



The **lwarp** package

L^AT_EX to HTML

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Abstract

The `lwarp` package allows L^AT_EX to directly produce HTML5 output, using external utility programs only for the final conversion of text and images. Math may be represented by SVG files or MATHJAX.

Documents may be produced by pdfL^AT_EX, LuaL^AT_EX, or XeL^AT_EX. A *texlua* script removes the need for system utilities such as *make* and *gawk*, and also supports *xindy* and *latexmk*. Configuration is automatic at the first manual compile.

Print and HTML versions of each document may coexist, each with its own set of auxiliary files. Support files are self-generated on request. Assistance is provided for import into EPUB conversion software and word processors.

A modular package-loading system uses the `lwarp` version of a package for HTML when available. More than 300 L^AT_EX packages are supported with these high-level source-compatibility replacements, and many others work as-is.

A tutorial is provided to quickly introduce the user to the major components of the package.

To update existing projects, see [section 2: Updates](#).

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

Note that this is still a “beta” version of `lwarp`, and some things may change in response to user feedback and further project development.

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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.

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MetaPost: Postscript graphics.

MacTeX: T_EX for Mac.

PDF Accessibility: Modern PDF standards.

Other: Additional projects may be specified.

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2 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 1069.

v0.65: css layout, alt tags, Japanese. PENDING

- 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`, `lltjtext`, `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
 - Fixes for `scrlayer`, `scrlayer-scrpage`.
- packages
 - `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 sideroc.
- 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 cjkpunct, upzhkinsoku, zhspacing.
- Japanese
 - Verified to work with xzjatype, luatexja, luatexja-fontspec.
 - Added bxjsarticle and related classes.
 - Added ltjsarticle and related classes.
 - Added p \LaTeX , up \LaTeX , uarticle and related classes.
 - Prevented utarticle and related classes.
 - Prevented bxcjkatype.
- Korean
 - Verified to work with kotex, xetexko, luatexko.

v0.62: Mi \TeX docs, HTML title, C \TeX , xeCJK, bitpattern.

- docs
 - Docs: Setting a UTF-8 locale. See section 10.8.
- Mi \TeX
 - Mi \TeX : Docs for *Mi \TeX 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 8.4.
- fixes
 - Fix for package options handling.
 - Fixes for horizontal white space between `fminipage`, `fcolorminipage`, `colorboxBlock`, `fcolorboxBlock`.
 - Logos: Fix for X \TeX logo, improved css, made robust, improved search-engine optimization.
 - `\[$1]`: Additional HTML `
` if $\$1 > 0$ pt.
 - Fixes for `\incluographics` 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. See page 1100.
- Improved documentation regarding font selection. See section 8.2.
- Added documentation regarding debugging options. See section 35.
- Added documentation regarding HTML entities inside program listings. See section 9.2.1.

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 10.

⚠ changed names

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

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

fixes

- Fix: Paragraph tags in a tabular.
- Fix: supertabular and xtab captions.
- Fix: DVI L^AT_EX `\includegraphics` EPS images.
- Fix: newfloat lists.
- Fix: css footnotes text align, minipage tabular and footnote margins.

packages

- Added epsfig, psfrag, psfragx, pstool.
- Added copyrightbox, pdfprivacy, thinsp, threadcol, uspace.

- Added chkfloat, cmdtrack, dprogress, lua-visual-debug, refcheck, srcltx, srctex, vpe, xbmks.

v0.60: Fixes for longtable, listings.

fixes

- longtable, etc.: Fixes for slowdown and memory management for very long tables.
- listings: Fix for HTML entities, and also when used inside a list.
- diagbox: Fix for incorrect HTML par tags.

packages

- Added 2up, booklet.
- Added bophook, draftfigure, fullminipage, grid-system, layaureo.
- Added leading, widows-and-orphans.
- Added fancytabs, thumb, thumbs.

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

⚠ Reset the configuration

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

lwarpmk

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

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

to quickly convert a document's EPS images to PDF or SVG. See section 9.7.

DVI *latex*

- Added support for DVI *latex*. See section 8.3.

latexmk

- Fix for `--shell-escape` with *latexmk*.

math

- Updated MathJax script to v2.7.4.
- Fix: Mathjax chapter number removed from non-numeric tagged equations.

- Added MathJax support for nicefrac, units.

- Fix for `\[` and `\]` with `\displaymathnormal`.

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.
- Added information about setting up a development version of lwarp.

docs

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

- Due to changes in *lwarpmk*, **recompile any existing project a single time** using `pdflatex filename.tex` or similar, after which *lwarpmk* may then be used with the new configuration files.
- *lwarpmk*: Added the `-p` option to specify the project name.
- *lwarpmk*: Now uses *makeglossaries* for glossary generation, allowing the processing of multiple glossaries at once.
- Added lwarp option `GlossaryCmd` to specify the shell command used by *lwarpmk printglossary* and *lwarpmk htmlglossary*. Defaults to *makeglossaries*.
- Docs: Extra indexing options. See section 9.5.11.
- 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 8.3.
- Added lwarp options `makeindex` and `xindy` to set `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to sensible values for a typical single index. See section 8.3.
- Added lwarp option `makeindexStyle` to tell *lwarpmk* to use a custom style instead of `lwarp.ist`. See section 9.5.17.
- 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.
- 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`, `hvindex`.

⚠ Reset the configuration

lwarpmk
glossaries

index and glossary

misc. fixes

packages

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 9.6.6.
- 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 9.6.7.
- 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 `\mathimagename`, which defaults to “math image”. For packages, the alt tag is set using the package name followed by `\packagediagramname`, which defaults to “diagram”. Ex:

```
(-xy- diagram)
```

See section 8.4.

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

- Added


```
lwarpmk pdftosvg <list-of-PDF-files>
```

 to quickly convert a document’s PDF images to SVG, for use with HTML. See section 9.7.
- Added support for `--shell-escape`. See section 8.1.
- Added support for array `w` and `W` columns.
- Fix: `\multicolumn` parameter handling.

- Added support for double `\hlines`, `\midrules`, and vertical rules.
- Added support for `arydshln` dashed lines with `HTML` `tabular`, but reverts to plain rules for `lateximage` and `SVG` `math array`.
- misc. fixes
 - Fix: `\thinspace`.
 - Fix: `paralist` compact environments.
- packages
 - Added `parnotes`, `quoting`, `lua-check-hyphen`, `tocenter`, `underscore`.
 - Tested to work as-is with `babelbib`, `bibunits`, `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 `\etalchar`. See section 9.5.9.
- `polyglossia`
 - Added documentation regarding `polyglossia`. See section 9.13.4.
- macros in section names
 - Added documentation regarding the use of macros in section names. See section 9.1.
- document encoding
 - Renamed and added package options:

⚠ New and revised encoding 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 8.2.

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`.
- \LaTeX core verse environment: line spacing.
- Removed `\citetitle`, adjusted `\attribution`.
- `memoir`: Minor update for v3.7g.
- Added `inputenx`, `bibunits`, `chnpage`, `forest`, `magaz`, `gridset`.
- Prevents loading `ae`, `aecc`, `tlenc`, and `wasysym`.



packages

v0.53: Improved image checks.

lwarpmk

- *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.

documentation

- Improved install instructions regarding `lwarp_baseline_marker.png`.
- Added documentation regarding footnotes in section headings, and footnotes with `\VerbatimFootnotes` from `fancybox`, `fancyvrb`. See section 9.4.4.
- Added documentation regarding font selection when using \TeX or \LaTeX with `fontspec` and traditional font packages. See section 8.2.

SVG math

- Fix: Limit the number of background tasks when generating `lateximages`.
- Added user-adjustable SVG math font scaling. See section 79.3.
- 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.
- MathJax
 - Fix: MathJax script was not executing in some conditions.
 - Added `\CustomizeMathJax` to add custom functions. See section 9.6.
- footnotes
 - Fix: Footnote numbering when using `HTMLDebugComments`.
 - Fix: Footnote paragraph tags.
 - Fix: `FootnoteDepth` defaults to `\subsubsection`.
- misc. fixes
 - Fix: `\kill` in a `lateximage`.
 - Fix: `\FileDepth`, misc. others, when input encoding is not `utf8`.
 - Fix: `\texorpdfstring` in a section name.
- packages
 - `hyperref` emulation: Fix for `#`, `%`, `&`, `~`, `_` characters in URLs.
 - `fancybox`, `fancyvrb`: Initial support for `\VerbatimFootnotes`.
 - `nicefrac`: Added with fix for `\ensuremath`.
 - `graphicx`: Fix for option defaults. Added `v1.1a/b` options.
 - `endfloat`: Updated for `v2.6`.
 - `url`: Fixes for active characters.
- 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 9.5.1.
 - Docs: `tikz` with matrices. See section 9.7.1.
- 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 9.6.8.
 - Fix: `\addcontentsline` inside `svg` math.
 - Fix: `SVG` math containing an embedded `lateximage`.
- MathJax
 - MathJax now handles `\ensuremath` in expressions.
- misc. fixes
 - 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.
- Added mhchem, chemfig, chemformula, chemmacros, chemnum, chemgreek, epstopdf-base, grid, ltxgrid.

v0.50: Improved 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 L^AT_EX code. Identical inline math expressions, such as multiple instance of $\$x\$$, now share a single image file. This reduces the number of images to store, transmit, process, and display. Each image file is only converted to svg a single time, and reused if it already exists. Display math and other forms of svg image such as picture and Tikz still use individual image files which are recreated each time *lwarpmk images* 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, phfquit, schemata, dblfloatfix, 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, flineno, figsize, hypdestopt, pagegrid, pdfrender, luacolor, resizegather.

v0.48:

- documentation
 - Added some documentation regarding converting an existing document. See section 7.
- 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.
 - Fix: `todonotes` and `luatodonotes`: Improved `\todotoc`.
- packages
 - Added `colortbl`, `chapterbib`, `acro`, `acronym`, `hypernat`, `hycap`, `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
 - `\PrintStack` changed to `\LWRPrintStack`.
- misc. fixes
 - 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 [9.12](#).
- 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 *pdf_latex*, automatically loads T1 and UTF-8 encodings. (Additional fontenc encodings may be loaded after lwarp.)
- lists
 - Added list and trivlist environments, hang.
- tabular
 - Fix: `\multicolumn` alignment if formatting for a word processor.
 - Added ltxtable.
- math
 - Fix: MATHJAX combined with lateximages.
 - algorithmicx: Improved comment symbol and floating.
- packages
 - Completed todonotes and luatodonotes.
 - Added todo, easy-todo, fixmetodonotes, fixme.
 - Added soulutf8, soulpos, cancel.

- Added section, fancyref, ifoddpage.
- Added preview, atbegshi, watermark.
- Improved tocloft \newlistof and \newlistentry.

v0.43:

footnotes

- Docs: Reorganized HTML customization, added an HTML settings table. See section 8.4.

sectioning

tabular

- Added FootnoteDepth to control the placement of pending footnotes before section breaks. By default, pending footnotes are printed before each \subparagraph or higher.

- Fix: Expansion in section name.

- 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, [Supporting T_EX development](#).

- Improved assistance for word-processor conversions when boolean FormatWP is set true. See section 12.

⚠ name change

- The boolean FormatWordProcessor has been renamed FormatWP.

⚠ name change

- The boolean HTMLMarkFloats has been renamed WMarkFloats.

- 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.

- Improved formatting for numerous objects. See section 12.

tabbing

- Add: tabbing environment.

overpic

- Add: overpic package. See section 315.

math

- Fix: Text copy/paste of \mathcal{A} MS math environment numbers and names.

- Improved \ensuremath.

- MATHJAX with siunitx: Updated script and documentation.
- textcomp: Improved `\interrobangdown`.
- realscripts: Fix for subscripts in a `lateximage`.
- morewrites: Enforces loading before `lwarp`.

v0.41:

- Added `tabular` vertical rules, subject to some limitations. See the rules section of section 9.9.

- 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 299.2 on page 840.
- 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` 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 9.7.
- `grffile` is now directly supported instead of emulated.
- Fix for `bigdelim`, and improved documentation. See section 132.
- Improved `LATEX` and `textcomp` symbols.
- Fix for `LATEX` logos and `\InlineClass`, etc. inside a `lateximage`.
- Fix for `xltxtra` with `XYLATEX`.
- 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`, `anonchp`, `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 65.8. `authblk` is added, and should be loaded before titling. See section 65.
- `\multirow` now supports the new optional `vpos` argument.
- Added `\multicolumnrow` for combined `\multicolumn` and `\multirow`. See section 299.2.
- Tabular special cases:
 - Added `\TabularMacro` to mark custom macros inside tabular data cells, avoiding row corruption. See section 9.9.
 - Added `\ResumeTabular` for use when a tabular environment is defined inside another environment. See section 9.9.
- Added `supertabular`, `xtab`, `bigstrut`, `bigdelim`.
- Added `fullwidth`.
- Added `addlines`, `anysize`, `a4`, `a4wide`, `a5comb`, `textarea`, `zwpage layout`, `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 9.5.2.
- Modified the tutorial to use the new `\ForceHTMLPage` and `\ForceHTMLTOC` macros.
- Added `appendix`, `tocbibind`, `fncychap`, `fix2col`.
- Added `resize`, `scalefont`.
- 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 9.5.
- 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:

- boxes and frames
 - babel-french
 - footnotes
 - siunitx
- Recorganized the documentation section regarding special cases and limitations. (Section 9)
 - Improved source formatting.
 - `\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: Improvements for French variants, load order, footnotes, ellipses.
 - Improved footnote numbering. `lateximage` footnotes now appear as regular footnotes to match the numbering of the print version. Also fixed a regression with `MATHJAX`.
 - 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 L^AT_EX 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

framing minipages

lateximage, SVG math,
tabular

eqnarray

verbatim packages

framing packages

list packages

babel-french

- 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 9.3.3. `\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 9.3.5. `\fbox` and minipages now often work in SVG math and `lateximages`. `MATHJAX` supports `\fbox`, but not `\fboxBlock` nor `fminipage`.
- Improved compatibility between `lateximage` and `minipage`, `\parbox`, `\makebox`, `\fbox`, `\framebox`, `\raisebox`, `\scalebox`, `\reflectbox`, `tabular`, `booktabs`.
- Improved font control for `lateximagees` and `svg math`.
- Added the `eqnarray` environments.
- `fancyvrb` is no longer required (preloaded), but is still supported.
- 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.

v0.33:

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

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

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

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

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

v0.30:

 **lwarp-newproject**

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

To modify existing documents, remove from the document source:

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

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

 **HTML setup changes.**

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

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

Old Package Option	New Package Option
<code>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 9.5.18.
- 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.

3 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 Lua \TeX . 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.

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

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.

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.

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

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

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

3.1 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.
<code>program</code>	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.
<code>commands</code>	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.

3.2 Supported packages and features

Table 2 lists some of the various L^AT_EX features and packages which may be used. Many are tested to work as-is, some are patches for the original packages, and some are emulations written for source-level compatibility. Many are nullified as being irrelevant to HTML output.

Table 2: L^AT_EX–HTML generation — lwarp package — Supported features

Category	Status and supported features.
Engines:	DVI L ^A T _E X, pdfL ^A T _E X, X _Y L ^A T _E X, LuaL ^A T _E X, upL ^A T _E X
Compiling:	latexmk, perltex, pythontex, <i>make</i> , etc.
Classes:	article, book, report, scrartcl, scrbook, scrreprt, memoir, CJK-related as listed below.
Koma-script:	scrextend, scrhack, sclayer. Others as listed below.
Memoir:	memhfixc
Languages:	babel, polyglossia. cjkpunct, xeCJK.
Chinese:	C _T E _X , ctex, upzhkinsoku, xpinyin, zhlineskip, zhspacing.
Japanese:	upL ^A T _E X, LuaT _E X-ja, gentombow, lltjext, plarray, plarydshln, plautopatch, plect, plectarray, plectarydshln, plectcolortbl, plectdelarray, pxatbegshi, pxeveryshi, pxftnright, pxgentombow, pxjahyper, pxpdfpages, pxpgfrcs, pxpgfmark, tascmac, zxjatype. bxjsarticle and related, ltjsarticle and related, luatexja, luatexja-fontspec, uarticle 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, changepage, chngpage, clrdblpg, continue, draftcopy, drafftfigure, draftwatermark, ebook, everyshi, fancyhdr, fancytabs, flippdf, fullminipage, fullpage, fwlw, geometry, gmeometric, grid, grid-system, gridset, layaureo, leading, ltxgrid, nccfancyhdr, notespages, pagegrid, pdfprivacy, pagesel, preview, rmpage, sclayer-scrpage, scrpage2, textarea, threadcol, thumb, thumbs, titleps, tocenter, turnthepage, twoup, typearea, vmargin, watermark, zwpagelayout. Tested to work as-is: underlin.
Sectioning:	Adds <code>FileDepth</code> for splitting the HTML output. Files may be numbered sequentially or named according to section name. Common short words and punctuation are removed from the filenames. <code>anonchap</code> , <code>bsheaders</code> , <code>fncychap</code> , <code>quotchap</code> , <code>section</code> , <code>sectionbreak</code> , <code>sectsty</code> , <code>titlesec</code> . Tested to work as-is: <code>secdot</code> .
Table of contents, figures, tables:	Supported, with hyperlinks. <code>multitoc</code> , <code>shorttoc</code> , <code>titletoc</code> , <code>tocbasic</code> , <code>tocbibind</code> , <code>tocloft</code> , <code>tocstyle</code> .
Title page:	<code>\maketitle</code> , <code>titlepage</code> , <code>authblk</code> , <code>titling</code> .
Front & back matter:	<code>abstract</code> , <code>appendix</code> .
Indexing:	<code>makeindex</code> and <code>xindy</code> are supported, with hyperlinks. <code>idxlayout</code> , <code>imakeidx</code> , <code>index</code> , <code>makeidx</code> , <code>repeatindex</code> , <code>splitidx</code> . Tested to work as-is: <code>hvindex</code> , <code>sepfootnotes</code> .
Glossary:	<code>glossaries</code> and <code>xindy</code> are used.
Bibliography:	<code>babelbib</code> , <code>backref</code> , <code>biblatex</code> , <code>bibunits</code> , <code>chapterbib</code> , <code>cite</code> , <code>hypernat</code> , <code>natbib</code> . Tested to work as-is: <code>notes2bib</code> .
Cross-references:	<code>bookmark</code> , <code>breakurl</code> , <code>cleveref</code> , <code>fancyref</code> , <code>hypdestopt</code> , <code>hyperref</code> , <code>prettyref</code> , <code>titleref</code> , <code>url</code> , <code>varioref</code> , <code>xurl</code> .

lwarp Supported Functions — continued

Category	Status
Margin notes:	marginal, marginfit, marginfix, scrlayer-notecolumn, versonotes.
Footnotes:	Adds FootnoteDepth to print footnotes at section breaks. dblfnote, endheads, endnotes, fbreak, fnpos, footmisc, footnote, footnoterange, footnpag, marginnote, nccfoots, pagenote, parnotes, pfnote, sidenote. Tested to work as-is: fixfoot.
Math:	Converted to SVG images with HTML <alt> tags containing the L ^A T _E X source for the math expression. MATHJAX supported as an alternative. amsmath: \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, amsthm, ntheorem, theorem.
Additional math:	Math fonts via SVG images, breqn, cases, resizegather, xy. Tested to work as-is: amscd, bm, braket, delarray, guass, nicematrix, pb-diagram, tikz-cd, etc.
Display math with <code>\displaymathother</code> :	Complicated math objects in display math, such as tikz-cd, etc.
Units and fractions:	nicefrac, Slunits, siunitx, units, unitsdef, xfrac. Tested to work as-is: Slunits.
Floats:	Appear where declared. capt-of, caption, cutwin, dblfloatfix, endfloat, fix2col, flafter, float, floatflt, floatrow, fltrace, hypcap, keyfloat, morefloats, newfloat, nonfloat, placeins, rotfloat, stfloats, subcaption, subfig, subfigure, subfloat, trivfloat, wrapfig.
Tabular:	tabular environment, array, arydshln, bigdelim, booktabs, colortbl, diagbox, longtable, ltablex, ltxtable, multirow, supertabular, tabularx, tabulary, threeparttable, xltabular, xtab.

lwarp Supported Functions — continued

Category	Status
Graphics:	graphics and graphicx. <code>\includegraphics</code> supports width, height, origin, angle, and scale tags, and adds class. References to PDF files are changed to svg, other image types are accepted as well. <code>\rotatebox</code> and <code>\scalebox</code> are supported as well as HTML can handle. rotating is emulated but all objects are unrotated. picture, tikz, and xy are converted to an svg image. asymptote, epsfig, epstopdf, figsize, grffile, overpic, psfrag, psfragx, pst-eps, pstool, pstricks, rviewport. Tested to work as-is: eepic, tikz-3dplot.
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, enumerate, enumitem, hang, paralist.
Environments:	Standard L ^A T _E X environments.
minipage, \parbox:	Some HTML5-imposed limitations. Nested minipages are supported. pbox.
Quotations:	copyrightbox, csquotes, epigraph, quoting, verse.
Verbatim:	fancyvrb, moreverb, shortvrb, verbatim.
Frames:	boxedminipage2e, fancybox, framed, mdframed, shadow, vertbars.
Multi-columns:	adjmulticol, multicol, multicolrule, vwcol.
Margins:	fullwidth, hanging, midpage.
Line numbering:	fnlineno, lineno.
Direct formatting:	<code>\emph</code> , <code>\textsuperscript</code> , <code>\textbf</code> , etc are supported. <code>\bfseries</code> , etc. are only supported in some cases. cancel, ellipsis, embrac, enparen, hyphenat, lettrine, lips, lua-check-hyphen, luacolor, magaz, nowidow, pdfrender, realscripts, relsize, scalefont, soul, soulpos, soulutf8, textfit, thinsp, trimclip, ulem, underscore, uspace, widows-and-orphans, xellipsis.

lwarp Supported Functions — continued

Category	Status
Acronyms:	acro, acronym.
Ordinals:	engord, fmtcount, nth.
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.
Symbols:	Native L ^A T _E X diacriticals, chemgreek, textalpha, textcomp, textgreek, xunicode. Tested to work as-is: gensymb.
Files:	attachfile, attachfile2, hyperxmp, intopdf, pdfpages, pdfx, xmpincl.
Science and engineering:	algorithm2e, algorithmicx, axodraw2, bitpattern, bytefield, chemfig, chemformula, chemgreek, chemmacros, chemnum, listings, mhchem, phfqit, register. Tested to work as-is: blochsphere, bodegraph, bohr, circuitikz, elements, engtlc, fast-diagram, hepnicensnames, heppennames, linop, pgfgantt, physics, simpler-wick, slashed, structmech, tikzcodeblocks.
Arts and humanities:	forest, musicography, octave, schemata, semantic-markup, vowel, xpiano. Tested to work as-is: phonrule, piano, tikz-dependency.

lwarp Supported Functions — continued

Category	Status
Editorial:	changebar, easy-todo, errata, fixme, fixmetodonotes, pdfcomment, pdfmarginpar, todo, todonotes, tram, xexchangebar.
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 calc, fileerr, somedefs, trace, xspace. Also, most math-only packages, including specialized typesetting for various fields of science and engineering.

