:

```
6544 \edef\theHTMLSection{#1}%
```

Create the page's HTML header:

```
6545 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline
```

The language is user-adjustable:

```
6546 \LWR@htmltag{%
6547 html lang=\LWR@orig@textquotedbl\LWR@currentHTMLLanguage\LWR@orig@textquotedbl%
6548 }\LWR@orignewline
```

Start of the meta data:

```
6549 \LWR@htmltag{head}\LWR@orignewline
```

Charset is fixed at UTF-8:

```
6550 \LWR@htmltag{%
6551 meta charset=\LWR@orig@textquotedbl{}UTF-8\LWR@orig@textquotedbl\ /%
6552 }\LWR@orignewline
```

Author:

```
6553 \ifthenelse{\equal{\theHTMLAuthor}{}}%
```

```

6554 {}%
6555 {%
6556 \LWR@htmltag{%
6557 meta name=\LWR@orig@textquotedbl{}author\LWR@orig@textquotedbl\ % space
6558 content=\LWR@orig@textquotedbl\theHTMLAuthor\LWR@orig@textquotedbl\ /%
6559 }\LWR@orignewline%
6560 }%

```

**lwarp** is the generator:

```

6561 \LWR@htmltag{%
6562 meta % space
6563 name=\LWR@orig@textquotedbl{}generator\LWR@orig@textquotedbl\ % space
6564 content=\LWR@orig@textquotedbl{}LaTeX lwarp package\LWR@orig@textquotedbl\ /%
6565 }\LWR@orignewline%

```

If there is a description, add it now:

```

6566 \ifdefempty{\LWR@currentHTMLDescription}{}{%
6567 \LWR@htmltag{%
6568 meta name=\LWR@orig@textquotedbl{}description\LWR@orig@textquotedbl\ % space
6569 content=\LWR@orig@textquotedbl\LWR@currentHTMLDescription\LWR@orig@textquotedbl\ /%
6570 }\LWR@orignewline
6571 }%

```

Mobile-friendly viewport:

```

6572 \LWR@htmltag{%
6573 meta % space
6574 name=\LWR@orig@textquotedbl{}viewport\LWR@orig@textquotedbl\ % space
6575 content=\LWR@orig@textquotedbl{}width=device-width, initial-scale=1.0\LWR@orig@textquotedbl\ /%
6576 }\LWR@orignewline

```

IE patch:

```

6577 \LWR@htmltag{!-\/-[if lt IE 9]}\LWR@orignewline
6578 \LWR@htmltag{%
6579 script % space
6580 src=\LWR@orig@textquotedbl{}%
6581 http://html5shiv.googlecode.com/svn/trunk/html5.js%
6582 \LWR@orig@textquotedbl%
6583 }%
6584 \LWR@htmltag{/script}\LWR@orignewline
6585 \LWR@htmltag{![endif]-\/-}\LWR@orignewline

```

The page's title, if there is one. A section name is also added if given.

```

6586 \ifthenelse{\equal{\theHTMLTitle}{} }%
6587 {}%
6588 {%
6589 \LWR@htmltag{title}%
6590 \ifdefempty{\theHTMLSection}%
6591 {\theHTMLTitle}%
6592 {\theHTMLTitleSection}%

```

```
6593 \LWR@htmltag{/title}\LWR@orignewline%
6594 }%
```

The page's stylesheet:

```
6595 \LWR@htmltag{%
6596 link % space
6597 rel=\LWR@orig@textquotedbl{}stylesheet\LWR@orig@textquotedbl\ % space
6598 type=\LWR@orig@textquotedbl{}text/css\LWR@orig@textquotedbl\ % space
6599 href=\LWR@orig@textquotedbl\LWR@currentcss\LWR@orig@textquotedbl\ /%
6600 }%
6601 \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.

```
6602 \ifbool{mathjax}%
6603 {%
6604 \begingroup%
6605 \LWR@restoreoriglists%
6606 \boolfalse{LWR@verbtags}%

6607 \verbatiminput{\LWR@mathjaxfilename}%

6608 \booltrue{LWR@verbtags}%
6609 \endgroup%
6610 \LWR@stoppars%
6611 }% end of mathjax
6612 {}%
```

End of the header:

```
6613 \LWR@htmltag{/head}\LWR@orignewline
```

Start of the body:

```
6614 \LWR@htmltag{body}\LWR@orignewline
6615 \endgroup
6616 \LWR@traceinfo{LWR@filestart: done}
6617 }

6618 \end{warpHTML}
```

## 64 Starting HTML output

**for HTML output:** 6619 \begin{warpHTML}

\LWR@LwarpStart Executed at the beginning of the entire document.

The use of `\textquotedbl` instead of `"` improves compatibility with `xeCJK`.

```
6620 \catcode'\$=\active
6621 \newcommand*{\LWR@LwarpStart}
6622 {%
6623 \LWR@traceinfo{\LWR@LwarpStart}
```

If formatting for a word processor, force `filedepth` to single-file only, force `HTML debug comments` off.

```
6624 \ifbool{FormatWP}{%
6625 \setcounter{FileDepth}{-5}%
6626 \boolfalse{HTMLDebugComments}%
6627 }{}
```

Expand and detokenize `\HomeHTMLFilename` and `\HTMLFilename`:

```
6628 \edef\LWR@strresult{\HomeHTMLFilename}
6629 \edef\HomeHTMLFilename{\detokenize\expandafter{\LWR@strresult}}
6630 \edef\LWR@strresult{\HTMLFilename}
6631 \edef\HTMLFilename{\detokenize\expandafter{\LWR@strresult}}
```

Force `onecolumn` and empty page style:

```
6632 \LWR@origonecolumn%
6633 \LWR@origpagestyle{empty}%
```

No black box for overfull lines:

```
6634 \overfullrule=0pt
```

Reduce chance of line overflow when `HTML` tags are added:

```
6635 \LWR@print@footnotesize%
```

In `PDF` output, don't allow line breaks to interfere with `HTML` tags:

```
6636 \LWR@print@raggedright%
6637 \LetLtxMacro{\}{\LWR@endofline}%
```

Spread the lines for `pdftotext` to read them well:

```
6638 \linespread{1.3}%
```

For `pdftotext` to reliably identify paragraph splits:

```
6639 \setlength{\parindent}{0pt}
6640 \setlength{\parskip}{2ex}
```

For the `lateximage` record file:

```
6641 \immediate\openout\LWR@lateximagesfile=\BaseJobname-images.txt
```

Removes space around the caption in the HTML:

```
6642 \setlength{\belowcaptionskip}{0ex}
6643 \setlength{\abovecaptionskip}{0ex}
```

Redefine the plain page style to be empty when used by index pages:

```
6644 \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:

```
6645 \let\LWR@origcaption\caption
```

Labels: `\ltx@Label` is used in `amsmath` environments and is also patched by `cleveref`.

Label in HTML

```
6646 \let\LWR@origltx@label\ltx@label
6647 \let\ltx@label\LWR@htmlmathlabel
```

Not yet started any paragraph handling:

```
6648 \global\boolfalse{LWR@doingapar}
6649 \global\boolfalse{LWR@doingstartpars}
```

Document and page settings:

```
6650 \mainmatter
6651 \LWR@origpagenumbering{arabic}
```

Start a new HTML file and a header:

```
6652 \LWR@traceinfo{LWR@lwarpStart: Starting new file.}
6653 \LWR@filestart
6654 \LWR@traceinfo{LWR@lwarpStart: Generating first header.}
```

```
6655 \ifdefempty{\LWR@firstpagetop}{}{%
6656 \LWR@htmltag{header}\LWR@orignewline
6657 \LWR@startpars
6658 \LWR@firstpagetop
6659 \LWR@stoppars
6660 \LWR@htmltag{/header}\LWR@orignewline
6661 }%
```

```
6662 \LWR@htmlclass{div}{bodywithoutsidetoc}
6663 \LWR@htmlclass{div}{bodycontainer}
6664 \LWR@traceinfo{LWR@lwarpStart: Generating textbody.}
6665 \LWR@htmlclass{section}{textbody}
```

Patch the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native L<sup>A</sup>T<sub>E</sub>X environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```
6666 \LWR@patchlists
```

Ensure that math mode is active to call `lwarp`'s patches:

```
6667 \catcode'\$=\active
```

Required for `\nameref` to work with SVG math:

```
6668 \immediate\write\@mainaux{\catcode'\string\$\active}%
6669 \LetLtxMacro\LWR@syntaxhighlightone$% balance for editor syntax highlighting
```

Allow HTML paragraphs to begin:

```
6670 \LWR@startpars
```

If using `MATHJAX`, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
6671 \LWR@customizeMathJax
```

First autopage label in case a figure occurs early.

```
6672 \setcounter{LWR@latestautopage}{\value{page}}%
6673 \LWR@newautopagelabel{LWR@currentautosec}%
```

```
6674 \LWR@traceinfo{LWR@lwarpStart: done}
6675 }
6676 \catcode'\$=3% math shift until lwarp starts
```

```
6677 \end{warpHTML}
```

## 65 Ending HTML output

**for HTML output:** `6678 \begin{warpHTML}`

`\LWR@requesttoc`  $\langle\mathit{boolean}\rangle$   $\langle\mathit{suffix}\rangle$  Requests that a TOC, LOF, or LOT be generated.

```
6679 \newcommand*\LWR@requesttoc[2]{%
6680 \ifbool{#1}
6681 {
6682 \expandafter\newwrite\@nameuse{tf@#2}
6683 \immediate\openout \@nameuse{tf@#2} \jobname.#2\relax
6684 }{ }
6685 }
```

`\LWR@LwarpEnd` Final stop of all HTML output:

```
6686 \newcommand*{\LWR@LwarpEnd}
6687 {
6688 \LWR@stoppars
6689 \LWR@closeprevious{finished}
```

At the bottom of the ending file:

Close the textbody:

```
6690 \LWR@htmlElementclassend{section}{textbody}
6691 \LWR@htmlElementclassend{div}{bodycontainer}
6692 \LWR@htmlElementclassend{div}{bodyandsidetoc}
```

Print any pending footnotes:

```
6693 \LWR@printpendingfootnotes
```

Create the footer:

```
6694 \ifdefempty{\LWR@pagebottom}{}{%
6695 \LWR@htmlElement{footer}
6696
6697 \LWR@pagebottom
6698
6699 \LWR@htmlElementend{footer}
6700 }
```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```
6701 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6702 {}
6703 {
6704 \ifnumcomp{\value{\LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}
6705 }
```

```
6706 \LWR@stoppars% final stop of all paragraphs
```

Finish the HTML file:

```
6707 \LWR@htmltag{/body}\LWR@orignewline
6708 \LWR@htmltag{/html}\LWR@orignewline
```

Seems to be required sometimes:

```
6709 \LWR@orignewpage
6710 }
```

`\enddocument` If labels have not changed, mark successful completion of the `lateximages` file. Executed as everything is being shut down.

```

6711 \xpatchcmd{\enddocument}
6712 {%
6713 \if@tempswa
6714 \@latex@warning@no@line{Label(s) may have changed.
6715 Rerun to get cross-references right}%
6716 \fi
6717 }
6718 {%
6719 \if@tempswa
6720 \@latex@warning@no@line{Label(s) may have changed.
6721 Rerun to get cross-references right}%
6722 \else
6723 \immediate\write\LWR@lateximagesfile{%
6724 |end|end|end|
6725 }%
6726 \fi
6727 }
6728 {}
6729 {
6730 \PackageWarningNoLine{lwarp}
6731 {%
6732 Could not patch \protect\enddocument.\MessageBreak
6733 If labels have changed, be sure to recompile before\MessageBreak
6734 creating lateximages with\MessageBreak
6735 \space\space lwarpmk limages,\MessageBreak
6736 or the images may be corrupt%
6737 }
6738 }

6739 \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

 **`\theauthor`, `authblk`** 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.

**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` `\and` `{\author}` While using `\maketitle` and print mode, the author is treated as a single-column tabular and the `\and` feature finishes the current tabular then starts a new one for the next author. Each author thus is placed into its own tabular, and an affiliation may be placed on its own line such as

```
\author{Name \\ Affiliation \and Second Name \\ Second Affiliation}
```

For HTML, the entire author block is placed inside a `<div>` of class `author`, and each individual author is inside a `<div>` of class `oneauthor`.

`\@title` `\@author` `\@date` `\@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` `\printdate` `\printtitle`, etc. 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` `\thedata` `\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:** 6740 `\begin{warpall}`

`\if@titlepage` Some classes do not provide `\if@titlepage`. In this case, provide it and force it false.

```
6741 \ifcvoid{@titlepagefalse}{
6742 \newif\if@titlepage
6743 \@titlepagefalse
6744 }{}

6745 \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:** 6746 `\begin{warpall}`  
6747 `\providerobustcmd{\affiliation}[1]{}{}`  
6748 `\end{warpall}`

**for PRINT output:** 6749 `\begin{warpprint}`

```
6750 \AtBeginEnvironment{titlepage}{
6751 \renewrobustcmd{\affiliation}[1]{\ \textsc{\small#1}}
6752 }
6753
6754 \AtBeginDocument{
6755 \ifpackageloaded{titling}{
6756 \AtBeginEnvironment{titlingpage}{
6757 \renewrobustcmd{\affiliation}[1]{\ \textsc{\small#1}}
6758 }
6759 }{}% titling loaded
6760 }% AtBeginDocument

6761 \end{warpprint}
```

**for HTML output:** 6762 \begin{warpHTML}

Env titlepage Sets up a <div> of class titlepage. Provided even for memoir class, since it is used by \maketitle.

```
6763 \DeclareDocumentEnvironment{titlepage}{}
6764 {
6765 \renewrobustcmd{\affiliation}[1]{\ \InlineClass{affiliation}{##1}}
6766 \LWR@printpendingfootnotes
6767 \LWR@forcenewpage
6768 \BlockClass{titlepage}
6769 }
6770 {
6771 \endBlockClass
6772 \LWR@printpendingfootnotes
6773 }

6774 \end{warpHTML}
```

## 66.4 Printing the thanks

**for HTML & PRINT:** 6775 \begin{warpall}

\printthanks Forces the \thanks to be printed.

This is necessary in a titlingpage environment when \maketitle was not used.

```
6776 \newcommand*{\printthanks}{\LWR@stoppars\@thanks\LWR@startpars}

6777 \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:** 6778 \begin{warpHTML}

\printtitle

```
6779 \newcommand*{\printtitle}
6780 {%
6781 \LWR@stoppars%
6782 \LWR@htmltag{\LWR@tagtitle}%
6783 \@title%
6784 \LWR@htmltag{\LWR@tagtitleend}%
6785 \LWR@startpars%
6786 }
```

`\LWR@printthetitle` A private version which prints the title without footnotes, used to title each HTML page.

```
6787 \newcommand*{\LWR@printthetitle}
6788 {%
6789 \LWR@stoppars%
6790 \LWR@htmltag{\LWR@tagtitle}%
6791 \thetitle%
6792 \LWR@htmltag{\LWR@tagtitleend}%
6793 \LWR@startpars%
6794 }
```

`\printauthor` HTML version.

```
6795 \newcommand*{\printauthor}{
```

The entire author block is contained in a <div> named author:

```
6796 \begin{BlockClass}{author}
```

\and finishes one author and starts the next:

```
6797 \renewcommand{\and}{%
6798 \end{BlockClass}
6799 \begin{BlockClass}{oneauthor}
6800 }
```

Individual authors are contained in a <div> named oneauthor:

```
6801 \begin{BlockClass}{oneauthor}
6802 \@author
6803 \end{BlockClass}
6804 \end{BlockClass}
6805 }
```

`\printdate`

```
6806 \newcommand*{\printdate}{%
6807 \begin{BlockClass}{titledate}
6808 \@date
6809 \end{BlockClass}
6810 }
```

```
6811 \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:** `6812 \begin{warpprint}`

`\printtitle`

```
6813 \newcommand*{\printtitle}{\Huge\@title}}
```

`\printauthor` Print mode.

```
6814 \newcommand*{\printauthor}
6815 {\large\begin{tabular}[t]{c}\@author\end{tabular}}}
```

`\printdate`

```
6816 \newcommand*{\printdate}{\small\textit{\@date}}
```

```
6817 \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:** `6818 \begin{warppHTML}`

```
6819 \@ifclassloaded{memoir}
6820 {
6821 \newcommand{\LWR@setfootnoteseries}{%
6822 \renewcommand\thefootnote{\@arabic\c@footnote}%
6823 }
6824 }{% not memoir
6825 \if@titlepage
6826 \newcommand{\LWR@setfootnoteseries}{%
6827 \renewcommand\thefootnote{\@arabic\c@footnote}%
6828 }
6829 \else
6830 \newcommand{\LWR@setfootnoteseries}{%
6831 \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
6832 }
6833 \fi
6834 }% not memoir
```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```
6835 \newcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```
6836 \LWR@setfootnoteseries%
6837 \def\@makefnmark{\thefootnote}
```

`\thefootnote`  $\Rightarrow$  `\nameuse{arabic}{footnote}`, or  
`\thefootnote`  $\Rightarrow$  `\nameuse{fnsymbol}{footnote}`

Redefine the footnote text:

```
6838 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
6839 \@thefnmark~%
```

`\makethanksmark`  $\Rightarrow$  `\thanksfootmark`  $\Rightarrow$  `\tamark`  $\Rightarrow$   
`\@thefnmark`  $\Rightarrow$  `\itshape a` (or similar)

Print the text:

```
6840 ##1%
```

```
6841 }%
```

```
6842 }
```

`\@fnsymbol` `{\langle counter \rangle}`

Re-defined to use an HTML entity for the double vertical bar symbol. The original definition used `\|` which was not being seen by *pdftotext*.

```
6843 \def\@fnsymbol#1{\ifcase#1\or *\or \HTMLentity{dagger}\or \HTMLentity{Dagger}\or
```

```
6844 \HTMLentity{sect}\or \HTMLentity{para}\or \text{\HTMLunicode{2016}}\or
```

```
6845 **\or \HTMLentity{dagger}\HTMLentity{dagger} \or
```

```
6846 \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.

```
6847 \renewcommand*\maketitle{%
```

An HTML titlepage `<div>` is used for all classes.

```
6848 \begin{titlepage}
```

Set up special patches:

```
6849 \LWR@maketitlesetup
```

Typeset the title, etc:

```
6850 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
6851 \LWR@stoppars\@thanks\LWR@startpars
```

Close the HTML titlepage div and cleanup:

```
6852 \end{titlepage}
6853 \setcounter{footnote}{0}%
6854 \global\let\thanks\relax
6855 \global\let\maketitle\relax
6856 \global\let\@maketitle\relax
6857 \global\let\@thanks\@empty
6858 \global\let\@author\@empty
6859 \global\let\@date\@empty
6860 \global\let\@title\@empty
6861 \global\let\title\relax
6862 \global\let\author\relax
6863 \global\let\date\relax
6864 \global\let\and\relax
6865 }
```

`\@maketitle` HTML mode. Typesets the title, etc.:

```
6866 \DeclareDocumentCommand{\@maketitle}{}{%
6867 \LWR@stoppars%
6868 \LWR@htmltag{\LWR@tagtitle}%
6869 \@title%
6870 \LWR@htmltag{\LWR@tagtitleend}%
6871 \LWR@startpars%
6872 \begin{BlockClass}{author}%
```

For IEEEtran class:

```
6873 \renewcommand*\cr}{}%
6874 \renewcommand*\crrc}{}%
6875 \renewcommand*\noalign}{}%

6876 \renewcommand{\and}{%
6877 \end{BlockClass}%
6878 \begin{BlockClass}{oneauthor}%
6879 }%
6880 \begin{BlockClass}{oneauthor}%
6881 \@author%
6882 \end{BlockClass}%
6883 \end{BlockClass}%
6884 \begin{BlockClass}{titledate}%
6885 \@date%
6886 \end{BlockClass}%
6887 }
```

`\LWR@titlingmaketitle` `\maketitle` for use inside an HTML titlingpage environment.

```
6888 \newcommand*\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
6889 \LWR@stoppars\@thanks\LWR@startpars
```

Set up special patches:

```
6890 \LWR@maketitlesetup
```

Typeset the title, etc:

```
6891 \@maketitle
```

Immediately generate any \thanks footnotes:

```
6892 \LWR@stoppars\@thanks\LWR@startpars
6893 }
```

```
6894 \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:** `6895 \begin{warpall}`

`\AddSubtitlePublished` Adds `\published` and `\subtitle`, and related.

```
6896 \newcommand*\AddSubtitlePublished{%
6897 \ifpackageloaded{titling}{% yes titling package
6898 \newcommand{\@published}{}%
6899 \newcommand{\published}[1]{\gdef\@published{##1}}%
6900 \renewcommand*\maketitlehooka{\printpublished}%
6901 \newcommand*\printpublished{%
6902 \warpprintonly{\begin{center}\unskip}%
6903 \begin{BlockClass}{published}%
6904 \warpprintonly{\large\itshape}%
6905 \@published%
6906 \end{BlockClass}%
6907 \warpprintonly{\end{center}}%
6908 }%
6909 \newcommand{\@subtitle}{}%
6910 \newcommand{\subtitle}[1]{\gdef\@subtitle{##1}}%
6911 \renewcommand*\maketitlehookb{\printsubtitle}%
6912 \newcommand*\printsubtitle{%
```

```

6913 \warpprintonly{\begin{center}\unskip}%
6914 \begin{BlockClass}{subtitle}%
6915 \warpprintonly{\Large\itshape}%
6916 \@subtitle%
6917 \end{BlockClass}%
6918 \warpprintonly{\end{center}}}%
6919 }%
6920 }% yes titling package
6921 {% no titling package
6922 \newcommand{\published}[1]{}%
6923 \newcommand*{\printpublished}{}%
6924 \newcommand{\subtitle}{}%
6925 \newcommand*{\printssubtitle}%
6926 }% no titling package
6927 }% \AddSubtitlePublished

6928 \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:** 6929 \begin{warpHTML}

\abstractname User-redefinable title for the abstract.

Also over-written by the babel package.

```
6930 \providecommand*{\abstractname}{Abstract}
```

Some classes allow an optional name, so it is allowed here.

Env abstract

```

6931 \DeclareDocumentEnvironment{abstract}{0{\abstractname}}
6932 {
6933 \LWR@forcenewpage
6934 \BlockClass{abstract}
6935 \BlockClassSingle{abstracttitle}{#1}
6936 }
6937 {
6938 \endBlockClass
6939 }

6940 \end{warpHTML}

```

## 68 Quote and verse

### 68.1 Attributions

`\attribution`  $\langle name \rangle$

For use with `quote`, `quotation`, `verse`:

Ex: "A quotation." `\attribution{\textsc{Author Name}}\textsl{Book Title}`

**for HTML output:**

```
6941 \begin{warpHTML}
6942 \newcommand{\attribution}[1]{%
6943 \LWR@stoppars%
6944 \begin{BlockClass}{attribution}
6945 #1
6946 \end{BlockClass}
6947 \LWR@startpars%
6948 }
6949 \end{warpHTML}
```

**for PRINT output:**

```
6950 \begin{warpprint}
6951 \newcommand{\attribution}[1]{
6952 \begin{flushright}
6953 \unskip
6954 #1
6955 \end{flushright}%
6956 }
6957 \end{warpprint}
```

### 68.2 Quotes, quotations

**for HTML output:** 6958 `\begin{warpHTML}`

Env `quote`

```
6959 \renewenvironment*{quote}
6960 {
6961 \LWR@forcenewpage
6962 \LWR@htmlblocktag{blockquote}
6963 }
6964 {\LWR@htmlblocktag{/blockquote}}
```

Env `quotation`

```
6965 \renewenvironment*{quotation}
6966 {
6967 \LWR@forcenewpage
6968 \LWR@htmlblocktag{blockquote}
6969 }
6970 {\LWR@htmlblocktag{/blockquote}}
```

```
6971 \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 `\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.

#### 68.3.1 L<sup>A</sup>T<sub>E</sub>X core verse environment

**for HTML output:** 6972 `\begin{warpHTML}`

Env `verse`

```
6973 \renewenvironment{verse}
6974 {\let\\newline% lwarp
6975 \list{}{\itemsep \z@
6976 \itemindent -1.5em%
6977 \listparindent\itemindent
6978 \rightmargin \leftmargin
6979 \advance\leftmargin 1.5em}%
6980 \item\relax}
6981 {\endlist}

6982 \end{warpHTML}
```

**for HTML & PRINT:** 6983 `\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 `\HTMLleftskip` Sets `\leftskip` inside a verse environment in HTML.

```
6984 \newlength{\HTMLleftskip}
6985 \setlength{\HTMLleftskip}{1em}
```

Len `\HTMLleftmargini` Sets `\leftmargini` inside a verse environment in HTML.

```
6986 \newlength{\HTMLleftmargini}
6987 \setlength{\HTMLleftmargini}{4.5em}
```

```
6988 \end{warpall}
```

## 69 Verbatim and tabbing

**for HTML & PRINT:** 6989 `\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.

```
6990 \newlength{\VerbatimHTMLWidth}
6991 \setlength{\VerbatimHTMLWidth}{4in}
6992 \end{warpall}
```

**for HTML output:** 6993 `\begin{warpHTML}`

Bool `LWR@verbtags` Used to temporarily turn off verbatim tags while doing `\verbatiminput` in the HTML head.

```
6994 \newbool{LWR@verbtags}
6995 \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.

```
6996 \newcommand*{\LWR@atbeginverbatim}[3]{}
6997 {}
```

Avoid excessive space between lines:

```
6998 \setlength{\parskip}{0ex}
```

Stop generating HTML paragraph tags:

```
6999 \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.

```
7000 \ifbool{LWR@verbtags}{%
7001 \LWR@htmltag{pre class=\textquotedbl#3\textquotedbl%
7002 \ifthenelse{\equal{#1}{}}{ }{ style=\textquotedbl#1\textquotedbl}%
7003 }%
7004 \LWR@orignewline% pre
7005 \leavevmode\unskip\LWR@print@vspace*{-#2\baselineskip}%
7006 }{ }%
```

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.

```
7007 \begingroup%
```

```
7008 % \LWR@print@normalsize%
7009 \LWR@origttfamily%
7010 \LWR@print@small%
```

Since inside a <pre>, restore the original list processing:

```
7011 \LWR@restoreoriglists%
```

Turn off babel-french extra space before punctuation:

```
7012 \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:

```
7013 \LWR@select@print@hspace%
7014 }
```

```
\LWR@afterendverbatim {(negative \baselineskip \vspace)}
```

Finishes enclosing a verbatim environment.

```
7015 \newcommand*{\LWR@afterendverbatim}[1]{%
7016 \endgroup%
7017 \par%
```

At the end of the environment, close the pre:

```
7018 \ifbool{LWR@verbtags}{%
7019 \LWR@print@vspace*{-#1\baselineskip}%
7020 \noindent\LWR@htmltag{/pre}\LWR@orignewline% pre
7021 }{ }%
```

Resume regular paragraph handling:

```
7022 \LWR@startpars%
7023 }
```

`\verbatiminput`  $\{(\textit{filename})\}$

Patch `\verbatiminput` to add HTML tags:

```
7024 \let\LWRV@origverbatim@input\verbatim@input
7025
7026 \renewcommand{\verbatim@input}[2]{%
7027 \ifbool{LWR@verbtags}{\LWR@forcenewpage}{}%
7028 \LWR@atbeginverbatim{2.5}{Verbatim}%
7029 \LWRV@origverbatim@input{#1}{#2}%
7030 \LWR@afterendverbatim{1.5}%
7031 }
```

Env `verbatim`

```
7032 \AfterEndPreamble{
7033 \LWR@traceinfo{Patching verbatim.}
7034 \AtBeginEnvironment{verbatim}{%
7035 \LWR@forcenewpage%
7036 \LWR@atbeginverbatim{2.5}{verbatim}%
7037 }
7038 \AfterEndEnvironment{verbatim}{%
7039 \LWR@afterendverbatim{1}%
7040 }
7041 }
```

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.

```
7042 \newcommand*\LWR@HTML@tabbing{%
7043 \LWR@forcenewpage%
7044 \LWR@atbeginverbatim{3}{tabbing}%
7045 \LWR@print@tabbing%
7046 }
7047
7048 \newcommand*\LWR@HTML@endtabbing{%
7049 \LWR@print@endtabbing%
7050 \LWR@afterendverbatim{1}%
7051 }
7052
7053 \LWR@formatted{tabbing}
7054 \LWR@formatted{endtabbing}

7055 \end{warpHTML}
```

## 70 Theorems

`\newtheorem`  $\langle text \rangle$  [ $\langle counter \rangle$ ] -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:** 7056 `\begin{warpHTML}`

`\@begintheorem`  $\langle name \rangle$   $\langle number \rangle$

```
7057 \renewcommand{\@begintheorem}[2]{%
7058 \LWR@forcenewpage
7059 \BlockClass{theoremcontents}
7060 \trivlist
7061 \item[\InlineClass{theoremlabel}{#1\ #2\ }]\itshape
7062 }
```

`\@opargbegintheorem`  $\langle name \rangle$   $\langle number \rangle$   $\langle oparg \rangle$

```
7063 \renewcommand{\@opargbegintheorem}[3]{%
7064 \LWR@forcenewpage
7065 \BlockClass{theoremcontents}
7066 \trivlist
7067 \item[\InlineClass{theoremlabel}{#1\ #2\ (#3)\ }]\itshape
7068 }
```

`\@endtheorem`

```
7069 \renewcommand*\@endtheorem{%
7070 \endtrivlist
7071 \endBlockClass% theoremcontents
7072 }
```

```
7073 \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:** 7074 `\begin{warpHTML}`

`\LWR@printcloseList` May be locally redefined by `enumerate` or `description`.

```
7075 \newcommand*\LWR@printcloseList{\LWR@printcloseitemize}
```

`\LWR@printopenList` May be locally redefined by `enumerate` or `description`.

```
7076 \newcommand*\LWR@printopenList{\ul style="\LWR@print@mbox{list-style-type:none}"}
```

`\@mklab` Removes PDF spacing.

```
7077 \AtBeginDocument{
7078 \def\@mklab#1{%
7079 % \hfil %
7080 #1}
7081 \let\makeLabel\@mklab
7082 }
```

`\@donoparitem` Modified for HTML output by replacing T<sub>E</sub>X boxes with plain text. Also removes PDF spacing.

```

7083 \def\@donoparitem{%
7084 \@noparitemfalse
7085 % \global\setbox\@labels\hbox{\hskip -\leftmargin
7086 % \unhbox\@labels
7087 % \hskip \leftmargin}%
7088 % \if@minipage\else
7089 % \@tempskipa\lastskip
7090 % \vskip -\lastskip
7091 % \advance\@tempskipa\outerparskip
7092 % \advance\@tempskipa -\parskip
7093 % \vskip\@tempskipa
7094 % \fi
7095 }

```

\@item Modified for HTML output by replacing TEX boxes with plain text. Also removes PDF spacing.

```

7096 \def\LWR@HTML@item[#1]{%
7097 \LWR@traceinfo{\@item}
7098 \if@noparitem
7099 \@donoparitem
7100 \else
7101 % \if@inlabel
7102 % \indent
7103 % \par
7104 % \fi
7105 \ifhmode
7106 % \unskip\unskip
7107 % \par
7108 % \fi
7109 \if@newlist
7110 \if@nobreak
7111 \@nbitem
7112 \else
7113 % \addpenalty\@beginparpenalty
7114 % \addvspace\@topsep
7115 % \addvspace{-\parskip}%
7116 % \fi
7117 \else
7118 % \addpenalty\@itempenalty
7119 % \addvspace\@itemsep
7120 % \fi
7121 \global\@inlabeltrue
7122 \fi
7123 % \everypar{%
7124 % \@minipagefalse
7125 % \global\@newlistfalse

7126 % \if@inlabel
7127 % \global\@inlabelfalse

7128 % {\setbox\z@\lastbox
7129 % \ifvoid\z@
7130 % \kern-\@itemindent
7131 % \fi}%

```

```

7132 % \box\@labels
7133 % \penalty\z@
7134 % \fi

7135 % \if@nobreak
7136 % \@nobreakfalse
7137 % \clubpenalty \@M
7138 % \else
7139 % \clubpenalty \@clubpenalty
7140 % \everypar{}%
7141 % \fi}%

7142 \if@noitemarg
7143 \@noitemargfalse
7144 \if@nmbolist

7145 \refstepcounter\@listctr
7146 \fi
7147 \fi

7148 \makeLabel{#1} % extra space
7149 % \sbox\@tempboxa{\makeLabel{#1}}%
7150 % \global\setbox\@labels\hbox{%
7151 % \unhbox\@labels
7152 % \hskip \itemindent
7153 % \hskip -\labelwidth
7154 % \hskip -\labelsep
7155 % \ifdim \wd\@tempboxa >\labelwidth
7156 % \box\@tempboxa

7157 % \else
7158 % \hbox to\labelwidth {\unhbox\@tempboxa}%
7159 % \fi
7160 % \hskip \labelsep}%
7161 \ignorespaces%
7162 }

```

\@nbitem

```

7163 \def\@nbitem{%
7164 % \@tempkipa\@outerparskip
7165 % \advance\@tempkipa -\parskip
7166 % \addvspace\@tempkipa
7167 }

```

\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.

```

7168 \newcommand*\LWR@listitem}{%
7169 \LWR@stoppars%
7170 \LWR@startnewdepth{listitem}%
7171 \LWR@htmltag{li}%
7172 \LWR@startpars%
7173 \LWR@origitem%
7174 }

```

`\LWR@nulllistfills` Nullifies various T<sub>E</sub>X fill commands, in case they are used inside `\makeLabel`. Problems are caused when these are nullified all the time.

```

7175 \newcommand*\LWR@nulllistfills}{%
7176 \renewcommand*\hss}{}%
7177 \renewcommand*\llap[1]{##1}%
7178 \renewcommand*\rlap[1]{##1}%
7179 \renewcommand*\hfil}{}%
7180 \renewcommand*\hfilneg}{}%
7181 \renewcommand*\hfill}{}%
7182 }

```

Env `list` `{<label>}{<commands>}`

```

7183 \newcommand*\LWR@liststart}{%
7184 \LWR@traceinfo{LWR@liststart}%
7185 \LWR@stoppars%
7186 \LWR@pushoneclose{list}%
7187 \LWR@htmltag{LWR@printopenlist}\LWR@originewline%
7188 \LWR@startpars%
7189 \setlength{\topsep}{0pt}%
7190 \setlength{\partopsep}{0pt}%
7191 \setlength{\itemsep}{0pt}%
7192 \setlength{\parsep}{0pt}%
7193 \setlength{\leftmargin}{0pt}%
7194 \setlength{\rightmargin}{0pt}%
7195 \setlength{\listparindent}{0pt}%
7196 \setlength{\itemindent}{0pt}%
7197 \setlength{\labelsep}{1em}%
7198 \LWR@nulllistfills%
7199 }

```

```

7200 \newcommand*\LWR@listend}{%
7201 \LWR@traceinfo{LWR@listend}%
7202 \LWR@stoppars%
7203 \LWR@closeprevious{list}%
7204 \LWR@startpars%
7205 }

```

## 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.

```
7206 \newcommand*\LWR@itemizeitem}{%
7207 \LWR@stoppars%
7208 \LWR@startnewdepth{listitem}%
7209 \LWR@htmltag{li}%
7210 \LWR@startpars%
7211 \LWR@origitem%
7212 }
```

Env `itemize` [*options*]

```
7213 \newcommand*\LWR@itemizestart}{%
7214 \renewcommand*\LWR@printcloselist}{\LWR@printcloseitemize}
7215 \renewcommand*\LWR@printopenlist}{ul style="\LWR@print@mbbox{list-style-type:none}}
7216 \let\item\LWR@itemizeitem%
7217 \LWR@nulllistfills%
7218 }
```

### 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*]

```
7219 \newcommand*\LWR@enumeratestart}{%
7220 \renewcommand*\LWR@printcloselist}{\LWR@printcloseitemize}
7221 \renewcommand*\LWR@printopenlist}{ul style="\LWR@print@mbbox{list-style-type:none}}
7222 \let\item\LWR@itemizeitem%
7223 \LWR@nulllistfills%
7224 }
```

### 71.4 Description

`\LWR@descitem` [*label*] Handles an `\item` inside a description.

```
7225 \newcommand*\LWR@descitem}[1][[]%
7226 {%
7227 \LWR@stoppars%
7228 \LWR@setlatestname{#1}%
7229 \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.

```
7230 \begingroup%
7231 \let\LWR@orig@desc@makeLabel\makeLabel
7232 \renewcommand*\makeLabel}[1]{%
```

```

7233 \LWR@htmltag{dt}%
7234 \LWR@orig@desc@makelabel{#1}%
7235 \LWR@htmltag{/dt}%
7236 }
7237 \LWR@select@html@nohspace%
7238 \LWR@origitem[#1]%
7239 \endgroup%
7240 \LWR@orignewline%
7241 \LWR@htmltag{dd}%
7242 \LWR@startpars%
7243 }

```

Env description [*options*]

```

7244 \newcommand*\LWR@descriptionstart}{%
7245 \renewcommand*\LWR@printclosedescription}{%
7246 \renewcommand*\LWR@printopenlist}{dl}
7247 \let\item\LWR@descitem%
7248 \LWR@nulllistfills%
7249 }

```

## 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 L<sup>A</sup>T<sub>E</sub>X environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```

7250 \newcommand*\LWR@patchlists}{%
7251 \LetLtxMacro\item\LWR@listitem%
7252 \LetLtxMacro\@item\LWR@HTML@item%
7253 \renewcommand*\@trivlist}{%
7254 \LWR@traceinfo{@trivlist start}%
7255 \LWR@liststart%
7256 \LWR@orig@trivlist%
7257 \LWR@traceinfo{@trivlist done}%
7258 }%
7259 \renewcommand*\@trivlist}{%
7260 \LWR@traceinfo{trivlist}%
7261 \LWR@origtrivlist%
7262 }%
7263 \renewcommand*\@endtrivlist}{%
7264 \LWR@traceinfo{endtrivlist start}%
7265 \LWR@origendtrivlist\LWR@listend%
7266 \LWR@traceinfo{endtrivlist done}%
7267 }%
7268 \renewcommand*\@itemize}{%
7269 \LWR@itemizestart\LWR@origitemize%
7270 }%
7271 \renewcommand*\@enumerate}{%

```

```

7272 \LWR@enumeratestart\LWR@origenumerate%
7273 }%
7274 \renewcommand*{\description}{%
7275 \LWR@descriptionstart\LWR@origdescription%
7276 }%
7277 }

```

`\LWR@restoreoriglists` Restores the original `trivlist` environment.

```

7278 \newcommand*{\LWR@restoreoriglists}{%
7279 \LWR@traceinfo{\LWR@restoreoriglists}%
7280 \LetLtxMacro\item\LWR@origitem%
7281 \LetLtxMacro@item\LWR@orig@item%
7282 \let\@trivlist\LWR@orig@trivlist%
7283 \let\trivlist\LWR@origtrivlist%
7284 \let\endtrivlist\LWR@origendtrivlist%
7285 \LetLtxMacro\itemize\LWR@origitemize%
7286 \LetLtxMacro\enditemize\LWR@endorigitemize%
7287 \LetLtxMacro\enumerate\LWR@origenumerate%
7288 \LetLtxMacro\endenumerate\LWR@endorigenumerate%
7289 \LetLtxMacro\description\LWR@origdescription%
7290 \LetLtxMacro\enddescription\LWR@endorigdescription%
7291 \let\@mklab\LWR@orig@mklab%
7292 \let\makelabel\LWR@origmakelabel%
7293 \let\@donoparitem\LWR@orig@donoparitem%
7294 \let\@nbitem\LWR@orig@nbitem%
7295 }

7296 \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  $\text{\LaTeX}$  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.

⚠ floatrow

⚠ tabular inside another environment

```
\StartDefiningTabulars
```

```
<define macros or environments using tabular and & here>
```

```
\StopDefiningTabulars
```

This includes before and after defining any macro which used `\ttabbox` from `floatrow`.

- When creating a new environment which contains a tabular environment, `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.

⚠ \newcolumntype

- `\newcolumntype` 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.

full-width rules

- `\toprule`, `\midrule`, `\bottomrule`, and `\hline` ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

**combined rules**

- If you wish to use `\cmidrule` followed by `\bottomrule`, it may be necessary to use:

```
\cmidrule{2-3} \[-2ex]
\bottomrule
```

The optional `-2ex` is ignored in HTML, but improves the visual formatting in the print output.

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

```
This & That \endhead
```

to

```
\warpprintonly{This & That \endhead}
```

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

**Other:**

- `tabularx` ignores the width, but `X` columns do produce paragraph columns or multicolumns.

**longtable headings**

- For `longtable`, place headings and footings which do not apply to HTML inside `\warpprintonly{}`.

**S columns**

- 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 `<span>`. If this situation is detected, a warning is printed instructing the user to isolate the `<span>` using `\warpprintonly` or the `warpprint` environment.

**for HTML output:** `7297 \begin{warpHTML}`

## 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.

```
7298 \LetLtxMacro\hdashline\hline
7299 \LetLtxMacro\cdashline\cline
7300 \LetLtxMacro\firsthdashline\hline
7301 \LetLtxMacro\lasthdashline\hline
```

⚠ `\warpprintonly`  
⚠ Misplaced `\noalign`

⚠ `tabular` inside a `<span>`

### 72.3 Token lookahead

Used by `\LWR@futurenonpacelet` to look at the next token.

`\LWR@mynexttoken`

```
7302 \newcommand\LWR@mynexttoken\relax
```

`\futurelet` copies the next token then executes a function to analyze

`\LWR@futurenonpacelet` does the same, but ignores intervening white space

Based on the `booktabs` style:

`\LWR@futurenonpacelet`

```
7303 \def\LWR@futurenonpacelet#1{\def\LWR@cs{#1}%
7304 \afterassignment\LWR@fnslone\let\nexttoken= }
7305 \def\LWR@fnslone{\expandafter\futurelet\LWR@cs\LWR@fnsltwo}
7306 \def\LWR@fnsltwo{%
7307 \expandafter\ifx\LWR@cs@eptoken\let\next=\LWR@fnslthree%
7308 \else\let\next=\nexttoken\fi\next}
7309 \def\LWR@fnslthree{\afterassignment\LWR@fnslone\let\next= }
```

`\LWR@getmynexttoken` Looks ahead and copies the next token into `\LWR@mynexttoken`.

```
7310 \newcommand*{\LWR@getmynexttoken}{%
7311 \LWR@traceinfo{\LWR@getmynexttoken}%
7312 % nothing must follow this next line
7313 \LWR@futurenonpacelet\LWR@mynexttoken\LWR@tabledatacolumnntag
7314 }
```

### 72.4 Tabular variables

Bool `LWR@startedrow` True if should print a row tag before this column.

```
7315 \newbool{LWR@startedrow}
7316 \boolfalse{LWR@startedrow}
```

Bool `LWR@tabularcelladded` True if have added a data cell for this position.

```
7317 \newbool{LWR@tabularcelladded}
7318 \boolfalse{LWR@tabularcelladded}
```

Ctr `LWR@hlines` Number of `\hlines` or `\midrules` above the next row.

```
7319 \newcounter{LWR@hlines}
```

Ctr `LWR@hdashedlines` Number of `\arydshln` dashed lines above the next row.

```
7320 \newcounter{LWR@hdashedlines}
```

- Bool** LWR@doingtbrule True if the next row will have a top/bottom rule above it.
- 7321 \newbool{LWR@doingtbrule}  
7322 \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.
- 7323 \newbool{LWR@doingcmidrule}  
7324 \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.
- 7325 \newbool{LWR@tableparcell}
- Bool** LWR@skippingmrowcell True if are doing an empty \multirow cell, and thus there is no data tag to close.
- 7326 \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.
- 7327 \newbool{LWR@skippingmcolrowcell}
- Bool** LWR@usedmultirow Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.
- 7328 \newbool{LWR@usedmultirow}
- Bool** LWR@foundmrowcell Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.
- 7329 \newbool{LWR@foundmrowcell}
- Bool** LWR@skipatbang True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.
- 7330 \newbool{LWR@skipatbang}
- Bool** LWR@emptyatbang True if finishing a row and should print empty @ or ! column table data cells.
- 7331 \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.
- 7332 \newbool{LWR@intabularmetadata}  
7333 \boolfalse{LWR@intabularmetadata}

- Ctrl LWR@tabularDepth Tracks whether & is being used inside a tabular.
- ```
7334 \newcounter{LWR@tabulardepth}
7335 \setcounter{LWR@tabulardepth}{0}
```
- Ctrl 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.
- ```
7336 \newcounter{LWR@tabularpardepth}
7337 \setcounter{LWR@tabularpardepth}{0}
```
- ```
7338 \newcommand*{\LWR@colsresult}{}%temp storage for column format results
7339 \newcommand*{\LWR@pposition}{}
7340 \newcommand*{\LWR@pleft}{}
7341 \newcommand*{\LWR@pright}{}

```
- LWR@tablecolspec Holds the parsed column specification, of total width LWR@tabletotalLaTeXcols, not counting @ and ! columns.
- Will contain a string such as llrrccpc, exactly one letter per L^AT_EX table column, without @, !, >, <, or the vertical bar.
- \LWR@strresult Holds the result of Str functions.
- ```
7342 \providecommand*{\LWR@strresult}{}
7343 \providecommand*{\LWR@strresulttwo}{}

```
- \LWR@origcolspec Holds the original column specs given to tabular.
- ```
7344 \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^AT_EX columns in the table.)
- ```
7345 \newcounter{LWR@tablecolspecwidth}

```
- Ctrl LWR@tablecolspecindex While parsing the L<sup>A</sup>T<sub>E</sub>X table column specification, starts at 1 and is incremented per token of the specification.
- ```
7346 \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.

```
7347 \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.)

```
7348 \newcounter{LWR@tabletotalLaTeXcols}
```

Ctrl LWR@tabletotalLaTeXcolsnext Holds the next L^AT_EX table column index while parsing, equal to one more than LWR@tabletotalLaTeXcols.

```
7349 \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.

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
```

```
7350 \newcommand*{\LWR@insertatbangcols}{%
7351 \ifbool{LWR@skipatbang}%
7352 {}%
7353 {%
7354   \LWR@printatbang{at}{\arabic{LWR@tableLaTeXcolindex}}%
7355   \LWR@printatbang{bang}{\arabic{LWR@tableLaTeXcolindex}}%
7356 }%
7357 }
```

\LWR@closetabledatocell If LWR@skippingmrowcell or LWR@skippingmcolrowcell then there is no data tag to close. Otherwise, close any paragraphs, then close the data tag.

```
7358 \newcommand*{\LWR@closetabledatocell}{%
7359 \global\booltrue{LWR@intabularmetadata}%
7360 \ifbool{LWR@exitingtabular}%
7361 {%
```

```

7362 \LWR@stoppars%
7363 }%
7364 {% not exiting tabular
7365 \ifboolexpr{bool{LWR@skippingmrowcell} or bool{LWR@skippingmcolrowcell}}%
7366 {%

```

```
7367 \LWR@stoppars%
```

If not skipping a `\multicolumnrow` cell, insert the @ and ! columns after this non-existent column.

```

7368 \ifbool{LWR@skippingmcolrowcell}%
7369 {}%
7370 {\LWR@insertatbangcols}%
7371 }%
7372 {% not skippingmrowcell

```

Insert any < then any @ and ! column contents, unless muted for the `\bottomrule` or a `\multicolumn`:

```

7373 \unskip%
7374 \ifboolexpr{%
7375 bool{LWR@tabularmutemods} or
7376 bool{LWR@skipatbang} or
7377 bool{LWR@emptyatbang}
7378 }%
7379 {}%
7380 {\LWR@getexparray{LWR@colafterspec}{\arabic{LWR@tableLaTeXcolindex}}}%

```

Close paragraphs:

```

7381 \LWR@stoppars%
7382 \global\boolfalse{LWR@tableparcell}%

```

Close the table data cell.

Close any color `<div>s`.

```

7383 \whileboolexpr{test {\ifnumcomp{\value{LWR@cellcolordepth}}{>}{0}}}%
7384 \LWR@htmltag{/div}\LWR@orignewline%
7385 \addtocounter{LWR@cellcolordepth}{-1}%
7386 }%

```

Skip the @ and ! cells if are closing a multicolumn cell.

```

7387 \leavevmode\unskip\LWR@htmltag{/td}\LWR@orignewline%
7388 \global\booltrue{LWR@tabularcelladded}%
7389 \LWR@insertatbangcols%
7390 }% not skipping mrowcell
7391 }% not exiting tabular
7392 \global\boolfalse{LWR@skippingmrowcell}%
7393 \global\boolfalse{LWR@skippingmcolrowcell}%
7394 \global\boolfalse{LWR@skipatbang}%

```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```
7395 \gdef\LWR@cellHTMLcolor{}
7396 \gdef\LWR@columnHTMLcolor{}
7397 \setcounter{LWR@cellcolordepth}{0}
7398 }
```

When not used inside a tabular, & performs its original function as recorded here (with catcode 4).

```
7399 \let\LWR@origampmacro&
7400 \end{warpHTML}
```

72.5.1 Handling &

for HTML output: 7401 \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.

```
7402 \newcommand*\LWR@tabularampersand}{%
7403 \LWR@traceinfo{LWR@tabularampersand}%
7404 \ifnumcomp{\value{LWR@tabulardepth}}{>}{0}%
7405 {%
```

If not skipping a multirow cell, close the current data cell.

```
7406 \unskip%
7407 \LWR@closetabledatacell%
```

Move to the next column.

```
7408 \addtocounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
7409 \global\boolfalse{LWR@tabularcelladded}%
```

Look at the next token to decide multi or single column data tag.

```
7410 \LWR@getmynexttoken%
7411 ]%
```

If not inside a tabular, performs the original action:

```
7412 {\LWR@origampmacro}%
7413 }
```

& 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.

```
7414 \newcommand*\LWR@tabularfinishrow{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```
7415 \ifboolexpr{%
7416   not bool {LWR@exitingtabular} or%
7417   bool{LWR@doingtbrule} or%
7418   bool{LWR@doingcmidrule} or%
7419   test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
7420   test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
7421   bool{LWR@startedrow}%
7422 }{%
```

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:

```
7423 \ifbool{LWR@exitingtabular}{%
7424   \global\booltrue{LWR@tabularmutemods}%
7425 }{%
7426   \global\boolfalse{LWR@tabularmutemods}%
7427 }%
```

Locally reenable the table data tags until finished with the final row:

```
7428 \global\boolfalse{LWR@exitingtabular}%
```

Generate table data tags and ampersands until the right edge:

```
7429 \whileboolexpr{%
7430   test {
7431     \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}
7432   } or %
7433   (%
```

```

7434     bool{LWR@intabularmetadata} and%
7435     not bool{LWR@tabularcelladded} and%
7436     test {
7437       \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{\value{LWR@tabletotalLaTeXcols}}
7438     }%
7439   )%
7440 }%
7441 {%
7442   \LWR@tabulatedatasinglecolumnntag%

```

The following is essentially `\LWR@tabularampersand` with `LWR@emptyatbang` added to empty the following cells:

```

7443   \LWR@closetabledatacell%
7444   \addtocounter{LWR@tableLaTeXcolindex}{1}%
7445   \global\boolfalse{LWR@tabularcelladded}%
7446   \global\booltrue{LWR@emptyatbang}%

```

Starts the next cell:

```

7447   \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}%
7448     {\LWR@getmynexttoken}%
7449     }%
7450 }%

```

Reenable the original `LWR@exitingtabular` to close the entire table:

```

7451 \ifbool{LWR@tabularmutemods}{%
7452   \global\booltrue{LWR@exitingtabular}%
7453 }{%
7454   \global\boolfalse{LWR@exitingtabular}%
7455 }%
7456 \global\boolfalse{LWR@tabularmutemods}%

7457 \global\boolfalse{LWR@emptyatbang}%
7458 }{% ifboolexpr
7459 }

```

72.6 Handling `\`

Inside `tabular`, `\` is redefined to `\LWR@tabularendofline`

Throws away options `[[dim]` or `[[*`

`\LWR@tabularendofline`

```

7460 \NewDocumentCommand{\LWR@tabularendofline}{s o}{%

```

Finish the row:

```

7461 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}%
7462   {\LWR@tabularfinishrow}%

```

```
7463   {\LWR@closetabledatacell}%
7464 \LWR@htmltag{/tr}\LWR@originewline%
```

xcolor row color support:

```
7465 \@rowc@lors%
```

No longer inside a data cell:

```
7466 \global\booltrue{\LWR@intabularmetadata}%
```

Not yet started a table row:

```
7467 \global\boolfalse{\LWR@startedrow}%
```

Additional setup:

```
7468 \setcounter{\LWR@hlines}{0}%
7469 \setcounter{\LWR@hdashedlines}{0}%
7470 \global\boolfalse{\LWR@doingtbrule}%
7471 \global\boolfalse{\LWR@doingcmidrule}%
7472 \LWR@clearmidrules%
7473 \gdef\LWR@rowHTMLcolor{}
```

Start at first column:

```
7474 \setcounter{\LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
7475 \global\boolfalse{\LWR@tabularcelladded}%
```

Allow T_EX to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

```
7476 \LWR@stoppars
7477 \LWR@origpar
```

Look at the next token to decide between single column data tag or a special case:

```
7478 \LWR@getmynexttoken%
7479 }
```

72.7 Looking ahead in the column specifications

```
\LWR@columnspeclookahead {<offset>}
```

Looks `offset` tokens ahead in the column specification, setting `\LWR@strresulttwo`.

The `w` column alignment will be seen as a single unit such as `{c}`.

```

7480 \newcommand*{\LWR@columnspeclookahead}[1]{%
7481 \setcounter{LWR@tempcountone}{\value{LWR@tablecolspecindex}}%
7482 \addtocounter{LWR@tempcountone}{#1}%
7483 \fullexpandarg%
7484 \StrChar{\LWR@origcolspec}{\arabic{LWR@tempcountone}}[\LWR@strresulttwo]%

```

Get the contents of the first group in \LWR@strresulttwo:

```

7485 \exploregroups%
7486 \StrChar{\LWR@strresulttwo}{1}[\LWR@strresulttwo]%
7487 \noexploregroups%
7488 }

```

72.8 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```

7489 \newcommand*{\LWR@colparameter}{}

```

\LWR@parseatcolumn Handles @{text} columns.

```

7490 \newcommand*{\LWR@parseatcolumn}{%

```

Move to the next token after the '@':

```

7491 \LWR@traceinfo{at column}%
7492 \addtocounter{LWR@tablecolspecindex}{1}%

```

Read the next token into \LWR@colparameter, expanding once:

```

7493 \LWR@traceinfo{about to read the next token:}%
7494 \expandarg%
7495 \StrChar{\LWR@origcolspec}%
7496   {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]
7497 \fullexpandarg%

```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

7498 \LWR@traceinfo{have now read the next token}%
7499 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7500 {% left edge of the table:
7501   \LWR@traceinfo{at the left edge}%
7502   \LWR@setexparray{LWR@colatspec}{leftedge}{\LWR@colparameter}%
7503   \LWR@traceinfo{at the left edge: %
7504   \LWR@getexparray{LWR@colatspec}{leftedge}}%
7505 }%
7506 {% not at the left edge:
7507   \LWR@traceinfo{not at the left edge}%
7508   \LWR@setexparray{LWR@colatspec}%
7509   {\arabic{LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
7510   \LWR@traceinfo{at \arabic{LWR@tabletotalLaTeXcols}: %

```

```

7511 \LWR@getexpparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcols}}}%
7512 }%
7513 \let\LWR@colparameter\relax%
7514 \global\booltrue{LWR@validtablecol}%
7515 }

```

`\LWR@parsebangcolumn` Handles `!{text}` columns.

```
7516 \newcommand*{\LWR@parsebangcolumn}{%
```

Move to the next token after the '!':

```

7517 \LWR@traceinfo{bang column}%
7518 \addtocounter{LWR@tablecolspecindex}{1}%

```

Read the next token into `\LWR@colparameter`, expanding once:

```

7519 \LWR@traceinfo{about to read the next token:}%
7520 \expandarg%
7521 \StrChar{\LWR@origcolspec}%
7522   {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]
7523 \fullexpandarg%

```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```

7524 \LWR@traceinfo{have now read the next token}%
7525 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
7526 {% left edge of the table:
7527   \LWR@traceinfo{at the left edge}%
7528   \LWR@setexpparray{LWR@colbangspec}{leftedge}{\LWR@colparameter}%
7529 }%
7530 {% not at the left edge:
7531   \LWR@traceinfo{not at the left edge}%
7532   \LWR@setexpparray{LWR@colbangspec}%
7533     {\arabic{LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
7534   \LWR@traceinfo{bang \arabic{LWR@tabletotalLaTeXcols}: \LWR@colparameter!}%
7535 }%
7536 \let\LWR@colparameter\relax%
7537 \global\booltrue{LWR@validtablecol}%
7538 }

```

`\LWR@parsebeforecolumn` Handles `>{text}` columns.

```
7539 \newcommand*{\LWR@parsebeforecolumn}{%
```

Move to the next token after the '>':

```
7540 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into `\LWR@colparameter`:

```
7541 \expandarg%
```

```

7542 \StrChar{\LWR@origcolspec}%
7543   {\varabic{\LWR@tablecolspecindex}}[\LWR@colparameter]%
7544 \fullexpandarg%

```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

7545 \LWR@setexparray{\LWR@colbeforespec}%
7546   {\varabic{\LWR@tabletotalLaTeXcolsnex}}{\LWR@colparameter}%
7547 \let\LWR@colparameter\relax%
7548 \global\booltrue{\LWR@validtablecol}%
7549 }

```

\LWR@parseaftercolumn Handles <{text} columns.

```

7550 \newcommand*{\LWR@parseaftercolumn}{%

```

Move to the next token after the '<':

```

7551 \addtocounter{\LWR@tablecolspecindex}{1}%

```

Read the next token, expanding once into \LWR@colparameter:

```

7552 \expandarg%
7553 \StrChar{\LWR@origcolspec}%
7554   {\varabic{\LWR@tablecolspecindex}}[\LWR@colparameter]%
7555 \fullexpandarg%

```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

7556 \LWR@setexparray{\LWR@colafterspec}%
7557   {\varabic{\LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
7558 \let\LWR@colparameter\relax%
7559 \global\booltrue{\LWR@validtablecol}%
7560 }

```

\LWR@parsebarcolumn Handles vertical rules.

```

7561 \newcommand*{\LWR@parsebarcolumn}{%
7562 \LWR@traceinfo{\LWR@parsebarcolumn}%

```

Remember the bar at this position:

```

7563 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
7564 {% left edge of the table:
7565   \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{leftedge}}%
7566   \ifdefstring{\LWR@tempone}{tvertbarl}%
7567   {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarldouble}}%
7568   {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarl}}%
7569 }%
7570 {% not at the left edge:
7571   \edef\LWR@tempone{%
7572     \LWR@getexparray{\LWR@colbarspec}{\varabic{\LWR@tabletotalLaTeXcols}}%

```

```

7573 }%
7574 \ifdefstring{\LWR@tempone}{tvertbarr}%
7575 {%
7576     \LWR@setexparray{\LWR@colbarspec}%
7577     {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdouble}%
7578 }%
7579 {%
7580     \LWR@setexparray{\LWR@colbarspec}%
7581     {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarr}%
7582 }%
7583 }%
7584 \global\booltrue{\LWR@validtablecol}%
7585 }

```

`\LWR@parsecoloncolumn` Handles vertical rules.

```

7586 \newcommand*{\LWR@parsecoloncolumn}{%
7587 \LWR@traceinfo{\LWR@parsecoloncolumn}%

```

Remember the bar at this position:

```

7588 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
7589 {% left edge of the table:
7590     \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{leftedge}}%
7591     \ifdefstring{\LWR@tempone}{tvertbarldash}%
7592     {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarldoubledash}}%
7593     {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarldash}}%
7594 }%
7595 {% not at the left edge:
7596     \edef\LWR@tempone{%
7597         \LWR@getexparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalLaTeXcols}}%
7598     }%
7599     \ifdefstring{\LWR@tempone}{tvertbarrdash}%
7600     {\LWR@setexparray{\LWR@colbarspec}%
7601         {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdoubledash}}%
7602     {\LWR@setexparray{\LWR@colbarspec}%
7603         {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdash}}%
7604 }%
7605 \global\booltrue{\LWR@validtablecol}%
7606 }

```

`\LWR@parsesemicoloncolumn` Handles vertical rules.

```

7607 \newcommand*{\LWR@parsesemicoloncolumn}{%

```

Treat ; as a : column:

```

7608 \LWR@parsecoloncolumn%

```

Skip the following width token:

```

7609 \addtocounter{\LWR@tablecolspecindex}{1}%
7610 }

```

72.9 Parsing ‘l’, ‘c’, or ‘r’ columns

`\LWR@parsenormalcolumn` {*<thiscolumn>*}

Add to the accumulated column specs, advance counters, and pre-clear another column of at, before, and after specs.

```

7611 \newcommand*\LWR@parsenormalcolumn[1]{%
7612 \addtocounter{LWR@tabletotalLaTeXcols}{1}%
7613 \addtocounter{LWR@tabletotalLaTeXcolsnext}{1}%

7614 \LWR@setexparray{LWR@tablecolspec}{\arabic{LWR@tabletotalLaTeXcols}}{#1}%

7615 \LWR@traceinfo{normal column \arabic{LWR@tabletotalLaTeXcols}: #1}%
7616 \LWR@setexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7617 \LWR@setexparray{LWR@colbangspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7618 \LWR@setexparray{LWR@colbeforespec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7619 \LWR@setexparray{LWR@colafterspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7620 \LWR@setexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7621 \global\booltrue{LWR@validtablecol}%
7622 }
```

72.10 Parsing ‘p’, ‘m’, or ‘b’ columns

`\LWR@parsepcolumn` {*<thiscolumn>*} The width will be ignored.

```

7623 \newcommand*\LWR@parsepcolumn[1]{%

Converts to the given column type:

7624 \LWR@parsenormalcolumn{#1}%

Skips the following width token:

7625 \addtocounter{LWR@tablecolspecindex}{1}%
7626 }
```

72.11 Parsing ‘w’ columns

`\LWR@parsewcolumn` The width will be ignored.

```

7627 \newcommand*\LWR@parsewcolumn{%

7628 \LWR@columnspeclookahead{1}%
7629 \expandafter\LWR@parsenormalcolumn\expandafter{\LWR@strresulttwo}%

Skips the following width and alignment tokens:

7630 \addtocounter{LWR@tablecolspecindex}{2}%
7631 }
```

72.12 Parsing '*' columns

`\LWR@parsestarcolumn` Star columns should already have been expanded, so this should never be used.

```
7632 \newcommand*\LWR@parsestarcolumn}{%
7633   \addtocounter{LWR@tablecolspecindex}{2}%
7634 }
```

72.13 Parsing 'D' columns

From the dcolumn package.

`\LWR@parseDcolumn` `{\langlethiscolumn\rangle}` The three parameters will be ignored.

```
7635 \newcommand*\LWR@parseDcolumn}[1]{%
```

Converts to the given column type.

```
7636 \LWR@parsenormalcolumn{#1}%
```

Skips the following three parameters.

```
7637 \addtocounter{LWR@tablecolspecindex}{3}%
7638 }
```

72.14 Expanding the star column specifications

`Ctr` `LWR@starcount` Internal count for duplicating star columns.

```
7639 \newcount\LWR@starcount
```

`\LWR@expcolspec` Temporary storage used to build the expanded column specifier.

```
7640 \newcommand*\LWR@expcolspec}{}
```

`Ctr` `LWR@splitstarindex` Indexes into the column specifiers.

```
7641 \newcounter{LWR@splitstarindex}
```

`Ctr` `LWR@splitstarcopies` Number of copies.

```
7642 \newcounter{LWR@splitstarcopies}
```

`\LWR@splitstarcontents` Contents to duplicate.

```
7643 \newcommand*\LWR@splitstarcontents}{}
```

`\expandcolspec` Expands `\LWR@origcolspec` for star columns.

```
7644 \newcommand*{\expandcolspec}{%
```

Find the position of any star token.

```
7645   \StrPosition{\LWR@origcolspec}{*}[\LWR@tempone]%
```

Expand until no stars are found:

```
7646   \whileboolexpr{ test {\ifnumgreater{\LWR@tempone}{0}}}%
7647   {%
```

Begin with any characters to the left of the star.

```
7648       \setcounter{\LWR@splitstarindex}{\LWR@tempone}%
7649       \addtocounter{\LWR@splitstarindex}{-1}%
7650       \StrLeft{\LWR@origcolspec}{\value{\LWR@splitstarindex}}[\LWR@expcolspec]%
```

Move past the star to remember its number of copies.

```
7651       \addtocounter{\LWR@splitstarindex}{2}%
7652       \StrChar{\LWR@origcolspec}{\value{\LWR@splitstarindex}}[\LWR@tempone]%
7653       \setcounter{\LWR@splitstarcopies}{\expandafter\@firstofone\LWR@tempone}%
```

Move past the number of copies and remember the contents.

```
7654       \addtocounter{\LWR@splitstarindex}{1}%
7655       \StrChar{\LWR@origcolspec}{\value{\LWR@splitstarindex}}[\LWR@splitstarcontents]%
```

For each copy, append the contents.

```
7656       \ifnumgreater{\value{\LWR@splitstarcopies}}{0}%
7657       {%
7658           \LWR@starcount=\value{\LWR@splitstarcopies}%
7659           \loop
7660           \appto\LWR@expcolspec{%
```

(Remove the enclosing braces.)

```
7661           \expandafter\@firstofone\LWR@splitstarcontents%
7662           }%
7663           \advance \LWR@starcount -1
7664           \ifnum \LWR@starcount>0 \repeat
7665       }{ }%
```

Remove any token to the left, and append the rightmost remaining tokens.

```
7666       \StrGobbleLeft{\LWR@origcolspec}{\value{\LWR@splitstarindex}}[\colspecremainder]%
7667       \appto{\LWR@expcolspec}{\colspecremainder}%
```

Remember the final result.

```
7668       \edef\LWR@origcolspec{\LWR@expcolspec}%
```

Table 10: Tabular baseline

l	p	m	b	r
			bot	
		mid	bot	
l	par	mid	bot	r
	par	mid		
	par			

See if more stars exist.

```
7669     \StrPosition{\LWR@origcolspec}{*}[\LWR@tempone]%
7670     }%
7671 }
```

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.

Bool LWR@validtablecol True if found a valid table column type.

```
7672 \newbool{LWR@validtablecol}
```

Bool LWR@opttablecol True if found a table column optional argument.

```
7673 \newbool{LWR@opttablecol}
```

$\LWR@parsetablecols$ $\{\langle colspecs \rangle\}$

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 $\LWR@tabletotalLaTeXcols$, which is the number of & and \\ in each line, but which does not include @, !, <, > specifications in the count.

```
7674 \newcommand*{\LWR@parsetablecols}[1]{%
7675 \LWR@traceinfo{LWR@parsetablecols}%
```

Remember the original supplied column spec:

```
7676 \renewcommand*{\LWR@origcolspec}{#1}%
```

Table 11: Tabular HTML column conversions

l, r, c:	Converted to table cells without paragraph tags. Uses css <code>vertical-align:middle</code> so that top or bottom-aligned cells may go above or below this cell.
p:	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.
m:	With paragraph tags, css <code>vertical-align:middle</code> .
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.
P, M, B:	Horizontally-centered versions.
S:	Converted to 'r'. Ignores optional argument. From the <code>siunitx</code> package.
D:	Converted to 'c'. From the <code>dcolumn</code> package.
@, !, >, <:	One each, in that order.
 :	Vertical rule.
Unknown:	Converted to 'l'.
\newcolumn:	Currently treated as unknown.

Remove spaces:

```
7677 \expandarg%
7678 \StrSubstitute{\LWR@origcolspec}{ }{ }[\LWR@origcolspec]%
```

Expand any star columns:

```
7679 \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:

```
7680 \setcounter{LWR@tabletotalLaTeXcols}{0}%
7681 \setcounter{LWR@tabletotalLaTeXcolsnext}{1}%
7682 \LWR@setexparray{LWR@colatspec}{leftedge}{}%
7683 \LWR@setexparray{LWR@colatspec}{1}{}%
7684 \LWR@setexparray{LWR@colatspec}{2}{}%
7685 \LWR@setexparray{LWR@colatspec}{3}{}%
7686 \LWR@setexparray{LWR@colbangspec}{leftedge}{}%
7687 \LWR@setexparray{LWR@colbangspec}{1}{}%
7688 \LWR@setexparray{LWR@colbangspec}{2}{}%
7689 \LWR@setexparray{LWR@colbangspec}{3}{}%
7690 \LWR@setexparray{LWR@colbeforespec}{1}{}%
7691 \LWR@setexparray{LWR@colbeforespec}{2}{}%
7692 \LWR@setexparray{LWR@colbeforespec}{3}{}%
7693 \LWR@setexparray{LWR@colafterspec}{1}{}%
7694 \LWR@setexparray{LWR@colafterspec}{2}{}%
7695 \LWR@setexparray{LWR@colafterspec}{3}{}%
7696 \LWR@setexparray{LWR@colbarspec}{leftedge}{}%
7697 \LWR@setexparray{LWR@colbarspec}{1}{}%
7698 \LWR@setexparray{LWR@colbarspec}{2}{}%
7699 \LWR@setexparray{LWR@colbarspec}{3}{}%
```

Starting at the first column specification:

```
7700 \setcounter{LWR@tablecolspecindex}{1}%
```

Place the colspecs string length into `\LWR@strresult`, and remember the number of characters in the column specification:

```
7701 \expandarg%
7702 \StrLen{\LWR@origcolspec}[\LWR@strresult]%
7703 \fullexpandarg%
7704 \LWR@traceinfo{original column spec length: \LWR@strresult}%
7705 \setcounter{LWR@tablecolspecwidth}{\LWR@strresult}%
```

Haven't seen any optional arguments so far

```
7706 \global\boolfalse{LWR@opttablecol}%
```

Scan through the column specifications:

```
7707 \whileboolexpr{%
7708     not test{%
7709         \ifnumcomp{\value{LWR@tablecolspecindex}}{>}%
7710             {\value{LWR@tablecolspecwidth}}%
7711     }%
7712 }%
7713 {%
```

Place the next single-character column type into \LWR@strresult:

```
7714 \expandarg%
7715 \StrChar{\LWR@origcolspec}{\arabic{LWR@tablecolspecindex}}[\LWR@strresult]%
7716 \LWR@traceinfo{position \arabic{LWR@tablecolspecindex}: \LWR@strresult}%
7717 \fullexpandarg%
```

Not yet found a valid column type:

```
7718 \global\boolfalse{LWR@validtablecol}%
```

Skip over any optional arguments, such as siunitx S column:

```
7719 \IfStrEq{\LWR@strresult}{[]}{\global\booltrue{LWR@opttablecol}}{}}%
```

Throw away anything found inside the optional argument:

```
7720 \ifbool{LWR@opttablecol}%
7721 {}% inside an optional argument
7722 {}% not an optional tabular argument
```

Not inside an optional argument, so consider the column type:

```
7723 \IfStrEq{\LWR@strresult}{l}{\LWR@parsenormalcolumn{l}}{}}%
7724 \IfStrEq{\LWR@strresult}{c}{\LWR@parsenormalcolumn{c}}{}}%
7725 \IfStrEq{\LWR@strresult}{r}{\LWR@parsenormalcolumn{r}}{}}%
7726 \IfStrEq{\LWR@strresult}{L}{\LWR@parsenormalcolumn{L}}{}}%
7727 \IfStrEq{\LWR@strresult}{C}{\LWR@parsenormalcolumn{C}}{}}%
7728 \IfStrEq{\LWR@strresult}{R}{\LWR@parsenormalcolumn{R}}{}}%
7729 \IfStrEq{\LWR@strresult}{J}{\LWR@parsenormalcolumn{J}}{}}%

7730 \IfStrEq{\LWR@strresult}{S}{\LWR@parsenormalcolumn{S}}{}}%
7731 \IfStrEq{\LWR@strresult}{s}{\LWR@parsenormalcolumn{s}}{}}%

7732 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@parseatcolumn}{}}%
7733 \IfStrEq{\LWR@strresult}{!}{\LWR@parsebangcolumn}{}}%
7734 \IfStrEq{\LWR@strresult}{>}{\LWR@parsebeforecolumn}{}}%
7735 \IfStrEq{\LWR@strresult}{<}{\LWR@parseaftercolumn}{}}%
7736 \IfStrEq{\LWR@strresult}{|}{\LWR@parsebarcolumn}{}}%
7737 \IfStrEq{\LWR@strresult}{:}{\LWR@parsecoloncolumn}{}}%
7738 \IfStrEq{\LWR@strresult}{;}{\LWR@parsesemicoloncolumn}{}}%

7739 \IfStrEq{\LWR@strresult}{p}{\LWR@parsepcolumn{p}}{}}%
```

```
7740 \IfStrEq{\LWR@strresult}{m}{\LWR@parsepcolumn{m}}{}%
7741 \IfStrEq{\LWR@strresult}{b}{\LWR@parsepcolumn{b}}{}%
```

```
7742 \IfStrEq{\LWR@strresult}{w}{\LWR@parsewcolumn{}}%
7743 \IfStrEq{\LWR@strresult}{W}{\LWR@parsewcolumn{}}%
```

A star column:

```
7744 \IfStrEq{\LWR@strresult}{*}{\LWR@parsestarcolumn{}}%
```

From the dcolumn package:

```
7745 \IfStrEq{\LWR@strresult}{D}{\LWR@parseDcolumn{c}}{}%
```

From the tabularx package. X column has no parameter, but will be given paragraph tags.

```
7746 \IfStrEq{\LWR@strresult}{X}{\LWR@parsenormalcolumn{X}}{}%
```

Many people define centered versions “P”, “M”, and “B”:

```
\newcolumnntype{P}[1]{>{\centering\arraybackslash}p{#1}}
```

```
7747 \IfStrEq{\LWR@strresult}{P}{\LWR@parsepcolumn{P}}{}%
7748 \IfStrEq{\LWR@strresult}{M}{\LWR@parsepcolumn{M}}{}%
7749 \IfStrEq{\LWR@strresult}{B}{\LWR@parsepcolumn{B}}{}%
```

If this column was an invalid column type, convert it to an l column:

```
7750 \ifbool{LWR@validtablecol}{}{}%
7751   \LWR@traceinfo{invalid column type: \LWR@strresult}%
7752   \LWR@parsenormalcolumn{l}%
7753 }%
7754 }% not an optional column argument
```

If read the closing bracket, no longer inside the optional argument:

```
7755 \IfStrEq{\LWR@strresult}{]}{\global\boolfalse{LWR@opttablecol}}{}%
```

Move to the next character:

```
7756 \addtocounter{LWR@tablecolspecindex}{1}%
7757 }% whiledo
7758 }%
```

72.16 colortbl and xparse 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.

```
7759 \ifundefined{rownum}{\newcount\rownum}{}
```

`\@rowcolors` Emulated in case xcolor is not used.

```
7760 \newcommand*\@rowcolors{}
```

`\@rowc@lors` Emulated in case xcolor is not used.

```
7761 \newcommand*\@rowc@lors{}
```

`\LWR@xcolorrowHTMLcolor` Emulated xcolor row color.

```
7762 \newcommand*\LWR@xcolorrowHTMLcolor{}
```

`\LWR@columnHTMLcolor` HTMLstyle code for the column color.

```
7763 \def\LWR@columnHTMLcolor{}
```

`\LWR@rowHTMLcolor` HTMLstyle code for the row color.

```
7764 \def\LWR@rowHTMLcolor{}
```

`\LWR@cellHTMLcolor` HTMLstyle code for the cell color.

```
7765 \def\LWR@cellHTMLcolor{}
```

`\LWR@ruleHTMLcolor` HTMLstyle code for the cell color.

```
7766 \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`.

```
7767 \newcommand*\rowcolor{\LWR@getmynexttoken}%
```

`\arrayrulecolor` [*model*] {*color*}

`\arrayrulecolornexttoken` [*⟨model⟩*] {*⟨color⟩*}

Print versions for use outside and inside a tabular:

```
7768 \newcommand{\arrayrulecolor}[2][named]{}
7769 \newcommand{\arrayrulecolornexttoken}[2][named]{\LWR@getmynexttoken}
```

`\doublerulesepcolor` [*⟨model⟩*] {*⟨color⟩*}

`\doublerulesepcolornexttoken` [*⟨model⟩*] {*⟨color⟩*}

Print versions for use inside and outside a tabular:

```
7770 \newcommand{\doublerulesepcolor}[2][named]{}
7771 \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.