4 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.

4.1 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>

4.2 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.

4.3 Translators

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

Prog `Hevea` **H^Ev^Ea**: <http://hevea.inria.fr/> (not on CTAN)

Prog `TtH` **T_TH**: <http://hutchinson.belmont.ma.us/tth/>

Prog `GELLMU` **GELLMU**: <http://www.albany.edu/~hammond/gellmu/>

Prog `LaTeXML` **\LaTeX ML**: <http://dlmf.nist.gov/LaTeXML/>

Prog `Plastex` **PlasTeX**: <https://github.com/tiarno/plastex>

Prog `LaTeX2HTML` **\LaTeX 2HTML**: <http://www.latex2html.org/>
and <http://ctan.org/pkg/latex2html>.

Prog `TeX2page` **TeX2page**: <http://ds26gte.github.io/tex2page/index.html>

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

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

4.4 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 \LaTeX and HTML.

- Prog AsciiDoc **Asciidoctor:** <http://asciidoctor.org/> (More active.)
 Prog AsciiDoctor **AsciiDoc:** <http://asciidoc.org/> (The original project.)

4.4.1 ASCIIDOCTOR- \LaTeX

The Asciidoctor-LaTeX project is developing additional \LaTeX -related features.

Asciidoctor-Latex:

- Prog AsciiDoctor-LaTeX <http://www.noteshare.io/book/asciidoctor-latex-manual>
<https://github.com/asciidoctor/asciidoctor-latex>

4.5 PANDOC

- Prog Pandoc A markup system which also reads and writes \LaTeX and HTML.

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

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

4.6 Word processors

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

4.7 Commercial systems

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

- Prog Flare
 Prog Madcap

4.8 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.

5 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 *lualatex*.

The lwarp package: This package.

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

***luatex*:** 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

5.1 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 TeX 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 ⇒ mktexlsr

— or —

Enter ⇒ texhash

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

11. See section 5.2.1 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 5.2.

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.

Just testing!

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.

5.2 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 5.2.1.)

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 5.2.1.
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 5.2.1.)

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 <pathtolwarpmk.lua> lwarpmk
```

- (c) Make the link executable:

```
Enter ⇒ chmod 0755 lwarpmk
```

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

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

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

- (a) Locate the M_IK_TE_X 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.

5.2.1 Using a local copy of *lwarpmk*

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

1. When compiling the tutorial in section 6, use the `lwarpmk` option for the `lwarp` package:

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

2. When the tutorial is compiled with *pdf_lat_ex*, 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.

```

5.3 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 89.

```

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

```

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

The T_EX 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/pdftocrop

```

Prog pdftotext Prog pdfseparate Prog pdftocairo	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/>:
 Enter ⇒

```
/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 MikT_EX, install a `miktex-poppler-bin-*` package. Otherwise:

1. See table 3 on page 89.

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

Prog perl **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.

6 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.

6.1 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: Files created along with the 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.

6.2 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 9.5.10.

⁷Also see section 9.5.12 for index options.

6.3 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 6.4 and 6.5.

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 9.5.10.

¹¹Also see section 9.5.12 for index options.

6.4 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 re-created, but display math and objects such as `Tikz` may move to new image numbers when the document is changed.

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, `lwarpmk` will inform so with an error message.

 **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. `lwarpmk` attempts to detect this situation and print a warning.

 **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

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

Tikz require one image file each. For a document with a large amount of math, see section 6.5 to use `MATHJAX` instead.

6.5 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.

6.6 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 [8.5](#) for more information about modifying the css styling of the document.

6.7 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 [8.4](#) for more information.

6.8 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:

[forced single-pass recompile](#)

```
Enter ⇒ lwarpmk print1
```

and/or

```
Enter ⇒ lwarpmk html1
```

6.9 Using X_YL^AT_EX or Lua^AT_EX

X_YL^AT_EX or Lua^AT_EX may be used instead of L^AT_EX.

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. X_YL^AT_EX or Lua^AT_EX 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
```

6.10 Using DVI L^AT_EX

Traditional DVI L^AT_EX 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 8.2 regarding font selection to avoid the use of bitmapped fonts.

6.11 Using a glossary

lwarp supports the glossaries package, although this tutorial does not supply an example.

To process the glossary for the print version:

```
Enter ⇒ lwarpmk printglossary
```



(If *makeglossaries* is not found, see section 9.5.10.)

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 9.5.10 to set options for processing glossaries.

6.12 Cleaning auxiliary files

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

```
Enter ⇒ lwarpmk clean
```

6.13 Cleaning auxiliary and output files

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

```
Enter ⇒ lwarpmk cleanall
```

6.14 Cleaning the images from the `lateximages` directory

The `lateximage` 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
```

6.15 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.

6.16 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]
```

6.17 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
```

6.18 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.

7 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) Avoid the `scale` option. Change:

```
\includegraphics[scale=<xx>]
```

to:

```
\includegraphics[width=<yy>\linewidth]
```
 - (b) Possible changes to tabular environments include `* columns`, `multirrow`, `longtable`, `supertabular`, `xtable`, `bigdelim`. See section 9.9.
 - (c) Possible option clashes with `memoir`. See section 9.12.
 - (d) If using indexes, see section 9.5.12.
 - (e) If using many indexes, glossaries, `.aux` files, etc., see section 9.5.12 regarding `morewrites`. If `morewrites` is already used, be sure to add the setup with `allocate=10`.
 - (f) Other changes as per [Special cases and limitations](#), section 9.
3. Convert any PDF images to SVG. See section 9.7.
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.

8 Additional details

8.1 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`.

8.2 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 8.3.

vector fonts 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.

Computer Modern

⚠ `pdflatex`

⚠ `DVI latex`

Pkg `cm-super`

Pkg `lmodern`

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

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`

X_YL^AT_EX and Lua^AL_AT_EX users must use the `fontspec` package. Do NOT use `fontenc`!

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

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

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

- For \LaTeX or \Lua\TeX :

Pkg `fontspec`
ligatures

- `fontspec` and font choices

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 *pdf \LaTeX* :

Pkg `lmodern`
 Pkg `fontenc`
 Pkg `inputenc`
 Pkg `inputenx`
 Pkg `newunicodechar`
 File `glyphtounicode.tex`

- (a) `\usepackage{lmodern}`, or other font-related packages
- (b) `\usepackage[T1]{fontenc}`
- (c) `\usepackage[utf8]{inputenc}`, or `latin1`, etc. Or use `inputenx`.
- (d) `\usepackage{newunicodechar}` along with related definitions.
- (e) To assist with the PDF-HTML conversion:
 - i. `\input glyphtounicode.tex`
 - ii. `\input glyphtounicode-cmr.tex%` from the `pdfx` package
 - iii. `\pdfgentounicode=1`
- (f) Another option to assist with the PDF-HTML conversion:
 - `\usepackage{cmap}`
- (g) `\usepackage{textcomp}`

3. `\usepackage{lwarp}` (section 8.3) 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.

 **fontspec with traditional font packages**

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

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

 **UTF-8 locale** In some cases, an external program may require a UTF-8 “locale”. See section 10.8.

8.2.1 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.

8.3 lwarp package loading and options

lwarp supports book, report, and article classes, as well as the equivalent Koma-script classes and memoir.

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

Opt	mathsvg	mathsvg, mathjax: For math display, select <i>mathsvg</i> (default) or <i>mathjax</i> . For more information about the math options, see section 9.6.
Opt	mathjax	
Opt	latexmk	latexmk: Tells <i>lwarpmk</i> to use <i>latexmk</i> to recompile the document several times if necessary. Otherwise, <i>lwarpmk</i> attempts to determine for itself whether to recompile. See section 8.4.
	Default: false	
Opt	dvips	dvips: Tells <i>lwarpmk</i> to use <i>dvips</i> and <i>ps2pdf</i> to convert DVI output to PDF.
	Default: false	
Opt	dvipdfm	dvipdfm: Tells <i>lwarpmk</i> to use <i>dvipdfm</i> to convert DVI output to PDF.
	Default: false	
Opt	dvipdfmx	dvipdfmx: Tells <i>lwarpmk</i> to use <i>dvipdfmx</i> to convert DVI output to PDF.
	Default: false	
Opt	HomeHTMLFilename	HomeHTMLFilename: See section 8.4.
	Default: {}	
Opt	HTMLFilename	HTMLFilename: See section 8.4.
	Default: {}	
Opt	PrintLatexCmd	PrintLatexCmd: Sets the shell commands executed by <i>lwarpmk print</i> . If not specified, will automatically be set according to the detected L ^A T _E X engine and the use of <code>--shell-escape</code> .
	Default: <automatic>	
Opt	HTMLLatexCmd	HTMLLatexCmd: Sets the shell commands executed by <i>lwarpmk html</i> . If not specified, will automatically be set according to the detected L ^A T _E X engine and the use of <code>--shell-escape</code> .
	Default: <automatic>	
Opt	makeindex	makeindex: Sets <code>PrintIndexCmd</code> , <code>HTMLIndexCmd</code> , and <code>LatexmkImageCmd</code> to use <i>makeindex</i> when generating indexes with <i>lwarpmk printindex</i> , <i>lwarpmk htmlindex</i> , or <i>latexmk</i> . If neither <i>makeindex</i> nor <i>xindy</i> is used, <i>makeindex</i> is assumed.
	Default: makeindex	
Opt	xindy	xindy: Sets <code>PrintIndexCmd</code> , <code>HTMLIndexCmd</code> , and <code>LatexmkImageCmd</code> to use <i>xindy</i> when generating indexes with <i>lwarpmk printindex</i> , <i>lwarpmk htmlindex</i> , or <i>latexmk</i> .
	Default: makeindex	
Opt	makeindexStyle	makeindexStyle: If you wish to use a custom <code>.ist</code> file for index generation, see section 28.
	Default: lwarp.ist	
Opt	xindyStyle	xindyStyle: If you wish to use a custom <code>.xdy</code> file for index generation, see section 28.
	Default: lwarp.xdy	

Table 5: lwarp package options

Option	Description
<code>mathsvg</code>	Show math using SVG images.
<code>mathjax</code>	Show math using MATHJAX.
<code>latexmk</code>	Use <i>latexmk</i> for compiling documents.
<code>dvips</code>	Use <i>dvips</i> and <i>ps2pdf</i> to convert DVI documents.
<code>dvipdfm</code>	Use <i>dvipdfm</i> to convert DVI documents.
<code>dvipdfmx</code>	Use <i>dvipdfmx</i> to convert DVI documents.
<code>HomeHTMLFilename</code>	The filename of the home page.
<code>HTMLFilename</code>	A prefix for the filenames of the remaining web pages.
<code>PrintLatexCmd</code>	The shell commands for <i>lwarpmk print</i> .
<code>HTMLLatexCmd</code>	The shell commands for <i>lwarpmk html</i> .
For indexing (section 9.5.12) and glossaries (section 9.5.10):	
<code>makeindex</code>	Use <i>makeindex</i> to generate indices.
<code>xindy</code>	Use <i>xindy</i> to generate indices.
<code>makeindexStyle</code>	Set a custom style for <i>makeindex</i> .
<code>xindyStyle</code>	Set a custom style for <i>xindy</i> .
<code>xindyLanguage</code>	The <i>xindy</i> language option used for index generation.
<code>xindyCodepage</code>	The <i>xindy</i> codepage option used for index generation.
<code>PrintIndexCmd</code>	Shell commands executed by <i>lwarpmk printindex</i> .
<code>HTMLIndexCmd</code>	Shell commands executed by <i>lwarpmk htmlindex</i> .
<code>LatexmkIndexCmd</code>	Shell commands executed by <i>latexmk</i> .
<code>GlossaryCmd</code>	Shell command executed by <i>lwarpmk printglossary</i> and <i>lwarpmk htmlglossary</i> .
Seldom necessary:	
<code>OSWindows</code>	Force compatibility with MS-WINDOWS.
<code>pdftotextEnc</code>	Set the encoding for <i>pdftotext</i> .
<code>lwarpmk</code>	Generate a local copy of <code>lwarpmk.lua</code> .
Used internally by lwarp:	
<code>warpprint</code>	Generate print output, and also generate configuration files.
<code>warpHTML</code>	Generate HTML output.
<code>BaseJobname</code>	The <code>\jobname</code> to use. Set to the <code>\jobname</code> of the printed version even while generating HTML.

- 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 9.5.12.
 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 9.5.12.
 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` **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 9.5.12.

Default: `<automatic>`

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` **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 9.5.10.

Default: `makeglossaries`

Opt `OSWindows` **OSWindows:** *lwarp* attempts to automatically sense `WINDOWS`, but it may be forced with this option. See section 8.6.

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

Default: `UTF-8`

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` **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 `warpHTML`

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

Default: `\jobname`

8.4 Customizing the HTML output

Table 6 shows several settings may be used to customize the HTML output. Watch for the correct placement of each!

⚠ Placement!

⚠ Changes!

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

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

```
Enter ⇒ lwarpmk clearall
```

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

```
Enter ⇒ lwarpmk print
```

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

```
Enter ⇒ lwarpmk html
```

Options for the lwarp package:

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

Opt HomeHTMLFilename
Default: `\BaseJobname`

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

```
HomeHTMLFilename=index
```

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

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

See section 8.4.1 for examples of naming and numbering HTML files.

filename underscores

Opt HTMLFilename
Default: `<empty>`

HTMLFilename: A filename prefix for the rest of the HTML web pages. Useful for numbered web pages with a common prefix. May be empty. See section 8.4.1 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
Default: `makeindex`

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

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>FootnoteDepth</code>	Sectioning depth of footnotes.
<code>\abstractname</code>	The name of the abstract.
<code>\mathimagenam</code>	The svg math image <code>lateximage alt</code> tag.
<code>\packagediagramname</code>	The suffix for a package's <code>lateximage alt</code> tags.
<code>\CSSFilename</code>	The css 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.

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

`\linkhomename` `\linkhomename`: Name of the link to the home page. Paragraphs are allowed.
 Default: `Home`
 Ctr `tocdepth` `tocdepth`: Sectioning depth of the table of contents. See section 17 for a list of L^AT_EX stack depths.

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

`sideroc`

Each subpage of the website has its own small table of contents on the side (the “sideroc”). Its depth is set by `SideTOCDepth`. This sideroc is only shown if the web page 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 and a link back to **Home** at the 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.

`\sidetocname`
 Default: `Contents`
 Ctr `FileDepth`
 Default: `-5`

`\sidetocname`: Name of the sideroc. Paragraphs are allowed.

`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.

⚠ Inaccessible pages!

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`.

⚠ 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 8.4.1 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!

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”.

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.

`\HTMLLanguage`
Default: `en-US`

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

<code>\HTMLTitle</code> Default: <code>\thetitle</code>	<code>\HTMLTitle: {<title>}</code> Overrides <code>\title</code> for the HTML header's meta title. Defaults to <code>\thetitle</code> , which is set by <code>\title</code> , or empty otherwise. Unlike the author, <code>\thetitle</code> is set by <code>\title</code> even if not using the titling package.
<code>\HTMLTitleBeforeSection</code> Default: <code>\HTMLTitleBeforeSection</code> <code>\HTMLTitleAfterSection</code>	<code>\HTMLTitleBeforeSection:</code> Sets subpage <code><title></code> tags to show the website title followed by the section name. <code>\HTMLTitleAfterSection:</code> 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>	<code>\HTMLAuthor: {<author>}</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>	<code>\HTMLDescription: {<description>}</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>	<code>\HTMLFirstPageTop: {<contents>}</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>	<code>\HTMLPageTop: {<contents>}</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>	<code>\HTMLPageBottom: {<contents>}</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!	<code>\tableofcontents:</code> Used to place a table of contents on the home page. This command must be used before the first file split, so that a way is available to navigate to other files from the homepage.
--	--

Links to each chapter/section are provided, as selected by `tocdepth`.

Placed in the document wherever necessary:

`\mathimagenam`
Default: `math image`

\mathimagenam: When creating an SVG math image, its `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 `\mathimagenam`, and the image is not reused.

This 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.

`\packagediagramname`
Default: `diagram`

\packagediagramname: For many packages, the output is placed inside a `lateximage` with an HTML `alt` tag set to the package name followed by `\packagediagramname`. 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 `lateximages`.

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.



Do not place anything else on the same line as `\end{warpprint}`.

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.



Do not place anything else on the same line as `\end{warpHTML}`.

`\warpprintonly`

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

`\warpHTMLonly`

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

8.4.1 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}
```

8.5 Customizing the css

`\CSSFilename`
Default: `lwarp.css`

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

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

```

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

```

The styles provided by lwarp include:

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

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

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

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

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

 **Rename it!**

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

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

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.

8.6 Selecting the operating system

Prog	Unix	lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as “UNIX” in the configuration files), and MS-WINDOWS is supported as well.
Prog	Mac OS	
Prog	Linux	
Prog	MS-Windows	If MS-WINDOWS is not correctly detected, use the lwarp option <code>OSWindows</code> .
Prog	Windows	When detected or specified, the operating-system path separator used by lwarp is modified, and the boolean <code>usingOSWindows</code> is set <code>true</code> . This boolean may be tested by the user for later use.
Opt	<code>OSWindows</code>	

8.7 Selecting actions for print or HTML output

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

For most of built-in L^AT_EX 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` `{<actions>}`

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

`\warpHTMLonly` `{<actions>}`

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

8.8 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 14: [Troubleshooting](#).

8.9 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 65.8.

- | | |
|------------------------------|--|
| <code>\maketitle</code> | Use <code>\maketitle</code> just after the <code>\begin{document}</code> , as this will establish the title of the homepage. Optionally, use a <code>titlepage</code> environment instead. |
| Env <code>titlepage</code> | The <code>titlepage</code> environment may be used to hold a custom title page. The <code>titlepage</code> will be set in a <code><div></code> class <code>titlepage</code> , and <code>\printtitle</code> , etc. may be used inside this environment. |
| Env <code>titlingpage</code> | Another form of custom title page, where <code>\maketitle</code> is allowed, and additional information may be included as well. |

`\title` `{\langle title \rangle}`

-  **newlines** Avoid newlines in the `\title`; these will interfere with the file break and CSS detection. Use a `\subtitle` command instead (section 65.8). 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 `datedate`.

`\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.

8.10 HTML page meta descriptions

`\HTMLDescription` `{\langle A description of the web page. \rangle}` The default is no description.

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{}
```

8.11 HTML homepage meta title

`\HTMLTitle` `{\langle title \rangle}` Sets the contents of the web page `<meta name="title">` element. Defaults to `\HTMLtitle{\thetitle}`. May be set empty to cancel the meta title tag.

See section 8.4 for `\HTMLTitleBeforeSection` and `\HTMLTitleAfterSection`, used to set the title for HTML subpages.

8.12 HTML page meta author

`\HTMLAuthor` `{\langle author \rangle}` Sets the contents of the web page `<meta name="author">` element. Defaults to `\HTMLAuthor{\theauthor}`. 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.

9 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.

9.1 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}}
```

9.2 Formatting

9.2.1 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.

9.2.2 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.

9.2.3 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}
...
```

9.2.4 Accents

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

9.2.5 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 fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

9.2.6 Superscripts and other non-math uses of math mode

Use `x` instead of x

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

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

9.2.8 Filenames and URLs in lists or footnotes

filename underscore Escape underscores in the filenames:

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

9.2.9 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.

9.3 Boxes and minipages

9.3.1 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 `\marginparBlock` occurs.

9.3.2 Save Boxes

TeX boxes are placed inline and do not allow line breaks, so boxes with long contents may overflow the line during HTML conversion. This is mostly a problem when the boxes contain objects which themselves hold large HTML tags, such as rotation commands with long contents. When this object overflows the line, some HTML code will be lost and the page will be corrupted.

9.3.3 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.
- 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.
- size** When using `\linewidth`, `\textwidth`, and `\textheight`, widths and heights are scaled proportionally to a 6×9 inch text area.
- no-width minipages** A minipage of width exactly `\linewidth` is automatically given no HTML width.

full-width minipages A new macro `\minipagefullwidth` requests that the next minipage be generated without an HTML `width` attribute, allowing it to be the full width of the display rather than the fixed width given.

 **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.

9.3.4 Side-by-side minipages

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

9.3.5 Framed minipages and other environments

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

`\fbox` For a framed object, options include:
`\fboxBlock`
 Env `fminipage`

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

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

`\fboxBlock` around a `tabular`, or else place the `tabular` inside a `minipage`, or use `fminipage`, described next. Also see below regarding the “Misplaced alignment tab character &.” error.

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 84 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 452 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 201 for the `fancybox` package.

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

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

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

9.3.6 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.

9.3.7 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.

9.4 Cross-references

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

 **label characters** `\nameref` refers to the most recently-used section where the `\label` was defined. If no section has been defined before the `\label`, the link will be empty. Index entries also use `\nameref` and have the same limitation.

9.4.1 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 497.

9.4.2 `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 576 to redefine the message which is printed for page number references.

9.4.3 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.

9.4.4 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.

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

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

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

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

⚠ **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.

- ⚠ **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`.

9.5 Front and back matter

9.5.1 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}
```

9.5.2 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.

 **inaccessible HTML page**

`\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.

9.5.3 abstract package

`Pkg abstract` If using the `number` option with file splits, be sure to place the table of contents before the abstract. The `number` option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

 **missing toc**

9.5.4 titling and authblk

`Pkg titling` lwarp supports the native \LaTeX titling commands, and also supports the packages `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.

`Pkg authblk`

package support

 **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 65.8.

9.5.5 tocloft package

`Opt tocloft titles` 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.

`Pkg tocloft`

`Pkg tocloft`

 **tocloft & other packages**

9.5.6 appendix package

`Pkg appendix` During HTML conversion, the option `toc` without the option `page` results in a ROC link to whichever section was before the `appendices` environment. It is recommended to use both `toc` and also `page` at the same time.

 **incorrect ROC link**

9.5.7 pagenote package

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

9.5.8 endnotes package

Pkg `endnotes` To place the endnotes in the TOC, use:
[table of contents](#)

```
\usepackage{endnotes}
\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*{\notesname}{Endnotes} % optional
```

[HTML page](#) To additionally have the endnotes on their own HTML page, if `FileDepth` allows:

```
\ForceHTMLPage
\theendnotes
```

9.5.9 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}}"}

```

9.5.10 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` command.
 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.

9.5.11 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 [9.5.17](#) and [9.5.18](#).
- [source code](#) See section [75](#) for lwarp's core index and glossary code, section [258](#) for index, section [390](#) for splitidx, section [256](#) for imakeidx, section [420](#) for tocbibind, and section [469.17](#) for memoir's indexing patches.

9.5.12 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.

9.5.13 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.

9.5.14 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 469.17 in the `lwarp-patch-memoir` package for the `\@@wrspindexhyp` macro as an example.

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

```

\usepackage[
  makeindex, latexmk,
  PrintIndexCmd={
    splitindex <projectname> -- -s lwarp.ist
  },
  HTMLIndexCmd={
    splitindex <projectname>_html -- -s lwarp.ist
  }
]{lwarp}
\usepackage{splitidx}
...
\makeindex
\newindex[Second Index]{secondname}

```

When creating the HTML index, “_html” is automatically appended to each of the names.

Use

Enter ⇒ `lwarpmk printindex`

Enter ⇒ `lwarpmk htmlindex`

to compile the indexes.

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

```

\usepackage[
  xindy, latexmk,
  PrintIndexCmd={
    splitindex -m xindy <projectname> -- -M lwarp.xdy
    -L english -C utf8 <optional>
  },
  HTMLIndexCmd={
    splitindex -m xindy <projectname>_html -- -M lwarp.xdy
    -L english -C utf8 <optional>
  }
]{lwarp}
\usepackage{splitidx}
...
\makeindex
\newindex[Second Index]{secondname}

```

When creating the HTML index, “_html” is automatically appended to each of the names.

Use

Enter ⇒ `lwarpmk printindex`

Enter ⇒ `lwarpmk htmlindex`

to compile the indexes.

9.5.15 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 9.5.17 and 9.5.18. The `splitindex` option is also available if shell escape is used, in which case the `splitidx` package and *splitindex* program will also be used.

If shell escape is not possible, *latexmk* may be used to automatically compile the indexes. The style, language, and codepage options are specified with *lwarp*'s `makeindexStyle`, `xindyStyle`, `xindyLanguage`, and `xindyCodepage` options. These are passed to *latexmk* by *lwarpmk*'s *lwarpmk printindex* and *lwarpmk htmlindex* commands.

Where shell escape and *latexmk* are not possible, *lwarpmk* may be used to manually compile the indexes. *lwarp*'s `PrintIndexCmd` and `HTMLIndexCmd` options are used.

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

The index style `lwarp.ist` is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```
\usepackage[makeindex,latexmk]{lwarp}
\usepackage[makeindex]{imakeidx}
...
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.ist}]
```

imakeidx will automatically compile the indexes. Shell escape is not required while using *makeindex*. *latexmk* may be specified, and if so it will be used for *lwarpmk print* and *lwarpmk html*, but *imakeidx* will actually create the indexes.

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

The index style `lwarp.ist` is automatically used for HTML output. This file turns on letter headings, so it may be desirable to specify it as an option, in which case it will also be used for print output, which will help match the print and HTML output.

```
\usepackage[makeindex,latexmk]{lwarp}
\usepackage[makeindex,splitindex]{imakeidx}
...
\makeindex[options={-s lwarp.ist}]
\makeindex[name=secondname,options={-s lwarp.ist}]
```

△ enable shell escape

Shell escape is required while using *splitindex*. For the first compile, use

```
Enter ⇒ pdflatex --shell-escape projectname.tex
```

```
Enter ⇒ pdflatex --enable-write18 projectname.tex (MikTeX)
```

or similar with *xelatex* or *lualatex*. *lwarp* will remember that shell escape was used.

imakeidx will automatically execute *splitindex*, and will also use *makeindex* to compile the indexes.

`latexmk` may be specified, and if so it will be used for *lwarpmk print* and *lwarpmk html*, but *imakeidx* will actually create the indexes.

For multiple indexes using *xindy* and *imakeidx*, using shell escape:

Options may be given to *imakeidx*'s `\makeindex` command. The style file `lwarp.xdy` is automatically used for HTML output, and is not necessary for print output since the output will be similar. If language or codepage must be set, they should be specified as options for `\makeindex`, since *imakeidx* will process the indexes.

```
\usepackage[xindy,latexmk]{lwarp}
\usepackage[xindy,splitindex]{imakeidx}
...
\makeindex[
  options={ -M lwarp.xdy -L english -c utf8 }
]
\makeindex[
  name=secondname,
  options={ -M lwarp.xdy -L english -c utf8 }
]
```

△ enable shell escape

For the first compile, use

```
Enter ⇒ pdflatex --shell-escape projectname.tex
```

```
Enter ⇒ pdflatex --enable-write18 projectname.tex (MikTeX)
```

or similar with *xelatex* or *lualatex*. *lwarp* will remember that shell escape was used.

imakeidx will automatically execute *splitindex* if selected, and will also use *xindy* to compile the indexes.

If selected, *latexmk* will automatically recompile the entire document as necessary.

For indexes using *xindy* and *imakeidx*, without shell escape, but *with latexmk*:

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

```

\usepackage[
  xindy,
  xindyLanguage=english,           <optional>
  xindyCodepage=utf8,             <optional>
  latexmk,
]{lwarp}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]

```

latexmk will create the indexes automatically when *lwarpmk print* and *lwarpmk html* are executed.

For indexes using *xindy* and *imakeidx*, without shell escape, and *without latexmk*:

lwarpmk must be told how to create the indexes:

```

\usepackage[
  xindy,
  PrintIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname.idx
  },
  HTMLIndexCmd={
    xindy -M lwarp.xdy -L english -C utf8
    <projectname>_html.idx ;
    xindy -M lwarp.xdy -L english -C utf8
    secondname_html.idx
  }
]{lwarp}
\usepackage[xindy]{imakeidx}
...
\makeindex
\makeindex[name=secondname]

```

 WINDOWS

For *WINDOWS*, replace the two “;” characters with “&”.

<projectname> is the \jobname: if compiling “name.tex”, use the filenames name.idx and name_html.idx.

Use

Enter ⇒ lwarpmk printindex

Enter ⇒ lwarpmk htmlindex

to compile the indexes.

9.5.16 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,
  xindyCodepage=utf8,
  latexmk
]{lwarp}
...
\xindyindex
\makeindex
\makeindex[secondname]

```

<optional>
<optional>

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.

9.5.17 Using a custom *makeindex* style file

Prog `makeindex` When using *makeindex*, *lwarpmk* uses the file `lwarp.ist` to process the index. This
File `lwarp.ist` file 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`.

9.5.18 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`.

9.5.19 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.

9.5.20 Index positions, toc, tocbibind

[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^AT_EX document:

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

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

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

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

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

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

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

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

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

[numbered index section](#)

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

 **tocloft & other packages** Pkg tocloft If using tocloft with tocibind, anonchop, 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.

9.6 Math

9.6.1 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 L^AT_EX-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 11 regarding EPUB output with MATHJAX.

9.6.2 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.

¹⁴See section 456 regarding fonts and fractions.

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 \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 \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.

9.6.3 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.

9.6.4 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}}}

```

9.6.5 MATHJAX limitations

MATHJAX limitations Limitations when using MATHJAX include:

Prog MathJax

subequations

footnotes in math

lateximage

siunitx

⚠ siunitx inside an equation

tabbing

⚠ other macros and packages

- 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 inside equations are not yet supported while using MATHJAX.
- 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.
- 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.
<https://github.com/burnpanck/MathJax-siunitx>
Also see section 9.6.10.
- 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 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.

9.6.6 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.

9.6.7 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](#)

9.6.8 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.

9.6.9 ntheorem package

`\pkg ntheorem`

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

 **Font control**

 **Equation numbering**

ntheorem has a bug with equation numbering in \mathcal{AMS} environments when the option `thref` is used. lwarp does not share this bug, so equations with `\split`, etc, are

numbered correctly with lwarp's HTML output, but not with the print output. It is recommended to use `cleveref` instead of `ntheorem`'s `thref` option.

9.6.10 siunitx package

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

⚠ **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`.

9.6.11 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`

9.6.12 newtxmath package

Pkg `newtxmath` The proper load order is:

⚠ **loading sequence**

```

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

```

9.7 Graphics

Pkg `graphics` For `\includegraphics` with `.pdf` or `.eps` files, the user must provide a `.pdf` or
 Pkg `graphicx` `.eps` image file for use in print mode, and also a `.svg`, `.png`, or `.jpg` version of the
`\includegraphics file` same image for use in HTML.
`formats`

```

\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 of “(image)”.

`\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.

9.7.1 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 `\&`.

9.7.2 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.

9.7.3 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.

9.7.4 xcolor package

Pkg xcolor **`\colorboxBlock` and `\fcolorboxBlock`** `\colorboxBlock` and `\fcolorboxBlock` are provided for increased HTML compati-

bility, and they are identical to `\colorbox` and `\fcolorbox` in print mode. In HTML mode they place their contents into a `<div>` instead of a ``. These `<div>`s are set to `display: inline-block` so adjacent `\colorbox`Blocks appear side-by-side in HTML, although text is placed before or after each.

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

background: none `\fcolorbox` and `\fcolorboxBlock` allow a background color of `none`, in which case only the frame is drawn, which can be useful for HTML.

color support Color definitions, models, and mixing are fully supported without any changes required.

colored tables `\rowcolors` is supported, except that the optional argument is ignored so far.

colored text and boxes `\textcolor`, `\colorbox`, and `\fcolorbox` are supported.

`\color` and `\pagecolor` `\color` and `\pagecolor` are ignored. Use CSS or `\textcolor` where possible.

9.7.5 epstopdf package

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



convert to .svg

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

to generate `.svg` versions.

9.7.6 pstricks package

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



use pspicture

9.7.7 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:



convert image files

```
Enter => lwarpmk pdftosvg <jobname>-fig*.pdf
```

9.7.8 psfrag package

⚠ use psfrags Pkg psfrag The `psfrags` environment is modified to use `lateximage` to encapsulate the image. Always use a `psfrags` environment to contain any local `\psfrag` macros and the associated `\includegraphics` or `\epsfig` calls. Outside of a `psfrags` environment, `psfrags` adjustments will not be seen by `lwarp`.

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

9.7.9 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
```

.

9.7.10 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
```

9.7.11 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

9.8 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.

9.9 Tabular

`Tabular` mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside `tabulars`, `multirows`, `* column` specifiers, `siunitx S` columns, or the packages `multirow`, `longtable`, `supertabular`, or `xtable`.

Defining 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:

⚠ `\multirow`

- 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.

```

... & \multirow{2}{.5in}{text} & ...
... & \mrowcell & ...

```

`vposn`

Note that recent versions of `\multirow` include a new optional `vposn` argument.

- 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.
- See section 299.2 for `\multicolumnrow`.

⚠ `\multicolumn & \multirow`

`lwarp` does not support directly combining `\multicolumn` and `\multirow`. Use `\multicolumnrow` instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[Opt]{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:

```

... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[Opt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
... & \mcolrowcell & \mcolrowcell & ...

```

⚠ empty cells

`vposn`

Note that recent versions of `\multirow` include a new optional `vposn` argument.

⚠ 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:

⚠ * column specification

- * in a column specification is not used (so far). Repeat the column type the correct number of times.

@ 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 1.

Rules:

vertical rules

- Doubled `\hlines`, `\midrules`, and vertical rules are supported.
- Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.

width and trim

- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim.

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.

⚠ \warpprintonly

⚠ Misplaced \noalign

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

```
This & That \endhead
```

to

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

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

colortbl:

⚠ row/cell color

- Only use `\rowcolor` and `\cellcolor` at the start of a row, in that order. `colortbl` ignores the overhang arguments.

Other:**longtable headings** **S columns**

- tabularx ignores the width, but X columns do produce paragraph columns or multicolumns.
- For longtable, place headings and footings which do not apply to HTML inside `\warpprintonly{}`.
- For S columns (from the siunitx package), while producing print output, anything non-numeric must be placed inside `{}` braces, including commands such as `\multirow`. While producing HTML output, though, anything placed inside braces is not seen by lwarp's tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

```
\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3 \\}
\warppHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\}
```

9.9.1 longtable package

Pkg longtable

 **Misplaced \noalign**

Longtable `\endhead`, `\endfoot`, and `\endlastfoot` rows are not used for HTML, and these rows should be disabled. Use

```
\warpprintonly{row contents}
```

instead of

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

Doing so helps avoid “Misplaced `\noalign`.” when using `\begin{warpprint}`.

Keep the `\endfirsthead` row, which is still relevant to HTML output.

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

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

or place it inside `\warpingprintonly`.

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

9.9.2 supertabular and xtab packages

Pkg supertabular

Pkg xtab

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

 **Misplaced alignment tab character &**

```

\StartDefiningTabulars
\tablefirsthead
...
\StopDefiningTabulars

```

See section 9.9.

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

9.9.3 bigdelim package

 **pkg bigdelim** 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{\}{2}{.25in}[left ] & c & d \\
\mrowcell & e & f \\
<empty> & g & h \\
\end{tabular}

```

```

<>   a   b
      {
left  { c   d
      { e   f
<>   g   h

```

9.10 Floats

9.10.1 Float contents alignment

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

```

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

```

9.10.2 float, trivfloat, and/or algorithmicx together

pkg float If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section 429.1.

pkg trivfloat

pkg algorithmx

 **package conflicts**

9.10.3 caption and subcaption packages

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

```
Pkg subcaption \documentclass{article}
  \captionoptions{...}
  \PassOptionsToPackage{options_list}{caption}
  \usepackage{lwarp}
  \usepackage{caption}
```

△ numbering To ensure proper float numbering, set caption positions such as:

```
\captionsetup[table]{position=top}
\captionsetup[figure]{position=bottom}
```

Similarly for subtable, subfigure, and longtable.

9.10.4 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.

9.10.5 floatrow package

Pkg floatrow Use `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros using `\ttabbox` with a tabular inside. See section 9.9.

△ Misplaced alignment
tab character &
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.

9.10.6 keyfloat package

Pkg `keyfloat` If placing a `\keyfig[H]` inside a `keywrap`, use an absolute width for `\keyfig`, instead of 1w-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 1w option.)

⚠ `keywrap`

9.11 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.

9.12 MEMOIR class

Cls `memoir` While emulating memoir, lwarp pre-loads a number of packages (section 469.1). 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}
```

`\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.

9.13 Miscellaneous packages

9.13.1 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` `\leftskip` 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 `\HTMLleftskip` 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` `\leftmargini`

`Len` `\HTMLleftskip`

`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 `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

9.13.2 newclude package

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

 **loading**

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

9.13.3 babel package

Pkg `babel`

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

```
\renewcommand*{\CaptionSeparator}{:~}
```

punctuation spaces Also when French is used, `lwarp` creates fixed-width space around punctuation by patching `\FBcolonspace`, `\FBthinspace`, `\FBguillspace`, `\FBmedkern`, `\FBthickkern`, `\FBtextellipsis`, and the tilde. If the user's document also changes these parameters, the user's changes should be placed inside a `warpprint` environment so that

 **customized spacing** the user's changes do not affect the HTML output.

9.13.4 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.

9.13.5 todonotes and luatodonotes packages

Pkg todonotes The documentation for todonotes and luatodonotes have an example with a todo
 Pkg luatodonotes inside a caption. If this example does not work it will be necessary to move the todo
 outside of the caption.

9.13.6 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}
```

9.13.7 chemfig package

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `lateximage`:

```
\begin{lateximage}[(-chemfig--\packagediagramname)]
\chemfig{...}
\polymerdelim[...]{...}
\end{lateximage}
```

9.13.8 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.

9.13.9 mhchem package

See section [290](#).

9.13.10 xparse

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

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

10 Compiling using custom shell commands

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

10.1 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`.

10.2 Literal character macros

The lwarp package options are parsed by T_EX, and so some characters require the use of a special macro to represent them. See table 7. `\LWRopquote` and `\LWRopseq` may be used to increase operating-system portability. `\jobname` must have `_html` appended for processing HTML. `\space` may be necessary between other macros.

 **macro not found** To use these macros, either `kvoptions-patch` must be loaded before lwarp:

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

Table 7: Literal character macros

Character	Macro	Comment
%	\LWRpercent	
\$	\LWRdollar	
&	\LWRamp	
%	\LWRhash	
\	\LWRbackslash	
' or "	\LWRopquote	Depends on the operating system.
& or &&	\LWRopseq	Depends on the operating system.
(space)	\space	Forces an extra space.
(jobname)	\jobname	Without file extension.

or `\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
  }
}

```

10.3 *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`.