```
7772 \newcommand*\LWR@maybenewtablerow
7773 {%
7774 \ifbool{\LWR@startedrow}%
7775 {}% started the row
7776 {% not started the row
```

Remember that now have started the row:

```
7777 \global\booltrue{\LWR@startedrow}%
```

Create the row tag, with a class if necessary.

```
7778 \global\booltrue{\LWR@intabularmetadata}%
7779 \ifboolexpr{%
7780 test{\ifnumcomp{\value{\LWR@hlines}}{>}{0}} or%
7781 test{\ifnumcomp{\value{\LWR@hdashedlines}}{>}{0}}%
7782 }%
7783 {%
7784 \LWR@htmltag{tr class="hline" }%
7785 \LWR@orignewline%
7786 }%
7787 {% not doing hline
7788 \ifbool{\LWR@doingtbrule}%
7789 {%
7790 \ifdefvoid{\LWR@ruleHTMLcolor}{%
7791 \LWR@htmltag{tr class="tbrule"%
7792 }{%
7793 \LWR@htmltag{%
7794 tr class="tbrule" % space
7795 style="border-top: 1px solid % space
7796 \LWR@origpound\LWR@ruleHTMLcolor "%
```

```

7797         }%
7798     }%
7799     \LWR@orignewline%
7800 }%
7801     {\LWR@htmltag{tr}\LWR@orignewline}%
7802 }% end of not doing hline
7803 }% end of not started the row
7804 }

```

72.18 Printing vertical bar tags

`\LWR@printbartag` {<*index*>}

Adds to a tabular data cell an HTML class name for a left/right vertical bar.

```

7805 \newcommand*{\LWR@printbartag}[1]{%
7806 \LWR@traceinfo{\LWR@printbartag !#1!}%
7807 \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}%
7808 {}% muting or empty
7809 {% not muting
7810     \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{#1}}%
7811     \ifdefempty{\LWR@tempone}{{ \LWR@tempone}%
7812 }% not muting
7813 \LWR@traceinfo{\LWR@printbartag done}%
7814 }

```

72.19 Printing at or bang tags

`\LWR@printatbang` {<*at -or- bang*>} {<*index*>}

```

7815 \newcommand*{\LWR@printatbang}[2]{%

```

Fetch the column at or bang spec:

```

7816 \xdef\LWR@atbangspec{\LWR@getexparray{\LWR@col#1spec}{#2}}%
7817 \LWR@traceinfo{atbang: #2 !\LWR@atbangspec!}%

```

Only generate if is not empty;

```

7818 \ifdefempty{\LWR@atbangspec}%
7819 {}%
7820 {% not empty
7821     \LWR@htmltag{%
7822         td class="td#1%
7823         \LWR@subaddcmidruletrim{}{}%
7824         \LWR@printbartag{#2}%
7825         "%
7826         \LWR@tdstartstyles%
7827         \LWR@addcmidrulewidth%
7828         \LWR@addcdashline%

```

```

7829     \LWR@addtabularrulecolors%
7830     \LWR@tdendstyles%
7831   }%

```

Create an empty cell if muting for the \bottomrule:

```

7832   \ifbool{expr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}}%
7833   {%
7834   {\LWR@atbangspec}%
7835   %
7836   \LWR@htmltag{/td}\LWR@orignewline%
7837   \global\booltrue{LWR@tabularcellladed}%
7838   }% not empty
7839   }%

```

\LWR@addleftmostbartag

```

7840 \newcommand*{\LWR@addleftmostbartag}{%
7841 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}{%
7842   \LWR@printbartag{leftedge}%
7843 }{%
7844 }

```

\LWR@tabularleftedge

```

7845 \newcommand*{\LWR@tabularleftedge}{%
7846 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}%
7847 {%
7848   \LWR@printatbang{at}{leftedge}%
7849   \LWR@printatbang{bang}{leftedge}%
7850 }% left edge
7851 }% not left edge
7852 }

```

72.20 Data opening tag

\LWR@thiscolspec Temporary storage.

```

7853 \newcommand*{\LWR@thiscolspec}{}

```

\LWR@tabledatasinglecolumnntag Print a table data opening tag with style for alignment and color.

```

7854 \newcommand*{\LWR@tabledatasinglecolumnntag}%
7855 {%
7856 \LWR@traceinfo{LWR@tabledatasinglecolumnntag}%
7857 \LWR@maybe newtable row%

```

Don't start a new paragraph tag if have already started one:

```

7858 \ifbool{LWR@intabularmetadata}%
7859 {%

```

If have found the end of tabular command, do not create the next data cell:

```
7860 \ifbool{LWR@exitingtabular}{}%
7861 {% not exiting tabular
```

Print the @ and ! contents before first column:

```
7862 \LWR@tabularleftedge%
```

Fetch the current column's alignment character into \LWR@strresult:

```
7863 \xdef\LWR@strresult{%
7864 \LWR@getexparray{LWR@tablecolspec}{\arabic{LWR@tableLaTeXcolindex}}%
7865 }%
```

print the start of a new table data cell:

```
7866 \LWR@traceinfo{LWR@tabledatasinglecolumnntag: about to print td tag}%
7867 \LWR@htmltag{td class="td%
```

append this column's spec:

```
7868 \LWR@strresult%
```

If this column has a cmidrule, add "rule" to the end of the HTML class tag. Also add vertical bar tags.

```
7869 \LWR@addcmidruletrim%
7870 \LWR@addleftmostbartag%
7871 \LWR@printbartag{\arabic{LWR@tableLaTeXcolindex}}%
7872 "%
```

Add styles for rules, alignment:

```
7873 \LWR@tdstartstyles%
7874 \LWR@addcmidrulewidth%
7875 \LWR@addcdashline%

7876 \xdef\LWR@thiscolspec{%
7877 \LWR@getexparray{LWR@tablecolspec}{\arabic{LWR@tableLaTeXcolindex}}%
7878 }%
7879 \LWR@addformatwpaignment{\LWR@thiscolspec}%
```

Add styles for cell and rule colors:

```
7880 \LWR@addtabulararrowcolor%
7881 \LWR@addtabularrulecolors%

7882 \LWR@tdendstyles%
7883 }% HTML td
7884 \LWR@traceinfo{LWR@tabledatasinglecolumnntag: done printing td tag}%
```

If this is a p, m, b, or X column, allow paragraphs:

```

7885     \ifboolexpr{%
7886         test{ \ifdefstring{\LWR@strresult}{p} } or
7887         test{ \ifdefstring{\LWR@strresult}{m} } or
7888         test{ \ifdefstring{\LWR@strresult}{b} } or
7889         test{ \ifdefstring{\LWR@strresult}{P} } or
7890         test{ \ifdefstring{\LWR@strresult}{M} } or
7891         test{ \ifdefstring{\LWR@strresult}{B} } or
7892         test{ \ifdefstring{\LWR@strresult}{X} }
7893     }%
7894     {% allow pars
7895         \LWR@traceinfo{\LWR@tabledatasinglecolumn: about to LWR@startpars}%
7896         \global\booltrue{\LWR@tableparcell}%
7897         \LWR@startpars%
7898         \LWR@traceinfo{\LWR@tabledatasinglecolumn: done with LWR@startpars}%
7899     }% allow pars
7900     }% no pars

```

Print the > contents unless muted for the \bottomrule:

```

7901     \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}%
7902     {}%
7903     {%
7904         \LWR@gettexpparray{\LWR@colbefore}{{\arabic{\LWR@tableLaTeXcolindex}}}%
7905     }%
7906     \global\boolfalse{\LWR@intabularmetadata}%
7907     }% not exiting tabular
7908 }{}% in tabular metadata
7909 \LWR@traceinfo{\LWR@tabledatasinglecolumn: done}%
7910 }%

```

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 arydshln package "cdashed line" should be created for this column.

ctr LWR@midrulecounter Indexes across the LWR@midrules and LWR@trim<l/r>rules data arrays.

```
7911 \newcounter{\LWR@midrulecounter}
```

len \LWR@heavyrulewidth The default width of the rule.

```
7912 \newlength{\LWR@heavyrulewidth}
```

```
7913 \setlength{\LWR@heavyrulewidth}{.08em}
```

Len `\LWR@lightrulewidth` The default width of the rule.

```
7914 \newlength{\LWR@lightrulewidth}
7915 \setlength{\LWR@lightrulewidth}{.05em}
```

Len `\LWR@cmidrulewidth` The default width of the rule.

```
7916 \newlength{\LWR@cmidrulewidth}
7917 \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.

```
7918 \newlength{\LWR@thiscmidrulewidth}
7919 \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.

```
7920 \newcommand*{\LWR@clearmidrules}
7921 {%
7922 \setcounter{LWR@midrulecounter}{1}%
7923 \whileboolexpr{%
7924   not test{%
7925     \ifnumcomp{\value{LWR@midrulecounter}}{>}%
7926       {\value{LWR@tabletotalLaTeXcols}}%
7927   }%
7928 }%
7929 {%
7930   \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{0pt}%
7931   \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
7932   \LWR@setexparray{LWR@trimrules}{\arabic{LWR@midrulecounter}}{%
7933     \LWR@setexparray{LWR@trimrules}{\arabic{LWR@midrulecounter}}{%
7934       \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{N}%
7935     \addtocounter{LWR@midrulecounter}{1}%
7936   }%
7937 }
```

`\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.

```
7938 \newcommand*{\LWR@subcmidrule}[4]{%
```

```

7939 \setcounter{LWR@midrulecounter}{#3}%
7940 \whileboolexpr{%
7941     not test {%
7942         \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
7943     }%
7944 }%
7945 {%
7946     \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{#1}%
7947     \addtocounter{LWR@midrulecounter}{1}%
7948 }% whiledo
7949 \IfSubStr{#2}{l}{\LWR@setexparray{LWR@trimlrules}{#3}{l}}{%
7950 \IfSubStr{#2}{r}{\LWR@setexparray{LWR@trimrrules}{#4}{r}}{%
7951 \global\booltrue{LWR@doingcmidrule}%
7952 }

```

`\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.

```

7953 \NewDocumentCommand{\LWR@docmidrule}
7954     {O{\LWR@cmidrulewidth} D()} >\SplitArgument{1}{-}m}
7955     {\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.

```

7956 \newcommand*{\LWR@subcdashline}[2]{%
7957 \setcounter{LWR@midrulecounter}{#1}%
7958 \whileboolexpr{%
7959     not test {%
7960         \ifnumcomp{\value{LWR@midrulecounter}}{>}{#2}%
7961     }%
7962 }%
7963 {%
7964     \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{Y}%
7965     \addtocounter{LWR@midrulecounter}{1}%
7966 }% whiledo
7967 \global\booltrue{LWR@doingcmidrule}%
7968 }

```

`\LWR@docdashline` {*leftcolumn-rightcolumn*}

Marks LWR@cdashlines data array elements to be Y from left to right columns.

```

7969 \NewDocumentCommand{\LWR@docdashline}
7970     {>\SplitArgument{1}{-}m}%
7971     {%
7972         \LWR@subcdashline#1%
7973     }

```

Used to compute margins, tabular trims, column offsets:

```
7974 \newlength{\LWR@templengthone}
7975 \newlength{\LWR@templengthtwo}
7976 \newlength{\LWR@templengththree}
7977 \newcounter{LWR@tempcountone}
```

Used to add a style to a table data cell:

```
7978 \newbool{LWR@tdhavecellstyle}
```

`\LWR@tdstartstyles` Begins possibly adding a table data cell style.

```
7979 \newcommand*{\LWR@tdstartstyles}{\global\boolfalse{LWR@tdhavecellstyle}}
```

`\LWR@tdaddstyle` Starts adding a table data cell style.

```
7980 \newcommand*{\LWR@tdaddstyle}{%
7981 \ifbool{LWR@tdhavecellstyle}%
7982 { ; }%
7983 { style="%
7984 \booltrue{LWR@tdhavecellstyle}%
7985 }
```

`\LWR@tdendstyles` Finishes possibly adding a table data cell style. Prints the closing quote.

```
7986 \newcommand*{\LWR@tdendstyles}{%
7987 \ifbool{LWR@tdhavecellstyle}{%
7988   "%
7989   \global\boolfalse{LWR@tdhavecellstyle}%
7990 }{ }%
7991 }
```

`\LWR@subaddcmidruletrim` `{\lefttrim}` `{\righttrim}` Adds a `\cmidrule` with optional trim.

```
7992 \newcommand*{\LWR@subaddcmidruletrim}[2]{%
7993 \setlength{\LWR@templengthone}{%
7994   \LWR@getexparray{LWR@midrules}{\arabic{LWR@tableLaTeXcolindex}}%
7995 }%
7996 \ifdimcomp{\LWR@templengthone}{>}{\opt}%
7997 }
```

Print the class with left and right trim letters appended:

```
7998 \LWR@origtilde tdrule#1#2%
```

Remember the width of the rule:

```
7999 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
8000 }%
8001 {%
```

```
8002 \setlength{\LWR@thiscmidrulewidth}{0pt}%
8003 }%
8004 }
```

`\LWR@addcmidruletrim` Adds left or right trim to a `\cmidrule`.

```
8005 \newcommand*\LWR@addcmidruletrim{%
8006 \LWR@subaddcmidruletrim%
8007 {\LWR@getexparray{\LWR@trimlrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8008 {\LWR@getexparray{\LWR@trimrrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8009 }
```

`\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`.

```
8010 \newcommand{\LWR@addrulewidth}[2]{%
```

Only add a custom width if `thiswidth` is different than the `defaultwidth`, or if a color is being used:

```
8011 \ifboolexpr{%
8012   test{\ifdimcomp{#1}={}\{0pt\}} or
8013   (
8014     ( test{\ifdimcomp{#1}={}\{#2\}} and not bool{FormatWP} )
8015     and ( test {\ifdefvoid{\LWR@ruleHTMLcolor}} )
8016   )
8017 }%
8018 {}% default width and color
8019 {}% custom width and/or color
```

Ensure that the width is wide enough to display in the browser:

```
8020 \LWR@forceminwidth{#1}%
```

Begin adding another style:

```
8021 \LWR@tdaddstyle%
```

The style itself:

```
8022 border-top:\LWR@printlength{\LWR@atleastonept} solid %
```

If default gray, the darkness of the color depends on the thickness of the rule:

```
8023 \ifdefvoid{\LWR@ruleHTMLcolor}{%
8024   \ifdimcomp{#1}{<}{\LWR@lightrulewidth}%
8025   {\LWR@origpound{A0A0A0}}%
8026   {% lightrule or heavier
8027     \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}%
```

```

8028         {\LWR@origpound{808080}%
8029         {black}%
8030     }% lightrule or heavier
8031     }{%
8032         \LWR@origpound\LWR@ruleHTMLcolor%
8033     }
8034 }% custom width and/or color
8035 }

```

`\LWR@addcmidrulewidth` Adds a style for the rule width.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8036 \newcommand{\LWR@addcmidrulewidth}{%
8037 \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
8038 }

```

`\LWR@addcdashline` Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8039 \newcommand{\LWR@addcdashline}{%
8040 \edef\LWR@tempone{%
8041     \LWR@getexparray{\LWR@cdashlines}{\arabic{\LWR@tableLaTeXcolindex}}%
8042 }%
8043 \ifdefstring{\LWR@tempone}{Y}{%
8044     \LWR@tdaddstyle%
8045     border-top: 1pt dashed %
8046     \ifdefvoid{\LWR@ruleHTMLcolor}%
8047         {black}%
8048         {\LWR@origpound\LWR@ruleHTMLcolor}%
8049 }{}%
8050 }

```

`\LWR@WPcell` `{\langle text-align \rangle}{\langle vertical-align \rangle}`

```

8051 \newcommand*{\LWR@WPcell}[2]{%
8052 \LWR@tdaddstyle%
8053 \LWR@print@mbbox{text-align:#1}; \LWR@print@mbbox{vertical-align:#2}%
8054 }

```

`\LWR@addformatwpalignment` If `FormatWP`, adds a style for the alignment.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8055 \newcommand*{\LWR@addformatwpalignment}[1]{%
8056 \ifbool{FormatWP}{%
8057 \IfSubStr{#1}{l}{\LWR@WPcell{left}{middle}}{%
8058 \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{%
8059 \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{%
8060 \IfSubStr{#1}{p}{\LWR@WPcell{left}{bottom}}{%
8061 \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{%
8062 \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{%
8063 \IfSubStr{#1}{P}{\LWR@WPcell{center}{bottom}}{%

```

```

8064 \IfSubStr{#1}{M}{\LWR@WPcell{center}{middle}}{%
8065 \IfSubStr{#1}{B}{\LWR@WPcell{center}{top}}{%
8066 }{%
8067 }

```

72.22 Cell colors

`\LWR@addtabularrowcolor` Adds a cell's row color style, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```

8068 \newcommand*{\LWR@addtabularrowcolor}{%
8069 \ifbool{LWR@tabularmutemods}{%
8070   \ifdefvoid{\LWR@rowHTMLcolor}{%
8071     \ifdefvoid{\LWR@xcolorrowHTMLcolor}{%
8072       {% xcolor row color
8073         \LWR@tdaddstyle%
8074         background:\LWR@origpound\LWR@xcolorrowHTMLcolor%
8075       }%
8076     }%
8077     {% explicit row color
8078       \LWR@tdaddstyle%
8079       background:\LWR@origpound\LWR@rowHTMLcolor%
8080     }%
8081 }%
8082 }

```

`\LWR@addtabularhrulecolor` Adds a cell's horizontal rule color style, if needed.

```

8083 \newcommand*{\LWR@addtabularhrulecolor}{%

```

If either form of horizontal rule is requested:

```

8084 \ifboolexpr{%
8085   test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
8086   test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
8087   bool{LWR@doingtbrule}%
8088 }{%

```

If there is a no custom color:

```

8089   \ifdefvoid{\LWR@ruleHTMLcolor}%
8090   {%
8091     \ifnumcomp{\value{LWR@hlines}}{>}{1}%
8092     {%
8093       \LWR@tdaddstyle%
8094       border-top: 4px double%
8095     }% else
8096     \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
8097     {%
8098       \LWR@tdaddstyle%
8099       border-top: 2px dashed%

```

```

8100     }{% else
8101     \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
8102     {%
8103         \LWR@tdaddstyle%
8104         border-top: 1px dashed%
8105     }{}}}%

```

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

```
8106     }%
```

If there is a custom color:

```

8107     {%
8108     \ifnumcomp{\value{LWR@hlines}}{>}{1}%
8109     {%
8110         \LWR@tdaddstyle%
8111         border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
8112     }{% else
8113     \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
8114     {%
8115         \LWR@tdaddstyle%
8116         border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8117     }{% else
8118     \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
8119     {%
8120         \LWR@tdaddstyle%
8121         border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8122     }{% else
8123         \LWR@tdaddstyle%
8124         border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
8125     }{}}}%
8126     }%
8127 }{}}%
8128 }

```

`\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.

```
8129 \newcommand*{\LWR@addtabularrulecolors}{%
```

Custom horizontal rule color:

```
8130 \LWR@addtabularhrulecolor%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8131 \ifbool{LWR@tabularmutemods}{}%
```

If at the leftmost cell, possibly add a leftmost vertical rule:

```
8132     \ifnumequal{\value{LWR@tableLaTeXcolindex}}{1}{%
```

Fetch the left edge's vertical bar specification:

```
8133     \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
```

Add a custom style if a vertical bar was requested:

```
8134     \ifdefstring{\LWR@tempone}{tvertbarl}{%
8135         \LWR@tdaddstyle%
8136         border-left: 1px solid % space
8137         \LWR@vertruleHTMLcolor%
8138     }{}%
8139     \ifdefstring{\LWR@tempone}{tvertbarldouble}{%
8140         \LWR@tdaddstyle%
8141         border-left: 4px double % space
8142         \LWR@vertruleHTMLcolor%
8143     }{}%
8144     \ifdefstring{\LWR@tempone}{tvertbarldash}{%
8145         \LWR@tdaddstyle%
8146         border-left: 1px dashed % space
8147         \LWR@vertruleHTMLcolor%
8148     }{}%
8149     \ifdefstring{\LWR@tempone}{tvertbarldoubledash}{%
8150         \LWR@tdaddstyle%
8151         border-left: 2px dashed % space
8152         \LWR@vertruleHTMLcolor%
8153     }{}%
8154 }{}%
```

Possibly add a right vertical rule for this cell:

```
8155     \edef\LWR@tempone{%
8156         \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tableLaTeXcolindex}}%
8157     }%
8158     \ifdefstring{\LWR@tempone}{tvertbarr}{%
```

Add a custom style if a vertical bar was requested:

```
8159         \LWR@tdaddstyle%
8160         border-right: 1px solid \LWR@vertruleHTMLcolor%
8161     }{}%
8162     \ifdefstring{\LWR@tempone}{tvertbarrdouble}{%
8163         \LWR@tdaddstyle%
8164         border-right: 4px double \LWR@vertruleHTMLcolor%
8165     }{}%
8166     \ifdefstring{\LWR@tempone}{tvertbarrdash}{%
8167         \LWR@tdaddstyle%
8168         border-right: 1px dashed \LWR@vertruleHTMLcolor%
8169     }{}%
8170     \ifdefstring{\LWR@tempone}{tvertbarrdoubledash}{%
8171         \LWR@tdaddstyle%
8172         border-right: 2px dashed \LWR@vertruleHTMLcolor%
8173     }{}%
8174 }%
8175 }
```

ctr LWR@cellcolordepth Counts how many cell color <div>s were added to the current tabular data cell.

```
8176 \newcounter{LWR@cellcolordepth}
```

\LWR@subadddtabularcellcolor {<HTML color>}

```
8177 \newcommand*{\LWR@subadddtabularcellcolor}[1]{%
8178 \LWR@htmltag{div class="cellcolor" style="%
8179   background:\LWR@origpound{ }{ }#1 %
8180 " }%
8181 \addtocounter{LWR@cellcolordepth}{1}%
8182 }
```

\LWR@adddtabularcellcolor Adds a cell color style, if needed.

```
8183 \newcommand*{\LWR@adddtabularcellcolor}{%
8184 \ifdefvoid{\LWR@cellHTMLcolor}%
8185 {%
8186   \ifdefvoid{\LWR@rowHTMLcolor}%
8187   {%
8188     \ifdefvoid{\LWR@xcolorrowHTMLcolor}%
8189     {%
8190       \ifdefvoid{\LWR@columnHTMLcolor}%
8191       {}%
8192       {\LWR@subadddtabularcellcolor{\LWR@columnHTMLcolor}}%
8193     }%
8194     {\LWR@subadddtabularcellcolor{\LWR@xcolorrowHTMLcolor}}%
8195   }%
8196   {\LWR@subadddtabularcellcolor{\LWR@rowHTMLcolor}}%
8197 }%
8198 {\LWR@subadddtabularcellcolor{\LWR@cellHTMLcolor}}%
8199 }
```

72.23 Multicolumns

72.23.1 Parsing multicolumns

```
8200 \newcounter{LWR@tablemulticolwidth}
```

Indexes into the multicolumn specification:

```
8201 \newcounter{LWR@tablemulticolspos}
```

Remembers multicolumn vertical rules if found in the column spec.

```
8202 \newcounter{LWR@mcvertbarsl}
8203 \newcounter{LWR@mcvertbarsr}
8204 \newcounter{LWR@mcvertbarsldash}
8205 \newcounter{LWR@mcvertbarsrdash}
8206 \newbool{LWR@mcvertbaronleft}%
```

`\LWR@printmccoltype` $\langle colspec \rangle$ Print any valid column type found. Does not print @, !, >, or < columns or their associated tokens.

This is printed as part of the table data tag's class.

```
8207 \newcommand*\LWR@printmccoltype}[1]{%
8208 \LWR@traceinfo{\LWR@printmccoltype -#1-}%
```

Get one token of the column spec:

```
8209 \StrChar{#1}{\arabic{\LWR@tablemulticolspan}}[\LWR@strresult]%
```

Add to the HTML tag depending on which column type is found:

```
8210 \IfStrEq{\LWR@strresult}{l}{l}{}%
8211 \IfStrEq{\LWR@strresult}{c}{c}{}%
8212 \IfStrEq{\LWR@strresult}{r}{r}{}%
8213 \IfStrEq{\LWR@strresult}{p}{p}{}%
8214 \IfStrEq{\LWR@strresult}{m}{m}{}%
8215 \IfStrEq{\LWR@strresult}{b}{b}{}%
8216 \IfStrEq{\LWR@strresult}{P}{P}{}%
8217 \IfStrEq{\LWR@strresult}{M}{M}{}%
8218 \IfStrEq{\LWR@strresult}{B}{B}{}%

8219 \IfStrEq{\LWR@strresult}{w}{w}{}%
8220 \IfStrEq{\LWR@strresult}{W}{W}{}%

8221 \IfStrEq{\LWR@strresult}{S}{c}{}%
8222 \IfStrEq{\LWR@strresult}{s}{c}{}%

8223 \IfStrEq{\LWR@strresult}{X}{p}{}%

8224 \IfStrEq{\LWR@strresult}{|}{}%
8225 {%
8226   \ifbool{\LWR@mcolvertbodybaronleft}%
8227     {\addtocounter{\LWR@mcolvertbodybarsl}{1}}% left edge
8228     {\addtocounter{\LWR@mcolvertbodybarsr}{1}}% not left edge
8229 }%
8230 {%
8231   \IfStrEq{\LWR@strresult}{:}{}%
8232   {%
8233     \ifbool{\LWR@mcolvertbodybaronleft}%
8234       {\addtocounter{\LWR@mcolvertbodybarsldash}{1}}% left edge
8235       {\addtocounter{\LWR@mcolvertbodybarsrdash}{1}}% not left edge
8236   }%
8237   {%
8238     \IfStrEq{\LWR@strresult}{;}{;%
8239     }%
8240     \ifbool{\LWR@mcolvertbodybaronleft}%
8241       {\addtocounter{\LWR@mcolvertbodybarsldash}{1}}% left edge
8242       {\addtocounter{\LWR@mcolvertbodybarsrdash}{1}}% not left edge
8243   }%
8244   {\boolfalse{\LWR@mcolvertbodybaronleft}}%
```

```

8245     }%
8246 }%
8247 \LWR@traceinfo{lwr@printmccoltype done}%
8248 }

```

`\LWR@multicolpartext` $\langle num\ parameters \rangle$ Print the data with paragraph tags, advance to bypass the given number of parameters.

```

8249 \newcommand*{\LWR@multicolpartext}[1]{%
8250 \LWR@startpars%
8251 \LWR@multicoltext%
8252 \addtocounter{LWR@tablemulticolspos}{#1}%
8253 \LWR@stoppars%
8254 }

```

`\LWR@multicolother` $\langle colspec \rangle$ For @, !, >, <, print the next token without paragraph tags:

```

8255 \newcommand*{\LWR@multicolother}[1]{%
8256 \addtocounter{LWR@tablemulticolspos}{1}%
8257 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
8258 \LWR@strresult%

```

A valid column data type was found:

```

8259 \global\booltrue{LWR@validtablecol}%
8260 }

```

`\LWR@multicolskip` Nothing to print for this column type.

```

8261 \newcommand*{\LWR@multicolskip}{%

```

A valid column data type was found:

```

8262 \global\booltrue{LWR@validtablecol}%
8263 }

```

`\LWR@printmccoldata` $\langle colspec \rangle$ Print the data for any valid column type found.

```

8264 \newcommand*{\LWR@printmccoldata}[1]{%
8265 \LWR@traceinfo{lwr@printmccoldata -#1}%

```

Not yet found a valid column type:

```

8266 \global\boolfalse{LWR@validtablecol}%

```

Get one token of the column spec:

```

8267 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%

```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```

8268 \IfStrEq{\LWR@strresult}{l}{\LWR@multicoltext}{}%
8269 \IfStrEq{\LWR@strresult}{c}{\LWR@multicoltext}{}%
8270 \IfStrEq{\LWR@strresult}{r}{\LWR@multicoltext}{}%
8271 \IfStrEq{\LWR@strresult}{D}{}%
8272 \addtocounter{LWR@tablemulticolspos}{3}% skip parameters
8273 \LWR@multicoltext%
8274 }{}%

8275 \IfStrEq{\LWR@strresult}{p}{\LWR@multicolpartext{2}}{}%
8276 \IfStrEq{\LWR@strresult}{m}{\LWR@multicolpartext{2}}{}%
8277 \IfStrEq{\LWR@strresult}{b}{\LWR@multicolpartext{2}}{}%
8278 \IfStrEq{\LWR@strresult}{P}{\LWR@multicolpartext{2}}{}%
8279 \IfStrEq{\LWR@strresult}{M}{\LWR@multicolpartext{2}}{}%
8280 \IfStrEq{\LWR@strresult}{B}{\LWR@multicolpartext{2}}{}%

8281 \IfStrEq{\LWR@strresult}{w}{\LWR@multicolpartext{3}}{}%
8282 \IfStrEq{\LWR@strresult}{W}{\LWR@multicolpartext{3}}{}%

8283 \IfStrEq{\LWR@strresult}{S}{\LWR@multicoltext}{}%
8284 \IfStrEq{\LWR@strresult}{s}{\LWR@multicoltext}{}%

8285 \IfStrEq{\LWR@strresult}{X}{\LWR@multicolpartext{1}}{}%
8286 \IfStrEq{\LWR@strresult}{|}{\LWR@multicolskip}{}%
8287 \IfStrEq{\LWR@strresult}{:}{\LWR@multicolskip}{}%
8288 \IfStrEq{\LWR@strresult}{;}{}%
8289     \LWR@multicolskip%
8290     \addtocounter{LWR@tablemulticolspos}{1}% skip parameter
8291 }{}%
8292 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@multicolother{#1}}{}%
8293 \IfStrEq{\LWR@strresult}{\detokenize{!}}{\LWR@multicolother{#1}}{}%
8294 \IfStrEq{\LWR@strresult}{\detokenize{>}}{\LWR@multicolother{#1}}{}%
8295 \IfStrEq{\LWR@strresult}{\detokenize{<}}{\LWR@multicolother{#1}}{}%

```

If an invalid column type:

```
8296 \ifbool{LWR@validtablecol}{\LWR@multicoltext}%
```

Tracing:

```
8297 \LWR@traceinfo{LWR@printmccoldata done}%
8298 }
```

```
\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.

```
8299 \newcommand*{\LWR@parsemulticolumnalignment}[2]{%
8300 \setcounter{LWR@tablemulticolspos}{1}%
8301 \StrLen{#1}[\LWR@strresult]%
8302 \setcounter{LWR@tablemulticolwidth}{\LWR@strresult}%

```

Scan across the tokens in the column spec:

```
8303 \whileboolexpr{%
8304     not test {%
8305         \ifnumcomp{\value{LWR@tablemulticolspos}}{>}%
8306             {\value{LWR@tablemulticolwidth}}%
8307     }%
8308 }%
8309 {%
```

Execute the assigned print function for each token in the column spec:

```
8310 #2{#1}%
```

Move to the next token in the column spec:

```
8311 \addtocounter{LWR@tablemulticolspos}{1}%
8312 }%
8313 }
```

72.23.2 Multicolumn factored code

`\LWR@addmulticolvertrulecolor`

```
8314 \newcommand*{\LWR@addmulticolvertrulecolor}{%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8315 \ifbool{LWR@tabularmutemods}{}{%
```

Left side:

```
8316     \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{%
8317         \LWR@tdadddstyle%
8318         border-left: 1px solid \LWR@vertruleHTMLcolor%
8319     }{}%
8320     \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{%
8321         \LWR@tdadddstyle%
8322         border-left: 4px double \LWR@vertruleHTMLcolor%
8323     }{}%
8324     \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{%
8325         \LWR@tdadddstyle%
8326         border-left: 1px dashed \LWR@vertruleHTMLcolor%
8327     }{}%
8328     \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{%
8329         \LWR@tdadddstyle%
8330         border-left: 2px dashed \LWR@vertruleHTMLcolor%
8331     }{}%
```

Right side:

```
8332     \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{%
```

```

8333     \LWR@tdaddstyle%
8334     border-right: 1px solid \LWR@vertruleHTMLcolor%
8335   }{}%
8336   \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{%
8337     \LWR@tdaddstyle%
8338     border-right: 4px double \LWR@vertruleHTMLcolor%
8339   }{}%
8340   \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{%
8341     \LWR@tdaddstyle%
8342     border-right: 1px dashed \LWR@vertruleHTMLcolor%
8343   }{}%
8344   \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{%
8345     \LWR@tdaddstyle%
8346     border-right: 2px dashed \LWR@vertruleHTMLcolor%
8347   }{}%
8348 }%
8349 }

```

```
8350 \newcommand{\LWR@multicoltext}{}

```

To find multicolumn right trim:

```
8351 \newcounter{LWR@lastmulticolumn}

```

```
\LWR@domulticolumn [1: vpos] [2: #rows] {3: numLaTeXcols} {4: numHTMLcols} {5: colspec}
{6: text}
```

```

8352 \NewDocumentCommand{\LWR@domulticolumn}{o o m m +m}{%
8353 \LWR@traceinfo{LWR@domulticolumn -#1- -#2- -#4- -#5-}%

```

Remember the text to be inserted, and remember that a valid column type was found:

```

8354 \renewcommand{\LWR@multicoltext}{%
8355 #6%
8356 \global\booltrue{LWR@validtablecol}%
8357 }%

```

Compute the rightmost column to be included. This is used to create the right trim.

```

8358 \setcounter{LWR@lastmulticolumn}{\value{LWR@tableLaTeXcolindex}}%
8359 \addtocounter{LWR@lastmulticolumn}{#3}%
8360 \addtocounter{LWR@lastmulticolumn}{-1}%

```

Row processing:

```
8361 \LWR@maybe newtablerow%

```

Begin the opening table data tag:

```
8362 \LWR@htmltag{td colspan="#4" %

```

```

8363 \IfValueT{#2}{ % rows?
8364 rowspan="#2" %

```

```

8365 \IfValueT{#1}{% vpos?
8366 \ifstrequal{#1}{b}{style="\LWR@print@box{vertical-align:bottom}" }{}%
8367 \ifstrequal{#1}{t}{style="\LWR@print@box{vertical-align:top}" }{}%
8368 }% vpos?
8369 }% rows?

```

```
8370 class="td%
```

Print the column type and vertical bars:

```

8371 \setcounter{LWR@mcolvertbarsl}{0}%
8372 \setcounter{LWR@mcolvertbarsr}{0}%
8373 \setcounter{LWR@mcolvertbarsldash}{0}%
8374 \setcounter{LWR@mcolvertbarsrdash}{0}%
8375 \booltrue{LWR@mcolvertbaronleft}%
8376 \LWR@parsemulticolmnalignment{#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:

```

8377 \LWR@subaddcmidruletrim%
8378 {\LWR@getexparray{LWR@trimlrules}{\arabic{LWR@tableLaTeXcolindex}}}%
8379 {\LWR@getexparray{LWR@trimrrules}{\arabic{LWR@lastmulticolumn}}}%

```

Also add vertical bar class.

```

8380 \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{ tvertbarl}{}%
8381 \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{ tvertbarldouble}{}%
8382 \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{ tvertbarr}{}%
8383 \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{ tvertbarrdouble}{}%
8384 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{ tvertbarldash}{}%
8385 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{ tvertbarldoubledash}{}%
8386 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{ tvertbarrdash}{}%
8387 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{ tvertbarrdoubledash}{}%

```

Close the class tag's opening quote: " NOT A TYPO

```
8388 %
```

```
8389 \LWR@tdstartstyles%
```

```
8390 \LWR@addtabulararrowcolor%
```

```
8391 \LWR@addcmidrulewidth%
```

```
8392 \LWR@addcdashline%
```

```
8393 \LWR@addtabularhrulecolor%
```

```
8394 \LWR@addmulticolvertrulecolor%
```

```
8395 \LWR@addformatwpaignment{#5}%
```

```
8396 \LWR@tdendstyles%
```

```
8397 }% end of the opening table data tag
```

```
8398 \global\boolfalse{LWR@intabularmetadata}%
```

```
8399 \LWR@parsemulticolmnalignment{#5}{\LWR@printmccoldata}%
```

```
8400 }
```

72.23.3 Multicolumn

`\LWR@htmlmulticolumn` $\{\langle numcols \rangle\} \{\langle alignment \rangle\} \{\langle text \rangle\}$

```
8401 \NewDocumentCommand{\LWR@htmlmulticolumn}{m m +m}%
8402 {%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
8403 \LWR@tabularhtmlcolumns{\arabic{\LWR@tableLaTeXcolindex}}{\#1}
```

Create the multicolumn tag:

```
8404 \LWR@domulticolumn{\#1}{\arabic{\LWR@tabhtmlcoltotal}}{\#2}{\#3}%
```

Move to the next L^AT_EX column:

```
8405 \addtocounter{\LWR@tableLaTeXcolindex}{\#1}%
8406 \addtocounter{\LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
8407 \global\booltrue{\LWR@skipatbang}%
8408 }
```

72.23.4 Longtable captions

longtable captions use `\multicolumn`.

Bool `\LWR@starredlongtable` Per the caption package, step the counter if longtable*.

```
8409 \newbool{\LWR@starredlongtable}
8410 \boolfalse{\LWR@starredlongtable}
```

Per the caption package. User-redefinable float type.

```
8411 \providecommand*\LTcaptiontype{table}
```

`\LWR@longtabledatacaptiontag` $* [\langle toc entry \rangle] \{\langle caption \rangle\}$

```
8412 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m}
8413 {%
```

Remember the latest name for `\nameref`:

```
8414 \IfValueTF{\#2}{% optional given?
8415   \ifblank{\#2}{% optional empty?
8416     {\LWR@setlatestname{\#3}}}% empty
8417   {\LWR@setlatestname{\#2}}}% given and non-empty
8418 }% optional given
8419 {\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:

```
8420 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalLaTeXcols}}
```

Create the multicolumn tag:

```
8421 \LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcols}}%
8422   {\arabic{LWR@tabhtmlcoltotal}}%
8423   {P}%
8424 {% \LWR@domulticolumn
8425 \IfBooleanTF{#1}% star?
```

Star version, show a caption but do not make a LOT entry:

```
8426 {% yes star
8427   \LWR@figcaption%
8428   \LWR@isolate{#3}%
8429   \endLWR@figcaption%
8430 }%
8431 {% No star:
```

Not the star version:

Don't step the counter if \caption[] {A caption.}

```
8432   \ifbool{LWR@starredlongtable}%
8433   {%
8434     \ifblank{#2}% TOC entry
8435     }%
8436     {%
8437       \refstepcounter{\LTcaption}%
8438       \protected@edef\@currentlabel{%
8439         \@nameuse{p@\LTcaption}\@nameuse{the\LTcaption}%
8440       }%
8441     }%
8442   }{}%
```

Create an HTML caption. Afterwards, maybe make a LOT entry.

```
8443   \LWR@figcaption%
8444   \LWR@isolate{\@nameuse{fnum@\LTcaption}}%
8445   \CaptionSeparator%
8446   \LWR@isolate{#3}%
8447   \endLWR@figcaption%
```

See if an optional caption was given:

```
8448   \ifblank{#2}% TOC entry empty
```

if the optional caption was given, but empty, do not form a toc entry

```
8449    {}%
```

If the optional caption was given, but might only be []:

```
8450    {% TOC entry not empty
8451        \IfNoValueTF{#2}% No TOC entry?
```

The optional caption is []:

```
8452        {% No TOC entry
8453            \addcontentsline%
8454            {\@nameuse{ext@LTcaption}}%
8455            {LTcaption}%
8456            {%
8457                \protect\numberline%
8458                {\LWR@isolate{\@nameuse{p@LTcaption}}\@nameuse{theLTcaption}}%
8459                {\ignorespaces \LWR@isolate{#3}\protect\relax}%
8460            }%
8461        }% end of No TOC entry
```

The optional caption has text enclosed:

```
8462        {% yes TOC entry
8463            \addcontentsline%
8464            {\@nameuse{ext@LTcaption}}%
8465            {LTcaption}%
8466            {%
8467                \protect\numberline%
8468                {\LWR@isolate{\@nameuse{p@LTcaption}}\@nameuse{theLTcaption}}%
8469                {\ignorespaces \LWR@isolate{#2}\protect\relax}%
8470            }%
8471        }% end of yes TOC entry
8472    }% end of TOC entry not empty
8473}% end of no star
```

Skip any trailing @ or ! columns for this cell:

```
8474 \global\booltrue{LWR@skipatbang}%
8475 }% end of \LWR@domulticolumn
8476
8477 \addtocounter{LWR@tableLaTeXcolindex}{\arabic{LWR@tabletotalLaTeXcols}}
8478 \addtocounter{LWR@tableLaTeXcolindex}{-1}
8479
8480 }
```

72.23.5 Counting HTML tabular columns

The L^AT_EX specification for a table includes a number of columns separated by the & character. These columns differ in content from line to line. Additional virtual columns may be specified by the special @ and ! columns. These columns are identical from line to line, but may be skipped during a multicolumn cell.

For HTML output, @ and ! columns are placed into their own tabular columns. Thus, a \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.

```
8481 \newcounter{LWR@tabhtmlcolindex}
8482 \newcounter{LWR@tabhtmlcolend}
8483 \newcounter{LWR@tabhtmlcoltotal}
```

```
\LWR@subtabularhtmlcolumns {<index>}
```

Factored from `\LWR@tabularhtmlcolumns`, which follows.

```
8484 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%
```

Temporarily define a macro equal to the @ specification for this column:

```
8485 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colatspec}{#1}}%
```

If the @ specification is not empty, add to the count:

```
8486 \ifdefempty{\LWR@atbangspec}%
8487 {}%
8488 {\addtocounter{LWR@tabhtmlcoltotal}{1}}%
```

Likewise for the ! columns:

```
8489 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colbangspec}{#1}}%
8490 \ifdefempty{\LWR@atbangspec}%
8491 {}%
8492 {\addtocounter{LWR@tabhtmlcoltotal}{1}}%
8493 }
```

```
\LWR@tabularhtmlcolumns {<starting LATEX column>} {<number LATEX columns>}
```

Compute the total number of HTML columns being spanned, considering the starting \LaTeX table column and the number of \LaTeX 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`.

```
8494 \newcommand*{\LWR@tabularhtmlcolumns}[2]{%
```

Count the starting index, compute ending index, and begin with the count being the \LaTeX span, to which additional @ and ! columns may be added:

```
8495 \setcounter{LWR@tabhtmlcolindex}{#1}%
8496 \setcounter{LWR@tabhtmlcoltotal}{#2}%
8497 \setcounter{LWR@tabhtmlcolend}{#1}%
8498 \addtocounter{LWR@tabhtmlcolend}{#2}%
```

If at the left edge, add the at/bang columns for the left edge:

```

8499 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{=}1}{%
8500   \LWR@subtabularhtmlcolumns{leftedge}%
8501 }{}%

```

Walk across the L^AT_EX columns looking for @ and ! columns:

```

8502 \whileboolexpr{%
8503   test {%
8504     \ifnumcomp{\value{LWR@tabhtmlcolindex}}{<}{\value{LWR@tabhtmlcolend}}%
8505   }%
8506 }%
8507 {%
8508   \LWR@subtabularhtmlcolumns{\arabic{LWR@tabhtmlcolindex}}%
8509   \addtocounter{LWR@tabhtmlcolindex}{1}%
8510 }% whiledo
8511 }

8512 \end{warpHTML}

```

72.24 Multirow if not loaded

A default definition in case multirow is not loaded. This is used during table parsing.

```

8513 \begin{warpHTML}
8514 \newcommand{\multirow}[2][c]{}
8515 \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 339 for the HTML versions.

for HTML & PRINT: 8516 \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.

```
8517 \AtBeginDocument{
```

\@ifundefined{@xmultirow} determines if multirow was never loaded.

Null action if not loaded:

```
8518 \@ifundefined{@xmultirow}
8519 {
8520 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8521   {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8522   {}%
8523 }% no version of multirow was loaded
8524 {% \@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:

```
8525 \@ifpackageloaded{multirow}{% v2.0 or newer
8526 \@ifpackagelater{multirow}{2016/09/01}% 2016/09/27 for v2.0
8527 {% v2.0+:
8528 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8529   {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8530   {\multicolumn{#1}{#2}{\@xmultirow[#3][#4][#5][#6][#7][#8]}}%
8531 }
8532 {% loaded but older, probably not executed:
8533 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8534   {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8535   {\multicolumn{#1}{#2}{\@xmultirow{#4}[#5][#6][#7][#8]}}%
8536 }
8537 }% 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.

```
8538 {% v1.6 or older did not \ProvidePackage
8539 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
8540   {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
8541   {\multicolumn{#1}{#2}{\@xmultirow{#4}[#5][#6][#7][#8]}}%
8542 }
8543
8544 }% \@ifundefined{@xmultirow}
8545
8546 \providecommand*\multicolumnrow{\LWR@print@multicolumnrow}
8547
8548 }% AtBeginDocument

8549 \end{warpall}
```

72.26 Utility macros inside a table

for HTML output: 8550 `\begin{warpHTML}`

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```
8551 \newcommand*{\LWR@donothing}{}
```

In case array is not loaded:

```
8552 \let\firstline\relax
8553 \let\lasthline\relax
8554 \newcommand*{\firstline}{}
8555 \newcommand*{\lasthline}{}

```

In case bigdelim is not loaded:

```
8556 \newcommand*{\ldelim}{}
8557 \newcommand*{\rdelim}{}

```

```
8558 \end{warpHTML}
```

72.27 Special-case tabular markers

for HTML & PRINT: 8559 \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.

```
8560 \newcommand*{\TabularMacro}{}

```

```
8561 \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: 8562 \begin{warpHTML}

```

8563 \newcommand*{\ResumeTabular}{%
8564 \global\boolfalse{LWR@exitingtabular}%
8565 \global\boolfalse{LWR@tabularmutemods}%
8566 \LWR@getmynexttoken%
8567 }

8568 \end{warpHTML}

```

for PRINT output: 8569 \begin{warpprint}

```

8570 \newcommand*{\ResumeTabular}{}

8571 \end{warpprint}

```

72.28 Checking for a new table cell

for HTML output: 8572 \begin{warpHTML}

Bool LWR@exitingtabular When \end is found, turns off the next opening data tag.

```
8573 \newbool{LWR@exitingtabular}
```

Bool LWR@tabularmutemods Mutes HTML output for @, !, < and >.

This is used while printing the final row to generate \bottomrules.

```
8574 \newbool{LWR@tabularmutemods}
```

\LWR@tabledatacolumnstag Open a new HTML table cell unless the next token is for a macro which does not create data, such as \hline, \toprule, etc:

```

8575 \newcommand*{\LWR@tabledatacolumnstag}%
8576 {%
8577 \LWR@traceinfo{LWR@tabledatacolumnstag}%

```

\show\LWR@mynexttoken to see what tokens to look for

If not any of the below, start a new table cell:

```
8578 \global\let\LWR@mynextaction\LWR@tabledatasinglecolumnstag%
```

If exiting the tabular:

```

8579 \ifdequal{\LWR@mynexttoken}{\end}%
8580 {\global\booltrue{LWR@exitingtabular}}}%

```

longtable can have a caption in a cell

```
8581 \ifdefequal{\LWR@mynexttoken}{\caption}%
8582   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

Look for other things which would not start a table cell:

```
8583 \ifdefequal{\LWR@mynexttoken}{\multicolumn}%
8584   {\global\let\LWR@mynextaction\LWR@donothing}{}%
8585 \ifdefequal{\LWR@mynexttoken}{\multirow}%
8586   {\global\let\LWR@mynextaction\LWR@donothing}{}%
8587 \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%
8588   {\global\let\LWR@mynextaction\LWR@donothing}{}%
8589 \ifdefequal{\LWR@mynexttoken}{\noalign}%
8590   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

If an `\mrowcell`, this is a cell to be skipped over:

```
8591 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%
8592   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

If an `\mcolrowcell`, this is a cell to be skipped over:

```
8593 \ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
8594   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8595 \ifdefequal{\LWR@mynexttoken}{\TabularMacro}%
8596   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8597 \ifdefequal{\LWR@mynexttoken}{\hline}%
8598   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8599 \ifdefequal{\LWR@mynexttoken}{\firsthline}%
8600   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8601 \ifdefequal{\LWR@mynexttoken}{\lasthline}%
8602   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8603 \ifdefequal{\LWR@mynexttoken}{\toprule}%
8604   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8605 \ifdefequal{\LWR@mynexttoken}{\midrule}%
8606   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8607 \ifdefequal{\LWR@mynexttoken}{\cmidrule}%
8608   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8609 \ifdefequal{\LWR@mynexttoken}{\morecmidrules}%
8610   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```
8611 \ifdefequal{\LWR@mynexttoken}{\specialrule}%
8612   {\global\let\LWR@mynextaction\LWR@donothing}{}
```

```

8613 \ifdefequal{\LWR@mynexttoken}{\cline}%
8614     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8615 \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
8616     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8617 \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
8618     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8619 \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
8620     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8621 \ifdefequal{\LWR@mynexttoken}{\doublerulesepcolor}%
8622     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8623 \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
8624     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8625 \ifdefequal{\LWR@mynexttoken}{\warpHTMLonly}%
8626     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8627 \ifdefequal{\LWR@mynexttoken}{\ldelim}%
8628     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8629 \ifdefequal{\LWR@mynexttoken}{\rdelim}%
8630     {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

For arydshln:

```

8631 \ifdefequal{\LWR@mynexttoken}{\hdashline}%
8632     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8633 \ifdefequal{\LWR@mynexttoken}{\cdashline}%
8634     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8635 \ifdefequal{\LWR@mynexttoken}{\firsthdashline}%
8636     {\global\let\LWR@mynextaction\LWR@donothing}{}%

8637 \ifdefequal{\LWR@mynexttoken}{\lasthdashline}%
8638     {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

Ignore an empty line between rows:

```

8639 \ifdefequal{\LWR@mynexttoken}{\par}%
8640     {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

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:

```
8641 \LWR@traceinfo{LWR@tabledatacolumnntag: about to do mynext}%
8642 \LWR@mynextaction%
8643 \LWR@traceinfo{LWR@tabledatacolumnntag: done}%
8644 }

8645 \end{warpHTML}
```

72.29 `\mrowcell`

for HTML & PRINT: 8646 `\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.

```
8647 \newcommand*{\mrowcell}{}

8648 \end{warpall}
```

72.30 `\mcolrowcell`

for HTML & PRINT: 8649 `\begin{warpall}`

 **multirow cells** `\mcolrowcell` The user must insert `\mcolrowcell` into any `\multicolumnrow` cells which must be skipped. This command has no action during print output.

```
8650 \newcommand*{\mcolrowcell}{}

8651 \end{warpall}
```

72.31 **HTML tabular environment**

for HTML output: 8652 `\begin{warpHTML}`

These are default definitions in case `booktabs` is not loaded, and are not expected to be used, but must exist as placeholders. They are pre-deleted in case `memoir` has already loaded `booktabs`.

```
8653 \LetLtxMacro\toprule\relax
8654 \LetLtxMacro\midrule\relax
8655 \LetLtxMacro\cmidrule\cline
8656 \LetLtxMacro\bottomrule\relax
8657 \LetLtxMacro\addlinespace\relax
8658 \LetLtxMacro\morecmidrules\relax
8659 \LetLtxMacro\specialrule\relax
8660
```

```

8661 \newcommand*\toprule}[1][\hline}
8662 \newcommand*\midrule}[1][\hline}
8663 \LetLtxMacro\cmidrule\cline
8664 \newcommand*\bottomrule}[1][\hline}
8665 \newcommand*\addlinespace}[1][{}
8666 \newcommand*\morecmidrules{}
8667 \newcommand*\specialrule}[3]{\hline}

```

`\noalign` $\langle text \rangle$ Redefined for use inside tabular.

```

8668 \LetLtxMacro\LWR@orignoalign\noalign
8669
8670 \newcommand{\LWR@tabularnoalign}[1]{%
8671 \begingroup%
8672 \global\advance\rownum\m@ne%
8673 \renewcommand*\LWR@xcolorrowHTMLcolor}{}%
8674 \multicolumn{\value{\LWR@tabletotalLaTeXcols}}{l}{#1} \\\
8675 \endgroup%
8676 % \@rowcol@ors%
8677 \LWR@getmynexttoken%
8678 }

```

`\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.

```

8679 \AtBeginDocument{
8680 \ifpackageloaded{lwarp-tabls}
8681 {
8682 \newcommand*\LWR@HTMLhline}[1][{}%
8683 \ifbool{FormatWP}%
8684 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
8685 {\addtocounter{\LWR@hlines}{1}}%
8686 \LWR@getmynexttoken}%
8687 }
8688 {
8689 \newcommand*\LWR@HTMLhline}{%
8690 \ifbool{FormatWP}%
8691 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
8692 {\addtocounter{\LWR@hlines}{1}}%
8693 \LWR@getmynexttoken}%
8694 }
8695 }% AtBeginDocument

```

`\LWR@HTMLcline` $\langle columns \rangle$

```

8696 \NewDocumentCommand{\LWR@HTMLcline}{m}%
8697 {\LWR@docmidrule{#1}\LWR@getmynexttoken}%

```

`\LWR@tabular@warpprintonly` $\langle contents \rangle$

Only process the contents if producing printed output. Modified inside a tabular to grab the next token.

```

8698 \newcommand{\LWR@tabular@warpprintonly}[1]{%
8699   \ifbool{warpingprint}{#1}{}%
8700   \LWR@getmynexttoken%
8701 }

```

`\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`.

```

8702 \AtBeginDocument{
8703 \@ifundefined{frenchbsetup}%
8704 {% no babel-french
8705   \newcommand*\LWR>nullifyNoAutoSpacing{}%
8706 }% no babel-french
8707 {% yes babel-french
8708   \newcommand*\LWR>nullifyNoAutoSpacing{%
8709     \NoAutoSpacing%
8710     \renewcommand*\NoAutoSpacing{}%
8711     \renewcommand*\LWR@FBcancel{}%
8712   }
8713 }% yes babel-french
8714 }% AtBeginDocument

```

Env `tabular` `<direction> [<verticalposition>] { <colspecs> }`

The `<direction>` is from `plext` for Japanese documents, and is ignored.

```

8715 \StartDefiningTabulars
8716
8717 \NewDocumentCommand{\LWR@HTML@tabular}{d<> o m}
8718 {%
8719 \LWR@traceinfo{LWR@HTML@tabular started}%

```

 **<table> inside ** In `LATEX`, a `tabular` may be placed inside a `minipage`, but in `HTML` a `<table>` may not be inside a ``. Since there may be several nested ``s, with an unknown number of other objects between, it is hard to undo all these ``s before the `<table>` then redo them after. The browser probably compensates for this situation, but formatting may be lost inside the `<table>` because several things are neutralized inside a ``. Furthermore, in the `HTML` output, the entire `<table>` is placed on a single line of `HTML` code, since the line breaking commands are neutralized inside a ``. Since this is such a sloppy situation, a warning is issued here instructing the user to please isolate the `` to `print-only`.

```

8720 \ifnumcomp{\value{LWR@spandepth}}{>}{0}{%
8721   \PackageWarning{lwarp}{%
8722     A tabular is being used inside a span such as\MessageBreak
8723     a minipage. Some formatting may not be correct\MessageBreak
8724     in the tabular.\MessageBreak
8725     It is recommended to use \protect\warpprintonly\space or the\MessageBreak
8726     warpprint environment to isolate the span to\MessageBreak
8727     print-only,%
8728   }
8729 }{}%

```

8730 \addtocounter{LWR@tabulardepth}{1}%

Not yet started a table row:

8731 \global\boolfalse{LWR@startedrow}%

Not yet doing any rules:

8732 \setcounter{LWR@hlines}{0}%

8733 \setcounter{LWR@hdashedlines}{0}%

8734 \global\boolfalse{LWR@doingtbrule}%

8735 \global\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.

8736 \LWR@nullifyNoAutoSpacing%

Have not yet found the end of tabular command. Unmute the @ and ! columns.

8737 \global\boolfalse{LWR@exitingtabular}%

8738 \global\boolfalse{LWR@tabularmutemods}%

Error if failed to use \mrowcell or \mcolrowcell when needed.

8739 \boolfalse{LWR@usedmultirow}

8740 \boolfalse{LWR@foundmrowcell}

Create the table tag:

8741 \global\booltrue{LWR@intabularmetadata}%

8742 \LWR@traceinfo{LWR@tabular: About to LWR@forecenewpage.}%

8743 \LWR@forcenewpage

8744 \LWR@htmlblocktag{table}%

Parse the table columns:

8745 \LWR@parsetablecols{#3}%

Table col spec is: \LWR@tablecolspec which is a string of llccrr, etc.

Do not place the table inside a paragraph:

8746 \LWR@stoppars%

Track column #:

8747 \setcounter{LWR@tableLaTeXcolindex}{1}%

Have not yet added data in this column:

8748 \global\boolfalse{LWR@tabularcellladded}%

Start looking for midrules:

```
8749 \LWR@clearmidrules%
```

`\` becomes a macro to end the table row:

```
8750 \LetLtxMacro{\}{\LWR@tabularendofline}%
```

`\warpprintonly` inside a tabular must grab the next token.

```
8751 \LetLtxMacro\warpprintonly\LWR@tabular@warpprintonly%
```

The following adjust for colortbl.

```
8752 \LetLtxMacro\arrayrulecolor\arrayrulecolornexttoken%
8753 \LetLtxMacro\doublerulesepcolor\doublerulesepcolornexttoken%
8754 \gdef\LWR@columnHTMLcolor{}%
8755 \gdef\LWR@rowHTMLcolor{}%
8756 \gdef\LWR@cellHTMLcolor{}%
8757 \@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.

```
8758 \ifdefvoid{\LWR@ruleHTMLcolor}%
8759   {\edef\LWR@vertruleHTMLcolor{black}}%
8760   {\edef\LWR@vertruleHTMLcolor{\LWR@origpound\LWR@ruleHTMLcolor}}%
```

Tracking the depth of cell color `<div>s`:

```
8761 \setcounter{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.

```
8762 \LWR@traceinfo{LWR@HTML@tabular: redefining macros}%
8763 \LetLtxMacro\noalign\LWR@tabularnoalign%
8764 \LetLtxMacro\hline\LWR@HTMLhline%
8765 \LetLtxMacro\cline\LWR@HTMLcline%

8766 \DeclareDocumentCommand{\hdashline}{o}{%
8767   \ifbool{FormatWP}%
8768     {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8769     {\addtocounter{LWR@hdashedlines}{1}}}%
8770   \LWR@getmynexttoken%
8771 }%

8772 \DeclareDocumentCommand{\cdashline}{m}{%
8773   \LWR@docdashline{##1}\LWR@getmynexttoken%
8774 }%
```

```

8775 \DeclareDocumentCommand{\firsthdashline}{o}{%
8776   \ifbool{FormatWP}%
8777     {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8778     {\addtocounter{LWR@hdashedlines}{1}}%
8779   \LWR@getmynexttoken%
8780 }%

```

```

8781 \DeclareDocumentCommand{\lasthdashline}{o}{%
8782   \ifbool{FormatWP}%
8783     {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8784     {\addtocounter{LWR@hdashedlines}{1}}%
8785   \LWR@getmynexttoken%
8786 }%

```

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`.

```

8787 \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
8788 \renewcommand*{\mrowcell}{%
8789   \LWR@maybenewtablerow%
8790   \LWR@tabularleftedge%
8791   \global\booltrue{LWR@skippingmrowcell}%
8792   \booltrue{LWR@foundmrowcell}%
8793 }%
8794 \renewcommand*{\mcolrowcell}{%
8795   \LWR@maybenewtablerow%
8796   \global\booltrue{LWR@skippingmcolrowcell}%
8797   \booltrue{LWR@foundmrowcell}%
8798 }%
8799 \LetLtxMacro\caption\LWR@longtabledatacaptiontag%

```

Reset for new processing:

```

8800 \global\boolfalse{LWR@tableparcell}%
8801 \global\boolfalse{LWR@skippingmrowcell}%
8802 \global\boolfalse{LWR@skippingmcolrowcell}%
8803 \global\boolfalse{LWR@skipatbang}%
8804 \global\boolfalse{LWR@emptyatbang}%

```

Set & for its special meaning inside the tabular:

```

8805 \StartDefiningTabulars%
8806 \protected\gdef&{\LWR@tabularampersand}%

```

Locally force any minipages to be fullwidth, until the end of the tabular:

```

8807 \booltrue{LWR@forceminipagefullwidth}

```

Nest one level deeper of tabular paragraph handling:

```

8808 \addtocounter{LWR@tabularpardepth}{1}%

```

Look ahead for a possible table data cell:

```

8809 \LWR@traceinfo{LWR@HTML@tabular: about to LWR@getmynexttoken}%
8810 \LWR@getmynexttoken%
8811 }%

```

Ending the environment:

```

8812 \newcommand*{\LWR@HTML@endtabular}
8813 {%
8814 \LWR@traceinfo{LWR@HTML@endtabular}%

```

Unnest one level of tabular paragraph handling:

```

8815 \addtocounter{LWR@tabularpardepth}{-1}%
8816 \ifboolexpr{%
8817   test {%
8818     \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}
8819   } or {%
8820     (%
8821       bool{LWR@intabularmetadata} and%
8822       not bool{LWR@tabularcelladded} and%
8823       test {%
8824         \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{\value{LWR@tabletotalLaTeXcols}}%
8825       }%
8826     )%
8827   }%
8828 }%
8829 \LWR@tabularfinishrow%
8830 }%
8831 {%
8832 \LWR@closetabledatacell%
8833 }%
8834 \LWR@htmlblocktag{/tr}%

```

xcolor row color support:

```

8835 \@rowc@lors%

8836 \LWR@htmlblocktag{/table}%
8837 \global\boolfalse{LWR@intabularmetadata}%

```

Unnest one level of tabular:

```

8838 \addtocounter{LWR@tabulardepth}{-1}%

```

Restore & to its usual meaning:

```

8839 \protected\gdef&{\LWR@origampmacro}%
8840 \StopDefiningTabulars%

```

Error if used `\multirow` or `\multicolumnrow` without using `\mrowcell` or `\mcolrowcell`.

```

8841 \ifbool{LWR@usedmultirow}{%

```

```

8842 \ifbool{LWR@foundmrowcell}%
8843 {}%
8844 {%
8845 \PackageError{lwarp}%
8846 {%
8847 When using \protect\multirow, \protect\multicolumnrow, \MessageBreak
8848 or the bigdelim package, \MessageBreak
8849 place \protect\mrowcell\space or \protect\mcolrowcell\MessageBreak
8850 in empty cells which are to be skipped.\MessageBreak
8851 See the lwarp package documentation:\MessageBreak
8852 "Special cases and limitations" -> "Tabular"
8853 }%
8854 {%
8855 See the lwarp package documentation:\MessageBreak
8856 "Special cases and limitations" -> "Tabular".
8857 }%
8858 }%
8859 }{}%

8860 \LWR@traceinfo{LWR@HTML@endtabular finished}%
8861 }
8862
8863 \csletcs{LWR@HTML@endtabular*}{LWR@HTML@endtabular}
8864
8865 \StopDefiningTabulars

```

siunitx may redefine tabular, so set the following later:

```

8866 \AtBeginDocument{
8867 \LetLtxMacro\LWR@origendtabular\endtabular
8868 \csletcs{LWR@origendtabular*}{endtabular*}
8869 \LWR@formatted{@tabular}
8870 \LWR@formatted{endtabular}
8871 \LWR@formatted{endtabular*}
8872 }

8873 \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>}
{<limagedepth>}{<limagenumber>}}

```

Table 12 shows the data structures related to cross-referencing.

Table 12: Cross-referencing data structures

Original L^AT_EX:	(print and HTML)
\refstepcounter: Steps the counter and sets \@currentlabel.	
\@currentlabel: \p@<ctr>\the<ctr> Updated by \refstepcounter.	
\Label: Writes to the .aux file: <code>\newlabel{<label>}{\@currentlabel}{\thepage}}</code>	
\newlabel: When the .aux file is read, sets \r@<label>.	
\r@<label>: Set to: <code>{{\@currentlabel}{\thepage}}</code>	
\ref: Returns the first part of \r@<label>.	
\pageref: Returns the second part of \r@<label>.	
Added by lwarp:	(HTML only)
\Label: Adds HTML tags (section 73.3), and another .aux entry (section 73.2).	
\newlabel: Unchanged. When the .aux file is read, sets \r@<label>@lwarp.	
\r@<label>@lwarp: Set to <code>{{section_name}{file_name}{depth}{number}}</code> :	
\LWR@nameref: The section name for this label.	
\LWR@htmlfileref: The filename or name for this label.	
\LWR@lateximagedepthref: The lateximagedepth for this label.	
\LWR@lateximagenumberref: The lateximagenumber for this label.	
\nameref: Emulated from hyperref for lwarp. See section 73.4.	
\ref and \nameref: Adds HTML tags. See section 73.4.	
Added by amsmath:	(print and HTML)
\Label: Execution is delayed until the math environment is completed.	
\ltx@label: L ^A T _E X \label, (HTML: patched by lwarp,) later patched by cleveref.	
Added by cleveref:	(print and HTML)
\refstepcounter: Added: sets \cref@currentlabel.	
\cref@currentlabel: (<type>=<ctr> unless an alias is used): <code>[<type>][\arabic{<ctr>}][<parent ctrs>]{\p@<ctr>\the<ctr>}</code> Also see section 59.4 for use with footnotes.	
\Label: Writes to the .aux file: <code>\newlabel{<label>@cref}{{\cref@currentlabel}{\thepage}}</code>	
\newlabel: Unchanged. When the .aux file is read, sets \r@<label>@cref.	
\r@<label>@cref: Set to: <code>{{\cref@currentlabel}{\thepage}}</code>	
Utility functions: See \cref@getlabel, \cref@gettype, \cref@getcounter, \cref@getprefix.	
Cross-referencing names: \crefname and \Crefname assign human-readable names for references to this counter type.	
Additionally patched by lwarp:	(HTML only)
\cref, etc.: Modified for lwarp. See section 87.	
\label inside math: See section 79.7.1.	
Footnotes: See \noteentry in section 59.4.	

for HTML output: 8874 \begin{warpHTML}

73.1 Setup

\@currentlabelname To remember the most recently defined section name, description, or caption, for \nameref.

```
8875 \providecommand*\@currentlabelname{}
```

\LWR@stripperperiod {<text>} [(<.>)]

Removes a trailing period.

```
8876 \def\LWR@stripperperiod#1.\ltx@empty#2\@nil{#1}%
```

\LWR@setlatestname {<object name>}

Removes \label, strips any final period, and remembers the result.

```
8877 \newcommand*\LWR@setlatestname[1]{%
```

Remove \label and other commands from the name, the strip any final period. See `gettittlestring`.

```
8878 \GetTitleStringExpand{#1}%
```

```
8879 \edef\@currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
```

```
8880 \edef\@currentlabelname{%
```

```
8881   \expandafter\LWR@stripperperiod\@currentlabelname%
```

```
8882   \ltx@empty.\ltx@empty\@nil%
```

```
8883 }%
```

```
8884 }
```

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>}
{<imagedepth>}{<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.

```

8885 \def\LWR@setref#1#2#3{%
8886   \ifx#1\relax%
8887     ??%
8888   \else%
8889     \expandafter#2#1%
8890   \fi}

```

`\LWR@nameref` `{\label}` Returns the section name for this label:

```

8891 \newcommand*\LWR@nameref}[1]{%
8892   \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@firstoffour{#1}%
8893 }

```

`\LWR@htmlfileref` `{\label}` Returns the file number or name for this label:

```

8894 \newcommand*\LWR@htmlfileref}[1]{%
8895   \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@secondoffour{#1}%
8896 }

```

`\LWR@lateximagedepthref` `{\label}` Returns the lateximagedepth for this label:

```

8897 \newcommand*\LWR@lateximagedepthref}[1]{%
8898   \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@thirdoffour{#1}%
8899 }

```

`\LWR@lateximagenumberref` `{\label}` Returns the lateximagenumber for this label:

```

8900 \newcommand*\LWR@lateximagenumberref}[1]{%
8901   \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@fourthoffour{#1}%
8902 }

```

`\LWR@lwarpLabel` `{\label}` Sanitize the name and then creates the label:

```

8903 \newcommand*\LWR@lwarpLabel}[1]{%
8904   \LWR@traceinfo{\LWR@lwarpLabel !#1!}%
8905   \LWR@setlatestname{\@currentlabelname}%
8906   \@bsphack%
8907   \protected@write\@auxout{%
8908     {\string\newLabel{#1@lwarp}}{%
8909       {\@currentlabelname}%
8910       {\ifbool{FileSectionNames}{\LWR@thisfilename}{\arabic{\LWR@htmlfilenumber}}}%
8911       {\arabic{\LWR@lateximagedepth}}%
8912       {\arabic{\LWR@lateximagenumber}}%
8913     }}%
8914   \@esphack%
8915 }

```

73.3 Labels

`\LWR@subLabel` `{\label}` Creates an HTML id tag.

`\detokenize` is used to allow underscores in the labels.

```
8916 \newcommand*{\LWR@sublabel}[1]{%
8917 \LWR@traceinfo{\LWR@sublabel !#1!}%
```

Create an HTML id tag unless are inside a `lateximage`, since it would appear in the image:

```
8918 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
8919 }{%
8920 {% not lateximage
```

If not doing a `lateximage`, create an HTML ID tag: (To be factored...)

```
8921   \LWR@sanitize{#1}%
8922   \ifbool{\LWR@doingstartpars}%
8923   {% pars allowed
8924     \ifbool{\LWR@doingapar}%
8925     {% par started
8926       \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8927     }% par started
8928     {% par not started
8929       \LWR@stoppars%
8930       \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8931       \LWR@startpars%
8932     }% par not started
8933   }% pars allowed
8934   {% pars not allowed
8935     \LWR@htmltag{a \LWR@print@mbbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8936   }% pars not allowed
8937 }% not lateximage
8938 }
```

`\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^AT_EX `\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.

```
8939 \NewDocumentCommand{\LWR@new@label}{d() m o}{%
8940 \LWR@traceinfo{\LWR@new@label: starting}%
8941 \LWR@traceinfo{\LWR@new@label: !#2!}%
8942 % \@bsphack%
```

Create a traditional L^AT_EX label, as modified by `cleveref`:

```
8943 \LWR@orig@label{#2}%
```

Create a special label which holds the section number, LWR@htmlfilenumber, LWR@lateximagedepth, and LWR@lateximagenumber:

```
8944 \LWR@traceinfo{LWR@new@label: filesectionnames is \ifbool{FileSectionNames}{true}{false}}%
8945 \LWR@traceinfo{LWR@new@label: LWR@thisfilename is !\LWR@thisfilename!}%
8946 \LWR@traceinfo{LWR@new@label: LWR@htmlfilenumber is \arabic{LWR@htmlfilenumber}}%
8947 \LWR@lwarplabel{#2}%
8948 \LWR@sublabel{#2}%
8949 % \@esphack%
8950 \LWR@traceinfo{LWR@new@label: done}%
8951 }
```

73.4 References

`\LWR@addlinktitle`

```
8952 \newcommand*{\LWR@addlinktitle}{%
8953     \ifdefvoid{\LWR@ThisAltText}{}{ % space
8954         title="\LWR@ThisAltText" % space
8955         \gdef\LWR@ThisAltText{}%
8956     }%
8957 }
```

`\LWR@startref` `{\label}` (Common code for `\ref` and `\nameref`.)

Open an HTML tag reference to a filename, # character, and a label.

```
8958 \newcommand*{\LWR@startref}[1]
8959 {%
8960 \LWR@sanitize{#1}%
8961 \LWR@traceinfo{LWR@startref A: !#1!}%
```

Create the filename part of the link:

```
8962 \LWR@htmltag{a href="%
8963 \LWR@traceinfo{LWR@startref B}%
8964 \LWR@print@mbox{\LWR@htmlrefsectionfilename{#1}}%
8965 \LWR@traceinfo{LWR@startref C}%
8966 \LWR@origpound%
```

Create the destination id:

See if LWR@lateximagedepth is unknown:

```
8967 \LWR@traceinfo{LWR@startref D: !#1!}%
8968 \ifcsundef{r@#1@lwarp}%
```

“??” if LWR@lateximagedepth is unknown, so create a link with an unknown destination:

```

8969 {%
8970   \LWR@traceinfo{LWR@startref D0: ??}%
8971   ??%
8972 }%

```

If `\LWR@lateximagedepth` is known. Use a `lateximage` if the depth is greater than zero, or a regular link otherwise:

```

8973 {%
8974   \ifthenelse{\cnttest{\LWR@lateximagedepthref{#1}}{>}{0}}%
8975     {%
8976       \LWR@ImagesName\LWR@lateximagenumberref{#1}%
8977     }%
8978     {%
8979       \LWR@traceinfo{LWR@startref D3}%

```

`\detokenize` is used to allow underscores in the labels:

```

8980       \LWR@print@mbox{\LWR@sanitized}%
8981     }%
8982 }%
8983 \LWR@traceinfo{LWR@startref E}%

```

Closing quote:

```

8984 "%

```

Maybe add a title:

```

8985 \LWR@addlinktitle%
8986 }%
8987 \LWR@traceinfo{LWR@startref F}%
8988 }

```

`\LWR@subnewref` $\{\langle label \rangle\} \{\langle label \text{ or } sub@label \rangle\}$

Factored for the `subfig` package. Uses the original label for the hyper-reference, but prints its own text, such as “1(b)”.

```

8989 \NewDocumentCommand{\LWR@subnewref}{m m}{%
8990   \LWR@traceinfo{LWR@subnewref #1 #2}%
8991   \LWR@startref{#1}%
8992   \LWR@print@ref{#2}%
8993   \LWR@htmltag{/a}%
8994 }

```

`\ref` * $\{\langle label \rangle\}$ `\ref` is redefined to `\LWR@HTML@ref`, except inside the text part of a `\hyperref`, where it is redefined to `\LWR@ref@ignorestar`.

`\LWR@HTML@ref` * $\{\langle label \rangle\}$ Create an internal document reference link, or without a link if starred per `\hyperref`.

```

8995 \NewDocumentCommand{\LWR@HTML@ref}{s m}{%
8996 \LWR@traceinfo{\LWR@HTML@ref !#2!}%
8997 \IfBooleanTF{#1}%
8998 {\LWR@print@ref{#2}}%
8999 {\LWR@subnewref{#2}{#2}}%
9000 }
9001
9002 \LWR@formatted{ref}

```

`\LWR@ref@ignorestar` * $\langle label \rangle$ For use inside `\hyperref`. Ignores the star, then uses the original `\ref`.

```

9003 \NewDocumentCommand{\LWR@ref@ignorestar}{s m}{%
9004 \LWR@print@ref{#2}%
9005 }

```

`\pagerefPageFor` Text for page references.

```

9006 \newcommand*{\pagerefPageFor}{see }

```

`\pageref` * $\langle label \rangle$ Create an internal document reference, or just the unlinked number if starred, per `\hyperref`.

```

9007 \NewDocumentCommand{\LWR@new@pageref}{s m}{%
9008 \IfBooleanTF{#1}%
9009 {\LWR@print@ref{#2}}%
9010 {\cpgeref{#2}}%
9011 }

```

`\nameref` $\langle label \rangle$

```

9012 \newrobustcmd*{\nameref}[1]{%
9013 \LWR@traceinfo{\nameref}%
9014 \LWR@startref{#1}%
9015 \LWR@traceinfo{\nameref B}%
9016 \LWR@nameref{#1}%
9017 \LWR@traceinfo{\nameref C}%
9018 \LWR@htmltag{/a}%
9019 \LWR@traceinfo{\nameref: done}%
9020 }

```

`\Namerf` $\langle label \rangle$ In print, adds the page number. In HTML, does not.

```

9021 \LetLtxMacro\Namerf\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.

```
9022 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it:
9023 % \EmulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.
```

Emulates `hyperref`:

`\@currentHref` Added to support `backref`.

```
9024 \AtBeginDocument{
9025 \def\@currentHref{%
9026 autopage-\theLWR@currentautosec%
9027 }
9028 }
```

`\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.

```
9029 \NewDocumentCommand{\LWR@subhyperref}{m}{%
9030 \LWR@traceinfo{\LWR@subhyperref !#1!}%
9031 \LWR@sanitize{#1}%
9032 \LWR@htmltag{%
9033   a href="\LWR@sanitized" % space
9034   \LWR@addlinktitle % space
9035   target="\_{}blank" % space
9036 }%
9037 }
```

`\LWR@subhyperreftext` $\{\langle text \rangle\}$

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.

```
9038 \newcommand{\LWR@subhyperreftext}[1]{%
9039 #1%
9040 \LWR@htmltag{/a}%
9041 \LWR@ensuredoingapar%
9042 }
```

`\LWR@subhyperrefclass` $\{\langle URL \rangle\} \{\langle text \rangle\} \{\langle htmlclass \rangle\}$

```

9043 \NewDocumentCommand{\LWR@subhyperrefclass}{m +m m}{%
9044 \LWR@htmltag{%
9045   a % space
9046   href="\begingroup\@sanitize#1\endgroup" % space
9047   class="#3" % space
9048   \LWR@addlinktitle % space
9049 }\LWR@orignewline%
9050 #2\LWR@orignewline%
9051 \LWR@htmltag{/a}%
9052 \LWR@ensuredoingapar%
9053 }

```

`\href` [*options*] {*URL*}

Create a link with accompanying text:

```

9054 \DeclareDocumentCommand{\LWR@hrefb}{O{} m}{%
9055 \LWR@ensuredoingapar%
9056 \LWR@subhyperref{#2}%
9057 \endgroup% restore catcodes
9058 \LWR@subhyperreftext%
9059 }
9060
9061 \newrobustcmd*{\href}{%
9062 \begingroup%
9063 \catcode'\#=12%
9064 \catcode'\%=12%
9065 \catcode'\&=12%
9066 \catcode'\~=12%
9067 \catcode'\_ =12%
9068 \LWR@hrefb%
9069 }

```

`\nolinkurl` {*URL*}

Print the name of the link without creating the link:

```

9070 \newcommand*{\LWR@nolinkurlb}[1]{%
9071 \LWR@ensuredoingapar%
9072 \def\LWR@templink{#1}%
9073 \@onelevel@sanitize\LWR@templink%
9074 \LWR@templink%
9075 \endgroup%
9076 }
9077
9078 \newrobustcmd*{\nolinkurl}{%
9079 \begingroup%
9080 \catcode'\#=12%
9081 \catcode'\%=12%
9082 \catcode'\&=12%
9083 \catcode'\~=12%
9084 \catcode'\_ =12%
9085 \LWR@nolinkurlb%
9086 }

```

`\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`.

```

9087 \DeclareDocumentCommand{\LWR@urlb}{m}{%
9088 \LWR@ensuredoingapar%
9089 \def\LWR@templink{#1}%
9090 \@onelevel@sanitize\LWR@templink%
9091 \href{\LWR@templink}{\LWR@templink}%
9092 \endgroup%
9093 }
9094
9095 \newrobustcmd*{\url}{%
9096 \begingroup%
9097 \catcode'\#=12%
9098 \catcode'\%=12%
9099 \catcode'\&=12%
9100 \catcode'\~=12%
9101 \catcode'\_ =12%
9102 \LWR@urlb%
9103 }

```

`\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`.

```

9104 \newcommand*{\LWR@subinlineimage}[5]{%
9105   \ifblank{#1}%
9106   {%
9107     \LWR@htmltag{img \LWR@indentHTML
9108       src="#3.#4" \LWR@indentHTML
9109       alt="#3" \LWR@indentHTML
9110       style="#5" \LWR@indentHTML
9111       class="#2" \LWR@orignewline
9112     }%
9113   }%
9114   {%
9115     \LWR@htmltag{img \LWR@indentHTML
9116       src="#3.#4" \LWR@indentHTML
9117       alt="#1" \LWR@indentHTML
9118       style="#5" \LWR@indentHTML
9119       class="#2" \LWR@orignewline
9120     }%
9121   }%
9122 }
9123 \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^AT_EX file identifier for the output file.

`LWR@have<type>`: A boolean remembering whether a `\listof` was requested for a float of this type.

File with extension `lo<f, t, a-z>`: An output file containing the commands to build the `\listof<type>` “table-of-contents” structure.

Cross-referencing names: For `cleveref`’s `\cref` and related, `\crefname` and `\Crefname` assign human-readable names for references to this float type.

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: `9124 \begin{warphTML}`

`\LWR@floatbegin` `{\<type>}` [`<placement>`] Begins a `\newfloat` environment.

```

9125 \NewDocumentCommand{\LWR@floatbegin}{m o}{%
9126 \ifbool{FormatWP}{\newline}{}%
9127 \LWR@stoppars

```

There is a new float, so increment the unique float counter:

```

9128 \addtocounter{LWR@thisautoid}{1}%
9129 \booltrue{LWR@freezethisautoid}%

```

```

9130 \begingroup%

```

Settings while inside the environment:

```

9131 \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.

```

9132 \LWR@htmltag{%
9133   figure id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}" % space
9134   class="#1 \@nameuse{LWR@floatstyle@#1}"%
9135 }%
9136 \ifbool{FormatWP}{%
9137   \LWR@orignewLine%
9138   \LWR@BlockClassWP{#1}{wp#1}%
9139 }{}%

```

Update the caption type:

```

9140 \renewcommand*{\@capttype}{#1}%
9141 \caption@settype{#1}%

```

Mark the float for a word processor conversion:

```

9142 \LWR@startpars%
9143 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
9144
9145 === begin #1 ===
9146
9147 }{}%

```

Look for `\centering`, etc:

```

9148 \LWR@futurenonspacel\@LWR@mynexttoken\LWR@floatalignment%
9149 }

```

For koma-script. The following does not work for tables.

```

9150 \AtBeginDocument{
9151 \ifpackageloaded{tocbasic}{
9152 \appto\figure@atbegin{%

```

```

9153 \LWR@futurenonspacel\et\LWR@mynexttoken\LWR@floatalignment%
9154 }
9155 }{}
9156 }

```

`\@float` Support packages which create floats directly.
`\@dblfloat`

```

9157 \let\@float\LWR@floatbegin
9158 \let\@dblfloat\LWR@floatbegin

```

`\LWR@floatend` Ends a `\newfloat` environment.

```

9159 \newcommand*{\LWR@floatend}{%

```

If saw a `\centering`, finish the center environment:

```

9160 \LWR@endfloatalignment%

```

Mark the float end for a word processor conversion:

```

9161 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
9162
9163 === end ===
9164
9165 }{}%
9166 \LWR@stoppars%

```

Close an HTML figure tag:

```

9167 \ifbool{FormatWP}{\endLWR@BlockClassWP}{}%
9168 \LWR@html\elementend{figure}%
9169 \endgroup%
9170 \boolfalse{LWR@freezethisautoid}%
9171 \LWR@startpars%
9172 \ifbool{FormatWP}{\newline}{}%
9173 }

```

`\end@float` Support packages which create floats directly.
`\end@dblfloat`

```

9174 \let\end@float\LWR@floatend
9175 \let\end@dblfloat\LWR@floatend

```

74.2 Float tracking

`Ctrl 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.

```

9176 \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.

```
9177 \newcounter{LWR@thisautoidWP}
```

Bool LWR@freezethisautoid Prevents multiple increments of \LWR@thisautoid inside a float.

```
9178 \newbool{LWR@freezethisautoid}
9179 \boolfalse{LWR@freezethisautoid}
```

\LWR@newautoidanchor Adds a new <autoid> anchor.

```
9180 \newcommand*{\LWR@newautoidanchor}{%
9181 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9182 }%
9183 {%
9184     \ifbool{LWR@freezethisautoid}{}{%
9185         \addtocounter{LWR@thisautoid}{1}%
9186         \LWR@htmltag{a id="\LWR@print@mbx{autoid-\arabic{LWR@thisautoid}}"}%
9187         \LWR@htmltag{/a}%
9188     }%
9189 }%
9190 }
```

\@capttype Remembers which float type is in use.

```
9191 \newcommand*{\@capttype}{}
```

\LWR@floatalignmentname Set to center, flushleft, or flushright if saw \centering, \raggedright, or \raggedleft.

```
9192 \newcommand*{\LWR@floatalignmentname}{}
```

\LWR@floatalignment If sees a \centering, \raggedleft, or \raggedright, creates a center, flushright, or flushleft environment.

```
9193 \newcommand*{\LWR@floatalignment}{%
9194 \ifdefstrequal{\LWR@mynexttoken}{\centering}{%
9195     \center%
9196     \renewcommand*{\LWR@floatalignmentname}{center}%
9197 }{}%
9198 \ifdefstrequal{\LWR@mynexttoken}{\raggedright}{%
9199     \flushleft%
9200     \renewcommand*{\LWR@floatalignmentname}{flushleft}%
9201 }{}%
9202 \ifdefstrequal{\LWR@mynexttoken}{\raggedleft}{%
9203     \flushright%
9204     \renewcommand*{\LWR@floatalignmentname}{flushright}%
9205 }{}%
9206 }
```

\LWR@endfloatalignment Closes an environment from \LWR@floatalignment.

```

9207 \newcommand*\LWR@endfloatalignment}{%
9208 \ifdefvoid{\LWR@floatalignmentname}{\@nameuse{end\LWR@floatalignmentname}}%
9209 \renewcommand*\LWR@floatalignmentname}{}%
9210 }

```

74.3 Caption inside a float environment

`\CaptionSeparator` How to separate the float number and the caption text.

```

9211 \AtBeginDocument{\providecommand*\CaptionSeparator}{:~}}

```

`\@makecaption` `{<name and num>}{<text>}`

Prints the float type and number, the caption separator, and the caption text.

```

9212 \AtBeginDocument{\renewcommand*\@makecaption}[2]{%
9213   \LWR@traceinfo{\@makecaption}%
9214   \LWR@isolate{#1}\CaptionSeparator\LWR@isolate{#2}%
9215   \LWR@traceinfo{\@makecaption: done}%
9216 }%
9217 }

```

74.4 Caption and LOF linking and tracking

When a new HTML file is marked in the L^AT_EX PDF file, the L^AT_EX page number at that point is stored in `LWR@latestautopage`, (and the associated filename is remembered by the special L^AT_EX labels). This page number is used to generate an autopage HTML `<id>` in the HTML output at the start of the new HTML file. 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.

```

9218 \newcounter{LWR@nextautoid}
9219 \newcounter{LWR@nextautopage}

```

`\LWRsetnextfloat` `{<autopage>}{<float autoid>}`

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`

```

9220 \newcommand*\LWRsetnextfloat}[2]{%
9221   \setcounter{LWR@nextautopage}{#1}%
9222   \setcounter{LWR@nextautoid}{#2}%
9223 }

```

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.

```
9224 \newcounter{LWR@latestautopage}
9225 \setcounter{LWR@latestautopage}{1}
```

Env LWR@figcaption An HTML <figcaption> is not allowed in places where L^AT_EX does allow a figure caption, such as inside a longtable where the tabular has already started, or inside a center environment. Therefore, a <div> of class figurecaption is used instead.

```
9226 \newenvironment*{LWR@figcaption}
9227   {
9228     \ifbool{FormatWP}{%
9229       \BlockClass[font-style:italic]{figurecaption}
9230     }{\LWR@print@vspace*{\baselineskip}
9231     }{
9232       \BlockClass{figurecaption}
9233     }%
9234   }
9235   {\endBlockClass}
```

\LWR@HTML@caption@begin {<type>}

Low-level code to create HTML tags for captions.

The print versions are from the caption package.

```
9236 \newcommand*{\LWR@HTML@caption@begin}[1]
9237 {%
9238 \LWR@traceinfo{LWR@HTML@caption@begin}%
```

Keep par and minipage changes local:

```
9239 \begingroup%
```

No need for a minipage or \parbox inside the caption:

```
9240 \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}{\}{\}%
9241 \RenewDocumentCommand{\parbox}{O{t} O{ } O{t} m +m}{##5}%
```

Enclose the original caption code inside an HTML tag:

```
9242 \LWR@figcaption%
9243 \LWR@traceinfo{LWR@HTML@caption@begin: about to LWR@origcaption@begin}%
9244 \LWR@print@caption@begin{#1}%
9245 \LWR@traceinfo{LWR@HTML@caption@begin: done}%
9246 }
```

\LWR@HTML@caption@end Low-level patches to create HTML tags for captions.

```
9247 \newcommand*{\LWR@HTML@caption@end}
9248 {%
```

```
9249 \LWR@traceinfo{LWR@HTML@caption@end}%
9250 \LWR@print@caption@end%
```

Closing tag:

```
9251 \endLWR@figcaption%
9252 \endgroup%
9253 % \leavevmode% avoid bad space factor (0) error
9254 \LWR@traceinfo{LWR@HTML@caption@end: done}%
9255 }
```

`\caption@begin` `\caption@end` Low-level patches to create HTML tags for captions. These are assigned `\AtBeginDocument` so that other packages which modify captions will have already been loaded before saving the print-mode version.

```
9256 \AtBeginDocument{
9257 \LWR@formatted{caption@begin}
9258 \LWR@formatted{caption@end}
9259 }
```

`\captionlistentry` Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```
9260 \let\LWR@origcaptionlistentry\captionlistentry
9261
9262 \renewcommand*{\captionlistentry}{%
9263 \LWR@ensuredoingapar%
9264 \LWR@origcaptionlistentry%
9265 }
9266
9267 \def\LWR@LTcaptionlistentry{%
9268 \LWR@ensuredoingapar%
9269 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
9270 \bgroup
9271 \ifstar{\egroup\LWR@LT@captionlistentry}% gobble *
9272 {\egroup\LWR@LT@captionlistentry}%
9273 \def\LWR@LT@captionlistentry#1{%
9274 \caption@listentry\@firstoftwo[LTcaption]{#1}}%
```

`\addcontentsline` Patched to write the autopage and autoid before each float's entry. No changes if writing .toc For a theorem, automatically defines `\ext@<type>` as needed, to mimic and reuse the float mechanism.

f

```
9275 \let\LWR@origaddcontentsline\addcontentsline
9276
9277 \renewcommand*{\addcontentsline}[3]{%
9278 \ifstrequal{#1}{toc}{ }% not TOC

9279 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9280 { }%
9281 {\LWR@newautoidanchor}%
```

```

9282   \ifcsvoid{ext@#2}{\csdef{ext@#2}{#1}}{}%
9283   \addtocontents{\@nameuse{ext@#2}}{%
9284     \protect\LWRsetnextfloat%
9285     {\arabic{LWR@latestautopage}}%
9286     {\arabic{LWR@thisautoid}}%
9287   }%
9288 }% not TOC
9289 \LWR@origaddcontentsline{#1}{#2}{#3}%
9290 }

```

Pkg `capt-of` Either package provides `\captionof`, which is later patched at the beginning of the document.
 Pkg `caption`

`\captionof` Patched to handle paragraph tags.

```

9291 \AtBeginDocument{
9292 \let\LWR@origcaptionof\captionof
9293
9294 \renewcommand*{\captionof}{%
9295 \LWR@stoppars%
9296 \LWR@origcaptionof%
9297 }
9298 }

9299 \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^AT_EX infrastructure is used for TOC, along with some patches to generate HTML output.

for HTML output: 9300 `\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^AT_EX, the file is not reset after being read, since the sideroc may be referred to again in each HTML page.

```
9301 \newcommand*\LWR@myshorttoc}[1]{%
9302 \LWR@traceinfo{\LWR@myshorttoc: #1}%
9303 \LWR@ensuredoingapar%
```

Only if the file exists:

```
9304 \IfFileExists{\jobname.#1}{%
9305 \LWR@traceinfo{\LWR@myshorttoc: loading}%
```



Many of the commands in the file will have @ characters in them, so @ must be made a regular letter.

```
9306 \begingroup%
9307 \makeatletter%
```

Read in the toc file:

```
9308 \@input{\jobname.#1}%
9309 \endgroup%
9310 }%
9311 {%
9312 \LWR@traceinfo{\LWR@myshorttoc: done}%
9313 }
```

```
\LWR@subtableofcontents {<toc/lof/lot>} {<sectionstarname>}
```

Places a TOC/LOF/LOT at the current position.

```
9314 \NewDocumentCommand{\LWR@subtableofcontents}{m m}{%
```

Closes previous levels:

```
9315 \@ifundefined{chapter}
9316 {\LWR@closeprevious{section}}
9317 {\LWR@closeprevious{chapter}}
```

Prints any pending footnotes so that they appear above the potentially large toc:

```
9318 \LWR@printpendingfootnotes
```

Place the list into its own chapter (if defined) or section:

```
9319 \@ifundefined{chapter}{\section*{#2}}{\chapter*{#2}}
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
9320 \LWR@htmlElementclass{nav}{#1}
```

Create the actual list:

```
9321 \LWR@myshorttoc{#1}
```

Close the nav:

```
9322 \LWR@htmlElementclassend{nav}{#1}
9323 }
```

`\@starttoc` {*(ext)*}

Patch `\@starttoc` to encapsulate the TOC inside HTML tags:

```
9324 \let\LWR@orig@starttoc\@starttoc
9325
9326 \renewcommand{\@starttoc}[1]{
9327 \LWR@htmlElementclass{nav}{#1}
9328 \LWR@orig@starttoc{#1}
9329 \LWR@htmlElementclassend{nav}{#1}
9330 }
```

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.)

```
9331 \newbool{LWR@copiedsidetoc}
9332 \boolfalse{LWR@copiedsidetoc}
```

`\tableofcontents` Patch `\tableofcontents`, etc. to print footnotes first. `newfloat` uses `\listoffigures` for all future float types.

```
9333 \AtBeginDocument{
9334 \let\LWR@origtableofcontents\tableofcontents
9335
9336 \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:

```
9337 \ifboolexpr{bool{FormatWP} and bool{WPMarkTOC}}{
9338
9339 === table of contents ===
9340
9341 }
9342 {
```

Copy the `.toc` file to `.sidetoc` for printing the sideroc. The original `.toc` file is renewed when `\tableofcontents` is finished.

```
9343 \ifbool{LWR@copiedsidetoc}{%
9344 \LWR@copyfile{\jobname.toc}{\jobname.sidetoc}%
9345 \booltrue{LWR@copiedsidetoc}%
9346 }%
```

```

9347 \LWR@printpendingfootnotes
9348 \LWR@origtableofcontents
9349 }
9350 }% \tableofcontents
9351 }% AtBeginDocument

```

`\listoffigures`

```

9352 \let\LWR@origlistoffigures\listoffigures
9353
9354 \renewcommand*\listoffigures{
9355 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9356
9357 === list of figures ===
9358
9359 }
9360 {
9361 \LWR@printpendingfootnotes
9362 \LWR@origlistoffigures
9363 }
9364 }

```

`\listoftables`

```

9365 \let\LWR@origlistoftables\listoftables
9366
9367 \renewcommand*\listoftables{
9368 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9369
9370 === list of tables ===
9371
9372 }
9373 {
9374 \LWR@printpendingfootnotes
9375 \LWR@origlistoftables
9376 }
9377 }

```

75.2 High-level toc commands

`\listof` $\langle type \rangle$ $\langle title \rangle$

Emulate the `\listof` command from the `float` package (section 230). Used to create lists of custom float types. Also used to redefine the standard L^AT_EX `\listoffigures` and `\listoftables` commands.

```

9378 \NewDocumentCommand{\listof}{m +m}{%
9379 \@ifundefined{l@#1}{%
9380 \csdef{l@#1}##1##2{\hypertocfloat{1}{#1}{\@nameuse{ext@#1}}{##1}{##2}}%
9381 }{}}%
9382 \LWR@subtableofcontents{\@nameuse{ext@#1}}{#2}
9383 \expandafter\newwrite\csname tf@#1\endcsname\endcsname

```

```

9384 \immediate\openout \csname tf@\csname ext@#1\endcsname\endcsname
9385   \jobname.\@nameuse{ext@#1}\relax
9386 }

```

75.3 Side toc

The “side toc” is a table-of-contents positioned to the side.

It may be renamed by redefining `\sidedocname`, and may contain paragraphs.

css may be used to format the sideroc:

CSS related to sideroc:

div.sidetoccontainer: The entire sideroc.

div.sidetoctitle: The title.

div.sidetoccontents: The table of contents.

```

9387 \end{warpHTML}

```

for HTML & PRINT: 9388 `\begin{warpall}`

Ctrl SideTOCDepth Controls how deep the side-TOC gets. Use a standard \LaTeX section level similar to `tocdepth`. Warn if parts of the website may be inaccessible.

```

9389 \newcounter{SideTOCDepth}
9390 \setcounter{SideTOCDepth}{1}
9391
9392 \AtBeginDocument{%
9393   \ifnumcomp{\value{SideTOCDepth}}{<}{\value{FileDepth}}{
9394     \PackageWarningNoLine{lwarp}
9395     {%
9396       SideTOCDepth is less than FileDepth,\MessageBreak
9397       so some website pages may be inaccessible%
9398     }
9399   }{}
9400 }

```

`\sidedocname` Holds the default name for the sideroc.

```

9401 \newcommand{\sidedocname}{Contents}

```

```

9402 \end{warpall}

```

for HTML output: 9403 `\begin{warpHTML}`

`\LWR@sidedoc` Creates the actual side-TOC.

```

9404 \newcommand*{\LWR@sidetoc}{
9405 \LWR@forcenewpage
9406 \LWR@stoppars
9407

```

The entire sideroc is placed into a nav of class sidetoc.

```

9408 \LWR@htmlElementclass{div}{sidetoccontainer}
9409 \LWR@htmlElementclass{nav}{sidetoc}
9410
9411 \setcounter{tocdepth}{\value{SideTOCDepth}}
9412

```

The title is placed into a <div> of class sidetocTitle, and may contain paragraphs.

```

9413 \begin{BlockClass}{sidetocTitle}
9414 \ifcsvoid{thetitle}{\InlineClass{sidetocThetitle}{\thetitle}\par}
9415 \sidetocname
9416 \end{BlockClass}

```

The table of contents is placed into a <div> of class sidetocContents.

```

9417 \begin{BlockClass}{sidetocContents}
9418 \LinkHome
9419
9420 \LWR@myshorttoc{sidetoc}
9421 \end{BlockClass}
9422 \LWR@htmlElementclassend{nav}{sidetoc}
9423 \LWR@htmlElementclassend{div}{sidetoccontainer}
9424 }

```

75.4 Low-level toc line formatting

`\numberline` {<number>}

(Called from each line in the .aux, .lof files.)

Record this section number for further use:

```

9425 \newcommand*{\LWR@numberline}[1]{%
9426 \LWR@sectionnumber{#1}\quad%
9427 }
9428
9429 \LetLtxMacro\numberline\LWR@numberline

```

`\LWR@maybetocdata` Replaced by `tocdata`. Adds author name.

```

9430 \newcommand*{\LWR@maybetocdata}{}

```

`\hypertoc` {<1: depth>} {<2: type>} {<3: name>} {<4: page>}

Called by `\l@section`, etc. to create a hyperlink to a section.

The autopage label is always created just after the section opens.

#1 is depth

#2 is section, subsection, etc.

#3 the text of the caption

#4 page number

```
9431 \NewDocumentCommand{\hypertoc}{m m +m m}{%
9432 \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
```

Respond to tocdepth:

```
9433 \ifthenelse{\cnttest{#1}{<=}{\value{tocdepth}}}{%
9434   {%
9435     \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.

```
9436     \LWR@subhyperrefclass{%
9437       \LWR@htmlrefsectionfilename{\BaseJobname-autopage-#4}%
9438       \LWR@origpound\LWR@print@mbx{autosec-#4}%
9439     }{#3}{toc#2}%

9440     \LWR@maybetocdata%

9441     \LWR@stoppars%
9442   }%
9443   }%
9444 \LWR@traceinfo{hypertoc done}%
9445 }
```

Ctrl lofdepth TOC depth for figures.

```
9446 \@ifclassloaded{memoir}{}{
9447 \newcounter{lofdepth}
9448 \setcounter{lofdepth}{1}
9449 }
```

Ctrl lotdepth TOC depth for tables.

```
9450 \@ifclassloaded{memoir}{}{
9451 \newcounter{lotdepth}
9452 \setcounter{lotdepth}{1}
9453 }
```

\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

```
9454 \newcommand{\hypertocfloat}[5]{%
9455 \LWR@startpars
```

If some float-creation package has not yet defined the float type's lofdepth counter, etc, define it here:

```
9456 \@ifundefined{c@#3depth}{%
9457 \newcounter{#3depth}%
9458 \setcounter{#3depth}{1}%
9459 }{}%
```

Respond to lofdepth, etc.:

```
9460 \LWR@traceinfo{hypertocfloat depth is #1 #3depth is \arabic{#3depth}}%
9461 \ifthenelse{\cnttest{#1}{<=}{\arabic{#3depth}}}%
9462   {%
9463     \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.

```
9464     \LWR@subhyperrefclass{%
9465     \LWR@htmlrefsectionfilename{%
9466       \BaseJobname-autopage-\arabic{LWR@nextautopage}%
9467     }%
9468     \LWR@origpound\LWR@print@embox{autoid-\arabic{LWR@nextautoid}}}%
9469     {#4}{toc#2}%

9470     \LWR@maybetocdata%

9471     \LWR@stoppars%
9472   }%
9473   {}%
9474 }
```

Automatically called by \contentsline:

```
\l@book {<name>} {<page>}
```

Uses \DeclareDocumentCommand in case the class does not happen to have a \book.

```
9475 \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`.

```
9476 \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`.

```
9477 \@ifundefined{chapter}
9478 {}
9479 {
9480 \DeclareDocumentCommand{\l@chapter}{m m}
9481   {\hypertoc{0}{chapter}{#1}{#2}}
9482 }
```

`\l@section` {<*name*>} {<*page*>}

```
9483 \renewcommand{\l@section}[2]{\hypertoc{1}{section}{#1}{#2}}
```

`\l@subsection` {<*name*>} {<*page*>}

```
9484 \renewcommand{\l@subsection}[2]{\hypertoc{2}{subsection}{#1}{#2}}
```

`\l@subsubsection` {<*name*>} {<*page*>}

```
9485 \renewcommand{\l@subsubsection}[2]{\hypertoc{3}{subsubsection}{#1}{#2}}
```

`\l@paragraph` {<*name*>} {<*page*>}

```
9486 \renewcommand{\l@paragraph}[2]{\hypertoc{4}{paragraph}{#1}{#2}}
```

`\l@subparagraph` {<*name*>} {<*page*>}

```
9487 \renewcommand{\l@subparagraph}[2]{\hypertoc{5}{subparagraph}{#1}{#2}}
```

`\l@figure` {<*name*>} {<*page*>}

```
9488 \renewcommand{\l@figure}[2]{\hypertocfloat{1}{figure}{lof}{#1}{#2}}
```

`\l@table` {<*name*>} {<*page*>}

```
9489 \renewcommand{\l@table}[2]{\hypertocfloat{1}{table}{lot}{#1}{#2}}
```

```
9490 \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: 9491 `\begin{warpHTML}`

```
9492 \newcounter{LWR@autoindex}
9493 \setcounter{LWR@autoindex}{0}
9494
9495 \newcounter{LWR@autoglossary}
9496 \setcounter{LWR@autoglossary}{0}
```

Env `theindex`

```
9497 \@ifundefined{chapter}
9498 {\newcommand*\LWR@indexsection[1]{\section*{#1}}}
9499 {\newcommand*\LWR@indexsection[1]{\chapter*{#1}}}
9500
9501 \AtBeginDocument{
9502 \renewenvironment*{theindex}{%
9503   \LWR@indexsection{\indexname}%
9504   \let\item\LWR@indexitem%
9505   \let\subitem\LWR@indexsubitem%
9506   \let\subsubitem\LWR@indexsubsubitem%
9507 }{}
9508 }% AtBeginDocument
```

`\LWR@indexitem` [*<index key>*] The optional argument is added to support `repeatindex`.

```
9509 \newcommand*\LWR@indexitem[1][\@empty]{
9510
9511 \InlineClass{indexitem}{\LWR@htmlcomment{}}#1%
9512 }
```

`\LWR@indexsubitem`

```
9513 \newcommand*\LWR@indexsubitem{
9514
9515 \InlineClass{indexsubitem}{\LWR@htmlcomment{}}
9516 }
```

`\LWR@indexsubsubitem`

```

9517 \newcommand{\LWR@indexsubsubitem}{
9518
9519 \InlineClass{indexsubsubitem}{\LWR@htmlcomment{}}
9520 }

```

`\@wrindex` $\langle term \rangle$ Redefined to write the `LWR@autoindex` counter instead of page.

```

9521 \def\LWR@wrindex#1{%
9522 \addtocounter{LWR@autoindex}{1}%
9523 \LWR@new@label{LWR@index-\arabic{LWR@autoindex}}%
9524 \protected@write\@indexfile{%
9525 {\string\indexentry{#1}{\arabic{LWR@autoindex}}}%
9526 \endgroup
9527 \@esphack}
9528
9529 \AtBeginDocument{
9530 \let\@wrindex\LWR@wrindex
9531 }

```

`\@wrglossary` $\langle term \rangle$ Redefined to write the `LWR@latestautopage` counter instead of page.

```

9532 \def\@wrglossary#1{%
9533 \addtocounter{LWR@autoglossary}{1}%
9534 \LWR@new@label{LWR@glossary-\theLWR@autoglossary}%
9535 \protected@write\@glossaryfile{%
9536 {\string\glossaryentry{#1}{\theLWR@autoglossary}}%
9537 \endgroup
9538 \@esphack}

```

`\LWR@indexnameref` $\langle LWR@autoindex \rangle$

Creates a hyperlink based on the given entry's autoindex.

```

9539 \newcommand*\LWR@indexnameref[1]{\nameref{LWR@index-#1}}

```

`\LWR@doindexentry` $\langle LWR@autoindex, or macros \rangle$

Creates a hyperlink, or handles `\see`, `\textbf`, etc.

```

9540 \newrobustcmd{\LWR@doindexentry}[1]{%
9541 \IfInteger{#1}%
9542   {\LWR@indexnameref{#1}}%
9543   {#1}%
9544 }

```

`\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{...}

```

```

9545 \newcommand{\LWR@hyperindexrefnullified}{%
9546 \renewrobustcmd{\emph}[1]{\LWR@HTML@emph{\LWR@doindexentry{##1}}}%
9547 \renewrobustcmd{\textbf}[1]{\LWR@HTML@textbf{\LWR@doindexentry{##1}}}%
9548 \renewrobustcmd{\texteb}[1]{\LWR@HTML@texteb{\LWR@doindexentry{##1}}}%
9549 \renewrobustcmd{\textlg}[1]{\LWR@HTML@textlg{\LWR@doindexentry{##1}}}%
9550 \renewrobustcmd{\textrm}[1]{\LWR@HTML@textrm{\LWR@doindexentry{##1}}}%
9551 \renewrobustcmd{\textsf}[1]{\LWR@HTML@textsf{\LWR@doindexentry{##1}}}%
9552 \renewrobustcmd{\texttt}[1]{\LWR@HTML@texttt{\LWR@doindexentry{##1}}}%
9553 \renewrobustcmd{\textup}[1]{\LWR@HTML@textup{\LWR@doindexentry{##1}}}%
9554 \renewrobustcmd{\textsc}[1]{\LWR@HTML@textsc{\LWR@doindexentry{##1}}}%
9555 \renewrobustcmd{\textulc}[1]{\LWR@HTML@textulc{\LWR@doindexentry{##1}}}%
9556 \renewrobustcmd{\textsi}[1]{\LWR@HTML@textsi{\LWR@doindexentry{##1}}}%
9557 \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
9558 \renewrobustcmd{\textsl}[1]{\LWR@HTML@textsl{\LWR@doindexentry{##1}}}%
9559 }

```

`\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`.

```
9560 \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.

```

9561 \def\LWR@tempone{#1}%
9562 \IfBeginWith{\LWR@tempone}{ }{%
9563   \StrGobbleLeft{\LWR@tempone}{1}[\LWR@tempone]%
9564 }{%}%

```

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.

```

9565 \IfInteger{\LWR@tempone}%
9566   {\LWR@indexnameref{\LWR@tempone}}%
9567   {%
9568     \begingroup%
9569     \LWR@hyperindexrefnullified
9570     #1%
9571     \endgroup%
9572   }%
9573 }

```

```
9574 \end{warppHTML}
```

for PRINT output: A null command for print mode, in case `hyperref` was not used:

```

9575 \begin{warpprint}
9576 \newcommand{\hyperindexref}[1]{#1}
9577 \end{warpprint}

```

for HTML & PRINT: For the glossaries package, try to prevent an error where `\glo@name` was not found:

```
9578 \begin{warpall}
9579 \providecommand{\glo@name}{}
9580 \end{warpall}
```

77 Bibliography presentation

for HTML output: 9581 `\begin{warpHTML}`

`\bibliography {<filenames>}`

Modified to use the base jobname instead of the `_html` jobname.

```
9582 \def\bibliography#1{%
9583     \if@filesw
9584     \immediate\write\@auxout{\string\bibdata{#1}}%
9585     \fi
9586 %     \@input@{\jobname.bbl}% original
9587     \begingroup%
9588     \@input@{\BaseJobname.bbl}% lwarp
9589     \endgroup%
9590 }
```

`\@biblabel {<text-refnumber>}`

```
9591 \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>

```
9592 \AtBeginDocument{
9593 \AtBeginEnvironment{thebibliography}{
9594 \providecommand*\LWR@newem}[1]{\textit{#1}}
9595
9596 \renewrobustcmd{\em}{%
9597     \begingroup
9598     \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
9599     \afterassignment\LWR@em@after
9600     \toks@\bgroup
9601 }
9602
9603 \def\LWR@em@finish#1{%
9604     \xdef\LWR@em@after{\noexpand#1{\the\toks@}}%
9605     \endgroup
9606     \LWR@em@after\egroup
```

```

9607 }
9608 }% \AtBeginEnvironment{thebibliography}
9609 }% \AtBeginDocument

9610 \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: 9611 `\begin{warpHTML}`

```

9612 \newcommand*{\LWR@restoreorigformatting}{%
9613 \LWR@traceinfo{\LWR@restoreorigformatting}%

```

Numerous macros change their print/HTML meaning depending on `\LWR@formatting`:

```

9614 \renewcommand*{\LWR@formatting}{print}%
9615 \linespread{1}%

```

```

9616 \let\par\LWR@origpar%

```

```

9617 \LWR@select@print@hspace%

```

```

9618 \let\hfil\LWR@origfil%
9619 \let\hss\LWR@orighss%
9620 \let\llap\LWR@origllap%
9621 \let\rlap\LWR@origrlap%
9622 \let\hfilneg\LWR@origfilneg%

```

```

9623 \let\,\LWR@origcomma% disable HTML short unbreakable space
9624 \let\thinspace\LWR@origthinspace% disable HTML short unbreakable space
9625 \let\negthinspace\LWR@orignegthinspace% disable HTML negative short unbreakable space
9626 \let\textellipsis\LWR@origtextellipsis%
9627 \let\textless\LWR@origtextless%
9628 \let\textgreater\LWR@origtextgreater%

```

```

9629 \let\&\LWR@origampersand%

```

```

9630 \let\em\LWR@origem%

```

```

9631 \LetLtxMacro\normalfont\LWR@originormalfont%
9632 \let\sp\LWR@origsp%
9633 \let\sb\LWR@origsb%
9634 \LetLtxMacro\textsuperscript\LWR@origtextsuperscript%
9635 \LetLtxMacro@textsuperscript\LWR@orig@textsuperscript%
9636 \LetLtxMacro\textsubscript\LWR@origtextsubscript%
9637 \LetLtxMacro@textsubscript\LWR@orig@textsubscript%
9638 \LetLtxMacro\underline\LWR@origunderline%
9639 \let~\LWR@origtilde%
9640 \let\enskip\LWR@origenskip%
9641 \let\quad\LWR@origquad%
9642 \let\qqquad\LWR@origqqquad%

```

`\endtabular` must be restored to its original, instead of relying on `lwarp`'s `\LWR@formatted` mechanism:

```

9643 \LetLtxMacro\endtabular\LWR@origendtabular%
9644 \csletcs{endtabular*}{LWR@origendtabular*}%

9645 \LetLtxMacro\noalign\LWR@orignoalign%
9646 \LetLtxMacro\hline\LWR@orighline%

9647 \let\newline\LWR@orignewline%
9648 \LetLtxMacro\includegraphics\LWR@originincludegraphics%

9649 \LetLtxMacro@ensuredmath\LWR@origensuredmath%
9650 %
9651 \LWR@restoreorigaccents%
9652 \LWR@restoreoriglists%
9653 %
9654 \LWR@FBcancel%
9655 }

9656 \end{warpHTML}

```

79 Math

79.1 Limitations

79.1.1 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}}

```

79.1.2 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`.

79.1.3 `svg` option

SVG math option For `svg` math, math is rendered as usual by `LATEX` into the initial `PDF` file using the current font¹⁸, then is captured from the `PDF` and converted to `svg` graphics via a number of utility programs. The `svg` format is a scalable-vector web format, so math may be typeset by `LATEX` with its fine control and precision, then displayed or printed at any size, depending on (sometimes broken) browser support. An `HTML alt` attribute carries the `LATEX` code which generated the math, allowing copy/paste of the `LATEX` math expression into other documents.

SVG image font size For the `lateximage` environment, the size of the math and text used in the `svg` image may be adjusted by setting `\LateximageFontSizeName` to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{normalsize}
```

For inline `svg` math, font size is instead controlled by `\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 `LATEX` code for the math expression. For `AMS` environments with multiple numbers in the same environment, only the first and

¹⁸See section 519 regarding fonts and fractions.

last is copy/pasted, as a range. No tags are listed inside a starred \mathcal{AMS} environment, although the `\tag` macro will still appear inside the \LaTeX math expression.

 **SVG math in \TeX boxes** SVG math does not work inside \TeX boxes, since a `\newpage` is required before and after each image.

79.1.4 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 \LaTeX PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of \LaTeX , and
2. As detokenized printed \LaTeX 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 \LaTeX values, and the MATHJAX cross-referencing system is ignored in favor of the \LaTeX internal system, seamlessly integrating with the rest of the \LaTeX code.

79.1.5 Customizing MATHJAX

MATHJAX does not have preexisting support every possible math function. Additional MATHJAX function definitions may be defined. These will be declared at the start of each HTML page, and thus will have a global effect.

Examples:

```
\CustomizeMathJax{
  \newcommand{\expval}[1]{\langle#1\rangle}
  \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arsinh}{\text{arsinh}}}
\CustomizeMathJax{\newcommand{\arcosh}{\text{arcosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
```

79.1.6 MATHJAX limitations

MATHJAX limitations Limitations when using MATHJAX include:

Prog MathJax

subequations

- MATHJAX itself does not support subequations. This may be improved by parsing the \LaTeX 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.

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

- Usage of `siunitx` inside a math equation is supported via a third-party `MATHJAX` extension. While inside a math expression, do not use `\SI` or `\si` inside `\text`, where it will be rendered as normal text.

⚠ **siunitx inside an equation**

<https://github.com/burnpanck/MathJax-siunitx>

Also see section 8.7.11.

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 supported by `MATHJAX`, including `\ensuremath` and `bigdelim`, along with occasionally-used macros such as `\relax`. `lwarp` emulates footnotes, units, and `nicefrac` for `MathJax`.

79.1.7 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.

79.1.8 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. 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.

changing contents**complicated alt tag**

79.1.9 Complicated display math objects

`\displaymathnormal`

By default, or when selecting `\displaymathnormal`, `MATHJAX` math display environ-

ments 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.

`\displaymath` other
MathJax unsupported
complicated alt tag

When selecting `\displaymath` other, 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.

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: 9657 `\begin{warpall}`

`\AltTextOpen` The opening part of HTML alt tag for an image. The default is a left parenthesis.

9658 `\newcommand*\AltTextOpen}{(}`

`\AltTextClose` The closing part of HTML alt tag for an image. The default is a right parenthesis.

9659 `\newcommand*\AltTextClose}{)}`

`\ImageAltText` The HTML alt tag for an image.

Default: `image`

9660 `\newcommand*\ImageAltText}{image}`

`\MathImageAltText` The HTML alt tag for an SVG math image.

Default: `“math image”`

9661 `\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.

9662 `\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`.

```

9663 \newcommand*{\ThisAltText}[1]{%
9664   \renewcommand{\LWR@ThisAltText}{#1}%
9665 }

```

`\PackageDiagramAltText` Appended to the `lateximage` HTML `alt` tag for the images generated by many packages.
 Default: “`diagram`”

```

9666 \newcommand*{\PackageDiagramAltText}{diagram}

9667 \end{warpall}

```

79.3 Inline and display math

for HTML output: `9668 \begin{warpHTML}`

`Ctr LWR@externalfilecnt` Counter for the external files which are generated and then referenced from the HTML:

```

9669 \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.

```

9670 \newbool{LWR@indisplaymathimage}

```

`Bool LWR@xfakebold` True if `xfakebold \setBold` is in use.

```

9671 \newbool{LWR@xfakebold}
9672 \boolfalse{LWR@xfakebold}

```

`\LWR@orig@setBold` Redefined by `lwarp-xfakebold`.

```

9673 \newcommand*{\LWR@orig@setBold}{}

```

`\LWR@orig@unsetBold` Redefined by `lwarp-xfakebold`.

```

9674 \newcommand*{\LWR@orig@unsetBold}{}

```

`\LWR@applyxfakebold` Redefined by `lwarp-xfakebold`.

```

9675 \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`.

```

9676 \newcommand*{\LWR@setcurrentfont}{%
9677   \LWR@traceinfo{Using font family \LWR@f@family}%

```

```

9678 \nameuse{LWR@print@LWR@family family}%
9679 \LWR@traceinfo{Using font series \LWR@series}%
9680 \nameuse{LWR@print@LWR@series series}%
9681 \LWR@traceinfo{Using font shape \LWR@shape}%
9682 \nameuse{LWR@print@LWR@shape shape}%
9683 \LWR@traceinfo{Using font caps shape \LWR@shapecaps}%
9684 \nameuse{LWR@print@LWR@shapecaps shape}%
9685 }

```

$\$$ 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.

```

9686 \let\LWR@origtextdollar\$
9687
9688 \renewcommand*{\$}{%
9689 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9690 {\LWR@origtextdollar}%
9691 {\HTMLUnicode{00024}}%
9692 }

```

File *A marker to be used to help *pdfcrop* identify the inline math baseline and width. If *lwarp_baseline_marker.png* 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 *A marker to be used to help *pdfcrop* identify the inline math baseline and width. If *lwarp_baseline_marker.eps* either *graphicx* or *graphics* is loaded, this marker is placed at the lower left and lower right corners of the inline math. *pdfcrop* is then able to identify the width of the image, and also the height of an image such as a horizontal dash which does not otherwise touch the baseline.*

A marker with alpha or opacity of 0% is not registered by *pdfcrop*, so the marker is a small square block of 1% alpha, which seems to work while still being effectively invisible in the final SVG image.

If *graphicx* is loaded, this marker is sized as a tiny 1 sp square. If *graphics* is loaded, this marker is used at its default size of around .25 pt. If neither *graphics* package is loaded, the marker is replaced by a 10 sp horizontal space, and there is no assistance for determining baseline or width of the inline math image. The best results are obtained when using *graphicx*.

$\LWR@addbaselinemarker$ Places a small marker in an svg inline image. If *graphics* or *graphicx* are loaded, the marker is a mostly transparent image. If neither is loaded, no marker is used.

```

9693 \AtBeginDocument{
9694
9695 \ifpdf
9696 \newcommand*\LWR@baselinename{\lwarp_baseline_marker.png}
9697 \else
9698 \ifXeTeX
9699 \newcommand*\LWR@baselinename{\lwarp_baseline_marker.png}
9700 \else
9701 \newcommand*\LWR@baselinename{\lwarp_baseline_marker.eps}
9702 \fi
9703 \fi
9704

```

```

9705 \IfFileExists{\LWR@baselinename}%
9706 {
9707   \@ifpackageloaded{graphicx}{
9708     \newcommand*\LWR@addbaselinemarker}{%
9709       \LWR@originincludegraphics{\LWR@baselinename}%
9710     }
9711   }{
9712     \@ifpackageloaded{graphics}{
9713       \newcommand*\LWR@addbaselinemarker}{%
9714         \LWR@originincludegraphics{\LWR@baselinename}%
9715       }
9716     }{
9717       \PackageWarningNoLine{lwarp}{Load graphicx or graphics
9718         for improved\MessageBreak
9719         SVG math baselines%
9720       }
9721       \newcommand*\LWR@addbaselinemarker}{}
9722     }
9723   }
9724 }{% \lwrap_baseline_marker.png or .eps is not present
9725   \PackageWarningNoLine{lwarp}{%
9726     File \LWR@baselinename\space is not installed\MessageBreak
9727     alongside the lwarp-*.sty files,\MessageBreak
9728     so SVG math baselines may not be accurate}
9729   \newcommand*\LWR@addbaselinemarker}{}
9730 }
9731
9732 }% AtBeginDocument

```

`\LWR@subsingledollar` * $\langle 2: \textit{alt text} \rangle$ $\langle 3: \textit{add'l hashing} \rangle$ $\langle 4: \textit{math expression} \rangle$

For inline math. Uses MathJax, or for svg math the image is measured and adjusted to the baseline of the HTML output, and placed inside a `lateximage`.

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.

```

9733 \newlength{\LWR@singledollarwidth}
9734 \newlength{\LWR@singledollarheight}
9735 \newlength{\LWR@singledollardepth}
9736
9737 \newsavebox{\LWR@singledollarbox}

```

```

9738
9739 \NewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
9740 \LWR@traceinfo{\LWR@subsingledollar}%

9741 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
9742 {%
9743 \LWR@traceinfo{\LWR@subsingledollar: already in a lateximage}%
9744 #4% contents
9745 }%
9746 {% not in a lateximage
9747 \begingroup%

```

Support for xfakebold:

```
9748 \LWR@applyxfakebold%
```

MathJax cannot parse the often complicated T_EX expressions which appear in the various uses of `\ensuredmath`. `\ensuremath` forces the `alt` tag to “(math image)”, as translated according to `\MathImageAltText`. If this is the case, force the use of a `lateximage` even if MathJax. Likewise for `siunitx` if `parse-numbers=false`.

If MathJax, or if formatting math for a word processor, and not `\ensuredmath`, and not a dynamic math expression, print the math expression:

```

9749 \ifboolexpr{%
9750   (
9751     bool{mathjax} or
9752     ( bool{FormatWP} and bool{WPMarkMath} )
9753   ) and
9754   ( not test {
9755     \ifstrequal {#2}
9756       {\AltTextOpen\MathImageAltText\AltTextClose} % from \ensuredmath
9757     }
9758   ) and
9759   ( not bool{\LWR@dynamicmath} )
9760 }%

```

For MATHJAX, print the math between `\(` and `\)`:

```

9761 {%
9762   \LWR@traceinfo{\LWR@subsingledollar: Mathjax}%
9763   {\textbackslash(\LWR@HTMLsanitize{#4}\textbackslash)}%
9764 }% mathjax

```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the L^AT_EX code, and a css style to control the baseline adjustment.

```

9765 {% not mathjax
9766 \LWR@traceinfo{\LWR@subsingledollar: NOT mathjax, or is ensuremath, or is dynamic}%

```

Measure the depth, width, and height of the math image:

```
9767 \begingroup%
```

Temporarily disable formatting while measuring the image parameters:

```
9768 \LWR@restoreorigformatting%
9769 \RenewDocumentEnvironment{lateximage}{s o s o o}{\relax}{\relax}% inside group
9770 \LWR@print@normalsize%
```

Temporarily set font for the HTML PDF output:

```
9771 \LWR@setcurrentfont%
```

`lateximagedepth` must be nested to avoid generating paragraph tags. \mathcal{AMS} `math` modifies the `\text` macro such that `\addtocounter` does not always occur as expected. Lower-level code is used instead.

```
9772 \global\advance\c@LWR@lateximagedepth 1\relax%
```

Typeset and save the contents, depending on how they were generated:

SVG math: `\LWR@origensuredmath` is part of argument #4.

SVG math \ensuremath: `\LWR@origensuredmath` is part of argument #4.

SVG dynamic math: `\LWR@origensuredmath` is part of argument #4.

Mathjax: Argument #4 is the contents of the math expression without `\LWR@origensuredmath`. This case is handled above.

Mathjax \ensuremath: `\LWR@origensuredmath` is part of argument #4.

Mathjax dynamic math: Argument #4 is the contents of the math expression without `\LWR@origensuredmath`, so `\LWR@origensuredmath` is added below.

\ifmmode: Included “just in case”.

```
9773 \ifmmode%
9774 \global\save\c@LWR@origensuredmath\c@LWR@origensuredmath%
9775 \else%
9776 \ifbool{LWR@dynamicmath}{%
9777 \ifbool{mathjax}{%
9778 \global\save\c@LWR@origensuredmath\c@LWR@origensuredmath}%
9779 }{%
9780 \global\save\c@LWR@origensuredmath\c@LWR@origensuredmath}%
9781 }%
9782 }{%
9783 \global\save\c@LWR@origensuredmath\c@LWR@origensuredmath}%
9784 }%
9785 \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.

```

9786 \global\sbox{\LWR@singledollarbox}{%
9787 \usebox{\LWR@singledollarbox}%
9788 \raisebox{-\dp\LWR@singledollarbox}{%
9789 \LWR@addbaselinemarker%
9790 }%
9791 }%

```

More low-level code to undo the counter change.

```

9792 \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.

```

Measure the depth:

```

9793 \setlength{\LWR@singledollardepth}{%
9794 \LateximageFontScale\dp\LWR@singledollarbox%
9795 }%

```

Make the length a global change:

```

9796 \global\LWR@singledollardepth=\LWR@singledollardepth%

```

Likewise for width:

```

9797 \setlength{\LWR@singledollarwidth}{%
9798 \LateximageFontScale\wd\LWR@singledollarbox%
9799 }%
9800 \global\LWR@singledollarwidth=\LWR@singledollarwidth%

```

Likewise for total height:

```

9801 \setlength{\LWR@singledollarheight}{%
9802 \LateximageFontScale\ht\LWR@singledollarbox%
9803 }%
9804 \addtolength{\LWR@singledollarheight}{%
9805 \LateximageFontScale\dp\LWR@singledollarbox%
9806 }%
9807 \global\LWR@singledollarheight=\LWR@singledollarheight%

9808 \endgroup%

```

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:

```

9809 \ifdimgreater{\LWR@singledollarwidth}{.7\LWR@singledollarheight}{%
9810 \def\LWR@singledollarstyle{%
9811 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
9812 }%
9813 }{%
9814 \def\LWR@singledollarstyle{%
9815 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
9816 }%
9817 }%

```

If a very narrow width, use the height.

```

9818 \ifdimless{\LWR@singledollarwidth}{.2em}%
9819 {%
9820 \def\LWR@singledollarstyle{%
9821 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
9822 }%
9823 }%
9824 {}%
```

If very wide and short, use the width:

```

9825 \ifdimless{\LWR@singledollarheight}{.2em}%
9826 {%
9827 \def\LWR@singledollarstyle{%
9828 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
9829 }%
9830 }%
9831 {}%
```

If there is significant text depth, add the depth to the style.

```

9832 \ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
9833 \def\LWR@singledollardepthstyle{%
9834 \ ; % extra space
9835 \LWR@print@mbbox{%
9836 vertical-align:-\LWR@convertto{em}{\the\LWR@singledollardepth} em%
9837 } % extra space
9838 }%
9839 }{%
9840 \def\LWR@singledollardepthstyle{}%
9841 }%
```

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.

```

9842 \ifbool{LWR@dynamicmath}{%
9843 \LWR@traceinfo{subsingledollar: dynamic}%
9844 \begin{lateximage}% no hashing
9845 [\MathImageAltText]% alt tag
9846 []% no add'l hashing
9847 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9848 }{%
9849 \LWR@traceinfo{subsingledollar: static}%
9850 \IfValueTF{#1}{%
9851 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
```

Support for `xfakebold`:

```

9852 \ifbool{LWR@xfakebold}%
9853 {\def\LWR@tempone{Y}}%
9854 {\def\LWR@tempone{N}}%
```

```

9855     \begin{lateximage}*% use hashing
9856         [#2]% alt
9857         *% do not add open/closing braces
9858         [% addl' hashing
9859             #3%
9860             FM\LWR@family%
9861             SR\LWR@series%
9862             SH\LWR@shape%
9863             SHC\LWR@shapecaps%
9864             CL\LWR@tempcolor%
9865             FB\LWR@tempone% xfakebold
9866         ]%
9867         [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9868     }{%
9869     \begin{lateximage}% no hashing
9870         [#2]% alt
9871         [% no add'l hashing
9872         [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9873     }%
9874 }%

```

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.)

```
9875     \LWR@addbaselinemarker%
```

Support for *xfakebold*:

```
9876     \LWR@applyxfakebold%
```

Typeset the contents:

```
9877     \usebox{\LWR@singledollarbox}%
```

The closing baseline marker:

```
9878     \LWR@addbaselinemarker%
```

```
9879     \end{lateximage}%
```

```
9880 %
```

```
9881 }% not mathjax
```

```
9882 \endgroup%
```

```
9883 }% not in a lateximage
```

Clear the single-use alt text:

```
9884 \gdef\LWR@ThisAltText{%
```

```
9885 \LWR@traceinfo{\LWR@subsingledollar: done}%
```

```
9886 }
```

```
9887 \LetLtxMacro\LWR@origdollar$
9888 \LetLtxMacro\LWR@secondorigdollar$% balance for editor syntax highlighting
```

```
9889 \LetLtxMacro\LWR@origopenparen\(  
9890 \LetLtxMacro\LWR@origcloseparen\  
9891 \LetLtxMacro\LWR@origopenbracket\  
9892 \LetLtxMacro\LWR@origclosebracket\]
```

\$ Redefine the dollar sign to place math inside a lateximage, or use MATHJAX:
\$\$

```
9893 \begingroup
9894 \catcode'\$=\active%
9895 \protected\gdef$\@ifnextchar$\LWR@doubledollar\LWR@singledollar%
```

Used by chemformula to escape single-dollar math:

```
9896 \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:

```
9897 \protected\gdef\LWR@doubledollar$#1$${%
```

If MATHJAX or formatting for a word processor, print the L^AT_EX expression:

```
9898 \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
```

For MATHJAX, print the math between \[and \]:

```
9899 {
9900
9901   \textbackslash[ %
9902   \LWR@HTMLsanitize{#1} %
9903   \textbackslash] %
9904
9905 }% mathjax
```

For SVG, print the math inside a lateximage, with an <alt> tag of the L^AT_EX code:

```
9906 {% not mathjax
9907   \begin{BlockClass}{displaymath}%
9908   \LWR@newautoidanchor%
9909   \booltrue{LWR@indisplaymathimage}%
9910   \begin{lateximage}%
9911   [%
9912     \textbackslash[[] % extra space
9913     \LWR@HTMLsanitize{#1} % extra space
9914     \textbackslash[[] %
9915   ]%
9916   *% do not add open/closing braces
```

Support for xfakebold:

```
9917   \LWR@applyxfakebold%
```

```

9918 \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
9919 \end{lateximage}%
9920 \end{BlockClass}%
9921 }% not mathjax

```

Clear the single-use alt text:

```

9922 \gdef\LWR@ThisAltText{}%
9923 }%

```

$\LWR@singledollar$ $\{\langle alt\ text\rangle\}\{\langle math\ expression\rangle\}$

```

9924 \protected\gdef\LWR@singledollar#1${%
9925 \ifbool{mathjax}{%
9926 \LWR@subsingledollar*%
9927 {% alt tag
9928 \textbackslash( %
9929 \LWR@HTMLsanitize{#1} % extra space
9930 \textbackslash)%
9931 }%
9932 {singledollar}% add'l hashing
9933 {#1}% contents
9934 }{% not mathjax
9935 \LWR@subsingledollar*%
9936 {% alt tag
9937 \textbackslash( %
9938 \LWR@HTMLsanitize{#1} % extra space
9939 \textbackslash)%
9940 }%
9941 {singledollar}% add'l hashing
9942 {\LWR@origensuredmath{#1}}% contents
9943 }% not mathjax

```

Clear the single-use alt text:

```

9944 \gdef\LWR@ThisAltText{}%
9945 }

```

\langle Redefine to the above dollar macros.

```

\langle
9946 \AtBeginDocument{
9947 \protected\gdef\langle#1\rangle{\$#1\$}
9948 \protected\gdef\langle#1\rangle[\$#1\$]
9949 }
9950
9951 \endgroup

9952 \AtBeginDocument{
9953 \LetLtxMacro\LWR@openbracketnormal\langle
9954 \LetLtxMacro\LWR@closebracketnormal\rangle
9955 }

```

$\LWR@ensuredmath$ $\{\langle expression\rangle\}$

If MathJax, a `lateximage` is used, since `\ensuremath` is often used for complex T_EX 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.

```

9956 \LetLtxMacro\LWR@origensuredmath\@ensuredmath
9957
9958 \renewcommand{\@ensuredmath}[1]{%
9959   \ifbool{mathjax}{%
9960     \LWR@subsingledollar*\@AltTextOpen\MathImageAltText\AltTextClose}{%
9961       \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
9962     }{\relax%
9963       \LWR@origensuredmath{#1}%
9964     }%
9965 }{% SVG math

```

If already inside a `lateximage` in math mode, continue as-is.

```

9966 \ifmmode%
9967   \LWR@origensuredmath{#1}%
9968 \else%

```

Create an inline math `lateximage` with a simple `alt` tag and additional hashing according to the contents.

```

9969   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9970   {\LWR@origensuredmath{#1}}%
9971   {%
9972     \LWR@subsingledollar*\@AltTextOpen\MathImageAltText\AltTextClose}{%
9973       \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
9974     }{%
9975       \LWR@origensuredmath{#1}%
9976     }%
9977   }%
9978 \fi%
9979 }%

```

Clear the single-use `alt` text:

```

9980 \gdef\LWR@ThisAltText{%
9981 }

```

Remove the old `math` and `displaymath` environments:

```

9982 \let\math\relax
9983 \let\endmath\relax
9984 \let\displaymath\relax
9985 \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`.

```

9986 \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`.

```
9987 \NewEnviron{LWR@displaymathnormal}{\expandafter[\BODY]\@ignoretrue}
```

Set the default `displaymath` to the normal version:

```
9988 \LetLtxMacro[\LWR@openbracketnormal%
9989 \LetLtxMacro]\LWR@closebracketnormal%
9990 \LetLtxMacro\displaymath\LWR@displaymathnormal%
9991 \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.

```
9992 \newenvironment{LWR@displaymathother}
9993 {%
9994   \begin{BlockClass}{displaymath}%
9995   \LWR@newautoidanchor%
9996   \booltrue{LWR@indisplaymathimage}%
9997   \begin{lateximage}%
9998   [\MathImageAltText]%
9999   \LWR@origdollar\LWR@origdollar%
10000 }
10001 {%
10002   \LWR@origdollar\LWR@origdollar%
10003   \end{lateximage}%
10004   \end{BlockClass}%
10005 }
```

Env `LWR@equationother` A version of `displaymath` which can handle complicated objects, but does not supply `MATHJAX` or `HTML alt` tags.

```
10006 \newenvironment{LWR@equationother}
10007 {%
10008   \begin{BlockClass}{displaymathnumbered}%
10009   \LWR@newautoidanchor%
10010   \booltrue{LWR@indisplaymathimage}%
10011   \begin{lateximage}[\MathImageAltText]%
10012   \LWR@origequation%
10013 }
10014 {%
10015   \LWR@origendequation%
10016   \end{lateximage}%
10017   \end{BlockClass}%
10018 }
```

79.4 MATHJAX support

Ctrl `LWR@nextequation` Used to add one to compute the next equation number.

```
10019 \newcounter{LWR@nextequation}
```

`\LWR@syncmathjax` Sets the MATHJAX equation format and number for the following equations.

These MATHJAX commands are printed inside “\($\)$ ” characters. They are printed to HTML output, not interpreted by L^AT_EX.

```
10020 \newcommand*\LWR@syncmathjax{%
```

If using chapters, place the chapter number in front of the equation. Otherwise, use the simple equation number.

```
10021 \ifcsdef{thechapter}{
10022   \InlineClass{hidden}{
10023     \textbackslash(
10024     \textbackslash)}seteqsection \{\thechapter\}
10025     \textbackslash)
10026   }
10027 }
10028 }{% not using chapters
```

MATHJAX doesn’t allow setting the equation number to 1:

```
10029 \ifthenelse{\cnttest{\value{equation}}>0}
10030 {
```

Tell MATHJAX that the next set of equations begins with the current L^AT_EX equation number, plus one.

```
10031   \setcounter{LWR@nextequation}{\value{equation}}
10032   \addtocounter{LWR@nextequation}{1}
```

Place the MATHJAX command inside “\($\)$ ” characters, to be printed to HTML, not interpreted by L^AT_EX.

```
10033   \InlineClass{hidden}{
10034     \textbackslash(
10035     \textbackslash)}seteqnumber \{\arabic{LWR@nextequation}\}
10036     \textbackslash)
10037   }
10038 }{% not eq > 0
10039 }
```

`\LWR@hidelatexequation` $\langle environment \rangle$ $\langle contents \rangle$

Creates the L^AT_EX version of the equation inside an HTML comment.

```
10040 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
```

Stop HTML paragraph handling and open an HTML comment:

```
10041 \LWR@stoppars
10042 \LWR@htmlopencomment
10043
```

Start the \LaTeX math environment inside the HTML comment:

```
10044 \begingroup
10045 \@nameuse{LWR@orig#1}
```

While in the math environment, restore various commands to their \LaTeX meanings.

```
10046 \LWR@restoreorigformatting
```

See `\LWR@htmlmathlabel` in section 79.7.1.

Print the contents of the equation:

```
10047 #2
```

End the \LaTeX math environment inside the HTML comment:

```
10048 \@nameuse{LWR@origend#1}
10049 \endgroup
10050
```

Close the HTML comment and resume HTML paragraph handling:

```
10051 \LWR@htmlclosecomment
10052 \LWR@startpars
10053 }
```

```
\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 \LaTeX .

```
10054 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%
```

Enclose the MATHJAX environment inside printed “\(" and “\)” characters.

```
10055 \LWR@origtilde\LWR@orignewline
10056 \textbackslash{}begin\{#1\}
```

Print the contents, sanitizing for HTML special characters.

```
10057 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#2}}
```

Close the MATHJAX environment:

```
10058 \textbackslash{}end\{#1\}
10059 \LWR@orignewline
10060 }
```

79.5 Equation environment

Remember existing equation environment, after redefined by amsmath, if loaded.

```

10061 \AtBeginDocument{
10062 \let\LWR@origequation\equation
10063 \let\LWR@origendequation\endequation
10064 \csletcs{LWR@origequation*}{equation*}
10065 \csletcs{LWR@origendequation*}{endequation*}
10066 }

```

```
\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.

```

10067 \newcommand*{\LWR@doequation}[2]{%
10068

```

If `mathjax` or `FormatWP`, print the \LaTeX expression:

```
10069 \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
```

MATHJAX output:

```
10070 {
```

Print commands to synchronize MATHJAX's equation number and format to the current \LaTeX chapter/section and equation number:

```
10071 \LWR@syncmathjax
```

Print the \LaTeX math inside an HTML comment:

```

10072 \LWR@hidelatexequation{#2}{#1}
10073 }

```

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`.

```
10074 {% not mathjax
```

Begin the `lateximage` with an `<alt>` tag containing the math source:

```

10075 \ifstrequal{#2}{equation*}{%
10076 \begin{BlockClass}{displaymath}%

```

```

10077 }{%
10078   \begin{BlockClass}{displaymathnumbered}%
10079 }%
10080 \LWR@newautoidanchor%
10081 \booltrue{LWR@indisplaymathimage}%
10082 \begin{lateximage}{%
10083   \ifstrequal{#2}{equation*}{%
10084     \ifdefequal{LWR@equationtag}{\theequation}{%
10085 %       no tag was given
10086     }{%
10087       (\LWR@equationtag) % tag was given
10088     }%
10089   }{%
10090     (\LWR@equationtag) % automatic numbering
10091   }%
10092   \textbackslash{begin\{#2\}} % extra space
10093   \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#1}} % extra space
10094   \textbackslash{end\{#2\}}%
10095 }*% alt tag

```

Support for `xfakebold`:

```

10096 \LWR@applyxfakebold%

```

Create the actual \LaTeX -formatted equation inside the `lateximage` using the contents of the environment.

```

10097 \@nameuse{LWR@orig#2}%
10098 #1% contents collected by \collect@body
10099 \@nameuse{LWR@origend#2}%
10100 \end{lateximage}%
10101 \end{BlockClass}%
10102}% not mathjax

```

Clear the single-use `alt` text:

```

10103 \gdef\LWR@ThisAltText{}%
10104 }

```

After the environment, if `MATHJAX`, print the math to the HTML output for `MATHJAX` processing:

```

10105 \newcommand*{\LWR@doendequation}[1]{%
10106   \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
10107   {%
10108     \LWR@addmathjax{#1}{\BODY}%
10109   }{%
10110

```

Clear the single-use `alt` text:

```

10111 \gdef\LWR@ThisAltText{}%
10112 }

```

Remove existing equation environment:

```
10113 \AtBeginDocument{
10114 \let\equation\relax
10115 \let\endequation\relax
10116 \csletcs{equation*}{relax}
10117 \csletcs{endequation*}{relax}
10118 }
```

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`.

```
10119 \AtBeginDocument{
10120 \NewEnviron{equation}%
10121 {\LWR@doequation{\BODY}{equation}}%
10122 [\LWR@doendequation{equation}]
10123
10124 \LetLtxMacro\LWR@equationnormal\equation
10125 \LetLtxMacro\endLWR@equationnormal\endequation
10126 }
```

Env `equation*`

```
10127 \AtBeginDocument{
10128 \NewEnviron{equation*}%
10129 {\LWR@doequation{\BODY}{equation*}}%
10130 [\LWR@doendequation{equation*}]
10131
10132 \csletcs{LWR@equationnormalstar}{equation*}
10133 \csletcs{LWR@endequationnormalstar}{endequation*}
10134 }
```

Remember the “less” version of `equation`, which uses `MATHJAX` and `alt` tags, but does not support complicated contents such as some `Tikz` expressions.

```
10135 \AtBeginDocument{
10136 \LetLtxMacro\LWR@equationless\equation
10137 \LetLtxMacro\endLWR@equationless\endequation
10138 \csletcs{LWR@equationlessstar}{equation*}
10139 \csletcs{LWR@endequationlessstar}{endequation*}
10140 }
```

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` Use when display math environments have simple math which is to sent to MATHJAX or included in HTML alt tags.
simple math objects

```
10141 \newcommand*{\displaymathnormal}{%
10142 \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}}%
10143 \LetLtxMacro\[\LWR@openbracketnormal%
10144 \LetLtxMacro\]\LWR@closebracketnormal%
10145 \LetLtxMacro\displaymath\LWR@displaymathnormal%
10146 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
10147 \LetLtxMacro\equation\LWR@equationnormal%
10148 \LetLtxMacro\endequation\endLWR@equationnormal%
10149 \csletcs{equation*}{LWR@equationnormalstar}%
10150 \csletcs{endequation*}{LWR@endequationnormalstar}%
10151 }
```

`\displaymathother` Use when display math environments have complicated objects which will not work with MathJax or should not be included in HTML alt tags. Complicated contents are more likely to compile correctly.
complicated math objects

```
10152 \newcommand*{\displaymathother}{%
10153 \boolfalse{mathjax}%
10154 \LetLtxMacro\displaymath\LWR@displaymathother%
10155 \LetLtxMacro\enddisplaymath\endLWR@displaymathother%
10156 \LetLtxMacro\[\LWR@displaymathother%
10157 \LetLtxMacro\]\endLWR@displaymathother%
10158 \LetLtxMacro\equation\LWR@equationother%
10159 \LetLtxMacro\endequation\endLWR@equationother%
10160 \csletcs{equation*}{displaymath}%
10161 \csletcs{endequation*}{enddisplaymath}%
10162 }
```

```
10163 \end{warpHTML}
```

for PRINT output: 10164 \begin{warpprint}

Print-mode versions:

```
10165 \newcommand*{\displaymathnormal}{}
10166 \newcommand*{\displaymathother}{}

10167 \end{warpprint}
```

for HTML output: 10168 \begin{warpHTML}

79.7 AMS Math environments

79.7.1 Support macros

Bool `LWR@amsmultline` True if processing a multiline environment.

To compensate for `multline`-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 `multline` environment and not an equation.

```
10169 \newbool{LWR@amsmultline}
10170 \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`.

```
10171 \newcommand*{\LWR@htmlmathlabel}[1]{%
10172 \LWR@traceinfo{LWR@htmlmathlabelb #1}%
```

If `mathjax` or `FormatWP`, print the \LaTeX expression:

```
10173 \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }{%
10174 {%
```

The combined \LaTeX & HTML label is printed in a `\text` field:

```
10175 \text{%
```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
10176 \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.)

```
10177 \LWR@htmlclosecomment%
10178 \LWR@origltx@label{#1}%
10179 \LWR@htmlopencomment%
10180 }% text
10181 }% mathjax
10182 {%
10183 \LWR@origltx@label{#1}%
10184 }%
10185 }
```

`\LWR@beginhideamsmath` Starts hiding L^AT_EX math inside an HTML comment.

```
10186 \newcommand*\LWR@beginhideamsmath}{
10187 \LWR@stoppars
10188 \LWR@origtilde\LWR@orignewline
10189 \LWR@htmlopencomment
10190
10191 \begingroup
10192 \LWR@restoreorigformatting
10193 }
```

`\LWR@endhideamsmath` Ends hiding L^AT_EX math inside an HTML comment.

```
10194 \newcommand*\LWR@endhideamsmath}{
10195 \endgroup
10196
10197 \LWR@htmlclosecomment
10198 \LWR@orignewline
10199 \LWR@startpars
10200 }
```

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^AT_EX's equation numbers, typeset with L^AT_EX 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`.

```
10201 \let\LWR@origeqnarray\eqnarray
10202 \let\LWR@origendeqnarray\endeqnarray
```

To remember whether the starred environment was used, and thus whether to number the equations:

```
10203 \newbool{LWR@numbereqnarray}
10204 \booltrue{LWR@numbereqnarray}
```

Common code used by `eqnarray` and `Beqnarray` (from `fancybox`):

```
10205 \newcommand{\LWR@eqnarrayfactor}{%
```

If `mathjax` or `FormatWP`, print the \LaTeX expression:

```
10206 \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
10207 {%
```

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:

```
10208 \LWR@syncmathjax
10209 \boolfalse{LWR@amsmultline}
10210 \ifbool{LWR@numbereqnarray}
10211 {
```

If numbering the equations, execute a copy inside an `HTML` comment block:

```
10212 \LWR@beginhideamsmath
10213 \LWR@origeqnarray
10214 \BODY
10215 \LWR@origendeqnarray
10216 \LWR@endhideamsmath
```

Then print the (sanitized) contents to the output for `MATHJAX` to interpret:

```
10217 \LWR@addmathjax{eqnarray}{\BODY}
10218 }%
10219 {% not LWR@numbereqnarray
```

If not numbering equations, just create the contents for `MATHJAX`:

```
10220 \LWR@addmathjax{eqnarray*}{\BODY}
10221 }% LWR@numbereqnarray
10222 }% mathjax
10223 {% not mathjax
10224 \ifbool{LWR@numbereqnarray}
10225 {
```

For numbered `svg` equations, first create a `lateximage` with an `alt` attribute containing sanitized copy of the source code:

```
10226 \begin{BlockClass}{displaymathnumbered}%
10227 \LWR@newautoanchor%
10228 \booltrue{LWR@indisplaymathimage}%
10229 \begin{lateximage}[{\LWR@startingequationtag--\LWR@equationtag}
10230 \LWR@addmathjax{eqnarray}{\BODY}]*
```

Support for `xfakebold`:

```
10231 \LWR@applyxfakebold%
```

Create the image contents using an actual `eqnarray`:

```
10232 \LWR@origeqnarray
```

```

10233     \BODY
10234     \LWR@origendeqnarray
10235     \end{lateximage}
10236     \end{BlockClass}
10237   }%
10238   {% not LWR@numbreqnarray

```

If not numbered, do the same, but an extra `\nonumber` seems to be required:

```

10239     \begin{BlockClass}{displaymath}
10240     \LWR@newautoanchor%
10241     \booltrue{LWR@indisplaymathimage}%
10242     \begin{lateximage}[\LWR@addmathjax{eqnarray*}]{\BODY}}*

```

Support for `xfakebold`:

```

10243     \LWR@applyxfakebold%

10244     \LWR@origeqnarray
10245     \BODY
10246     \nonumber
10247     \LWR@origendeqnarray
10248     \end{lateximage}
10249     \end{BlockClass}
10250   }% LWR@numbreqnarray
10251 }% not mathjax

```

Default to number equations in the future:

```

10252 \booltrue{LWR@numbreqnarray}

```

Clear the single-use alt text:

```

10253 \gdef\LWR@ThisAltText{}%
10254 }

```

`eqnarray` itself is made with a blank line before and after to force it to be on its own line:

```

10255 \RenewEnviron{eqnarray}
10256 {%
10257
10258 \LWR@eqnarrayfactor
10259
10260 }

```

The starred version is patched to turn off the numbering:

```

10261 \csgpreto{eqnarray*}{\boolfalse{LWR@numbreqnarray}}
10262 \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 `` 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: 10263 `\begin{warpHTML}`

Ctrl LWR@lateximagenumber Sequence the images.

```
10264 \newcounter{LWR@lateximagenumber}
10265 \setcounter{LWR@lateximagenumber}{0}
```

Ctrl LWR@lateximagedepth Do not create `\lateximage` inside of `\lateximage`.

```
10266 \newcounter{LWR@lateximagedepth}
10267 \setcounter{LWR@lateximagedepth}{0}
```

A few utility macros to write special characters:

```
10268 \edef\LWR@hashmark{\string#} % for use in \write
10269 \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`.

```
10270 \newcounter{LWR@LIpage}
```

```
10271 \end{warpHTML}
```

80.3 Font size

for HTML & PRINT: 10272 `\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.

```
10273 \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.

```
10274 \newcommand*{\LateximageFontScale}{1}
```

```
10275 \end{warpall}
```

80.4 Sanitizing math expressions for HTML

for HTML output: 10276 \begin{warpHTML}

```
\LWR@HTMLsanitize {<math>{text}</math>}
```

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.

Two versions follow, depending on expansion needs. There may be a better way...

```
10277 \newrobustcmd{\LWR@HTMLsanitize}[1]{%
```

Cancel French `babel` character handling, and fully expand the strings:

```
10278 \begingroup%
```

```
10279 \LWR@FBcancel%
```

```
10280 \fullexpandarg%
```

The `&`, `<`, and `>` may be interpreted by the browser:

```
10281 \protect\StrSubstitute{\detokenize{#1}}%
```

```
10282 {\detokenize{&}}{\detokenize{&#amp;}}[\LWR@strresult]%
```

```
10283 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
```

```
10284 {\detokenize{<}}{\detokenize{&lt;}}[\LWR@strresult]%
```

```
10285 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
```

```
10286 {\detokenize{>}}{\detokenize{&gt;}}[\LWR@strresult]%
```

The double quote occasionally causes problems.

```
10287 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
```

```
10288 {\detokenize{"}}{\detokenize{&quot;}}[\LWR@strresult]%
```

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.

```
10289 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
```

```
10290 {\detokenize{##}}{\LWR@origpound}[\LWR@strresult]%
```

```
10291 \LWR@strresult%
```

```
10292 \endgroup%
```

```
10293 }
```

`\LWR@HTMLsanitizeexpand` $\langle text \rangle$

This version expands the argument before sanitizing it.

```
10294 \newrobustcmd{\LWR@HTMLsanitizeexpand}[1]{%
```

Cancel French `babel` character handling, and fully expand the strings:

```
10295 \begingroup%
10296 \LWR@FBcancel%
10297 \fullexpandarg%
```

The difference between this and `\LWR@HTMLsanitize` (without “expand”) is the following `\expandafter`:

```
10298 \protect\StrSubstitute{\detokenize\expandafter{#1}}%
10299 {\detokenize{&}}{\detokenize{&}}[\LWR@strresult]%
```

```
10300 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10301 {\detokenize{<}}{\detokenize{&lt;}}[\LWR@strresult]%
```

```
10302 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10303 {\detokenize{>}}{\detokenize{&gt;}}[\LWR@strresult]%
```

```
10304 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
10305 {\detokenize{"}}{\detokenize{&quot;}}[\LWR@strresult]%
```

`\LWR@HTMLsanitizeexpand` is not used for defining new MathJax macros, so the `##` conversion is not needed here.

```
10306 \LWR@strresult%
10307 \endgroup%
10308 }
```

80.5 Equation numbers

`Ctr` `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.

```
10309 \newcounter{LWR@startingequation}
10310
10311 \@ifundefined{chapter}
10312 {
10313 \renewcommand{\theLWR@startingequation}{%
10314 \arabic{LWR@startingequation}%
10315 }
10316 }
10317 {% chapter defined
10318 \renewcommand{\theLWR@startingequation}{%
10319 \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}{}%
10320 \arabic{LWR@startingequation}%
```

```
10321 }
10322 }
```

Bool LWR@isstartingequation True for the first equation tag, false for later tags in the same environment.

```
10323 \newbool{LWR@isstartingequation}
```

`\LWR@startingequationtag` Prints the starting equation number or tag.

```
10324 \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`.