10.4 *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 9.6.8.

10.5 *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
 - ⚠ HTML look-alike
- 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.

10.6 Other packages

Pkg	<code>sympytex</code>	Other packages such as <code>sympytex</code> and <code>rterface</code> would be set up similar to <code>pythontex</code> , and the same warnings would apply.
Pkg	<code>rterface</code>	

10.7 make program

Prog	<code>make</code>	To use <code>lwarp</code> with the <i>make</i> program, have the makefile take <code>project.tex</code> and generate the print version <code>project.pdf</code> , as normal. <code>\usepackage{lwarp}</code> must be used, and it generates <code>lwarpmk.conf</code> 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`.

10.8 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 it calls the `ditaa` program.

11 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:

<i>FormatEPUB</i>	
Bool	FormatEPUB
	Default: <code>false</code>
	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.

12 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.

12.1 Activating word-processor conversion

A special boolean is provided to simplify the process of converting lwarp HTML output to EPUB:

FormatWP

Bool FormatWP
Default: false

Changes HTML output for easier conversion by a word processor. Removes headers and nav, prints footnotes per section, and also forces single-file output and turns off HTML debug comments. Additionally, honors the booleans WPMarkFloats, WPMarkMinipages, WPMarkTOC, and WPMarkLOFT.

To help modify lwarp HTML output for easier import to a word processor, add

```
\booltrue{FormatWP}
```

formatting adjustments

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

- If using a class without chapters, \section and lower are shifted up in level for the HTML heading tags. The CSS has not been changed, so the section heading formats will not match the normal HTML output, but when imported to *LibreOffice Writer* the higher section headings will import as **Heading 1** for the title, **Heading 2** for \section, etc.
- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.
- Forces single-file output.
- Turns off HTML debugging comments. These are comments appearing inside the HTML code, marking the opening/closing of sections and <div>s, but they are no longer useful when the document has been imported into a word processor.

- An additional `<div>` with an `id` encapsulates each float and minipage, which on import into *LibreOffice Writer* causes a thin frame to appear around the text block for each.
- Float captions are given an explicit italic formatting.
- Tabular rule borders are made explicit for *LibreOffice Writer*. `LIBREOFFICE` displays a light border around each cell while editing, even those which have no border when printed, and `lwarp` also uses a light border for thin rules, so it will be best to judge the results using the print preview instead of while editing in `LIBREOFFICE`.
- `\includegraphics` and `svg` math width and height are made explicit for `LIBREOFFICE`.
- `\hspace` is approximated by a number of `\quads`, and rules are approximated by a number of underscores.
- Explicit HTML styles are given to:
 - `\textsc`, etc.
 - `\underline`, `soul` and `ulem` markup.
 - `center`, `flushleft`, `flushright`.
 - `\marginpar`, `keyfloat`, `sidenotes`, `floatflt`, and `wrapfig`.
 - `fancybox` `\shadowbox`, etc.
 - The `LATEX` and `TEX` logos.
- Honors several booleans:
 - WPMarkFloats:** Marks the begin and end of floats.
 - WPMarkMinipages:** Marks the begin and end of minipages.
 - WPMarkTOC:** Marks the location of the Table of Contents.
 - WPMarkLOFT:** Marks the locations of the List of Figures/Tables.
 - WPMarkMath:** Prints `LATEX` math instead of using images.
 - WPTitleHeading:** Adjusts title and section headings.

Several of these may be used to add markers to the HTML text which help determine where to adjust the word processor document after import.

12.2 Additional modifications

WPMarkFloats

Adds

```
=== begin table ===
...
=== end ===
```

or

```
=== begin figure ===
...
=== end ===
```

Bool `WPMarkFloats`
 Default: `false`

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.

WPMarkMinipages

Adds

```
=== begin minipage ===
...
=== end minipage ===
```

Bool `WPMarkMinipages`
 Default: `false`

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

WPMarkTOC

While formatting for word processors, adds

```
=== table of contents ===
```

Bool `WPMarkTOC`
 Default: `true`

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

While formatting for word processors, adds

```
=== list of figures === and/or
=== list of tables ===
```

Bool WPMarkLOFT
Default: false

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

While formatting for word processors, prints math as L^AT_EX code instead of creating svg images or MATHJAX. This is useful for cut/paste into the LibreOffice Writer TeXMaths extension.

Bool WPMarkMath
Default: false
Prog TeXMaths
siunitx

When using the siunitx package, enter

```
\usepackage{siunitx}
```

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

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**.

Bool WPTitleHeading
Default: false
section headings

See table 8 on page 190.

12.3 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.

Table 8: Section HTML headings for word-processor conversion

Section	HTML headings*			
	With <code>\chapter</code>		Without <code>\chapter</code>	
	WPTitleHeading		WPTitleHeading	
	true	false	true	false
Title	<code><h1></code>	plain	<code><h1></code>	plain
<code>\part</code>	<code><h2></code>	<code><h1></code>	<code><h2></code>	<code><h1></code>
<code>\chapter</code>	<code><h3></code>	<code><h2></code>	—	—
<code>\section</code>	<code><h4></code>	<code><h3></code>	<code><h3></code>	<code><h2></code>
<code>\subsection</code>	<code><h5></code>	<code><h4></code>	<code><h4></code>	<code><h3></code>
<code>\paragraph</code>	<code><h6></code>	<code><h5></code>	<code><h5></code>	<code><h4></code>
<code>\subparagraph</code>	span	<code><h6></code>	<code><h6></code>	<code><h5></code>

* For default depths when not FormatWP, see table 9 on page 204.

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.

12.4 Limitations

Floats and captions are not explicitly converted to LIBREOFFICE floats with their own captions. Floats are surrounded by a thin frame in the LIBREOFFICE editor, and may be marked with `WPMarkFloats`, but are not given a proper LIBREOFFICE object frame. Captions are given an explicit italic formatting, but not a proper LIBREOFFICE paragraph style.

Cross references are not actual LIBREOFFICE linked cross references.

The List of Figures and List of Tables are not linked. The pasted pseudo LOF and LOT match the numbering of the L^AT_EX and HTML versions.

Equation numbering is not automatic, but the equation numbers in SVG math will match the L^AT_EX and HTML output. SVG math is recommended when using the $\mathcal{A}\mathcal{M}\mathcal{S}$ 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.

13 Modifying lwarp

locating something To quickly find the source for a package in `lwarp.dtx`, search for `*packagename`, such as `*siunitx`.

Likewise, to quickly find the source for a file in `lwarp.dtx`, search for `*filename`, such as `*lwarp.css`.

Purely text-based packages probably will work as-is when generating HTML.

Look to existing code for ideas on how to expand into new code.

image of TeX output An environment may be converted to a `lateximage` then displayed with an image of the resulting L^AT_EX output. See section 87 for an example of the `picture` environment.

css classes To create a custom HTML block or inline CSS class, see section 52.8.

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
```

13.1 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}
```

13.2 Modifying a package for lwarp

If a class loads additional packages, it will be required to modify the class for lwarp, since lwarp must be loaded before most other packages.

To work with lwarp, a class must first set up anything which replicates the functions of the basic L^AT_EX classes, load any required fonts, then load lwarp, then finally load and adjust any other required packages.

When creating HTML, lwarp redefines the `\usepackage` and `\RequirePackage` macros such that it first looks to see if a `lwarp-<packagename>.sty` version exists. If so, the lwarp version is used instead. This modular system allows users to create their own versions of packages for lwarp to use for HTML, simply by creating a new package with a `lwarp-` prefix. If placed in the local directory along with the source code, it will be seen by that project alone. If placed alongside the other `lwarp-` packages where T_EX can see it, then the user's new package will be seen by any documents using lwarp. (Remember `mktexlsr` or `texhash`.)

An `lwarp-<packagename>.sty` package is only used during HTML generation. Its purpose is to pretend to be the original package, while modify anything necessary to create a successful HTML conversion. For many packages it is sufficient to simply provide nullified macros, lengths, counters, etc. for anything which the original package does, while passing the raw text on to be typeset. See the pre-existing `lwarp-` packages for examples.

Anything the user might expect of the original package must be replaced or emulated by the new `lwarp-` package, including package options, user-adjustable counters, lengths, and booleans, and conditional behaviors. In many of these packages, most of the new definitions have a “local” prefix according to the package name, and `@` characters inside the name, which hides these names from the user. In most cases these macros will not need to be emulated for HTML output. Only the “user-facing” macros need to be nullified or emulated.

Each `lwarp-*` package should first call either of:

```
\LWR@ProvidesPackageDrop  
-or-  
\LWR@ProvidesPackagePass
```

If “Drop”ped, the original print-version package is ignored, and only the `lwarp-` version is used. Use this where the original print version is useless for HTML. If “Pass”ed, the original package is loaded first, with the user-supplied options, then the `lwarp-` version continues loading as well. See section 313 ([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.

13.2.1 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 21.1. 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.

13.3 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 L^AT_EX classes, load any required fonts, then load `lwarp`, then finally load and adjust any other required packages.

13.4 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.

13.5 Modifying *lwarpmk*

Prog `lwarpmk` In most installations, `lwarpmk.lua` is an executable file located somewhere the
File `lwarpmk.lua` 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`.

14 Troubleshooting

14.1 Using the lwarp.sty package

Also see:

Section 8.8: [Commands to be placed into the warpprint environment](#)

Section 9: [Special cases and limitations](#)

Text is not converting correctly / corrupted HTML tags:

- Font-related UTF-8 information must be embedded in the PDF file. See section 8.2 regarding bitmapped vs. vector fonts.
- See section 9.2.1 regarding HTML entities and the characters `&`, `<`, and `>`.

Undefined HTML settings:

- See the warning regarding the placement of the HTML settings at section 8.4.

Tabular problems: See section 9.9.

Obscure error messages:

Print first: Be sure that a print version of the document compiles and that your document’s L^AT_EX code is correct, before attempting to generate an HTML version.

`\end{warpHTML}`, `\end{warpprint}`, `\end{warpall}`: Each of these must be without any other characters on the same line.

Options clash: If using memoir, see section 9.12.

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

```
\usepackage{morewrites}
\morewritesetup{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 `l@<floattype>` or `l@<sectiontype>` definition. See lwarp’s definitions for examples.

“Improper `\prevdepth`”: `lateximages` and `svg math` require `\newpage`, which cannot work inside `TeX` boxes or `\ensuremath`. Anything using `\newsavebox`, `\newbox`, `lrbox`, `\savebox`, `\hbox`, `\vbox`, `\usebox`, `\sbox`, etc., must be modified to work without box commands.

If you find something using `\ensuremath`, have it temporarily set:

```
\LetLtxMacro\@ensuredmath\LWR@origensuredmath
```

inside a group first.

Also, custom macros which appear inside a section, figure, or table name should be made robust since they appear inside the `.toc`, `.lof`, or `.lot` files. Use `\newrobustcmd` or `\robustify` from `etoolbox`, `xparse`, etc.

If using BibTeX, see section 9.5.9.

“! Undefined control sequence. ... `\@begindocumenthook`”: See section 9.13.4 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 9.6.8.

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 9.6.8.

Missing sections: See section 8.4 regarding the `FileDepth` and `SideTOCDepth` counters, and the use of `\tableofcontents` in the home page.

Misnumbered footnotes from section headings: See section 9.4.4.

! macros in section,table,figure names

! BibTeX

! polyglossia

! custom macros for environments

! `\LWR@formatted`

! “impure” math objects

Missing HTML files:

- See the warning regarding changes to the HTML settings at section 8.4.
- Ensure that the filenames are unique after math and short words are removed. See `FileSectionNames` at section 8.4.

Missing / incorrect cross-references:

- Use `lwarpmk` again followed by `lwarpmk html` or `lwarpmk print` to compile the document one more time.
- Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French).

labels

⚠ label characters

`\nameref`

⚠ empty link

`\nameref` refers to the most recently-used section where the `\label` was defined. If no section has been defined before the `\label`, the link will be empty. Index entries also use `\nameref` and have the same limitation.

- `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 576 to redefine the message which is printed for page number references.

⚠ cleveref page numbers

BibTeX errors with `\etalchar`: See section 9.5.9.

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 `XƎLATEX` or `LuaATEX`.

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 images` 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 images` 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.

Before attempting to create the svg image files, `lwarpmk` verifies that the HTML version of the document exists and has correct internal image references.¹⁵ If it is necessary to recompile the document's HTML version, `lwarpmk` will inform so with an error message.

 **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. `lwarpmk` attempts to detect this situation and print a warning.

 **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 6.5 to use `MATHJAX` instead.

Plain-looking document:

- The document's css stylesheet may not be available, or may be linked incorrectly. Verify any `\CSSFILENAME` statements point to a valid css file.

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 8.4.
- Verify that the proper css is actually being used.

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

- 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.

14.1.1 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.

14.2 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**

16 Implementation

This package is perhaps best described as a large collection of smaller individual technical challenges, in many cases solved through a number of ~~crude 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 ^A T _E X depth	HTML headings *
title of the entire website		<h1>
none	-5	new for this package
book	-2	not yet used
part	-1	<h2>
chapter	0	<h3>
section	1	<h4>
subsection	2	<h5>
subsubsection	3	<h6>
paragraph	4	
subparagraph	5	
listitem	7	new for this package, used for list items

* If `FormatWP` is true, section headings may be adjusted, depending on `WPTitleHeading`. See table 8 on page 190.

17 Section depths and HTML headings

Stacks are created to track depth inside the L^AT_EX 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^AT_EX 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.

18 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:

19 Detecting the T_EX Engine — *pdf_latex*, *lua_latex*, *xel_latex*

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

Detects X_ET_EX and Lua_AT_EX:

```

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}

```

20 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{xpach}

```

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

```

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

```

Pkg `letltxmacro`

```

22 \RequirePackage{letltxmacro}

```

21 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.

21.1 Tests of package load order

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

```

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

```

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

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

```

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

```

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

```

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

```

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

```

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

```

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

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

```

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

```

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

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

```

65 \newcommand*\LWR@loadnever}[2]{%
66 \PackageError{lwarp}
67 {Package #1 is not supported by lwarp's HTML conversion.
68 Package(s) #2 may be useful instead}
69 {Package #1 might conflict with lwarp in some way,
70 or is superceded by another package.

```

```
71 For a possible alternative, see package(s) #2.}
72 }
```

`\LWR@checkloadnever` $\langle thispackagename \rangle$ $\langle badpackagename \rangle$ $\langle replacementpkgnames \rangle$

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

```
73 \newcommand*\LWR@checkloadnever}[3]{%
74   \edef\LWR@tempone{#1}%
75   \ifdefstring{\LWR@tempone}{#2}{%
76     \LWR@loadnever{#2}{#3}%
77   }{}%
78 }
```

`\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.

```
79 \newcommand*\LWR@earlyloadnever}[2]{%
80 \@ifpackageloaded{#1}{%
81   \PackageError{lwarp}
82   {Package #1 is not supported by lwarp's HTML conversion.
83   Package(s) #2 may be useful instead}
84   {Package #1 might conflict with lwarp in some way,
85   or is superceded by another package.
86   For a possible alternative, see package(s) #2.}
87 }{}%
88 }
```

`\LWR@earlyclassloadnever` $\langle badclassname \rangle$ $\langle replacementclassname \rangle$

The first class is not supported, so tell the user to use the second instead. This version checks immediately for classes which may have been loaded before lwarp.

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

21.2 Error for disallowed packages and classes loaded before lwarp

```

99 \LWR@earlyclassloadnever{jarticle}{ujarticle}
100 \LWR@earlyclassloadnever{jbook}{ujbook}
101 \LWR@earlyclassloadnever{jreport}{ujreport}
102 \LWR@earlyclassloadnever{tarticle}{utarticle}
103 \LWR@earlyclassloadnever{tbook}{utbook}
104 \LWR@earlyclassloadnever{treport}{utreport}
105 \LWR@earlyloadnever{ae}{cm-super, lmodern}
106 \LWR@earlyloadnever{aecompl}{cm-super, lmodern}
107 \LWR@earlyloadnever{aecc}{cm-super, lmodern}
108 \LWR@earlyloadnever{boxedminipage}{boxedminipage2e}
109 \LWR@earlyloadnever{caption2}{caption}
110 % \LWR@earlyloadnever{caption}{caption}% might be preloaded by memoir

```

The older CJK and CJKutf8 only work with xeCJK:

```

111 \@ifpackageloaded{xeCJK}{-}{-}
112   \LWR@earlyloadnever{CJK}{ctex, xeCJK}
113   \LWR@earlyloadnever{CJKutf8}{ctex, xeCJK}
114 }

```

bxckattype is based on CJK:

```

115 \LWR@earlyloadnever{bxckattype}{upLaTeX, bxjsarticle, ujarticle, utarticle}

```

hangul is not in TeXLive, and is not tested:

```

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

```

Others:

```

117 \LWR@earlyloadnever{fancyheadings}{fancyhdr}
118 \LWR@earlyloadnever{glossary}{glossaries}
119 \LWR@earlyloadnever{t1enc}{fontenc, inputenc, inputenx}
120 \LWR@earlyloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}

```

21.3 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:

```

121 \LWR@loadafter{2in1}
122 \LWR@loadafter{2up}
123 \LWR@loadafter{a4}
124 \LWR@loadafter{a4wide}

```

```
125 \LWR@loadafter{a5comb}
126 \LWR@notmemoirloadafter{abstract}
127 \LWR@loadafter{accsupp}
128 \LWR@loadafter{acro}
129 \LWR@loadafter{acronym}
130 \LWR@loadafter{adjmulticol}
131 \LWR@loadafter{addlines}
132 \LWR@loadafter{ae}
133 \LWR@loadafter{aecc}
134 \LWR@loadafter{afterpage}
135 \LWR@loadafter{algorithm2e}
136 \LWR@loadafter{algorithmicx}
137 \LWR@loadafter{alltt}
138 \LWR@loadafter{amsmath}
139 \LWR@loadafter{amsthm}
140 \LWR@loadafter{anonchap}
141 \LWR@loadafter{anysize}
142 \LWR@notmemoirloadafter{appendix}
143 \LWR@loadafter{arabicfront}
144 \LWR@notmemoirloadafter{array}
145 \LWR@loadafter{arydshln}
146 \LWR@loadafter{asymptote}
147 % \LWR@loadafter{atbegshi}% used by morewrites
148 \LWR@loadafter{attachfile}
149 \LWR@loadafter{attachfile2}
150 \LWR@loadafter{authblk}
151 \LWR@loadafter{axessibility}
152 \LWR@loadafter{axodraw2}
153 \LWR@loadafter{backref}
154 \LWR@loadafter{balance}
155 \LWR@loadafter{bigdelim}
156 \LWR@loadafter{bigstrut}
157 \LWR@loadafter{bitpattern}
158 \LWR@loadafter{blowup}
159 \LWR@loadafter{booklet}
160 \LWR@loadafter{bookmark}
161 \LWR@notmemoirloadafter{booktabs}
162 \LWR@loadafter{bophook}
163 \LWR@loadafter{bounddvi}
164 \LWR@loadafter{boxedminipage}
165 \LWR@loadafter{boxedminipage2e}
166 \LWR@loadafter{breakurl}
167 \LWR@loadafter{breqn}
168 \LWR@loadafter{bsheaders}
169 \LWR@loadafter{bypapersize}
170 \LWR@loadafter{bytefield}
171 \LWR@loadafter{cancel}
172 \LWR@loadafter{canoniclayout}
173 \LWR@loadafter{caption}
174 \LWR@loadafter{caption2}
```

```
175 \LWR@loadafter{cases}
176 % \LWR@loadafter{ccaption}% may be preloaded by memoir
177 \LWR@loadafter{changebar}
178 \LWR@notmemoirloadafter{change page}
179 \LWR@notmemoirloadafter{chnpage}
180 \LWR@loadafter{chappg}
181 \LWR@loadafter{chapterbib}
182 \LWR@loadafter{chemfig}
183 \LWR@loadafter{chemformula}
184 \LWR@loadafter{chemgreek}
185 \LWR@loadafter{chemmacros}
186 \LWR@loadafter{chemnum}
187 \LWR@loadafter{chkfloat}
188 \LWR@loadafter{cite}
189 \LWR@loadafter{cmdtrack}
190 \LWR@loadafter{color}
191 \LWR@loadafter{colortbl}
192 \LWR@loadafter{continue}
193 \LWR@loadafter{copyrightbox}
194 \LWR@notmemoirloadafter{crop}
195 % ctex must be loaded before lwarp
196 \LWR@loadafter{cuted}
197 \LWR@loadafter{cutwin}
198 \LWR@loadafter{dblfloatfix}
199 \LWR@loadafter{dblfnote}
200 \LWR@notmemoirloadafter{dcolumn}
201 \LWR@loadafter{diagbox}
202 \LWR@loadafter{dprogress}
203 \LWR@loadafter{draftcopy}
204 \LWR@loadafter{draftfigure}
205 \LWR@loadafter{draftwatermark}
206 \LWR@loadafter{easy-todo}
207 \LWR@loadafter{ebook}
208 \LWR@loadafter{ellipsis}
209 \LWR@loadafter{embrac}
210 \LWR@loadafter{emptypage}
211 \LWR@loadafter{endfloat}
212 \LWR@loadafter{endheads}
213 \LWR@loadafter{endnotes}
214 \LWR@notmemoirloadafter{enumerate}
215 \LWR@loadafter{enumitem}
216 \LWR@notmemoirloadafter{epigraph}
217 \LWR@loadafter{epsfig}
218 \LWR@loadafter{epstopdf}
219 \LWR@loadafter{epstopdf-base}
220 \LWR@loadafter{errata}
221 \LWR@loadafter{eso-pic}
222 \LWR@loadafter{everypage}
223 \LWR@loadafter{everyshi}
224 \LWR@loadafter{extramarks}
```

```
225 \LWR@loadafter{fancybox}
226 \LWR@loadafter{fancyhdr}
227 \LWR@loadafter{fancyheadings}
228 \LWR@loadafter{fancyref}
229 \LWR@loadafter{fancytabs}
230 \LWR@loadafter{fancyvrb}
231 \LWR@loadafter{figcaps}
232 \LWR@loadafter{figsize}
233 \LWR@loadafter{fix2col}
234 \LWR@loadafter{fixme}
235 \LWR@loadafter{fixmetodonotes}
236 \LWR@loadafter{flafter}
237 \LWR@loadafter{flippdf}
238 \LWR@loadafter{float}
239 \LWR@loadafter{floatflt}
240 \LWR@loadafter{floatpag}
241 \LWR@loadafter{floatrow}
242 \LWR@loadafter{fltrace}
243 \LWR@loadafter{flushend}
244 \LWR@loadafter{fnbreak}
245 \LWR@loadafter{fncychap}
246 \LWR@loadafter{fnlineno}
247 \LWR@loadafter{fnpos}
248 % fontenc must be loaded before lwarp
249 % fontspec must be loaded before lwarp
250 \LWR@loadafter{footmisc}
251 \LWR@loadafter{footnote}
252 \LWR@loadafter{footnotehyper}
253 \LWR@loadafter{footnoterange}
254 \LWR@loadafter{footnpag}
255 \LWR@loadafter{forest}
256 \LWR@loadafter{framed}
257 \LWR@loadafter{ftnright}
258 \LWR@loadafter{fullminipage}
259 \LWR@loadafter{fullpage}
260 \LWR@loadafter{fullwidth}
261 \LWR@loadafter{fwlw}
262 \LWR@loadafter{gentombow}
263 % geometry is always loaded by lwarp, and lwarp-geometry is AtBeginDocument
264 \LWR@loadafter{gmeometric}
265 \LWR@loadafter{glossaries}
266 % \LWR@loadafter{graphics}% pre-loaded by xunicode
267 % \LWR@loadafter{graphicx}% pre-loaded by xunicode
268 \LWR@loadafter{glossary}
269 \LWR@loadafter{grffile}
270 \LWR@loadafter{grid}
271 \LWR@loadafter{grid-system}
272 \LWR@loadafter{gridset}
273 \LWR@loadafter{hang}
274 \LWR@loadafter{hanging}
```

```
275 \LWR@loadafter{hypcap}
276 \LWR@loadafter{hypdestopt}
277 \LWR@loadafter{hypernat}
278 \LWR@loadafter{hyperref}
279 \LWR@loadafter{hyperxmp}
280 \LWR@loadafter{hyphenat}
281 \LWR@loadafter{idxlayout}
282 \LWR@loadafter{ifoddpages}
283 \LWR@loadafter{imakeidx}
284 \LWR@loadafter{indentfirst}
285 \LWR@notmemoirloadafter{index}
286 % inputenc must be loaded before lwarp
287 % inputex must be loaded before lwarp
288 \LWR@loadafter{intopdf}
289 \LWR@loadafter{keyfloat}
290 \LWR@loadafter{layaureo}
291 \LWR@loadafter{layout}
292 \LWR@loadafter{leading}
293 \LWR@loadafter{letterspace}
294 \LWR@loadafter{letrine}
295 \LWR@loadafter{lineno}
296 \LWR@loadafter{lips}
297 \LWR@loadafter{listings}
298 \LWR@loadafter{longtable}
299 \LWR@loadafter{lscap}
300 \LWR@loadafter{ltabx}
301 \LWR@loadafter{ltcaption}
302 \LWR@loadafter{ltxgrid}
303 \LWR@loadafter{ltxtable}
304 \LWR@loadafter{lua-check-hyphen}
305 \LWR@loadafter{lua-visual-debug}
306 \LWR@loadafter{luacolor}
307 \LWR@loadafter{luatodonotes}
308 \LWR@loadafter{magaz}
309 \LWR@notmemoirloadafter{makeidx}
310 \LWR@loadafter{marginfit}
311 \LWR@loadafter{marginfix}
312 \LWR@loadafter{marginnote}
313 \LWR@loadafter{mcaption}
314 \LWR@loadafter{mdframed}
315 \LWR@loadafter{memhfixc}
316 \LWR@loadafter{metalogo}
317 \LWR@loadafter{mhchem}
318 \LWR@loadafter{microtype}
319 \LWR@loadafter{midfloat}
320 \LWR@loadafter{midpage}
321 \LWR@loadafter{morefloats}
322 \LWR@notmemoirloadafter{moreverb}
323 % morewrites must be loaded before lwarp
324 \LWR@notmemoirloadafter{mparhack}
```

```
325 %\LWR@loadafter{multicol}% loaded by ltxdoc
326 \LWR@loadafter{multicolrule}
327 \LWR@loadafter{multirow}
328 \LWR@loadafter{multitoc}
329 \LWR@loadafter{musicography}
330 \LWR@loadafter{nameref}
331 \LWR@loadafter{natbib}
332 \LWR@notmemoirloadafter{nccfancyhdr}
333 \LWR@notmemoirloadafter{needspace}
334 % newclude must be loaded before lwarp
335 \LWR@loadafter{newtxmath}
336 % newunicodechar must be loaded before lwarp
337 \LWR@notmemoirloadafter{nextpage}
338 \LWR@loadafter{nicefrac}
339 \LWR@loadafter{nonfloat}
340 \LWR@loadafter{nonumonpart}
341 \LWR@loadafter{nopageno}
342 \LWR@loadafter{notespages}
343 \LWR@loadafter{nowidow}
344 \LWR@loadafter{nththeorem}
345 \LWR@loadafter{octave}
346 \LWR@loadafter{overpic}
347 \LWR@loadafter{pagegrid}
348 \LWR@notmemoirloadafter{pagenote}
349 \LWR@loadafter{pagesel}
350 \LWR@loadafter{paralist}
351 \LWR@loadafter{parnotes}
352 \LWR@notmemoirloadafter{parskip}
353 \LWR@loadafter{pbox}
354 \LWR@loadafter{pdfcomment}
355 \LWR@loadafter{pdfscape}
356 \LWR@loadafter{pdfmarginpar}
357 \LWR@loadafter{pdfpages}
358 \LWR@loadafter{pdfprivacy}
359 \LWR@loadafter{pdfrender}
360 \LWR@loadafter{pdfsync}
361 \LWR@loadafter{pdftricks}
362 \LWR@loadafter{pdfx}
363 \LWR@loadafter{pfnote}
364 \LWR@loadafter{phfqit}
365 \LWR@loadafter{placeins}
366 \LWR@loadafter{plarray}
367 \LWR@loadafter{plarydshln}
368 \LWR@loadafter{plextarray}
369 \LWR@loadafter{plextarydshln}
370 \LWR@loadafter{plcolortbl}
371 \LWR@loadafter{plextdelarray}
372 \LWR@loadafter{prelim2e}
373 \LWR@loadafter{prettyref}
374 \LWR@loadafter{preview}
```

```
375 \LWR@loadafter{psfrag}
376 \LWR@loadafter{psfragx}
377 \LWR@loadafter{pst-eps}
378 \LWR@loadafter{pstool}
379 \LWR@loadafter{pstricks}
380 % \LWR@loadafter{pxatbegshi}% may be used by morewrites
381 \LWR@loadafter{pxeveryshi}
382 \LWR@loadafter{pxftnright}
383 \LWR@loadafter{pxjahyper}
384 \LWR@loadafter{quotchap}
385 \LWR@loadafter{quoting}
386 \LWR@loadafter{ragged2e}
387 \LWR@loadafter{realscripts}
388 \LWR@loadafter{refcheck}
389 \LWR@loadafter{register}
390 \LWR@loadafter{reysize}
391 \LWR@loadafter{repeatindex}
392 \LWR@loadafter{resizegather}
393 \LWR@loadafter{rmpage}
394 \LWR@loadafter{romanbar}
395 \LWR@loadafter{romanbarpagenumber}
396 \LWR@loadafter{rotating}
397 \LWR@loadafter{rotfloat}
398 \LWR@loadafter{rviewport}
399 \LWR@loadafter{savetrees}
400 % scalefnt is loaded by babel-french
401 \LWR@loadafter{schemata}
402 \LWR@loadafter{scrextend}
403 \LWR@loadafter{scrhack}
404 \LWR@loadafter{sclayer}
405 \LWR@loadafter{sclayer-notecolumn}
406 \LWR@loadafter{sclayer-scrpage}
407 \LWR@loadafter{scrpage2}
408 \LWR@loadafter{section}
409 \LWR@loadafter{sectionbreak}
410 \LWR@loadafter{sectsty}
411 \LWR@loadafter{semantic-markup}
412 \LWR@notmemoirloadafter{setspace}
413 \LWR@loadafter{shadow}
414 \LWR@notmemoirloadafter{showidx}
415 \LWR@loadafter{showkeys}
416 \LWR@loadafter{sidecap}
417 \LWR@loadafter{sidenotes}
418 \LWR@loadafter{SIunits}
419 \LWR@loadafter{siunitx}
420 \LWR@loadafter{soul}
421 \LWR@loadafter{soulpos}
422 \LWR@loadafter{soulutf8}
423 \LWR@loadafter{splitidx}
424 \LWR@loadafter{srcltx}
```

```
425 \LWR@loadafter{srctex}
426 \LWR@loadafter{stabular}
427 \LWR@notltjloadafter{stfloats}
428 \LWR@loadafter{subfig}
429 \LWR@loadafter{subfigure}
430 \LWR@loadafter{supertabular}
431 \LWR@loadafter{t1inc}
432 \LWR@loadafter{tabls}
433 \LWR@notmemoirloadafter{tabularx}
434 \LWR@loadafter{tabulary}
435 \LWR@loadafter{tascmac}
436 \LWR@loadafter{textarea}
437 % \LWR@loadafter{textcomp}% maybe before lwarp with font packages
438 \LWR@loadafter{textfit}
439 \LWR@loadafter{textpos}
440 \LWR@loadafter{theorem}
441 \LWR@loadafter{thinsp}
442 \LWR@loadafter{threadcol}
443 \LWR@loadafter{threeparttable}
444 \LWR@loadafter{thumb}
445 \LWR@loadafter{thumbs}
446 \LWR@loadafter{tikz}
447 \LWR@loadafter{titleps}
448 \LWR@loadafter{titlesec}
449 \LWR@loadafter{titletoc}
450 \LWR@notmemoirloadafter{titling}
451 % \LWR@loadafter{tocbasic}% preloaded by koma-script classes
452 \LWR@notmemoirloadafter{tocbibind}
453 \LWR@loadafter{toccenter}
454 \LWR@notmemoirloadafter{tocloft}
455 \LWR@loadafter{tocstyle}
456 \LWR@loadafter{todo}
457 \LWR@loadafter{todonotes}
458 \LWR@loadafter{tram}
459 \LWR@loadafter{transparent}
460 \LWR@loadafter{trimclip}
461 \LWR@loadafter{trivfloat}
462 \LWR@loadafter{turnthepage}
463 \LWR@loadafter{twoup}

464 % \LWR@loadafter{typearea}% preloaded by koma-script classes
465 % \LWR@loadafter{ulem}% preloaded by ctexart and related classes
466 \LWR@loadafter{underscore}
467 \LWR@loadafter{units}
468 \LWR@loadafter{unitsdef}
469 \LWR@loadafter{upref}
470 \LWR@loadafter{url}
471 \LWR@loadafter{uspace}
472 \LWR@loadafter{varioref}% no lwarp package provided
```

```
473 \LWR@notmemoirloadafter{verse}
474 \LWR@loadafter{versonotes}
475 \LWR@loadafter{vertbars}
476 \LWR@loadafter{vmargin}
477 \LWR@loadafter{vowel}
478 \LWR@loadafter{vpe}
479 \LWR@loadafter{vwcol}
480 \LWR@loadafter{wallpaper}
481 \LWR@loadafter{watermark}
482 \LWR@loadafter{widows-and-orphans}
483 \LWR@loadafter{wrapfig}
484 \LWR@loadafter{xbmks}
485 \LWR@loadafter{xcolor}
486 \LWR@loadafter{xexchangebar}
487 \LWR@loadafter{xellipsis}
488 % xetexko-vertical must be loaded before lwarp
489 \LWR@loadafter{xfrac}
490 \LWR@loadafter{xltabular}
491 \LWR@loadafter{xltextra}
492 \LWR@loadafter{xmpincl}
493 \LWR@loadafter{xpiano}
494 \LWR@loadafter{xpinyin}
495 \LWR@loadafter{xtab}
496 % xunicode must be loaded before lwarp
497 \LWR@loadafter{xurl}
498 \LWR@loadafter{xy}
499 \LWR@loadafter{zwpagelayout}
```

22 MD5 hashing

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

```
500 \newcommand{\LWR@mdfive}[1]{%
501 \PackageError{lwarp}
502 {No MD5 macro was found.}
503 {Lwarp must find the macros pdfmdfivesum or mdfivesum.}
504 }
```

The default for pdfL^AT_EX, dviL^AT_EX, upL^AT_EX, etc:

```
505 \let\LWR@mdfive\pdfmdfivesum
```

For LuaL^AT_EX:

```
506 \ifLuaTeX
507 \RequirePackage{pdftexcmds}
```

```
508 \let\LWR@mdfive\pdf@mdfivesum
509 \fi
```

For X_YL^AT_EX:

```
510 \ifXeTeX
511 \@ifundefined{pdfmfivesum}{
512     {\let\LWR@mdfive\pdfmdfivesum}
513 \@ifundefined{mdfivesum}{
514     {\let\LWR@mdfive\mdfivesum}
515 \fi
```

23 pdf_LA_TE_X T1 and UTF-8 encoding

When using pdf_LA_TE_X, 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.

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

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

```
516 \newcommand*{\LWR@pdfencoding}{%
517     \RequirePackage[T1]{fontenc}
518
519     \@ifpackageloaded{inputenc}{
520         \@ifpackageloaded{inputenx}{
521             \RequirePackage[utf8]{inputenc}
522         }
523     }
524 }

525 \ifPDFTeX% pdflatex or dvi latex
526     \LWR@pdfencoding
527 \fi
528
529 \ifpTeX
530     \LWR@pdfencoding
531 \fi
```

24 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.

```
532 \ifpTeX
533 \else
534 \RequirePackage{newunicodechar}
535
536 \newunicodechar{×}{\texttimes}
537
538 \ifPDFTeX% pdflatex or dvi latex
539 \newunicodechar{ff}{ff}% the first arguments are ligatures
540 \newunicodechar{fi}{fi}
541 \newunicodechar{fl}{fl}
542 \newunicodechar{ffi}{ffi}
543 \newunicodechar{ffl}{ffl}
544 \newunicodechar{--}{---}
545 \newunicodechar{-}{--}
546 \fi
547
548 \fi
```

25 Upright quotes

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

```
549 \ifPDFTeX
550 \RequirePackage{upquote}
551 \fi
552
553 \ifpTeX
554   \RequirePackage{upquote}
555 \fi
```

26 Miscellaneous tools

`\LWR@providelength` $\langle \text{lengthname} \rangle$ 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.

```
556 \newcommand*\LWR@providelength[1]{%
557   \ifdeflength{#1}{\newlength{#1}}%
558 }
```

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

`\LWR@convertto` $\langle \text{dest unit} \rangle$ $\langle \text{length} \rangle$

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

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

Prints an error if could not patch a macro.

```
560 \newcommand*\LWR@patcherror[2]{%
561   \PackageError{lwarp}
562   {Unable to patch package #1, macro #2}
563   {Please contact the author of the lwarp package.}
564 }
```

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

```
565 \newcommand{\LWR@isolate}[1]{#1}%
566
567 \@ifpackageloaded{ctexpatch}{
568   \renewcommand{\LWR@isolate}[1]{\null#1\null}%
569 }{}
570
571 \@ifpackageloaded{xeCJK}{
572   \renewcommand{\LWR@isolate}[1]{\null#1\null}%
573 }
```

27 Operating-System portability

Prog	Unix	lwarp tries to detect which operating system is being used. UNIX / MAC OS / LINUX is the default (collectively referred to as “UNIX” in the configuration files), and MS-WINDOWS is supported as well.
Prog	Mac OS	
Prog	Linux	
Prog	MS-Windows	If MS-WINDOWS is not correctly detected, use the lwarp option OSWindows.
Prog	Windows	When detected or specified, the operating-system path separator used by lwarp is modified, and the boolean usingOSWindows is set true. This boolean may be tested by the user for later use.
Opt	OSWindows	

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:

```
574 \let\LWRpercent\@percentchar
```

The literal \$ character:

```
575 \catcode'\$=12
576 \def\LWRdollar{\$}
577 \catcode'\$=3
```

The literal & character:

```
578 \catcode'\&=12
579 \def\LWRamp{\&}
580 \catcode'\&=4
```

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

```
581 \catcode'\&=0
582 &catcode'\=12
583 &def&LWRbackslash{\}
584 &catcode'\=0
585 \catcode'\&=4
```

The literal # character:

```
586 \catcode'\#=12
```

```
587 \def\LWRhash{#}
588 \catcode'\#=6
```

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

```
589 \def\LWRopquote{'}
```

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

```
590 \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.

```
591 \newbool{usingOSWindows}
592 \boolfalse{usingOSWindows}
```

27.3 UNIX, LINUX, and MAC OS

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

```
593 \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.

```
594 \newcommand*{\LWR@setOSWindows}
595 {
596 \booltrue{usingOSWindows}
597 \renewcommand*{\OSPathSymbol}{\@backslashchar}
598 \def\LWRopquote{"}
```

```
599 \def\LWRopseq{\space\LWRamp\space\space}
600 }
```

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

```
601 \ifwindows
602 \LWR@setOSWindows
603 \fi
```

28 Package options

Pkg `kvoptions` Allows key/value package options.

```
604 \RequirePackage{kvoptions}
605 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

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

```
606 \newcommand{\lwarpsetup}[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`.

```
607 \newbool{warpingprint}
608 \newbool{warpingHTML}
609 \newbool{mathjax}
610 \newbool{LWR@origmathjax}
```

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

```
611 \booltrue{warpingprint}%
612 \boolfalse{warpingHTML}%
613 \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.

```
614 \DeclareVoidOption{warpprint}{%}
```

```

615 \PackageInfo{lwarp}{Using option 'warpprint'}
616 \booltrue{warpingprint}%
617 \boolfalse{warpingHTML}%
618 }

```

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.

```

619 \DeclareVoidOption{warpHTML}{%
620 \PackageInfo{lwarp}{Using option 'warpHTML'}%
621 \booltrue{warpingHTML}%
622 \boolfalse{warpingprint}%
623 }

```

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.

```

624 \DeclareVoidOption{mathsvg}{%
625 \PackageInfo{lwarp}{Using option 'mathsvg'}
626 \boolfalse{mathjax}%
627 \boolfalse{LWR@origmathjax}%
628 }

```

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

```

629 \DeclareVoidOption{mathjax}{%
630 \PackageInfo{lwarp}{Using option 'mathjax'}
631 \booltrue{mathjax}%
632 \booltrue{LWR@origmathjax}%
633 }

```

Opt `BaseJobname` Option `BaseJobname` sets the `\BaseJobname` for this document.

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.