```
10325 \newcommand*{\LWR@equationtag}{}

```

Only if `svg math`, patch `\tag` after packages have loaded, in case someone else modified `\tag`.

```
10326 \AtBeginDocument{
10327
10328 \ifbool{mathjax}{}{% not mathjax
```

`\LWR@remember tag` `{\tag}`

For use inside the math environments while using `svg math`. Sets `\theLWR@startingequation` and `\theequation` to the given tag.

```
10329 \NewDocumentCommand{\LWR@remember tag}{m}{%
10330 \ifbool{LWR@isstartingequation}%
10331 {%
10332   \global\boolfalse{LWR@isstartingequation}%
10333   \xdef\LWR@startingequationtag{#1}%
10334 }{}%
10335 \xdef\LWR@equationtag{#1}%
10336 }%

10337 }% not mathjax
10338 }% AtBeginDocument
```

80.6 HTML alt tags

`\LWR@amsmathbody` `{\envname}` For use inside the optional argument to a `lateximage` to add the contents of an AMS math environment to the `<alt>` tag.

```
10339 \newcommand*{\LWR@amsmathbody}[1]
10340 {%
10341 \textbackslash\begin\{\#1\} % extra space
```

```

10342 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{\the\@envbody}}%
10343 \textbackslash\end\}\{#1\}%
10344 }

```

`\LWR@amsmathbodynumbered` $\langle envname \rangle$ For use inside the optional argument to a `lateximage` to add the contents of a AMS math environment to the `alt` tag, prefixed by the equation numbers.

```

10345 \newcommand*\LWR@amsmathbodynumbered}[1]
10346 {%
10347 \ifnumcomp{\value{LWR@startingequation}}{=}{\value{equation}}%
10348 {(\LWR@equationtag)}%
10349 {(\LWR@startingequationtag--\LWR@equationtag)} % extra space
10350 \LWR@amsmathbody{#1} % extra space
10351 }

```

80.7 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`.

```

10352 \newcommand{\LWR@lateximage@oneimageb}[3]{%
10353   \LWR@subinlineimage{#1}{lateximage}%
10354   {%
10355     \LWR@print@mbox{%
10356       \LWR@ImagesDirectory\OSPathSymbol%
10357       #2%
10358     }%
10359   }{svg}{#3}%
10360 }

```

`\LWR@lateximage@oneimage` $\langle 1: alt text \rangle \langle 2: filename \rangle \langle 3: CSS style \rangle \langle 4: delimit? \rangle$

Creates an image for the `lateximage`, whose `alt` text depends on the circumstances.

```

10361 \newcommand{\LWR@lateximage@oneimage}[4]{%
10362   \ifdefvoid{\LWR@ThisAltText}{%
10363     \IfBooleanTF{#4}{%
10364       \LWR@lateximage@oneimageb{#1}{#2}{#3}%
10365     }{%
10366       \LWR@lateximage@oneimageb%
10367         {\AltTextOpen#1\AltTextClose}%
10368         {#2}{#3}%
10369     }%
10370   }{%
10371     \LWR@lateximage@oneimageb%
10372       {\AltTextOpen\LWR@ThisAltText\AltTextClose}%
10373       {#2}{#3}%
10374   }%
10375 }

```

Env `lateximage` * $\langle 2: <alt> tag \rangle$ * $\langle 4: add'l hashing \rangle$ $\langle 5: CSS style \rangle$

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 T_EX 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{LWRlateximage-<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.

```
10376 \catcode'\$=\active%
10377
10378 \NewDocumentEnvironment{lateximage}{s O{\ImageAltText} s O{} O{}}
10379 {%
10380 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
10381 \LWR@traceinfo{lateximage: entering depth is \arabic{LWR@lateximagedepth}}%
```

Nested lateximages remain one large lateximage:

```
10382 \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 T_EX macros are used for tracking nested lateximages.

```
10383 {%
10384 % \addtocounter{LWR@lateximagedepth}{1}%
10385 \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
10386 }%
```

Otherwise, this is the outer-most lateximage:

```
10387 {% start of outer-most lateximage
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

```
10388 \LWR@traceinfo{lateximage: starting outer-most lateximage}%
10389   \setcounter{LWR@startingequation}{\value{equation}}%
10390   \addtocounter{LWR@startingequation}{1}%
10391   \booltrue{LWR@isstartingequation}%
10392   \let\LWR@startingequationtag\theLWR@startingequation%
```

The default equation tag, unless overwritten by `\tag`:

```
10393   \let\LWR@equationtag\theequation%
```

Starting a new lateximage:

```
10394   \addtocounter{LWR@lateximagenumber}{1}%
10395   \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}%
```

While inside a lateximage, locally do not use mathjax:

```
10396   \boolfalse{mathjax}%
```

Be sure that are doing a paragraph:

```
10397   \LWR@ensuredoingapar%
```

Next file:

```
10398   \addtocounter{LWR@externalfilecnt}{1}%
10399   \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 `LWR@lateximage-BaseJobname-XXX`:

```
10400   \setcounterpageref{LWR@LIpage}{%
10401     LWR@lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}%
10402   }%
10403   \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:

```
10404   \LWR@htmltag{span\LWR@indentHTML%
10405     id="lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}"\LWR@indentHTML
10406     class="lateximagesource"\LWR@originewline
10407   }%
```

Write instructions to the `<ImagesDirectory>.txt` file:

```

10408 \LWR@traceinfo{lateximage: about to write to \BaseJobname-images.txt}%
10409 \IfBooleanTF{#1}% starred
10410 {% hash

```

Compute and save the hashed file name for later use:

```

10411 \ifdefvoid{\LWR@ThisAltText}{%
10412 \IfBooleanTF{#3}{%
10413 \edef\LWR@hashedname{%
10414 \LWR@mdfive{\detokenize\expandafter{#2}-!-#4}%
10415 }%
10416 }{%
10417 \edef\LWR@hashedname{%
10418 \LWR@mdfive{\detokenize\expandafter{\AltTextOpen#2\AltTextClose}-!-#4}%
10419 }%
10420 }%
10421 }{%
10422 \edef\LWR@hashedname{%
10423 \LWR@mdfive{\detokenize\expandafter{\AltTextOpen\LWR@ThisAltText\AltTextClose}-!-#4}%
10424 }%
10425 }%
10426 \LWR@traceinfo{lateximage: hash is \LWR@hashedname}%

```

Write the page, hashing, and hashed name:

```

10427 \immediate\write\LWR@lateximagesfile{%
10428 |\arabic{LWR@Lpage}|true|\LWR@hashedname|%
10429 }%
10430 }% hash
10431 {% no hash

```

No hash, so write the page, no hashing, and the image number:

```

10432 \LWR@traceinfo{lateximage: hash false}%
10433 \immediate\write\LWR@lateximagesfile{%
10434 |\arabic{LWR@Lpage}|false|\LWR@ImagesName\arabic{LWR@externalfilecnt}}%
10435 }%
10436 }% no hash

```

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by *pdftotext*.

```

10437 \LWR@traceinfo{lateximage: about to create open comment}%
10438 \LWR@htmlopencomment%

```

One level deeper. At this outer-most lateximage, it is known that this is not being used inside an \mathcal{AMS} $\text{\textbackslash text}$, since the outer-most level will never be in math mode.

```

10439 \addtocounter{LWR@lateximagedepth}{1}%

```

Start the new PDF page:

```

10440 \LWR@traceinfo{lateximage: about to create a new page}%
10441 \LWR@orignewpage%

```

Typeset the image in a “standard” width page and font size:

```
10442 \LWR@traceinfo{lateximage: about to create minipage}%
10443 \LWR@print@minipage{6in}%
10444 \@nameuse{LWR@print@LateximageFontSizeName}%
```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for `\hspace`, etc. inside a `lateximage`.

```
10445 \LWR@traceinfo{lateximage: about to temporarily restore formatting}%
10446 \LWR@restoreorigformatting%
```

Use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

```
10447 \def\@mpfn{footnote}%
10448 \def\thempfn{\thefootnote}%
10449 \LetLtxMacro\@footnotetext\LWR@footnotetext%
```

Create the `LWRlateximage<number>` label:

```
10450 \LWR@traceinfo{lateximage: about to create label}%
10451 \LWR@orig@label{LWRlateximage-\BaseJobname-\arabic{LWR@lateximagenumber}}%
10452 \LWR@traceinfo{lateximage: finished creating the label}%
```

Enable print-mode math functions:

```
10453 \LetLtxMacro$\LWR@origdollar%
10454 \catcode'\$=3% math shift
10455 \LetLtxMacro\(\LWR@origopenparen%
10456 \LetLtxMacro\)\LWR@origcloseparen%
```

Only enable print-mode display math if are not already inside display math:

```
10457 \ifbool{LWR@indisplaymathimage}{}{% not in display math
10458 \LetLtxMacro\[\LWR@origopenbracket%
10459 \LetLtxMacro\]\LWR@origclosebracket%
10460 \let\equation\LWR@origequation%
10461 \let\endequation\LWR@origendequation%
10462 \csletcs{equation*}{LWR@origequation*}%
10463 \csletcs{endequation*}{LWR@origendequation*}%
10464 }% not in display math
```

For chemformula:

```
10465 \LetLtxMacro\LWR@newsingledollar$%
10466 \LetLtxMacro\LWR@newsingledollar$% syntax highlighting
```

```
10467 }% end of outer-most lateximage
10468 \LWR@traceinfo{lateximage: finished start of environment}%
10469 }% end of \begin{lateximage}
```

`\endlateximage` When the environment closes:

```
10470 {% start of \end{lateximage}
10471 \LWR@traceinfo{lateximage: starting end of lateximage}%
```

Nested more than one deep?

```
10472 \LWR@traceinfo{lateximage: internal depth was \arabic{LWR@lateximagedepth}}%
10473 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%
```

If nesting inside an already existing lateximage, simply record one less level. Uses a lower-level TEX macro due to \mathcal{AMS} \text change of \addtocounter.

```
10474 {%
10475   \LWR@traceinfo{lateximage: unnesting}%
10476   \global\advance\c@LWR@lateximagedepth -1\relax%
10477 }%
```

If this is the outer-most lateximage:

```
10478 {% end of outer-most lateximage
```

Finish the lateximage minipage and start a new PDF page:

```
10479 \LWR@traceinfo{lateximage: ending outer-most lateximage}%
10480   \endLWR@print@minipage%
10481   \LWR@orignewpage%
```

Close the HTML comment which encapsulated any traces of the lateximage picked up by *pdftotext*:

```
10482   \LWR@print@vspace*{.5\baselineskip}%
10483   \LWR@htmlclosecomment%
10484   \LWR@traceinfo{lateximage: The page after the image is \arabic{page}}%
```

Create a link to the lateximage, allowing its natural height:

```
10485   \IfBooleanTF{#1}% starred
10486   {% hash
10487     \LWR@lateximage@oneimage{#2}{\LWR@hashedname}{#5}{#3}%
10488   }% hash
10489   {% no hash
10490     \LWR@lateximage@oneimage{#2}{\LWR@ImagesName\theLWR@externalfilecnt}{#5}{#3}%
10491   }% no hash
```

Be sure that are doing a paragraph:

```
10492   \LWR@ensuredoingapar%
```

Close the HTML span which has the *pdftotext* comment and also the link to the .svg image:

```
10493   \LWR@htmltag{/span}%
10494   \ifbool{HTMLDebugComments}{%
10495     \LWR@htmlcomment{End of lateximage}%
10496   }{}
```

Undo one lateximage level. This is not inside an \mathcal{AMS} $\text{\textbackslash text}$, so regular $\text{\textbackslash addtocounter}$ may be used here.

```
10497 \addtocounter{LWR@lateximagedepth}{-1}%
```

Clear the single-use alt text:

```
10498 \gdef\LWR@ThisAltText{}%
10499 % end of outer-most lateximage
10500 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
10501 \LWR@traceinfo{lateximage: done}%
10502 }%
10503 \catcode'\$=3% math shift
10504 \end{warpHTML}
```

for PRINT output: 10505 $\text{\textbackslash begin}\{\text{warpprint}\}$

Env lateximage * [\langle alt tag \rangle] * [\langle add'l hashing \rangle] [\langle css style \rangle]

varwidth is used to create a box of the natural width of its contents.

```
10506 \NewDocumentEnvironment{lateximage}{s o s o o}
10507   {\begin{varwidth}[b]{\linewidth}}
10508   {\end{varwidth}}
10509 \end{warpprint}
```

81 center, flushleft, flushright

for HTML output: 10510 $\text{\textbackslash begin}\{\text{warpHTML}\}$

Env center Replace center functionality with css tags:

```
10511 \renewenvironment*{center}
10512 {
10513 \LWR@forcenewpage
10514 \ifbool{FormatWP}
10515 {\BlockClass[\LWR@print@mbbox{text-align:center}]{center}}
10516 {\BlockClass{center}}
10517 }
10518 {\endBlockClass}
```

Env flushright

```
10519 \renewenvironment*{flushright}
10520 {
10521 \LWR@forcenewpage
10522 \ifbool{FormatWP}
10523 {\BlockClass[\LWR@print@mbbox{text-align:right}]{flushright}}
```

```

10524 {\BlockClass{flushright}}
10525 }
10526 {\endBlockClass}

```

Env flushleft

```

10527 \renewenvironment*{flushleft}
10528 {
10529 \LWR@forcenewpage
10530 \ifbool{FormatWP}
10531 {\BlockClass[\LWR@print@mbbox{text-align:left}]{flushleft}}
10532 {\BlockClass{flushleft}}
10533 }
10534 {\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`

```

10535 \newcommand*{\LWR@HTML@centering}{%
10536 \ifbool{HTMLDebugComments}{%
10537   \LWR@htmlcomment{centering}%
10538 }{}}%
10539 }
10540 \LWR@formatted{centering}

```

`\raggedleft`

```

10541 \newcommand*{\LWR@HTML@raggedleft}{%
10542 \ifbool{HTMLDebugComments}{%
10543   \LWR@htmlcomment{raggedleft}%
10544 }{}}%
10545 }
10546 \LWR@formatted{raggedleft}

```

`\raggedright`

```

10547 \newcommand*{\LWR@HTML@raggedright}{%
10548 \ifbool{HTMLDebugComments}{%
10549   \LWR@htmlcomment{raggedright}%
10550 }{}}%
10551 }
10552 \LWR@formatted{raggedright}

```

`\leftline` `{\text}`

```

10553 \renewcommand{\leftline}[1]{\begin{flushleft}\#1\end{flushleft}}

```

```
\centerline {<text>}
```

```
10554 \renewcommand{\centerline}[1]{\begin{center}#1\end{center}}
```

```
\rightline {<text>}
```

```
10555 \renewcommand{\rightline}[1]{\begin{flushright}#1\end{flushright}}
```

```
10556 \end{warpHTML}
```

82 Preloaded packages

for HTML output: 10557 \begin{warpHTML}

If the given package was loaded before or by lwarp, load the lwarp version as well.

```
\LWR@PreloadedPackage {<packagename>}
```

```
10558 \newcommand*{\LWR@PreloadedPackage}[1]{%
10559   \ifpackageloaded{#1}%
10560     {%
10561       \AtBeginDocument{
10562         \LWR@origRequirePackage{lwarp-#1}%
10563       }
10564     }%
10565   }%
10566 }
```

If `inputtrc` was loaded before lwarp, as is usually done, explicitly load the lwarp patches now:

```
10567 \LWR@PreloadedPackage{inputtrc}
```

If `textcomp` was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
10568 \LWR@PreloadedPackage{textcomp}
```

If `xunicode` was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
10569 \LWR@PreloadedPackage{xunicode}
```

If `graphics` or `graphicx` were loaded before lwarp, perhaps by `xunicode`, explicitly load the lwarp patches now:

```
10570 \LWR@PreloadedPackage{graphics}
```

```
10571 \LWR@PreloadedPackage{graphicx}
```

fontaxes must be preloaded so that lwarp may patch it for HTML.

```
10572 \LWR@PreloadedPackage{fontaxes}
```

nfssex-cfr may be preloaded by cfm-lm or related font packages.

```
10573 \LWR@PreloadedPackage{nfssex-cfr}
```

ulem may be preloaded by ctex, ctexart, and related classes.

```
10574 \LWR@PreloadedPackage{ulem}
```

xetexko-vertical may be preloaded by xetexko.

```
10575 \LWR@PreloadedPackage{xetexko-vertical}
```

geometry is preloaded by lwarp, and perhaps by various classes.

```
10576 \LWR@PreloadedPackage{geometry}
```

plext is preloaded by some CJK classes.

```
10577 \LWR@PreloadedPackage{plext}
```

stfloats is preloaded by ltj* classes.

```
10578 \LWR@PreloadedPackage{stfloats}
```

ltxtext is preloaded by ltj* classes.

```
10579 \LWR@PreloadedPackage{ltxtext}
```

```
10580 \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.

NOTE: As of this writing, the siunitx extension for MATHJAX is not currently hosted at any public CDN, thus siunitx is not usable with MATHJAX unless a local copy of this extension is created first. See `\MathJaxFileName` to select a custom MathJax script.

 **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 HTML output: `10581 \begin{warpHTML}`

Options for siunitx:

```

10582 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}C}
10583 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
10584 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLunicode{2032}}
10585 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLunicode{2033}}
10586 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLunicode{0127}}}}
10587
10588 \appto\LWR@restoreorigformatting{%
10589 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}C}}%
10590 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}%
10591 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}%
10592 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{^\prime\prime}}}%
10593 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}%
10594 }
10595
10596 \PassOptionsToPackage{
10597     detect-mode=true,
10598     per-mode=symbol,% fraction is not seen by pdftotext
10599     text-celsius = {\LWR@siunitx@textcelsius},
10600     text-degree = {\LWR@siunitx@textdegree},
10601     text-arcminute = {\LWR@siunitx@textprime} ,
10602     text-arcsecond = {\LWR@siunitx@textdblprime} ,
10603 }{siunitx}

10604 \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 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 L^AT_EX, 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:

```
10605 \begin{warpprint}
10606 \define@key{Gin}{class}{}
10607 \define@key{Gin}{alt}{}

```

Print-mode additions for the `overpic` package. See section 360 for the HTML version.

```
10608 \AtBeginDocument{
10609 \ifpackageloaded{overpic}{
10610 \newcommand*\overpicfontsize{12}
10611 \newcommand*\overpicfontskip{14}
10612 }{}
10613 }
10614 \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 `warpall` 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: `10615 \begin{warpall}`

After `xparse` may have been loaded ...

```
10616 \AtBeginDocument{

```

... and *only* if `xcolor` was loaded:

```
10617 \ifpackageloaded{xcolor}{
10618 \LWR@traceinfo{patching xcolor}

```

The print version:

`\colorboxBlock` `\colorboxBlock` is the same as `\colorbox`:

```
10619 \LetLtxMacro\colorboxBlock\colorbox
```

The original definition is reused by the new versions:

```
10620 \LetLtxMacro\LWR@orig@print@fcolorbox\colorbox
```

`\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`.)

```
10621 \newsavebox{\LWR@colorminipagebox}
10622
10623 \NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%
10624 \LWR@traceinfo{\LWR@print@fcolorbox #2 #4}%
```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```
10625 \begin{lrbox}{\LWR@colorminipagebox}%
10626 #5%
10627 \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.

```
10628 \ifstrequal{#4}{none}%
10629 {% #4 none
10630   \LWR@traceinfo{background is none}%
10631   {% scope the \colorlet
10632     \colorlet{\LWR@currentcolor}{.}%
10633     \color{#2}%
10634     \fbox{%
10635       \color{\LWR@currentcolor}%
10636       \usebox{\LWR@colorminipagebox}%
10637     }% fbox
10638   }% colorlet
10639 }% #4 none
10640 {% #4 not none
10641 \LWR@traceinfo{background not none}%
10642 \IfValueTF{#1}%
10643 {%
10644   \IfValueTF{#3}%
10645   {\LWR@orig@print@fcolorbox[#1][#2][#3][#4]{\usebox{\LWR@colorminipagebox}}}%
10646   {\LWR@orig@print@fcolorbox[#1][#2][#4]{\usebox{\LWR@colorminipagebox}}}%
10647 }%
10648 {% no value #1
10649   \IfValueTF{#3}%
```

```

10650   {\LWR@orig@print@fcolorbox{#2}[#3][#4]{\usebox{\LWR@colorminipagebox}}}%
10651   {\LWR@orig@print@fcolorbox{#2}[#4]{\usebox{\LWR@colorminipagebox}}}%
10652 }% no value #1
10653 }% #4 not none
10654 \LWR@traceinfo{\LWR@print@fcolorbox done}%
10655 }
10656
10657 \renewcommand*{\fcolorbox}{\LWR@print@fcolorbox}

```

`\fcolorboxBlock` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

In print mode, `\fcolorboxBlock` is the same as `\fcolorbox`.

```

10658 \newcommand*{\LWR@print@fcolorboxBlock}{\LWR@print@fcolorbox}
10659 \newcommand*{\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:

```

10660 \NewDocumentEnvironment{\LWR@print@fcolorminipage}{o m o m O{c} O{ } o m}
10661 {%
10662 \LWR@traceinfo{*** fcolorminipage: #2 #4 #8}%

```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```

10663 \begin{lrbox}{\LWR@colorminipagebox}%

```

If inner alignment is not given, use the outer alignment instead:

```

10664 \IfValueTF{#7}%
10665 {\begin{minipage}[#5][#6][#7]{#8}}%
10666 {\begin{minipage}[#5][#6][#5]{#8}}%
10667 }%
10668 {%
10669 \end{minipage}%
10670 \end{lrbox}%
10671 \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.

```

10672 \ifstrequal{#4}{none}%
10673 {% #4 none
10674   {% scope the \colorlet
10675     \colorlet{\LWR@currentcolor}{.}%
10676     \color{#2}%
10677     \fbox{%
10678       \color{\LWR@currentcolor}%

```

```

10679         \usebox{\LWR@colorminipagebox}%
10680     }% fbox
10681 }% colorlet
10682 }% #4 none
10683 {% #4 not none
10684     \IfValueTF{#1}%
10685     {%
10686     \IfValueTF{#3}%
10687     {\LWR@orig@print@fcolorbox[#1][#2][#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
10688     {\LWR@orig@print@fcolorbox[#1][#2]{#4}{\usebox{\LWR@colorminipagebox}}}%
10689     }%
10690     {% no value #1
10691     \IfValueTF{#3}%
10692     {\LWR@orig@print@fcolorbox[#2][#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
10693     {\LWR@orig@print@fcolorbox[#2]{#4}{\usebox{\LWR@colorminipagebox}}}%
10694     }% no value #1
10695 }% #4 not none
10696 \LWR@traceinfo{*** finished end fcolorminipage}%
10697 }
10698
10699 \newenvironment*{fcolorminipage}
10700     {\LWR@print@fcolorminipage}
10701     {\endLWR@print@fcolorminipage}

10702 \LWR@traceinfo{xcolor patches done}
10703 }{}% xcolor loaded
10704 }% AtBeginDocument

10705 \end{warpall}

```

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: 10706 `\begin{warpprint}`

```

10707 \AtBeginDocument{
10708 \ifpackageloaded{chemmacros}{

```

Env `polymerdelims`

```

10709 \DeclareDocumentEnvironment{polymerdelims}{}
10710     {}{}

```

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 168.4.

```
10711 \DeclareDocumentEnvironment{redoxreaction}{m m}
10712   {\rule{0pt}{#1}}{\rule[-#2]{0pt}{#2}}

10713 }{}% chemmacros
10714 }% AtBeginDocument

10715 \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 541 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 461 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: 10716 \begin{warpprint}

\AtEndPreamble forces cleveref to be loaded last:

```
10717 \AtEndPreamble{
10718   \RequirePackage{cleveref}
10719 }
```

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.

```
10720 \AfterEndPreamble{
10721 \LWR@traceinfo{Patching cleveref.}
```

`\@@@setcref` $\{\langle kindofref \rangle\} \{\langle label \rangle\}$

`\@templabel` becomes the section number.

```
10722 \def\LWR@orig@@@setcref#1#2{\cref@getlabel{#2}{\@templabel}#1{\@templabel}{}}%
10723
10724 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% before v0.21
10725   \renewcommand*\@@@setcref}[2]{#1{\ref{#2}}{}}
10726 }{
10727   \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
10728     \renewcommand*\@@@setcref}[2]{#1{\ref{#2}}{}}
10729   }{
10730     \PackageWarning{lwarp-cleveref}{
10731       Unknown version of cleveref.
10732       \protect\cref\space will fail.
10733     }%
10734   }
10735 }
```

`\@@@setcrefrange` $\{\langle text \rangle\} \{\langle label \rangle\} \{\langle label \rangle\}$

```
10736 \def\LWR@orig@@@setcrefrange#1#2#3{%
10737   \cref@getlabel{#2}{\@labela}%
10738   \cref@getlabel{#3}{\@labelb}%
10739   #1{\@labela}{\@labelb}{}}%
10740
10741 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
10742   \renewcommand{\@@@setcrefrange}[3]{%
10743     #1{\ref{#2}}{\ref{#3}}{}}%
10744   }
10745 }{
10746   \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
10747     \renewcommand{\@@@setcrefrange}[3]{%
10748       #1{\ref{#2}}{\ref{#3}}{}}%
10749     }
10750   }{
10751     \PackageWarning{lwarp-cleveref}{
10752       Unknown version of cleveref.
10753       \protect\crefrange\space will fail.
10754     }
10755   }
10756 }
10757 }
```

`\cpagerefFor` Redefinable word between “page(s)” and the page numbers.

```
10758 \newcommand*\cpagerefFor{for}
```

`\@@@setcpageref` $\langle\textit{typeofref}\rangle$ $\langle\textit{label}\rangle$, where *typeofref* is “page” or “pages”

```

10759 \def\LWR@orig@@setcpageref#1#2{% before v0.21
10760   \cref@getpageref{#2}\@temppage}#1{\@temppage}{}}}%
10761
10762 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
10763   \cpageref@getlabel{#2}\@temppage}#1{\@temppage}{}}}%
10764
10765 \ifdefequal{\@@setcpageref}\LWR@orig@@setcpageref}{
10766   \renewcommand*\@@setcpageref[2]{%
10767     #1{\cpagerefFor\ \cref{#2}}{}}}%
10768   }
10769 }{
10770   \ifdefequal{\@@@setcpageref}\LWR@orig@@@setcpageref}{
10771     \renewcommand*\@@@setcpageref[2]{%
10772       #1{\cpagerefFor\ \cref{#2}}{}}}%
10773     }
10774   }
10775   {
10776     \PackageWarning{lwarp-cleveref}{
10777       Unknown version of cleveref.
10778       \protect\cpageref\space will fail.
10779     }
10780   }
10781 }

10782 \def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
10783   \cref@getpageref{#2}\@pagea}%
10784   \cref@getpageref{#3}\@pageb}%
10785   #1{\@pagea}\@pageb}{}}{}}}%
10786
10787 \def\LWR@orig@@@setcpagerefrange#1#2#3{% as of v0.21
10788   \cpageref@getlabel{#2}\@pagea}%
10789   \cpageref@getlabel{#3}\@pageb}%
10790   #1{\@pagea}\@pageb}{}}{}}}%
10791
10792 \ifdefequal{\@@setcpagerefrange}\LWR@orig@@setcpagerefrange}{
10793   \renewcommand*\@@setcpagerefrange[3]{%
10794     #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{}}{}}}%
10795   }
10796 }{
10797   \ifdefequal{\@@@setcpagerefrange}\LWR@orig@@@setcpagerefrange}{
10798     \renewcommand*\@@@setcpagerefrange[3]{%
10799       #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{}}{}}}%
10800     }
10801   }
10802   {
10803     \PackageWarning{lwarp-cleveref}{
10804       Unknown version of cleveref.
10805       \protect\cpagerefrange\space will fail.
10806     }
10807   }
10808 }
10809
10810 }% 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.

```
10811 \LetLtxMacro\LWR@orig@label\label
10812 \RenewDocumentCommand{\label}{}{\LWR@new@label}
10813
10814 \LetLtxMacro\LWR@orig@pageref\pageref
10815 \RenewDocumentCommand{\pageref}{}{\LWR@new@pageref}
10816 \end{warpHTML}
```

88 picture environment

Env `picture` The `picture` environment is enclosed inside a `\lateximage`.

for HTML output: 10817 `\begin{warpHTML}`

Env `picture`

```
10818 \BeforeBeginEnvironment{picture}{\begin{lateximage}[picture]}
10819
10820 \AfterEndEnvironment{picture}{\end{lateximage}}

10821 \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 ``. 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 `\linewidth`, `\textwidth`, and `\textheight`, widths and heights in HTML are scaled proportionally to a 6×9 inch text area, and inside a `multicols` `\linewidth` is divided by the specified number of columns.
- 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.
-  **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.

for HTML output: 10822 `\begin{warpageHTML}`

89.1 Counters and lengths

- Ctr** `LWR@minipagedepth` Used to only reset the line width at the outermost minipage.
- ```
10823 \newcounter{LWR@minipagedepth}
10824 \setcounter{LWR@minipagedepth}{0}
```
- Len** `\LWR@minipagewidth` Used to convert the width into printable units.
- ```
10825 \newlength{\LWR@minipagewidth}
```
- Len** `\LWR@minipageheight` Used to convert the height into printable units.
- ```
10826 \newlength{\LWR@minipageheight}
```

## 89.2 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 89.3.

## 89.3 Minipage handling

- Bool** `LWR@minipagefullwidth` Should the next minipage have no HTML width?

```
10827 \newbool{LWR@minipagefullwidth}
10828 \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`.

```
10829 \newbool{LWR@forceminipagefullwidth}
10830 \boolfalse{LWR@forceminipagefullwidth}
```

`\minipagefullwidth` Requests that the next minipage have no width tag in HTML:

**for HTML output:** 10831 `\newcommand*{\minipagefullwidth}{\global\booltrue{LWR@minipagefullwidth}}`

`\UseMinipageWidths` Locally requests that minipage widths be honored.

```
10832 \newcommand*{\UseMinipageWidths}{\boolfalse{LWR@forceminipagefullwidth}}
```

`\IgnoreMinipageWidths` Locally requests that minipage widths be ignored.

```
10833 \newcommand*{\IgnoreMinipageWidths}{\booltrue{LWR@forceminipagefullwidth}}
10834 \end{warpHTML}
```

**for PRINT output:** 10835 `\begin{warpprint}`  
 10836 `\newcommand*{\minipagefullwidth}{}`  
 10837 `\newcommand*{\UseMinipageWidths}{}`  
 10838 `\newcommand*{\IgnoreMinipageWidths}{}`  
 10839 `\end{warpprint}`

**for HTML output:** 10840 `\begin{warpHTML}`

**Bool** `LWR@minipagethispar` Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

```
10841 \newbool{LWR@minipagethispar}
10842 \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.

```
10843 \NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m m}
10844 {%
10845 \LWR@traceinfo{minipage}%
```

Temporarily open a group, 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.

The following used to be an actual L<sup>A</sup>T<sub>E</sub>X minipage.

```
10846 \begingroup%
```

Compute width, adjusted for frames:

```
10847 \setlength{\LWR@minipagewidth}{#4}%
10848 \ifthenelse{\cnttest{\value{LWR@minipagedepth}}{=}{0}}{%
```

Only create a new page if not yet nested:

```
10849 \LWR@orignewpage%
```

Adjust virtual page size:

```
10850 \addtolength{\LWR@minipagewidth}{3em}% room for frames
10851 \setlength{\linewidth}{6in}%
10852 \setlength{\textwidth}{6in}%
10853 \setlength{\textheight}{9in}%
10854 }{}%
10855 \LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%
```

Compute height:

```
10856 \setlength{\LWR@minipageheight}{\textheight}% default unless specified
10857 \ifblank{#2}{\setlength{\LWR@minipageheight}{#2}}%
```

Track nesting depth:

```
10858 \addtocounter{LWR@minipagedepth}{1}%
```

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.

```
10859 \ifbool{FormatWP}{\newline}{}%
10860 \LWR@stoppars%
```

If FormatWP, add a text frame:

```
10861 \ifbool{FormatWP}{%
10862
10863 \addtocounter{LWR@thisautoidWP}{1}%
10864 \LWR@htmltag{%
10865 div id="\LWR@print@mbox{autoidWP-\arabic{LWR@thisautoidWP}}" %
10866 class="wpmminipage"%
10867 }%
10868
10869 }{}%
```

Create the <div> tag with optional alignment style:

```
10870 \LWR@traceinfo{minipage: creating div class}%
10871 \LWR@htmltag{div class="minipage" style="%
10872 \ifthenelse{\equal{#1}{t}}{\LWR@print@mbbox{vertical-align:bottom} ; }{}%
10873 \ifthenelse{\equal{#1}{c}}{\LWR@print@mbbox{vertical-align:middle} ; }{}%
10874 \ifthenelse{\equal{#1}{b}}{\LWR@print@mbbox{vertical-align:top} ; }{}%
10875 \ifthenelse{\equal{#3}{t}}{\LWR@print@mbbox{justify-content:flex-start} ; }{}%
10876 \ifthenelse{\equal{#3}{c}}{\LWR@print@mbbox{justify-content:center} ; }{}%
10877 \ifthenelse{\equal{#3}{b}}{\LWR@print@mbbox{justify-content:flex-end} ; }{}%
10878 \ifthenelse{\equal{#3}{s}}{\LWR@print@mbbox{justify-content:space-between} ; }{}%
```

Print the width and optional height styles:

```
10879 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
10880 \ifbool{LWR@minipagefullwidth}%
10881 {\global\boolfalse{LWR@minipagefullwidth}}%
10882 {%
10883 \ifbool{LWR@forceminipagefullwidth}%
10884 {}%
10885 {%
10886 \ifdimequal{#4}{\linewidth}%
10887 {}%
10888 {width:\LWR@printlength{\LWR@minipagewidth} ; }%
10889 }%
10890 }%
10891 \LWR@traceinfo{minipage: about to print the height}%
10892 \ifblank{#2}{}{height:\LWR@printlength{\LWR@minipageheight} ; }%
10893 "%}
```

Finish with an empty line to start the contents on a new line.

```
10894
10895 % 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.

```
10896 \setlength{\linewidth}{\LWR@minipagewidth}% the padded width
10897 \addtolength{\linewidth}{-3em}% the original width
10898 \setlength{\textwidth}{6in}%
10899 \setlength{\textheight}{9in}%
```

`\raggedright` cancels hyphenation, which will be done by HTML instead.

```
10900 \LWR@print@raggedright%
```

Set minipage footnotes:

```
10901 \def\@mpfn{mpfootnote}%
10902 \def\thempfn{\thempfootnote}\c@mpfootnote\z@%
```

```
10903 \let\@footnotetext\@mpfootnotetext%
```

Resume paragraph tag handling for the contents of the minipage:

```
10904 \LWR@startpars%
10905 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
10906
10907 === begin minipage ===
10908
10909 }{%
10910 \LWR@traceinfo{minipage: finished starting the minipage}%
10911 }% finished \minipage
10912 {% \endminipage
```

Print pending minipage footnotes:

```
10913 \LWR@printpendingmpfootnotes%
```

End the environment with closing tag:

```
10914 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
10915
10916 === end minipage ===
10917
10918 }{%
10919 \LWR@stoppars%
```

The following used to be an actual L<sup>A</sup>T<sub>E</sub>X minipage.

```
10920 \endgroup%
10921
10922 \ifbool{FormatWP}{%
10923
10924 \LWR@html elementend{div}%
10925
10926 }{%
10927 \LWR@htmldivclassend{minipage}%
10928
10929 \addtocounter{LWR@minipagedepth}{-1}%
10930 \LWR@startpars%
10931 \ifbool{FormatWP}{\newline}{}%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
10932 \global\booltrue{LWR@minipagethispar}%
10933 \LWR@traceinfo{LWR@minipage: done}%
10934 }
10935
10936 \NewDocumentEnvironment{LWR@HTML@minipage}{O{t} O{} O{t} m}
10937 {\LWR@HTML@sub@minipage{#1}{#2}{#3}{#4}}
10938 {\endLWR@HTML@sub@minipage}
10939
10940 \LWR@formattedenv{minipage}
```

## 89.4 `\parbox`, `\mbox`, `\makebox`, `\framebox`, `\fbox`, `\raisebox`

for HTML output:

`\parbox` [*⟨pos⟩*] [*⟨height⟩*] [*⟨inner-pos⟩*] {*⟨width⟩*} {*⟨text⟩*}

A `parbox` uses the `minipage` code:

```
10941 \NewDocumentCommand{\LWR@HTML@parbox}{O{t} O{} O{t} m +m}
10942 {
10943 \LWR@traceinfo{parbox of width #4}%
10944 \begin{minipage}[#1][#2][#3]{#4}%
10945 #5
10946 \end{minipage}%
10947 }
10948
10949 \LWR@formatted{parbox}
```

`\mbox` {*⟨text⟩*} Nullified for HTML.

```
10950 \newcommand*{\LWR@HTML@mbox}[1]{#1}
10951
10952 \LWR@formatted{mbox}
```

`\LWR@makebox@paren` {*⟨width⟩*}, {*⟨height⟩*}

Adds to the style in `\LWR@temptwo`.

```
10953 \NewDocumentCommand{\LWR@makebox@paren}{m m}{%
10954 \IfValueTF{#2}{%
10955 \setlength{\LWR@tempwidth}{#1\unitlength}%
10956 \setlength{\LWR@tempheight}{#2\unitlength}%
10957 \appto{\LWR@temptwo}{%
10958 \LWR@print@mbox{width:\LWR@printlength{\LWR@tempwidth}} ; % space
10959 \LWR@print@mbox{height:\LWR@printlength{\LWR@tempheight}} ; % space
10960 }%
10961 }{%
10962 \PackageError{lwarp}%
10963 {(width,height) is missing a comma ',' character}%
10964 {\protect\makebox\space and \protect\framebox\space accept
10965 a size in the format (width,height).}%
10966 }%
10967 }
```

`\LWR@makebox@align` {*⟨alignment character⟩*}

Adds to the style in `\LWR@temptwo`.

```
10968 \newcommand*{\LWR@makebox@align}[1]{%
10969 \def\LWR@align{center}%
10970 \ifstrequal{#1}{l}{\def\LWR@align{left}}{%
10971 \ifstrequal{#1}{r}{\def\LWR@align{right}}{%
10972 \ifstrequal{#1}{s}{\def\LWR@align{justify}}{%
```

```

10973 \appto{\LWR@temptwo}{%
10974 \LWR@print@mbbox{text-align:\LWR@align} ; %
10975 }%
10976 }

```

`\makebox` (*(width,height)*) [*(width)*] [*(pos)*] {*(text)*}

```
10977 \NewDocumentCommand{\LWR@HTML@makebox}{>\SplitArgument{1}{,}}d() o o +m}{%
```

Build the style depending on arguments:

```

10978 {% scope
10979 \def\LWR@temptwo{%
10980 \IfValueTF{#1}%
10981 {% (width,height) ..
10982 \LWR@makebox@paren #1%
10983 \IfValueT{#2}%
10984 {% (width,height) [posn]
10985 \LWR@makebox@align{#2}%
10986 }%
10987 }%
10988 {% [width]
10989 \IfValueT{#2}% [width]
10990 {%
10991 \setlength{\LWR@tempwidth}{#2}%
10992 \ifdimgreater{\LWR@tempwidth}{0pt}{%
10993 \appto{\LWR@temptwo}{%
10994 width:\LWR@printlength{\LWR@tempwidth} ; % space
10995 }%
10996 }{ }%
10997 }%
10998 }%
10999 \IfValueT{#3}%
11000 {% [width] [posn]
11001 \LWR@makebox@align{#3}%
11002 }%
11003 \InlineClass[%
11004 \LWR@print@mbbox{display:inline-block} ; %
11005 \LWR@temptwo%
11006]%
11007 {makebox}%
11008 {#4}%
11009 }% scope
11010 }
11011 \LWR@formatted{makebox}

```

`\framebox` (*(width,height)*) [*(width)*] [*(pos)*] {*(text)*}

```

11012 \NewDocumentCommand{\LWR@HTML@framebox}{d() o o +m}{%
11013 \fbox{\makebox(#1)[#2][#3]{#4}}%
11014 }
11015
11016 \LWR@formatted{framebox}

```

`\LWR@forceminwidth`  $\{\langle\mathit{legth}\rangle\}$

Sets `\LWR@atleastonept` to be at least 1pt.

```

11017 \newlength{\LWR@atleastonept}
11018
11019 \newcommand*{\LWR@forceminwidth}[1]{%
11020 \setlength{\LWR@atleastonept}{#1}%
11021 \ifthenelse{%
11022 \lengthtest{\LWR@atleastonept>0pt}\AND%
11023 \lengthtest{\LWR@atleastonept<1pt}%
11024 }%
11025 {\setlength{\LWR@atleastonept}{1pt}}%
11026 {}%
11027 }

```

`\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.

```

11028 \newcommand*{\LWR@fboxstyle}{%
11029 \LWR@findcurrenttextcolor%
11030 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@origpound\LWR@tempcolor ; %
11031 padding:\LWR@printlength{\fboxsep} ; %
11032 color:\LWR@origpound\LWR@tempcolor%
11033 }

```

`\fbox`  $\{\langle\mathit{text}\rangle\}$

Creates a framed inline span enclosing the text.

Create a new HTML version, but don't use it until after `xcolor` may have loaded:

```

11034 \newcommand{\LWR@HTML@fbox}[1]{%
11035 \LWR@traceinfo{HTML fbox}%
11036 \LWR@forceminwidth{\fboxrule}%
11037 \InlineClass[%
11038 \LWR@print@mbbox{display:inline-block} ; %
11039 \LWR@fboxstyle%
11040]{fbox}{#1}%
11041 }

```

`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`:

```

11042 \AtBeginDocument{\LWR@formatted{fbox}}

```

`\fboxBlock`  $\{\langle\mathit{text}\rangle\}$  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:** 11043 `\end{warpHTML}`

```

11044 \begin{warpall}
11045 \let\fbxBlock\fbx
11046 \end{warpall}
11047
11048 \begin{warpHTML}

```

**for HTML output:** Next, an HTML version:

```

11049 \newcommand{\LWR@HTML@fbxBlock}[1]{%
11050 \LWR@forceminwidth{\fbxrule}%
11051 \LWR@stoppars%
11052 \begin{BlockClass}%
11053 \LWR@fbxstyle%
11054]{fbxBlock}
11055 #1
11056 \end{BlockClass}
11057 \LWR@startpars%
11058 }
11059
11060 \LWR@formatted{fbxBlock}
11061
11062 \end{warpHTML}

```

Env fminipage [*align*] [*height*] [*align*] {*width*}

Creates a framed HTML <div> around its contents.

**for HTML & PRINT:** Print version:

```

11063 \begin{warpall}
11064
11065 \newsavebox{\LWR@fminipagebox}
11066
11067 \NewDocumentEnvironment{\LWR@print@fminipage}{0{t} o 0{t} m}
11068 {%

```

An outer minipage will be used for vertical alignment. An inner minipage will be framed with \fbx.

If the optional inner alignment is not given, use the outer instead:

```

11069 \IfValueTF{#3}%
11070 {\def\LWR@thisalign{#3}}
11071 {\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.

```

11072 \IfValueTF{#2}%
11073 {\minipage[#1][#2+2\fbxsep+2\fbxrule][\LWR@thisalign]{#4+2\fbxsep+2\fbxrule}}%
11074 {\minipage[#1][#4+2\fbxsep+2\fbxrule}}%

```

Capture the contents of the environment:

```

11075 \begin{lrbox}{\LWR@fminipagebox}%

```

Nest the contents inside an inner minipage of the desired size:

```
11076 \IfValueTF{#2}%
11077 {\minipage[#1][#2][\LWR@thisalign]{#4}}%
11078 {\minipage[#1]{#4}}%
11079 }
11080 {%
```

Close the inner minipage and the LR box with the contents:

```
11081 \endminipage%
11082 \end{lrbox}%
```

Create a frame around the contents of the environment:

```
11083 \fbox{\usebox{\LWR@fminipagebox}}%
```

The entire thing is placed inside the outer minipage:

```
11084 \endminipage%
11085 }
11086
11087 \LetLtxMacro\fminipage\LWR@print@fminipage
11088 \LetLtxMacro\endfminipage\endLWR@print@fminipage
11089 % \newenvironment{fminipage}{\LWR@print@fminipage}{\endLWR@print@fminipage}
11090
11091 \end{warpall}
```

HTML version:

```
for HTML output: 11092 \begin{warpHTML}
11093
11094 \NewDocumentEnvironment{LWR@HTML@fminipage}{O{t} o O{t} m}
11095 {%
11096 \LWR@traceinfo{fminipage #1 #2 #3 #4}%
11097 \LWR@forceminwidth{\fboxrule}%
11098 \setlength{\LWR@tempwidth}{#4}%
11099 \IfValueTF{#2}{\setlength{\LWR@tempheight}{#2}}%

11100 \LWR@stoppars%

11101 \begin{BlockClass}[%
11102 \LWR@fboxstyle ; %
11103 \IfValueTF{#2}{height:\LWR@printlength{\LWR@tempheight} ; }%
11104 \ifbool{LWR@minipagefullwidth}%
11105 {\global\boolfalse{LWR@minipagefullwidth}}%
11106 {%
11107 \ifbool{LWR@forceminipagefullwidth}%
11108 {}%
11109 {%
11110 \ifdimequal{\LWR@tempwidth}{\linewidth}%
11111 {}%
11112 {width:\LWR@printlength{\LWR@tempwidth} ; }%
11113 }%
}
```

```

11114 }%
11115]{fminipage}%
11116 }
11117 {%
11118 \end{BlockClass}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

11119 \global\booltrue{LWR@minipagethispar}%
11120 \LWR@traceinfo{fminipage done}%
11121 }
11122
11123 \LWR@formattedenv{fminipage}

```

`\raisebox`  $\{ \langle \textit{raiselen} \rangle \} [ \langle \textit{height} \rangle ] [ \langle \textit{depth} \rangle ] \{ \langle \textit{text} \rangle \}$

```

11124 \NewDocumentCommand{\LWR@HTML@raisebox}{m o o m}{%
11125 #4%
11126 }
11127
11128 \LWR@formatted{raisebox}

11129 \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:** 11130 `\begin{warpHTML}`

`\emph`  $\{ \langle \textit{text} \rangle \}$

```

11131 \DeclareRobustCommand{\LWR@HTML@emph}[1]{%
11132 {%
11133 \itshape%
11134 \LWR@htmlspan{em}{#1}%

```

```
11135 }%
11136 }
11137
11138 \LWR@formatted{emph}
11139
11140 \newcommand{\LWR@null@emph}[1]{#1}
```

`\textmd` {*⟨text⟩*}

```
11141 \DeclareRobustCommand{\LWR@HTML@textmd}[1]{%
11142 {%
11143 \mdseries%
11144 \InlineClass(font-weight:normal){textmd}{#1}%
11145 }%
11146 }
11147
11148 \LWR@formatted{textmd}
11149
11150 \newcommand{\LWR@null@textmd}[1]{#1}
```

`\textbf` {*⟨text⟩*}

```
11151 \DeclareRobustCommand{\LWR@HTML@textbf}[1]{%
11152 {%
11153 \bfseries%
11154 \LWR@htmlspan{b}{#1}%
11155 }%
11156 }
11157
11158 \LWR@formatted{textbf}
11159
11160 \newcommand{\LWR@null@textbf}[1]{#1}
```

`\texteb` {*⟨text⟩*} From `nfssect-cfr`.

```
11161 \DeclareRobustCommand{\LWR@HTML@texteb}[1]{%
11162 {%
11163 \ebweight%
11164 \InlineClass{texteb}{#1}%
11165 }%
11166 }
11167
11168 \LWR@formatted{texteb}
11169
11170 \newcommand{\LWR@null@texteb}[1]{#1}
```

`\textlg` {*⟨text⟩*} From `nfssect-cfr`.

```
11171 \DeclareRobustCommand{\LWR@HTML@textlg}[1]{%
11172 {%
11173 \lgweight%
11174 \InlineClass{textlg}{#1}%

```

```
11175 }%
11176 }
11177
11178 \LWR@formatted{textlg}
11179
11180 \newcommand{\LWR@null@textlg}[1]{#1}
```

`\textrm`  $\langle text \rangle$

```
11181 \DeclareRobustCommand{\LWR@HTML@textrm}[1]{%
11182 {%
11183 \rmfamily%
11184 \InlineClass(font-family:serif){textrm}{#1}%
11185 }%
11186 }
11187
11188 \LWR@formatted{textrm}
11189
11190 \newcommand{\LWR@null@textrm}[1]{#1}
```

`\textsf`  $\langle text \rangle$

```
11191 \DeclareRobustCommand{\LWR@HTML@textsf}[1]{%
11192 {%
11193 \sffamily%
11194 \InlineClass(font-family:sans){textsf}{#1}%
11195 }%
11196 }
11197
11198 \LWR@formatted{textsf}
11199
11200 \newcommand{\LWR@null@textsf}[1]{#1}
```

`\texttt`  $\langle text \rangle$

```
11201 \DeclareRobustCommand{\LWR@HTML@texttt}[1]{%
11202 {%
11203 \ttfamily%
11204 \LWR@htmlspan{kbd}{#1}%
11205 }%
11206 }
11207
11208 \LWR@formatted{texttt}
11209
11210 \newcommand{\LWR@null@texttt}[1]{#1}
```

`\textup`  $\langle text \rangle$

```
11211 \DeclareRobustCommand{\LWR@HTML@textup}[1]{%
11212 {%
11213 \upshape%
11214 \InlineClass(font-style:normal){textup}{#1}%

```

```

11215 }%
11216 }
11217
11218 \LWR@formatted{textup}
11219
11220 \newcommand{\LWR@null@textup}[1]{#1}

```

`\textit`  $\{\langle text \rangle\}$

```

11221 \DeclareRobustCommand{\LWR@HTML@textit}[1]{%
11222 {%
11223 \itshape%
11224 \LWR@htmlspan{i}{#1}%
11225 }%
11226 }
11227
11228 \LWR@formatted{textit}
11229
11230 \newcommand{\LWR@null@textit}[1]{#1}

```

`\textsc`  $\{\langle text \rangle\}$

```

11231 \DeclareRobustCommand{\LWR@HTML@textsc}[1]{%
11232 {%
11233 \scshape%
11234 \InlineClass{textsc}{#1}%
11235 }%
11236 }
11237
11238 \LWR@formatted{textsc}
11239
11240 \newcommand{\LWR@null@textsc}[1]{#1}

```

`\textulc`  $\{\langle text \rangle\}$  From fontaxes.

```

11241 \DeclareRobustCommand{\LWR@HTML@textulc}[1]{%
11242 {%
11243 \ulcshape%
11244 \InlineClass{textulc}{#1}%
11245 }%
11246 }
11247
11248 \LWR@formatted{textulc}
11249
11250 \newcommand{\LWR@null@textulc}[1]{#1}

```

`\textsi`  $\{\langle text \rangle\}$

```

11251 \@ifundefined{textsi}{
11252 \LetLtxMacro\LWR@print@textsi\LWR@print@textsc
11253 }{}
11254

```

```

11255 \DeclareRobustCommand{\LWR@HTML@textsi}[1]{%
11256 {%
11257 \sishape%
11258 \textsc{\textit{#1}}%
11259 % \InlineClass(
11260 % font-style: italic;
11261 % font-variant: small-caps ;
11262 % font-variant-numeric: oldstyle-nums ;
11263 %){textsi}{#1}%
11264 }%
11265 }
11266
11267 \LWR@formatted{textsi}
11268
11269 \newcommand{\LWR@null@textsi}[1]{#1}

```

`\textsl`  $\langle text \rangle$

```

11270 \DeclareRobustCommand{\LWR@HTML@textsl}[1]{%
11271 {%
11272 \slshape%
11273 \InlineClass(font-style:oblique){textsl}{#1}%
11274 }%
11275 }
11276
11277 \LWR@formatted{textsl}
11278
11279 \newcommand{\LWR@null@textsl}[1]{#1}

```

`\textnormal`  $\langle text \rangle$

```

11280 \DeclareRobustCommand{\LWR@HTML@textnormal}[1]{\textmd{\textrm{\textup{#1}}}}
11281
11282 \LWR@formatted{textnormal}
11283
11284 \newcommand{\LWR@null@textnormal}[1]{#1}

11285 \newcommand{\LWR@null@rmfamily}{}
11286 \newcommand{\LWR@null@ssfamly}{}
11287 \newcommand{\LWR@null@ttfamily}{}
11288 \newcommand{\LWR@null@bfseries}{}
11289 \newcommand{\LWR@null@ebweight}{}
11290 \newcommand{\LWR@null@lgweight}{}
11291 \newcommand{\LWR@null@mdseries}{}
11292 \newcommand{\LWR@null@upshape}{}
11293 \newcommand{\LWR@null@slshape}{}
11294 \newcommand{\LWR@null@scshape}{}
11295 \newcommand{\LWR@null@itshape}{}
11296 \newcommand{\LWR@null@normalfont}{}

11297 \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.

```

11298 \catcode'\$=\active% redefining $ below
11299 \catcode'_ =12% redefining _ below
11300 \newcommand*\LWR@nullfonts}{%
11301 \LetLtxMacro\emph\LWR@null@emph%
11302 \LetLtxMacro\textmd\LWR@null@textmd%
11303 \LetLtxMacro\textbf\LWR@null@textbf%
11304 \LetLtxMacro\textrm\LWR@null@textrm%
11305 \LetLtxMacro\textsf\LWR@null@textsf%
11306 \LetLtxMacro\texttt\LWR@null@texttt%
11307 \LetLtxMacro\textup\LWR@null@textup%
11308 \LetLtxMacro\textit\LWR@null@textit%
11309 \LetLtxMacro\textsc\LWR@null@textsc%
11310 \LetLtxMacro\textulc\LWR@null@textulc%
11311 \LetLtxMacro\textsi\LWR@null@textsi%
11312 \LetLtxMacro\textsl\LWR@null@textsl%
11313 \LetLtxMacro\textnormal\LWR@null@textnormal%
11314 \LetLtxMacro\rmfamily\LWR@null@rmfamily%
11315 \LetLtxMacro\sffamily\LWR@null@sffamily%
11316 \LetLtxMacro\ttfamily\LWR@null@ttfamily%
11317 \LetLtxMacro\bfseries\LWR@null@bfseries%
11318 \LetLtxMacro\mdseries\LWR@null@mdseries%
11319 \LetLtxMacro\upshape\LWR@null@upshape%
11320 \LetLtxMacro\slshape\LWR@null@slshape%
11321 \LetLtxMacro\scshape\LWR@null@scshape%
11322 \LetLtxMacro\ulcshape\LWR@null@ulcshape%

11323 \LetLtxMacro\sisshape\LWR@null@sisshape%

11324 \LetLtxMacro\itshape\LWR@null@itshape%
11325 \LetLtxMacro\normalfont\LWR@null@normalfont%
11326 \LetLtxMacro\em\LWR@null@em%

```

### Various built-in symbols.

```

11327 \renewcommand*\$}{-}%
11328 \renewcommand*\%}{-}%
11329 \renewcommand*_}{-}%
11330 \renewcommand*\}{-}%
11331 \renewcommand*\{}{-}%
11332 \renewcommand*\&}{and}%
11333 \renewcommand*\#}{-}%
11334 \renewcommand*\,}{-}%
11335 \renewcommand*\~}{-}%
11336 \renewcommand*\^[1]{-}%
11337 \renewcommand*\~[1]{-}%
11338 \renewcommand*\{newline}{-}%
11339 \renewcommand*\textasciicircum}{-}%
11340 \renewcommand*\textasciitilde}{-}%
11341 \renewcommand*\textasteriskcentered}{-}%

```

11342 \renewcommand\*{\textbackslash}{-}%  
11343 \renewcommand\*{\textbar}{-}%  
11344 \renewcommand\*{\textbardbl}{-}%  
11345 \renewcommand\*{\textbigcircle}{-}%  
11346 \renewcommand\*{\textbraceleft}{-}%  
11347 \renewcommand\*{\textbraceright}{-}%  
11348 \renewcommand\*{\textbullet}{-}%  
11349 \renewcommand\*{\textcopyright}{-}%  
11350 \renewcommand\*{\textdagger}{-}%  
11351 \renewcommand\*{\textdaggerdbl}{-}%  
11352 \renewcommand\*{\textdollar}{-}%  
11353 \renewcommand\*{\textellipsis}{-}%  
11354 \renewcommand\*{\textemdash}{-}%  
11355 \renewcommand\*{\textendash}{-}%  
11356 \renewcommand\*{\textexclamdown}{-}%  
11357 \renewcommand\*{\textgreater}{-}%  
11358 \renewcommand\*{\textless}{-}%  
11359 \renewcommand\*{\textordfeminine}{-}%  
11360 \renewcommand\*{\textordmasculine}{-}%  
11361 \renewcommand\*{\textparagraph}{-}%  
11362 \renewcommand\*{\textperiodcentered}{-}%  
11363 \renewcommand\*{\textpertenthousand}{-}%  
11364 \renewcommand\*{\textperthousand}{-}%  
11365 \renewcommand\*{\textquestiondown}{-}%  
11366 \renewcommand\*{\textquotedblleft}{-}%  
11367 \renewcommand\*{\textquotedblright}{-}%  
11368 \renewcommand\*{\textquoteleft}{-}%  
11369 \renewcommand\*{\textquoteright}{-}%  
11370 \renewcommand\*{\textregistered}{-}%  
11371 \renewcommand\*{\textsection}{-}%  
11372 \renewcommand\*{\textsterling}{-}%  
11373 \renewcommand\*{\texttrademark}{-}%  
11374 \renewcommand\*{\textunderscore}{-}%  
11375 \renewcommand\*{\textvisiblespace}{-}%  
11376 \renewcommand\*{\copyright}{-}%  
11377 \renewcommand\*{\dag}{-}%  
11378 \renewcommand\*{\ddag}{-}%  
11379 \renewcommand\*{\dots}{-}%  
11380 \renewcommand\*{\P}{-}%  
11381 \renewcommand\*{\pounds}{-}%  
11382 \renewcommand\*{\S}{-}%  
11383 \renewcommand\*{\aa}{a}%  
11384 \renewcommand\*{\AA}{A}%  
11385 \renewcommand\*{\AE}{AE}%  
11386 \renewcommand\*{\ae}{ae}%  
11387 \renewcommand\*{\dh}{d}%  
11388 \renewcommand\*{\DH}{D}%  
11389 \renewcommand\*{\DJ}{D}%  
11390 \renewcommand\*{\dj}{d}%  
11391 \renewcommand\*{\IJ}{IJ}%  
11392 \renewcommand\*{\i j}{i j}%  
11393 \renewcommand\*{\L}{L}%  
11394 \renewcommand\*{\l}{l}%  
11395 \renewcommand\*{\NG}{NG}%  
11396 \renewcommand\*{\ng}{ng}%

```

11397 \renewcommand*{\O}{O}%
11398 \renewcommand*{\o}{o}%
11399 \renewcommand*{\oe}{oe}%
11400 \renewcommand*{\OE}{OE}%
11401 \renewcommand*{\ss}{ss}%
11402 \renewcommand*{\SS}{SS}%
11403 \renewcommand*{\th}{th}%
11404 \renewcommand*{\TH}{TH}%
11405 \renewcommand*{\guillemotleft}{}%
11406 \renewcommand*{\guilsinglleft}{}%
11407 \renewcommand*{\quotedblbase}{}%
11408 \renewcommand*{\textquotedbl}{}%
11409 \renewcommand*{\guillemotright}{}%
11410 \renewcommand*{\guilsinglright}{}%
11411 \renewcommand*{\quotesinglbase}{}%

11412 \renewcommand*{\HTMLunicode}[1]{}%
11413 \renewcommand*{\HTMLentity}[1]{}%

11414 \renewcommand{\textsuperscript}[1]{##1}%
11415 \renewcommand{\textsubscript}[1]{##1}%

11416 \renewcommand{\underline}[1]{##1}%

11417 \RenewDocumentCommand{\hspace}{s m}{}%

11418 \RenewDocumentCommand{\LWR@htmlspanclass}{o m +m}{##3}%
11419 \DeclareExpandableDocumentCommand{\InlineClass}{D{({})}{ } o m +m}{##4}%

```

#### Nullify math macros.

```

11420 \def\##1\{}%
11421 \def\[##1\]{}%
11422 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
11423 \protected\def$##1${}%

```

#### Nullify logos:

```

11424 \renewcommand*{\TeX}{TeX}%
11425 \renewcommand*{\LaTeX}{LaTeX}%
11426 \renewcommand*{\LaTeXe}{LaTeX2e}%
11427 \renewcommand*{\LuaTeX}{LuaTeX}%
11428 \renewcommand*{\LuaLaTeX}{LuaLaTeX}%
11429 \renewcommand*{\XeTeX}{XeTeX}%
11430 \renewcommand*{\XeLaTeX}{XeLaTeX}%
11431 \renewcommand*{\ConTeXt}{ConTeXt}%
11432 \renewcommand*{\BibTeX}{BibTeX}%
11433 \renewcommand*{\MakeIndex}{MakeIndex}%
11434 \renewcommand*{\AmS}{AmS}%
11435 \renewcommand*{\MiKTeX}{MiKTeX}%
11436 \renewcommand*{\LyX}{LyX}%

```

Use the simpler form with `\texorpdfstring`:

```
11437 \let\texorpdfstring\relax%
11438 \newcommand{\texorpdfstring}[2]{##2}%
11439 }
11440 \catcode'\$=3%
11441 \catcode'_ =8%
```

`\FilenameNullify` *{(redefinitions)}*

Adds more nullifying definitions for filename generation.

```
11442 \newcommand*\FilenameNullify}[1]{%
11443 \appto{\LWR@nullfonts}{#1}%
11444 }
```

Remembers the current font family, series, and shape. fontaxes support is integrated here.

```
11445 \newcommand*\LWR@f@family}{rm}
11446 \newcommand*\LWR@f@series}{md}
11447 \newcommand*\LWR@f@shape}{up}
11448 \newcommand*\LWR@f@shapecaps}{ulc}
```

`\LWR@textcurrentfont` *{(text)}*

Prints the text with the current font choices. Avoids nesting repeated font selections.

```
11449 \newcounter{LWR@textcurrentfontdepth}
11450 \setcounter{LWR@textcurrentfontdepth}{0}
11451
11452 \newcommand*\LWR@textcurrentfont}[1]{%
11453 \ifnumcomp{\value{LWR@textcurrentfontdepth}}{>}{0}%
11454 {%
11455 \addtocounter{LWR@textcurrentfontdepth}{1}%
11456 #1%
11457 \addtocounter{LWR@textcurrentfontdepth}{-1}%
11458 }%
11459 {%
11460 \addtocounter{LWR@textcurrentfontdepth}{1}%
11461 \InlineClass{%
11462 text\LWR@f@family\LWR@origtilde{%
11463 text\LWR@f@series\LWR@origtilde{%
11464 text\LWR@f@shape\LWR@origtilde{%
11465 text\LWR@f@shapecaps%
11466 }%
11467 }%
11468 \addtocounter{LWR@textcurrentfontdepth}{-1}%
11469 }%
11470 }
```

Env `\LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```
11471 \newenvironment*{LWR@blocktextcurrentfont}{%
11472 \LWR@stoppars%
11473 \BlockClass{%
11474 text\LWR@family\LWR@origtilde{}}%
11475 text\LWR@series\LWR@origtilde{}}%
11476 text\LWR@shape\LWR@origtilde{}}%
11477 text\LWR@shapecaps%
11478 }%
11479 }\endBlockClass\LWR@startpars}
```

#### \mdseries

```
11480 \newrobustcmd*{\LWR@HTML@mdseries}{\renewcommand*{\LWR@f@series}{md}}
11481 \LWR@formatted{mdseries}
```

#### \bfseries

```
11482 \newrobustcmd*{\LWR@HTML@bfseries}{\renewcommand*{\LWR@f@series}{bf}}
11483 \LWR@formatted{bfseries}
```

#### \ebweight From nfssect-cfr.

```
11484 \newrobustcmd*{\LWR@HTML@ebweight}{\renewcommand*{\LWR@f@series}{eb}}
11485 \LWR@formatted{ebweight}
```

#### \lgweight From nfssect-cfr.

```
11486 \newrobustcmd*{\LWR@HTML@lgweight}{\renewcommand*{\LWR@f@series}{lg}}
11487 \LWR@formatted{lgweight}
```

#### \rmfamily

```
11488 \newrobustcmd*{\LWR@HTML@rmfamily}{\renewcommand*{\LWR@f@family}{rm}}
11489 \LWR@formatted{rmfamily}
```

#### \sffamily

```
11490 \newrobustcmd*{\LWR@HTML@sffamily}{\renewcommand*{\LWR@f@family}{sf}}
11491 \LWR@formatted{sffamily}
```

#### \ttfamily

```
11492 \newrobustcmd*{\LWR@HTML@ttfamily}{\renewcommand*{\LWR@f@family}{tt}}
11493 \LWR@formatted{ttfamily}
```

#### \upshape

```
11494 \newrobustcmd*{\LWR@HTML@upshape}{\renewcommand*{\LWR@f@shape}{up}}
11495 \LWR@formatted{upshape}
```

`\itshape`

```
11496 \newrobustcmd*{\LWR@HTML@itshape}{\renewcommand*{\LWR@f@shape}{it}}
11497 \LWR@formatted{itshape}
```

`\scshape`

```
11498 \newrobustcmd*{\LWR@HTML@scshape}{\renewcommand*{\LWR@f@shapecaps}{sc}}
11499 \LWR@formatted{scshape}
```

`\ulcshape` From fontaxes.

```
11500 \@ifundefined{ulcshape}{
11501 \LetLtxMacro\ulcshape\upshape
11502 }{}
11503 \newrobustcmd*{\LWR@HTML@ulcshape}{\renewcommand*{\LWR@f@shapecaps}{ulc}}
11504 \LWR@formatted{ulcshape}
```

`\sishape`

```
11505 \@ifundefined{sishape}{
11506 \LetLtxMacro\sishape\scshape
11507 }{}
11508 \newrobustcmd*{\LWR@HTML@sishape}{%
11509 \renewcommand*{\LWR@f@shape}{it}
11510 \renewcommand*{\LWR@f@shapecaps}{sc}%
11511 }
11512 \LWR@formatted{sishape}
```

`\slshape`

```
11513 \newrobustcmd*{\LWR@HTML@slshape}{\renewcommand*{\LWR@f@shape}{sl}}
11514 \LWR@formatted{slshape}
```

`\normalfont`

```
11515 \renewrobustcmd*{\normalfont}{\rmfamily\mdseries\upshape\ulcshape}
```

`\sp`  $\langle text \rangle$

For siunitx. Must work in math mode.

```
11516 \renewcommand{\sp}[1]{\text{^{#1}}}
```

`\sb`  $\langle text \rangle$

For siunitx. Must work in math mode.

```
11517 \renewcommand{\sb}[1]{\text{_{#1}}}
```

`\textsuperscript`  $\langle text \rangle$

```
11518 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\@textsuperscript`  $\langle text \rangle$

```
11519 \renewcommand{\@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\textsubscript`  $\langle text \rangle$

```
11520 \AtBeginDocument{
11521 \renewrobustcmd{\textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
11522 }
```

`\@textsubscript`  $\langle text \rangle$

```
11523 \AtBeginDocument{
11524 \renewcommand{\@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
11525 }
```

`\up`  $\langle text \rangle$  Prints superscript.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
11526 \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.

```
11527 \AtBeginDocument{\let\fup\textsuperscript}
```

`\underline`  $\langle text \rangle$

```
11528 \renewcommand{\underline}[1]{%
11529 \InlineClass%
11530 (text-decoration:underline; text-decoration-skip: auto)%
11531 {underline}{#1}%
11532 }
```

`\LWR@overline`  $\langle text \rangle$

```
11533 \newcommand{\LWR@overline}[1]{%
11534 \InlineClass%
11535 (text-decoration:overline; text-decoration-skip: auto)%
11536 {overline}{#1}%
11537 }
```

`\LWR@currenttextcolor` The color to use for text and `\rule`, defaulting to black:

```
11538 \newcommand*{\LWR@currenttextcolor}{black}
```

`\LWR@tempcolor` The color converted to HTML colorspace.  
`\LWR@tempcolortwo`

```
11539 \newcommand*{\LWR@tempcolor}{}
11540 \newcommand*{\LWR@tempcolortwo}{}
```

`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```
11541 \newcommand*{\LWR@findcurrenttextcolor}{%
11542 \renewcommand{\LWR@tempcolor}{000000}%
11543 }
```

`\LWR@textcurrentcolor` `{<text>}` Like `\textcolor` but uses the current `\color` instead.

```
11544 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%
11545 \renewcommand*{\LWR@currenttextcolor}{black}%
11546 #1%
11547 }
```

```
11548 \end{warppHTML}
```

**for PRINT output:** 11549 `\begin{warpprint}`

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

Prints the text with the current font choices.

```
11550 \newcommand*{\LWR@textcurrentfont}[1]{#1}
```

Env `LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```
11551 \newenvironment*{LWR@blocktextcurrentfont}{}{}
```

`\FilenameNullify` `{<macros to nullify>}`

```
11552 \newcommand*{\FilenameNullify}[1]{}
11553 \end{warpprint}
```

## 91 Skips, spaces, font sizes

**for HTML output:** 11554 `\begin{warppHTML}`

`\`, and `\thinspace` may be redefined by other packages, so are redefined `\AtBeginDocument` here.

Direct-formatting space commands become HTML entities:

```

11555 \AtBeginDocument{
11556 \renewrobustcmd*{\,}{\HTMLUnicode{202f}} % HTML thin non-breakable space
11557 \renewrobustcmd*{\thinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
11558 \renewrobustcmd*{\negthinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
11559 \renewrobustcmd*{~}{\HTMLentity{nbsp}}
11560 \renewrobustcmd*{\textellipsis}{\HTMLUnicode{2026}}
11561 }

```

Direct-formatting font sizes are ignored:

```

11562 \newrobustcmd*{\LWR@HTML@normalsize}{}
11563 \LWR@formatted{normalsize}
11564
11565 \newrobustcmd*{\LWR@HTML@small}{}
11566 \LWR@formatted{small}
11567
11568 \newrobustcmd*{\LWR@HTML@footnotesize}{}
11569 \LWR@formatted{footnotesize}
11570
11571 \newrobustcmd*{\LWR@HTML@scriptsize}{}
11572 \LWR@formatted{scriptsize}
11573
11574 \newrobustcmd*{\LWR@HTML@tiny}{}
11575 \LWR@formatted{tiny}
11576
11577 \newrobustcmd*{\LWR@HTML@large}{}
11578 \LWR@formatted{large}
11579
11580 \newrobustcmd*{\LWR@HTML@Large}{}
11581 \LWR@formatted{Large}
11582
11583 \newrobustcmd*{\LWR@HTML@LARGE}{}
11584 \LWR@formatted{LARGE}
11585
11586 \newrobustcmd*{\LWR@HTML@huge}{}
11587 \LWR@formatted{huge}
11588
11589 \newrobustcmd*{\LWR@HTML@Huge}{}
11590 \LWR@formatted{Huge}

11591 \DeclareDocumentCommand{\onecolumn}{}{}
11592
11593 \DeclareDocumentCommand{\twocolumn}{0}{}
11594
11595 #1
11596
11597 }

```

`\hfill`

```
11598 \newcommand*\LWR@HTML@hfill{\quad}
11599 \LWR@formatted{hfill}
```

`\hrulefill`

```
11600 \newcommand*\LWR@HTML@hrulefill{\rule{1in}{1pt}}
11601 \LWR@formatted{hrulefill}
```

`\dotfill`

```
11602 \newcommand*\LWR@HTML@dotfill{\dots}
11603 \LWR@formatted{dotfill}
```

`\newpage`

```
11604 \renewcommand*\newpage{
11605
11606 }
```

`\newline` Uses the HTML `<br />` element.

```
11607 \newrobustcmd*\LWR@newlinebr{\unskip\LWR@htmltag{br /}\LWR@originewline}%
11608 \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`.

```
11609 \LetLtxMacro\LWR@origendofline\\
11610 \NewDocumentCommand{\LWR@endofline}{s O{0pt}}
11611 {%
11612 \newline%

11613 \setlength{\LWR@templengthone}{#2}%
11614 \ifdimgreater{\LWR@templengthone}{0pt}{\newline}{}%
11615 }
```

`\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

`\hspace` be on its own line. Since people often place small horizontal space between minipages, `\enskip` it is desirable to maintain this space if possible. `lwarp` tries to do this by remembering `\quad` that a minipage has been seen, in which case paragraph tags are suppressed around `\qqquad` `\hspace`, `\enskip`, `\quad`, and `\qqquad` 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 `\qqquad`'s HTML output.

```
11616 \newcommand*{\LWR@minipagestartpars}{%
11617 \ifbool{LWR@minipagethispar}{\LWR@startpars}{}%
11618 }
```

`\LWR@minipagestoppars` Placed just after `\hspace`, `\quad`, or `\qqquad`'s HTML output.

```
11619 \newcommand*{\LWR@minipagestoppars}{%
11620 \ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%
11621 }
```

`\quad` Handles special minipage & horizontal space interactions. Uses 2003 EM SPACE to pass validation.

```
11622 \renewrobustcmd*{\quad}{%
11623 \LWR@minipagestoppars%
11624 \HTMLUnicode{2003}%
11625 \LWR@minipagestartpars%
11626 }
```

`\qqquad` Handles special minipage & horizontal space interactions.

```
11627 \renewrobustcmd*{\qqquad}{\quad\quad}
```

`\enskip` Handles special minipage & horizontal space interactions.

```
11628 \renewrobustcmd*{\enskip}{%
11629 \LWR@minipagestoppars%
11630 \HTMLUnicode{2002}%
11631 \LWR@minipagestartpars%
11632 }
```

Len `\LWR@tempwidth` Used to compute span width, height, raise for `\hspace` and `\rule`:

Len `\LWR@tempheight`

Len `\LWR@tempraise`

```
11633 \newlength{\LWR@tempwidth}
11634 \newlength{\LWR@tempheight}
11635 \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 `\quad`.

```
11636 \newcommand{\LWR@select@html@hspace}{%
11637 \RenewDocumentCommand{\hspace}{s m}{%
11638 \setlength{\LWR@tempwidth}{##2}%
```

If `\fill`, change to `\quad`:

```
11639 \ifnum\gluestretchorder\LWR@tempwidth>0%
11640 \setlength{\LWR@tempwidth}{2em}%
11641 \fi%
```

Only if the width is greater than zero:

```
11642 \ifdimcomp{\LWR@tempwidth}{>}{0pt}{%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11643 \LWR@minipagestoppars%
```

Support the HTML thin wrappable space:

```
11644 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
11645 {%
11646 \HTMLUnicode{2009}% thin breakable space
11647 }%
```

Print the span with the converted width. Not rounded.

```
11648 {%
11649 \LWR@htmltagc{%
11650 span style="width:\LWR@printlength{\LWR@tempwidth}; % extra space
11651 display:inline-block"%
11652 }%
```

If formatting for a word processor, approximate with a number of `\quads`, in case a span of a given width is not supported:

```
11653 \ifbool{FormatWP}{%
11654 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
11655 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
11656 \quad%
11657 \addtolength{\LWR@templengthone}{-1em}%
11658 }%
11659 }%
```

If NOT formatting for a word processor, include an empty comment to avoid an empty span:

```
11660 {\LWR@htmlcomment{}}%
```

Close the span:

```
11661 \LWR@htmltagc{/span}%
11662 }%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11663 \LWR@minipagestartpars%
11664 }{}% width greater than 0
11665 }%
11666 }
```

```
\LWR@select@html@nohspace *{\langle length\rangle}
\hspace
```

Used to disable \hspace while creating description \items.

```
11667 \newcommand{\LWR@select@html@nohspace}{%
11668 \RenewDocumentCommand{\hspace}{s m}{}%
11669 }
```

```
\LWR@select@print@hspace
```

```
11670 \newcommand*{\LWR@select@print@hspace}{%
11671 \renewrobustcmd\hspace{\@ifstar\@hspace\@hspace}%
11672 }
```

```
\hspace *{\langle length\rangle}
```

Handles special minipage & horizontal space interactions.

```
11673 \LWR@select@html@hspace
```

```
\LWR@vspace *{\langle length\rangle} Nullified vspace.
```

```
11674 \NewDocumentCommand{\LWR@HTML@vspace}{s m}{%
11675
11676 \LWR@formatted{vspace}}
```

```
\linebreak [\langle num\rangle] Inserts an HTML br tag.
```

```
11677 \renewcommand*{\linebreak}[1][\newline]
```

```
\nolinebreak [\langle num\rangle]
```

```
11678 \renewcommand*{\nolinebreak}[1][\newline]
```

`\pagebreak` [*<num>*] Starts a new paragraph.

```
11679 \renewcommand*\pagebreak}[1][{}
11680
11681 }
```

`\nopagebreak` [*<num>*]

```
11682 \renewcommand*\nopagebreak}[1][{}]
```

`\enlargethispage` \* *<len>*

```
11683 \RenewDocumentCommand{\enlargethispage}{s m}{}]
```

`\clearpage`

`\cleardoublepage`

```
11684 \renewcommand*\clearpage{}
11685 \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.