```

634 \DeclareStringOption[\jobname]{BaseJobname}

```

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

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

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

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

```
636 \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.

```
637 \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.

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

Opt `pdftotextEnc` The option `pdftotextEnc` sets the encoding used by *pdftotext*. This is passed to *pdftotext* using its `-enc` option, and is used when converting L^AT_EX PDF output with HTML tags into a plain-text file with HTML tags.
Default: UTF-8

```
639 \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`:

```
640 \newbool{LWR@creatinglwarpmk}
641 \boolfalse{LWR@creatinglwarpmk}
642
643 \DeclareVoidOption{lwarpmk}{
644 \PackageInfo{lwarp}{Using option 'lwarpmk'}
645 \booltrue{LWR@creatinglwarpmk}
646 }
```

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.

```
647 \DeclareVoidOption{OSWindows}{
```

```

648 \PackageInfo{lwarp}{Using option 'OSWindows'}
649 \LWR@setOSWindows
650 }

```

Opt `HomeHTMLFilename` The filename of the homepage. The default is the jobname. This option is stored into `\LWR@HomeHTMLFilename`, and later transferred into `\HomeHTMLFilename` for internal use.

Default: `\lwarp`

```
651 \DeclareStringOption[] {HomeHTMLFilename}
```

Opt `HTMLFilename` The filename prefix of web pages after the homepage. The default is empty, no prefix. This option is stored into `\LWR@HTMLFilename`, and later transferred into `\HTMLFilename` for internal use.

Default: `<empty>`

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

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

Default: `<automatic>`

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

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

Default: `<automatic>`

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

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

Default: `<empty>`

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

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

Default: `<empty>`

```
656 \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>`

```
657 \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.

```
658 \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.

```
659 \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`

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

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

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

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

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

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

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

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

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

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

```
665 \ProcessKeyvalOptions*\relax
```

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

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

Defaults unless already over-ridden by the user:

```
667 \ifcsemtty{\LWR@HomeHTMLFilename}{
668 \newcommand*\HomeHTMLFilename{\BaseJobname}
669 }{
670 \csedef{HomeHTMLFilename}{\LWR@HomeHTMLFilename}
671 }
672
673 \csedef{HTMLFilename}{\LWR@HTMLFilename}
```

`\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.

```

674 \ifdefempty{\LWR@PrintIndexCmd}{
675   \renewcommand{\LWR@PrintIndexCmd}{%
676     makeindex -s \LWR@makeindexStyle \space \jobname.idx%
677   }
678   \ifbool{LWR@xindy}{
679     \renewcommand{\LWR@PrintIndexCmd}{%
680       xindy
681       -M \LWR@xindyStyle \space
682       -L \LWR@xindyLanguage \space
683       -C \LWR@xindyCodepage \space
684       \jobname.idx%
685     }
686   }{}
687 }{}
688
689 \ifdefempty{\LWR@HTMLIndexCmd}{
690   \renewcommand{\LWR@HTMLIndexCmd}{%
691     makeindex -s \LWR@makeindexStyle \space \jobname_html.idx%
692   }
693   \ifbool{LWR@xindy}{
694     \renewcommand{\LWR@HTMLIndexCmd}{%
695       xindy
696       -M \LWR@xindyStyle \space
697       -L \LWR@xindyLanguage \space
698       -C \LWR@xindyCodepage \space
699       \jobname_html.idx%
700     }
701   }{}
702 }{}
703
704 \ifdefempty{\LWR@LatexmkIndexCmd}{
705   \renewcommand{\LWR@LatexmkIndexCmd}{%
706     makeindex -s \LWR@makeindexStyle%
707   }
708   \ifbool{LWR@xindy}{
709     \renewcommand{\LWR@LatexmkIndexCmd}{%
710       xindy
711       -M \LWR@xindyStyle \space
712       -L \LWR@xindyLanguage \space
713       -C \LWR@xindyCodepage%
714     }
715   }{}
716 }{}

```

28.1 Conditional compilation

`\warpprintonly` `{\contents}`

Only process the contents if producing printed output.

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

`\warpHTMLonly` `{\contents}`

Only process the contents if producing HTML output.

```
718 \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.

```
719 \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.

```
720 \ifbool{warpingHTML}{
721 \def\DefaultCutFileName{\def\CommentCutFile{comment_html.cut}}
722 }{}
723
724 \ifbool{warpingprint}{
725 \def\DefaultCutFileName{\def\CommentCutFile{comment_print.cut}}
726 }{}
```

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

```
727 \includecomment{warpall}
```

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

`Env warpHTML`

For HTML output:

```
728 \ifbool{warpingHTML}
729 {\includecomment{warpHTML}}
730 {\excludecomment{warpHTML}}%
731 \ifbool{warpingprint}
```

```
732 {\includecomment{warpprint}}
733 {\excludecomment{warpprint}}
```

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

```
734 \ifbool{LWR@creatinglwarpmk}
735 {\includecomment{LWR@createlwarpmk}}
736 {\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: 737 \begin{warppHTML}

Load fontspec if necessary:

```
738 \ifxetexorluatex
739 \@ifpackageloaded{fontspec}{}{
740   \usepackage[no-math]{fontspec}
741 }
```

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

```
742 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
743 \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
744 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
745 \else
```

pdf_latex only: Only pre-loaded if *pdf_latex* is being used.

Pkg microtype

ligatures Older browsers don't display ligatures. Turn off letter ligatures, keeping L^AT_EX dash and quote ligatures, which may fail on older browsers but at least won't corrupt written words.

```
746 \RequirePackage {microtype}
747
748 \microtypesetup{
749   protrusion=false,
750   expansion=false,
```

```

751     tracking=false,
752     kerning=false,
753     spacing=false}
754
755 \DisableLigatures[f,q,t,T,Q]{encoding = *,family = *}
756 \fi
757 \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: 758 `\begin{warpHTML}`

```
759 \RequirePackage{geometry}
```

Avoid class and option conflict by changing settings after package load:

```

760 \geometry{
761   paperheight=190in,%
762   paperwidth=20in,%
763   left=2in,right=6in,%
764   top=1in,bottom=1in,%
765 }

```

`ltjarticle` and other classes may require these to be reset by `lwarp`:

```

766 \setlength{\textheight}{0.8\paperheight}
767 \setlength{\textwidth}{0.7\paperwidth}
768
769 \@twosidefalse
770 \@mparswitchfalse
771
772 \end{warpHTML}

```

for HTML & PRINT: 773 `\begin{warpall}`

Pkg `xparse`

L^AT_EX3 command argument parsing

```
774 \RequirePackage{xparse}
```

Pkg `calc`

```
775 \RequirePackage{calc}
```

```
776 \end{warpall}
```

for HTML output:

```
777 \begin{warpHTML}
```

Pkg `expl3`

L^AT_EX3 programming

```
778 \RequirePackage{expl3}
```

Pkg `getttitlestring`

Used to emulate `\nameref`.

```
779 \RequirePackage{getttitlestring}
```

Pkg `everyhook`

`everyhook` is used to patch paragraph handling.

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

```
781
```

```
782 \RequirePackage{everyhook}
```

```
783 \end{warpHTML}
```

for HTML & PRINT:

```
784 \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>

```
785 \RequirePackage{filecontents}
```

```
786
```

```
787 \@ifpackagelater{filecontents}{2011/10/09}%
788 {}
789 {
790 \newwrite\fcwrite
791 \let\LWR@origfilec@ntents\filec@ntents
792 \def\filec@ntents{\def\chardef##1\write{\let\reserved@c\fcwrite}\LWR@origfilec@ntents}
793 }

794 \end{warpall}

for HTML output: 795 \begin{warpHTML}

  Pkg  xifthen

796 \RequirePackage{xifthen}

  Pkg  verbatim

797 \RequirePackage{verbatim}

  Pkg  refcount

  Provides \setcounterref, \setcounterpageref, etc.

798 \RequirePackage{refcount}

  Pkg  newfloat

799 \RequirePackage{newfloat}

800 \end{warpHTML}

for HTML & PRINT: 801 \begin{warpall}

  Pkg  xstring

802 \RequirePackage{xstring}

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

803 \RequirePackage{environ}

804 \end{warpall}

for HTML output: 805 \begin{warpHTML}
```

Pkg	<code>zref</code>	Used for cross-references.
		<code>806 \RequirePackage{zref}</code>
Pkg	<code>printlen</code>	Used to convert lengths for image width/height options.
		<code>807 \RequirePackage{printlen}</code>
<code>\LWR@printlength</code>	<code>{\langle length \rangle}</code>	Prints a length using a locally-controlled unit and space. Rounding is used unless the length is small.
		<code>808 \newrobustcmd*{\LWR@printlength}[1]{%</code>
		<code>809 \begingroup%</code>
		<code>810 \uselengthunit{PT}%</code>
		<code>811 \renewcommand*{\unitspace}{}%</code>
		<code>812 \ifdimless{#1}{10pt}{%</code>
		<code>813 \printlength{#1}%</code>
		<code>814 }{%</code>
		<code>815 \rndprintlength{#1}%</code>
		<code>816 }{%</code>
		<code>817 \endgroup%</code>
		<code>818 }</code>
		<code>819 \end{warpHTML}</code>
for PRINT output:		<code>820 \begin{warpprint}</code>
Pkg	<code>varwidth</code>	Used for print-mode lateximage:
		<code>821 \RequirePackage{varwidth}</code>
		<code>822 \end{warpprint}</code>

30 Loading packages

for HTML output: `823 \begin{warpHTML}`

Remember the original `\RequirePackage`:

```
824 \LetLtxMacro\LWR@origRequirePackage\RequirePackage
```

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

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

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

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

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

The following should never be loaded:

```
827 \newcommand*{\LWR@checkloadfilename}[1]{%
828 \LWR@checkloadnever{#1}{ae}{latinmodern}
829 \LWR@checkloadnever{#1}{aecc}{latinmodern}
830 \LWR@checkloadnever{#1}{bitfield}{bytefield}
831 \LWR@checkloadnever{#1}{boxedminipage}{boxedminipage2e}
832 \LWR@checkloadnever{#1}{caption2}{caption}
833 \LWR@checkloadnever{#1}{ccaption}{caption}
834 \LWR@checkloadnever{#1}{doublespace}{setspace}
835 \LWR@checkloadnever{#1}{fancyheadings}{fancyhdr}
836 \LWR@checkloadnever{#1}{glossary}{glossaries}
837 \LWR@checkloadnever{#1}{newthm}{ntheorem}
838 \LWR@checkloadnever{#1}{rplain}{fancyhdr}
839 \LWR@checkloadnever{#1}{si}{siunitx}
840 \LWR@checkloadnever{#1}{t1enc}{fontenc, inputenc, inputenx}
841 \LWR@checkloadnever{#1}{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}
```

The following should only be loaded before `lwarp`:

```
842 \LWR@checkloadbefore{#1}{ctex}
843 \LWR@checkloadbefore{#1}{fontspec}
844 \LWR@checkloadbefore{#1}{inputenc}
845 \LWR@checkloadbefore{#1}{inputenx}
846 \LWR@checkloadbefore{#1}{kotex}
847 \LWR@checkloadbefore{#1}{luatexja}
848 \LWR@checkloadbefore{#1}{luatexja-fontspec}
849 \LWR@checkloadbefore{#1}{luatexko}
850 \LWR@checkloadbefore{#1}{morewrites}
851 \LWR@checkloadbefore{#1}{newclude}
852 \LWR@checkloadbefore{#1}{newunicodechar}
853 \LWR@checkloadbefore{#1}{plext}
854 \LWR@checkloadbefore{#1}{xeCJK}
855 \LWR@checkloadbefore{#1}{xetexko}
856 \LWR@checkloadbefore{#1}{zxjatype}
857 }
```

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

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

```
858 \newcommand*\LWR@findword[3][,]{%
859   \StrBetween[#3,\numexpr#3+1]{#1#2#1}{#1}{#1}%
860 }
```

`\LWR@lookforpackagename` {*index*}

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@requirepackagenames`, and builds `\LWR@parsedrequirepackagenames` which is the modified list of names.

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

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

```
862 \LWR@findword{\LWR@requirepackagenames}{#1}[\LWR@strresult]%
```

Remove blanks. The original name with blanks is in `LWR@strresult` and the final name with no blanks goes into `LWR@strresulttwo`.

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

See if the package name was found:

```
864 \IfStrEq{\LWR@strresulttwo}{}%
865 {}% no filename
866 {% yes filename was found
```

Check if the package should be loaded before lwarp, or never at all:

```
867 \LWR@checkloadfilename{\LWR@strresulttwo}%
```

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

```
868   \IfFileExists{lwarp-\LWR@strresulttwo.sty}%
869   {% lwarp-* file found
870     \ifdefvoid{\LWR@parsedrequirepackagenames}{%
871       \edef\LWR@parsedrequirepackagenames{lwarp-\LWR@strresulttwo}%
872     }{%
873       \edef\LWR@parsedrequirepackagenames{%
874         \LWR@parsedrequirepackagenames,lwarp-\LWR@strresulttwo%
875       }%
```

```

876     }%
877   }%
878   {%

879     \ifdefvoid{\LWR@parsedrequirepackagenames}{%
880       \edef\LWR@parsedrequirepackagenames{\LWR@strresulttwo}%
881     }{%
882       \edef\LWR@parsedrequirepackagenames{%
883         \LWR@parsedrequirepackagenames,\LWR@strresulttwo%
884       }%
885     }%
886   }% no lwarp-* file
887 }% yes filename
888 }

```

`\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^AT_EX version.

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

Redirect up to twenty names:¹⁶

```

890 \renewcommand*{\LWR@requirepackagenames}{#2}%
891 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
892 \LWR@lookforpackagename{1}%
893 \LWR@lookforpackagename{2}%
894 \LWR@lookforpackagename{3}%
895 \LWR@lookforpackagename{4}%
896 \LWR@lookforpackagename{5}%
897 \LWR@lookforpackagename{6}%
898 \LWR@lookforpackagename{7}%
899 \LWR@lookforpackagename{8}%
900 \LWR@lookforpackagename{9}%
901 \LWR@lookforpackagename{10}%
902 \LWR@lookforpackagename{11}%
903 \LWR@lookforpackagename{12}%
904 \LWR@lookforpackagename{13}%
905 \LWR@lookforpackagename{14}%
906 \LWR@lookforpackagename{15}%
907 \LWR@lookforpackagename{16}%
908 \LWR@lookforpackagename{17}%
909 \LWR@lookforpackagename{18}%
910 \LWR@lookforpackagename{19}%
911 \LWR@lookforpackagename{20}%

```

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

`\RequirePackage` depending on the options and version:

```

912 \IfValueTF{#1}%
913 {% options given
914   \IfValueTF{#3}% version given?
915   {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}[#3]}%
916   {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}}%
917 }%
918 {% no options given
919   \IfValueTF{#3}% version given?
920   {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}[#3]}%
921   {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}}%
922 }%
923 }
924 \LetLtxMacro\usepackage\RequirePackage

```

`\LWR@ProvidesPackagePass` $\langle pkgname \rangle$ [$\langle version \rangle$]

Uses the original package, including options.

```

925 \NewDocumentCommand{\LWR@ProvidesPackagePass}{m o}{
926 \PackageInfo{lwarp}{Using package ‘#1’ and adding lwarp modifications, including options,}%
927 \IfValueTF{#2}
928 {\ProvidesPackage{lwarp-#1}[#2]}
929 {\ProvidesPackage{lwarp-#1}}
930 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{#1}}
931 \ProcessOptions\relax
932 \IfValueTF{#2}
933 {\LWR@origRequirePackage{#1}[#2]}
934 {\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.

```

935 \DeclareOption*{}%
936 \ProcessOptions\relax
937 }

```

`\LWR@ProvidesPackageDrop` $\langle pkgname \rangle$ [$\langle version \rangle$]

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

```

938 \NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{
939 \PackageInfo{lwarp}{Replacing package ‘#1’ with the lwarp version, discarding options,}%
940 \IfValueTF{#2}
941 {\ProvidesPackage{lwarp-#1}[#2]}
942 {\ProvidesPackage{lwarp-#1}}

```

Ignore all options.

```
943 \DeclareOption*{}
```

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

```
944 % \ProcessOptions\relax% original LaTeX code
945 \let\ds@\empty%          from the original \ProcessOptions
946 \edef\@curroptions{}%    lwarp modification to \ProcessOptions
947 \@processoptions\relax%  from the original \ProcessOptions
948 }
```

```
949 \end{warpHTML}
```

31 Additional required packages

for HTML output: 950 \begin{warpHTML}

Pkg caption

```
951 \RequirePackage{caption}%
```

```
952 \end{warpHTML}
```

32 File handles

Defines file handles for writes.

for HTML & PRINT: 953 \begin{warpall}

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

```
954 \newwrite\LWR@quickfile%
```

```
955 \end{warpall}
```

for HTML output: 956 \begin{warpHTML}

\LWR@lateximagesfile For lateximages.txt.

```
957 \newwrite\LWR@lateximagesfile
```

```
958 \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^AT_EX.

for HTML output: 959 `\begin{warpHTML}`

```
\include {<filename>}
```

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

```
960 \def\@include#1 {%
961 \immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp
962 \immediate\write\LWR@quickfile{\string\input{#1.tex}}% lwarp
963 \immediate\closeout\LWR@quickfile% lwarp
964 \LWR@origclearpage% \changed
965 \if@filesw
966   \immediate\write\@mainaux{\string\@input{#1_html_inc.aux}}% changed
967 \fi
968 \@tempswatru
969 \if@partsw
970   \@tempswafalse
971   \edef\reserved@b{#1}%
972   \@for\reserved@a:=\@partlist\do
973   {\ifx\reserved@a\reserved@b\@tempswatru\fi}%
974 \fi
975 \if@tempswa
976   \let\@auxout\@partaux
977   \if@filesw
978     \immediate\openout\@partaux #1_html_inc.aux % changed
979     \immediate\write\@partaux{\relax}%
980   \fi
981   \@input@{#1_html_inc.tex}% changed
982   \LWR@origclearpage% changed
983   \@writeckpt{#1}%
```

```

984 \if@filesw
985 \immediate\closeout\@partaux
986 \fi
987 \else
988 \deadcycles\z@
989 \@nameuse{cp@#1}%
990 \fi
991 \let\@auxout\@mainaux%
992 }

993 \end{warpHTML}

```

34 Copying a file

for HTML output: 994 \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.

```

995 \newwrite\LWR@copyoutfile % open the file to write to
996 \newread\LWR@copyinfile % open the file to read from
997
998 \newcommand*{\LWR@copyfile}[2]{%
999 \LWR@traceinfo{LWR@copyfile: copying #1 to #2}
1000
1001 \immediate\openout\LWR@copyoutfile=#2
1002 \openin\LWR@copyinfile=#1
1003 \begingroup\endlinechar=-1
1004 \makeatletter
1005
1006 \LWR@traceinfo{LWR@copyfile: about to loop}
1007
1008 \loop\unless\ifeof\LWR@copyinfile
1009 \LWR@traceinfo{LWR@copyfile: one line}
1010 \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline
1011 % \LWR@fileline\par % print the content into the pdf
1012 % print the content:
1013 \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
1014 \repeat
1015 \immediate\closeout\LWR@copyoutfile
1016 \LWR@traceinfo{LWR@copyfile: done}
1017 \endgroup
1018 }

```

```
1019 \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: 1020 \begin{warpall}

Bool LWR@tracinglwarp True if tracing is turned on.

```
1021 \newbool{LWR@tracinglwarp}
```

`\tracinglwarp` Turns on the debug tracing messages.

```
1022 \newcommand{\tracinglwarp}{\booltrue{LWR@tracinglwarp}}
```

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

```
1023 \newcommand{\LWR@traceinfo}[1]{%
```

```
1024 \ifbool{LWR@tracinglwarp}%
```

```
1025 {%
```

```
1026 \typeout{*** lwarp: #1}%
```

```
1027 }%
```

```
1028 {}%
```

```
1029 }
```

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

Default: false

```
1030 \newbool{HTMLDebugComments}
```

```
1031 \boolfalse{HTMLDebugComments}
```

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

```
1032 \AfterEndPreamble{
```

```
1033 \LWR@traceinfo{AfterEndPreamble}
```

```
1034 }
```

```

1035
1036 \AtBeginDocument{
1037 \LWR@traceinfo{AtBeginDocument}
1038 }

1039 \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^AT_EX and its packages are used as-is.

While generating the HTML version of a document, the original macro or environment is redefined to call a new HTML version or a copy of the original print version. The new HTML versions of macros and environments are used most of the time. Copies of the print versions are used inside a `lateximage` environment, which draws and remembers an image of the printed output, and also several other places. The copies of the print versions may also be used by the HTML versions, such as when the HTML version merely encloses the print version inside HTML tags.

The general structure for providing print and HTML versions of a macro or environment is as follows:

For a preexisting macro, not defined with `xparse`: An HTML version is provided with a special name, inside a `warpHTML` environment, then `\LWR@formatted` is used to redefine and patch various macros:

```

\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}% may also use xparse

\LWR@formatted{name}
\end{warpHTML}

```

`\LWR@formatted{name}` copies the original print version, then redefines `\name` to use either the print or HTML version depending on which mode lwarp is using. `xparse` may be used to define the new HTML version, even if the original did not use `xparse`.

For a preexisting environment, not defined with xparse: The process is similar. Note the use of `\LWR@formattedenv` instead of `\LWR@formatted`.

```
\begin{warpHTML}
\newenvironment{\LWR@HTML@name}{...}% may also use xparse

\LWR@formattedenv{name}
\end{warpHTML}
```

If the original used xparse: A copy must be made using a new name:

```
\begin{warpHTML}
\NewDocumentCommand{\LWR@print@name}{..}{..}% copy the original

\NewDocumentCommand{\LWR@HTML@name}{..}{..}% or use \newcommand

\LWR@formatted{name}
\end{warpHTML}
```

Similar for an environment, using `\LWR@formattedenv`. (`\LWR@formatted` and `\LWR@formattedenv` use `\LetLtxMacro` to copy the original print definition, which may not work with macros and environments created by xparse, so the print version must be manually recreated in the lwarp source.)

For a new macro or environment, not using xparse for the print version:

```
\begin{warpall}
\newcommand{name}{...}% NOT xparse!
\end{warpall}

\begin{warpHTML}
\newcommand{\LWR@HTML@name}{...}% may use xparse for HTML

\LWR@formatted{name}
\end{warpHTML}
```

Similar for an environment. The plain `\name` or environment name is used for the printed version, and is placed inside `warpall`. `xparse` may be used for the `\LWR@HTML@<name>` version.

For a new macro or environment, using xparse: It is possible to use xparse for an entirely new macro or environment by defining the `\LWR@print@<name>` version with xparse, along with `\name` defined without xparse to refer directly to the `\LWR@print` version:

```

\begin{warpall}
\NewDocumentCommand{\LWR@print@name}{...} {...}%      -or-
\NewDocumentEnvironment{\LWR@print@name}{...} {...} {...}

% Simply a call to \LWR@print@name:
\newcommand{\name}{\LWR@print@name}%                  -or-
\newenvironment{name}{\LWR@print@name}{\endLWR@print@name}
\end{warpall}

\begin{warpHTML}
\NewDocumentCommand{\LWR@HTML@name}{...} {...}%      -or-
\NewDocumentEnvironment{\LWR@HTML@name}{...} {...} {...}

\LWR@formatted{name}%                                -or-
\LWR@formattedenv{name}
\end{warpHTML}

```

In general, `\LWR@formatted` or `\LWR@formattedenv` are placed inside a `warpHTML` environment, and while producing an HTML document they do the following:

- Macros are modified:
 1. The pre-existing print version `\name` is saved as `\LWR@print@<name>`, unless `\LWR@print@<name>` is already defined.
 2. The original `\name` is redefined to call either the print or HTML version depending on which format is in use at the moment, as set by `\LWR@formatting`, which is defined as either “print” or “HTML”.
- When `lwarp` is producing a print document, the original definitions are used, as well as any new definitions defined in `warpall` above.
- When `lwarp` is generating HTML output, `\LWR@formatting` is set to “HTML”, and `\name` is directed to `\LWR@HTML@<name>`.
- When `lwarp` is generating HTML output but enters a `lateximage` environment, or for some other reason needs to draw images using the original print definitions, `\LWR@formatting` is changed to “print” and `\name` is then redirected to `\LWR@print@<name>`, which was the original `\name`.

Since arguments are not handled by the new `\name`, any star and other arguments are processed by the print or HTML version.

Expandable versions are also provided as well. These usually are necessary for anything which could appear inside a `tabular`, without which a “Misplaced `\omit`” error may occur.

⚠ Misplaced `\omit` error

```

\LWR@expandableformatted
\LWR@expandableformattedenv

```

(Older versions of lwarp used `\LetLtxMacro` for everything, but this could fail when using macros defined by `xparse`. This older system is still in use for many definitions.)

for HTML output: 1040 `\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”.

```
1041 \newcommand*{\LWR@formatting}{HTML}
```

`\LWR@formatted` `{\macroname}` No backslash in the macro name.

If not yet defined, defines `\LWR@print@<name>` as the original print-mode `\<name>`. Also redefines `\<name>` to use `\LWR@<format>@<name>`, where `<format>` is set by `\LWR@formatting`, and is print or HTML.

```

1042 \newcommand*{\LWR@formatted}[1]{%
1043   \ifcsundef{LWR@print@#1}{%
1044     \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1045     \csname#1\endcsname%
1046   }{}%
1047   \ifcsundef{#1}{%
1048     \expandafter\newrobustcmd\csname #1\endcsname{%
1049       \@nameuse{LWR@\LWR@formatting @#1}%
1050     }%
1051   }{%
1052     \expandafter\renewrobustcmd\csname #1\endcsname{%
1053       \@nameuse{LWR@\LWR@formatting @#1}%
1054     }%
1055   }%
1056 }

```

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

An expandable version of `\LWR@formatted`.

```

1057 \newcommand*{\LWR@expandableformatted}[1]{%
1058   \ifcsundef{LWR@print@#1}{%
1059     \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1060     \csname#1\endcsname%
1061   }{}%
1062   \ifcsundef{#1}{%
1063     \expandafter\newcommand\csname #1\endcsname{%

```

```

1064         \@nameuse{LWR@LWR@formatting @#1}%
1065     }%
1066 }{%
1067     \expandafter\renewcommand\csname #1\endcsname{%
1068         \@nameuse{LWR@LWR@formatting @#1}%
1069     }%
1070 }%
1071 }

```

`\LWR@formattedenv` $\{ \langle environmentname \rangle \}$

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`.

```

1072 \newcommand*{\LWR@formattedenv}[1]{%
1073     \ifcsundef{LWR@print@#1}{%
1074         \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1075         \csname#1\endcsname%
1076         \csletcs{endLWR@print@#1}{end#1}%
1077     }{}%
1078     \DeclareDocumentEnvironment{#1}{}%
1079     {\@nameuse{LWR@LWR@formatting @#1}}%
1080     {\@nameuse{endLWR@LWR@formatting @#1}}%
1081 }

```

`\LWR@expandableformattedenv` $\{ \langle environmentname \rangle \}$

An expandable version of `LWR@formattedenv`.

```

1082 \newcommand*{\LWR@expandableformattedenv}[1]{%
1083     \ifcsundef{LWR@print@#1}{%
1084         \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1085         \csname#1\endcsname%
1086         \csletcs{endLWR@print@#1}{end#1}%
1087     }{}%
1088     \DeclareExpandableDocumentEnvironment{#1}{}%
1089     {\@nameuse{LWR@LWR@formatting @#1}}%
1090     {\@nameuse{endLWR@LWR@formatting @#1}}%
1091 }

1092 \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: 1093 \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

```
1094 \newbool{FormatEPUB}
1095 \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

```
1096 \newbool{FormatWP}
1097 \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.¹⁷

```
1098 \newbool{WPMarkFloats}
1099 \boolfalse{WPMarkFloats}
```

Bool WPMarkMinipages Adds
Default: false

```
=== begin minipage ===
...
=== end minipage ===
```

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

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

```
1100 \newbool{WPMarkMinipages}
1101 \boolfalse{WPMarkMinipages}
```

Bool **WPMarkTOC** While formatting for word processors, adds
 Default: **true** `=== table of contents ===`

where the Table of Contents would have been. This helps identify where to insert the actual TOC.

If set false, the actual TOC is printed instead.

```
1102 \newbool{WPMarkTOC}
1103 \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.

```
1104 \newbool{WPMarkLOFT}
1105 \boolfalse{WPMarkLOFT}
```

Bool **WPMarkMath** 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.

```
1106 \newbool{WPMarkMath}
1107 \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 LIBROFFICE. 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 190.

```
1108 \newbool{WPTitleHeading}
1109 \boolfalse{WPTitleHeading}
```

```
1110 \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: 1111 \begin{warpHTML}

1112 \AtBeginDocument{
1113 \ifbool{FormatWP}{
1114 \@ifundefined{chapter}{
1115 \ifbool{WPTitleHeading}{% part and section starting at h2
1116 \renewcommand*\LWR@tagtitle}{h1}
1117 \renewcommand*\LWR@tagtitleend}{/h1}
1118 \renewcommand*\LWR@tagpart}{h2}
1119 \renewcommand*\LWR@tagpartend}{/h2}
1120 \renewcommand*\LWR@tagsection}{h3}
1121 \renewcommand*\LWR@tagsectionend}{/h3}
1122 \renewcommand*\LWR@tagsubsection}{h4}
1123 \renewcommand*\LWR@tagsubsectionend}{/h4}
1124 \renewcommand*\LWR@tagsubsubsection}{h5}
1125 \renewcommand*\LWR@tagsubsubsectionend}{/h5}
1126 \renewcommand*\LWR@tagparagraph}{h6}
1127 \renewcommand*\LWR@tagparagraphend}{/h6}
1128 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
1129 \renewcommand*\LWR@tagsubparagraphend}{/span}
1130 }% WPTitleHeading
1131 {% not WPTitleHeading, part and section starting at h1
1132 \renewcommand*\LWR@tagtitle}{div class="title"}
1133 \renewcommand*\LWR@tagtitleend}{/div}
1134 \renewcommand*\LWR@tagpart}{h1}
1135 \renewcommand*\LWR@tagpartend}{/h1}
1136 \renewcommand*\LWR@tagsection}{h2}
1137 \renewcommand*\LWR@tagsectionend}{/h2}
1138 \renewcommand*\LWR@tagsubsection}{h3}
1139 \renewcommand*\LWR@tagsubsectionend}{/h3}
1140 \renewcommand*\LWR@tagsubsubsection}{h4}
1141 \renewcommand*\LWR@tagsubsubsectionend}{/h4}
1142 \renewcommand*\LWR@tagparagraph}{h5}
1143 \renewcommand*\LWR@tagparagraphend}{/h5}
1144 \renewcommand*\LWR@tagsubparagraph}{h6}
1145 \renewcommand*\LWR@tagsubparagraphend}{/h6}
1146 }% not WPTitleHeading
1147 }% chapter undefined
```

```

1148 {% chapter defined
1149 \ifbool{WPTitleHeading}{
1150 {% not WPTitleHeading, part and chapter starting at h1
1151 \renewcommand*\LWR@tagtitle}{div class="title"}
1152 \renewcommand*\LWR@tagtitleend}{/div}
1153 \renewcommand*\LWR@tagpart}{h1}
1154 \renewcommand*\LWR@tagpartend}{/h1}
1155 \renewcommand*\LWR@tagchapter}{h2}
1156 \renewcommand*\LWR@tagchapterend}{/h2}
1157 \renewcommand*\LWR@tagsection}{h3}
1158 \renewcommand*\LWR@tagsectionend}{/h3}
1159 \renewcommand*\LWR@tagsubsection}{h4}
1160 \renewcommand*\LWR@tagsubsectionend}{/h4}
1161 \renewcommand*\LWR@tagsubsubsection}{h5}
1162 \renewcommand*\LWR@tagsubsubsectionend}{/h5}
1163 \renewcommand*\LWR@tagparagraph}{h6}
1164 \renewcommand*\LWR@tagparagraphend}{/h6}
1165 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
1166 \renewcommand*\LWR@tagsubparagraphend}{/span}
1167 }% not WPTitleHeading
1168 }% chapter defined
1169 }{}% FormatWP
1170 }% AtBeginDocument

1171 \end{warpHTML}

```

38 Remembering original formatting macros

for HTML output: 1172 \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.

```

1173 \chardef\LWR@origpound='\#

1174 \let\LWR@origcomma\,
1175 \let\LWR@origthinspace\thinspace
1176 \let\LWR@orignegthinspace\negthinspace
1177 \let\LWR@origtilde~
1178 \let\LWR@origenskip\enskip
1179 \let\LWR@origquad\quad
1180 \let\LWR@origqqquad\qqquad

```

```
1181 \let\LWR@orighfil\hfil
1182 \let\LWR@orighss\hss
1183 \let\LWR@origllap\llap
1184 \let\LWR@origrlap\rlap
1185 \let\LWR@orighfilneg\hfilneg
1186
1187 \let\LWR@origmedskip\medskip
1188 \let\LWR@origbigskip\bigskip
1189
1190 \let\LWR@origtextellipsis\textellipsis
1191
1192 \LetLtxMacro\LWR@origrmfamily\rmfamily
1193 \LetLtxMacro\LWR@origsffamily\sffamily
1194 \LetLtxMacro\LWR@origttfamily\ttfamily
1195 \LetLtxMacro\LWR@origbfseries\bfseries
1196 \LetLtxMacro\LWR@origmdseries\mdseries
1197 \LetLtxMacro\LWR@origupshape\upshape
1198 \LetLtxMacro\LWR@origslshape\slshape
1199 \LetLtxMacro\LWR@origscshape\scshape

1200 \ifundefined{sisshape}{
1201   \LetLtxMacro\LWR@origsisshape\scshape
1202 }{
1203   \LetLtxMacro\LWR@origsisshape\sisshape
1204 }

1205 \LetLtxMacro\LWR@origitshape\itshape
1206 \LetLtxMacro\LWR@origem\em
1207 \LetLtxMacro\LWR@orignormalfont\normalfont
1208
1209 \let\LWR@origonecolumn\onecolumn
1210
1211 \let\LWR@origsp\sp
1212 \let\LWR@origsb\sb
1213 \LetLtxMacro\LWR@origtextsuperscript\textsuperscript
1214 \LetLtxMacro\LWR@orig@textsuperscript\@textsuperscript
1215
1216 \AtBeginDocument{
1217 \LetLtxMacro\LWR@origtextsubscript\textsubscript
1218 \LetLtxMacro\LWR@orig@textsubscript\@textsubscript
1219 }
1220
1221 \LetLtxMacro\LWR@origunderline\underline

1222 \let\LWR@orignewpage\newpage
1223
1224 \let\LWR@origpagestyle\pagestyle
1225 \let\LWR@origthispagestyle\thispagestyle
1226 \LetLtxMacro\LWR@origpagenumbering\pagenumbering
```

```

1227
1228 \let\LWR@orignewline\newline
1229
1230
1231 \AtBeginDocument{% in case packages change definition
1232 \let\LWR@orig@trivlist\@trivlist
1233 \let\LWR@origtrivlist\trivlist
1234 \let\LWR@origendtrivlist\endtrivlist
1235 \LetLtxMacro\LWR@origitem\item
1236 \LetLtxMacro\LWR@origitemize\itemize
1237 \LetLtxMacro\LWR@endorigitemize\enditemize
1238 \LetLtxMacro\LWR@origenumerate\enumerate
1239 \LetLtxMacro\LWR@endorigenumerate\endenumerate
1240 \LetLtxMacro\LWR@origdescription\description
1241 \LetLtxMacro\LWR@endorigdescription\enddescription
1242 \let\LWR@orig@mklab\@mklab
1243 \let\LWR@origmakelabel\makelabel
1244 \let\LWR@orig@donoparitem\@donoparitem
1245 \LetLtxMacro\LWR@orig@item\@item
1246 \let\LWR@orig@nbitem\@nbitem
1247 }
1248
1249 \let\LWR@origpar\par
1250
1251 \LetLtxMacro\LWR@origfootnote\footnote
1252 \let\LWR@orig@mpfootnotetext\@mpfootnotetext
1253
1254 \let\LWR@origclearpage\clearpage
1255
1256
1257 \AtBeginDocument{% in case packages change definition
1258 \LetLtxMacro\LWR@orighline\hline%
1259 \LetLtxMacro\LWR@origcline\cline%
1260 }

1261 \end{warpHTML}

```

39 Accents

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

for HTML output: 1262 `\begin{warpHTML}`

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

```
1263 \AtBeginDocument{
```

The following are restored for print when inside a lateximage.

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

```
1264 \LetLtxMacro\LWR@origt\t
```

For pdfL^AT_EX, additional work is required:

```
1265 \ifPDFTeX% pdflatex or dvi latex
1266 \LetLtxMacro\LWR@origequalaccent\=
1267 \LetLtxMacro\LWR@origdotaccent\.
1268 \LetLtxMacro\LWR@origu\u
1269 \LetLtxMacro\LWR@origv\v
1270 \LetLtxMacro\LWR@origc\c
1271 \LetLtxMacro\LWR@origd\d
1272 \LetLtxMacro\LWR@origb\b
```

The HTML redefinitions follow.

For pdfL^AT_EX, Unicode diacritical marks are used:

```
1273 \renewcommand*{\=} [1]{#1\HTMLUnicode{0305}}
1274 \renewcommand*{\.} [1]{#1\HTMLUnicode{0307}}
1275 \renewcommand*{\u} [1]{#1\HTMLUnicode{0306}}
1276 \renewcommand*{\v} [1]{#1\HTMLUnicode{030C}}
1277 \renewcommand*{\c} [1]{#1\HTMLUnicode{0327}}
1278 \renewcommand*{\d} [1]{#1\HTMLUnicode{0323}}
1279 \renewcommand*{\b} [1]{#1\HTMLUnicode{0331}}
1280 \fi
```

For all engines, a Unicode diacritical tie is used:

```
1281 \def\LWR@t#1#2{#1\HTMLUnicode{0361}#2}
1282 \renewcommand*{\t} [1]{\LWR@t#1}
```

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

```
1283 \ifPDFTeX% pdflatex or dvi latex
1284 \newcommand*{\LWR@restoreorigaccents}{%
1285 \LetLtxMacro\=\LWR@origequalaccent%
1286 \LetLtxMacro\.\LWR@origdotaccent%
1287 \LetLtxMacro\u\LWR@origu%
1288 \LetLtxMacro\v\LWR@origv%
1289 \LetLtxMacro\t\LWR@origt%
1290 \LetLtxMacro\c\LWR@origc%
1291 \LetLtxMacro\d\LWR@origd%
```

```

1292 \LetLtxMacro\b\LWR@origb%
1293 }%
1294 \else% XeLaTeX, LuaLaTeX:
1295 \newcommand*{\LWR@restoreorigaccents}{%
1296 \LetLtxMacro\t\LWR@origt%
1297 }%
1298 \fi%
1299 }% AtBeginDocument

```

```

1300 \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:

```

1301 \excludecomment{LWRwriteconf}

```

Generate configuration files if print mode and not `-pstool`:

```

for PRINT output: 1302 \begin{warpprint}
1303 \fullexpandarg%
1304 \IfSubStr*{\jobname}{-pstool}
1305   {
1306     \typeout{lwarp: jobname with -pstool is found,}%
1307     \typeout{lwarp: \space\space not generating configuration files.}%
1308   }
1309   {
1310     \typeout{lwarp: generating configuration files}
1311     \includecomment{LWRwriteconf}
1312   }
1313 \end{warpprint}

```

40.2 project_html.tex

File `project_html.tex` Used to allow an HTML version of the document to exist alongside the print version.

```

Config file: 1314 \begin{LWRwriteconf}
1315 \immediate\openout\LWR@quickfile=\jobname_html.tex
1316 \immediate\write\LWR@quickfile{%
1317 \detokenize{\PassOptionsToPackage}%
1318 {warpHTML,BaseJobname=\jobname}{lwarp}%
1319 }
1320 \immediate\write\LWR@quickfile{%
1321 \detokenize{\input}\string{\jobname.tex\string }%
1322 }
1323 \immediate\closeout\LWR@quickfile
1324 \end{LWRwriteconf}

```

40.3 *lwarpmk* configuration files

```

Config file: 1325 \begin{LWRwriteconf}

```

`\LWR@lwarpconfversion` The version number of the configuration file, allowing *lwarpmk* to detect an obsolete configuration file format. Incremented by one each time the configuration file format changes. (This is NOT the same as the *lwarp* version number.)