```
11686 \newcommand*\LWR@HTML@rule}[3][{}%
```

The width is copied into a temporary L<sup>A</sup>T<sub>E</sub>X length, from which comparisons and conversions may be made:

```
11687 \setlength{\LWR@tempwidth}{#2}%]
```

If it's zero-width then skip the entire rule:

```
11688 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}%
11689 {}% zero- width
11690 {% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```
11691 \ifthenelse{%
11692 \lengthtest{\LWR@tempwidth>0pt}\AND%
11693 \lengthtest{\LWR@tempwidth<1pt}%
11694 }%
11695 {\setlength{\LWR@tempwidth}{1pt}}%
11696 {}%]
```

Likewise with height:

```

11697 \setlength{\LWR@tempheight}{#3}%
11698 \ifthenelse{%
11699 \lengthtest{\LWR@tempheight>0pt}\AND%
11700 \lengthtest{\LWR@tempheight<1pt}}%
11701 }%
11702 {\setlength{\LWR@tempheight}{1pt}}%
11703 }%

```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```
11704 \LWR@minipagestoppars%
```

Print the span with the converted width and height. The width and height are NOT rounded, since a height of less than 1pt is quite common in L<sup>A</sup>T<sub>E</sub>X code.

```

11705 \LWR@findcurrenttextcolor%
11706 \LWR@htmltagc{%
11707 span\LWR@indentHTML%
11708 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`.

```
11709 \ifbool{FormatWP}{\background:\LWR@currenttextcolor ; }%
```

The width and height are printed, converted to PT:

```

11710 width:\LWR@printlength{\LWR@tempwidth} ; %
11711 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.

```

11712 \ifblank{#1}%
11713 }%
11714 {%
11715 \setlength{\LWR@tempraise}{0pt-#1}%
11716 \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
11717 \LWR@indentHTML%
11718 -ms-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
11719 \LWR@indentHTML%
11720 -webkit-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
11721 \LWR@indentHTML%
11722 transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
11723 \LWR@indentHTML%
11724 }%

```

Display inline-block to place the span inline with the text:

```
11725 display:inline-block;"\LWR@orignewline%
11726 }%
```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```
11727 \ifbool{FormatWP}{%
11728 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
11729 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
11730 _}%
11731 \addtolength{\LWR@templengthone}{-1em}%
11732 }%
11733 }
```

If NOT formatting for a word processor, add a comment to avoid an empty <span>:

```
11734 {\LWR@htmlcomment{}}%
```

Close the span:

```
11735 \LWR@htmltagc{/span}%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
11736 \LWR@minipagestartpars%
11737 }% non-zero width
11738 }
11739
11740 \LWR@formatted{rule}
```

```
11741 \end{warpHTML}
```

## 92 \phantomsection

**for HTML output:** 11742 \begin{warpHTML}

\phantomsection Emulate the [hyperref](#) \phantomsection command, often used to insert the bibliography into the table of contents. Ignores \ForceHTMLTOC.

```
11743 \DeclareDocumentCommand{\phantomsection}{}{}%
11744 \begingroup%
11745 \boolfalse{LWR@forcingshtmltoc}%
11746 \section*{}%
11747 \endgroup%
11748 }
```

```
11749 \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: 11750 \begin{warpall}
11751 \newrobustcmd*{\Xe}
11752 {X\hspace{-.1667em}\raisebox{-.5ex}{E}}
11753
11754 \AtBeginDocument{
11755 \ifpackageloaded{graphics}{
11756 \ifpackageloaded{metalogo}{
11757 \renewrobustcmd*{\Xe}
11758 {X\hspace{-.1667em}\raisebox{-.5ex}{\reflectbox{E}}}
11759 }
11760 }{
11761 \PackageWarningNoLine{lwarp}{Load graphicx or graphics
11762 for improved XeTeX logo}
11763 }
11764 }
11765
11766 \providerobustcmd*{\XeTeX}{\mbox{\Xe\hspace{-.125em}\TeX}}
11767 \providerobustcmd*{\XeLaTeX}{\mbox{\Xe\hspace{-.125em}\LaTeX}}
11768 \providerobustcmd*{\AmS}{%
11769 \leavevmode\hbox{$\mathcal A\kern-.2em\lower.376ex%
11770 \hbox{$\mathcal M$}\kern-.2em\mathcal S$}%
11771 }
11772 \newrobustcmd*{\LyX}{\textsf{LyX}}
11773 \providerobustcmd*{\LuaTeX}{\mbox{Lua\TeX}}
11774 \providerobustcmd*{\LuaLaTeX}{\mbox{Lua\LaTeX}}
11775 \providerobustcmd*{\BibTeX}{\mbox{B\textsc{ib}\TeX}}
11776 \providerobustcmd*{\MakeIndex}{\mbox{\textit{MakeIndex}}}
11777 \providerobustcmd*{\ConTeXt}{\mbox{Con\TeX{t}}}
11778 \providerobustcmd*{\MiKTeX}{\mbox{MiK\TeX}}
11779 \end{warpall}

```

```

for HTML output: 11780 \begin{warpHTML}

```

The print-mode versions of the following may be changed by `metalogo`, so their print formatting is recorded `\AtBeginDocument`.

`\TeX`   `TEX`

`latexlogo` is a CSS class used to properly typeset the E and A in  $\LaTeX$  and friends.

latexlogofont is a css class used to select the font for the rest of the logo in L<sup>A</sup>T<sub>E</sub>X, LuaT<sub>E</sub>X, ConT<sub>E</sub>Xt, etc.

```

11781 \newrobustcmd*{\LWR@HTML@TeX}
11782 {%
11783 \InlineClass{latexlogofont}%
11784 {%
11785 \InlineClass{latexlogo}%
11786 {%
11787 T%
11788 \InlineClass{latexlogosub}{e}%
11789 X%
11790 }%
11791 }%
11792 }
11793 \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

```

11794 \newrobustcmd*{\LWR@HTML@LaTeX}
11795 {%
11796 \InlineClass{latexlogofont}%
11797 {%
11798 \InlineClass{latexlogo}%
11799 {%
11800 L%
11801 \InlineClass{latexlogosup}{a}%
11802 T%
11803 \InlineClass{latexlogosub}{e}%
11804 X%
11805 }%
11806 }%
11807 }
11808
11809 \AtBeginDocument{\LWR@formatted{LaTeX}}% may have been patched by metalogo
11810
11811
11812 \newrobustcmd*{\LWR@HTML@LaTeXe}
11813 {%
11814 \LaTeX%
11815 \InlineClass{latexlogofont}{%
11816 \InlineClass{latexlogotwoe}{%
11817 2%
11818 \InlineClass{latexlogotwoesub}{\HTMLUnicode{03B5}}%
11819 }%
11820 }%
11821 }
11822 \AtBeginDocument{\LWR@formatted{LaTeXe}}% may have been patched by metalogo

```

\LuaTeX LuaT<sub>E</sub>X, LuaL<sup>A</sup>T<sub>E</sub>X  
\LuaLaTeX

```

11823 \newrobustcmd*{\LWR@HTML@LuaTeX}{\InlineClass{latexlogofont}{Lua}\TeX}
11824 \AtBeginDocument{\LWR@formatted{LuaTeX}}% may have been patched by metalogo
11825

```

```
11826 \newrobustcmd*{\LWR@HTML@LuaLaTeX}{\InlineClass{latexlogofont}{Lua}\LaTeX}
11827 \AtBeginDocument{\LWR@formatted{LuaLaTeX}}% may have been patched by metalogo
```

`\XeTeX`  $X\TeX$ ,  $X\LaTeX$   
`\XeLaTeX`

`xetexlogo` is a css class which aligns the backwards E in  $X\TeX$  and spaces  $\TeX$  appropriately.

`xelatexlogo` is a css class which aligns the backwards E in  $X\LaTeX$  and spaces  $\LaTeX$  appropriately.

```
11828 \newrobustcmd*{\LWR@HTML@Xe}
11829 {%
11830 X%
11831 \InlineClass{xelatexlogosub}{\HTMLUnicode{18e}}%
11832 }
11833 \AtBeginDocument{\LWR@formatted{Xe}}% may have been patched by metalogo
11834
11835 \newrobustcmd*{\LWR@HTML@XeTeX}{\InlineClass{xetexlogo}{\Xe}\TeX}
11836 \AtBeginDocument{\LWR@formatted{XeTeX}}% may have been patched by metalogo
11837
11838 \newrobustcmd*{\LWR@HTML@XeLaTeX}{\InlineClass{xelatexlogo}{\Xe}\LaTeX}
11839 \AtBeginDocument{\LWR@formatted{XeLaTeX}}% may have been patched by metalogo
```

`\ConTeXt` `ConTeXt`

```
11840 \newrobustcmd*{\LWR@HTML@ConTeXt}{%
11841 \InlineClass{latexlogofont}{Con}\TeX}%
11842 \InlineClass{latexlogofont}{t}%
11843 }
11844 \LWR@formatted{ConTeXt}
```

`\BibTeX`  $\text{BIB}\TeX$ , *MakeIndex*  
`\MakeIndex`

```
11845 \newrobustcmd*{\LWR@HTML@BibTeX}
11846 {\InlineClass{latexlogofont}{B\textsc{ib}}\TeX}
11847 \LWR@formatted{BibTeX}
11848
11849 \newrobustcmd*{\LWR@HTML@MakeIndex}
11850 {\InlineClass{latexlogofont}{\textit{MakeIndex}}}
11851 \LWR@formatted{MakeIndex}
```

`\AmS`  $\mathcal{AMS}$

`amslogo` is a css class used for the  $\mathcal{AMS}$  logo.

```
11852 \AtBeginDocument{%
11853 \newrobustcmd*{\LWR@HTML@AmS}
11854 {%
11855 \InlineClass{amslogo}{%
11856 \textit{%
11857 A%
11858 \InlineClass{latexlogosub}{M}%

```

```

11859 S%
11860 }%
11861 }%
11862 }%
11863 \LWR@formatted{AmS}
11864 }

```

`\MiKTeX` `MiKTeX`

```

11865 \newrobustcmd*{\LWR@HTML@MiKTeX}{\InlineClass{latexlogofont}{MiK}\TeX}
11866 \LWR@formatted{MiKTeX}

```

`\LyX` `LyX`

`lyxlogo` is a css class used for the LyX logo.

```

11867 \newrobustcmd*{\LWR@HTML@LyX}{\InlineClass{lyxlogo}{LyX}}
11868 \LWR@formatted{LyX}

11869 \end{warpHTML}

```

## 94 `\AtBeginDocument`, `\AtEndDocument`

**for HTML output:** 11870 `\begin{warpHTML}`

`\LWR@LwarpStart` Automatically sets up the HTML-related actions for the start and end of the document.

```

\LWR@LwarpEnd
11871 \AfterEndPreamble{\LWR@LwarpStart}
11872 \AtEndDocument{\LWR@LwarpEnd}

11873 \end{warpHTML}

```

## 95 Loading KOMA-SCRIPT class patches

Load patches to koma-script.

**for HTML output:** 11874 `\begin{warpHTML}`

```

11875 \@ifclassloaded{scrbook}{\RequirePackage{lwarp-patch-komascript}}{}
11876 \@ifclassloaded{scrartcl}{\RequirePackage{lwarp-patch-komascript}}{}
11877 \@ifclassloaded{scrreprt}{\RequirePackage{lwarp-patch-komascript}}{}

11878 \end{warpHTML}

```

## 96 Loading MEMOIR class patches

Load patches to memoir.

```
for HTML output: 11879 \begin{warpHTML}
11880 \@ifclassloaded{memoir}{\RequirePackage{lwarp-patch-memoir}}{}
11881 \end{warpHTML}
```

## 97 ut\* class patches

Load patches to uj\* and ut\* classes, as well as ltj\* classes.

```
for HTML output: 11882 \begin{warpHTML}
11883 \newcommand*{\LWR@patchujtclasses}{
 uj/t does not use \partname
11884 \def\@partnameformat{}
11885 \def\@partcntformat##1{%
11886 \prepartname%
11887 \csname the##1\endcsname%
11888 \postpartname%
11889 \quad%
11890 }
11891 \@ifundefined{chapter}{}{
11892 \def\@chapcntformat##1{%
11893 \prechaptername%
11894 \csname the##1\endcsname%
11895 \postchaptername%
11896 \quad%
11897 }
11898 }
 Use decimal points instead of centered dots:
11899 \renewcommand{\thepart}{\@Roman\c@part}
11900 \@ifundefined{chapter}{
11901 \renewcommand{\thesection}{\@arabic\c@section}
11902 }{
11903 \renewcommand{\thechapter}{\@arabic\c@chapter}
11904 \renewcommand{\thesection}{\thechapter.\@arabic\c@section}
11905 }
11906 \renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}
11907 \renewcommand{\thesubsubsection}{%
11908 \thesubsection.\@arabic\c@subsubsection}
11909 \renewcommand{\theparagraph}{%
```

```

11910 \thesubsubsection.\@arabic\c@paragraph}
11911 \renewcommand{\thesubparagraph}{%
11912 \theparagraph.\@arabic\c@subparagraph}
11913 \ifundefined{chapter}{
11914 \renewcommand{\thefigure}{\@arabic\c@figure}
11915 \renewcommand{\thetable}{\@arabic\c@table}
11916 }{
11917 \renewcommand{\thefigure}{%
11918 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@figure}
11919 \renewcommand{\thetable}{%
11920 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@table}
11921 }
11922 }
11923
11924 \@ifclassloaded{ujarticle}{\LWR@patchujtclasses}{}
11925 \@ifclassloaded{ujbook}{\LWR@patchujtclasses}{}
11926 \@ifclassloaded{ujreport}{\LWR@patchujtclasses}{}
11927 \@ifclassloaded{utarticle}{\LWR@patchujtclasses}{}
11928 \@ifclassloaded{utbook}{\LWR@patchujtclasses}{}
11929 \@ifclassloaded{utreport}{\LWR@patchujtclasses}{}
11930 \@ifclassloaded{ltjarticle}{\LWR@patchujtclasses}{}
11931 \@ifclassloaded{ltjbook}{\LWR@patchujtclasses}{}
11932 \@ifclassloaded{ltjreport}{\LWR@patchujtclasses}{}
11933 \@ifclassloaded{ltjsarticle}{\LWR@patchujtclasses}{}
11934 \@ifclassloaded{ltjsbook}{\LWR@patchujtclasses}{}
11935 \@ifclassloaded{ltjsreport}{\LWR@patchujtclasses}{}
11936 \@ifclassloaded{ltjskiyou}{\LWR@patchujtclasses}{}
11937 \@ifclassloaded{ltjspf}{\LWR@patchujtclasses}{}
11938 \@ifclassloaded{ltjtarticle}{\LWR@patchujtclasses}{}
11939 \@ifclassloaded{ltjtbook}{\LWR@patchujtclasses}{}
11940 \@ifclassloaded{ltjtreport}{\LWR@patchujtclasses}{}

11941 \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:** 11942 \begin{warpHTML}

\AtBeginDocument in case the user set FileSectionNames in the preamble.

```

11943 \AtBeginDocument{
11944 \ifpackageloaded{ctexpatch}{%
11945 \def\@partcntformat#1{%
11946 \LWR@isolate{\CTEX@partname}~%
11947 \CTEX@part@aftername%
11948 }%
11949

```

```

11950 \def\@partnameformat{}
11951
11952 \def\@chapcntformat#1{%
11953 \LWR@isolate{\CTEX@chaptername}~%
11954 \CTEX@chapter@aftername%
11955 }%
11956 }{}
11957 }

11958 \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:** 11959 \begin{warpHTML}

If kotexutf's version of \@setref is detected, it is reverted to the original.

```

11960 \AtBeginDocument{
11961 \ifpackageloaded{kotexutf}{%
11962 \def\LWR@kotexutf@setref#1#2#3{%
11963 \@setref@dhucs@orig{#1}{#2}{#3}%
11964 \ifx#1\relax\else
11965 \bgroup
11966 \dhucs@make@CJKchar@null
11967 \edef\@temp{\expandafter#2#1}\global\josatoks\expandafter{\@temp}%
11968 \egroup
11969 \fi%
11970 }%
11971
11972 \ifdefequal{\@setref}{\LWR@kotexutf@setref}{
11973 \let\@setref\@setref@dhucs@orig
11974 }{}
11975 }{}
11976 }

11977 \end{warpHTML}

```

---

 File 2 **lwarp-2in1.sty**

§ 100 Package **2in1**

Pkg 2in1 2in1 is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{2in1}

---

 File 3 **lwarp-2up.sty**

§ 101 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**

§ 102 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**§ 103 Package **a4wide**

Pkg a4wide a4wide is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a4wide}[1994/08/30]

File 6 **lwarp-a5comb.sty**§ 104 Package **a5comb**

Pkg a5comb a5comb is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a5comb}

File 7 **lwarp-abstract.sty**§ 105 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**

§ 106 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 \begin{group}

```

```

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-accsupp.sty**

§ 107 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]{}

```

---

File 10 **lwarp-acro.sty**

§ 108 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}[2017/01/30]

`\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 \cs_gset_protected:Npn \acro_write_short:nn #1#2
16 {
17 \mode_if_horizontal:F { \leavevmode }
18 \group_begin:
19 \bool_if:NTF \l__acro_custom_format_bool
20 { \l__acro_custom_format_tl }
21 { \l__acro_short_format_tl }
22 {\LWR@textcurrentfont{#2}}% lwarp
23 \group_end:
24 }
25
26 \cs_gset_protected:Npn \acro_write_alt:nn #1#2
27 {
28 \mode_if_horizontal:F { \leavevmode }
29 \group_begin:
30 \bool_if:NTF \l__acro_custom_format_bool
31 { \l__acro_custom_format_tl }
32 { \l__acro_alt_format_tl }
33 {\LWR@textcurrentfont{#2}}% lwarp
34 \group_end:
35 }
36
37 \cs_gset_protected:Npn \acro_write_long:nn #1#2
38 {
39 \mode_if_horizontal:F { \leavevmode }
40 \group_begin:
41 \bool_if:NTF \l__acro_custom_long_format_bool
42 { \l__acro_custom_long_format_tl }
43 { \use:n }
44 {
45 \use:x
46 {
47 \exp_not:n {#1}
48 {
49 \bool_if:NTF \l__acro_first_upper_bool
50 { \exp_not:N \l__acro_first_upper_case:n { \exp_not:n {
51 \LWR@textcurrentfont{#2}}% lwarp
52 } } }
53 { \exp_not:n {\LWR@textcurrentfont{#2}} }% lwarp
54 }
55 }
56 }
57 \group_end:
58 }
59 \ExplSyntaxOff

```

File 11 **lwarp-acronym.sty**

§ 109 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 12 **lwarp-adjmulticol.sty**

§ 110 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 margi>} {<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 13 **lwarp-addlines.sty**§ 111 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 14 **lwarp-afterpage.sty**§ 112 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 15 **lwarp-algorithm2e.sty**§ 113 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@everypar\n\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 16 **lwarp-algorithmicx.sty**

### § 114 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 [488.1](#).

**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 17 **lwarp-alltt.sty**

§ 115 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 18 **lwarp-amsmath.sty**

§ 116 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@remembertag{#1}%
16 \LWR@origmake@df@tag@@@{#1}%
17 }
18
19 }% not mathjax
```

The following  $\mathcal{AMS}$  environments are patched in-place:

`\LWR@amsmathenv@@before`     $\{ \langle environment name \rangle \}$

Embeds the environment inside a `lateximage`.

```
20 \newcommand*\LWR@amsmathenv@@before[1]{%
21 \begin{BlockClass}{displaymathnumbered}
22 \LWR@newautoidanchor%
23 \booltrue{LWR@indisplaymathimage}%
24 \begin{lateximage}[\LWR@amsmathbodynumbered{#1}]*
25 \LWR@applyxfakebold%
26 }
```

`\LWR@amsmathenv@before`     $\{ \langle environment name \rangle \}$

Embeds the environment with `MATHJAX` or a `lateximage`.

```
27 \newcommand*\LWR@amsmathenv@before[1]{%
28 \LWR@stoppars%
29 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
30 {
31 \LWR@syncmathjax
32 \boolfalse{LWR@amsmultline}
33 \ifstrequal{#1}{multline}{\booltrue{LWR@amsmultline}}{}
34 \ifstrequal{#1}{multline*}{\booltrue{LWR@amsmultline}}{}

```



autonom's "+" environments are not supported by `MATHJAX`.

```
35 \LWR@beginhideamsmath
36 }
37 {
38 \LWR@amsmathenv@@before{#1}
39 }
40 }
```

`\LWR@amsmathenv@@after`

Embeds the environment inside a `lateximage`.

```
41 \newcommand*\LWR@amsmathenv@@after{%
42 \end{lateximage}\end{BlockClass}\LWR@startpars%
43 }
```

`\LWR@amsmathenv@after`    `{\langle environment name \rangle}`

Embeds the environment with `MATHJAX` or a `lateximage`.

```
44 \newcommand*\LWR@amsmathenv@after}[1]{%
45 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
46 {
47 \LWR@endhideamsmath
48 \boolfalse\LWR@amsmultline}
49 \LWR@addmathjax{#1}{\the\@envbody}
50 }
51 {\LWR@amsmathenv@@after}
```

Clear the single-use alt text:

```
52 \gdef\LWR@ThisAltText{}%
53 }
```

Env `multline`

```
54 \BeforeBeginEnvironment{multline}{\LWR@amsmathenv@before{multline}}
55
56 \AfterEndEnvironment{multline}{\LWR@amsmathenv@after{multline}}
```

Env `multline*`

```
57 \BeforeBeginEnvironment{multline*}{\LWR@amsmathenv@before{multline*}}
58
59 \AfterEndEnvironment{multline*}{\LWR@amsmathenv@after{multline*}}
60
```

Env `gather`

```
61 \BeforeBeginEnvironment{gather}{\LWR@amsmathenv@before{gather}}
62
63 \AfterEndEnvironment{gather}{\LWR@amsmathenv@after{gather}}
```

Env `gather*`

```
64 \BeforeBeginEnvironment{gather*}{\LWR@amsmathenv@before{gather*}}
65
66 \AfterEndEnvironment{gather*}{\LWR@amsmathenv@after{gather*}}
```

Env `align`

```

67 \BeforeBeginEnvironment{align}{\LWR@amsmathenv@before{align}}
68
69 \AfterEndEnvironment{align}{\LWR@amsmathenv@after{align}}

```

Env `align*`

```

70 \BeforeBeginEnvironment{align*}{\LWR@amsmathenv@before{align*}}
71
72 \AfterEndEnvironment{align*}{\LWR@amsmathenv@after{align*}}

```

Env `flalign`

```

73 \BeforeBeginEnvironment{flalign}{\LWR@amsmathenv@before{flalign}}
74
75 \AfterEndEnvironment{flalign}{\LWR@amsmathenv@after{flalign}}

```

Env `flalign*`

```

76 \BeforeBeginEnvironment{flalign*}{\LWR@amsmathenv@before{flalign*}}
77
78 \AfterEndEnvironment{flalign*}{\LWR@amsmathenv@after{flalign*}}

```

Env `alignat`

```

79 \BeforeBeginEnvironment{alignat}{\LWR@amsmathenv@before{alignat}}
80
81 \AfterEndEnvironment{alignat}{\LWR@amsmathenv@after{alignat}}

```

Env `alignat*`

```

82 \BeforeBeginEnvironment{alignat*}{\LWR@amsmathenv@before{alignat*}}
83
84 \AfterEndEnvironment{alignat*}{\LWR@amsmathenv@after{alignat*}}

```

---

File 19 **lwarp-amsthm.sty**

§ 117 Package **amsthm**

*(Emulates or patches code by PUBLICATIONS TECHNICAL GROUP — AMERICAN MATHEMATICAL SOCIETY.)*

The original source code is located in `amscldotx.dtx`, and printed in `amscldotpdf.pdf`.

Pkg `amsthm` `amsthm` is patched for use by `lwarp`.

**for HTML output:** `amsthm` must be loaded before `mdframed`:

```

1 \@ifpackageloaded{mdframed}{
2 \PackageError{lwarp}
3 {Package mdframed must be loaded after package amsthm}

```

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.

```

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 \csdef{\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\thmheadn\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 \@endpefalse
149 }

```

---

File 20 **lwarp-anonchap.sty**

§ 118 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\@chacntformat##1{%
4 #1~\csname the##1\endcsname\simplechapterdelim\quad%
5 }%
6 }
7
8 \newcommand{\restorechapter}{%
9 \let\@chacntformat\@secCNTformat%

```

---

10 }

---

File 21 **lwarp-anysize.sty**

§ 119 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 22 **lwarp-appendix.sty**

§ 120 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 23 **lwarp-ar.sty**

§ 121 Package **ar**

*(Emulates or patches code by AGOSTINO DE MARCO.)*

Pkg 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}

```

---

File 24 **lwarp-arabicfront.sty**

§ 122 Package **arabicfront**

Pkg arabicfront arabicfront is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{arabicfront}[2006/09/03]

---

File 25 **lwarp-array.sty**

§ 123 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}

```

File 26 **lwarp-arydshln.sty**

§ 124 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 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 \newcolumnntype{:}{|}%
21 \newcolumnntype{;}[1]{|}%
22 \LetLtxMacro\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 % \ifadl@zwhrule \vskip-\arrayrulewidth \fi
46 % \hrule \@height\arrayrulewidth
47 % \futurelet\@tempa\adl@xhline}
48 \def\adl@xhline{\ifx\@tempa\hline \adl@ixhline\fi
49 % \ifx\@tempa\hdashline \adl@ixhline\fi
50 % \ifnum0='{ \fi}}
51 \def\adl@ixhline{\vskip\doublerulessep \adl@hline\relax\doublerulessep}
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}\cline{#1-#2}}

```

File 27 **lwarp-asymptote.sty**

§ 125 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 28 **lwarp-atbegshi.sty**§ 126 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 29 **lwarp-attachfile.sty**§ 127 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 30 **lwarp-attachfile2.sty**

§ 128 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 31 **lwarp-authblk.sty**

§ 129 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 32 **lwarp-autonum.sty**

§ 130 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
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 33 **lwarp-axessibility.sty**

§ 131 Package **axessibility**

Pkg axessibility axessibility is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{axessibility}
2 \newcommand{\wrap}[1]{}

```

---

File 34 **lwarp-axodraw2.sty**

§ 132 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 35 **lwarp-backnaur.sty**

§ 133 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 36 **lwarp-backref.sty**

§ 134 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]

```

Force the hyperref option:

```

2 \def\backref{\let\backrefxxx\hyper@section@backref}

```

---

File 37 **lwarp-balance.sty**

§ 135 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 38 **lwarp-bbding.sty**

§ 136 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 39 **lwarp-biblatex.sty**

§ 137 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 chapterlistsgaps option may no longer work.

```
1 \ifdef{\newfloat@addtocontents@ORI}{
2 \let\addtocontents\newfloat@addtocontents@ORI
3 }{}

4 \LWR@ProvidesPackagePass{biblatex}[2018/03/04]
```

---

File 40 **lwarp-bibunits.sty**

§ 138 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 41 **lwarp-bigdelim.sty**

§ 139 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}

```

---



---

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}

```

---

File 42 **lwarp-bigfoot.sty**

§ 140 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\vtypefraction{0.7}
12 \def\FootnoteMinimum{1sp}
13 \def\FootnoteMainMinimum{0pt}
14 \newcount\bigfoottolerance
15 \bigfoottolerance=100
16 \providecommand\footnotecarryratio{2}

```

---

File 43 **lwarp-bigstrut.sty**

§ 141 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 }

```

---

File 44 **lwarp-bitpattern.sty**

§ 142 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 45 **lwarp-blowup.sty**

§ 143 Package **blowup**

Pkg blowup **blowup** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{blowup}[2018/01/02]

2 \newcommand*\blowUp[1]{}

```

---

File 46 **lwarp-booklet.sty**

§ 144 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 47 **lwarp-bookmark.sty**

§ 145 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]{}
5 \newcommand*\bookmarkdefinestyle[2]{}
6 \newcommand*\bookmarkget[1]{}
7 \newcommand*\BookmarkAtEnd[1]{}

```

---

File 48 **lwarp-booktabs.sty**

§ 146 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 `lateximage`.

**for HTML output:** First, forget the placeholder macros:

```
1 \LetLtxMacro\toprule\relax
2 \LetLtxMacro\midrule\relax
3 \LetLtxMacro\cmidrule\cline
4 \LetLtxMacro\bottomrule\relax
5 \LetLtxMacro\addlinespace\relax
6 \LetLtxMacro\morecmidrules\relax
7 \LetLtxMacro\specialrule\relax
8
9 \LWR@ProvidesPackagePass{booktabs}[2016/04/27]

10 \DeclareDocumentCommand{\LWR@HTML@toprule}{o d()}%
11 {%
12 \IfValueTF{#1}%
13 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}%
14 {%
15 \ifbool{FormatWP}%
16 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}%
17 {\global\booltrue{LWR@doingtbrule}}%
18 }%
19 \LWR@getmynexttoken}
20
21 \LWR@expandableformatted{toprule}
22
23 \DeclareDocumentCommand{\LWR@HTML@midrule}{o d()}%
24 {%
25 \IfValueTF{#1}%
26 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}%
27 {%
28 \ifbool{FormatWP}%

```

```

29 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
30 {\addtocounter{LWR@hlines}{1}}}%
31 }%
32 \LWR@getmynexttoken}
33
34 \LWR@expandableformatted{midrule}
35
36 \DeclareDocumentCommand{\LWR@HTML@cmidrule}{O{\LWR@cmidrulewidth} d() m}{%
37 \LWR@docmidrule[#1](#2){#3}%
38 \LWR@getmynexttoken%
39 }%
40
41 \LWR@expandableformatted{cmidrule}
42
43 \DeclareDocumentCommand{\LWR@HTML@bottomrule}{o d()}{%
44 \IfValueTF{#1}%
45 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
46 {%
47 \ifbool{FormatWP}%
48 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
49 {\global\booltrue{LWR@doingtbrule}}}%
50 }%
51 \LWR@getmynexttoken%
52 }%
53
54 \LWR@expandableformatted{bottomrule}
55
56 \DeclareDocumentCommand{\LWR@HTML@addlinespace}{o}{}%
57
58 \LWR@expandableformatted{addlinespace}
59
60 \DeclareDocumentCommand{\LWR@HTML@morecmidrules}{}{}%
61
62 \LWR@expandableformatted{morecmidrules}
63
64 \DeclareDocumentCommand{\LWR@HTML@specialrule}{m m m d()}%
65 {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}\LWR@getmynexttoken}%
66
67 \LWR@expandableformatted{specialrule}

```

---

File 49 **lwarp-bophook.sty**

§ 147 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 50 **lwarp-bounddvi.sty**

§ 148 Package **bounddvi**

Pkg bounddvi bounddvi is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{bounddvi}[2016/12/28]

File 51 **lwarp-boxedminipage2e.sty**

§ 149 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 52 **lwarp-breakurl.sty**

§ 150 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\bur\url
3
4 \NewDocumentCommand{\LWR@bur\altb}{O{} +m m}{%
```

```

5 \LWR@ensuredoingapar%
6 \LWR@subhyperref{#2}%
7 \LWR@subhyperref{#3}%
8 \endgroup% restore catcodes
9 }
10
11 \newrobustcmd*{\burlalt}{%
12 \begingroup%
13 \catcode'\#=12%
14 \catcode'\%=12%
15 \catcode'\&=12%
16 \catcode'\~=12%
17 \catcode'_ =12%
18 \LWR@burlaltp%
19 }
20
21 \LetLtxMacro\burlalt\burlalt

```

---

File 53 **lwarp-breqn.sty**

§ 151 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.

 **MATHJAX** MathJax does not support **breqn**.

**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 54 **lwarp-bsheaders.sty**

§ 152 Package **bsheaders**

Pkg bsheaders bsheaders is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{bsheaders}[1997/10/06]

---

File 55 **lwarp-bxpapersize.sty**

§ 153 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 56 **lwarp-bytefield.sty**

§ 154 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 57 **lwarp-cancel.sty**

§ 155 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 \ifcseempty{#2}%
14 {\InlineClass{#5}{#3}{#1}}%
15 {\LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}}%
16 }

```

`\cancel`     $\langle text \rangle$

```

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 58 **lwarp-canonicalayout.sty**

§ 156    Package **canonicalayout**

Pkg canonicalayout canonicalayout is ignored.

**for HTML output:** s1 \LWR@ProvidesPackageDrop{canonicalayout}[2011/11/05]

```

2 \newcommand*{\currentfontletters}{}
3 \newcommand*{\charactersperpage}{}

```

File 59 **lwarp-caption.sty**§ 157 Package **caption***(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg caption caption is patched for use by lwarp.

```

for HTML output: 1 \LWR@ProvidesPackagePass{caption}[2019/09/01]

2 \renewcommand\caption@ibox[3]{%
3 \@testopt{\caption@iibox{#1}{#2}{#3}}{%
4 \wd\@tempboxa%
5 \linewidth% lwarp
6 }%
7 \LWR@traceinfo{caption@ibox: done}%
8 }

9 \long\def\caption@iibox#1#2#3[#4]{%
10 \@testopt{\caption@iibox{#1}{#2}{#3}{#4}}\captionbox@hj@default
11 }

12 \long\def\caption@iibox#1#2#3#4[#5]#6{%
13 % \setbox\@tempboxa\hbox{#6}%
14 \begingroup
15 #1*% set \caption@position
16 \caption@iftop{%
17 \LWR@traceinfo{caption@iibox top}%
18 \endgroup
19 \parbox[t]{#4}{%
20 #1\relax
21 \caption@setposition t%
22 \vbox{\caption#2{#3}}%
23 {\caption#2{#3}}% lwarp
24 \captionbox@hrule
25 \csname caption@hj@#5\endcsname
26 \unhbox\@tempboxa
27 #6% lwarp
28 }%
29 }{%
30 \LWR@traceinfo{caption@iibox bottom}%
31 \endgroup
32 \parbox[b]{#4}{%
33 #1\relax
34 \caption@setposition b%
35 \csname caption@hj@#5\endcsname
36 \unhbox\@tempboxa
37 #6% lwarp
38 \captionbox@hrule
39 \vtop{\caption#2{#3}}%
40 {\caption#2{#3}}% lwarp

```

```

41 }%
42 }%
43 \LWR@traceinfo{caption@iiibox: done}%
44 }
45
46 % \def\caption@caption{%
47 % \caption@iftype
48 % {%
49 % \caption@checkgrouplevel\@empty\caption
50 % \caption@star
51 % {\caption@refstepcounter\@capttype}%
52 % {\caption@dblarg{\@caption\@capttype}}}%
53 % {\caption@Error{\noexpand\caption outside float}%
54 % \caption@gobble}%
55 % }
56
57 \long\def\caption@@caption#1[#2]#3{%

58 \ifcaption@star
59 \else
60 \caption@prepareanchor{#1}{#2}%
61 \memcaptioninfo{#1}{\csname the#1\endcsname}{#2}{#3}%
62 \@nameuse{nag@hascaptiontrue}%
63 \fi

64 \par
65 \caption@beginex{#1}{#2}{#3}%
66 \caption@setfloatcapt{%
67 \caption@boxrestore
68 \if@minipage
69 \@setminipage
70 \fi
71 \caption@normalsize

72 \ifcaption@star
73 \let\caption@makeanchor\@firstofone
74 #3% lwarp
75 \else% lwarp
76 \@makecaption{\csname fnum@#1\endcsname}%
77 {\ignorespaces\caption@makeanchor{#3}}%
78 \fi% lwarp

79 % \par
80 \caption@if@minipage\@minipagetrue\@minipagefalse}%
81 \caption@end%
82 }

\caption@@@make {<caption label>} {<caption text>}

83 \renewcommand\caption@@@make[2]{%
84 \LWR@traceinfo{caption@@@make}%
85 % \sbox\@tempboxa{#1}%
86 % \ifdim\wd\@tempboxa=\z@

```

```

87 % \let\caption@lsep\relax
88 % \fi
89 \caption@ifempty{#2}{%
90 \let\caption@lsep\@empty
91 \let\caption@tfmt\@firstofone
92 }%
93 \caption@applyfont

```

\caption@fmt with plain format is defined as {#1#2#3\par}:

```

94 % \caption@fmt
95 {\ifcaption@star\else
96 \begingroup
97 \captionlabelfont
98 #1%
99 \endgroup
100 \fi}%
101 {\ifcaption@star\else
102 \begingroup
103 \caption@iflf\captionlabelfont
104 \relax
105 \caption@lsep
106 \endgroup
107 \fi}%
108 {%
109 \captiontextfont
110 % \caption@ifstrut
111 % {\vrule\@height\ht\strutbox\@width\z}%
112 % {}%
113 % \nobreak\hskip\z@skip % enable hyphenation
114 \caption@tfmt{#2}%
115 % \caption@ifstrut
116 % {\ifhmode\@finalstrut\strutbox\fi}%
117 % {}%
118 }}%
119 \LWR@traceinfo{caption@@@make done}%
120 }

```

\caption@@make@ {<>} {<>}

```

121 \renewcommand{\caption@@make@}[2]{%
122 \caption@stepthecounter
123 \caption@beginhook
124 \caption@@make{#1}{#2}%
125 \caption@endhook
126 }

```

\caption@makecaption

```

127 \long\def\caption@makecaption#1#2{%
128 % \caption@iftop
129 % {\vskip\belowcaptionskip}%
130 % {\caption@rule\vskip\abovecaptionskip}%
131 \caption@@make{#1}{#2}%
132 % \caption@iftop
133 % {\vskip\abovecaptionskip\caption@rule}%

```

```

134 % {\vskip\belowcaptionskip}%
135 }

136 % \DeclareCaptionBox{none}{#2}
137 \DeclareCaptionBox{parbox}{%
138 #2%
139 }
140 \DeclareCaptionBox{colorbox}{%
141 #2%
142 }

```

---

File 60 **lwarp-cases.sty**

§ 158 Package **cases**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg cases **cases** is patched for use by **lwarp**.

 **MATHJAX** MathJax does not support **cases**.

**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 61 **lwarp-changebar.sty**

§ 159 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*\cbccolor}[1]{}
8 \newlength\changebarwidth
9 \newlength\deletebarwidth
10 \newlength\changebarsep
11 \newcounter{changebargrey}

```

---

File 62 **lwarp-changelayout.sty**

§ 160 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{%
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 63 **lwarp-changepage.sty**§ 161 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 64 **lwarp-changes.sty**§ 162 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 65 **lwarp-chappg.sty**

§ 163 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 66 **lwarp-chapterbib.sty**

§ 164 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 67 **lwarp-chemfig.sty**

§ 165 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 68 **lwarp-chemformula.sty**

§ 166 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}[2017/03/23]

2 \ExplSyntaxOn

`\ch` Enclose in an inline SVG image or MathJax. The `alt` tag is the contents of the `\ch` expression. The filename is hashed, and also has additional hashing information based on the local options.

```

3 \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 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
24 {
25 \begingroup%
26 \boolfalse{mathjax}%
27 \LWR@subsingledollar*{% lwarp
28 \textbackslash}chcpd{\LWR@HTMLsanitize{#2}\}%
29 }{%
30 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
31 }{% original
32 \group_begin:
33 \tl_if_blank:nF {#2}
34 {
35 \keys_set:nn {chemformula} {#1}
36 __chemformula_save_catcodes:
37 __chemformula_sanitize:Nn
38 \l__chemformula_chemformula_tmpa_tl
39 {#2}
40 __chemformula_input_compound_no_check:Nv
41 \l__chemformula_compound_tl
42 \l__chemformula_chemformula_tmpa_tl
43 __chemformula_prepare_output:N \l__chemformula_compound_tl
44 \chemformula_write:V \l__chemformula_compound_tl
45 }
46 \group_end:
47 }
48 \endgroup
49 }

```

`\charrow` If standalone, appears in a regular `lateximage`.

```
50 \RenewDocumentCommand \charrow { mO{}O{} }
51 {
52 \begin{lateximage}[-chemformula- charrow]
53 \group_begin:
54 __chemformula_draw_arrow:nnn {#1} {#2} {#3}
55 \group_end:
56 \end{lateximage}
57 }
```

`\chname` If standalone, appears in a regular `lateximage`, hashed according to contents.

```
58 \RenewDocumentCommand \chname { R(){}R(){} }
59 {
60 \begin{lateximage}*[%
61 \textbackslash{}chname(\LWR@HTMLsanitize{#1})(\LWR@HTMLsanitize{#2})
62]*%
63 \chemformula_chwritebelow:nn {#1} {#2}
64 \end{lateximage}
65 }
```

`\chlewis` Placed inline, hashed according to contents and options.

```
66 \RenewDocumentCommand \chlewis { O{}mm }
67 {
68 \begingroup%
69 \boolfalse{mathjax}%
70 \LWR@subsingledollar*{\textbackslash{}chlewis\{#2\}\{#3\}}%
71 {
72 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
73 }{
74 \chemformula_lewis:nnn {#1} {#2} {#3}
75 }
76 \endgroup%
77 }
```

`lwarp` redefines the `$` character, so special handling is required to escape math expressions inside `\ch`.

This boolean tracks a new kind of escaped math:

```
78 \bool_new:N __chemformula_first_last_LWRdollar_bool
```

`\chemformula_input_escape_math`

Adds additional escaping for the new dollar definition:

```
79 \cs_gset_protected:Npn __chemformula_input_escape_math:n #1
80 {
81 __chemformula_first_last_math:n {#1}
82 \bool_if:NT __chemformula_first_last_dollar_bool
83 {
```

```

84 \bool_set_true:N \l__chemformula_first_last_math_bool
85 __chemformula_read_escape_dollar:w #1 \q_nil
86 }
87 \bool_if:NT \l__chemformula_first_last_mathbraces_bool
88 {
89 \bool_set_true:N \l__chemformula_first_last_math_bool
90 __chemformula_read_escape_mathbraces:w #1 \q_nil
91 }

```

Added by lwarp:

```

92 \bool_if:NT \l__chemformula_first_last_LWRdollar_bool% lwarp
93 {
94 \bool_set_true:N \l__chemformula_first_last_math_bool% lwarp
95 __chemformula_read_escape_LWRdollar:w #1 \q_nil% lwarp
96 }
97 }

```

\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.

```

98 \begingroup
99 \catcode'\$=\active
100
101 \cs_new_protected:Npn __chemformula_read_escape_LWRdollar:w $#1$ \q_nil
102 {
103 __chemformula_read_escape_math:n {#1}
104 }
105
106 \endgroup

```

\chemformula\_bool\_set\_if\_first\_last

The following looks at the first and last tokens for delimiters to escape math inside  $\backslash ch$ . The original definition is modified to look for the control sequences which are used by the new meaning of  $\$$ .

```

107 \cs_new_protected:Npn __chemformula_bool_cs_set_if_first_last:NnNN #1#2#3#4
108 {
109 \int_zero:N \l__chemformula_tmpa_int
110 \int_zero:N \l__chemformula_tmpb_int
111 \int_set:Nn \l__chemformula_tmpa_int { \tl_count:n {#2} }
112 \tl_map_inline:nn {#2}
113 {
114 \int_incr:N \l__chemformula_tmpb_int
115 \int_compare:nT { \l__chemformula_tmpb_int = 1 }
116 {

```

At the start, the `cs_` version compares control sequences:

```

117 \ifdefstrequal{##1}{#3}% lwarp

```

```

118 {
119 \bool_set_true:N #1
120 }% lwarp
121 {}
122 }

```

At the end, compare more control sequences:

```

123 \int_compare:nT { \l__chemformula_tmpb_int = \l__chemformula_tmpa_int }
124 {
125 \ifdefstrequal{##1}{#4}
126 {}
127 {
128 \bool_set_false:N #1
129 }
130 }
131 }
132 }

```

\chemformula\_first\_last\_math

Modified to check for the new meaning of \$ at first/last:

```

133 \cs_gset_protected:Npn \l__chemformula_first_last_math:n #1
134 {
135 \bool_set_false:N \l__chemformula_first_last_math_bool
136 \bool_set_false:N \l__chemformula_first_last_dollar_bool
137 \bool_set_false:N \l__chemformula_first_last_LWRdollar_bool% lwarp
138 \bool_set_false:N \l__chemformula_first_last_mathbraces_bool
139 __chemformula_bool_set_if_first_last:Nnnn
140 \l__chemformula_first_last_dollar_bool
141 {#1}
142 { $ } { $ }
143 \bool_if:NF \l__chemformula_first_last_dollar_bool
144 {
145 __chemformula_bool_set_if_first_last:Nnnn
146 \l__chemformula_first_last_mathbraces_bool
147 {#1}
148 { \ () { \) }

```

Added by lwarp:

```

149 \bool_if:NF \l__chemformula_first_last_mathbraces_bool% lwarp
150 {
151 __chemformula_bool_cs_set_if_first_last:Nnnn
152 \l__chemformula_first_last_LWRdollar_bool
153 {#1}
154 { \LWR@newsingledollar } { \LWR@newsingledollar }
155 }% lwarp
156 }
157 }

```

158 \ExplSyntaxOff

File 69 **lwarp-chemgreek.sty**§ 167 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 70 **lwarp-chemmacros.sty**§ 168 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.

### § 168.1 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}
```

### § 168.2 Code

### § 168.3 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
```

### § 168.4 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
```

### § 168.5 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 {0{}}
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

```

## § 168.6 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

```

## § 168.7 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 { O{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

```

## § 168.8 Particles

```

244 \AtBeginDocument{
245 \@ifchemmacrosmoduleloaded{particles}{
246 \PackageInfo{lwarp}{Patching~chemmacros~module~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

```

## § 168.9 Phases

```

278 \AtBeginDocument{
279 \@ifchemmacrosmoduleloaded{phases}{
280 \PackageInfo{lwarp}{Patching~chemmacros~module~phases}
281
282 \cs_undefine:N \chemmacros_phase:n
283 \cs_new_protected:Npn \chemmacros_phase:n #1
284 {
285 \chemmacros_leave_vmode:
286 \bool_if:NTF \l__chemmacros_phases_sub_bool
287 {
288 \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

```

## § 168.10 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

```

### § 168.11 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

```

### § 168.12 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

```

### § 168.13 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 \ifdefvoid{\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

```

#### § 168.14 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

```

### § 168.15 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

```

### § 168.16 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
649 \AfterEndPreamble{% After \AtBeginDocument
650 % \NMR{<num>,<elem>}<num>,<unit>}[<solvent>] ALL arguments are optional
651 % \NMR* same but without ": δ" at end
652 \cs_gset_protected:Npn \chemmacros_nmr:nnnn #1#2#3#4
653 {
654 \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
655 \group_begin:
656 \chemmacros_leave_vmode:
657 \bool_set_false:N \l__chemmacros_nmr_frequency_bool
658 \bool_set_false:N \l__chemmacros_nmr_solvent_bool
659 \tl_if_empty:nF {#3}
660 { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
661 \tl_if_empty:nF {#4}
662 { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
663 \bool_if:nT
664 {
665 \l__chemmacros_nmr_frequency_bool
666 ||
667 \l__chemmacros_nmr_solvent_bool
668 }
669 { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
670 \bool_if:nT
671 {
672 \l__chemmacros_nmr_frequency_bool
673 &&
674 \l__chemmacros_nmr_solvent_bool
675 }
676 { \bool_set_true:N \l__chemmacros_nmr_comma_bool }
677 \tl_if_empty:nTF {#2}
678 {
679 __chemmacros_nmr_nucleus:VV
680 \l__chemmacros_nmr_isotope_default_tl
681 \l__chemmacros_nmr_element_default_tl
682 }
683 { __chemmacros_nmr_nucleus:w #2 \q_stop }

```

```

684 \mode_if_math:TF
685 {
686 \text
687 {
688 \group_begin:
689 \tl_use:N \l__chemmacros_nmr_format_tl
690 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
691 __chemmacros_nmr_base:VV
692 \g__chemmacros_nmr_isotope_tl
693 \g__chemmacros_nmr_element_tl
694 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
695 { ~ (}
696 \bool_if:NT \l__chemmacros_nmr_frequency_bool
697 { __chemmacros_nmr_frequency:n {#3} }
698 \bool_if:NT \l__chemmacros_nmr_comma_bool
699 { , ~ }
700 \bool_if:NT \l__chemmacros_nmr_solvent_bool
701 { \chemmacros_chemformula:n {#4} }
702 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
703 {) }
704 \tl_if_blank:nT {#1} {::~}
705 }}% lwarp
706 \group_end:
707 }
708 \tl_if_blank:nT {#1}
709 {
710 \delta
711 \text { \l__chemmacros_nmr_delta_tl }
712 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {=}
713 }
714 }
715 {
716 \group_begin:
717 \tl_use:N \l__chemmacros_nmr_format_tl
718 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
719 __chemmacros_nmr_base:VV
720 \g__chemmacros_nmr_isotope_tl
721 \g__chemmacros_nmr_element_tl
722 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
723 {~()}
724 \bool_if:NT \l__chemmacros_nmr_frequency_bool
725 { __chemmacros_nmr_frequency:n {#3} }
726 \bool_if:NT \l__chemmacros_nmr_comma_bool
727 {,~}
728 \bool_if:NT \l__chemmacros_nmr_solvent_bool
729 {
730 \bool_if:NTF \l__chemmacros_nmr_parse_bool

731 % { \chemformula_ch:nn { } {#4} }% original
732 {\ch{#4}}% lwarp
733 {#4}
734 }
735 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
736 {}}
737 }}% lwarp

```

```

738 \tl_if_blank:nT {#1} {:}
739 \group_end:
740 \tl_if_blank:nT {#1}
741 {
742 \tl_use:N \c_space_tl
743 \c_math_toggle_token
744 \delta
745 \c_math_toggle_token
746 \l__chemmacros_nmr_delta_tl
747 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {~=}
748 }
749 }
750 \group_end:
751 }
752]% AfterEndPreamble
753
754
755 \RenewDocumentCommand \chemmacros_data:w { smo }
756 {
757 \bool_if:NT \l__chemmacros_nmr_list_bool { \item }
758 {
759 % \tl_use:N \l__chemmacros_nmr_format_tl #2
760 \tl_use:N \l__chemmacros_nmr_format_tl
761 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
762 #2
763 \IfNoValueF {#3} { ~ (#3) }
764 \IfBooleanT {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { : } }
765 }}% lwarp
766 }
767 \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
768 }
769
770]{}% \@ifchemmacrosmoduleloaded
771]% AtBeginDocument

```

## § 168.17 Thermodynamics

```

772 \AtBeginDocument{
773 \@ifchemmacrosmoduleloaded{thermodynamics}{
774 \PackageInfo{lwarp}{Patching~chemmacros~module~thermodynamics}
775
776 \cs_gset_protected:Npn \chemmacros_state:nn #1#2
777 {
778 \group_begin:
779 \boolfalse{mathjax}
780 \chemmacros_set_keys:nn {thermodynamics} {#1}
781 \LWR@subsingledollar*{% yes hashing
782 \textbackslash{}state\{\LWR@HTMLsanitize{#2}\}% alt
783 }{%
784 chemmacros_state% add'l hashing
785 #1% options
786 LSP \tl_use:N \l__chemmacros_state_sp_left_tl% super/subscripts
787 LSB \tl_use:N \l__chemmacros_state_sb_left_tl
788 RSP \tl_use:N \l__chemmacros_state_sp_right_tl
789 RSB \tl_use:N \l__chemmacros_state_sb_right_tl
790 }

```

```

791 {
792 \LWR@origensuredmath{
793 \chemmacros_text:V \l__chemmacros_state_pre_tl
794 \c_math_superscript_token
795 { \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*.

```

796 \tl_if_empty:NTF \l__chemmacros_state_sb_left_tl
797 {}
798 {
799 \c_math_subscript_token
800 { \chemmacros_text:V \l__chemmacros_state_sb_left_tl }
801 }
802 #2
803 \c_math_superscript_token
804 { \chemmacros_text:V \l__chemmacros_state_sp_right_tl }
805 \tl_if_empty:NTF \l__chemmacros_state_sb_right_tl
806 {}
807 {
808 \c_math_subscript_token
809 { \chemmacros_text:V \l__chemmacros_state_sb_right_tl }
810 }
811 \chemmacros_text:V \l__chemmacros_state_post_tl
812 }
813 }
814 \group_end:
815 }
816 \cs_generate_variant:Nn \chemmacros_state:nn { nV }
817
818 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
819 {
820 \chemmacros_define_keys:xn
821 {thermodynamics/\chemmacros_remove_backslash:N #1}
822 {
823 pre .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
824 post .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
825 superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
826 superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,
827 superscript .meta:n = { superscript-right = ##1 } ,
828 subscript-left .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
829 subscript-right .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
830 subscript .meta:n = { subscript-left = ##1 } ,
831 subscript-pos .choices:nn =
832 { left , right }
833 { \tl_set_eq:NN \l__chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
834 symbol .tl_set:N = \l__chemmacros_state_symbol_tl ,
835 unit .tl_set:N = \l__chemmacros_state_unit_tl
836 }
837 \DeclareDocumentCommand #1 { s0{}D(){}m }
838 {
839 \group_begin:
840 \chemmacros_set_keys:xn
841 {thermodynamics/\chemmacros_remove_backslash:N #1}

```

```

842 {#2}
843 \tl_if_blank:nF {##3}
844 {
845 \chemmacros_set_keys:nx {thermodynamics}
846 { subscript-\l__chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
847 }
848 \chemmacros_state:nV {##2} \l__chemmacros_state_symbol_tl
849 \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
850 \IfBooleanF {##1} { = ~ \SI {##4} { \l__chemmacros_state_unit_tl } }
851 \group_end:
852 }
853 }

```

The pre-existing macros are redefined with the new definition:

```

854 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
855 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
856 \RenewChemState \gibbs { symbol = G , unit = \kilo\joule\per\mole }
857
858 }{}% \ifchemmacrosmoduleloaded
859 }% AtBeginDocument

860 \ExplSyntaxOff

```

---

## File 71 **lwarp-chemnum.sty**

### § 169 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 72 **lwarp-chkfloat.sty**

§ 170 Package **chkfloat**

Pkg chkfloat chkfloat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]

---

File 73 **lwarp-chngpage.sty**

§ 171 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-changepage}

```

---

File 74 **lwarp-cite.sty**

§ 172 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 75 **lwarp-CJK.sty**

§ 173 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 76 **lwarp-CJKutf8.sty**

§ 174 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 77 **lwarp-clrdblpg.sty**

§ 175 Package **clrdblpg**

Pkg clrdblpg clrdblpg is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{clrdblpg}[2018/04/21]

```

File 78 **lwarp-cmdtrack.sty**§ 176 Package **cmdtrack**

Pkg cmdtrack cmdtrack is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]

2 \newcommand{\untrack}[1]{}  


---

File 79 **lwarp-color.sty**§ 177 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 80 **lwarp-colortbl.sty**§ 178 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}
```

The version for use inside a tabular.

```
36 \newcommand{\LWR@HTML@doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
37
38 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolornexttoken}}
```

---

File 81 **lwarp-continue.sty**

§ 179 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 82 **lwarp-copyrightbox.sty**

§ 180 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 83 **lwarp-crop.sty**

§ 181 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 84 **lwarp-ctable.sty**

§ 182 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 \@df\CTdoinside
16 \let\@CTbgopacity \@df\CTbgopacity
17 \@CTframerule \@df\CTframerule
18 \@CTcaptionskip \@df\CTcaptionskip
19 \@CTframesep \@df\CTframesep
20 \@CTwidth \@df\CTwidth
21 \@CTmaxwidth \@df\CTmaxwidth
22 \@CTmincapwidth \@df\CTmincapwidth
23 \@CTfooterwidth \@df\CTfooterwidth
24 \def\@CTfgactual {\@df\CTframefg}%
25 \def\@CTbgactual {\@df\CTframebg}%
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{\@CTaborfig}{-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}[%
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 85 **lwarp-cuted.sty**

§ 183 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 86 **lwarp-cutwin.sty**

§ 184 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 87 **lwarp-dblfloatfix.sty**

§ 185 Package **dblfloatfix**

Pkg dbfloatfix dbfloatfix is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{dblfloatfix}[2012/12/31]

---

File 88 **lwarp-dblfnote.sty**

§ 186 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 89 **lwarp-dcolumn.sty**

§ 187 Package **dcolumn**

Pkg dcolumn dcolumn is emulated by the lwarp core.

1 \LWR@ProvidesPackageDrop{dcolumn}[2014/10/28]

File 90 **lwarp-diagbox.sty**

§ 188 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 {<E/W>} {<A>} {<E/W>} {}
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 {<A>} {}
17 \newcommand{\LWR@diagboxNW}[2]{%
18 \LWR@diagbox@AB{E}{#2}{W}{#1}%
19 }
```

Likewise for NE, SW, SE:

```
20 \newcommand{\LWR@diagboxNE}[2]{%
21 \LWR@diagbox@AB{W}{#1}{E}{#2}%
22 }
23
24 \let\LWR@diagboxSW\LWR@diagboxNE
25 \let\LWR@diagboxSE\LWR@diagboxNW
```

```
\diagbox@double {<keys>} {<A>} {}
26 \def\diagbox@double#1#2#3{%
27 \setkeys{diagbox}{dir=NW,#1}%
```

```
28 \@nameuse{LWR@diagbox\diagbox@dir}{#2}{#3}%
29 }
```

```
\LWR@diagboxTNW {<title>} {<A>} {}
```

```
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 {<keys>} {<A>} {<T>} {}
```

```
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 91 **lwarp-dingbat.sty**

§ 189 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 92 **lwarp-dprogress.sty**

§ 190 Package **dprogress**

Pkg dprogress dprogress is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]

---

File 93 **lwarp-draftcopy.sty**

§ 191 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 94 **lwarp-draftfigure.sty**

§ 192 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 95 **lwarp-draftwatermark.sty**

§ 193 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 96 **lwarp-easy-todo.sty**

§ 194 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 }
```

\todoui Modified to use \textcolor instead of \color.

```
10 \renewcommand{\todoui}[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 97 **lwarp-ebook.sty**

§ 195 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 98 **lwarp-ed.sty**

§ 196 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. todoclist 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 99 **lwarp-ellipsis.sty**§ 197 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 100 **lwarp-embrac.sty**§ 198 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 \ifxetexorluatex
12 \LetLtxMacro\LWR@orig@HTML@textsi\LWR@HTML@textsi
13 \RenewDocumentCommand{\LWR@HTML@textsi}{s m}{%
14 \LWR@orig@HTML@textsi{#2}}
15 \fi
16
17 \AtBeginDocument{
18 \LWR@formatted{emph}
19 \LWR@formatted{textit}
20 \LWR@formatted{textsl}
21 \ifxetexorluatex
22 \LWR@formatted{textsi}
23 \fi
24 }
25

```

```

26 \newcommand{\LWR@HTML@EmbracOff}{}
27 \LWR@formatted{EmbracOff}
28
29 \newcommand{\LWR@HTML@EmbracOn}{}
30 \LWR@formatted{EmbracOn}

```

---

File 101 **lwarp-emptypage.sty**

§ 199 Package **emptypage**

Pkg emptypage emptypage is ignored.

**for HTML output:** Discard all options for lwarp-emptypage:

```
1 \LWR@ProvidesPackageDrop{emptypage}[2010/05/30]
```

---

File 102 **lwarp-endfloat.sty**

§ 200 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 103 **lwarp-endheads.sty**

§ 201 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 104 **lwarp-endnotes.sty**

§ 202 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 105 **lwarp-enumerate.sty**

§ 203 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 106 **lwarp-enumitem.sty**

§ 204 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 107 **lwarp-epigraph.sty**

§ 205 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}{flushleft}
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}{flushleft}
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]{}

```

---

File 108 **lwarp-epsfig.sty**

§ 206 Package **epsfig**

Pkg epsfig epsfig is emulated for use by lwarp.

 Only the L<sup>A</sup>T<sub>E</sub>X<sub>2</sub>e 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 109 **lwarp-epstopdf.sty**

§ 207 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 110 **lwarp-epstopdf-base.sty**

§ 208 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 111 **lwarp-eqlist.sty**

§ 209 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 112 **lwarp-eqparbox.sty**

§ 210 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 113 **lwarp-errata.sty**

§ 211 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 114 **lwarp-eso-pic.sty**

§ 212 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][[]]{}

```

File 115 **lwarp-eurosym.sty**

§ 213 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 116 **lwarp-everypage.sty**

§ 214 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 117 **lwarp-everyshi.sty**

§ 215 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 118 **lwarp-extramarks.sty**

§ 216 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 119 **lwarp-fancybox.sty**

§ 217 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+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 \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\V@footnotetext%
6 \let\LWR@footnotetext\V@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\lbox{\LWR@origSbox\LWR@nestspan}
52
53
54 \let\LWR@origendSbox\endSbox
55
56 \def\endlbox{\endLWR@nestspan\LWR@origendSbox}

```

Beqnarray is adapted for MATHJAX or enclosed inside a lateximage:

```

57 \RenewEnviron{Beqnarray}
58 {\LWR@eqnarrayfactor}
59
60 \csgpreto{Beqnarray*}{\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 {(\lcr)} [(\tcb)]
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 120 **lwarp-fancyhdr.sty**

§ 218 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*\iffloatfloat[2]{#2}
22 \newcommand*\iffbotfloat[2]{#2}
23 \newcommand*\iffootnote[2]{#2}

```

File 121 **lwarp-fancyref.sty**

§ 219 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#1refformat\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 122 **lwarp-fancytabs.sty**

§ 220 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 123 **lwarp-fancyvrb.sty**

§ 221 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**

⚠ **\VerbatimFootnotes**  
 ⚠ **sectioning or displaymath**

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

```

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

```

and likewise for equations or display math.

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\@footnotetext%
9 \let\footnote\@footnote%
10 \let\LWR@footnotetext\@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 } \FV@LeftListFrame
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 124 **lwarp-figcaps.sty**

§ 222 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 125 **lwarp-figsize.sty**

§ 223 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 126 **lwarp-fitbox.sty**

§ 224 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 127 **lwarp-fix2col.sty**

§ 225 Package **fix2col**

Pkg fix2col fix2col is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fix2col}[2015/11/13]

---

File 128 **lwarp-fixme.sty**

§ 226 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 129 **lwarp-fixmetodonotes.sty**

§ 227 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 130 **lwarp-flafter.sty**

§ 228 Package **flafter**

Pkg flafter flafter is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{flafter}[2018/01/08]  
2 \providecommand\fl@trace[1]{}

---

File 131 **lwarp-flippdf.sty**

§ 229 Package **flippdf**

Pkg flippdf flippdf is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]  
  
2 \newcommand\FlipPDF{}  
3 \newcommand\UnFlipPDF{}

---

File 132 **lwarp-float.sty**

§ 230 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%
```
- `LikeSize`, `newfloat` also creates `\l@<type>`, but `float` does not, so remove it here:
- ```
10 \cslet{l@#1}\relax%
11 }
```
- `\floatname` `{<type>} {<name>}`
Sets the text name of the float, such as “Figure”.
- ```
12 \NewDocumentCommand{\floatname}{m +m}{%
13 \SetupFloatingEnvironment{#1}{name=#2}%
14 }
```
- `\floatplacement` `{<type>} {<placement>}`  
Float placement is ignored.
- ```
15 \newcommand*\floatplacement}[2]{%
16   \SetupFloatingEnvironment{#1}{placement=#2}%
17 }
```
- `\floatstyle` `{<style>}`
Remember the style for future floats:
- ```
18 \newcommand{\floatstyle}[1]{%
19 \def\LWR@floatstyle{#1}%
20 }
```

```

\restylefloat * {<type>}
Remember the style for this float:
21 \NewDocumentCommand{\restylefloat}{s m}{%
22 \csedef{LWR@floatstyle@#2}{\LWR@floatstyle}%
23 }

```

---

File 133 **lwarp-floatflt.sty**

§ 231 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 {⟨type⟩} {⟨width⟩} Borrowed from the lwarp version of keyfloat:

```

2 \NewDocumentEnvironment{KFLTfloatflt@marginfloat}{0{-1.2ex} m m}
3 {%
4 \setlength{\LWR@templengthone}{#3}%
5 \LWR@BlockClassWP{%
6 float:right; %
7 width:\LWR@printlength{\LWR@templengthone}; % extra space
8 margin:10pt%
9 }{%
10 width:\LWR@printlength{\LWR@templengthone}%
11 }%
12 {marginblock}%
13 \captionsetup{type=#2}%
14 }
15 {%
16 \endLWR@BlockClassWP%
17 }

```

Env floatingfigure [⟨placement⟩] {⟨width⟩}

```

18 \DeclareDocumentEnvironment{floatingfigure}{o m}
19 {\begin{KFLTfloatflt@marginfloat}{figure}{#2}}
20 {\end{KFLTfloatflt@marginfloat}}

```

Env floatingtable [⟨placement⟩]

```

21 \DeclareDocumentEnvironment{floatingtable}{o}
22 {\begin{KFLTfloatflt@marginfloat}{table}{1.5in}}
23 {\end{KFLTfloatflt@marginfloat}}

```

---

File 134 **lwarp-floatpag.sty**

§ 232 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 135 **lwarp-floatrow.sty**

§ 233 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 +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` [*⟨1 command⟩*] [*⟨2 captype⟩*] [*⟨3 preamble⟩*] [*⟨4 default width⟩*]

Preamble and default width are ignored.

```

57 \NewDocumentCommand{\newfloatcommand}{m m o o}{%
58 \@namedef{#1}{
59 \floatbox{#2}
60 }
61 }

```

`\renewfloatcommand` [*⟨1 command⟩*] [*⟨2 captype⟩*] [*⟨3 preamble⟩*] [*⟨4 default width⟩*]

Preamble and default width are ignored.

```

62 \NewDocumentCommand{\renewfloatcommand}{m m o o}{%
63 \@namedef{#1}{%
64 \floatbox{#2}
65 }
66 }

```

`\ffigbox` [*⟨width⟩*] [*⟨height⟩*] [*⟨vposn⟩*] [*⟨caption commands⟩*] [*⟨contents⟩*]

```
67 \newfloatcommand{ffigbox}{figure}[\nocapbeside][[]]
```

```
\ttabbox [<width>] [<height>] [<vposn>] {<caption commands>} {<contents>}
```

```
68 \newfloatcommand{ttabbox}{table}[\captop][\FBwidth]
```

```
\fcapside [<width>] [<height>] [<vposn>] {<caption commands>} {<contents>}
```

```
69 \newfloatcommand{fcapside}{figure}[\capbeside][[]]
```

```
Env floatrow [<numfloats>]
```

The row of floats is placed into a <div> of class floatrow.

```
70 \newenvironment*{floatrow}[1][2]
```

```
71 {
```

```
72 \LWR@forcenewpage
```

```
73 \BlockClass{floatrow}
```

While inside the floatrow, divide the \linewidth by the number of floats.

```
74 \booltrue{LWR@infloatrow}
```

```
75 \setlength{\linewidth}{6in/#1}
```

```
76 }
```

```
77 {
```

```
78 \boolfalse{LWR@infloatrow}
```

```
79 \endBlockClass
```

```
80 }
```

Keys for \DeclareNewFloatType:

```
81 \newcommand*{\LWR@frowkeyplacement}{}
```

```
82 \newcommand*{\LWR@frowkeyname}{}
```

```
83 \newcommand*{\LWR@frowkeyfileext}{}
```

```
84 \newcommand*{\LWR@frowkeywithin}{}
```

```
85 \newcommand*{\LWR@frowkeycapstyle}{}
```

```
86
```

```
87 \define@key{frowkeys}{placement}{}%
```

```
88 \define@key{frowkeys}{name}{\renewcommand{\LWR@frowkeyname}{#1}}%
```

```
89 \define@key{frowkeys}{fileext}{\renewcommand{\LWR@frowkeyfileext}{#1}}%
```

```
90 \define@key{frowkeys}{within}{\renewcommand{\LWR@frowkeywithin}{#1}}%
```

```
91 \define@key{frowkeys}{relatedcapstyle}{}%
```

```
\DeclareNewFloatType {<type>} {<options>}
```

Use \listof{type}{Title} to print a list of the floats.

```
92 \newcommand*{\DeclareNewFloatType}[2]{%
```

Reset key values:

```
93 \renewcommand*{\LWR@frowkeyplacement}{}%
```

```
94 \renewcommand*{\LWR@frowkeyname}{}%
```

```
95 \renewcommand*{\LWR@frowkeyfileext}{}%
```

```
96 \renewcommand*{\LWR@frowkeywithin}{}%
```

```
97 \renewcommand*{\LWR@frowkeycapstyle}{}%
```

Read new key values:

```
98 \LWR@traceinfo{about to setkeys frowkeys}%
99 \setkeys{frowkeys}{#2}%
100 \LWR@traceinfo{finished setkeys frowkeys}%
```

Create a new float with optional [within]:

```
101 \ifthenelse{\equal{\LWR@frowkeywithin}{}}%
102 {%
103 \LWR@traceinfo{about to newfloat #1 \LWR@frowkeyplacement\ %
104 \LWR@frowkeyfileext}%
105 \newfloat{#1}{\LWR@frowkeyplacement}{\LWR@frowkeyfileext}%
106 }%
107 {%
108 \LWR@traceinfo{about to newfloat #1\ \LWR@frowkeyplacement\ %
109 \LWR@frowkeyfileext\ \LWR@frowkeywithin}%
110 \newfloat{#1}{\LWR@frowkeyplacement}%
111 {\LWR@frowkeyfileext}[\LWR@frowkeywithin]%
112 \LWR@traceinfo{finished newfloat #1}%
113 }%
```

Rename the float if a name was given:

```
114 \ifthenelse{\equal{\LWR@frowkeyname}{}}%
115 {%
116 {\floatname{#1}{\LWR@frowkeyname}}%
117 }
```

Not used:

```
118 \newcommand{\buildFBBOX}[2]{%
119 \newcommand*{\CenterFloatBoxes}{%
120 \newcommand*{\TopFloatBoxes}{%
121 \newcommand*{\BottomFloatBoxes}{%
122 \newcommand*{\PlainFloatBoxes}{%
123
124 \newcommand{\capsubrowsettings}{%
125
126 \NewDocumentCommand{\RawFloats}{o o}{%
```

`\RawCaption`     $\langle text \rangle$

To be used inside a minipage or parbox.

```
127 \newcommand{\RawCaption}[1]{#1}
```

`\floatfoot`     $\langle text \rangle$

Places additional text inside a float, inside a CSS `<div>` of class `floatfoot`.

```
128 \NewDocumentCommand{\floatfoot}{s +m}{%
129 \begin{BlockClass}{floatfoot}
130 #2
131 \end{BlockClass}
132 }
```

Used to compute `\linewidth`.

```
133 \newbool{LWR@infloatrow}
134 \boolfalse{LWR@infloatrow}
```

Env `floatrow` [`<num_floats>`]

```
135 \newenvironment*{floatrow}[1][2]
136 {
```

The row of floats is placed into a `<div>` of class `floatrow`:

```
137 \LWR@forcenewpage
138 \BlockClass{floatrow}
```

While inside the `floatrow`, `LWR@infloatrow` is set true, which tells `\floatbox` to use `\subfigure` or `\subtable`.

```
139 \begingroup
140 \booltrue{LWR@infloatrow}
141 }
142 {
143 \endgroup
144 \endBlockClass
145 \boolfalse{LWR@infloatrow}
146 }
```

File 136 **lwarp-fltrace.sty**

§ 234 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 137 **lwarp-flushend.sty**

§ 235 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 138 **lwarp-fnbreak.sty**

§ 236 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 139 **lwarp-fncychap.sty**

§ 237 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 140 **lwarp-fnlineno.sty**

§ 238 Package **fnlineno**

Pkg fnlineno fnlineno is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnlineno}[2011/01/07]

---

File 141 **lwarp-fnpara.sty**

§ 239 Package **fnpara**

Pkg fnpara fnpara is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnpara}

---

File 142 **lwarp-fnpos.sty**

§ 240 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 143 **lwarp-fontawesome.sty**

§ 241 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 \begin{lateximage}*[icon][fontawesomexetex#1]%
10 \begingroup%
11 \LWR@orig@FA%
12 \LWR@orig@symbol{#1}%
13 \endgroup%
14 \end{lateximage}%
15 }
16
17 \RenewDocumentCommand{\FA}{*}{%
18 \LetLtxMacro\symbol\LWR@fontawesome@xelatex@symbol%
19 }
20
21 \else
22
23 \newcommand*{\LWR@fontawesome@symbolone}[1]{%
24 \begin{lateximage}*[icon #1][fontawesomeone#1]%
25 \begingroup%
26 \fontencoding{U}\fontfamily{fontawesomeone}\selectfont%
27 \LWR@orig@symbol{#1}%
28 \endgroup%
29 \end{lateximage}%
30 }
31
32 \newcommand*{\LWR@fontawesome@symboltwo}[1]{%
33 \begin{lateximage}*[icon #1][fontawesometwo#1]%
34 \begingroup%
35 \fontencoding{U}\fontfamily{fontawesometwo}\selectfont%
36 \LWR@orig@symbol{#1}%
37 \endgroup%
38 \end{lateximage}%
39 }
40
41 \newcommand*{\LWR@fontawesome@symbolthree}[1]{%

```

```

42 \begin{lateximage}*[icon #1][fontawesomethree#1]%
43 \begingroup%
44 \fontencoding{U}\fontfamily{fontawesomeonethree}\selectfont%
45 \LWR@orig@symbol{#1}%
46 \endgroup%
47 \end{lateximage}%
48 }
49
50 \renewrobustcmd\FAone{%
51 \LetLtxMacro\symbol\LWR@fontawesome@symbolone%
52 }
53
54 \renewrobustcmd\FAtwo{%
55 \LetLtxMacro\symbol\LWR@fontawesome@symboltwo%
56 }
57
58 \renewrobustcmd\FAthree{%
59 \LetLtxMacro\symbol\LWR@fontawesome@symbolthree%
60 }
61 \fi

```

---

File 144 **lwarp-fontawesome5.sty**

§ 242 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 \cs_if_exist:cTF{c__fontawesome_slot_#2_tl}{
5 \begin{lateximage}*[#2][#1]
6 \exp_last_unbraced:Nv
7 __fontawesome_icon_at:nnnn
8 {c__fontawesome_slot_#2_tl}
9 {#1}{#2}
10 \end{lateximage}
11 }{
12 \msg_error:nnxx{fontawesome5}{icon-not-found}{#2}{#1}
13 }
14 }
15 \ExplSyntaxOff

```

---

File 145 **lwarp-fontaxes.sty**

§ 243 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 146 **lwarp-fontenc.sty**

§ 244 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 147 **lwarp-footmisc.sty**

§ 245 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*\multiplefootnotemark}{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 148 **lwarp-footnote.sty**

§ 246 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@endfn@text
30 \let\endfootnotetext\endfootnote
```

---

File 149 **lwarp-footnotebackref.sty**

§ 247 Package **footnotebackref**

Pkg footnotebackref footnotebackref is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{footnotebackref}[2012/07/01]

---

File 150 **lwarp-footnotehyper.sty**

§ 248 Package **footnotehyper**

Pkg footnotehyper footnotehyper is a hyperref-safe version of footnote. For lwarp, footnotehyper is emulated.

**for HTML output:** Discard all options for lwarp-footnotehyper:

```
1 \RequirePackage{footnote}
2 \LWR@ProvidesPackageDrop{footnotehyper}[2018/01/23]
```

---

File 151 **lwarp-footnoterange.sty**

§ 249 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 152 **lwarp-footnpag.sty**

§ 250 Package **footnpag**

Pkg footnpag footnpag is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{footnpag}

File 153 **lwarp-foreign.sty**

§ 251 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 154 **lwarp-forest.sty**

§ 252 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}%
17 lwarp
17 }
```

File 155 **lwarp-framed.sty**

§ 253 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>} {<bottitle>} {<thicknesstop>} {<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}}{% 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}}{% 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][[]]{
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 156 **lwarp-ftcap.sty**

§ 254 Package **ftcap**

Pkg ftcap ftcap is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ftcap}

---

File 157 **lwarp-ftnright.sty**

§ 255 Package **ftnright**

Pkg ftnright ftnright is ignored.

**for HTML output:** Discard all options for lwarp-ftnright:

```
1 \LWR@ProvidesPackageDrop{ftnright}[2014/10/28]
```

---

File 158 **lwarp-fullminipage.sty**

§ 256 Package **fullminipage**

Pkg fullminipage fullminipage is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]

```
2 \newenvironment{fullminipage}[1][{}]{}
```

---

File 159 **lwarp-fullpage.sty**

§ 257 Package **fullpage**

Pkg fullpage fullpage is ignored.

**for HTML output:** Discard all options for lwarp-fullpage:

```
1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]
```

File 160 **lwarp-fullwidth.sty**

§ 258 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 161 **lwarp-fwlw.sty**

§ 259 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@fwlwhead{}
6 \def\ps@NextWordFoot{}

```

File 162 **lwarp-gentombow.sty**

§ 260 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 163 **lwarp-geometry.sty**

§ 261 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}{%

```

Gather all options:

```
3 \newcommand*\LWR@newgeometryoptions}{reset,}
4
5 \DeclareOption*{%
6 \edef\LWR@newgeometryoptions{\LWR@newgeometryoptions\CurrentOption,}%
7 }

```

Process the options:

```
8 \ProcessOptions\relax

```

Assign and set the selected geometry. \AtEndPreamble lwarp will save this, then set its own geometry.

```
9 \ifdefvoid{\LWR@newgeometryoptions}{}{
10 \expandafter\LWR@origgeometry\expandafter{\LWR@newgeometryoptions}
11 }
12
13 }{}% LWR@allowanothergeometry

```

The user-level commands are nullified:

```
14 \renewcommand*\geometry}[1]{}
15 \renewcommand*\newgeometry}[1]{}
16 \renewcommand*\restoregeometry{}{}
17 \renewcommand*\savegeometry}[1]{}
18 \renewcommand*\loadgeometry}[1]{}

```

---

File 164 **lwarp-gloss.sty**

§ 262 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 165 **lwarp-glossaries.sty**

§ 263 Package **glossaries**

(Emulates or patches code by NICOLA L.C. TALBOT.)

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`

Opt [lwarpmk] `htmlglossary`

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 166 **lwarp-gmeometric.sty**

§ 264 Package **gmeometric**

Pkg gmeometric gmeometric is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{gmeometric}[2008/11/22]

File 167 **lwarp-graphics.sty**

§ 265 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]

§ 265.1 **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
```

## § 265.2 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@igyyscale{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}{}

```

### § 265.3 **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 #1transform: rotate(-#2deg);
114 }

```

`\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.

```
115 \newcommand*\LWR@scalestyle}[3]{%
116 #1transform:scale(#2,#3);
117 }
```

## § 265.4 `\includegraphics`

Bool `LWR@infloatrow` Used to compute `\linewidth`.

```
118 \newbool{LWR@infloatrow}
119 \boolfalse{LWR@infloatrow}
```

`\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@includegraphicsb` \* [*2: options*] [*3: options*] {*4: filename*}

`graphics` syntax is `\includegraphics` \* [*llx,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.

```

140 \NewDocumentCommand{\LWR@includegraphicsb}{s o o m}
141 {%

```

Start the image tag on a new line, allow PDF output word wrap:

```

142 \LWR@origtilde \LWR@orignewline%

```

Temporarily compute `\linewidth`, `\textwidth`, `\textheight` arguments with a 6x9 inch size until the next `\endgroup`.

```

143 \begingroup%
144 \ifthenelse{\cnttest{\value{\LWR@minipagedepth}}{=}{0}}{%
145 {%
146 \ifbool{\LWR@infloatrow}%
147 {}
148 {% not in a minipage or a floatrow:
149 \setlength{\linewidth}{6in}%
150 \setlength{\textwidth}{6in}%
151 \setlength{\textheight}{9in}%
152 }%
153 }{%

```

For correct em sizing during the width and height conversions:

```

154 \large%

```

Reset some defaults, possibly will be changed below if options were given:

```

155 \setlength{\LWR@igwidth}{0pt}%
156 \setlength{\LWR@igheight}{0pt}%
157 \renewcommand*\LWR@igwidthstyle{}%
158 \renewcommand*\LWR@igheightstyle{}%
159 \renewcommand*\LWR@igorigin{}%

```

```

160 \renewcommand*\LWR@igangle}{}%
161 \renewcommand*\LWR@igxscale}{1}%
162 \renewcommand*\LWR@igyyscale}{1}%
163 \renewcommand*\LWR@igclass}{inlineimage}%

164 \ifdefvoid{\LWR@ThisAltText}{%
165 \renewcommand*\LWR@igalt}{\ImageAltText}%
166 }{%
167 \renewcommand*\LWR@igalt}{\LWR@ThisAltText}%
168 }%

```

If #3 is empty, only one optional argument was given, thus graphicx syntax:

```

169 \IfValueF{#3}{%
170 \IfValueTF{#2}%
171 {\setkeys{igraph}{#2}}%
172 {\setkeys{igraph}{}}%
173 }%

```

Fully expand and detokenize the filename, changing the file extension to .svg if necessary.

```

174 \begingroup%
175 \LetLtxMacro\Gin@setfile\LWR@HTML@Gin@setfile%
176 \edef\LWR@tempone{#4}%
177 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
178 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
179 \LWR@replaceEPSSVG%
180 \xdef\LWR@parsedfilename{\LWR@tempone}%
181 \Gin@include@graphics{\detokenize\expandafter{\LWR@tempone}}%
182 \endgroup%
183 \filename@parse{\LWR@parsedfilename}%
184 \LWR@traceinfo{\LWR@parsedfilename is \LWR@parsedfilename}%
185 % \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:

```

186 \ifbool{FormatWP}{%
187 \begingroup%
188 \LWR@restoreorigformatting%
189 \ifpdf%
190 \appto\LWR@restoreorigformatting{%
191 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
192 }%
193 \else% \ifpdf
194 \ifXeTeX%
195 \appto\LWR@restoreorigformatting{%
196 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
197 }%
198 \else%
199 \appto\LWR@restoreorigformatting{%
200 \DeclareGraphicsExtensions{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
201 }%

```

```

202 \fi%
203 \fi% \ifpdf
204 \define@key{Gin}{angle}{}%
205 \IfBooleanTF{#1}%
206 {% starred
207 \IfValueTF{#3}%
208 {%
209 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics*[#2][#3]{#4}}%
210 }%
211 {%
212 \IfValueTF{#2}%
213 {%
214 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics*[#2]{#4}}%
215 }{%
216 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics*{#4}}%
217 }%
218 }%
219 }% starred
220 }% not starred
221 \IfValueTF{#3}%
222 {%
223 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics[#2][#3]{#4}}%
224 }%
225 {%
226 \IfValueTF{#2}%
227 {%
228 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics[#2]{#4}}%
229 }{%
230 \global\savebox{\LWR@imagesizebox}{\LWR@originincludegraphics{#4}}%
231 }%
232 }%
233 }% not starred
234 \endgroup%
235 \settowidth{\LWR@igwidth}{\usebox{\LWR@imagesizebox}}%
236 \global\renewcommand*{\LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%
237 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
238 \global\renewcommand*{\LWR@igheightstyle}{height:\LWR@printlength{\LWR@igheight}}%
239 }{}% FormatWP

```

Create the HTML reference with the graphicspath, filename, extension, alt tag, style, and class.

The `\LWR@origtilde` adds space between tags in case this is being done inside a `\savebox` where `\newline` has no effect.

```

240 \LWR@traceinfo{\LWR@includegraphicsb: about to create href}%
241 \href{\LWR@parsedfilename}%
242 {% start of href
243 \LWR@traceinfo{\LWR@includegraphicsb: about to LWR@htmltag}%
244 \LWR@htmltag{% start of image tags
245 img\LWR@indentHTML%
246 src="%
247 \detokenize\expandafter{\LWR@parsedfilename}%

```

248 "\LWR@indentHTML%

Only include a style tag if a width, height, angle, or scale was given:

```

249 \ifthenelse{
250 \NOT\equal{\LWR@igwidthstyle}{ } \OR
251 \NOT\equal{\LWR@igheightstyle}{ } \OR
252 \NOT\equal{\LWR@igorigin}{ } \OR
253 \NOT\equal{\LWR@igangle}{ } \OR
254 \NOT\equal{\LWR@igxscale}{1} \OR
255 \NOT\equal{\LWR@igyscale}{1}
256 }%
257 {%
258 style="\LWR@indentHTML
259 \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{ }}%
260 {\LWR@igwidthstyle;\LWR@indentHTML}{ }%
261 \ifthenelse{\NOT\equal{\LWR@igheightstyle}{ }}%
262 {\LWR@igheightstyle;\LWR@indentHTML}{ }%
263 \ifthenelse{\NOT\equal{\LWR@igorigin}{ }}%
264 {%
265 transform-origin: \LWR@originnames{\LWR@igorigin};\LWR@indentHTML%
266 }{}%
267 \ifthenelse{\NOT\equal{\LWR@igangle}{ }}%
268 {%
269 \LWR@rotstyle{-ms-}{\LWR@igangle}\LWR@indentHTML
270 \LWR@rotstyle{-webkit-}{\LWR@igangle}\LWR@indentHTML
271 \LWR@rotstyle}{\LWR@igangle }\LWR@indentHTML
272 }{}%
273 \ifthenelse{%
274 \NOT\equal{\LWR@igxscale}{1}\OR%
275 \NOT\equal{\LWR@igyscale}{1}%
276 }%
277 {%
278 \LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
279 \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
280 \LWR@scalestyle}{\LWR@igxscale}{\LWR@igyscale}\LWR@indentHTML
281 }{}%
282 %
283 \ifthenelse{\NOT\equal{\LWR@opacity}{1}}%
284 {opacity:\LWR@opacity;\LWR@indentHTML}{ }%
285 %
286 "\LWR@indentHTML%
287 }{}%
```

Set the class and alt tag:

```

288 class="\LWR@igclass"\LWR@indentHTML%
289 alt="\AltTextOpen\LWR@igalt\AltTextClose" \LWR@originewline%
290 }% end of image tags
291 }% end of href
```

Return to original page size and font size:

292 \endgroup

Clear the single-use alt text:

```
293 \gdef\LWR@ThisAltText{}%
294 \LWR@traceinfo{LWR@includegraphicsb done}%
295 }
```

`\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.

```
296 \AtBeginDocument{
297
298 \LWR@traceinfo{Patching includegraphics.}
299
300 \LetLtxMacro\LWR@originincludegraphics\includegraphics
301
302 \renewcommand*{\includegraphics}
303 {%
```

This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:

```
304 \LWR@traceinfo{includegraphics}%
305 \LWR@ensuredoingapar%
306 \LWR@includegraphicsb%
307 }% includegraphics
308 }% AtBeginDocument
```

## § 265.5 Boxes

`\LWR@rotboxorigin` Holds the origin key letters.

```
309 \newcommand*\LWR@rotboxorigin{}
```

`\LWR@originname` {*(letter)*}

Given one L<sup>A</sup>T<sub>E</sub>X origin key value, translate into an HTML origin word:

```
310 \newcommand*\LWR@originname}[1]{%
311 \ifthenelse{\equal{#1}{t}}{top}{}%
312 \ifthenelse{\equal{#1}{b}}{bottom}{}%
313 \ifthenelse{\equal{#1}{c}}{center}{}%
314 \ifthenelse{\equal{#1}{l}}{left}{}%
315 \ifthenelse{\equal{#1}{r}}{right}{}%
316 }
```

`\LWR@originnames` {*(letters)*}

Given one- or two-letter L<sup>A</sup>T<sub>E</sub>X origin key values, translate into HTML origin words:

```

317 \newcommand*\LWR@originnames}[1]{%
318 \StrChar{#1}{1}[\LWR@strresult]%
319 \LWR@originname{\LWR@strresult}
320 \StrChar{#1}{2}[\LWR@strresult]%
321 \LWR@originname{\LWR@strresult}
322 }

```

Handle the origin key for `\rotatebox`:

```

323 \define@key{krotbox}{origin}{%
324 \renewcommand*\LWR@rotboxorigin}{#1}%
325 }

```

These keys are ignored:

```

326 \define@key{krotbox}{x}{}
327 \define@key{krotbox}{y}{}
328 \define@key{krotbox}{units}{}

```

`\rotatebox` [*keyval list*] [*angle*] [*text*]

```

329 \AtBeginDocument{

```

The HTML version:

```

330 \NewDocumentCommand{\LWR@HTML@rotatebox}{0{} m +m}{%

```

Reset the origin to “none-given”:

```

331 \renewcommand*\LWR@rotboxorigin}{}

```

Process the optional keys, which may set `\LWR@rotateboxorigin`:

```

332 \setkeys{krotbox}{#1}%

```

Select inline-block so that HTML will transform this span:

```

333 \LWR@htmltagc{%
334 span\LWR@indentHTML
335 style="\LWR@indentHTML
336 display: inline-block;\LWR@indentHTML

```

If an origin was given, translate and print the origin information:

```

337 \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{} }%
338 {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@indentHTML}%
339 {}%

```

Print the rotation information:

```

340 \LWR@rotstyle{-ms-}{#2}\LWR@indentHTML
341 \LWR@rotstyle{-webkit-}{#2}\LWR@indentHTML

```

```
342 \LWR@rotstyle{#2}"\LWR@orignewLine%
343 }\LWR@orignewLine%
```

Print the text to be rotated:

```
344 \begin{LWR@nestspan}%
345 #3%
```

Close the span:

```
346 \LWR@htmltagc{/span}%
347 \end{LWR@nestspan}%
348 }
```

The high-level interface:

```
349 \LWR@formatted{rotatebox}
350
351 }% AtBeginDocument
```

`\scalebox`  $\langle h\text{-scale} \rangle$  [ $\langle v\text{-scale} \rangle$ ]  $\langle \text{text} \rangle$

```
352 \AtBeginDocument{
```

The HTML version:

```
353 \NewDocumentCommand{\LWR@HTML@scalebox}{m o m}{%
```

Select inline-block so that HTML will transform this span:

```
354 \LWR@htmltagc{%
355 span\LWR@indentHTML
356 style="\LWR@indentHTML
357 display: inline-block;\LWR@indentHTML
```

Print the scaling information:

```
358 \LWR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
359 \LWR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
360 \LWR@scalestyle{#1}{\IfNoValueTF{#2}{#1}{#2}}
361 "\LWR@orignewLine
362 }\LWR@orignewLine%
```

Print the text to be scaled:

```
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{scalebox}
369
370 }% AtBeginDocument
```

`\reflectbox`  $\{\langle text \rangle\}$

```
371 \AtBeginDocument{
372
373 \newcommand{\LWR@HTML@reflectbox}[1]{%
374 \scalebox{-1}[1]{#1}%
375 }% \reflectbox
376
377 \LWR@formatted{reflectbox}
378
379 }% AtBeginDocument
```

`\resizebox`  $\{\langle h-length \rangle\} \{\langle v-length \rangle\} \{\langle text \rangle\}$

Simply prints its text argument.

```
380 \AtBeginDocument{
381
382 \NewDocumentCommand{\LWR@HTML@resizebox}{s m m m}{%
383 #4%
384 }
385
386 \LWR@formatted{resizebox}
387
388 }% AtBeginDocument
```

---

File 168 **lwarp-graphics.sty**

§ 266 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 169 **lwarp-grffile.sty**

§ 267 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.

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 170 **lwarp-grid.sty**

§ 268 Package **grid**

Pkg grid

grid is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{grid}[2009/06/16]

2 \newenvironment\*{gridenv}{}{}

---

File 171 **lwarp-grid-system.sty**

§ 269 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 172 **lwarp-gridset.sty**

§ 270 Package **gridset**

Pkg gridset gridset is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{gridset}

2 \newcommand*\gridbase{}
3 \newcommand*\gridinterval{}
4 \newcommand*\savepos}[1]{}
5 \newcounter{gridcnt}
6 \newcommand*\vskipnextgrid{}
7 \newcommand*\thegridinfo}[1]{}
8 \newcommand*\theposinfo}[1]{}
9 \newcommand*\theypos}[1]{}

```

---

File 173 **lwarp-hang.sty**

§ 271 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@mbbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
17 \LWR@print@mbbox{text-indent:-\LWR@printlength{\hangingindent}}%
18]%
19 {hangingpar}%
20 }
21 {\endBlockClass}
22

```

```

23 \newenvironment{hanginglist}
24 {%
25 \renewcommand*\LWR@printcloseitemize{\LWR@printcloseitemize}%
26 \renewcommand*\LWR@printopenlist{%
27 \LWR@findhangingleftmargin%
28 ul style="%
29 \LWR@print@mbox{list-style-type:none;} % extra space
30 \LWR@print@mbox{%
31 margin-left:\LWR@printlength{\LWR@templengthone}%
32 } ; % extra space
33 \LWR@print@mbox{%
34 text-indent:-\LWR@printlength{\hangingindent}%
35 }%
36 "%
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@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
55 \LWR@print@mbox{text-indent:-\LWR@printlength{\hangingindent}}%
56][labeledpar]#2%
57 }
58 {\endBlockClass}
59
60 \newenvironment{labeledlist}[1]
61 {\hanginglist}
62 {\endhanginglist}
63
64 \newenvironment{compactlabel}[1]
65 {\hanginglist}
66 {\endhanginglist}

```

---

File 174 **lwarp-hanging.sty**

§ 272 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`     $\langle indent \rangle$   $\langle afternum \rangle$

Use `hangparas` instead.

```

9 \newcommand*\hangpara[2]{}

```

Env `hangparas`     $\langle indent \rangle$   $\langle afternum \rangle$

```

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 175 **lwarp-hypbmsec.sty**

§ 273    Package **hypbmsec**

Pkg `hypbmsec`    `hypbmsec` is emulated by the `lwarp` core.

for HTML output:    1 \LWR@ProvidesPackageDrop{hypbmsec}[2016/05/16]

---

File 176 **lwarp-hypcap.sty**

§ 274    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 177 **lwarp-hypdestopt.sty**

§ 275 Package **hypdestopt**

Pkg hypdestopt hypdestopt is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hypdestopt}[2016/05/21]

---

File 178 **lwarp-hypernat.sty**

§ 276 Package **hypernat**

Pkg hypernat hypernat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hypernat}[2001/07/09]

---

File 179 **lwarp-hyperref.sty**

§ 277 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 \catcode'\#=12%
28 \catcode'\%=12%
29 \catcode'\&=12%
30 \catcode'\~=12%
31 \catcode'_ =12%
32 \LWR@hyperimageb%
33 }
34

```

`\hyperdef`     $\{\langle 1: \text{category} \rangle\} \{\langle 2: \text{name} \rangle\} \{\langle 3: \text{text} \rangle\}$

Creates an HTML anchor to `category.name` with the given text.

```
35 \NewDocumentCommand{\LWR@hyperdefb}{m m +m}{%
36 \LWR@ensuredoingapar%
37 \LWR@sublabel{#1.#2}%
38 #3%
39 \endgroup%
40 }
41
42 \newcommand*{\hyperdef}{%
43 \begingroup%
44 \catcode'\#=12%
45 \catcode'\%=12%
46 \catcode'\&=12%
47 \catcode'\~=12%
48 \catcode'_ =12%
49 \LWR@hyperdefb%
50 }
51

```

`\LWR@hyperrefb`     $\{\langle 1: URL \rangle\} \{\langle 2: \text{category} \rangle\} \{\langle 3: \text{name} \rangle\} \{\langle 4: \text{text} \rangle\}$

Creates an HTML link to `URL#category.name` with the given text.

```
52 \newcommand{\LWR@hyperreffinish}[1]{%
53 \begingroup%
54 \RenewDocumentCommand{\ref}{\LWR@ref@ignorestar}%

```

```

55 #1%
56 \endgroup%
57 \LWR@htmltag{/a}%
58 }
59
60 \newcommand*\LWR@hyperrefbb}[3]{%
61 \LWR@htmltag{%
62 a href="%
63 \detokenize\expandafter{#1}\LWR@hashmark%
64 \detokenize\expandafter{#2}.\detokenize\expandafter{#3}%
65 "%
66 \LWR@addlinktitle%
67 }%
68 \endgroup%
69 \LWR@hyperreffinish%
70 }
71
72 \newrobustcmd*\LWR@hyperrefb}{%
73 \begingroup%
74 \catcode'\#=12%
75 \catcode'\%=12%
76 \catcode'\&=12%
77 \catcode'\~=12%
78 \catcode'_ =12%
79 \LWR@hyperrefbb%
80 }

```

`\LWR@hyperrefc` [*label*] {*text*}

Creates text as an HTML link to the L<sup>A</sup>T<sub>E</sub>X label.

```

81
82 \NewDocumentCommand{\LWR@hyperrefcb}{0{label}}{%
83 \LWR@startref{#1}%
84 \endgroup%
85 \LWR@hyperreffinish%
86 }
87
88 \newcommand*\LWR@hyperrefc}{%
89 \begingroup%
90 \catcode'\#=12%
91 \catcode'\%=12%
92 \catcode'\&=12%
93 \catcode'\~=12%
94 \catcode'_ =12%
95 \LWR@hyperrefcb%
96 }

```

`\hyperref` {*1: URL*} {*2: category*} {*3: name*} {*4: text*} — or —  
 [*1: label*] {*2: text*}

```

97 \DeclareRobustCommand*\hyperref}{%
98 \LWR@ensuredoingapar%
99 \ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
100 }

```

`\hypertarget`     $\langle name \rangle$   $\langle text \rangle$

Creates an anchor to name with the given text.

```

101 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%
102 \label{LWR-ht-#1}%
103 #2%
104 \endgroup%
105 }
106
107 \newcommand*{\hypertarget}{%
108 \begingroup%
109 \catcode'\#=12%
110 \catcode'\%=12%
111 \catcode'\&=12%
112 \catcode'\~=12%
113 \catcode'_ =12%
114 \LWR@hypertargetb%
115 }

```

`\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`.

```

116 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%
117 \LWR@hyperrefcb[LWR-ht-#1]%
118 }
119
120 \DeclareDocumentCommand{\hyperlink}{}{%
121 \LWR@ensuredoingapar%
122 \begingroup%
123 \catcode'\#=12%
124 \catcode'\%=12%
125 \catcode'\&=12%
126 \catcode'\~=12%
127 \catcode'_ =12%
128 \LWR@hyperlinkb%
129 }

```

`\autoref`    \*  $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

130 \NewDocumentCommand{\autoref}{s m}{%
131 \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%
132 }

```

`\autopageref`     $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

133 \NewDocumentCommand{\autopageref}{s m}{%
134 \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}%
135 }

```

---

```

\pdfstringdef {<macroname>} {<TEXstring>}
 136 \newcommand{\pdfstringdef}[2]{}

\pdfbookmark [<level>] {<text>} {<name>}
 137 \newcommand{\pdfbookmark}[3][]{ }

\currentpdfbookmark {<text>} {<name>}
 138 \newcommand{\currentpdfbookmark}[2]{}

\subpdfbookmark {<text>} {<name>}
 139 \newcommand{\subpdfbookmark}[2]{}

\belowpdfbookmark {<text>} {<name>}
 140 \newcommand{\belowpdfbookmark}[2]{}

\texorpdfstring {<TEXstring>} {<PDFstring>}
 141 \newcommand{\texorpdfstring}[2]{#1}

\hypercalcbp {<dimen>} From hyperref.
 142 \def\hypercalcbp#1{%
 143 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
 144 }%

\Acrobatmenu {<menuoption>} {<text>}
 145 \newcommand{\Acrobatmenu}[2]{}

\TextField [<parameters>] {<label>}
 146 \DeclareRobustCommand{\TextField}[2][]{ }

\CheckBox [<parameters>] {<label>}
 147 \DeclareRobustCommand{\CheckBox}[2][]{ }

\ChoiceMenu [<parameters>] {<label>} {<choices>}
 148 \DeclareRobustCommand{\ChoiceMenu}[3][]{ }

\PushButton [<parameters>] {<label>}
 149 \DeclareRobustCommand{\PushButton}[2][]{ }

```

---

|                                 |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| <code>\Submit</code>            | <code>[\langle parameters \rangle] \{\langle label \rangle\}</code> |
|                                 | 150 <code>\DeclareRobustCommand{\Submit}[2][\{\}</code>             |
| <code>\Reset</code>             | <code>[\langle parameters \rangle] \{\langle label \rangle\}</code> |
|                                 | 151 <code>\DeclareRobustCommand{\Reset}[2][\{\}</code>              |
| <code>\Gauge</code>             | <code>[\langle parameters \rangle] \{\langle label \rangle\}</code> |
|                                 | 152 <code>\DeclareRobustCommand{\Gauge}[2][\{\}</code>              |
| <code>\LayoutTextField</code>   | <code>\{\langle label \rangle\} \{\langle field \rangle\}</code>    |
|                                 | 153 <code>\newcommand*\LayoutTextField}[2]\{\}</code>               |
| <code>\LayoutChoiceField</code> | <code>\{\langle label \rangle\} \{\langle field \rangle\}</code>    |
|                                 | 154 <code>\newcommand*\LayoutChoiceField}[2]\{\}</code>             |
| <code>\LayoutCheckField</code>  | <code>\{\langle label \rangle\} \{\langle field \rangle\}</code>    |
|                                 | 155 <code>\newcommand*\LayoutCheckField}[2]\{\}</code>              |
| <code>\MakeRadioField</code>    | <code>\{\langle width \rangle\} \{\langle height \rangle\}</code>   |
|                                 | 156 <code>\newcommand*\MakeRadioField}[2]\{\}</code>                |
| <code>\MakeCheckField</code>    | <code>\{\langle width \rangle\} \{\langle height \rangle\}</code>   |
|                                 | 157 <code>\newcommand*\MakeCheckField}[2]\{\}</code>                |
| <code>\MakeTextField</code>     | <code>\{\langle width \rangle\} \{\langle height \rangle\}</code>   |
|                                 | 158 <code>\newcommand*\MakeTextField}[2]\{\}</code>                 |
| <code>\MakeChoiceField</code>   | <code>\{\langle width \rangle\} \{\langle height \rangle\}</code>   |
|                                 | 159 <code>\newcommand*\MakeChoiceField}[2]\{\}</code>               |
| <code>\MakeFieldButton</code>   | <code>\{\langle text \rangle\}</code>                               |
|                                 | 160 <code>\newcommand{\MakeFieldButton}[1]\{\}</code>               |

---

File 180 **lwarp-hyperxmp.sty**

§ 278 Package **hyperxmp**

Pkg hyperxmp hyperxmp is ignored.

**for HTML output:** Discard all options for lwarp-hyperxmp:

```
1 \LWR@ProvidesPackageDrop{hyperxmp}[2018/11/27]
```

---

File 181 **lwarp-hyphenat.sty**

§ 279 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@origcolonhyp\colonhyp
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{\colonhyp}{:}
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\colonhyp\LWRHYNAT@origcolonhyp%
31 \LetLtxMacro\hyp\LWRHYNAT@orighyp%
32 }
```

---

File 182 **lwarp-idxlayout.sty**

§ 280 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 \pretolprintindex{
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 183 **lwarp-ifoddpge.sty**

§ 281 Package **ifoddpge**

*(Emulates or patches code by MARTIN SCHARRER.)*

Pkg ifoddpge ifoddpge is emulated.

for HTML output: Discard all options for lwarp-ifoddpge:

```

1 \LWR@ProvidesPackageDrop{ifoddpge}[2016/04/23]

2 \newif\ifoddpge
3
4 \newif\ifoddpgeoroneside
5
6 \DeclareRobustCommand{\checkoddpge}{\oddpagetrue\oddpgeoronesidetrue}
7
8 \def\oddpge@page{1}
9
10 \def\@ifoddpge{%
11 \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpgeoroneside{%
15 \expandafter\@firstoftwo
16 }

```

File 184 **lwarp-imakeidx.sty**

§ 282 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 8.6.17 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@showidxentry{#1}{#2}%
81 \@esphack%
82 }
83
84 \def\imki@wrindexunique#1#2{%
85 \imki@wrindexentryunique{#1}{#2}{\thepage}%
86 \endgroup\imki@showidxentry{#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@maybeaddtotoc
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 185 **lwarp-index.sty**

§ 283 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}% lwarp
23 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}% lwarp
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 186 **lwarp-inputtrc.sty**

§ 284 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 187 **lwarp-intopdf.sty**

§ 285 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 188 **lwarp-karnaugh-map.sty**

§ 286 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 }%

```



```

72 00 \& |(000000)| \& |(000001)| \& |(000011)| \& |(0000
73 01 \& |(000100)| \& |(000101)| \& |(000111)| \& |(0001
74 11 \& |(001100)| \& |(001101)| \& |(001111)| \& |(0011
75 10 \& |(001000)| \& |(001001)| \& |(001011)| \& |(0010
76 \& \& \& \& \&
77 00 \& |(100000)| \& |(100001)| \& |(100011)| \& |(1000
78 01 \& |(100100)| \& |(100101)| \& |(100111)| \& |(1001
79 11 \& |(101100)| \& |(101101)| \& |(101111)| \& |(1011
80 10 \& |(101000)| \& |(101001)| \& |(101011)| \& |(1010
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@ \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@mapsizex*0.5+\@karnaughmap@local@maprealignmentx@,\@karnaughmap@var@mapsizex*0.5+\@karnaughmap@local@maprealignmenty@,\@karnaughmap@local@matrixtemplate@)
140 \@karnaughmap@local@matrixtemplate@
141 };
142 }{
143 \end{tikzpicture}
144 \endgroup
145 }

```

---

File 189 **lwarp-keyfloat.sty**

§ 287 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 \providecommand*\KFLT@LWR@hook@keysubfloats{}
27 \renewcommand*\KFLT@LWR@hook@keysubfloats{%
28 \ifbool{KFLT@keywrap}{%
29 }{%
30 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{%
31 \setlength{\linewidth}{6in}%
32 \setlength{\textwidth}{6in}%
33 \setlength{\textheight}{9in}%
34 }{}%
35 }%
36 \normalcolor%
37 }
38
39 \let\KFLT@LWR@hook@keyfloatsminipage\relax
40 \let\endKFLT@LWR@hook@keyfloatsminipage\relax
41 \newenvironment*{KFLT@LWR@hook@keyfloatsminipage}[1]{}{}

42 \providecommand*\KFLT@LWR@hook@keyfloats{}
43 \renewcommand*\KFLT@LWR@hook@keyfloats{%
44 \ifbool{KFLT@keywrap}{%
45 }{%
46 \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{%
47 \setlength{\linewidth}{6in}%
48 \setlength{\textwidth}{6in}%
49 \setlength{\textheight}{9in}%
50 }{}%
51 }%
52 \normalcolor%
53 }
54
55 \renewcommand*\KFLT@maybeendfloatrow{%
56 \ifnumless{\value{KFLT@thiscol}}{\value{KFLT@numcols}}%
57 }{% thiscol < numcols
58 }{% >=
59 \defcounter{KFLT@thiscol}{0}%
60 }%
61 }%
62
63 \renewcommand{\KFLT@trackrows}%
64 {%

```

If are nested inside a keyfloats or a subfloat:

```

65 \ifboolexpr{%
66 test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}} or%
67 bool{KFLT@inkeysubfloats}%
68 }%
69 {% nested

```

Tracks row start and end:

```
70 \KFLT@maybestartfloatrow%
```

Possibly fill space between columns:

```

71 \ifnumgreater{\value{KFLT@thiscol}}{1}%
72 {%
73 % \hfill%
74 }%
75 {}%
76 }% nested
77 {}% not nested
78 }

79 \RenewDocumentCommand{\KFLT@onefigureimage}{m}
80 {%
81 \LWR@traceinfo{KFLT@onefigureimage}%
82 % \begin{lrbox}{\KFLT@envbox}%
83 \ifthenelse{\NOT\equal{\KFLT@lw}{}}%
84 {%
85 \KFLT@frame{\includegraphics%
86 [scale=\KFLT@es,width=\KFLT@imagewidth]{#1}}%
87 }%
88 {% not linewidth
89 \ifthenelse{\dimtest{\KFLT@w}{>}{0pt}}%
90 {% width is given
91 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
92 {% w and h
93 \KFLT@frame{\includegraphics%
94 [scale=\KFLT@es,%
95 width=\KFLT@imagewidth,height=\KFLT@h]{#1}}%
96 }% w and h
97 {% only w
98 \KFLT@frame{\includegraphics%
99 [scale=\KFLT@es,width=\KFLT@imagewidth]{#1}}%
100 }% only w
101 }% width is given
102 }% width is not given
103 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
104 {%
105 \KFLT@frame{\includegraphics%
106 [scale=\KFLT@es,height=\KFLT@h]{#1}}%
107 }%
108 {%
109 \KFLT@frame{\includegraphics%
110 [scale=\KFLT@es]{#1}}%
111 }%
112 }% width is not given

```

```

113 }% not linewidth
114 % \end{lrbox}%
115 % \unskip%
116 % \KFLT@findenvboxwidth%
117 % \begin{turn}{\KFLT@r}%
118 % \KFLT@frame{\usebox{\KFLT@envbox}}%
119 % \unskip%
120 % \end{turn}%
121 \LWR@traceinfo{KFLT@onefigureimage: done}%
122 }

123 \RenewDocumentEnvironment{KFLT@boxinner}{ }
124 {%
125 \LWR@traceinfo{KFLT@boxinner}%
126 \LWR@stoppars%
127 \minipagefullwidth%
128 \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
129 \fminipage{\KFLT@imagewidth}%
130 }{%
131 \minipage{\KFLT@imagewidth}%
132 }%
133 }
134 {%
135 \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
136 \endfminipage%
137 }{%
138 \endminipage%
139 }%
140 \LWR@startpars%
141 \LWR@traceinfo{KFLT@boxinner: done}%
142 }

143 \newcommand*\LWR@KFLT@setttextalign[1]{%
144 \def\LWR@KFLT@textalign{justify}%
145 \ifcsstring{KFLT@#1textalign}{\centering}%
146 {\def\LWR@KFLT@textalign{center}}%
147 {}%
148 \ifcsstring{KFLT@#1textalign}{\raggedleft}%
149 {\def\LWR@KFLT@textalign{right}}%
150 {}%
151 \ifcsstring{KFLT@#1textalign}{\raggedright}%
152 {\def\LWR@KFLT@textalign{left}}%
153 {}%
154 }
155
156 \renewcommand{\KFLT@addtext}[1]
157 {%

Is there text to add?

158 \ifcsempy{KFLT@#1t}%
159 {}% no text
160 {% text to add
161 {% local

```

Add some space, then create a <div> to contain the text:

```
162 \addvspace{\smallskipamount}%
163 \LWR@KFLT@settextalign{#1}%
164 \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%
```

Set the alignment and some text parameters:

```
165 % \csuse{KFLT@#1textalign}%
166 % \footnotesize%
167 \setlength{\parskip}{1.5ex}%
168 \setlength{\parindent}{0em}%
```

Typeset the actual text:

```
169 \csuse{KFLT@#1t}%
```

Close it all out with a little more space:

```
170 \end{BlockClass}%
171 % \par\addvspace{2ex}%
172 }% local
173 }% text to add
174 }
175
176 \@ifpackageloaded{tocdata}
177 {}
178 {% tocdata not loaded
179
180 \newcommand*\LWR@KFLT@setnamealign[1]{%
181 \def\LWR@KFLT@textalign{justify}%
182 \ifstrequal{#1}{\centering}%
183 {\def\LWR@KFLT@textalign{center}}%
184 {}%
185 \ifstrequal{#1}{\raggedleft}%
186 {\def\LWR@KFLT@textalign{right}}%
187 {}%
188 \ifstrequal{#1}{\raggedright}%
189 {\def\LWR@KFLT@textalign{left}}%
190 {}%
191 }
192
193 \renewcommand*\KFLT@addartisttext[3]{%
194
```

Add space and create the name inside a <div>:

```
195 % \addvspace{\medskipamount}%
196 % \begin{minipage}{\linewidth}%
197 \LWR@KFLT@setnamealign{#3}%
198 \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%
199
```

Text alignment is #3, and depends on artist or author:

```

200 % #3%
201
#1 is empty or 'subgrp'
#2 is empty for artist, 'u' for author:
202 \footnotesize\textsc{%
203 \KFLT@optionalname{\csuse{KFLT@#1a#2p}}%
204 \KFLT@optionalname{\csuse{KFLT@#1a#2f}}%
205 \csuse{KFLT@#1a#2l}%
206 \csuse{KFLT@#1a#2s}%
207 }%
208 % \end{minipage}%
209 \end{BlockClass}
210 % \par\addvspace{2ex}%
211 }
212
213}% tocd data not loaded

```

Env KFLT@marginfloat [*<offset>*] {*<type>*}

```

214 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}
215 {%
216 \uselengthunit{PT}%
217 \LWR@BlockClassWP%
218 {float:right; width:2in; margin:10pt}%
219 {}%
220 {marginblock}%
221 \captionsetup{type=#2}%
222 \minipage{\LWR@usersmarginparwidth}%
223 \setlength{\marginparwidth}{.95\LWR@usersmarginparwidth}%
224 }
225 {%
226 \endminipage%
227 \endLWR@BlockClassWP%
228 }
229 \DeclareDocumentEnvironment{marginfigure}{o}
230 {\begin{KFLT@marginfloat}{figure}}
231 {\end{KFLT@marginfloat}}
232
233 \DeclareDocumentEnvironment{margintable}{o}
234 {\begin{KFLT@marginfloat}{table}}
235 {\end{KFLT@marginfloat}}

```

Env keywrap {*<width>*} {*<keyfloat>*}

```

236 \DeclareDocumentEnvironment{keywrap}{m +m}
237 {%
238 \LWR@ensuredoingapar%
239 \setlength{\linewidth}{6in}% in case #1 has \linewidth
240 \setlength{\LWR@templengthone}{#1}%
241 \begin{LWR@BlockClassWP}%
242 {%

```

```

243 float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
244 margin:10pt%
245 }%
246 {}%
247 {marginblock}%
248 \setlength{\linewidth}{.95\LWR@templengthone}%
249 \booltrue{KFLT@keywrap}%
250 #2%
251 \end{LWR@BlockClassWP}%
252 }
253 {}

254]% AtBeginDocument

```

---

File 190 **lwarp-layaureo.sty**

§ 288 Package **layaureo**

Pkg layaureo layaureo is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{layaureo}[2004/09/16]

---

File 191 **lwarp-layout.sty**

§ 289 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 192 **lwarp-layouts.sty**

§ 290 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{\tryvoffset}[1]{}
33 \newcommand{\trytopmargin}[1]{}
34 \newcommand{\tryheadheight}[1]{}
35 \newcommand{\tryheadsep}[1]{}
36 \newcommand{\trytextheight}[1]{}
37 \newcommand{\tryfootskip}[1]{}
38 \newcommand{\tryoddsidemargin}[1]{}
39 \newcommand{\tryevensidemargin}[1]{}
40 \newcommand{\trytextwidth}[1]{}
41 \newcommand{\trymarginparsep}[1]{}
42 \newcommand{\trymarginparwidth}[1]{}
43 \newcommand{\trymarginparpush}[1]{}
44 \newcommand{\trycolumnsep}[1]{}
45 \newcommand{\trycolumnseprule}[1]{}
46 \newcommand{\setfootbox}[2]{}
47 \newcommand{\currentpage}{}
48 \newcommand{\drawpage}{(draw page)}
49 \newcommand{\pagediagram}{(page diagram)}
50 \newcommand{\pagedesign}{(page design)}
51 \newcommand{\pagevalues}{(page values)}
52 \newcommand{\trystockwidth}[1]{}
53 \newcommand{\trystockheight}[1]{}
54 \newcommand{\trytrimedge}[1]{}
55 \newcommand{\trytrimtop}[1]{}
56 \newcommand{\tryuppermargin}[1]{}
57 \newcommand{\tryspinemargin}[1]{}
58 \newcommand{\currentstock}{}
59 \newcommand{\drawstock}{(draw stock)}
60 \newcommand{\stockdiagram}{(stock diagram)}
```

```
61 \newcommand{\stockdesign}{(stock design)}
62 \newcommand{\stockvalues}{(stock values)}
63 \newcommand{\tryitemindent}[1]{ }
64 \newcommand{\trylabelwidth}[1]{ }
65 \newcommand{\trylabelsep}[1]{ }
66 \newcommand{\tryleftmargin}[1]{ }
67 \newcommand{\tryrightmargin}[1]{ }
68 \newcommand{\trylistparindent}[1]{ }
69 \newcommand{\trytopsep}[1]{ }
70 \newcommand{\tryparskip}[1]{ }
71 \newcommand{\trypartopsep}[1]{ }
72 \newcommand{\tryparsep}[1]{ }
73 \newcommand{\tryitemsep}[1]{ }
74 \newcommand{\currentlist}{ }
75 \newcommand{\drawlist}{(draw list)}
76 \newcommand{\listdiagram}{(list diagram)}
77 \newcommand{\listdesign}{(list design)}
78 \newcommand{\listvalues}{(list values)}
79 \newcommand{\tryfootins}[1]{ }
80 \newcommand{\tryfootnotesep}[1]{ }
81 \newcommand{\tryfootnoteline}[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 193 **lwarp-leading.sty**

§ 291 Package **leading**

Pkg leading leading is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{leading}[2008/12/11]  
 2 \newcommand\leading[1]{}

---

File 194 **lwarp-letterspace.sty**

§ 292 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][1]{}

---

```
4 \def\textls#1#{
5 \newcommand*\lslig[1]{#1}
```

---

File 195 **lwarp-lettrine.sty**

§ 293 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 `lettrinertext`. `\lettrine [<keys>] {<letter>} {<additional text>}`

```
2 \DeclareDocumentCommand{\lettrine}{o m m}{%
3 \InlineClass{lettrine}{#2}\InlineClass{lettrinertext}{#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 196 **lwarp-lineno.sty**

§ 294 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\lineLabel\label
35
36 \def\switchlinenumbers{\@ifstar{}{}}
37 \def\setmakelinenumbers#1{\@ifstar{}{}}
38
39 \def\leftlinenumbers{\@ifstar{}{}}
40 \def\rightlinenumbers{\@ifstar{}{}}
41
42 \newcounter{linenumber}
43 \newcount\c@pagewiselinenumber
44 \let\c@runninglinenumber\c@linenumber
45
46 \def\runningpagewiselinenumbers{}
47 \def\realpagewiselinenumbers{}
48
49
50 \NewDocumentCommand\modulolinenumbers{s o}{}
51
52 \chardef\c@linenumbermodulo=5

```

```

53 \modulolinenumbers[1]
54
55 \newcommand*{firstlinenumber}[1]{
56
57 \newcommand\internallinenumbers{
58 \let\endinternallinenumbers\endlinenumbers
59 \@namedef{internallinenumbers*}{\internallinenumbers*}
60 \expandafter\let\csname endinternallinenumbers*\endcsname\endlinenumbers
61
62 \newcommand*{\linenoplaceholder}[1]{% redefine per language
63 (line number reference for \detokenize\expandafter{#1})
64 }
65
66 \newcommand*{\lineref}[2][\linenoplaceholder{#2}]
67 \newcommand*{\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\thelinenumber{}
87
88 \def\LineNumber{}
89 \def\makeLineNumber{}
90 \def\makeLineNumberLeft{}
91 \def\makeLineNumberRight{}
92 \def\makeLineNumberOdd{}
93 \def\makeLineNumberEven{}
94 \def\makeLineNumberRunning{}
95
96
97 \newenvironment{numquote} {\quote}{\endquote}
98 \newenvironment{numquotation} {\quotation}{\endquotation}
99 \newenvironment{numquote*} {\quote}{\endquote}
100 \newenvironment{numquotation*}{\quotation}{\endquotation}
101
102 \newdimen\bframerule
103 \bframerule=\fbxrule
104
105 \newdimen\bframesep
106 \bframesep=\fbxsep
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 197 **lwarp-lips.sty**

§ 295 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 198 **lwarp-listings.sty**

§ 296 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@frameround ffff\relax%
34 \lst@multicols\@empty%
35 \LWR@origlst@Init{#1}\relax%
```

Avoids extra horizontal space:

```
36 \def\lst@frame{r}{}%
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@afterendverbatim{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\fnnum@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@origllap{\LWR@orignormalfont
139 \kern 6in \kern\lst@numbersep
140 \lst@numberstyle{\thelstnumber}}}%
141 }{\PackageError{lwarp-listings}{Numbers #1 unknown}\@ehc}}

```

142 \end{warpHTML}

---

File 199 **lwarp-listliketab.sty**

§ 297 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 200 **lwarp-lltjext.sty**

§ 298 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 201 **lwarp-longtable.sty**

§ 299 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 `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 ...
\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 threeparttable, 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 202 **lwarp-lscape.sty**

§ 300 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 203 **lwarp-ltablex.sty**

§ 301 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{tabularx}
2
3 \LWR@ProvidesPackageDrop{ltablex}[2014/08/13]
4
5 \DeclareDocumentEnvironment{tabularx}{m o m}
6 {\longtable{#3}}
7 {\endlongtable}
8
9 \DeclareDocumentEnvironment{tabularx*}{m o m}
10 {\longtable{#3}}
11 {\endlongtable}
12
13 \newcommand*{\keepXColumns}{}
14 \newcommand*{\convertXColumns}{}

```

File 204 **lwarp-ltcaption.sty**

§ 302 Package **ltcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg ltcaption ltcaption is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ltcaption}[2018/08/26]

\LTcaptype is already defined by lwarp.

longtable\* is already defined by lwarp-longtable.

```
2 \newlength{\LTcapskip}
3 \newlength{\LTcapleft}
4 \newlength{\LTcapright}
5 \newcommand*{\LTcapmarginsfalse}{}

```

File 205 **lwarp-ltxgrid.sty**

§ 303 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 206 **lwarp-ltxtable.sty**

§ 304 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 \LWR@ProvidesPackageDrop{ltxtable}[1995/12/11]

```
\LTXtable {<width>}{<file>}
2 \newcommand*\LTXtable[2]{%
3 \input{#2}%
4 }

```

File 207 **lwarp-lua-check-hyphen.sty**

§ 305 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 208 **lwarp-lua-visual-debug.sty**

§ 306 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 209 **lwarp-luacolor.sty**

§ 307 Package **luacolor**

Pkg luacolor luacolor is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{luacolor}[2016/05/16]

2 \newcommand{\luacolorProcessBox}[1]{}

---

File 210 **lwarp-luatodonotes.sty**

§ 308 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\LWRTODONOTES@orig@todocommon\@todocommon

```

```

64
65 \RenewDocumentCommand{\@todocommon}{m m}{%
66 \begingroup%
67 \renewcommand*\phantomsection}{}%
68 \LWRTODONOTES@orig@todocommon{#1}{#2}%
69 \endgroup%
70 }
71
72 \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 211 **lwarp-lyluatex.sty**

§ 309 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 212 **lwarp-magaz.sty**

§ 310 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 213 **lwarp-makeidx.sty**

§ 311 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@orignewpage%
4 \LWR@startpars%
5 }
```

---

File 214 **lwarp-manyfoot.sty**

§ 312 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 pdfL<sup>A</sup>T<sub>E</sub>X. With **bigfoot** this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining **bigfoot** or **manyfoot** footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use X<sub>E</sub>L<sup>A</sup>T<sub>E</sub>X or LuaL<sup>A</sup>T<sub>E</sub>X instead of pdfL<sup>A</sup>T<sub>E</sub>X.

**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 215 **lwarp-marginal.sty**

§ 313 Package **marginal**

Pkg marginal marginal is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{marginal}

2 \newcommand*\showlostmarginals{}{}
3 \newcommand*\enlargefreelist{}{}
4 \newcommand*\onesidemarginals{}{}

```

---

File 216 **lwarp-marginfit.sty**

§ 314 Package **marginfit**

Pkg marginfit marginfit is ignored.

**for HTML output:** Discard all options for lwarp-marginfit:

```

1 \LWR@ProvidesPackageDrop{marginfit}[2018/06/08]

```

File 217 **lwarp-marginfix.sty**

§ 315 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*{\margin skip}[1]{}
3 \newcommand*{\clearmargin}{}
4 \newcommand*{\softclearmargin}{}
5 \newcommand*{\extendmargin}[1]{}
6 \newcommand*{\mparshift}[1]{}
7 \newdimen\marginheightadjustment
8 \newdimen\marginposadjustment
9 \newcommand*{\blockmargin}[1][{}]{
10 \newcommand*{\unblockmargin}[1][{}]{
11 \newcommand*{\marginphantom}[2][{}]{

```

File 218 **lwarp-marginnote.sty**

§ 316 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 219 **lwarp-marvosym.sty**

§ 317 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 220 **lwarp-mathtools.sty**

§ 318 Package **mathtools**

*(Emulates or patches code by MORTEN HØGHOLM, LARS MADSEN.)*

Pkg mathtools mathtools is patched for use by lwarp.

 **numbering, italics** showonlyrefs and mathic are disabled.

**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:{\MT_showonlyrefs_false;}
5 \mathtoolsset{showonlyrefs=false}
```

Forces math italic correction off. Not patched for lwarp.

---

```

6 \renewcommand*{\MT_mathic_true:}{\MT_mathic_false:}
7 \mathtoolsset{mathic=false}

8 \MHInternalSyntaxOff

```

---

File 221 **lwarp-mcaption.sty**

§ 319 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 222 **lwarp-mdframed.sty**

§ 320 Package **mdframed**

*(Emulates or patches code by MARCO DANIEL, ELKE SCHUBERT.)*

Pkg mdframed mdframed is loaded with options forced to framemethod=none.

### § 320.1 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.

## § 320.2 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}
```

## § 320.3 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 % \@nbrlistfalse%
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
```

## § 320.4 Initial setup

To handle css and paragraphs, patch code at start and end of environment and contents. `\LWR@print@raggedright` helps avoid hyphenation.

```
32 \mdfsetup{
33 startcode={\LWR@mdframedstart\LWR@print@raggedright},
34 endcode={\LWR@mdframedend},
35 startinnercode={\LWR@startpars\LWR@print@raggedright},
36 endinnercode={\LWR@stoppars},
37 }
```

## § 320.5 Color and length HTML conversion

`\LWR@mdfprintcolor`    `{\langle mdfcolorkey \rangle}`

Given the `mdframed` key, print the color.

```
38 \newcommand*{\LWR@mdfprintcolor}[1]{%
39 \convertcolorspec{named}{\@nameuse{mdf@#1}}{\HTML}\LWR@tempcolor%
40 \LWR@origpound\LWR@tempcolor
41 }
```

`\LWR@mdfprintlength`    `{\langle mdflengthkey \rangle}`

Given the `mdframed` key, print the length.

```
42 \newcommand*{\LWR@mdfprintlength}[1]{%
43 \LWR@forceminwidth{\@nameuse{mdf@#1@length}}%
44 \LWR@printlength{\LWR@atleastonept}%
45 }
```

## § 320.6 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 \let\LTxMacro\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 }
```

§ 320.7 **Mdframed 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@frametitlessave\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 \mdf@endinnercode%
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 \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 }

```

## § 320.8 Titles and subtitles

`\mdfframedtitleenv`     $\{\langle title \rangle\}$

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`     $\{\langle sub -or- subsub \rangle\} [\langle options \rangle] \{\langle title \rangle\}$

Common code for `\LWR@mdfsubtitle` and `\LWR@mdfsubsubtitle`.

Encapsulate the subtitle inside a `<div>` of class `mdfframedsubtitle`:

```
152 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}
153 {% the following empty line is required
154
155 \LWR@traceinfo{\LWR@mdfframedsubtitlecommon 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@mdfsubtitlecommon{subsub}%
187 }
188 \let\mdfsubsubtitle\LWR@mdfsubsubtitle
```

§ 320.9 **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 \ifstrempty{##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][]{%
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][]{%
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][]{%
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][]{%
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 \ifbool{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 223 **lwarp-media9.sty**

§ 321 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 `addresource` can generate a multimedia object.

```
10 \define@key\LWR@medianine{addresource}{%
```

```
11 \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]
```

```
12 {\LWR@medianine@postertext}
```

```
13 {#1}
```

```
14 }
```

Each flashvars source can generate a multimedia object.

```

15 \newcommand*{\LWR@medianine@flashvarsb}[1]{%
16 \IfBeginWith{#1}{source=}{%
17 \StrGobbleLeft{#1}{7}[\LWR@tempone]%
18 \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
19 {\LWR@medianine@postertext}%
20 {\LWR@tempone}%
21 }{%
22 \IfBeginWith{#1}{src=}{%
23 \StrGobbleLeft{#1}{4}[\LWR@tempone]%
24 \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
25 {\LWR@medianine@postertext}%
26 {\LWR@tempone}%
27 }{%
28 }
29
30 \NewDocumentCommand{\LWR@medianine@flashvars}{ >[\SplitList{&}] m }{%
31 \ProcessList {#1}{\LWR@medianine@flashvarsb}%
32 }
33
34 \define@key{\LWR@medianine}{flashvars}{%
35 \LWR@medianine@flashvars{#1}%
36 }

```

`\includemedia` [*options*] {*poster text*} {*file or URL*}

```

37 \newcommand*{\LWR@includemediab}[3][[]]{%
38 \let\input@path\LWR@medianine@path%
39 \renewcommand*{\LWR@medianine@options}{#1}%
40 \renewcommand*{\LWR@medianine@postertext}{#2}%
41 \setkeys*{\LWR@medianine}{#1}%
42 \IfBeginWith{#3}{http}{\LWR@multimedia[#1]{#2}{#3}}{%
43 \IfBeginWith{#3}{HTTP}{\LWR@multimedia[#1]{#2}{#3}}{%
44 \IfBeginWith{#3}{ftp}{\LWR@multimedia[#1]{#2}{#3}}{%
45 \IfBeginWith{#3}{FTP}{\LWR@multimedia[#1]{#2}{#3}}{%
46 }}}%
47 \endgroup%
48 }
49
50 \newrobustcmd*{\includemedia}{%
51 \begingroup%
52 \catcode'\#=12%
53 \catcode'\%=12%
54 % \catcode'\&=12% left alone for splitting flash variables
55 \catcode'\~=12%
56 \catcode'_ =12%
57 \LWR@includemediab%
58 }

```

`\mediabutton` [*options*] {*text*}

Ignored.

```

59 \newcommand*{\mediabutton}[2][[]]{

```

File 224 **lwarp-memhfixc.sty**

§ 322 Package **memhfixc**

Pkg memhfixc memhfixc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{memhfixc}[2013/05/30]

File 225 **lwarp-metalogo.sty**

§ 323 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 226 **lwarp-metalogox.sty**

§ 324 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 227 **lwarp-mhchem.sty**

§ 325 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:

|                                                 |       |
|-------------------------------------------------|-------|
| <code>\ce{NaOH(aq,\infty)}</code>               | % old |
| <code>\ce{NaOH(aq,\infty)}</code>               | % new |
| <code>\ce{Fe(CN)_{\frac{6}{2}}}</code>          | % old |
| <code>\ce{Fe(CN)_{\frac{6}{2}}}</code>          | % new |
| <code>\ce{NO_x}</code>                          | % old |
| <code>\ce{NO_x}</code>                          | % new |
| <code>\ce{NO_x}</code>                          | % old |
| <code>\ce{NO_x}</code>                          | % new |
| <code>\ce{\\$cis\{-}[PtCl2(NH3)2]}</code>       | % old |
| <code>\ce{\mathit{cis}\{-}[PtCl2(NH3)2]}</code> | % 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 228 **lwarp-microtype.sty**

§ 326 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 229 **lwarp-midfloat.sty**

§ 327 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 230 **lwarp-midpage.sty**

§ 328 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@mbbox{margin-top:6ex} ; \LWR@print@mbbox{margin-bottom:6ex}%
5]{midpage}}
6 {\end{BlockClass}}
```

---

File 231 **lwarp-minibox.sty**

§ 329 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\fbboxrule{\l_minibox_rule_dim}
10 \setlength\fbboxsep{\l_minibox_pad_dim}
11 \fbboxBlock{%
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 232 **lwarp-minitoc.sty**

§ 330 Package **minitoc**

Pkg minitoc minitoc is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{minitoc}[2018/07/12]

mtcoff disables minitoc.

2 \usepackage{mtcoff}

---

File 233 **lwarp-morefloats.sty**

§ 331 Package **morefloats**

Pkg morefloats morefloats is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{morefloats}[2015/07/22]

---

File 234 **lwarp-moreverb.sty**

§ 332 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{verbatim}{%
8 \LWR@afterendverbatim{1}%
9 }
10
11
12 \LetLtxMacro\LWRMV@orig@verbatiminput\@verbatiminput
13
14 \renewcommand{\@verbatiminput}[2][]{%
15 \LWR@forcenewpage
16 \LWR@atbeginverbatim{3}{Verbatim}%
17 \LWRMV@orig@verbatiminput[#1]{#2}%
18 \LWR@afterendverbatim{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 235 **lwarp-movie15.sty**

§ 333 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 \beginngroup%
18 \catcode'\#=12%
19 \catcode'\%=12%
20 \catcode'\&=12%
21 \catcode'\~=12%
22 \catcode'_ =12%
23 \LWR@includemovieb%
24 }
25
26
27 \newcommand*{\movieref}[3][[]]{
28
29 \LetLtxMacro\movie\LWR@multimedia
30 % \LetLtxMacro\sound\LWR@multimedia% not in media15
31
32 \newcommand{\hyperlinkmovie}[3][[]]{

```

---

File 236 **lwarp-mparhack.sty**

§ 334 Package **mparhack**

Pkg mparhack mparhack is ignored.

**for HTML output:** Discard all options for lwarp-mparhack:

```
1 \LWR@ProvidesPackageDrop{mparhack}[2005/04/17]
```

---

File 237 **lwarp-multicap.sty**

§ 335 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 238 **lwarp-multicol.sty**

§ 336 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 239 **lwarp-multicolrule.sty**

§ 337 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 240 **lwarp-multimedia.sty**

§ 338 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 241 **lwarp-multirow.sty**

§ 339 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 neg-

ative 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 339.2 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 & ...
```

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}{}
```

### § 339.1 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 \IfValueT{#1}{%
12 \ifstrequal{#1}{b}{style="\LWR@print@boxed{vertical-align:bottom}" }{%
13 \ifstrequal{#1}{t}{style="\LWR@print@boxed{vertical-align:top}" }{%
14 }%
```

The left/right border, if given:

```
15 \ifdefvoid{\LWR@multirowborder}{}%
16 style="\LWR@print@boxed{border-\LWR@multirowborder:} 2px dotted black ; %
17 \LWR@print@boxed{padding-\LWR@multirowborder:} 2px" %
18 }%
```

A class adds the column spec and the rule:

```
19 class="td%
```

Append this column's spec:

```
20 \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.

```
21 \LWR@addcmidruletrim%
22 \LWR@addleftmostbartag%
23 \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%
24 "%
```

```
25 \LWR@tdstartstyles%
26 \LWR@addcmidrulewidth%
27 \LWR@addcdashline%
28 \LWR@addtabularrulecolors%
29 \LWR@tdendstyles%
30 }%
```

The column's < spec:

```
31 \LWR@getexparray{\LWR@colbeforespec}{\arabic{\LWR@tableLaTeXcolindex}}%
```

While printing the text, redefine `\` to generate a new line

```
32 \begingroup\LetLtxMacro{\}{\LWR@endofline}#6\endgroup%
33 \LWR@stoppars%
34 \global\boolfalse{\LWR@intabularmetadata}%
35 \renewcommand{\LWR@multirowborder}{}%
36 \LWR@traceinfo{*** LWR@HTML@multirow done}%
37 }%
38
39 \LWR@formatted{multirow}
```

### § 339.2 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`.

```
40 \AtBeginDocument{
41
42 \NewExpandableDocumentCommand{\LWR@HTML@multicolumnrow}{m m O{ } m O{ } m O{ } +m}{%
43 \booltrue{LWR@usedmultirow}%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
44 \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}
```

Create the multicolumn/multirow tag:

```
45 \begingroup%
46 \LetLtxMacro{\}\{\LWR@endofline}%
47 \LWR@domulticolumn[#3][#4]{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#8}%
48 \endgroup%
```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```
49 \addtocounter{LWR@tableLaTeXcolindex}{#1}%
50 \addtocounter{LWR@tableLaTeXcolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
51 \global\booltrue{LWR@skipatbang}%
52 }
53
54 \LWR@expandableformatted{multicolumnrow}
55
56 }% \AtBeginDocument
```

---

File 242 **lwarp-multitoc.sty**

§ 340 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 243 **lwarp-musicography.sty**

§ 341 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 al t tag copies C and 3/2, etc. Hashes are used for the meter images, which are then reused as necessary.



Note that browser support for musical symbols may be buggy. ALT text and copy/paste into a text editor work well.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{musicography}[2019/05/28]

2 \NewDocumentCommand{\LWR@HTML@musSymbol}{ O{\musFont} m m m m }{%
3 \begin{lateximage}%
4 {#1\kern#2\raisebox{#3}{#5}\kern#4}%
5 \end{lateximage}%
6 }
7
8 \LWR@formatted{musSymbol}
9
10 \NewDocumentCommand{\LWR@HTML@musStemmedNote}{ m }{%
11 \begin{lateximage}%
12 \musSymbol{0.05em}{0.5ex}{0.2em}{#1\musStem}%
13 \end{lateximage}%
14 }
15
16 \LWR@formatted{musStemmedNote}
17
18 \NewDocumentCommand{\LWR@HTML@musFlaggedNote}{ m m }{%
19 \begin{lateximage}%
20 \musSymbol{0.05em}{0.5ex}{0pt}{#1\musStem}%
21 \musSymbol{0pt}{0pt}{0.9em}{#2}%
22 \end{lateximage}%
23 }
24
25 \LWR@formatted{musFlaggedNote}
26
27 \NewDocumentCommand{\LWR@HTML@musDottedNote}{ m }{%
28 \begin{lateximage}%
29 #1\musDot%
30 \end{lateximage}%
31 }
32
```

```

33 \LWR@formatted{musDottedNote}
34
35 \NewDocumentCommand{\LWR@HTML@musMeter}{ m m }{%
36 \begin{lateximage}*[#1/#2][#1#2]*%
37 \musStack{#1 #2}\kern0.05em%
38 \end{lateximage}%
39 }
40
41 \LWR@formatted{musMeter}
42
43 \NewDocumentCommand{\LWR@HTML@meterCplus}{ m }{%
44 \begin{lateximage}*[C#1]*%
45 \meterC{}\kern-0.7pt#1%
46 \end{lateximage}%
47 }
48
49 \LWR@formatted{meterCplus}
50
51 \NewDocumentCommand{\LWR@HTML@meterC}{}{%
52 \begin{lateximage}*[C]*%
53 \musSymbolMeter{\symbol{83}}%
54 \end{lateximage}%
55 }
56
57 \LWR@formatted{meterC}
58
59 \NewDocumentCommand{\LWR@HTML@meterCutC}{}{%
60 \begin{lateximage}*[C]*%
61 \musSymbolMeter{\symbol{82}}%
62 \end{lateximage}%
63 }
64
65 \LWR@formatted{meterCutC}
66
67 \NewDocumentCommand{\LWR@HTML@meterCThreeTwo}{}{%
68 \begin{lateximage}*[C3/2]*%
69 \meterCplus{\musStack{3 2}}%
70 \end{lateximage}%
71 }
72
73 \LWR@formatted{meterCThreeTwo}
74
75 \NewDocumentCommand{\LWR@HTML@meterO}{}{\HTMLUnicode{25EF}}
76
77 \LWR@formatted{meterO}
78
79 \newcommand{\LWR@null@noFig}[1][[]]{%
80
81 \NewDocumentCommand{\LWR@HTML@musFig}{ m }{%
82 \begin{lateximage}*[%
83 \quad \% ALT text for copy/paste
84 \quad \LetLtxMacro\noFig\LWR@null@noFig%
85 \quad \LetLtxMacro\musSharp\LWR@HTML@musSharp%
86 \quad \LetLtxMacro\musDoubleSharp\LWR@HTML@musDoubleSharp%
87 \quad \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 244 **lwarp-nameauth.sty**

§ 342 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 245 **lwarp-nameref.sty**

§ 343 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 246 **lwarp-natbib.sty**

§ 344 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 247 **lwarp-nccfancyhdr.sty**

§ 345 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 248 **lwarp-needspace.sty**

§ 346 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 249 **lwarp-nextpage.sty**

§ 347 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{\cleartooddpge}{o}{}
5 \DeclareDocumentCommand{\movetooddpge}{o}{}

```

---

File 250 **lwarp-nfssext-cfr.sty**

§ 348 Package **nfssext-cfr**

*(Emulates or patches code by CLEA F. REES.)*

Pkg nfssext-cfr nfssext-cfr is emulated in HTML, and used as-is in print output.

Results depend on the browser's font.

**for HTML output:** 1 \LWR@ProvidesPackagePass{nfssext-cfr}[2017/03/28]

Macros which are present in the 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@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@ostyle}{\LWR@HTML@scshape}
27 % \newrobustcmd{\LWR@HTML@sihape}{}
28 \newrobustcmd{\LWR@HTML@olshape}{}
29 \newrobustcmd{\LWR@HTML@scolshape}{}
30 \newrobustcmd{\LWR@HTML@ushape}{}
31 \newrobustcmd{\LWR@HTML@scushape}{}
32 \newrobustcmd{\LWR@HTML@uishape}{\LWR@HTML@itshape}
33 \newrobustcmd{\LWR@HTML@rihape}{}
34 \newrobustcmd{\LWR@HTML@regwidth}{}
35 \newrobustcmd{\LWR@HTML@nwidth}{}
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{embossstyle}
76 \LWR@formatted{ornamentalstyle}
77 \LWR@formatted{qtstyle}
78 \LWR@formatted{shstyle}
79 \LWR@formatted{swashstyle}
80 \LWR@formatted{tmstyle}
81 \LWR@formatted{tvstyle}
82 \LWR@formatted{tstyle}
83 \LWR@formatted{lstyle}
84 \LWR@formatted{tlstyle}
85 \LWR@formatted{plstyle}
86 \LWR@formatted{tostyle}
87 % \LWR@formatted{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\tmlstyle\LWR@null@tmlstyle%  
203 \LetLtxMacro\tmlstyle\LWR@null@tmlstyle%  
204 \LetLtxMacro\tmlstyle\LWR@null@tmlstyle%  
205 \LetLtxMacro\lstyle\LWR@null@lstyle%  
206 \LetLtxMacro\lstyle\LWR@null@lstyle%  
207 \LetLtxMacro\plstyle\LWR@null@plstyle%  
208 \LetLtxMacro\lstyle\LWR@null@lstyle%  
209 % \LetLtxMacro\lstyle\LWR@null@lstyle%  
210 \LetLtxMacro\olshape\LWR@null@olshape%  
211 \LetLtxMacro\lstyle\LWR@null@lstyle%  
212 \LetLtxMacro\lstyle\LWR@null@lstyle%  
213 \LetLtxMacro\lstyle\LWR@null@lstyle%  
214 \LetLtxMacro\lstyle\LWR@null@lstyle%  
215 \LetLtxMacro\lstyle\LWR@null@lstyle%  
216 \LetLtxMacro\lstyle\LWR@null@lstyle%  
217 \LetLtxMacro\lstyle\LWR@null@lstyle%  
218 \LetLtxMacro\lstyle\LWR@null@lstyle%  
219 \LetLtxMacro\lstyle\LWR@null@lstyle%  
220 \LetLtxMacro\lstyle\LWR@null@lstyle%  
221 \LetLtxMacro\lstyle\LWR@null@lstyle%  
222 \LetLtxMacro\lstyle\LWR@null@lstyle%  
223 \LetLtxMacro\lstyle\LWR@null@lstyle%  
224 \LetLtxMacro\lstyle\LWR@null@lstyle%  
225 \LetLtxMacro\lstyle\LWR@null@lstyle%  
226 \LetLtxMacro\lstyle\LWR@null@lstyle%  
227 \LetLtxMacro\lstyle\LWR@null@lstyle%  
228 % \LetLtxMacro\lstyle\LWR@null@lstyle%  
229 \LetLtxMacro\lstyle\LWR@null@lstyle%  
230 % \LetLtxMacro\lstyle\LWR@null@lstyle%  
231 \LetLtxMacro\lstyle\LWR@null@lstyle%  
232 \LetLtxMacro\lstyle\LWR@null@lstyle%  
233 % \LetLtxMacro\lstyle\LWR@null@lstyle%  
234 % \LetLtxMacro\lstyle\LWR@null@lstyle%  
235 % \LetLtxMacro\lstyle\LWR@null@lstyle%  
236 \LetLtxMacro\lstyle\LWR@null@lstyle%  
237 \LetLtxMacro\lstyle\LWR@null@lstyle%  
238 \LetLtxMacro\lstyle\LWR@null@lstyle%

```
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@eswshape}{}{% 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@textsu}[1]{#1}

```
349 % \newrobustcmd{\LWR@null@textsi}[1]{#1}
350 \newrobustcmd{\LWR@null@textdf}[1]{#1}
351
352 \ifdef{\LWR@HTML@eswshape}{% 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@null@font}{%
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{}
452 \newrobustcmd*\LWR@HTML@zeroslash{}
453 \LWR@formatted{zeroslash}
```

File 251 **lwarp-nicefrac.sty**

§ 349 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 \CustomizeMathJax{\newcommand{\nicefrac}[3][[]]{#2/#3}}

```

File 252 **lwarp-niceframe.sty**

§ 350 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 \setlength{\LWR@templengthone}{#1}
4 \begin{BlockClass}[max-width:\LWR@printlength{\LWR@templengthone}]{#3}
5 #2

```

---

```

6 \end{BlockClass}
7 }
8
9 \newcommand{\niceframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{niceframe}}
10 \newcommand{\curlyframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{curlyframe}}
11 \newcommand{\artdecoframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{artdecoframe}}
12
13 \newcommand{\generalframe}[9]{\LWR@niceframe{\textwidth}{#9}{generalframe}}

```

---

File 253 **lwarp-nomencl.sty**

§ 351 Package **nomencl**

*(Emulates or patches code by BORIS VEYTSMAN, BERND SCHANDL, LEE NETHERTON, CV RADHAKRISHNAN.)*

Pkg nomencl nomencl is patched for use by lwarp.

To process the HTML nomenclature:

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

**for HTML output:** 1 \LWR@ProvidesPackagePass{nomencl}[2005/09/22]

\BaseJobname is added to the label in case xr or xr-hyper are used.

```

2 \def\@@@nomenclature[#1]#2#3{%
3 \def\@tempa{#2}\def\@tempb{#3}%
4 \protected@write\@nomenclaturefile{%
5 {\string\nomenclatureentry{#1\nom@verb\@tempa @[\nom@verb\@tempa]}%
6 \begin@group\nom@verb\@tempb\protect\nomeqref{\theequation}%
7 |nompageref}{\theLWR@previousautopagelabel}}% lwarp
8 \end@group
9 \@esphack}
10
11 \renewcommand*{\pagedeclaration}[1]{, \nameref{\BaseJobname-autopage-#1}}%

```

---

File 254 **lwarp-nonfloat.sty**

§ 352 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\@capttype{figure}\caption}
4 \newcommand{\tabcaption}{\def\@capttype{table}\topcaption}
5 \newenvironment{narrow}[2]{}{}

```

File 255 **lwarp-nonumonpart.sty**

§ 353 Package **nonumonpart**

Pkg nonumonpart nonumonpart is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nonumonpart}[2011/04/15]

File 256 **lwarp-nopageno.sty**

§ 354 Package **nopageno**

Pkg nopageno nopageno is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nopageno}[1989/01/01]

File 257 **lwarp-notes.sty**

§ 355 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 258 **lwarp-notespages.sty**

§ 356 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]{}
11 \newcommand*\notespages}[1]{}
12 \newcommand*\notesfill}[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 259 **lwarp-nowidow.sty**

§ 357 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]{}
3 \newcommand*\setnowidow}[1]{}

\noclub [⟨lines⟩]
\setnoclub [⟨lines⟩]

```

---

```
4 \newcommand*\noclub}[1][{}]{
5 \newcommand*\setnoclub}[1][{}]{
```

---

File 260 **lwarp-nttheorem.sty**

§ 358 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.

---

### § 358.1 Limitations

 **Font control** This conversion is not total. Font control is via css, and the custom  $\LaTeX$  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.

### § 358.2 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]

```

### § 358.3 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\theoreminframepreskipamount
43 \thm@topsepadd\theoreminframepostskipamount
44 \else
45 \thm@topsep\theorempreskipamount
46 \thm@topsepadd\theorempostskipamount
47 \fi
48 \else% oldframeskips
49 \thm@topsep\theorempreskipamount
50 \thm@topsepadd \theorempostskipamount
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\theoreminframepreskipamount
79 \thm@topsepadd\theoreminframepostskipamount
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 }

```

#### § 358.4 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 }

```

#### § 358.5 \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 }

```

#### § 358.6 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}

```

### § 358.7 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

```

### § 358.8 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

```

## § 358.9 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

```

### § 358.10 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 }

```

### § 358.11 **\NoEndMark**

```

445 \gdef\NoEndMark{\global\setendmarkfalse}

```

### § 358.12 **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 \begingroup
457 \c@tocdepth=-2%
458 \def\thm@list{#1}\thm@processlist
459 \endgroup
460 \LWR@html@elementclassend{nav}{lohtm}%
461 }

```

### § 358.13 **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

```

### § 358.14 **Cross-referencing**

```
\thref {<label>}
```

```
481 \newcommand*{\thref}[1]{\cref{#1}}%
```

---

### File 261 **lwarp-octave.sty**

### § 359 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 262 **lwarp-overpic.sty**

§ 360 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 263 **lwarp-pagegrid.sty**

§ 361 Package **pagegrid**

Pkg pagegrid pagegrid is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagegrid}[2016/05/16]

2 \newcommand*{\pagegridsetup}[1]{}

```

---

File 264 **lwarp-pagenote.sty**

§ 362 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 265 **lwarp-pagesel.sty**

§ 363 Package **pagesel**

Pkg pagesel pagesel is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagesel}[2016/05/16]

```

---

File 266 **lwarp-paralist.sty**

§ 364 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 267 **lwarp-parnotes.sty**

§ 365 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@inparnotestrue
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 268 **lwarp-parskip.sty**

§ 366 Package **parskip**

Pkg parskip parskip is ignored.

**for HTML output:** Discard all options for lwarp-parskip.

```
1 \LWR@ProvidesPackageDrop{parskip}[2001/04/09]
```

---

File 269 **lwarp-pbox.sty**

§ 367 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 270 **lwarp-pdfcomment.sty**

§ 368 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{\pdffreetextcomment}[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][{}]{%

```

---

File 271 **lwarp-pdfcrypt.sty**

§ 369 Package **pdfcrypt**

Pkg pdfcrypt pdfcrypt is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfcrypt}[2016/05/16]

```

2 \newcommand*\pdfcryptsetup}[1][{}]{%

```

---

File 272 **lwarp-pdflscope.sty**

§ 370 Package **pdfscape**

Pkg pdfscape pdfscape is ignored.

**for HTML output:** Discard all options for lwarp-pdfscape:

```
1 \LWR@ProvidesPackageDrop{pdfscape}[2016/05/14]
```

---

File 273 **lwarp-pdfmarginpar.sty**

§ 371 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 274 **lwarp-pdfpages.sty**

§ 372 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}{doublepagetwist}[false]{}
11 \define@key{pdfpages}{doublepagetwistodd}[false]{}
12 \define@key{pdfpages}{doublepagetwist*}[false]{}
13 \define@key{pdfpages}{doublepagetwistodd*}[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 275    **lwarp-pdfprivacy.sty**

§ 373    Package    **pdfprivacy**

Pkg    pdfprivacy    pdfprivacy is ignored.

**for HTML output:**    1 \LWR@ProvidesPackageDrop{pdfprivacy}[2017/12/03]

---

File 276 **lwarp-pdfrender.sty**

§ 374 Package **pdfrender**

Pkg pdfrender pdfrender is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfrender}[2016/05/17]

```
2 \newcommand*\pdfrender[1]{}
3 \newcommand{\textpdfrender}[2]{#2}
```

---

File 277 **lwarp-pdfsync.sty**

§ 375 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 278 **lwarp-pdftricks.sty**

§ 376 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 279 **lwarp-pdfx.sty**

§ 377 Package **pdfx**

Pkg pdfx pdfx is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfx}[2017/05/18]

---

File 280 **lwarp-perpage.sty**

§ 378 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<countername>` to include `\theperpage`, it is necessary to place that redefinition inside a `warpprint` environment to avoid modifying the HTML definitions.

`\AddAbsoluteCounter` must not be inside `warpprint`, as the counter must be added for HTML also, although it is not incremented.

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

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

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

```

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

```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by HTML page. This is recommended for

`\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{perpage}[2014/10/25]
2 \newcommand\AddAbsoluteCounter[1]
3 {
4 \ifundefined{c@abs#1}{%
5 \expandafter\newcount\csname c@abs#1\endcsname
6 \global\value{abs#1}\@ne
7 \global\expandafter\let\csname cl@abs#1\endcsname\empty
8 \expandafter\xdef\csname theabs#1\endcsname{%
9 \noexpand\number \csname c@abs#1\endcsname
10 }%
11 \global\@namedef{c@pabs@#1}{\pp@cl@begin
12 \stepcounter{abs#1}%
13 \pp@cl@end}%
14 \@addtoreset{pabs@#1}{#1}
15 }
16 {}
17 }
18
19 \AddAbsoluteCounter{page}
20 \def\theabspage{1}
21
22 \newcommand*\MakePerPage[2][1]{%
23 \ifltxcounter{#2Reset}{%
24 \setcounter{#2Reset}{#1}%
25 }{
26
27 }%
28 }
29
30 \newcommand*\MakeSorted[1]{%
31
32 \newcommand*\MakeSortedPerPage[2][1]{%
33 \ifltxcounter{#2Reset}{%
34 \setcounter{#2Reset}{#1}%
35 }{
36 }%
37 }
38
39 \newcommand*{\theperpage}{1}

```

File 281 **lwarp-pfnote.sty**

§ 379 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 282 **lwarp-phfqit.sty**

§ 380 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 283 **lwarp-pifont.sty**

§ 381 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 284 **lwarp-placeins.sty**

§ 382 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 285 **lwarp-plarydshln.sty**

§ 383 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 286 **lwarp-plext.sty**

§ 384 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{\rensujj}{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\pccaption\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<> O{0pt} O{c} m}{%
34 \global\booltrue{LWR@minipagefullwidth}%
35 \parbox{#2}{#4}%
36 }

```

picture, as modified by `pext`, is encapsulated by the `lwarp` core.

File 287 **lwarp-plextarydshln.sty**

§ 385 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 288 **lwarp-plextcolortbl.sty**

§ 386 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 289 **lwarp-prelim2e.sty**

§ 387 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 290 **lwarp-prettyref.sty**

§ 388 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 291 **lwarp-preview.sty**

§ 389 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 292 **lwarp-psfrag.sty**

§ 390 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 293 **lwarp-psfragx.sty**

§ 391 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 294 **lwarp-pst-eps.sty**

§ 392 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 295 **lwarp-pstool.sty**

§ 393 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 296 **lwarp-pstricks.sty**

§ 394 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 297 **lwarp-pxatbegshi.sty**

§ 395 Package **pxatbegshi**

Pkg pxatbegshi pxatbegshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxatbegshi}[2017/11/04]

2 \LWR@origRequirePackage{lwarp-atbegshi}

```

---

File 298 **lwarp-pxeveryshi.sty**

§ 396 Package **pxeveryshi**

Pkg pxeveryshi pxeveryshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxeveryshi}[2012/05/19]

2 \LWR@origRequirePackage{lwarp-everyshi}

```

File 299 **lwarp-pxftnright.sty**

§ 397 Package **pxftnright**

Pkg pxftnright pxftnright is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxftnright}[2017/02/28]

2 \LWR@origRequirePackage{lwarp-ftnright}

File 300 **lwarp-pxjahyper.sty**

§ 398 Package **pxjahyper**

Pkg pxjahyper pxjahyper is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxjahyper}[2018/07/15]

File 301 **lwarp-quotchap.sty**

§ 399 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 302 **lwarp-quoting.sty**

§ 400 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 303 **lwarp-ragged2e.sty**

§ 401 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 304 **lwarp-realscripts.sty**

§ 402 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\realsubscript\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 O{l} mm} {%
34 \LWR@setrealscriptsalign{#2}%
35 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
36 \textsubscript{#4}#3%
37 }%
38 }

```

---

File 305 **lwarp-refcheck.sty**

§ 403 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 306 **lwarp-register.sty**

§ 404 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 \xpatchcmd{\register}
3 {\centering}
4 {%
5 \begin{center}%
6 \begin{lateximage}[-register--\PackageDiagramAltText]%
7 }
8 {}
9 {\LWR@patcherror{register}{register}}
10
11 \xpatchcmd{\endregister}
12 {\leftskip}
13 {%
14 \end{lateximage}\end{center}%
15 \leftskip%
16 }%
17 {}
18 {\LWR@patcherror{register}{endregister}}
19
20 \expandafter\xapptocmd\csname register*\endcsname
21 {%
22 \begin{center}%
23 \begin{lateximage}[-register--\PackageDiagramAltText]%
24 }
25 {}
26 {\LWR@patcherror{register}{register*}}
27
28 \expandafter\xpatchcmd\csname endregister*\endcsname
29 {\leftskip}
30 {%
31 \end{lateximage}\end{center}%
32 \leftskip%
33 }%
34 {}
35 {\LWR@patcherror{register}{endregister*}}
36
37 \setlength{\regWidth}{5in}

```

File 307 **lwarp-reysize.sty**

§ 405 Package **reysize**

(Emulates or patches code by DONALD ARSENEAU, BERNIE COSELL, MATT SWIFT.)

Pkg reysize reysize is patched for use by lwarp.

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\reysize\LWR@origreysize%
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@reysize-temp}
21
22 \renewcommand*{\reysize}[1]{%
23 \renewcommand*{\larger}[1][1]{%
24 \renewcommand*{\smaller}[1][1]{%
25 \renewcommand*{\relscale}[1]{%
26
27 \renewcommand*{\textlarger}[2][1]{%
28 \setcounter{LWR@reysize-temp}{100+(#1*20)}%
29 \InlineClass[font-size:\arabic{LWR@reysize-temp}\%]{textlarger}{#2}%
30 }
31
```

```

32 \renewcommand*{\textsmaller}[2][1]{%
33 \setcounter{LWR@relsize-temp}{100-(#1*20)}%
34 \InlineClass[font-size:\arabic{LWR@relsize-temp}\%]{textsmaller}{#2}%
35 }
36
37 \renewcommand*{\textscale}[2]{%
38 \setcounter{LWR@relsize-temp}{100*\real{#1}}%
39 \InlineClass[font-size:\arabic{LWR@relsize-temp}\%]{textscale}{#2}%
40 }

```

---

File 308 **lwarp-repeatindex.sty**

§ 406 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 309 **lwarp-resizegather.sty**

§ 407 Package **resizegather**

Pkg resizegather resizegather is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{resizegather}[2016/05/16]

2 \newcommand*{\resizegathersetup}[1]{}

```

---

File 310 **lwarp-rmpage.sty**

§ 408 Package **rmpage**

Pkg rmpage rmpage is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{rmpage}[1997/09/29]

```

---

File 311 **lwarp-romanbar.sty**

§ 409 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 312 **lwarp-romanbarpagenumber.sty**

§ 410 Package **romanbarpagenumber**

Pkg romanbarpagenumber romanbarpagenumber is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{romanbarpagenumber}[2015/02/06]

---

File 313 **lwarp-rotating.sty**

§ 411 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 314 **lwarp-rotfloat.sty**

§ 412 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 {<1: type>} {<2: placement>} {<3: ext>} [<4: within>]

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 315 **lwarp-rviewport.sty**

§ 413 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 316 **lwarp-savetrees.sty**

§ 414 Package **savetrees**

Pkg savetrees savetrees is ignored.

**for HTML output:** Discard all options for `lwarp-savetrees`:

```

1 \LWR@ProvidesPackageDrop{savetrees}[2016/04/13]

```

File 317 **lwarp-scalefnt.sty**

§ 415 Package **scalefnt**

*(Emulates or patches code by D. CARLISLE.)*

Pkg scalefnt scalefnt is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{scalefnt}
2 \DeclareRobustCommand\scafont[1]{}

```

File 318 **lwarp-schemata.sty**

§ 416 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 319 **lwarp-scrextend.sty**

§ 417 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 \begingroup\let\thefootnotemark\multfootsep\@makefnmark\endgroup
47 }
48
49 \DeclareDocumentCommand{\multfootsep}{}{,}
50

```

```

51 \DeclareDocumentCommand{\footref}{m}{%
52 \begingroup
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@mbox{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
110 \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
111]{addmargin}
112 }
113 {
114 \setlength{\LWR@templengthone}{#2}
115 \begin{BlockClass}[
116 \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ;
117 \LWR@print@mbox{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 320 **lwarp-scrhack.sty**

§ 418 Package **scrhack**

Pkg scrhack scrhack is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrhack}[2018/03/30]

---

File 321 **lwarp-scrlayer.sty**

§ 419 Package **scrlayer**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrlayer scrlayer is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{scrLayer}[2018/03/30]

2 \newcommand*\DeclareSectionNumberDepth}[2]{}
3 \newcommand*\DeclareLayer}[2][{}
4 \newcommand*\DeclareNewLayer}[2][{}
5 \newcommand*\ProvideLayer}[2][{}
6 \newcommand*\RedeclareLayer}[2][{}
7 \newcommand*\ModifyLayer}[2][{}
8 \newcommand*\layerhalign{}
9 \newcommand*\layervalign{}
10 \newcommand*\layerxoffset{}
11 \newcommand*\layeryoffset{}
12 \newcommand*\layerwidth{}
13 \newcommand*\layerheight{}
14 \providecommand*\LenToUnit[1]{\strip@pt\dimexpr#1*\p@/\unitlength}
15 \newcommand*\putUL}[1]{}
16 \newcommand*\putUR}[1]{}
17 \newcommand*\putLL}[1]{}
18 \newcommand*\putLR}[1]{}
19 \newcommand*\putC}[1]{}
20 \newcommand*\GetLayerContents}[1]{}
21 \newcommand*\IfLayerExists}[3]{#3}
22 \newcommand*\DestroyLayer}[1]{}
23 \newcommand*\layercontentsmeasure{}
24 \newcommand*\currentpagestyle{}
25 \newcommand*\BeforeSelectAnyPageStyle}[1]{}
26 \newcommand*\AfterSelectAnyPageStyle}[1]{}
27 \newcommand*\DeclarePageStyleAlias}[2]{}
28 \newcommand*\DeclareNewPageStyleAlias}[2]{}
29 \newcommand*\ProvidePageStyleAlias}[2]{}
30 \newcommand*\RedeclarePageStyleAlias}[2]{}
31 \newcommand*\DestroyPageStyleAlias}[1]{}
32 \newcommand*\GetRealPageStyle}[1]{}
33 \newcommand*\DeclarePageStyleByLayers}[3][{}
34 \newcommand*\DeclareNewPageStyleByLayers}[3][{}
35 \newcommand*\ProvidePageStyleByLayers}[3][{}
36 \newcommand*\RedeclarePageStyleByLayers}[3][{}
37 \NewDocumentCommand{\ForEachLayerOfPageStyle}{s m m}{}
38 \newcommand*\AddLayersToPageStyle}[2]{}
39 \newcommand*\AddLayersAtBeginOfPageStyle}[2]{}
40 \newcommand*\AddLayersAtEndOfPageStyle}[2]{}
41 \newcommand*\RemoveLayersFromPageStyle}[2]{}
42 \newcommand*\AddLayersToPageStyleBeforeLayer}[3]{}
43 \newcommand*\AddLayersToPageStyleAfterLayer}[3]{}
44 \newcommand*\UnifyLayersAtPageStyle}[1]{}
45 \newcommand*\ModifyLayerPageStyleOptions}[2]{}
46 \newcommand*\AddToLayerPageStyleOptions}[2]{}
47 \newcommand*\IfLayerPageStyleExists}[3]{#3}
48 \newcommand*\IfRealLayerPageStyleExists}[3]{#3}
49 \newcommand*\IfLayerAtPageStyle}[4]{#4}
50 \newcommand*\IfSomeLayerAtPageStyle}[4]{#4}
51 \newcommand*\IfLayersAtPageStyle}[4]{#4}
52 \newcommand*\DestroyRealLayerPageStyle}[1]{}
53 \@ifundefined{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*{\sclayerInitInterface}[1]{}
68 \newcommand{\sclayerAddToInterface}[3]{}
69 \newcommand{\sclayerAddCsToInterface}[3]{}
70 \newcommand{\sclayerOnAutoRemoveInterface}[2]{}

```

---

File 322 **lwarp-sclayer-notecolumn.sty**

§ 420 Package **sclayer-notecolumn**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg sclayer-notecolumn sclayer-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 323 **lwarp-sclayer-scrpage.sty**

§ 421 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{scrLayer-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*{\clearplainofpairofpagestyles}{}
28 \newcommand*{\clearpairofpagestyles}{}
29 \newcommand*{\clearscrheadings}{}
30 \newcommand*{\clearscrheadfoot}{}
31 \newcommand*{\clearscrplain}{}

32 \NewDocumentCommand{\deftriplepagestyle}{m o m m m m m m}{}
33 \NewDocumentCommand{\newtriplepagestyle}{m o m m m m m m}{}
34 \NewDocumentCommand{\renewtriplepagestyle}{m o m m m m m m}{}
35 \NewDocumentCommand{\providetripelastyle}{m o m m m m m m}{}
36 \newcommand*{\defpagestyle}[3]{}
37 \newcommand*{\newpagestyle}[3]{}
38 \newcommand*{\providepagestyle}[3]{}
39 \newcommand*{\renewpagestyle}[3]{}

```

---

File 324 **lwarp-scrpage2.sty**

§ 422 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{\deftripstyle}{m o o m m m m m}{}
25 \NewDocumentCommand{\defpagestyle}{s m m m}{}
26 \NewDocumentCommand{\newpagestyle}{s m m m}{}
27 \NewDocumentCommand{\renewpagestyle}{s m m m}{}
28 \NewDocumentCommand{\providepagestyle}{s m m m}{}
29 \newcommand{\partmarkformat}{}
30 \if@chapter
31 \newcommand{\chaptermarkformat}{}
32 \fi
33 \newcommand{\sectionmarkformat}{}
34 \newcommand{\subsectionmarkformat}{}
35 \newcommand{\subsubsectionmarkformat}{}
36 \newcommand{\paragraphmarkformat}{}
37 \newcommand{\subparagraphmarkformat}{}
38
39 \newcommand*{\clearscrheadings}{}
40 \newcommand*{\clearscrheadfoot}{}
41 \newcommand*{\clearscrplain}{}

```

---

File 325 **lwarp-section.sty**

§ 423 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\hdsiz{\huge}\else
4 \def\chsize{\huge}\def\hdsiz{\Huge}
5 \fi
6 \let\ttsiz\LARGE
7 \let\ausiz\large
8 \let\dasiz\large
9 \let\secsiz\Large
10 \let\subsiz\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 326 **lwarp-sectionbreak.sty**

§ 424 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 327 **lwarp-sectsty.sty**

§ 425 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 328 **lwarp-semantic-markup.sty**

§ 426 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 329 **lwarp-setspace.sty**

§ 427 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 330 **lwarp-shadow.sty**

§ 428 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\boxsep

```

```

3 \newdimen\shboxrule
4 \newdimen\shdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8 }

```

---

File 331 **lwarp-shapepar.sty**

§ 429 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 332 **lwarp-showidx.sty**

§ 430 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 333 **lwarp-showkeys.sty**

§ 431 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 334 **lwarp-showtags.sty**

§ 432 Package **showtags**

Pkg showtags showtags is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{showtags}% no version is given

```
2 \newcommand{\thecitetag}[1]{}

```

---

File 335 **lwarp-sidecap.sty**

§ 433 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 336 **lwarp-sidenotes.sty**

§ 434 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{marginfloat}{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  $\LaTeX 2_{\epsilon}$  `article.cls` source:

```

40 \renewenvironment{figure*}
41 {\@dblfloat{figure}}
42 {\end@dblfloat}
43
44 \renewenvironment{table*}
45 {\@dblfloat{table}}
46 {\end@dblfloat}

```

File 337 **lwarp-SIunits.sty**

§ 435 Package **Slunits**

*(Emulates or patches code by MARCEL HELDOORN.)*

Pkg SIunits **Slunits** is patched for use by `lwarp`.

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 HTML output:** 1 \LWR@ProvidesPackagePass{SIunits}[2007/12/02]

Patched for copy/paste with the HTML `alt` tag:

```

2 \DeclareRobustCommand{\unit}[2]{%
3 \@inunitcommandtrue% original
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 \LWR@origensuredmath{% lwarp modification
12 \SI@fstyle{#1}\@qsk\period@active{#2}}% original
13 }%
14 }% contents
15 \@inunitcommandfalse% original

```

---

16 }

---

File 338 **lwarp-siunitx.sty**

§ 436 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.

**NOTE:** As of this writing, the siunitx extension for MATHJAX is not currently hosted at any public CDN, thus siunitx is not usable with MATHJAX unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom MathJax script.

 **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 HTML output:**

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{siunitx}[2018/05/17]
```

```
4 \AtBeginDocument{% in case textcomp was not loaded
5 \DeclareSIUnit\bohr{\textit{a}\textsubscript{0}}
6 \DeclareSIUnit\cLight{\textit{c}\textsubscript{0}}
7 \DeclareSIUnit\elementarycharge{\textit{e}}
8 \DeclareSIUnit\electronmass{\textit{m}\textsubscript{e}}
9 \DeclareSIUnit\hartree{\textit{E}\textsubscript{h}}
10 \DeclareSIUnit\planckbar{\LWR@siunitx@textplanckbar}
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 @@_ __siunitx_print_type_tl _
29 text __siunitx_font_family_tl :
30 }
31 \bool_if:NTF __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 __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 __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 {
80 __siunitx_unit_output_pre_print:

```

For parse-numbers=false:

```

81% __siunitx_print:nn { number } { \ensuremath {#1} }
82 \LWR@subsingledollar{% lwarp
83 \textbackslash(\LWR@HTMLSanitize{#1} \textbackslash)% lwarp
84 }{siunitx}{%
85 __siunitx_print:nn { number } {%
86 \LWR@origensuredmath{#1}%
87 }%
88 }% lwarp

89 __siunitx_unit_output_print:
90 }
91 \group_end:% lwarp
92 }
93 %

```

For quotients, the fraction code is replaced by the symbol code:

```

94 \cs_undefine:N __siunitx_number_output_quotient_fraction:
95 \cs_new_protected:Npn __siunitx_number_output_quotient_fraction: {
96 \bool_set_true:N \l__siunitx_number_compound_bool
97 __siunitx_number_output_quotient_aux_i:
98 \tl_set_eq:NN \l__siunitx_number_out_tl
99 \l__siunitx_number_numerator_tl
100 \tl_put_right:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
101 \tl_put_right:NV \l__siunitx_number_out_tl
102 \l__siunitx_number_denominator_tl
103 __siunitx_number_output_single_aux:
104 }

```

For units, the fraction code is replaced by the symbol code:

```

105 \cs_undefine:N __siunitx_unit_format_fraction_fraction:
106 \cs_new_protected:Npn __siunitx_unit_format_fraction_fraction: {
107 __siunitx_unit_format_fraction_symbol_aux:
108 \int_compare:nNnT { \l__siunitx_unit_denominator_int } > { 1 }
109 {
110 \bool_if:NT \l__siunitx_unit_denominator_bracket_bool
111 {
112 \tl_put_left:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_open_tl
113 \tl_put_right:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_close_tl
114 }
115 }
116 \tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
117 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
118 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_unit_denominator_tl
119 }

```

```

120 \cs_undefine:N __siunitx_angle_print_astronomy_aux:
121 \cs_new_protected:Npn __siunitx_angle_print_astronomy_aux: {
122 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer }
123 \l__siunitx_tmpa_tl
124 { __siunitx_print:nV { number } \l__siunitx_tmpa_tl }
125 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{0}% lwarp
126 {% lateximage
127 \hbox_set:Nn \l__siunitx_angle_marker_box
128 {
129 __siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
130 }
131 \hbox_set:Nn \l__siunitx_angle_unit_box
132 {
133 __siunitx_print:nV { unit } \l__siunitx_unit_tl
134 \skip_horizontal:n { -\scriptspace }
135 }
136 __siunitx_angle_print_astronomy_aux:n { marker }
137 __siunitx_angle_print_astronomy_aux:n { unit }
138 \hbox_set:Nn \l__siunitx_angle_marker_box
139 {
140 \box_use:N \l__siunitx_angle_marker_box
141 \box_use:N \l__siunitx_angle_unit_box
142 }
143 \dim_compare:nNnTF
144 { \l__siunitx_angle_marker_dim } > { \l__siunitx_angle_unit_dim }
145 { __siunitx_angle_print_astronomy_marker: }
146 { __siunitx_angle_print_astronomy_unit: }
147 }% lateximage
148 {% not a lateximage
149 __siunitx_print:nV { unit } \l__siunitx_unit_tl
150 __siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
151 }% not a lateximage
152 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-decimal }
153 \l__siunitx_tmpa_tl
154 { __siunitx_print:nV { number } \l__siunitx_tmpa_tl }
155 }

156 \RenewDocumentCommand \num { o m } {
157 \leavevmode
158 \group_begin:% lwarp
159 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
160 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
161 \bool_set_false:N \l__siunitx_font_set_bool
162 \IfNoValueF {#1}
163 { \keys_set:nn { siunitx } {#1} }
164 __siunitx_number_output:n {#2}
165 \group_end:% lwarp
166 }
167
168 \RenewDocumentCommand \numrange { o m m } {
169 \leavevmode
170 \group_begin:% lwarp
171 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
172 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
173 \bool_set_false:N \l__siunitx_font_set_bool

```

```

174 \IfNoValueF {#1}
175 { \keys_set:nn { siunitx } {#1} }
176 __siunitx_range_numbers:nn {#2} {#3}
177 \group_end:% lwarp
178 }
179
180 \RenewDocumentCommand \ang { o > { \SplitArgument { 2 } { ; } } m } {
181 \group_begin:% lwarp
182 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
183 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
184 \IfNoValueF {#1}
185 { \keys_set:nn { siunitx } {#1} }
186 __siunitx_angle_output:nnn #2
187 \group_end:% lwarp
188 }
189
190 \RenewDocumentCommand \si { o m } {
191 \leavevmode
192 \group_begin:% lwarp
193 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
194 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
195 \bool_set_false:N \l__siunitx_font_set_bool
196 \IfNoValueTF {#1}
197 { __siunitx_unit_output:nn {#2} { } }
198 {
199 \keys_set:nn { siunitx } {#1}
200 __siunitx_unit_output:nn {#2} {#1}
201 }
202 \group_end:% lwarp
203 }
204
205
206 \RenewDocumentCommand{\SIRange}{o m m m}
207 {%
208 \leavevmode
209 \group_begin:% lwarp
210 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
211 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
212 \bool_set_false:N \l__siunitx_font_set_bool
213 \IfNoValueTF {#1}
214 { __siunitx_range_unit:nnnn {#4} { } {#2} {#3} }
215 {
216 \keys_set:nn { siunitx } {#1}
217 __siunitx_range_unit:nnnn {#4} {#1} {#2} {#3}
218 }
219 \group_end:% lwarp
220 }
221
222 \ExplSyntaxOff

```

File 339 **lwarp-slantsc.sty**

§ 437 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 340 **lwarp-soul.sty**

§ 438 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`     $\langle text \rangle$

```
13 \newcommand{\caps}[1]{%
14 \InlineClass%
15 (font-variant:small-caps;letter-spacing:.1ex)%
16 {capsspacing}{#1}%
17 }
```

`\LWR@soulcolor`     $\langle text \rangle$   $\langle color \rangle$   $\langle class \rangle$   $\langle colorstyle \rangle$   $\langle FormatWPstyle \rangle$

Add colors if not empty:

```
18 \newcommand{\LWR@soulcolor}[5]{%
19 \ifcseempty{#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]{}
55 }
```

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 341 **lwarp-soulpos.sty**

§ 439 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 342 **lwarp-soulutf8.sty**

§ 440 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 343 **lwarp-splitidx.sty**

§ 441 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 534.17 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@verbinde\@onelevel@sanitize\@tempa\fi
16 \@wrsindex{\@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{LWR@index-\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 344 **lwarp-srcltx.sty**

§ 442 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 345 **lwarp-srctex.sty**

§ 443 Package **srctex**

Pkg srctex srctex is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{srctex}[2006/11/12]  
2 \LWR@origRequirePackage{lwarp-srcltx}

File 346 **lwarp-stabular.sty**

§ 444 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 [ $\langle vpos \rangle$ ] [ $\langle colspec \rangle$ ]

```
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 347 **lwarp-stackengine.sty**

§ 445 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 `lateximage` 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 348 **lwarp-stfloats.sty**

§ 446 Package **stfloats**

Pkg stfloats stfloats is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{stfloats}[2017/03/27]

`stfloats` may have been preloaded by a `lj*` 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 349 **lwarp-struktex.sty**

§ 447 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 350 **lwarp-subcaption.sty**

§ 448 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 351 **lwarp-subfig.sty**

§ 449 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`     $\langle 1 \text{ type} \rangle \langle 2 \text{ LOF entry} \rangle \langle 3 \text{ caption} \rangle$

```

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 % \hb@xt@\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 % \hb@xt@\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 \ifnextchar(% %) 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`    `{\label}`

The unstarred version uses a `\ref` link whose printed text comes from the `sub@<label>`:

```

182 \renewcommand{\sf@subref}[1]{%
183 \LWR@subnewref{#1}{sub#1}%
184 }

```

`\sf@@subref`    `{\label}`

The starred version uses the printed `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.

`\@newsubfloat`    `[\langle keys/values \rangle] {\langle float name \rangle}`

```

186 \LetLtxMacro\LWR@orig@newsubfloat\@newsubfloat
187
188 \def\@newsubfloat[#1]#2{%
189 \LWR@orig@newsubfloat[#1]{#2}%
190 \renewcommand{\l@sub#2}[2]{\hypertocfloat{2}{sub#2}{\ext@sub#2}{##1}{##2}}%
191 }

```

Pre-defined for figures and tables:

`\l@subfigure`    `{\text} {\langle pagenum \rangle}`

```

192 \renewcommand{\l@subfigure}[2]{\hypertocfloat{2}{subfigure}{lof}{#1}{#2}}

```

`\l@subtable`    `{\text} {\langle pagenum \rangle}`

```

193 \renewcommand{\l@subtable}[2]{\hypertocfloat{2}{subtable}{lot}{#1}{#2}}

```

---

File 352 **lwarp-subfigure.sty**

§ 450 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 353 **lwarp-supertabular.sty**

§ 451 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][1]{%
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 354 **lwarp-syntonly.sty**

§ 452 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 355 **lwarp-tabfigures.sty**

§ 453 Package **tabfigures**

Pkg tabfigures tabfigures is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tabfigures}[2012/01/24]

---

File 356 **lwarp-tablefootnote.sty**

§ 454 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 357 **lwarp-tables.sty**

§ 455 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 358 **lwarp-tabularx.sty**

§ 456 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 359 **lwarp-tabulary.sty**

§ 457 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 360 **lwarp-tascmac.sty**

§ 458 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\asci{ASCII Corporation}
73
74 \def\Ascii{ASCII Corporation}
75
76 \def\ASCII{ASCII Corporation}
```

File 361 **lwarp-textarea.sty**

§ 459 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 362 **lwarp-textcomp.sty**

§ 460 Package **textcomp**

*(Emulates or patches code by FRANK MITTELBACH, ROBIN FAIRBAIRNS, WERNER LEMBERG.)*

Pkg textcomp **textcomp** is patched for use by lwarp.

#### § 460.1 **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.

#### § 460.2 **Package loading**

**for HTML output:** 1 \LWR@ProvidesPackagePass{textcomp}[2017/04/05]

#### § 460.3 **HTML symbols**

For HTML, use HTML entities or direct Unicode, depending on the engine.

\AtBeginDocument improves support for Lua<sup>L</sup>TeX and Xe<sup>L</sup>TeX.

§ 460.3.1 pdf~~La~~T~~E~~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

```

§ 460.3.2 X~~La~~T~~E~~X and Lua~~La~~T~~E~~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{\%}
27 \newcommand*\LWR@HTML@textohm{\%}
28 \newcommand*\LWR@HTML@textmu{\%}
29 \newcommand*\LWR@HTML@textlquill{\%}
30 \newcommand*\LWR@HTML@textrquill{\%}
31 \newcommand*\LWR@HTML@textcircledP{\%}
32 \newcommand*\LWR@HTML@texttwelveudash{\%}% emdash
33 \newcommand*\LWR@HTML@textthreequartersemdash{\%}% emdash
34 \newcommand*\LWR@HTML@textmho{\%}
35 \newcommand*\LWR@HTML@textnaira{\%}
36 \newcommand*\LWR@HTML@textpeso{\%}
37 \newcommand*\LWR@HTML@textrecipe{\%}
38 \newcommand*\LWR@HTML@textinterrobang{\%}
39 \newcommand*\LWR@HTML@textinterrobangdown{\%}
40 \newcommand*\LWR@HTML@textperthousand{\%}
41 \newcommand*\LWR@HTML@textpertenthousand{\%}
42 \newcommand*\LWR@HTML@textbaht{\%}
43 \newcommand*\LWR@HTML@textdiscount{\%}
44 \newcommand*\LWR@HTML@textservicemark{\%}
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}

```

#### § 460.4 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 363 **lwarp-textfit.sty**

§ 461 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*\scaletoheight[2]{%
19 \sbox{\LWR@textfitbox}{#2}%
20 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
21 \LWR@textfitscale{#1}{#2}%
22 }
```

---

File 364 **lwarp-textpos.sty**

§ 462 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 365 **lwarp-theorem.sty**

§ 463 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]

### § 463.1 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 \theorem@style{plain}%
7 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
8 }%
9 {%
10 \theorem@style{#1}%
11 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
12 }%
13 \begingroup
14 \csname th@the\theorem@style \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 \theorem@style
27 \expandafter \endcsname \the \theorem@bodyfont
28 \@thm{#1}{#2}}%
29 \global \expandafter \let \csname end#1\endcsname \@endtheorem
30 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@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 \theorem@style \expandafter
41 \endcsname \the\theorem@bodyfont \@thm{#1}{#2}}%
42 \global \expandafter \let \csname end#1\endcsname \@endtheorem
43 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@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 \theorem@style \expandafter
57 \endcsname \the\theorem@bodyfont \@thm{#2}{#3}}%
58 \global \expandafter \let \csname end#1\endcsname \@endtheorem
59 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
60 }%
61 \fi}

```

## § 463.2 **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 366 **lwarp-thinsp.sty**

§ 464 Package **thinsp**

Pkg thinsp thinsp is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{thinsp}[2016/10/02]

```

2 \AtBeginDocument{
3 \let\thinthinspace\relax% defined by some packages
4 \newcommand*{\thinthinspace}{\thinspace}

```

```

5 }
6
7 \newcommand*{\stretchthinspace}{\thinspace}
8 \newcommand*{\stretchthinthinspace}{\thinthinspace}
9 \newcommand*{\stretchnegthinspace}{\negthinspace}

```

---

File 367 **lwarp-threadcol.sty**

§ 465 Package **threadcol**

Pkg threadcol threadcol is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{threadcol}[2013/01/06]

2 \newcommand{\setthreadname}[1]{}

---

File 368 **lwarp-threeparttable.sty**

§ 466 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\@captype{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 369 **lwarp-threparttablex.sty**

§ 467 Package **threparttablex**

Pkg threparttablex threparttablex is patched for use by lwarp.

threparttablex 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{threparttablex}[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 370 **lwarp-thumb.sty**

§ 468 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 371 **lwarp-thumbs.sty**

§ 469 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 372 **lwarp-tikz.sty**

§ 470 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@print@tiny}
22 \def\pgfutil@font@scriptsize{\LWR@print@scriptsize}
23 \def\pgfutil@font@footnotesize{\LWR@print@footnotesize}
```

```

24 \def\pgfutil@font@small{\LWR@print@small}
25 \def\pgfutil@font@normalsize{\LWR@print@normalsize}
26 \def\pgfutil@font@large{\LWR@print@large}
27 \def\pgfutil@font@Large{\LWR@print@Large}
28 \def\pgfutil@font@huge{\LWR@print@huge}
29 \def\pgfutil@font@Huge{\LWR@print@Huge}
30
31 \def\pgfutil@font@itshape{\LWR@origitshape}
32 \def\pgfutil@font@bfseries{\LWR@origbfseries}
33
34 \def\pgfutil@font@normalfont{\LWR@orignormalfont}

```

---

File 373 **lwarp-titles.sty**

§ 471 Package **titles**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg titles titles is loaded and used by lwarp during HTML output. All user options and macros are ignored and disabled.

Discard all options for lwarp-titles:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titles}[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}{}

---

|                               |                                                            |
|-------------------------------|------------------------------------------------------------|
| <code>\footrule</code>        |                                                            |
|                               | 8 <code>\newcommand*\footrule{}</code>                     |
| <code>\setheadrule</code>     | <code>{\langle length \rangle}</code>                      |
|                               | 9 <code>\newcommand*\setheadrule[1]{}</code>               |
| <code>\setfootrule</code>     | <code>{\langle length \rangle}</code>                      |
|                               | 10 <code>\newcommand*\setfootrule[1]{}</code>              |
| <code>\makeheadrule</code>    |                                                            |
|                               | 11 <code>\newcommand*\makeheadrule{}</code>                |
| <code>\makefootrule</code>    |                                                            |
|                               | 12 <code>\newcommand*\makefootrule{}</code>                |
| <code>\setmarkboth</code>     | <code>{\langle code \rangle}</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>* {&lt;name&gt;}</code>                                                                                          |
|                               | 21 <code>\NewDocumentCommand{\newtitlemark}{s m}{}</code>                                                              |
| <code>\pretitlemark</code>    | <code>* {&lt;section&gt;}{&lt;text&gt;}</code>                                                                         |
|                               | 22 <code>\NewDocumentCommand{\pretitlemark}{s m m}{}</code>                                                            |
| <code>\ifsamemark</code>      | <code>{&lt;group&gt;}{&lt;command&gt;}{&lt;&gt;true&gt;}{&lt;&gt;false&gt;}</code>                                     |
|                               | 23 <code>\newcommand{\ifsamemark}[4]{}</code>                                                                          |
| <code>\setfloathead</code>    | <code>* [&lt;.&gt;] [&lt;.&gt;] [&lt;.&gt;] {&lt;.&gt;} {&lt;.&gt;} {&lt;.&gt;} {&lt;extra&gt;} [&lt;which&gt;]</code> |
|                               | 24 <code>\NewDocumentCommand{\setfloathead}{s o o o m m m m}{}</code>                                                  |
| <code>\setfloatfoot</code>    | <code>* [&lt;.&gt;] [&lt;.&gt;] [&lt;.&gt;] {&lt;.&gt;} {&lt;.&gt;} {&lt;.&gt;} {&lt;extra&gt;} [&lt;which&gt;]</code> |
|                               | 25 <code>\NewDocumentCommand{\setfloatfoot}{s o o o m m m m}{}</code>                                                  |
| <code>\nextfloathead</code>   | <code>* [&lt;.&gt;] [&lt;.&gt;] [&lt;.&gt;] {&lt;.&gt;} {&lt;.&gt;} {&lt;.&gt;} {&lt;extra&gt;} [&lt;which&gt;]</code> |
|                               | 26 <code>\NewDocumentCommand{\nextfloathead}{s o o o m m m m}{}</code>                                                 |
| <code>\nextfloatfoot</code>   | <code>* [&lt;.&gt;] [&lt;.&gt;] [&lt;.&gt;] {&lt;.&gt;} {&lt;.&gt;} {&lt;.&gt;} {&lt;extra&gt;} [&lt;which&gt;]</code> |
|                               | 27 <code>\NewDocumentCommand{\nextfloatfoot}{s o o o m m m m}{}</code>                                                 |
| <code>\newmarkset</code>      | <code>{&lt;markset&gt;}</code>                                                                                         |
|                               | 28 <code>\newcommand{\newmarkset}[1]{}</code>                                                                          |
| <code>\newextramark</code>    | <code>* {&lt;markset&gt;}{&lt;macro-name&gt;}</code>                                                                   |
|                               | 29 <code>\NewDocumentCommand{\newextramarkset}{s m m}{}</code>                                                         |
| <code>\botextramarks</code>   | <code>{&lt;markset&gt;}</code>                                                                                         |
|                               | 30 <code>\newcommand{\botextramarks}[1]{}</code>                                                                       |
| <code>\topextramarks</code>   | <code>{&lt;markset&gt;}</code>                                                                                         |
|                               | 31 <code>\newcommand{\topextramarks}[1]{}</code>                                                                       |
| <code>\firstextramarks</code> | <code>{&lt;markset&gt;}</code>                                                                                         |
|                               | 32 <code>\newcommand{\firstextramarks}[1]{}</code>                                                                     |
| <code>\nextextramarks</code>  | <code>{&lt;markset&gt;}</code>                                                                                         |
|                               | 33 <code>\newcommand{\nexttopextramarks}[1]{}</code>                                                                   |

```
\outerextramarks {\langle markset \rangle}
34 \newcommand{\outerextramarks}[1]{}

```

```
\innerextramarks {\langle markset \rangle}
35 \newcommand{\innerextramarks}[1]{}

```

---

File 374 **lwarp-titleref.sty**

§ 472 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 375 **lwarp-titlesec.sty**

§ 473 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 * {<command>} {<left>} {<before>} {<after>} [<right>]
```

```
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 {\langle true\rangle} {\langle false\rangle}
 23 \newcommand{\iftitlemeasuring}[2]{#2}

\assignpagestyle {\langle command\rangle} {\langle pagestyle\rangle}
 24 \newcommand{\assignpagestyle}[2]{#2}

\tITLEclass {\langle name\rangle} [\langle startlevel\rangle] {\langle class\rangle} [\langle cmd\rangle]
 25 \NewDocumentCommand{\TITLEclass}{m o m o}

```

---

File 376 **lwarp-titletoc.sty**

§ 474 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 {\langle section\rangle} [\langle left\rangle] {\langle above\rangle} {\langle label\rangle} {\langle leader\rangle}
 2 \NewDocumentCommand{\dottedcontents}{m o m m m}{\}

```

```

\tITLEcontents * {\langle section\rangle} [\langle left\rangle] {\langle above\rangle} {\langle numbered\rangle} {\langle numberless\rangle} {\langle filler\rangle} [\langle below or
 begin\rangle] [\langle separator\rangle] [\langle end\rangle]
 3 \newcommand{\TITLEcontents}{\@ifstar{\ttl@tcstar}{\ttl@tcnostar}}
 4 \NewDocumentCommand{\ttl@tcstar}{m o m m m m o o}{\}
 5 \NewDocumentCommand{\ttl@tcnostar}{m o m m m m o}{\}

```

```

\contentsmargin [\langle correction\rangle] {\langle right\rangle}
 6 \newcommand{\contentsmargin}[2][\]{}

```

```

\thecontentslabel
 7 \newcommand*\thecontentslabel{\thecontentslabel}

```

```

\thecontentspage
 8 \newcommand*\thecontentspage{\thecontentspage}

```

```

\contentslabel [\langle format\rangle] {\langle space\rangle}
 9 \newcommand{\contentslabel}[2][\]{}{\thecontentslabel}

```

|                              |                                                                                                       |                                                                  |
|------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <code>\contentspage</code>   | <code>[\langle format \rangle]</code>                                                                 | 10 <code>\newcommand{\contentspage}[1][\thecontentspage]</code>  |
| <code>\contentspush</code>   | <code>\langle text \rangle</code>                                                                     | 11 <code>\newcommand{\contentspush}[1]{}</code>                  |
| <code>\contentsuse</code>    | <code>\langle name \rangle \langle text \rangle</code>                                                | 12 <code>\newcommand{\contentsuse}[2]{}</code>                   |
| <code>\startcontents</code>  | <code>[\langle name \rangle]</code>                                                                   | 13 <code>\newcommand*\startcontents[1][\thecontentspage]</code>  |
| <code>\stopcontents</code>   | <code>[\langle name \rangle]</code>                                                                   | 14 <code>\newcommand*\stopcontents[1][\thecontentspage]</code>   |
| <code>\resumecontents</code> | <code>[\langle name \rangle]</code>                                                                   | 15 <code>\newcommand*\resumecontents[1][\thecontentspage]</code> |
| <code>\printcontents</code>  | <code>[\langle name \rangle \langle prefix \rangle \langle start \rangle \langle code \rangle]</code> | 16 <code>\newcommand{\printcontents}[4][\thecontentspage]</code> |
| <code>\startlist</code>      | <code>[\langle name \rangle \langle list \rangle]</code>                                              | 17 <code>\newcommand{\startlist}[2][\thecontentspage]</code>     |
| <code>\stoplist</code>       | <code>[\langle name \rangle \langle list \rangle]</code>                                              | 18 <code>\newcommand{\stoplist}[2][\thecontentspage]</code>      |
| <code>\resumelist</code>     | <code>[\langle name \rangle \langle list \rangle]</code>                                              | 19 <code>\newcommand{\resumelist}[2][\thecontentspage]</code>    |
| <code>\printlist</code>      | <code>[\langle name \rangle \langle list \rangle \langle prefix \rangle \langle code \rangle]</code>  | 20 <code>\newcommand{\printlist}[4][\thecontentspage]</code>     |

---

File 377 **lwarp-titling.sty**

§ 475 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 \prettitle{}
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 \@bspreadauthor \@author \@bspostauthor%
72 \end{BlockClass}%
73 \end{BlockClass}%
74 }
75 \maketitlehookc
76 {
77 \begin{BlockClass}{titledate}%
78 \@bspreadate \@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`  $\{\langle series \rangle\}$

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 378 **lwarp-tocbasic.sty**

§ 476 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 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 379 **lwarp-tocbibind.sty**

§ 477 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 L<sup>A</sup>T<sub>E</sub>X 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` [numbered index section](#) Use the `tocbibind` `numindex` option to generate a numbered index. Without this option, the index heading has no number.

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

**for HTML output:**

```
1 \let\simplechapterdelim\relax
2
3 \LWR@ProvidesPackagePass{tocbibind}[2010/10/13]
4 \renewenvironment{theindex}%
5 {%
6 \if@bibchapter
7 \if@donumindex
8 \chapter{\indexname}
9 \else
```

```

10 \if@dotocind
11 \chapter*{\indexname}
12 \addcontentsline{toc}{chapter}{\LWR@isolate{\indexname}}
13 \else
14 \chapter*{\indexname}
15 \fi
16 \fi
17 \else
18 \if@donumindex
19 \section{\indexname}
20 \else
21 \if@dotocind
22 \section*{\indexname}
23 \addcontentsline{toc}{\@tocextra}{\LWR@isolate{\indexname}}
24 \else
25 \section*{\indexname}
26 \fi
27 \fi
28 \fi
29 \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}{O{\@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 380 **lwarp-tocdata.sty**

§ 478 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 \quad --- %
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 381 **lwarp-tocenter.sty**

§ 479 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}{}

```

---

File 382 **lwarp-tocloft.sty**

§ 480 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 {<style>}
2 \newcommand{\tocloftpagestyle}[1]{}

```

```
\cftmarktoc
3 \newcommand*{\cftmarktoc}{}

```

```
\cfttoctitlefont
4 \newcommand*{\cfttoctitlefont}{}

```

```
\cftaftertocitle
5 \newcommand*{\cftaftertocitle}{}

```

```
6 \newlength{\cftbeforetoctitleskip}
7 \newlength{\cftaftertocitleskip}

```

---

|                                |                                                                |
|--------------------------------|----------------------------------------------------------------|
| <code>\cftmarklof</code>       |                                                                |
|                                | 8 <code>\newcommand*\cftmarklof{}</code>                       |
| <code>\cftloftitlefont</code>  |                                                                |
|                                | 9 <code>\newcommand*\cftloftitlefont{}</code>                  |
| <code>\cftafterloftitle</code> |                                                                |
|                                | 10 <code>\newcommand*\cftafterloftitle{}</code>                |
|                                | 11 <code>\newlength{\cftbeforeloftitleskip}</code>             |
|                                | 12 <code>\newlength{\cftafterloftitleskip}</code>              |
| <code>\cftmarklot</code>       |                                                                |
|                                | 13 <code>\newcommand*\cftmarklot{}</code>                      |
| <code>\cftlottitlefont</code>  |                                                                |
|                                | 14 <code>\newcommand*\cftlottitlefont{}</code>                 |
| <code>\cftafterlottitle</code> |                                                                |
|                                | 15 <code>\newcommand*\cftafterlottitle{}</code>                |
|                                | 16 <code>\newlength{\cftbeforelottitleskip}</code>             |
|                                | 17 <code>\newlength{\cftafterlottitleskip}</code>              |
| <code>\cftdot</code>           |                                                                |
|                                | 18 <code>\providecommand*\cftdot{.}</code>                     |
| <code>\cftdotsep</code>        |                                                                |
|                                | 19 <code>\providecommand*\cftdotsep{1}</code>                  |
| <code>\cftnodots</code>        |                                                                |
|                                | 20 <code>\providecommand*\cftnodots{5000}</code>               |
| <code>\cftdotfill</code>       | <code>{&lt;sep&gt;}</code>                                     |
|                                | 21 <code>\providecommand{\cftdotfill}[1]{}</code>              |
| <code>\cftsetpnumwidth</code>  | <code>{&lt;length&gt;}</code>                                  |
|                                | 22 <code>\DeclareDocumentCommand{\cftsetpnumwidth}{m}{}</code> |

```
\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*{\cftsubsecattersnum}{}
65 \newcommand*{\cftsubsecattersnumb}{}
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*{\cftsubsubsecattersnum}{}
76 \newcommand*{\cftsubsubsecattersnumb}{}
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*{\cftparaattersnum}{}
87 \newcommand*{\cftparaattersnumb}{}
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*{\cftsubparaattersnum}{}
98 \newcommand*{\cftsubparaattersnumb}{}
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*{\cftfigattersnum}{}
109 \newcommand*{\cftfigattersnumb}{}
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}
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 383 **lwarp-tocstyle.sty**

§ 481 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 384 **lwarp-todo.sty**

§ 482 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\todotodo\else\textbf{#1} \fi}#2%
8 \label{todolbl:\thetodo}%
9 }%
10

```

```

11 \renewcommand\doneitem[2]{%
12 \stepcounter{todo}%
13 \item[%
14 \HTMLUnicode{2611} \quad
15 \ref{todopage:\thetodo}
16] \@nameuse{@done\the\c@todo}:
17 {\todoformat\ifx#1\todotocmark\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 385 **lwarp-todonotes.sty**

§ 483 Package **todonotes**

*(Emulates or patches code by HENRIK SKOV MIDTBY.)*

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 \let\LWRTODONOTES@orig@todotoc\todotoc
9
10 \renewcommand*\l@todotoc}{%

```

```

11 \phantomsection%
12 \LWRTODONOTES@orig@todotoc%
13 }
14
15 \renewcommand{\@todonotes@drawMarginNoteWithLine}{
16 \fcolorbox
17 {\@todonotes@currentbordercolor}
18 {\@todonotes@currentbackgroundcolor}
19 {\arabic{\@todonotes@numberoftodonotes}}
20 \marginpar{\@todonotes@drawMarginNote}
21 }
22
23 \renewcommand{\@todonotes@drawInlineNote}{%
24 \fcolorboxBlock%
25 {\@todonotes@currentbordercolor}%
26 {\@todonotes@currentbackgroundcolor}%
27 {%
28 \if@todonotes@authorgiven%
29 {\@todonotes@author:\,}%
30 \fi%
31 \@todonotes@text%
32 }%
33 }
34
35 \renewcommand{\@todonotes@drawMarginNote}{%
36 \if@todonotes@authorgiven%
37 \@todonotes@author\par%
38 \fi%
39 \arabic{\@todonotes@numberoftodonotes}: %
40 \fcolorbox%
41 {\@todonotes@currentbordercolor}%
42 {\@todonotes@currentbackgroundcolor}%
43 {%
44 \@todonotes@sizecommand%
45 \@todonotes@text %
46 }%
47 }%
48
49 \renewcommand{\@todonotes@drawLineToRightMargin}{ }
50
51 \renewcommand{\@todonotes@drawLineToLeftMargin}{ }
52
53 \renewcommand{\missingfigure}[2][]{%
54 \setkeys{todonotes}{#1}%
55 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
56 \fcolorboxBlock%
57 {\@todonotes@currentbordercolor}%
58 {\@todonotes@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 \begin{group}
69 \renewcommand*\phantomsection{}%
70 \IfValueTF{#1}{%
71 \LWRTODONOTES@orig@todo[#1]{#2}%
72 }{%
73 \LWRTODONOTES@orig@todo{#2}%
74 }
75 \end{group}%
76 }
77
78 \fi% \if@todonotes@disabled

```

---

File 386 **lwarp-topcapt.sty**

§ 484 Package **topcapt**

Pkg topcapt topcapt is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{topcapt}[2004/12/11]

2 \LetLtxMacro\topcaption\caption

---

File 387 **lwarp-tram.sty**

§ 485 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 \LWR@ProvidesPackageDrop{tram}[2013/04/04]

```

2 \newenvironment{tram}[1][{}%
3 {\BlockClass[background:lightgray]{tram}}
4 {\endBlockClass}

```

---

File 388 **lwarp-transparent.sty**

§ 486 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>Ǝ</sub>L<sup>A</sup>T<sub>E</sub>X!** Note that transparent does not work with X<sub>Ǝ</sub>L<sup>A</sup>T<sub>E</sub>X.

**for HTML output:** Discard all options for lwarp-transparent:

```

1 \LWR@ProvidesPackageDrop{transparent}[2016/05/16]

2 \newcommand*{\transparent}[1]{\edef\LWR@opacity{#1}}
3
4 \newcommand*{\texttransparent}[2]{%
5 \begingroup%
6 \transparent{#1}%
7 \InlineClass[opacity: #1]{transparent}{#2}%
8 \endgroup%
9 }
```

---

File 389 **lwarp-trimclip.sty**

§ 487 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 390 **lwarp-trivfloat.sty**

§ 488 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}
```

### § 488.1 **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 391 **lwarp-truncate.sty**

§ 489 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 392 **lwarp-turnthepage.sty**

§ 490 Package **turnthepage**

Pkg turnthepage turnthepage is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{turnthepage}[2011/03/24]

```
2 \newcommand{\turnthepage}{}

```

---

File 393 **lwarp-twoup.sty**

§ 491 Package **twoup**

Pkg twoup twoup is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{twoup}[2007/02/26]

```
2 \newcommand{\cleartolastpage}{}

```

---

File 394 **lwarp-typearea.sty**

§ 492 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{\reca\lctypearea}{}{}
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 395 **lwarp-typicons.sty**

§ 493 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 396 **lwarp-ulem.sty**

§ 494 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 397 **lwarp-umoline.sty**

§ 495 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 398 **lwarp-underscore.sty**

§ 496 Package **underscore**

Pkg underscore underscore is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{underscore}[2006/09/13]

---

File 399 **lwarp-units.sty**

§ 497 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 \CustomizeMathJax{\newcommand{\unit}[2][]{#1 #2}}
26 \CustomizeMathJax{\newcommand{\unitfrac}[3][]{#1 #2/#3}}

```

---

File 400 **lwarp-unitsdef.sty**

§ 498 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 401 **lwarp-upref.sty**

§ 499 Package **upref**

Pkg upref upref is ignored.

**for HTML output:** Discard all options for lwarp-upref:

```
1 \LWR@ProvidesPackageDrop{upref}[2007/03/14]
```

---

File 402 **lwarp-url.sty**

§ 500 Package **url**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg url url is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{url}[2013/09/16]

url uses math mode to print its string inside a group, so the original meaning of math is restored first.

```

2 \let\ltxmacro\LWR@url@origUrl@FormatString\url@FormatString
3
4 \renewcommand*{\url@FormatString}{%
5 \InlineClass{verbatim}{%
6 \LWR@restoreorigformatting%
7 \LWR@url@origUrl@FormatString%
8 }%
9 }

```

---

File 403 **lwarp-ospace.sty**

§ 501 Package **ospace**

Pkg ospace ospace is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ospace}[2016/11/06]

File 404 **lwarp-verse.sty**

§ 502 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 <code>verse</code> or <code>memoir</code> packages can place stanza numbers to the left with their <code>\flagverse</code> command. Do not allow them to go into the left margin, which would cause <i>pdfcrop</i> to crop the entire page further to the left: |
| Cls | memoir                  |                                                                                                                                                                                                                                                                     |
|     | <code>\flagverse</code> |                                                                                                                                                                                                                                                                     |
| Len | <code>\vleftskip</code> | <pre>7 \ifdef{\vleftskip}{% 8 \setlength{\vleftskip}{\HTMLvleftskip} 9 \setlength{\leftmargini}{\HTMLleftmargini} 10 }{} 11 \LWR@forcenewpage 12 \LWR@atbeginverbatim{3}{verse}% 13 }</pre>                                                                         |

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 405 **lwarp-versednotes.sty**

§ 503 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\versotextwidth
4 \newdimen\versoleftmargin
5 \newcommand*\versolayout{}
```

In case the user changed the page number before loading `versonotes`:

```
6 \setcounter{page}{1}
```

---

File 406 **lwarp-vertbars.sty**

§ 504 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 407 **lwarp-vmargin.sty**

§ 505 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 408 **lwarp-vowel.sty**

§ 506 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 409 **lwarp-vpe.sty**

§ 507 Package **vpe**

Pkg vpe **vpe** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18]

File 410 **lwarp-vwcol.sty**

§ 508 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][1]{%
```

New paragraph, and process the options:

```
15 \LWR@stoppars%
16 \vwcolsetup{#1}%
```

Begin with no style:

```
17 \newcommand*{\LWR@vwcolstyle}{}%
```

presep and postsep are created with HTML margins:

```
18 \if@vwcol@presep
19 \appto{\LWR@vwcolstyle}{margin-left: 1em ; padding-left: .5em ; }
20 \fi
21 \if@vwcol@postsep
22 \appto{\LWR@vwcolstyle}{margin-right: 1em ; padding-right: .5em ; }
23 \fi
```

sep becomes column-gap:

```
24 \ifdimgreater{\vwcol@sep}{1sp}{
25 \LWR@vwcol@addgap{column-gap}
26 \LWR@vwcol@addgap{-moz-column-gap}
27 \LWR@vwcol@addgap{-webkit-column-gap}
28 }{}%
```

rule become column-rule, while prerule and postrule become HTML borders:

```

29 \convertcolorspec{named}{\vwcol@rulecol}{HTML}\LWR@vwcol@rulecolor%
30 \ifdimgreater{\vwcol@rule}{0pt}{
31 \ifdimless{\vwcol@rule}{1pt}{
32 \setlength{\vwcol@rule}{1pt}
33 }{}
34 \LWR@vwcol@addrule{column-rule}
35 \LWR@vwcol@addrule{-moz-column-rule}
36 \LWR@vwcol@addrule{-webkit-column-rule}
37 \if@vwcol@prerule\LWR@vwcol@addrule{border-left}\fi
38 \if@vwcol@postrule\LWR@vwcol@addrule{border-right}\fi
39 }{}

```

Each of the justify options becomes a text-align. Indentation is added where appropriate.

```

40 \ifdefequal{\vwcol@justify}{\RaggedRight}{
41 \appto{\LWR@vwcolstyle}{text-align: left ; }
42 \ifdimgreater{\vwcol@parindent}{0pt}{
43 \appto{\LWR@vwcolstyle}{%
44 text-indent: \LWR@printlength{\vwcol@parindent} ; %
45 }
46 }{}
47 }{}

48 \ifdefequal{\vwcol@justify}{\RaggedLeft}{
49 \appto{\LWR@vwcolstyle}{text-align: right ; }
50 }{}

51 \ifdefequal{\vwcol@justify}{\Centering}{
52 \appto{\LWR@vwcolstyle}{text-align: center ; }
53 }{}

54 \ifdefequal{\vwcol@justify}{\justifying}{
55 \appto{\LWR@vwcolstyle}{text-align: justify ; }
56 \ifdimgreater{\vwcol@parindent}{0pt}{
57 \appto{\LWR@vwcolstyle}{%
58 text-indent: \LWR@printlength{\vwcol@parindent} ; %
59 }
60 }{}
61 }{}

```

Create the <div> with the assembled style:

```

62 \BlockClass[\LWR@vwcolstyle]{multicols}
63 }

```

When the environment ends:

```

64 {
65 \endBlockClass
66 \LWR@startpars
67 }

```

File 411 **lwarp-wallpaper.sty**

§ 509 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[1]{}
17 \newlength\wpXoffset
18 \newlength\wpYoffset

```

File 412 **lwarp-watermark.sty**

§ 510 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 413 **lwarp-widows-and-orphans.sty**

§ 511 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 414 **lwarp-wrapfig.sty**

§ 512 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 \LWR@wrapposition%
19 }%
20 {marginblock}%

21 \setlength{\linewidth}{\LWR@templengthone}%
22 }
23
24
25 \NewDocumentEnvironment{wrapfigure}{o m o m}
```

```

26 {%
27 \LWR@subwrapfigure{#2}{#4}%
28 \captionsetup{type=figure}%
29 }
30 {%
31 \endLWR@BlockClassWP%
32 }
33
34
35 \NewDocumentEnvironment{wraptable}{o m o m}
36 {%
37 \LWR@subwrapfigure{#2}{#4}%
38 \captionsetup{type=table}%
39 }
40 {%
41 \endLWR@BlockClassWP%
42 }
43
44
45 \NewDocumentEnvironment{wrapfloat}{m o m o m}
46 {%
47 \LWR@subwrapfigure{#3}{#5}%
48 \captionsetup{type=#1}%
49 }
50 {%
51 \endLWR@BlockClassWP%
52 }
53
54 \newlength{\wrapoverhang}

```

---

File 415 **lwarp-xbmks.sty**

§ 513 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 416 **lwarp-xcolor.sty**

§ 514 Package **xcolor**

*(Emulates or patches code by DR. UWE KERN.)*

Pkg xcolor xcolor is supported by lwarp.

### § 514.1 **Limitations**

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>\colorboxBlock</code> and <code>\fcolorboxBlock</code> | <code>\colorboxBlock</code> and <code>\fcolorboxBlock</code> are provided for increased HTML compatibility, and they are identical to <code>\colorbox</code> and <code>\fcolorbox</code> in print mode. In HTML mode they place their contents into a <code>&lt;div&gt;</code> instead of a <code>&lt;span&gt;</code> . These <code>&lt;div&gt;</code> s are set to display: <code>inline-block</code> so adjacent <code>\colorboxBlock</code> s appear side-by-side in HTML, although text is placed before or after each. |
|                                                              | Print-mode definitions for <code>\colorboxBlock</code> and <code>\fcolorboxBlock</code> are created by <code>lwarp</code> 's core if <code>xcolor</code> is loaded.                                                                                                                                                                                                                                                                                                                                                         |
| <code>background: none</code>                                | <code>\colorbox</code> and <code>\fcolorboxBlock</code> allow a background color of <code>none</code> , in which case only the frame is drawn, which can be useful for HTML.                                                                                                                                                                                                                                                                                                                                                |
| <code>color support</code>                                   | Color definitions, models, and mixing are fully supported without any changes required.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <code>colored tables</code>                                  | <code>\rowcolors</code> is supported, except that the optional argument is ignored so far.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>colored text and boxes</code>                          | <code>\textcolor</code> , <code>\colorbox</code> , and <code>\fcolorbox</code> are supported.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <code>\color</code> and <code>\pagecolor</code>              | <code>\color</code> and <code>\pagecolor</code> are ignored. Use <code>css</code> or <code>\textcolor</code> where possible.                                                                                                                                                                                                                                                                                                                                                                                                |

### § 514.2 **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 491.

`\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 994.  
**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 995.  
**HTML lateximage:** Remembers and reuses the print version.

**\colorboxBlock:**

**Print:** Becomes `\colorbox`.  
**HTML:** Newly defined by lwarp-xcolor to use a `<div>`, page 995.  
**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 995.  
**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 996.  
**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 997.

**HTML lateximage:** Uses the print version.

**\boxframe:**

**Print:** Used as-is.

**HTML:** Redefined by lwarp-xcolor, page 998.

**HTML lateximage:** Remembers and reuses the print version.

### § 514.3 Package loading

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{xcolor}[2016/05/11]
2 \begin{warpHTML}
```

### § 514.4 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 }
```

### § 514.5 \normalcolor

**\normalcolor**

```
9 \DeclareRobustCommand{\LWR@HTML@normalcolor}{\color{black}}%
10
11 \LWR@formatted{normalcolor}
```

### § 514.6 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`  $\{\langle text \rangle\}$  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`  $\{\langle 2: model \rangle\} \{\langle 3: color \rangle\}$

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`  $[\langle model \rangle] \{\langle color \rangle\} \{\langle text \rangle\}$

Similar to `\textcolor`, but prints black text against a color background.

Converted into an HTML hex color span.

```

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 }

```

### § 514.7 **HTML border**

`\LWR@borderpadding`  $\{\langle colorstyle \rangle\} \{\langle color \rangle\}$  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 }
```

### § 514.8 **High-level macros**

`\color`  $[\langle model \rangle] \{\langle color \rangle\}$

 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`  $[\langle model \rangle] \{\langle color \rangle\} \{\langle text \rangle\}$

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`  $[\langle model \rangle] \{\langle color \rangle\}$

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:framemodel>] { <2:framecolor> } [<3:boxmodel>] { <4:boxcolor> } [<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`  $\langle width \rangle$   $\langle height \rangle$   $\langle depth \rangle$

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}

```

## § 514.9 Row colors

`\rowc@l@rs` [ $\langle cmds \rangle$ ]  $\langle startrow \rangle$   $\langle odd color \rangle$   $\langle even color \rangle$

```

211 \newcommand*{\LWR@xcolortempcolor}{}
212
213 \def\rowc@l@rs[#1]#2#3#4%
214 {
215 \global\rownum=1
216 \global\@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 \global\advance\rownum\@ne%
269 % }%
270 \@rowcolors%
271 }

272 \end{warpHTML}

```

---

File 417 **lwarp-xexchangebar.sty**

§ 515 Package **xexchangebar**

Pkg xexchangebar xexchangebar is ignored

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{xexchangebar}[2017/08/03]
2 \LWR@origRequirePackage{lwarp-changebar}

```

---

File 418 **lwarp-xellipsis.sty**

§ 516 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@xellipsespace}[1]{%
3 \ifdim#1=0pt\else%
4 \ifdim#1<\fontdimen2\font%
5 \,%
6 \else%
7 ~%
8 \fi%
9 \fi%
10 }
11
12 \def\xelip{%
13 \mbox{%
14 \LWR@xellipsespace{\xeliprebef}%
15 \xeliprechar%
16 \LWR@xellipsespace{\xelipreaft}%
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 \xeligchar%
24 \repeat%
25 \LWR@xellipsespace{\xeligpaft}%
26 \LWR@xellipsespace{\xeligpostbef}%
27 \xeligpostchar%
28 \LWR@xellipsespace{\xeligpostaft}%
29 }%
30 }%

```

---

File 419 **lwarp-xetexko-vertical.sty**

§ 517 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 420 **lwarp-xfakebold.sty**

§ 518 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 }

```

File 421 **lwarp-xfrac.sty**

§ 519 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.

**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 }

```

```

69 \end{warpHTML}

```

---

File 422 **lwarp-xltabular.sty**

§ 520 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
3 \LWR@ProvidesPackageDrop{xltabular}[2018/05/23]
4
5 \DeclareDocumentEnvironment{xltabular}{o m m}
6 {\longtable{#3}}
7 {\endlongtable}

```

---

File 423 **lwarp-xltextra.sty**

§ 521 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 424 **lwarp-xmpinl.sty**

§ 522 Package **xmpinl**

*(Emulates or patches code by MAARTEN SNEEP.)*

Pkg xmpinl xmpinl is ignored.

**for HTML output:** Discard all options for lwarp-xmpinl:

```

1 \LWR@ProvidesPackageDrop{xmpinl}[2008/05/10]
2 \newcommand*\includemp}[1]{}
```

---

File 425 **lwarp-xpiano.sty**

§ 523 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 426 **lwarp-xpinyin.sty**

§ 524 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{pinyinscope}{O{}}{}{}
3
4 \RenewDocumentCommand{\xpinyin}{s O{} m}{%
5 \IfBooleanTF{#1}{#3}{\@firstoftwo#3}%
6 }
7
8 \RenewDocumentCommand{\enablepinyin}{}{}

```

---

File 427 **lwarp-xr.sty**

§ 525 Package **Xr**

*(Emulates or patches code by JEAN-PIERRE DRUCBERT, DAVID CARLISLE.)*

Pkg xr xr is patched for use by lwarp.

**for HTML output:** lwarp-xr-hyper also uses lwarp-xr to reuse the following definition. Only load xr if xr-hyper has not been loaded:

```

1 \ifdef{\externaldocument}{}{
2 \LWR@ProvidesPackagePass{xr}[2019/01/05]
3 }

4 \LetLtxMacro\LWR@orig@externaldocument\externaldocument
5

```

```

6 \renewcommand*{\externaldocument}[2][]{%
7 \ifblank{#1}{%
8 \LWR@orig@externaldocument{#2_html}%
9 }{%
10 \LWR@orig@externaldocument[#1]{#2_html}%
11 }%
12 }

```

---

File 428 **lwarp-xr-hyper.sty**

§ 526 Package **xr-hyper**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg xr-hyper xr-hyper is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xr-hyper}[2000/03/22]
2
3 \LWR@origRequirePackage{lwarp-xr}

```

---

File 429 **lwarp-xtab.sty**

§ 527 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** 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{\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{mpxctabular}{s o m}
61 {\minipage{\linewidth}\xctabular{#3}}
62 {\endxctabular\endminipage}
```

---

File 430 **lwarp-xunicode.sty**

§ 528 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 431 **lwarp-xurl.sty**

§ 529 Package **xurl**

Pkg xurl xurl is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xurl}[2018/06/02]

---

File 432 **lwarp-xy.sty**

§ 530 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 433 **lwarp-zhlineskip.sty**

§ 531 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 434 **lwarp-zwpagelayout.sty**

§ 532 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][{}]{
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 435 **lwarp-patch-komascript.sty**

§ 533 Package **patch-komascript**

Pkg lwarp-patch-komascript Patches for komascript classes.

lwarp loads this package when scrbook, scrartcl, 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 436 **lwarp-patch-memoir.sty**

§ 534 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 534.1). 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}

### § 534.1 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-changepage}% 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}
25 \RequirePackage{lwarp-subfigure}% req'd
26 \makeindex

```

subfigure is emulated via subfig, which pre-defines subfigure and subtable, but memoir does not, so they must be tested for here:

```

27 \LetLtxMacro\LRW@memorignewsfloat\newsfloat
28 \RenewDocumentCommand{\newsfloat}{0{} m}{%
29 \ifundefined{c@sub#2}{%
30 \LRW@memorignewsfloat[#1]{#2}%
31 }{}%
32 }
33
34 \RequirePackage{lwarp-tabularx}% req'd
35 \RequirePackage{lwarp-titling}% req'd
36 % \RequirePackage{lwarp-tocbibind}% not emulated by memoir
37 \RequirePackage{lwarp-tocloft}% req'd
38 \RequirePackage{lwarp-verse}% req'd

```

## § 534.2 Preliminary setup

Bypass the memoir package mechanism:

```
39 \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.

```
40 \setstocksize{190in}{20in}
41 \setlrmarginsandblock{2in}{2in}{*}
42 \setulmarginsandblock{1in}{1in}{*}
```

## § 534.3 Page layout

```
43 \renewcommand*\stockavi{}
44 \renewcommand*\stockav{}
45 \renewcommand*\stockaiv{}
46 \renewcommand*\stockaiii{}
47 \renewcommand*\stockbvi{}
48 \renewcommand*\stockbv{}
49 \renewcommand*\stockbiv{}
50 \renewcommand*\stockbiii{}
51 % \renewcommand*\stockmetriccrownvo{}% in docs but not in the package
52 \renewcommand*\stockmlargecrownvo{}
53 \renewcommand*\stockmdemyvo{}
54 \renewcommand*\stocksmallroyalvo{}
55 \renewcommand*\pageavi{}
56 \renewcommand*\pageav{}
57 \renewcommand*\pageaiv{}
58 \renewcommand*\pageaiii{}
59 \renewcommand*\pagebvi{}
60 \renewcommand*\pagebv{}
61 \renewcommand*\pagebiv{}
62 \renewcommand*\pagebiii{}
63 % \renewcommand*\pagemetriccrownvo{}% in docs but not in the package
64 \renewcommand*\pagemlargecrownvo{}
65 \renewcommand*\pagemdemyvo{}
66 \renewcommand*\pagemsmallroyalvo{}
67
68 \renewcommand*\stockdbill{}
69 \renewcommand*\stockstatement{}
70 \renewcommand*\stockexecutive{}
71 \renewcommand*\stockletter{}
72 \renewcommand*\stockold{}
73 \renewcommand*\stocklegal{}
74 \renewcommand*\stockledger{}
75 \renewcommand*\stockbroadsheet{}
76 \renewcommand*\pagedbill{}
77 \renewcommand*\pagestatement{}
78 \renewcommand*\pageexecutive{}
79 \renewcommand*\pageletter{}
80 \renewcommand*\pageold{}
81 \renewcommand*\pagelegal{}
82 \renewcommand*\pageledger{}

```

```
83 \renewcommand*\pagebroadsheet){}
84
85 \renewcommand*\stockpottvo){}
86 \renewcommand*\stockfoolscapvo){}
87 \renewcommand*\stockcrownvo){}
88 \renewcommand*\stockpostvo){}
89 \renewcommand*\stocklargecrownvo){}
90 \renewcommand*\stocklargepostvo){}
91 \renewcommand*\stocksmalldemyvo){}
92 \renewcommand*\stockdemyvo){}
93 \renewcommand*\stockmediumvo){}
94 \renewcommand*\stocksmallroyalvo){}
95 \renewcommand*\stockroyalvo){}
96 \renewcommand*\stocksuperroyalvo){}
97 \renewcommand*\stockimperialvo){}
98 \renewcommand*\pagepottvo){}
99 \renewcommand*\pagefoolscapvo){}
100 \renewcommand*\pagecrownvo){}
101 \renewcommand*\pagepostvo){}
102 \renewcommand*\pagelargecrownvo){}
103 \renewcommand*\pagelargepostvo){}
104 \renewcommand*\pagesmalldemyvo){}
105 \renewcommand*\pagedemyvo){}
106 \renewcommand*\pagemediumvo){}
107 \renewcommand*\pagesmallroyalvo){}
108 \renewcommand*\pageroyalvo){}
109 \renewcommand*\pagesuperroyalvo){}
110 \renewcommand*\pageimperialvo){}
111
112 \renewcommand*\memfontfamily){}
113 \renewcommand*\memfontenc){}
114 \renewcommand*\memfontpack){}
115
116 \renewcommand*\anyptfilebase){}
117 \renewcommand*\anyptsize}{10}
118
119 \renewcommand*\setstocksize}[2]{}
120 \renewcommand*\settrimmedsize}[3]{}
121 \renewcommand*\settrims}[2]{}
122
123 % \newlength{\lxvchars}
124 % \setlength{\lxvchars}{305pt}
125 % \newlength{\xlvchars}
126 % \setlength{\xlvchars}{190pt}
127 \renewcommand*\setxlvchars}[1]{}
128 \renewcommand*\setlxvchars}[1]{}
129
130 \renewcommand*\settypeblocksize}[3]{}
131 \renewcommand*\setlrmargins}[3]{}
132 \renewcommand*\setlrmarginsandblock}[3]{}
133 \renewcommand*\setbinding}[1]{}
134 \renewcommand*\setulmargins}[3]{}
135 \renewcommand*\setulmarginsandblock}[3]{}
136 \renewcommand*\setcolsepandrul}[2]{}
137
```

```

138 \renewcommand*\setheadfoot}[2]{}
139 \renewcommand*\setheaderspaces}[3]{}
140 \renewcommand*\setmarginnotes}[3]{}
141 \renewcommand*\setfootins}[2]{}
142 \renewcommand*\checkandfixthelayout}[1][1]{}
143 \renewcommand*\checkthelayout}[1]{}
144 \renewcommand*\fixthelayout}{}
145 %
146 % \newlength{\stockheight}
147 % \newlength{\trimtop}
148 % \newlength{\trimedge}
149 % \newlength{\stockwidth}
150 % \newlength{\spinmargin}
151 % \newlength{\foremargin}
152 % \newlength{\uppermargin}
153 % \newlength{\headmargin}
154 %
155 \renewcommand*\typeoutlayout}{}
156 \renewcommand*\typeoutstandardlayout}{}
157 \renewcommand*\settypeoutlayoutunit}[1]{}
158 \renewcommand*\fixpdflayout}{}
159 \renewcommand*\fixdvipslayout}{}
160
161 \renewcommand*\medievalpage}[1][1]{}
162 \renewcommand*\isopage}[1][1]{}
163 \renewcommand*\semiisopage}[1][1]{}
164
165 \renewcommand{\setpagebl}[3]{}
166 \renewcommand{\setpageml}[3]{}
167 \renewcommand{\setpagetl}[3]{}
168 \renewcommand{\setpagetm}[3]{}
169 \renewcommand{\setpagetr}[3]{}
170 \renewcommand{\setpagemr}[3]{}
171 \renewcommand{\setpagebr}[3]{}
172 \renewcommand{\setpagebm}[3]{}
173 \renewcommand{\setpagecc}[3]{}

```

#### § 534.4 Text and fonts

```

174 \let\miniscule\tiny
175 \let\HUGE\Huge
176
177 \renewcommand*\abnormalparskip}[1]{}
178 \renewcommand*\nonzeroparskip}{}
179 \renewcommand*\traditionalparskip}{}
180
181 \let\onelineskip\baselineskip
182
183 \let\OnehalfSpacing\onehalfspacing
184 \let\DoubleSpacing\doublespacing
185 \renewcommand*\setPagenoteSpacing}[1]{}
186 \renewcommand*\setFloatSpacing}[1]{}
187 \let\SingleSpacing\singlespacing
188 \let\setSingleSpace\SetSinglespace
189 \let\SingleSpace\singlespace
190 \let\endSingleSpace\endsinglespace

```

```

191 \let\Spacing\spacing
192 \let\endSpacing\endspacing
193 \let\OnehalfSpace\onehalfspace
194 \let\endOnehalfSpace\endonehalfspace
195 \csletcs{OnehalfSpace*}{onehalfspace}
196 \csletcs{endOnehalfSpace*}{endonehalfspace}
197 \let\DoubleSpace\doublespace
198 \let\endDoubleSpace\enddoublespace
199 \csletcs{DoubleSpace*}{doublespace}
200 \csletcs{endDoubleSpace*}{enddoublespace}
201 \renewcommand*\setDisplayskipStretch}[1]{}
202 \renewcommand*\memdskipstretch{}{}
203 \renewcommand*\noDisplayskipStretch{}{}
204 \renewcommand*\memdskips{}{}
205
206 \renewcommand*\midslippy{}{}
207 \renewenvironment*{midslippypar}{}{}
208
209 \renewcommand*\slippybottom{}{}

```

### § 534.5 **Titles**

```

210 \csletcs{titlingpage*}{titlingpage}
211 \csletcs{endtitlingpage*}{endtitlingpage}
212 \let\titlingpageend\relax
213 \newcommand{\titlingpageend}[2]{}
214 \let\andnext\and
215 \renewcommand*\thanksmarkstyle}[1]{}
216 \renewcommand{\thanksfootmark}{%
217 \thanksscript{\tmark}%
218 }
219
220 % \newlength{\thanksmarksep}

```

### § 534.6 **Abstracts**

```

221 \renewcommand*\abstractcol{}{}
222 \renewcommand*\abstractintoc{}{}
223 \renewcommand*\abstractnum{}{}
224 \renewcommand*\abstractrunin{}{}

```

### § 534.7 **Document divisions**

\book \* (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

225 \DeclareDocumentCommand{\book}{s d() o o d() m}{%
226 \LWR@section{#1}{#3}{#6}{book}%
227 }

```

```

228 \def\@apppage{%
229 \part*\appendixpagename}
230 }
231 \renewcommand\mempreaddapppagetotochook{}
232 \renewcommand\mempostaddapppagetotochook{}
233

```

```
234 \def\sapppage{%
235 \part*\appendixpage}
236 }

237 \DeclareDocumentCommand{\mainmatter}{s}{%
238 \booltrue{LWR@mainmatter}%
239 }
240
241 \DeclareDocumentCommand{\frontmatter}{s}{%
242 \boolfalse{LWR@mainmatter}%
243 }

244 \renewcommand*\raggedbottomsection{}
245 \renewcommand*\normalbottomsection{}
246 \renewcommand*\bottomsectionskip{}
247 \renewcommand*\bottomsectionpenalty{}
248 \csletcs{appendixpage*}{appendixpage}
249 \renewcommand*\namedsubappendices{}
250 \renewcommand*\unnamedsubappendices{}
251 \renewcommand*\setsecnumdepth[1]{}% todo tocvsec2
252 \renewcommand*\maxsecnumdepth[1]{}% todo tocvsec2
253 \renewcommand*\beforebookskip{}
254 \renewcommand*\afterbookskip{}
255 \renewcommand*\beforepartskip{}
256 \renewcommand*\afterpartskip{}
257 \renewcommand*\midbookskip{}
258 \renewcommand*\midpartskip{}
259 \renewcommand*\printbookname{}
260 \renewcommand*\booknamefont{}
261 \renewcommand*\booknamenum{}
262 \renewcommand*\printbooknum{}
263 \renewcommand*\booknumfont{}
264 \renewcommand*\printpartname{}
265 \renewcommand*\partnamefont{}
266 \renewcommand*\partnamenum{}
267 \renewcommand*\printpartnum{}
268 \renewcommand*\partnumfont{}
269 \renewcommand*\printbooktitle[1]{}
270 \renewcommand*\booktitlefont{}
271 \renewcommand*\printparttitle[1]{}
272 \renewcommand*\parttitlefont{}
273 \renewcommand*\bookpageend{}
274 \renewcommand*\bookblankpage{}
275 \renewcommand*\nobookblankpage{}
276 \renewcommand*\partpageend{}
277 \renewcommand*\partblankpage{}
278 \renewcommand*\nopartblankpage{}
279 \RenewDocumentCommand{\newleadpage}{s o m m}{}% todo
280 \RenewDocumentCommand{\renewleadpage}{s o m m}{}% todo
281 \renewcommand*\leadpagetoclevel{chapter}
282
283 \renewcommand*\openright{}
284 \renewcommand*\openleft{}
285 \renewcommand*\openany{}
286 \renewcommand*\clearforchapter{}
```

```
287 \renewcommand*\memendofchapterhook{}
288 \renewcommand*\chapterheadstart{}
289 % \newlength{\beforechapskip}
290 \renewcommand*\afterchapternum{}
291 % \newlength{\midchapskip}
292 \renewcommand*\afterchaptertitle{}
293 % \newlength{\afterchapskip}
294 \renewcommand*\printchaptername{}
295 \renewcommand*\chapnamefont{}
296 \renewcommand*\chapternamenum{}
297 \renewcommand*\printchapternum{}
298 \renewcommand*\chapnumfont{}
299 \renewcommand{\printchaptertitle}[1]{}
300 \renewcommand*\chaptitelfont{}
301 \renewcommand*\printchapternonum{}
302 \renewcommand*\indentafterchapter{}
303 \renewcommand*\noindentafterchapter{}
304 \renewcommand*\insertchapterspace{}
305
306 \renewcommand*\chapterstyle}[1]{}
307 \renewcommand\makechapterstyle}[2]{}
308 \renewcommand*\chapindent{}
309 \let\chapterprecis\cftchapterprecis
310 \let\chapterprecishere\cftchapterprecishere
311 \let\chapterprecistoc\cftchapterprecistoc
312 \renewcommand*\precisfont{}
313 \renewcommand*\prechapterprecis{}
314 \renewcommand*\postchapterprecis{}
315 \renewcommand{\precistoc}[1]{}
316 \renewcommand*\precistocfont{}
317 \renewcommand*\precistocformat{}
318 % \newlength{\prechapterprecisshift}
319
320 \renewcommand*\setbeforesecskip}[1]{}
321 \renewcommand*\setaftersecskip}[1]{}
322 \renewcommand*\setsecindent}[1]{}
323 \renewcommand*\setsecheadstyle}[1]{}
324 \renewcommand*\setbeforesubsecskip}[1]{}
325 \renewcommand*\setaftersubsecskip}[1]{}
326 \renewcommand*\setsubsecindent}[1]{}
327 \renewcommand*\setsubsecheadstyle}[1]{}
328 \renewcommand*\setbeforesubsubsecskip}[1]{}
329 \renewcommand*\setaftersubsubsecskip}[1]{}
330 \renewcommand*\setsubsubsecindent}[1]{}
331 \renewcommand*\setsubsubsecheadstyle}[1]{}
332 \renewcommand*\setbeforeparaskip}[1]{}
333 \renewcommand*\setafterparaskip}[1]{}
334 \renewcommand*\setparaindent}[1]{}
335 \renewcommand*\setparaheadstyle}[1]{}
336 \renewcommand*\setbeforesubparaskip}[1]{}
337 \renewcommand*\setaftersubparaskip}[1]{}
338 \renewcommand*\setsubparaindent}[1]{}
339 \renewcommand*\setsubparaheadstyle}[1]{}
340 \renewcommand{\@hangfrom}[1]{#1}
341 \renewcommand{\sethangfrom}[1]{}

```

```

342 \renewcommand{\setsecnumformat}[1]{}
343
344 \renewcommand*\hangsecnum{}
345 \renewcommand*\defaultsecnum{}
346
347 \renewcommand*\sechook{}
348 \renewcommand{\setsechook}[1]{}
349 \renewcommand*\subsechook{}
350 \renewcommand{\setsubsechook}[1]{}
351 \renewcommand*\subsubsechook{}
352 \renewcommand{\setsubsubsechook}[1]{}
353 \renewcommand*\parahook{}
354 \renewcommand{\setparahook}[1]{}
355 \renewcommand*\subparahook{}
356 \renewcommand{\setsubparahook}[1]{}
357
358 \RenewDocumentCommand{\plainbreak}{s m}{\begin{center}~\end{center}}
359
360 \RenewDocumentCommand{\fancybreak}{s +m}{%
361 \begin{center}#2\end{center}%
362 }
363
364 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
365 \begin{center}#4\end{center}%
366 }
367
368 \RenewDocumentCommand{\pfbreak}{s}{%
369 \begin{center}
370 \pfbreakdisplay
371 \end{center}
372 }
373
374 % \newlength{\pfbreakskip}
375 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
376
377 \renewcommand{\makeheadstyles}[2]{}
378 \renewcommand*\headstyles[1]{}

```

## § 534.8 **Pagination and headers**

```

379 \renewcommand*\savepagenumber{}
380 \renewcommand*\restorepagenumber{}
381 \renewcommand*\uppercaseheads{}
382 \renewcommand*\nouppercaseheads{}
383
384 \renewcommand*\bookpagemark[1]{}
385 \renewcommand*\partmark[1]{}
386 \renewcommand*\bibmark{}
387 \renewcommand*\indexmark{}
388 \renewcommand*\glossarymark{}
389
390 \LWR@origpagestyle{empty}
391 \renewcommand*\ps@empty{}
392 \renewcommand*\makepagestyle[1]{}
393 \renewcommand*\emptypshook{}%
394 % \renewcommand*\empty@oddhead{}

```

```

395 % \renewcommand*\empty@oddfoot{}
396 % \renewcommand*\empty@evenhead{}
397 % \renewcommand*\empty@evenfoot{}
398 \renewcommand*\@oddhead{}
399 \renewcommand*\@oddfoot{}
400 \renewcommand*\@evenhead{}
401 \renewcommand*\@evenfoot{}
402 \renewcommand*\aliaspagestyle}[2]{}
403 \renewcommand*\copypagestyle}[2]{}
404
405 \renewcommand*\makeevenhead}[4]{}
406 \renewcommand*\makeoddhead}[4]{}
407 \renewcommand*\makeevenfoot}[4]{}
408 \renewcommand*\makeoddfoot}[4]{}
409 \renewcommand*\makerunningwidth}[3]{}
410 % \newlength\headwidth
411 \renewcommand*\makeheadrule}[3]{}
412 \renewcommand*\makefootrule}[3]{}
413 \renewcommand*\makeheadfootruleprefix}[3]{}
414 % \newlength\normalrulethickness
415 % \setlength\normalrulethickness{.4pt}
416 % \newlength\footruleheight
417 % \newlength\footruleskip
418 \renewcommand*\makeheadposition}[5]{}
419 \renewcommand*\makepsmarks}[2]{}
420 \renewcommand*\makeheadfootstrut}[3]{}
421
422 \renewcommand*\createplainmark}[3]{}
423 \renewcommand*\memUchead}[1]{}
424 \renewcommand*\createmark}[5]{}
425 \renewcommand*\clearplainmark}[1]{}
426 \renewcommand*\clearmark}[1]{}
427 \renewcommand*\addtopsmarks}[3]{}
428 \renewcommand*\ifonlyfloats}[2]{}
429 \renewcommand*\mergepagefloatstyle}[3]{}
430
431 \renewcommand*\framepichead{}
432 \renewcommand*\framepictextfoot{}
433 \renewcommand*\framepichook{}
434 \renewcommand*\showheadfootlocoff{}
435 \renewcommand*\showtextblocklocoff{}

```

### § 534.9 Paragraphs and lists

```

436 \renewcommand*\hangfrom}[1]{}
437 \let\centerfloat\centering
438 \renewcommand*\raggedyright}[1]{}
439 % \newlength\ragrparindent
440 \renewcommand*\sourceatright}[2]{}
441 \let\memorigdbs\LWR@endofline
442 \let\memorigpar\par
443 \let\atcentercr\LWR@endofline
444
445 \renewcommand*\linenottooshort}[1]{}
446 \renewcommand*\russianpar{}
447 \renewcommand*\lastlinerulefill{}

```

```

448 \renewcommand*\lastlineparrule{}
449 \renewcommand*\justlastraggedleft{}
450 \renewcommand*\raggedrightthenleft{}
451 \renewcommand*\leftcenterright{}
452
453 \renewcommand{\leftspringright}[4]{%
454 \begin{minipage}{#1\linewidth}#3\end{minipage}\quad%
455 \begin{minipage}{#2\linewidth}\begin{flushright}#4\end{flushright}\end{minipage}%
456 }
457
458 \renewenvironment*{blockdescription}
459 {\LWR@descriptionstart\LWR@origdescription}
460 {\enddescription}
461 \renewcommand*{blockdescriptionlabel}[1]{\textbf{#1}}
462 \renewenvironment*{labelled}[1]{\begin{description}}{\end{description}}
463 \renewenvironment*{flexlabelled}[6]{\begin{description}}{\end{description}}
464 \renewcommand*\tightlists{}
465 \renewcommand*\defaultlists{}
466 \RenewDocumentCommand{\firmlists}{s}{}
467 \renewcommand*\firmlist{}
468 \renewcommand*\tightlist{}
469 \renewcommand*\zerotrivseps{}
470 \renewcommand*\savetrivseps{}
471 \renewcommand*\restoretrivseps{}

```

## § 534.10 Contents lists

```

472 \csletcs{tableofcontents*}{tableofcontents}
473 \csletcs{listoffigures*}{listoffigures}
474 \csletcs{listoftables*}{listoftables}
475 \renewenvironment{KeepFromToc}{}{}
476 \renewcommand*\oncoltocetc{}
477 \renewcommand*\twocoltocetc{}
478 \renewcommand*\ensureonecol{}
479 \renewcommand*\restorefromonecol{}
480 \renewcommand*\doccoltocetc{}
481 \renewcommand*\maxtocdepth[1]{}% tocvsec2
482 \renewcommand*\settocdepth[1]{}% tocvsec2
483
484 \renewcommand{\toheadstart}{}
485 \renewcommand{\printtoctitle}[1]{}
486 \renewcommand{\tocmark}{}
487 \renewcommand{\aftertoctitle}{}
488 \renewcommand{\lofheadstart}{}
489 \renewcommand{\printloftitle}[1]{}
490 \renewcommand{\lofmark}{}
491 \renewcommand{\afterloftitle}{}
492 \renewcommand{\lotheadstart}{}
493 \renewcommand{\printlottitle}[1]{}
494 \renewcommand{\lotmark}{}
495 \renewcommand{\afterlottitle}{}
496
497 \renewcommand*\setpnumwidth[1]{}
498 \renewcommand*\setrmarg[1]{}
499 \renewcommand*\cftbookbreak{}
500 \renewcommand*\cftpartbreak{}

```

```

501 \renewcommand*{\cftchapterbreak}{}
502 % \newlength{\cftbeforebookskip}
503 % \newlength{\cftbookindent}
504 % \newlength{\cftbooknumwidth}
505 \renewcommand*{\cftbookfont}{}
506 \renewcommand*{\cftbookname}{}
507 \renewcommand*{\cftbookpresnum}{}
508 \renewcommand*{\cftbookaftersnum}{}
509 \renewcommand*{\cftbookaftersnumb}{}
510 \renewcommand*{\cftbookleader}{}
511 \renewcommand*{\cftbookdotsep}{1}
512 \renewcommand*{\cftbookpagefont}{}
513 \renewcommand*{\cftbookafterpnum}{}
514 \renewcommand*{\cftbookformatpnum}[1]{}
515 \renewcommand*{\cftbookformatpnumhook}[1]{}

```

Part is already defined by tocloft.

```

516 % \newlength{\cftbeforechapterskip}
517 % \newlength{\cftchapterindent}
518 % \newlength{\cftchapternumwidth}
519 \renewcommand*{\cftchapterfont}{}
520 \renewcommand*{\cftchaptername}{}
521 \renewcommand*{\cftchapterpresnum}{}
522 \renewcommand*{\cftchapteraftersnum}{}
523 \renewcommand*{\cftchapteraftersnumb}{}
524 \renewcommand*{\cftchapterleader}{}
525 \renewcommand*{\cftchapterdotsep}{1}
526 \renewcommand*{\cftchapterpagefont}{}
527 \renewcommand*{\cftchapterafterpnum}{}
528 \renewcommand*{\cftchapterformatpnum}[1]{}
529 \renewcommand*{\cftchapterformatpnumhook}[1]{}

530 % \newlength{\cftbeforesectionsip}
531 % \newlength{\cftsectionindent}
532 % \newlength{\cftsectionnumwidth}
533 \renewcommand*{\cftsectionfont}{}
534 \renewcommand*{\cftsectionname}{}
535 \renewcommand*{\cftsectionpresnum}{}
536 \renewcommand*{\cftsectionaftersnum}{}
537 \renewcommand*{\cftsectionaftersnumb}{}
538 \renewcommand*{\cftsectionleader}{}
539 \renewcommand*{\cftsectiondotsep}{1}
540 \renewcommand*{\cftsectionpagefont}{}
541 \renewcommand*{\cftsectionafterpnum}{}
542 \renewcommand*{\cftsectionformatpnum}[1]{}
543 \renewcommand*{\cftsectionformatpnumhook}[1]{}

544 % \newlength{\cftbeforesubsectionskip}
545 % \newlength{\cftsubsectionindent}
546 % \newlength{\cftsubsectionnumwidth}
547 \renewcommand*{\cftsubsectionfont}{}
548 \renewcommand*{\cftsubsectionname}{}
549 \renewcommand*{\cftsubsectionpresnum}{}
550 \renewcommand*{\cftsubsectionaftersnum}{}

```

```
551 \renewcommand*\cftsubsectionaftersnumb{}
552 \renewcommand*\cftsubsectionleader{}
553 \renewcommand*\cftsubsectiondotsep{1}
554 \renewcommand*\cftsubsectionpagefont{}
555 \renewcommand*\cftsubsectionafterpnum{}
556 \renewcommand*\cftsubsectionformatpnum[1]{}
557 \renewcommand*\cftsubsectionformatpnumhook[1]{}

558 % \newlength{\cftbeforesubsubsectionsip}
559 % \newlength{\cftsubsubsubsectionindent}
560 % \newlength{\cftsubsubsubsectionnumwidth}
561 \renewcommand*\cftsubsubsubsectionfont{}
562 \renewcommand*\cftsubsubsubsectionname{}
563 \renewcommand*\cftsubsubsubsectionpresnum{}
564 \renewcommand*\cftsubsubsubsectionaftersnum{}
565 \renewcommand*\cftsubsubsubsectionaftersnumb{}
566 \renewcommand*\cftsubsubsubsectionleader{}
567 \renewcommand*\cftsubsubsubsectiondotsep{1}
568 \renewcommand*\cftsubsubsubsectionpagefont{}
569 \renewcommand*\cftsubsubsubsectionafterpnum{}
570 \renewcommand*\cftsubsubsubsectionformatpnum[1]{}
571 \renewcommand*\cftsubsubsubsectionformatpnumhook[1]{}

572 % \newlength{\cftbeforeparagraphskip}
573 % \newlength{\cftparagraphindent}
574 % \newlength{\cftparagraphnumwidth}
575 \renewcommand*\cftparagraphfont{}
576 \renewcommand*\cftparagraphname{}
577 \renewcommand*\cftparagraphpresnum{}
578 \renewcommand*\cftparagraphaftersnum{}
579 \renewcommand*\cftparagraphaftersnumb{}
580 \renewcommand*\cftparagraphleader{}
581 \renewcommand*\cftparagraphdotsep{1}
582 \renewcommand*\cftparagraphpagefont{}
583 \renewcommand*\cftparagraphafterpnum{}
584 \renewcommand*\cftparagraphformatpnum[1]{}
585 \renewcommand*\cftparagraphformatpnumhook[1]{}

586 % \newlength{\cftbeforesubparagraphskip}
587 % \newlength{\cftsubparagraphindent}
588 % \newlength{\cftsubparagraphnumwidth}
589 \renewcommand*\cftsubparagraphfont{}
590 \renewcommand*\cftsubparagraphname{}
591 \renewcommand*\cftsubparagraphpresnum{}
592 \renewcommand*\cftsubparagraphaftersnum{}
593 \renewcommand*\cftsubparagraphaftersnumb{}
594 \renewcommand*\cftsubparagraphleader{}
595 \renewcommand*\cftsubparagraphdotsep{1}
596 \renewcommand*\cftsubparagraphpagefont{}
597 \renewcommand*\cftsubparagraphafterpnum{}
598 \renewcommand*\cftsubparagraphformatpnum[1]{}
599 \renewcommand*\cftsubparagraphformatpnumhook[1]{}

600 % \newlength{\cftbeforefigureskip}
601 % \newlength{\cftfigureindent}
602 % \newlength{\cftfigurenumwidth}
```

```
603 \renewcommand*\cftfigurefont{}
604 \renewcommand*\cftfigurename{}
605 \renewcommand*\cftfigurepresnum{}
606 \renewcommand*\cftfigureaftersnum{}
607 \renewcommand*\cftfigureaftersnumb{}
608 \renewcommand*\cftfigureleader{}
609 \renewcommand*\cftfiguredotsep}{1}
610 \renewcommand*\cftfigurepagefont{}
611 \renewcommand*\cftfigureafterpnum{}
612 \renewcommand*\cftfigureformatpnum}[1]{}
613 \renewcommand*\cftfigureformatpnumhook}[1]{}

```

```
614 % \newlength{\cftbeforesubfigureskip}
615 % \newlength{\cftsubfigureindent}
616 % \newlength{\cftsubfigureenumwidth}
617 \newcommand*\cftsubfigurefont{}
618 \newcommand*\cftsubfigurename{}
619 \newcommand*\cftsubfigurepresnum{}
620 \newcommand*\cftsubfigureaftersnum{}
621 \newcommand*\cftsubfigureaftersnumb{}
622 \newcommand*\cftsubfigureleader{}
623 \newcommand*\cftsubfiguredotsep}{1}
624 \newcommand*\cftsubfigurepagefont{}
625 \newcommand*\cftsubfigureafterpnum{}
626 \newcommand*\cftsubfigureformatpnum}[1]{}
627 \newcommand*\cftsubfigureformatpnumhook}[1]{}

```

```
628 % \newlength{\cftbeforetableskip}
629 % \newlength{\cfttableindent}
630 % \newlength{\cfttableenumwidth}
631 \renewcommand*\cfttablefont{}
632 \renewcommand*\cfttablename{}
633 \renewcommand*\cfttablepresnum{}
634 \renewcommand*\cfttableaftersnum{}
635 \renewcommand*\cfttableaftersnumb{}
636 \renewcommand*\cfttableleader{}
637 \renewcommand*\cfttabledotsep}{1}
638 \renewcommand*\cfttablepagefont{}
639 \renewcommand*\cfttableafterpnum{}
640 \renewcommand*\cfttableformatpnum}[1]{}
641 \renewcommand*\cfttableformatpnumhook}[1]{}

```

```
642 % \newlength{\cftbeforesubtableskip}
643 % \newlength{\cftsubtableindent}
644 % \newlength{\cftsubtableenumwidth}
645 \newcommand*\cftsubtablefont{}
646 \newcommand*\cftsubtablename{}
647 \newcommand*\cftsubtablepresnum{}
648 \newcommand*\cftsubtableaftersnum{}
649 \newcommand*\cftsubtableaftersnumb{}
650 \newcommand*\cftsubtableleader{}
651 \newcommand*\cftsubtabledotsep}{1}
652 \newcommand*\cftsubtablepagefont{}
653 \newcommand*\cftsubtableafterpnum{}
654 \newcommand*\cftsubtableformatpnum}[1]{}
655 \newcommand*\cftsubtableformatpnumhook}[1]{}

```

```

656 \renewcommand*\booknumberline}[1]{}
657 \renewcommand*\partnumberline}[1]{}
658 \renewcommand*\chapternumberline}[1]{}
659 \renewcommand*\numberlinehook}[1]{}
660 % \renewcommand*\cftwhatismyname}{}%
661 \renewcommand*\booknumberlinehook}[1]{}
662 \renewcommand*\partnumberlinehook}[1]{}
663 \renewcommand*\chapternumberlinehook}[1]{}
664 \renewcommand{\numberlinebox}[2]{}
665 \renewcommand{\booknumberlinebox}[2]{}
666 \renewcommand{\partnumberlinebox}[2]{}
667 \renewcommand{\chapternumberlinebox}[2]{}
668 %
669 % \newlength{\cftparfillskip}
670 \renewcommand*\cftpagenumbersoff}[1]{}
671 \renewcommand*\cftpagenumberon}[1]{}
672 \renewcommand*\cftlocalchange}[3]{}
673 \renewcommand*\cftaddtitleline}[4]{}
674 \renewcommand*\cftaddnumtitleline}[4]{}
675 \renewcommand{\cftinsertcode}[2]{}
676 \renewcommand{\cftinserthook}[2]{}
677 \renewcommand{\settocpreprocessor}[2]{}
678 \DeclareRobustCommand{\cftpagenumbersoff}[1]{}
679 \DeclareRobustCommand{\cftpagenumberon}[1]{}

```

### § 534.11 Floats and captions

`\newfloat` [*(1: within)*] [*(2: type)*] [*(3: ext)*] [*(4: capname)*]

```

680 \RenewDocumentCommand{\newfloat}{o m m m}{%
681 \IfValueTF{#1}%
682 \DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
683 \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.

```

684 \cslet{listof#2s}\relax%
685 \cslet{listof#2es}\relax%
686 }

```

`\newlistof` [*(within)*] [*(type)*] [*(ext)*] [*(listofname)*]

Emulated through the `\newfloat` mechanism. Note that `memoir` uses a different syntax than `tocloft` for the name.

```

687 \RenewDocumentCommand{\newlistof}{o m m m}
688 {%
689 \IfValueTF{#1}
690 {\newlistentry[#1]{#2}{#3}{0}}
691 {\newlistentry{#2}{#3}{0}}
692 \@namedef{ext@#2}{#3}%
693 \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
694 \setcounter{#3depth}{1}%
695 \@namedef{#3mark}{}%
696 \@namedef{#2}{\listof{#2}{#4}}
697 \@namedef{@cftmake#3title}{}

```

```

698 \@ifundefined{cftbefore#3titleskip}{
699 \expandafter\newlength\csname cftbefore#3titleskip\endcsname
700 \expandafter\newlength\csname cftafter#3titleskip\endcsname
701 }{}
702 \@namedef{cft#3titlefont}{}
703 \@namedef{cftafter#3title}{}
704 \@namedef{cft#3prehook}{}
705 \@namedef{cft#3posthook}{}
706 }

```

```
707 \renewcommand{\setfloatadjustment}[2]{}

```

Borrowed from the lwarp version of keyfloat:

```

708 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{0{-1.2ex} m}
709 {% start
710 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
711 \captionsetup{type=#2}%
712 }
713 {%
714 \endLWR@BlockClassWP%
715 }
716
717 \DeclareDocumentEnvironment{marginfigure}{o}
718 {\begin{KFLTmemoir@marginfloat}{figure}}
719 {\end{KFLTmemoir@marginfloat}}
720
721 \DeclareDocumentEnvironment{margintable}{o}
722 {\begin{KFLTmemoir@marginfloat}{table}}
723 {\end{KFLTmemoir@marginfloat}}

724 \renewcommand{\setmarginfloatcaptionadjustment}[2]{}
725 \renewcommand{\setmpjustification}[2]{}
726 \renewcommand*\{mpjustification}{}
727 \renewcommand*\{setfloatlocations}[2]{}
728 \DeclareDocumentCommand{\suppressfloats}{o}{}
729 \renewcommand*\{FloatBlock}{}
730 \renewcommand*\{FloatBlockAllowAbove}{}
731 \renewcommand*\{FloatBlockAllowBelow}{}
732 \renewcommand*\{setFloatBlockFor}{}
733
734 \renewcommand{\captiontitlefinal}[1]{}
735
736 \renewcommand{\flegtable}{\tablename}
737 \renewcommand{\flegfigure}{\figurename}
738 \renewcommand{\flegtocable}{}
739 \renewcommand{\flegtocfigure}{}
740
741
742 \renewcommand{\subcaption}[2][{}]{%
743 \ifblank{#1}{\subfloat[#2]}{\subfloat[#1][#2]}%
744 }
745
746 \renewcommand{\contsubcaption}{\ContinuedFloat\subcaption}
747

```

```

748 \LetLtxMacro\subcaptionref\subref
749
750 \renewcommand*\tightsubcaptions{}
751 \renewcommand*\loosesubcaptions{}
752
753 \renewcommand*\subcaptionsize[1]{}
754 \renewcommand*\subcaptionlabelfont[1]{}
755 \renewcommand*\subcaptionfont[1]{}
756 \renewcommand*\subcaptionstyle[1]{}
757
758 \renewcommand*\hangsubcaption{}
759 \renewcommand*\shortsubcaption{}
760 \renewcommand*\normalsubcaption{}
761
762 \RenewDocumentEnvironment{sidecaption}{o m o}
763 {}
764 {
765 \IfValueTF{#1}{\caption[#1]{#2}}{\caption{#2}}%
766 \IfValueT{#3}{\label{#3}}%
767 }
768
769 % \newlength{\sidecapwidth}
770 % \newlength{\sidecapsep}
771 \renewcommand*\setsidecaps[2]{}
772 \renewcommand*\sidecapmargin[1]{}
773 % \newif\ifscapmargleft
774 \scapmargleftfalse
775 \renewcommand*\setsidecappos[1]{}
776
777 \RenewDocumentEnvironment{sidecontcaption}{m o}
778 {}
779 {%
780 \ContinuedFloat%
781 \caption{#1}%

```

Without \@capttype, the section is referred to instead.

```

782 \IfValueT{#2}{\label[\@capttype]{#2}}%
783 }

```

\sidenamedlegend does not appear to use the roc argument.

```

784 \renewenvironment{sidenamedlegend}[2][]{
785 \begin{center}
786 \@nameuse{\@capttype name}\CaptionSeparator#2
787 \end{center}
788 }
789 {}
790
791 \renewenvironment{sidelegend}[1]
792 {\begin{center}
793 #1
794
795 }
796 {\end{center}}

```

```

797
798 \renewcommand*\sidecapstyle{}
799 \renewcommand*\overridescapmargin}[1]{}
800 % \newlength\sidecapraise
801 \renewcommand*\sidecapfloatwidth{\linewidth}
802
803 \LetLtxMacro\ctabular\ctabular
804 \LetLtxMacro\endctabular\endctabular
805
806 \renewcommand\autorows[5][]{%
807 #5
808 }
809
810 \renewcommand\autocol[5][]{%
811 #5
812 }

```

### § 534.12 Page notes

```

813 \renewcommand*\feetabovelfloat{}
814 \renewcommand*\feetbelowfloat{}
815 \renewcommand*\feetatbottom{}
816
817 \renewcommand*\verbfootnote[2][{}
818 \PackageError{lwarp, memoir}
819 {Verbatim footnotes are not yet supported by lwarp.}
820 {This may be improved some day.}
821 }
822
823 \renewcommand*\plainfootnotes{}
824 \renewcommand*\twocolumnfootnotes{}
825 \renewcommand*\threecolumnfootnotes{}
826 \renewcommand*\paragraphfootnotes{}
827 \renewcommand*\footfudgefiddle{}
828
829 \renewcommand*\newfootnoteseries}[1]{
830 \PackageError{lwarp, memoir}
831 {Memoir footnote series are not yet supported by lwarp.}
832 {This may be improved some day.}
833 }
834
835 \renewcommand*\plainfootstyle}[1]{}
836 \renewcommand*\twocolumnfootstyle}[1]{}
837 \renewcommand*\threecolumnfootstyle}[1]{}
838 \renewcommand*\paragraphfootstyle}[1]{}
839
840 \renewcommand*\footfootmark{}
841 \renewcommand*\footmarkstyle}[1]{}
842
843 % \newlength\footmarkwidth
844 % \newlength\footmarksep
845 % \newlength\footparindent
846
847 \renewcommand*\foottextfont{}
848

```

```

849 \renewcommand*{\marginparmargin}[1]{}
850 \renewcommand*{\sideparmargin}[1]{}
851
852 \LetLtxMacro\sidepar\marginpar
853 \renewcommand*{\sideparfont}{}
854 \renewcommand*{\sideparform}{}
855 \LWR@providelength{\sideparvshift}
856
857 \renewcommand*{\parnopar}{}
858
859 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
860 \renewcommand*{\sidebarmargin}[1]{}
861 \renewcommand*{\sidebarfont}{}
862 \renewcommand*{\sidebarform}{}
863 % \newlength{\sidebarhsep}
864 % \newlength{\sidebarvsep}
865 % \newlength{\sidebarwidth}
866 % \newlength{\sidebartopsep}
867 \renewcommand{\setsidebarheight}[1]{}
868 \renewcommand*{\setsidebars}[6]{}
869 \renewcommand*{\footnotesatfoot}{}
870 \renewcommand*{\footnotesinmargin}{}
871
872 \LetLtxMacro\sidefootnote\footnote
873 \LetLtxMacro\sidefootnotemark\footnotemark
874 \LetLtxMacro\sidefootnotetext\footnotetext
875
876 \renewcommand*{\sidefootmargin}[1]{}
877 % \newlength{\sidefoothsep}
878 % \newlength{\sidefootvsep}
879 % \newlength{\sidefootwidth}
880 % \newlength{\sidefootadjust}
881 % \newlength{\sidefootheight}
882 \renewcommand*{\setsidefootheight}[1]{}
883 % \renewcommand*{\sidefootfont}{}% in docs but not in the package
884 \renewcommand*{\setsidefeet}[6]{}
885 \renewcommand*{\sidefootmarkstyle}[1]{}
886 \renewcommand*{\sidefoottextfont}{}
887 \renewcommand*{\sidefootform}{}
888
889 \renewcommand*{\continuousnotenums}{\pncontopttrue}% from pagenote
890 \renewcommand*{\notepageref}{}
891 \renewcommand*{\prenotetext}{}
892 \renewcommand*{\postnotetext}{}
893 \renewcommand*{\idtextinnotes}[1]{}
894 \renewcommand*{\printpageinnotes}[1]{}
895 \renewcommand*{\printpageinnoteshyperref}[1]{}
896 \renewcommand*{\foottopagenote}{}
897 \renewcommand*{\pagetofootnote}{}

```

### § 534.13 **Decorative text**

```

898 \renewcommand*{\epigraphposition}[1]{}
899 \renewcommand*{\epigraphtextposition}[1]{}
900 \renewcommand*{\epigraphsourceposition}[1]{}
901 \renewcommand*{\epigraphfontsize}[1]{}

```

```
902 \renewcommand*\epigraphforheader}[2][{}]{}
903 \renewcommand*\epigraphpicture}{}
```

### § 534.14 Poetry

```
904 \renewcommand*\vinphantom}{ }
905 \renewcommand*\vleftofline}[1][{}]{#1}
906 % \let\linenumberfrequency\poemlines
907 % \renewcommand*\linenumberfont}[1][{}]{ }
908
909 \DeclareDocumentCommand{\PoemTitle}{s o o m}{%
910 \IfValueTF{#2}%
911 {\poemtitle[#2][#4]}%
912 {\poemtitle{#4}}%
913 }
914
915 \renewcommand*\NumberPoemTitle}{ }
916 \renewcommand*\PlainPoemTitle}{ }
917 \renewcommand*\poemtitlepstyle}{ }
918 \renewcommand*\poemtitlestarmark}[1][{}]{ }
919 \renewcommand*\poemtitlestarpstyle}{ }
920 \renewcommand*\PoemTitleheadstart}{ }
921 \renewcommand*\printPoemTitlenonum}{ }
922 \renewcommand*\printPoemTitlenum}{ }
923 \renewcommand*\afterPoemTitlenum}{ }
924 \renewcommand*\printPoemTitletitle}[1][{}]{ }
925 \renewcommand*\afterPoemTitle}{ }
926 \newlength{\midpoemtitleskip}
927 \renewcommand*\PoemTitlenumfont}{ }
928 \renewcommand*\PoemTitlefont}{ }
```

### § 534.15 Boxes, verbatims and files

```
929 \renewenvironment{qframe}{\framed}{\endframed}
930 \renewenvironment{qshade}{\shaded}{\endshaded}
```

Use the comment package:

```
931 \renewcommand*\commentsoff}[1]{\includecomment{#1}}
932 \renewcommand*\commentson}[1]{\excludecomment{#1}}
933 \LetLtxMacro\renewcomment\commentson
934
935 \renewcommand*\setverbatimfont}[1][{}]{ }
936 \renewcommand*\tabson}[1][{}]{ }
937 \renewcommand*\tabsoff}{ }
938 \renewcommand*\wrappingon}{ }
939 \renewcommand*\wrappingoff}{ }
940 \renewcommand*\verbatimindent}{ }
941 \renewcommand*\verbatimbreakchar}[1][{}]{ }
942 \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.

```

943 \renewcommand*\bvbox{}
944 \renewcommand*\bvtopandtail{}
945 \renewcommand*\bvboxes{}
946 \renewcommand*\nobvbox{}
947 % \newlength\bvboxsep
948 \renewcommand*\bvtoprulehook{}
949 \renewcommand*\bvtopmidhook{}
950 \renewcommand*\bvendrulehook{}
951 \renewcommand*\bvleftsidehook{}
952 \renewcommand*\bvrightsidehook{}
953 \renewcommand*\bvperpagetrue{}
954 \renewcommand*\bvperpagefalse{}
955 \renewcommand{\bvtopofpage}[1]{}
956 \renewcommand{\bvendofpage}[1]{}
957 \renewcommand*\linenumberfrequency[1]{}
958 \renewcommand*\resetbvlinenumber{}
959 \renewcommand*\setbvlinenums[2]{}
960 \renewcommand*\linenumberfont[1]{}
961 \renewcommand*\bvnumbersinside{}
962 \renewcommand*\bvnumbersoutside{}

```

## § 534.16 Cross referencing

```

963 \renewcommand*\fref[1]{\cref{#1}}
964 \renewcommand*\tref[1]{\cref{#1}}
965 \renewcommand*\pref[1]{\cpageref{#1}}
966 \renewcommand*\Aref[1]{\cref{#1}}
967 \renewcommand*\Bref[1]{\cref{#1}}
968 \renewcommand*\Pref[1]{\cref{#1}}
969 \renewcommand*\Sref[1]{\cref{#1}}
970 \renewcommand*\figurerefname{Figure}
971 \renewcommand*\tablerefname{Table}
972 \renewcommand*\pagerefname{page}
973 \renewcommand*\bookrefname{Book~}
974 \renewcommand*\partrefname{Part~}
975 \renewcommand*\chapterrefname{Chapter~}
976 \renewcommand*\sectionrefname{\S}
977 \renewcommand*\appendixrefname{Appendix~}
978 \LetLtxMacro\titleref\nameref
979 \renewcommand*\headnameref{}
980 \renewcommand*\tocnameref{}
981
982 \providecounter{LWR@currenttitle}
983
984 \renewcommand*\currenttitle{%
985 \addtocounter{LWR@currenttitle}{1}%
986 \label{currenttitle\arabic{LWR@currenttitle}}%
987 \nameref{currenttitle\arabic{LWR@currenttitle}}%
988 }
989
990 \renewcommand*\theTitleReference[2]{}
991 \renewcommand*\namerefon{}
992 \renewcommand*\namerefoff{}

```

§ 534.17 **Back matter**

Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.

```

993 \AtBeginDocument{
994
995 \def\@wrindexhyp#1||\{\%
996 \addtocounter{LWR@autoindex}{1}%
997 \LWR@new@Label{LWRindex-\arabic{LWR@autoindex}}%
998 % \ifshowindexmark\@showidx{#1}\fi
999 \protected@write\@auxout{%
1000 {\string\@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%
1001 \endgroup
1002 \@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.

```

1003 \def\@wrspindexhyp#1||\{\%
1004 \addtocounter{LWR@autoindex}{1}%
1005 \LWR@new@Label{LWRindex-\arabic{LWR@autoindex}}%
1006 % \ifshowindexmark\@showidx{#1}\fi
1007 \protected@write\@auxout{%
1008 {%
1009 % \string\@wrindexm@m{\@idxfile}{#1}{\@nameuse{the\@sptheid}}%
1010 \string\@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}%
1011 }%
1012 \endgroup
1013 \@esphack}%
1014
1015 }% \AtBeginDocument

```

Patched to use \_html filename and \BaseJobname:

```

1016 \catcode'_ =12%
1017 \renewcommand*\makeindex}[1][\BaseJobname]{%
1018 \if@filesw
1019 \def\gindex{\@bsphack%
1020 \@ifnextchar [{\@index}{\@index[\BaseJobname]}}
1021 \def\specialindex{\@bsphack\@spindex}%
1022 \makememindexhook
1023 \expandafter\newwrite\csname #1@idxfile\endcsname
1024 \expandafter\immediate\openout \csname #1@idxfile\endcsname #1_html.idx\relax
1025 \typeout{Writing index file #1_html.idx }%
1026 \fi}
1027 \catcode'_ =8%

```

Patched to use \_html filename and \BaseJobname. This will later be patched by the lwarp core.

```

1028 \catcode'_ =12%
1029 \renewcommand{\printindex}[1][\BaseJobname]{\@input@{#1_html.ind}}
1030 \catcode'_ =8%

```

```

1031 \DeclareDocumentCommand{\newblock}{}{}
1032 %
1033 \renewcommand*{\showindexmarks}{}
1034 \renewcommand*{\hideindexmarks}{}
1035
1036 \renewcommand*{\xindyindex}{}

```

### § 534.18 **Miscellaneous**

```

1037 \renewcommand*{\changemarks}{}
1038 \renewcommand*{\nochangemarks}{}
1039 \renewcommand*{\added}[1]{}
1040 \renewcommand*{\deleted}[1]{}
1041 \renewcommand*{\changed}[1]{}
1042
1043 \renewcommand*{\showtrimsoff}{}
1044 \renewcommand*{\showtrimson}{}
1045 \renewcommand*{\trimXmarks}{}
1046 \renewcommand*{\trimLmarks}{}
1047 \renewcommand*{\trimFrame}{}
1048 \renewcommand*{\trimNone}{}
1049 \renewcommand*{\trimmarkscolor}{}
1050 \renewcommand*{\trimmarks}{}
1051 \renewcommand*{\tmarktl}{}
1052 \renewcommand*{\tmarktr}{}
1053 \renewcommand*{\tmarkbr}{}
1054 \renewcommand*{\tmarkbl}{}
1055 \renewcommand*{\tmarktm}{}
1056 \renewcommand*{\tmarkmr}{}
1057 \renewcommand*{\tmarkbm}{}
1058 \renewcommand*{\tmarkml}{}
1059 \renewcommand*{\trimmark}{}
1060 \renewcommand*{\quarkmarks}{}
1061 \renewcommand*{\registrationColour}[1]{}
1062
1063 \renewcommand*{\leavespergathering}[1]{}
1064
1065 \renewcommand*{\noprelistbreak}{}
1066
1067 \renewcommand*{\cleartorecto}{}
1068 \renewcommand*{\cleartoverso}{}
1069
1070 \renewenvironment{vplace}[1][1]{}{}

```

### § 534.19 **caption emulation**

```

1071 \renewcommand*{\captiondelim}[1]{\renewcommand*{\CaptionSeparator}{#1}}
1072 \renewcommand*{\captionnamefont}[1]{}
1073 \renewcommand*{\captiontitlefont}[1]{}
1074 \renewcommand*{\flushleft}{}
1075 \renewcommand*{\centerlastline}{}
1076 \renewcommand*{\captionstyle}[2][1]{}
1077 \DeclareDocumentCommand{\captionwidth}{m}{}
1078 \renewcommand*{\changecaptionwidth}{}
1079 \renewcommand*{\normalcaptionwidth}{}

```

```

1080 \renewcommand*\hangcaption{}
1081 \renewcommand*\indentcaption}[1]{}
1082 \renewcommand*\normalcaption{}
1083 \renewcommand{\precaption}[1]{}
1084 \renewcommand{\postcaption}[1]{}
1085 \renewcommand{\midbication}[1]{}
1086 \renewcommand{\contcaption}[1]{}
1087 % \ContinuedFloat%
1088 % \caption{#1}%
1089 \begin{LWR@figcaption}% Later becomes \caption*
1090 \LWR@isolate{\@nameuse{\@capttype name}}~%
1091 \thechapter.\thevalue{\@capttype}\CaptionSeparator\LWR@isolate{#1}%
1092 \end{LWR@figcaption}
1093 }

```

```

1094 \newlength{\abovelegendskip}
1095 \setlength{\abovelegendskip}{0.5\baselineskip}
1096 \newlength{\belowlegendskip}
1097 \setlength{\belowlegendskip}{\abovelegendskip}

```

The extra \\ here forces a <br> in HTML when \legend is used in a \marginpar.

```

1098 \renewcommand{\legend}[1]{\begin{center}#1\\end{center}}
1099
1100 \renewcommand{\namedlegend}[2][{}
1101 \begin{center}
1102 \@nameuse{fleg@capttype}\CaptionSeparator#2\\
1103 \end{center}
1104 \@nameuse{flegtoc@capttype}{#1}
1105 }
1106
1107 \renewcommand{\newfixedcaption}[3][\caption]{%
1108 \renewcommand{#2}{\def\@capttype{#3}#1}}
1109 \renewcommand{\renewfixedcaption}[3][\caption]{%
1110 \renewcommand{#2}{\def\@capttype{#3}#1}}
1111 \renewcommand{\providefixedcaption}[3][\caption]{%
1112 \providecommand{#2}{\def\@capttype{#3}#1}}
1113
1114 \renewcommand{\bitwonumcaption}[6][{}%
1115 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1116 \addtocounter{\@capttype}{-1}%
1117 \begingroup%
1118 \csdef{\@capttype name}{#4}%
1119 \ifblank{#5}{\caption{#6}}{\caption[#5]{#6}}%
1120 \endgroup%
1121 \ifblank{#1}{ }\label{#1}}%
1122 }
1123
1124 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo
1125
1126 \renewcommand{\bicaption}[5][{}%
1127 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1128 \begin{LWR@figcaption}% Later becomes \caption*
1129 \LWR@isolate{#4} \thechapter.\thevalue{\@capttype}\CaptionSeparator\LWR@isolate{#5}%
1130 \end{LWR@figcaption}
1131 \ifblank{#1}{ }\label{#1}}%

```

```

1132 }
1133
1134 \renewcommand{\bicontcaption}[3]{%
1135 \contcaption{#1}%
1136 \begingroup%
1137 \csdef{\@captype name}{#2}%
1138 \contcaption{#3}%
1139 \endgroup%
1140 }

1141 % only in ccaption, not in memoir:
1142 % \LetLtxMacro\longbitwonumcaption\bitwonumcaption%
1143 % \LetLtxMacro\longbionenumcaption\bitwonumcaption%
1144 % \LetLtxMacro\longbicaption\bicaption%
1145
1146 \RenewDocumentCommand{\subtop}{0{} 0{} m}{%
1147 \subfloat[#1][#2]{#3}%
1148 }
1149
1150 \RenewDocumentCommand{\subbottom}{0{} 0{} m}{%
1151 \subfloat[#1][#2]{#3}%
1152 }
1153
1154 \renewcommand{\contsubtop}{%
1155 \ContinuedFloat\addtocounter{\@captype}{1}%
1156 \subtop}
1157
1158 \renewcommand{\contsubbottom}{%
1159 \ContinuedFloat\addtocounter{\@captype}{1}%
1160 \subbottom}
1161
1162 \renewcommand{\subconcluded}{\}
1163
1164 \let\subfigure\subbottom
1165 \let\subtable\subtop
1166
1167 \let\contsubtable\contsubtop
1168 \let\contsubfigure\contsubbottom

1169 \newcommand{\newfloatentry}[4][\@empty]{TODO: newfloatentry}
1170 \newcommand{\newfloatlist}[5][\@empty]{TODO: newfloatlist}
1171 \newcommand{\newfloatenv}[4][\@empty]{TODO: newfloatenv}
1172 \DeclareRobustCommand{\newfloatpagesoff}[1]{\}
1173 \DeclareRobustCommand{\newfloatpageson}[1]{\}
1174 \newcommand{\setnewfloatindents}[3]{\}

```

## § 534.20 Final patchwork

```

1175 \newlistof{tableofcontents}{toc}{\contentsname}
1176 \newlistof{listoffigures}{lof}{\listfigurename}
1177 \newlistof{listoftables}{lot}{\listtablename}

```

File 437 **lwarp-common-multimedia.sty**

§ 535 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.

```

30 \newcommand*\LWR@multimedia@fileAV[4]{%
31 \filename@parse{#2}%
32 \IfFileExists{#2}{%

```

The container `<div>` is sized as desired.

```

33 \ifstrequal{#3}{audio}{%
34 \begin{BlockClass}{AVviewport}
35 }{%
36 \begin{BlockClass}[\LWR@multimedia@printsiz\ 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 \@filef@und\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{\@filef@und}{#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@printsize\ 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`     $\langle poster\ text \rangle$   $\langle filename \rangle$   $\langle audio/video \rangle$   $\langle mimetype \rangle$

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`     $\langle poster\ text \rangle$   $\langle URL\ or\ filename \rangle$   $\langle mime\ type \rangle$

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@multimedias`.

`\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@multimedias`     $\langle options \rangle$   $\langle poster\ text \rangle$   $\langle filename \rangle$

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@multimediab}[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 \catcode'\#=12%
141 \catcode'\%=12%
142 \catcode'\&=12%
143 \catcode'\~=12%
144 \catcode'_ =12%
145 \LWR@multimediab%
146 }
```

# Change History

## § 536 Chg Hist

For the most recent changes, see page [1073](#).

|       |                                                                                    |                                                              |
|-------|------------------------------------------------------------------------------------|--------------------------------------------------------------|
| 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                             |
|       | Added section: Operating-System portability. . . . . 207                           |                                                              |
|       | Added section: Selecting the operating system. . . . . 112                         |                                                              |
|       | 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. . . . . 354                     |                                                              |
|       | General: 2016/03/14 . . . . . 1                                                    |                                                              |
|       | Global: Uses \p@(type) in float captions. . . . . 1                                |                                                              |
|       | Test Suite: Sub-figures . . . . . 1                                                |                                                              |
| v0.13 | \CaptionSeparator: Fix for newer babel package. . . . . 475                        |                                                              |
|       | \LWR@LwarpStart: \up and \fup . . . 373                                            |                                                              |
|       | General: 2016/03/24 . . . . . 1                                                    |                                                              |
|       | Fix dollar-redefined bug for newer package. . . . . 946                            |                                                              |
|       | Removed package: subfig . . . . . 1                                                |                                                              |
|       | Test Suite: Ordinals, Subcaption . . . 1                                           |                                                              |
| v0.14 | \LWR@htmlsectionfilename: Fix: Links to home page. . . . . 316                     |                                                              |
|       | General: 2016/03/31 . . . . . 1                                                    |                                                              |
|       | floatrow: Added. . . . . 714                                                       |                                                              |
|       | Docs: Commands for a successful HTML conversion. . . . . 115                       |                                                              |
|       | Docs: Commands into a warpprint environment. . . . . 113                           |                                                              |
|       | Docs: Newclude limitations. . . . 158                                              |                                                              |
|       | Docs: Table: Cross-referencing data structures. . . . . 460                        |                                                              |
|       | Docs: Table: Float data structures. 471                                            |                                                              |
|       | Docs: Trademarks section. . . . . 185                                              |                                                              |
|       | Docs: Troubleshooting cross-references. . . . . 180                                |                                                              |
|       | Test Suite: Assigned cleveref name for Test Float. . . . . 1                       |                                                              |
|       | Test Suite: Floatrow . . . . . 1                                                   |                                                              |
| v0.15 | General: 2016/04/06 . . . . . 1                                                    |                                                              |
|       | Added. . . . . 719                                                                 |                                                              |
|       | Ampersand (&): Fixed handling when passed as an argument. . . 406                  |                                                              |
|       | Docs: Added warning icons for items needing special attention. 188                 |                                                              |
|       | Docs: Clarify print/HTML output. 112                                               |                                                              |
|       | Docs: Moved the supported features table to the introduction. 64                   |                                                              |
|       | Files: lwarp_formal.css added. . . . 1                                             |                                                              |
|       | Fix: steps counter . . . . . 718                                                   |                                                              |
|       | Fixed & handling. . . . . 717                                                      |                                                              |
|       | Test Suite: test_suite_formal.css file added. . . . . 1                            |                                                              |
| v0.16 | General: 2016/04/11 . . . . . 1                                                    |                                                              |
|       | \titlingpage: Improved print-output spacing. . . . . 380                           |                                                              |
|       | xfrac: Adjusted for the use of any font: . . . . . 1002                            |                                                              |
|       | Added XeLaTeX, LuaLaTeX support. . . . . 189                                       |                                                              |
|       | Docs: Font and UTF-8 support. . . 96                                               |                                                              |
|       | Docs: Moved location of \usepackage{lwarp}. . . . . 99                             |                                                              |
|       | Docs: Text not converting. . . . . 180                                             |                                                              |
|       | Lwarp no longer selects fonts. 96, 216                                             |                                                              |
|       | Removed package: suffix . . . . . 1                                                |                                                              |
|       | Test Suite: Improved titlingpage. 380                                              |                                                              |
|       | Test Suite: Lwarp no longer selects fonts. . . . . 1                               |                                                              |
|       | Test Suite: Supports XeLaTeX, LuaLaTeX. . . . . 1                                  |                                                              |
| v0.17 | \LWR@htmlsectionfilename: Fix: Links when entire doc is one HTML page. . . . . 316 |                                                              |
|       | General: 2016/04/14 . . . . . 1                                                    |                                                              |
|       | mdframed: Added. . . . . 805                                                       |                                                              |

|                                                                                     |     |                                                                                        |      |
|-------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------|------|
| Test Suite: Fix: Print-version<br>front-matter page numbers. . . . .                | 1   | \LWR@minipagestartpars: Suppresses<br>paragraph tags between<br>minipages. . . . .     | 568  |
| Test Suite: Mdframed . . . . .                                                      | 1   | \LWR@subsingledollar: MATHJAX<br>support. . . . .                                      | 499  |
| v0.18                                                                               |     | \LateximageFontSizeName: Add:<br>User-adjustable math/lateximage<br>font size. . . . . | 520  |
| \LWR@includegraphicsb: Add: svgz<br>file extension. . . . .                         | 742 | \hspace: Fix: \hspace length<br>computations. . . . .                                  | 570  |
| em, ex, %, px dimensions<br>preserved. . . . .                                      | 742 | \minipagefullwidth: Added: No<br>width tag for the next minipage in<br>HTML. . . . .   | 545  |
| Fix: \linewidth, \textwidth,<br>\textheight inside a minipage. . . . .              | 742 | \warpHTMLonly: Added. . . . .                                                          | 215  |
| Improved HTML output linebreaks. . . . .                                            | 742 | \warpprintonly: Replaces<br>\rowprintedonly. . . . .                                   | 215  |
| \LWR@myshorttoc: Reorganize<br>\HomeHTMLFilename logic. . . . .                     | 478 | \xfracHTMLfontsize: Added. . . . .                                                     | 1002 |
| \LWR@newhtmlfile: sideroc after title,<br>improving responsive design. . . . .      | 353 | General: 2016/06/08 . . . . .                                                          | 1    |
| \LWR@requesttoc: Reorganize<br>\HomeHTMLFilename logic. . . . .                     | 374 | css for table note item. . . . .                                                       | 943  |
| \LWR@subhyperref: Improved HTML<br>output linebreaks. . . . .                       | 468 | MATHJAX support added. 508, 515, 516                                                   |      |
| \LWR@subhyperrefclass: Improved<br>HTML output linebreaks. . . . .                  | 468 | multirow: Added optional args. . . . .                                                 | 830  |
| \LWR@subinlineimage: Suppress extra<br>space. . . . .                               | 470 | Adapts to tikz version. . . . .                                                        | 946  |
| \hspace: \hspace supported. . . . .                                                 | 570 | Avoids MATHJAX. . . . .                                                                | 498  |
| General: 2016/05/19 . . . . .                                                       | 1   | cleveref: Loaded \AtEndPreamble. . . . .                                               | 540  |
| File: lwarp.css: Improved toc<br>outline display. . . . .                           | 1   | Docs: Math options. . . . .                                                            | 99   |
| Files: lwarp.css and<br>lwarp_formal.css: Improved<br>responsive design. . . . .    | 1   | Docs: Table: Cross-referencing data<br>structures, updated. . . . .                    | 460  |
| Microtype disabled during HTML<br>generation . . . . .                              | 216 | File: lwarp.css: tnoteitemheader<br>added. . . . .                                     | 1    |
| PDF Unicode input characters. . . . .                                               | 203 | File: lwarp_mathjax.txt added. . . . .                                                 | 1    |
| Test Suite: Verse package . . . . .                                                 | 1   | Introduction: MATHJAX support<br>mentioned. . . . .                                    | 61   |
| lateximage: pdfcrop: -- hires added. . . . .                                        | 525 | Options: mathsvg and mathjax . . . . .                                                 | 210  |
| Reorganize \HomeHTMLFilename<br>logic. . . . .                                      | 525 | Supports colored \rule. . . . .                                                        | 993  |
| Suppress extra space. . . . .                                                       | 525 | titles: null \pagestyle and<br>\thispagestyle for HTML. . . . .                        | 947  |
| verse: Supports verse, memoir<br>packages. . . . .                                  | 981 | v0.20                                                                                  |      |
| minipage: Fix: \linewidth,<br>\textwidth, \textheight inside a<br>minipage. . . . . | 545 | \BlockClassSingle: Renamed from<br>"LWR@htmldivclassline". . . . .                     | 329  |
| v0.19                                                                               |     | \HTMLDescription: Added<br>\NewHTMLdescription. (Renamed<br>in v0.30.) . . . . .       | 339  |
| \HTMLFilename: Docs: Escape<br>filename underscores. . . . .                        | 315 | \HTMLFilename: No longer escape<br>underscores. . . . .                                | 315  |
| \HomeHTMLFilename: Docs: Escape<br>filename underscores. . . . .                    | 315 | \HomeHTMLFilename: No longer<br>escape underscores. . . . .                            | 315  |
| \LWR@LwarpStart: Enabled \\<br>newline. . . . .                                     | 372 | \InlineClass: Renamed from<br>"inlineclass". . . . .                                   | 329  |
| \LWR@doequation: MATHJAX support. . . . .                                           | 511 | \LWR@LwarpStart: Fix: math cross<br>references. . . . .                                | 373  |
| \LWR@doubledollar: MATHJAX<br>support. . . . .                                      | 505 | \LWR@closeparagraph: \unskip extra<br>spaces. . . . .                                  | 333  |
| \LWR@filestart: lwarp_mathjax.txt<br>loaded. . . . .                                | 369 | No break tags in the start/end of a<br>tabular. . . . .                                | 333  |
|                                                                                     |     | \LWR@endofline: Fix: \\<br>. . . . .                                                   | 568  |

|                                                                                                          |     |                                                                              |      |
|----------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------|------|
| \LWR@filestart: Adds meta description. . . . .                                                           | 369 | listings: Added. . . . .                                                     | 784  |
| \LWR@htmldivclass: Added optional style. . . . .                                                         | 327 | lrcaption: Added. . . . .                                                    | 793  |
| \LWR@htmlElementclass: Added optional style. . . . .                                                     | 327 | lwarp-newproject: Added. . . . .                                             | 241  |
| \LWR@htmlSectionfilename: HTMLFilename: removed additional trailing '-', and may be empty. . . . .       | 316 | microtype: User-interface emulated. . . . .                                  | 821  |
| Sections called "Index" or "index" have an underscore prepended to their filenames if no prefix. . . . . | 316 | needspace: Added. . . . .                                                    | 839  |
| \LWR@includegraphicsb: Fix: \linewidth in a floatrow. . . . .                                            | 742 | nowidow: Added. . . . .                                                      | 852  |
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| <code>\LWR@currenttextcolor</code>                  | 11538        | <code>LWR@freezethisautoid</code> (boolean)       | 474   |
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| <code>\LWR@descitem</code>                          | 7225         | <code>\LWR@getexparray</code>                     | 5070  |
| <code>LWR@displaymathnormal</code> (environment)    | 9987         | <code>\LWR@getmynexttoken</code>                  | 7310  |
| <code>LWR@displaymathother</code> (environment)     | 9992         | <code>LWR@glrbox</code> (environment)             | 718   |
| <code>\LWR@docdashline</code>                       | 7969         | <code>\LWR@gsavebox</code>                        | 704   |
| <code>\LWR@docmidrule</code>                        | 7953         | <code>LWR@hdashedlines</code> (counter)           | 401   |
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| <code>\LWR@doindexentry</code>                      | 9540         | <code>\LWR@hidelatexequation</code>               | 10040 |
| <code>LWR@doingapar</code> (boolean)                | 331          | <code>LWR@hlines</code> (counter)                 | 401   |
| <code>LWR@doingcmidrule</code> (boolean)            | 402          | <code>\LWR@HTML@caption@begin</code>              | 9236  |
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| <code>LWR@doingtbrule</code> (boolean)              | 402          | <code>\LWR@HTML@Gin@setfile</code>                | 122   |
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| <code>\LWR@doubledollar</code>                      | 9897         | <code>\LWR@htmlblockcomment</code>                | 5444  |
| <code>LWR@dynamicmath</code> (boolean)              | 314          | <code>\LWR@htmlblocktag</code>                    | 5446  |
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| <code>LWR@emptyatbang</code> (boolean)              | 402          | <code>\LWR@htmlcomment</code>                     | 5437  |
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| <code>\LWR@htmlOpencomment</code>             | 5416  | <code>LWR@midrules</code>                    | 427         |
| <code>\LWR@htmlrefsectionfilename</code>      | 5171  | <code>LWR@minipagedepth (counter)</code>     | 544         |
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| <code>\LWR@HTMLsanitizeexpand</code>          | 10294 | <code>\LWR@minipageheight (length)</code>    | 544         |
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| <code>\LWR@htmlspan</code>                    | 5393  | <code>\LWR@minipagestoppars</code>           | 11619       |
| <code>\LWR@htmlspanclass</code>               | 5401  | <code>LWR@minipagethispar (boolean)</code>   | 545         |
| <code>\LWR@htmltag</code>                     | 5411  | <code>\LWR@minipagewidth (length)</code>     | 544         |
| <code>\LWR@htmltagc</code>                    | 5344  | <code>\LWR@multicolother</code>              | 8255        |
| <code>\LWR@hyperindexrefnullified</code>      | 9545  | <code>\LWR@multicolpartext</code>            | 8249        |
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| <code>\LWR@indentHTMLtwo</code>               | 5341  | <code>\LWR@mynshorttoc</code>                | 9301        |
| <code>\LWR@indexitem</code>                   | 9509  | <code>\LWR@nameref</code>                    | 8891        |
| <code>\LWR@indexnameref</code>                | 9539  | <code>LWR@nestspan (environment)</code>      | 5354        |
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| <code>\LWR@indexsubsubitem</code>             | 9517  | <code>\LWR@newautoidanchor</code>            | 9180        |
| <code>LWR@indisplaymathimage (boolean)</code> | 497   | <code>\LWR@newautopagelabel</code>           | 6079        |
| <code>LWR@infloatrow (boolean)</code>         | 741   | <code>\LWR@newhtmlfile</code>                | 6117        |
| <code>\LWR@instertatbangcols</code>           | 7350  | <code>LWR@nextautoid (counter)</code>        | 475         |
| <code>LWR@intabularmetadata (boolean)</code>  | 402   | <code>LWR@nextautopage (counter)</code>      | 475         |
| <code>\LWR@isolate</code>                     | 687   | <code>LWR@nextequation (counter)</code>      | 508         |
| <code>LWR@isstartingequation (boolean)</code> | 523   | <code>\LWR@notltjloadafter</code>            | 42          |
| <code>\LWR@itemizeitem</code>                 | 7206  | <code>\LWR@notmemoirloadafter</code>         | 39          |
| <code>LWR@latestautopage (counter)</code>     | 476   | <code>\LWR@nullfonts</code>                  | 11298       |
| <code>\LWR@lateximage@oneimage</code>         | 10361 | <code>\LWR@nullifycomment</code>             | 1044        |
| <code>\LWR@lateximage@oneimageb</code>        | 10352 | <code>\LWR@nullifyNoAutoSpacing</code>       | 8702        |
| <code>LWR@lateximagedepth (counter)</code>    | 520   | <code>\LWR@nulllistfills</code>              | 7175        |
| <code>\LWR@lateximagedepthref</code>          | 8897  | <code>\LWR@opacity</code>                    | 120         |
| <code>LWR@lateximagenumber (counter)</code>   | 520   | <code>\LWR@openparagraph</code>              | 5618        |
| <code>\LWR@lateximagenumberref</code>         | 8900  | <code>LWR@opttablecol (boolean)</code>       | 417         |
| <code>\LWR@lateximagesfile</code>             | 1212  | <code>\LWR@orig@setBold</code>               | 9673        |
| <code>\LWR@latexmkcmd</code>                  | 1606  | <code>\LWR@orig@unsetBold</code>             | 9674        |
| <code>\LWR@latexmkdvipdfm</code>              | 1611  | <code>\LWR@origcolspec</code>                | 7344        |
| <code>\LWR@latexmkvar</code>                  | 1600  | <code>\LWR@originname</code>                 | 310         |
| <code>\LWR@lightrulewidth (length)</code>     | 428   | <code>\LWR@originnames</code>                | 317         |
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| <code>\LWR@loadbefore</code>                  | 55    | <code>\LWR@parseatcolumn</code>              | 7490        |
| <code>\LWR@loadnever</code>                   | 70    | <code>\LWR@parsebangcolumn</code>            | 7516        |
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| <code>\LWR@parseDcolumn</code> .....             | <u>7635</u>  | <code>\LWR@select@print@hspace</code> .....        | <u>11670</u> |
| <code>\LWR@parsedrequirepackagenames</code> ..   | <u>1043</u>  | <code>\LWR@setcurrentfont</code> .....             | <u>9676</u>  |
| <code>\LWR@parsenormalcolumn</code> .....        | <u>7611</u>  | <code>\LWR@setexpparray</code> .....               | <u>5061</u>  |
| <code>\LWR@parsepcolumn</code> .....             | <u>7623</u>  | <code>\LWR@setlatestname</code> .....              | <u>8877</u>  |
| <code>\LWR@parsesemicoloncolumn</code> .....     | <u>7607</u>  | <code>\LWR@setOSWindows</code> .....               | <u>760</u>   |
| <code>\LWR@parsestarcolumn</code> .....          | <u>7632</u>  | <code>\LWR@setref</code> .....                     | <u>8885</u>  |
| <code>\LWR@parsetablecols</code> .....           | <u>7674</u>  | <code>\LWR@shellescapecmd</code> .....             | <u>1583</u>  |
| <code>\LWR@parsewcolumn</code> .....             | <u>7627</u>  | <code>\LWR@sidetoc</code> .....                    | <u>9404</u>  |
| <code>\LWR@patcherror</code> .....               | <u>682</u>   | <code>\LWR@simplifycustom</code> .....             | <u>5974</u>  |
| <code>\LWR@patchlists</code> .....               | <u>7250</u>  | <code>\LWR@simplifyname</code> .....               | <u>5963</u>  |
| <code>\LWR@pdfencoding</code> .....              | <u>608</u>   | <code>\LWR@singledollar</code> .....               | <u>9924</u>  |
| <code>\LWR@popclose</code> .....                 | <u>5034</u>  | <code>LWR@skipatbang (boolean)</code> .....        | <u>402</u>   |
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| <code>LWR@previousautopagelabel (counter)</code> | <u>351</u>   | <code>LWR@spandepth (counter)</code> .....         | <u>331</u>   |
| <code>\LWR@printatbang</code> .....              | <u>7815</u>  | <code>\LWR@splitstarcontents</code> .....          | <u>7643</u>  |
| <code>\LWR@printbartag</code> .....              | <u>7805</u>  | <code>LWR@splitstarcopies (counter)</code> .....   | <u>415</u>   |
| <code>\LWR@printcloselist</code> .....           | <u>7075</u>  | <code>LWR@splitstarindex (counter)</code> .....    | <u>415</u>   |
| <code>\LWR@PrintLatexCmd</code> .....            | <u>1630</u>  | <code>LWR@starcount (counter)</code> .....         | <u>415</u>   |
| <code>\LWR@printlength</code> .....              | <u>1025</u>  | <code>LWR@starredlongtable (boolean)</code> ....   | <u>443</u>   |
| <code>\LWR@printmccoldata</code> .....           | <u>8264</u>  | <code>LWR@startedrow (boolean)</code> .....        | <u>401</u>   |
| <code>\LWR@printmccoltype</code> .....           | <u>8207</u>  | <code>LWR@startingequation (counter)</code> ....   | <u>522</u>   |
| <code>\LWR@printopenlist</code> .....            | <u>7076</u>  | <code>\LWR@startingequationtag</code> .....        | <u>10324</u> |
| <code>\LWR@printpendingfootnotes</code> .....    | <u>5894</u>  | <code>\LWR@startnewdepth</code> .....              | <u>6264</u>  |
| <code>\LWR@printpendingmpfootnotes</code> ....   | <u>5906</u>  | <code>\LWR@startpars</code> .....                  | <u>5688</u>  |
| <code>\LWR@printpercentlength</code> .....       | <u>678</u>   | <code>\LWR@startref</code> .....                   | <u>8958</u>  |
| <code>\LWR@printthetitle</code> .....            | <u>6787</u>  | <code>\LWR@stoppars</code> .....                   | <u>5706</u>  |
| <code>\LWR@providelength</code> .....            | <u>674</u>   | <code>\LWR@stripperiod</code> .....                | <u>8876</u>  |
| <code>\LWR@ProvidesPackageDrop</code> .....      | <u>1198</u>  | <code>\LWR@strresult</code> .....                  | <u>7342</u>  |
| <code>\LWR@ProvidesPackageDropA</code> .....     | <u>1183</u>  | <code>\LWR@subaddcmdruletrim</code> .....          | <u>7992</u>  |
| <code>\LWR@ProvidesPackageDropB</code> .....     | <u>1192</u>  | <code>\LWR@subaddtabularcellcolor</code> .....     | <u>8177</u>  |
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| <code>\LWR@pushclose</code> .....                | <u>5007</u>  | <code>\LWR@subcmdrule</code> .....                 | <u>7938</u>  |
| <code>\LWR@pushoneclose</code> .....             | <u>6260</u>  | <code>\LWR@subhtmlclass</code> .....               | <u>5451</u>  |
| <code>\LWR@quickfile</code> .....                | <u>1209</u>  | <code>\LWR@subhyperref</code> .....                | <u>9029</u>  |
| <code>\LWR@ref@ignorestar</code> .....           | <u>9003</u>  | <code>\LWR@subhyperrefclass</code> .....           | <u>9043</u>  |
| <code>\LWR@remembertag</code> .....              | <u>10329</u> | <code>\LWR@subhyperrefext</code> .....             | <u>9038</u>  |
| <code>\LWR@replaceEPSVG</code> .....             | <u>129</u>   | <code>\LWR@subinlineimage</code> .....             | <u>9104</u>  |
| <code>\LWR@requesttoc</code> .....               | <u>6679</u>  | <code>\LWR@sublabel</code> .....                   | <u>8916</u>  |
| <code>\LWR@requirepackagenames</code> .....      | <u>1042</u>  | <code>\LWR@subnewref</code> .....                  | <u>8989</u>  |
| <code>\LWR@restoreorigaccents</code> .....       | <u>1537</u>  | <code>\LWR@subsingledollar</code> .....            | <u>9733</u>  |
| <code>\LWR@restoreorigformatting</code> .....    | <u>9611</u>  | <code>\LWR@subtableofcontents</code> .....         | <u>9314</u>  |
| <code>\LWR@restoreoriglists</code> .....         | <u>7278</u>  | <code>\LWR@subtabularhtmlcolumns</code> .....      | <u>8484</u>  |
| <code>\LWR@rotboxorigin</code> .....             | <u>309</u>   | <code>\LWR@syncmathjax</code> .....                | <u>10020</u> |
| <code>\LWR@rotstyle</code> .....                 | <u>112</u>   | <code>LWR@tablecolspec</code> .....                | <u>403</u>   |
| <code>\LWR@rowHTMLcolor</code> .....             | <u>7764</u>  | <code>LWR@tablecolspecindex (counter)</code> ...   | <u>403</u>   |
| <code>\LWR@ruleHTMLcolor</code> .....            | <u>7766</u>  | <code>LWR@tablecolspecwidth (counter)</code> ...   | <u>403</u>   |
| <code>\LWR@sanitize</code> .....                 | <u>843</u>   | <code>\LWR@tabledatacolumnntag</code> .....        | <u>8575</u>  |
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| <code>\LWR@scalestyle</code> .....               | <u>115</u>   | <code>LWR@tableLaTeXcolindex (counter)</code> ...  | <u>403</u>   |
| <code>\LWR@secondoffour</code> .....             | <u>700</u>   | <code>LWR@tableparcell (boolean)</code> .....      | <u>402</u>   |
| <code>\LWR@section</code> .....                  | <u>6277</u>  | <code>LWR@tabletotalLaTeXcols (counter)</code> ..  | <u>404</u>   |
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| <code>\LWR@tabular@warpprintonly</code> . . . . .      | <u>8698</u>         | <code>makeidx</code> (package) . . . . .               | <i>140, 800, 959</i>        |
| <code>LWR@tabularcelladedd</code> (boolean) . . . . .  | <i>401</i>          | <code>\MakeIndex</code> . . . . .                      | <u>11845</u>                |
| <code>LWR@tabularDepth</code> (counter) . . . . .      | <i>403</i>          | <code>makeindex</code> (option) . . . . .              | <i>99, 104, 212</i>         |
| <code>\LWR@tabularendofline</code> . . . . .           | <u>7460</u>         | <code>makeindex</code> (program) . . . . .             | <i>138</i>                  |
| <code>\LWR@tabularfinishrow</code> . . . . .           | <u>7414</u>         | <code>makeindexStyle</code> (option) . . . . .         | <i>101, 138, 211</i>        |
| <code>\LWR@tabularhtmlcolumns</code> . . . . .         | <u>8494</u>         | <code>\makelabel</code> . . . . .                      | <i>392</i>                  |
| <code>\LWR@tabularleftedge</code> . . . . .            | <u>7845</u>         | <code>\maketitle</code> . . . . .                      | <u>47, 114, 6847</u>        |
| <code>LWR@tabularmutemods</code> (boolean) . . . . .   | <i>450</i>          | <code>manyfoot</code> (package) . . . . .              | <i>800</i>                  |
| <code>LWR@tabularpardepth</code> (counter) . . . . .   | <i>403</i>          | <code>marginal</code> (package) . . . . .              | <i>802</i>                  |
| <code>\LWR@tdaddstyle</code> . . . . .                 | <u>7980</u>         | <code>marginfit</code> (package) . . . . .             | <i>802</i>                  |
| <code>\LWR@tdendstyles</code> . . . . .                | <u>7986</u>         | <code>marginfix</code> (package) . . . . .             | <i>803</i>                  |
| <code>\LWR@tdstartstyles</code> . . . . .              | <u>7979</u>         | <code>marginnote</code> (package) . . . . .            | <i>803</i>                  |
| <code>\LWR@tempcolor</code> . . . . .                  | <u>11539</u>        | <code>\marginpar</code> . . . . .                      | <i>118, 346, 5918</i>       |
| <code>\LWR@tempcolortwo</code> . . . . .               | <u>11539</u>        | <code>\marginparBlock</code> . . . . .                 | <i>118, 346, 5929, 5947</i> |
| <code>\LWR@tempheight</code> (length) . . . . .        | <i>569</i>          | <code>\markboth</code> . . . . .                       | <u>5262</u>                 |
| <code>\LWR@tempraise</code> (length) . . . . .         | <i>569</i>          | <code>\markright</code> . . . . .                      | <u>5263</u>                 |
| <code>\LWR@tempwidth</code> (length) . . . . .         | <i>569</i>          | <code>marvosym</code> (package) . . . . .              | <i>804</i>                  |
| <code>\LWR@textcurrentcolor</code> . . . . .           | <i>22, 11544</i>    | <code>math</code> (environment) . . . . .              | <u>9986</u>                 |
| <code>\LWR@textcurrentfont</code> . . . . .            | <i>11449, 11550</i> | <code>\MathImageAltText</code> . . . . .               | <i>109, 9661</i>            |
| <code>\LWR@thirdoffour</code> . . . . .                | <i>700</i>          | <code>MathJax</code> (program) . . . . .               | <i>142, 143, 494</i>        |
| <code>\LWR@ThisAltText</code> . . . . .                | <u>9662</u>         | <code>MathJax</code> (program) [requirement] . . . . . | <i>74</i>                   |
| <code>LWR@thisautoid</code> (counter) . . . . .        | <i>473</i>          | <code>mathjax</code> (boolean) . . . . .               | <i>209</i>                  |
| <code>LWR@thisautoidWP</code> (counter) . . . . .      | <i>474</i>          | <code>mathjax</code> (option) . . . . .                | <i>99, 104, 210</i>         |
| <code>\LWR@thiscmidrulewidth</code> (length) . . . . . | <i>428</i>          | <code>\MathJaxFilename</code> . . . . .                | <i>107, 5762</i>            |
| <code>\LWR@thiscolspec</code> . . . . .                | <u>7853</u>         | <code>mathsvg</code> (option) . . . . .                | <i>99, 104, 210</i>         |
| <code>\LWR@thisfilename</code> . . . . .               | <u>5957</u>         | <code>mathtools</code> (package) . . . . .             | <i>804</i>                  |
| <code>\LWR@thisnewfilename</code> . . . . .            | <u>5962</u>         | <code>\mbox</code> . . . . .                           | <u>10950</u>                |
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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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