```

1326 \newcommand*{\LWR@lwarpconfversion}{1}% also in lwarpmk.lua

```

40.3.1 Helper macros

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

```

1327 \ifshellescape
1328   \def\LWR@shellescapecmd{--shell-escape }
1329 \else
1330   \def\LWR@shellescapecmd{}
1331 \fi

```

`\LWR@compilecmd` $\langle engine \rangle$ $\langle suffix \rangle$

Used to form the basic compilation command for a document, adding the optional shell escape.

Engine is *pdflatex*, etc. Suffix is empty or `_html`

```

1332 \newcommand*{\LWR@compilecmd}[2]{%
1333   #1 \LWR@shellescapecmd \jobname#2%
1334 }

```

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

Adds to the compilation command.

Cmd is *dvipdfmx*, etc. Suffix is empty or `_html`

```
1335 \newcommand*{\LWR@addcompilecmd}[2]{%
1336     \LWRopseq
1337     #1 \jobname#2%
1338 }
```

`\LWR@unknownengine` Error message if not sure which \LaTeX engine is being used.

```
1339 \newcommand*{\LWR@unknownengine}{%
1340     \PackageError{lwarp}
1341     {Unknown LaTeX engine.}
1342     {Lwarp only knows about pdflatex, dvi latex, xelatex, and lualatex.}
1343 }
```

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

Adds a *latexmk* variable assignment.

```
1344 \newcommand*{\LWR@latexmkvar}[2]{%
1345     -e
1346     \LWRopquote%
1347     \LWRdollar #1=q/#2/%
1348     \LWRopquote
1349 }
```

`\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.

```
1350 \newcommand*{\LWR@latexmkcmd}[1]{%
1351     latexmk \space \LWR@shellescapecmd \space #1 \space
1352     -recorder \space
1353     \LWR@latexmkvar{makeindex}{\LWR@LatexmkIndexCmd}
1354 }
```

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

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

```
1355 \newcommand*{\LWR@latexmkdvipdfm}[1]{%
1356     -pdfdvi \space
1357     \LWR@latexmkvar{dvipdf}{%
1358         #1
```

```

1359     \@percentchar O
1360     -o \@percentchar D
1361     \@percentchar S%
1362   }
1363 }

```

`\LWR@compileuplatex` Sets compile options for up \LaTeX with `ujarticle` or related classes.

```

1364 \newcommand*\LWR@compileuplatex{
1365   \def\LWR@tempprintlatexcmd{%
1366     \LWR@compilecmd{uplatex}{}
1367     \LWR@addcompilecmd{dvipdfmx}{}
1368   }
1369   \def\LWR@tempHTMLlatexcmd{%
1370     \LWR@compilecmd{uplatex}_{_html}
1371     \LWR@addcompilecmd{dvipdfmx}_{_html}
1372   }
1373 }

```

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

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

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

```

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

```

For *dvipdfmx*:

```

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

```

1374 \ifbool{LWR@latexmk}{

```

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

```

1375   \ifpdf

```

For *latexmk* with *pdflatex*:

```
1376     \ifPDFTeX
1377         \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}}
1378     \else
```

For *latexmk* with *lualatex*:

```
1379         \ifLuaTeX
1380             \def\LWR@latexcmd{\LWR@latexmkcmd{-lualatex}}
1381         \else
1382             \LWR@unknownengine
1383         \fi
1384     \fi
1385 \else% \ifpdf
```

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

```
1386     \ifXeTeX
```

For *latexmk* with *xelatex*:

```
1387         \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}}
1388     \else% \ifXeTeX
```

For *latexmk* with DVI *latex*:

```
1389         \ifbool{LWR@dvipdfm}{
1390             \def\LWR@latexcmd{%
1391                 \LWR@latexmkcmd{%
1392                     \LWR@latexmkdvipdfm{dvipdfm}%
1393                 }
1394             }
1395         }{
1396             \ifbool{LWR@dvipdfmx}{
1397                 \def\LWR@latexcmd{%
1398                     \LWR@latexmkcmd{%
1399                         \LWR@latexmkdvipdfm{dvipdfmx}%
1400                     }
1401                 }
1402             }{
1403                 \def\LWR@latexcmd{\LWR@latexmkcmd{-pdfps}}
1404             }
1405         }
1406     \fi
1407 \fi% \ifpdf
```

The final assignment if *latexmk*:

```

1408     \def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
1409     \def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
1410 }% latexmk

```

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

```

1411 {% not latexmk
1412     \ifpdf

```

For *pdflatex* or *lualatex*:

```

1413         \ifPDFTeX

```

For *pdflatex*:

```

1414             \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdflatex}{}}
1415             \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdflatex}{_html}}
1416         \else
1417             \ifLuaTeX

```

For *lualatex*:

```

1418             \def\LWR@tempprintlatexcmd{\LWR@compilecmd{lualatex}{}}
1419             \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{lualatex}{_html}}
1420         \else
1421             \LWR@unknownengine
1422         \fi
1423     \fi
1424 \else% \ifpdf

```

For DVI *latex* or *xelatex*:

```

1425         \ifXeTeX

```

For *xelatex*:

```

1426             \def\LWR@tempprintlatexcmd{\LWR@compilecmd{xelatex}{}}
1427             \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{xelatex}{_html}}
1428         \else

```

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

```

1429             \ifbool{LWR@dvipdfm}{

```

For DVI *latex* with *dvipdfm*:

```

1430         \def\LWR@tempprintlatexcmd{%
1431             \LWR@compilecmd{latex}{}
1432             \LWR@addcompilecmd{dvipdfm}{}
1433         }
1434         \def\LWR@tempHTMLlatexcmd{%
1435             \LWR@compilecmd{latex}{_html}
1436             \LWR@addcompilecmd{dvipdfm}{_html}
1437         }
1438     }{
1439         \ifbool{LWR@dvipdfmx}{

```

For DVI *latex* with *dvipdfmx*:

```

1440         \def\LWR@tempprintlatexcmd{%
1441             \LWR@compilecmd{latex}{}
1442             \LWR@addcompilecmd{dvipdfmx}{}
1443         }
1444         \def\LWR@tempHTMLlatexcmd{%
1445             \LWR@compilecmd{latex}{_html}
1446             \LWR@addcompilecmd{dvipdfmx}{_html}
1447         }
1448     }{% dvips

```

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

```

1449         \def\LWR@tempprintlatexcmd{%
1450             \LWR@compilecmd{latex}{}
1451             \LWR@addcompilecmd{dvips}{}
1452             \LWR@addcompilecmd{ps2pdf}{} .ps
1453         }
1454         \def\LWR@tempHTMLlatexcmd{%
1455             \LWR@compilecmd{latex}{_html}
1456             \LWR@addcompilecmd{dvips}{_html}
1457             \LWR@addcompilecmd{ps2pdf}{_html} .ps
1458         }
1459     }
1460 }
1461 \fi% \ifXeTeX
1462 \fi% \ifpdf
1463}% latexmk

```

For *ujarticle*, *utarticle*, and related, using up \LaTeX and *dvipdfmx*:

```

1464 \@ifclassloaded{ujarticle}{\LWR@compileuplatex}{}
1465 \@ifclassloaded{ujbook}{\LWR@compileuplatex}{}
1466 \@ifclassloaded{ujreport}{\LWR@compileuplatex}{}
1467 \@ifclassloaded{utarticle}{\LWR@compileuplatex}{}
1468 \@ifclassloaded{utbook}{\LWR@compileuplatex}{}
1469 \@ifclassloaded{utreport}{\LWR@compileuplatex}{}

```

Only make the setting permanent if the original was empty:

```

1470 \ifdefempty{\LWR@PrintLatexCmd}{
1471     \def\LWR@PrintLatexCmd{\LWR@tempprintlatexcmd}
1472 }{}
1473 \ifdefempty{\LWR@HTMLLatexCmd}{
1474     \def\LWR@HTMLLatexCmd{\LWR@tempHTMLlatexcmd}
1475 }{}

```

`\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.

```

1476 \newcommand{\LWR@writeconf}[1]{
1477 \ifcsdef\LWR@quickfile{}{\newwrite\LWR@quickfile}
1478 \immediate\openout\LWR@quickfile=#1
1479 \immediate\write\LWR@quickfile{confversion = [[\LWR@lwarpconfversion]]}
1480 \ifbool{usingOSWindows}{
1481     \immediate\write\LWR@quickfile{opsystem = [[Windows]]}
1482 }{
1483     \immediate\write\LWR@quickfile{opsystem = [[Unix]]}
1484 }
1485 \immediate\write\LWR@quickfile{sourcename = [[\jobname]]}
1486 \immediate\write\LWR@quickfile{homehtmlfilename = [[\HomeHTMLFilename]]}
1487 \immediate\write\LWR@quickfile{htmlfilename = [[\HTMLFilename]]}
1488 \immediate\write\LWR@quickfile{latexmk = [[\ifbool{\LWR@latexmk}{true}{false}]]}
1489 \immediate\write\LWR@quickfile{printlatexcmd = [[\LWR@PrintLatexCmd]]}
1490 \immediate\write\LWR@quickfile{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}
1491 \immediate\write\LWR@quickfile{printindexcmd = [[\LWR@PrintIndexCmd]]}
1492 \immediate\write\LWR@quickfile{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}
1493 \immediate\write\LWR@quickfile{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}
1494 \immediate\write\LWR@quickfile{glossarycmd = [[\LWR@GlossaryCmd]]}
1495 \immediate\write\LWR@quickfile{pdftotextenc = [[\LWR@pdftotextEnc]]}
1496 \immediate\closeout\LWR@quickfile
1497 }
1498
1499 \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: 1500 \begin{LWRwriteconf}
1501
1502 \AtBeginDocument{\LWR@writeconf{lwarpmk.conf}}
1503
1504 \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: 1505 \begin{LWRwriteconf}
1506
1507 \AtBeginDocument{\LWR@writeconf{\jobname.lwarpmkconf}}
1508
1509 \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: 1510 \begin{LWRwriteconf}
1511 \begin{filecontents*}{lwarp.css}
1512 /*
1513 CSS stylesheet for the LaTeX lwarp package
1514 Copyright 2016–2018 Brian Dunn -- BD Tech Concepts LLC
1515 */
1516
1517
1518 /* a fix for older browsers: */
1519 header, section, footer, aside, nav, main,
1520 article, figure { display: block; }
1521
1522
1523 A:link {color:#000080 ; text-decoration: none ; }
1524 A:visited {color:#800000 ; }
1525 A:hover {color:#000080 ; text-decoration: underline ;}
1526 A:active {color:#800000 ; }
1527
```

```
1528 a.tocpart {display: inline-block ; margin-left: 0em ;
1529     font-weight: bold ;}
1530 a.tocchapter {display: inline-block ; margin-left: 0em ;
1531     font-weight: bold ;}
1532 a.tocsection {display: inline-block ; margin-left: 1em ;
1533     text-indent: -.5em ; font-weight: bold ; }
1534 a.tocsubsection {display: inline-block ; margin-left: 2em ;
1535     text-indent: -.5em ; }
1536 a.tocsubsubsection {display: inline-block ; margin-left: 3em ;
1537     text-indent: -.5em ; }
1538 a.tocparagraph {display: inline-block ; margin-left: 4em ;
1539     text-indent: -.5em ; }
1540 a.tocsubparagraph {display: inline-block ; margin-left: 5em ;
1541     text-indent: -.5em ; }
1542 a.tocfigure {margin-left: 0em}
1543 a.tocsubfigure {margin-left: 2em}
1544 a.tocatable {margin-left: 0em}
1545 a.tocsubtable {margin-left: 2em}
1546 a.toctheorem {margin-left: 0em}
1547 a.toclstlisting {margin-left: 0em}
1548
1549 body {
1550     font-family: "DejaVu Serif", "Bitstream Vera Serif",
1551         "Lucida Bright", Georgia, serif;
1552     background: #FAF7F4 ;
1553     color: black ;
1554     margin: 0em ;
1555     padding: 0em ;
1556     font-size: 100% ;
1557     line-height: 1.2 ;
1558 }
1559
1560 p {margin: 1.5ex 0em 1.5ex 0em ;}
1561 table p {margin: .5ex 0em .5ex 0em ;}
1562
1563 /* Holds a section number */
1564 span.sectionnumber { margin-right: 0em }
1565
1566 /* Inserted in front of index lines */
1567 span.indexitem {margin-left: 0em}
1568 span.indexsubitem {margin-left: 2em}
1569 span.indexsubsubitem {margin-left: 4em}
1570
1571 div.hidden, span.hidden { display: none ; }
1572
1573 kbd, span.texttt {
1574     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1575         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1576         "Courier New", monospace;
1577     font-size: 100% ;
```

```
1578 }
1579
1580 pre { padding: 3pt ; }
1581
1582 span.strong, span.textbf, div.strong, div.textbf { font-weight: bold; }
1583
1584 span.textit, div.textit { font-style: italic; }
1585
1586 span.textmd, div.textmd { font-weight: normal; }
1587
1588 span.textsc, div.textsc {
1589     font-variant: small-caps;
1590     font-variant-numeric: oldstyle-nums ;
1591 }
1592
1593 span.textsi, div.textsi {
1594     font-style: italic ;
1595     font-variant: small-caps;
1596     font-variant-numeric: oldstyle-nums ;
1597 }
1598
1599 span.textsl, div.textsl { font-style: oblique; }
1600
1601 span.textup, div.textup {
1602     font-style: normal;
1603     font-variant: normal;
1604     font-variant-numeric: normal ;
1605 }
1606
1607 span.textrm, div.textrm {
1608     font-family: "DejaVu Serif", "Bitstream Vera Serif",
1609     "Lucida Bright", Georgia, serif;
1610 }
1611
1612 span.textsf, div.textsf {
1613     font-family: "DejaVu Sans", "Bitstream Vera Sans",
1614     Geneva, Verdana, sans-serif ;
1615 }
1616
1617 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
1618
1619 span.underline {
1620     text-decoration: underline ;
1621     text-decoration-skip: auto ;
1622 }
1623
1624 span.overline {
1625     text-decoration: overline ;
1626     text-decoration-skip: auto ;
1627 }
```

```
1628
1629
1630 /* for vertical text: */
1631 div.verticalrl { writing-mode: vertical-rl }
1632 div.horizontal-tb { writing-mode: horizontal-tb }
1633
1634
1635 /* for diagbox */
1636 div.diagboxtitleN { border-bottom: 1px solid gray }
1637 div.diagboxtitleS { border-top: 1px solid gray }
1638
1639 div.diagboxE {
1640     padding-left: 2em ;
1641     text-align: right ;
1642 }
1643
1644 div.diagboxW {
1645     padding-right: 2em ;
1646     text-align: left ;
1647 }
1648
1649
1650
1651 /* For realscripts */
1652 .supsubscript {
1653     display: inline-block;
1654     text-align: left ;
1655 }
1656
1657 .supsubscript sup,
1658 .supsubscript sub {
1659     position: relative;
1660     display: block;
1661     font-size: .5em;
1662     line-height: 1;
1663 }
1664
1665 .supsubscript sup {
1666     top: .5em;
1667 }
1668
1669 .supsubscript sub {
1670     top: .5em;
1671 }
1672
1673 div.attribution p {
1674     text-align: right ;
1675     font-size: 80%
1676 }
1677
```

```
1678 span.poemtitle {
1679   font-size: 120% ; font-weight: bold;
1680 }
1681
1682 pre.tabbing {
1683   font-family: "Linux Libertine Mono O", "Lucida Console",
1684     "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
1685     "Liberation Mono", "FreeMono", "Andale Mono",
1686     "Nimbus Mono L", "Courier New", monospace;
1687 }
1688
1689 blockquote {
1690   display: block ;
1691   margin-left: 2em ;
1692   margin-right: 2em ;
1693 }
1694
1695 blockquotation {
1696   display: block ;
1697   margin-left: 2em ;
1698   margin-right: 2em ;
1699 }
1700
1701 /* quotchap is for the quotchap package */
1702 div.quotchap {
1703   display: block ;
1704   font-style: oblique ;
1705   overflow-x: auto ;
1706   margin-left: 2em ;
1707   margin-right: 2em ;
1708 }
1709
1710 blockquote p, blockquotation p, div.quotchap p {
1711   line-height: 1.5;
1712   text-align: left ;
1713   font-size: .85em ;
1714 }
1715
1716 /* qauthor is for the quotchap package */
1717 div.qauthor {
1718   display: block ;
1719   text-align: right ;
1720   margin-left: auto ;
1721   margin-right: 2em ;
1722   font-size: 80% ;
1723   font-variant: small-caps;
1724 }
1725
1726 div.qauthor p {
1727   text-align: right ;
```

```
1728 }
1729
1730 div.epigraph, div.dictum {
1731   line-height: 1.2;
1732   text-align: left ;
1733   padding: 3ex 1em 0ex 1em ;
1734 /*   margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
1735   margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
1736 /*   margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
1737   font-size: .85em ;
1738   max-width: 27em ;
1739 }
1740
1741 div.epigraphsource, div.dictumauthor {
1742   text-align:right ;
1743   margin-left:auto ;
1744 /*   max-width: 50% ; */
1745   border-top: 1px solid #A0A0A0 ;
1746   padding-bottom: 3ex ;
1747   line-height: 1.2;
1748 }
1749
1750 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ;}
1751 div.epigraphsource p, div.dictumauthor p { padding: .5ex 0ex 0ex 0ex ; margin: 0ex ;}
1752 div.dictumauthor { font-style:italic }
1753
1754
1755 /* copyrightbox package */
1756 div.copyrightbox { margin: .5ex .5em }
1757 div.copyrightbox p {margin: 0px .5em ; padding: 0px}
1758 div.copyrightboxnote {text-align: left ; font-size: 60%}
1759
1760
1761 /* lettrine package: */
1762 span.lettrine { font-size: 4ex ; float: left ; }
1763 span.lettrinetext { font-variant: small-caps ; }
1764
1765 /* ulem and soul packages: */
1766 span.uline {
1767   text-decoration: underline ;
1768   text-decoration-skip: auto ;
1769 }
1770
1771 span.uuline {
1772   text-decoration: underline ;
1773   text-decoration-skip: auto ;
1774   text-decoration-style: double ;
1775 }
1776
1777 span.uwave {
```

```
1778     text-decoration: underline ;
1779     text-decoration-skip: auto ;
1780     text-decoration-style: wavy ;
1781 }
1782
1783 span.sout {
1784     text-decoration: line-through ;
1785 }
1786
1787 span.xout {
1788     text-decoration: line-through ;
1789 }
1790
1791 span.dashuline {
1792     text-decoration: underline ;
1793     text-decoration-skip: auto ;
1794     text-decoration-style: dashed ;
1795 }
1796
1797 span.dotuline {
1798     text-decoration: underline ;
1799     text-decoration-skip: auto ;
1800     text-decoration-style: dotted ;
1801 }
1802
1803 span.letterspacing { letter-spacing: .2ex ; }
1804
1805 span.capsspacing {
1806     font-variant: small-caps ;
1807     letter-spacing: .1ex ;
1808 }
1809
1810 span.highlight { background: #F8E800 ; }
1811
1812
1813
1814
1815 html body {
1816     margin: 0 ;
1817     line-height: 1.2;
1818 }
1819
1820
1821 body div {
1822     margin: 0ex;
1823 }
1824
1825
1826 h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
1827 {
```

```
1828     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
1829         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
1830         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
1831         "Times New Roman", serif;
1832     font-style: normal ;
1833     font-weight: bold ;
1834     text-align: left ;
1835 }
1836
1837 h1 { /* title of the entire website, used on each page */
1838     text-align: center ;
1839     font-size: 2.5em ;
1840     padding: .4ex 0em 0ex 0em ;
1841 }
1842 h2 { font-size: 2.25em }
1843 h3 { font-size: 2em }
1844 h4 { font-size: 1.75em }
1845 h5 { font-size: 1.5em }
1846 h6 { font-size: 1.25em }
1847 span.paragraph {font-size: 1em ; font-variant: normal ;
1848     margin-right: 1em ; }
1849 span.subparagraph {font-size: 1em ; font-variant: normal ;
1850     margin-right: 1em ; }
1851
1852 div.minisec {
1853     font-family: "DejaVu Sans", "Bitstream Vera Sans",
1854         Geneva, Verdana, sans-serif ;
1855     font-style: normal ;
1856     font-weight: bold ;
1857     text-align: left ;
1858 }
1859
1860 h1 {
1861     margin: 0ex 0em 0ex 0em ;
1862     line-height: 1.3;
1863     text-align: center ;
1864 }
1865
1866 h2 {
1867     margin: 1ex 0em 1ex 0em ;
1868     line-height: 1.3;
1869     text-align: center ;
1870 }
1871
1872 h3 {
1873     margin: 3ex 0em 1ex 0em ;
1874     line-height: 1.3;
1875 }
1876
1877 h4 {
```

```
1878 margin: 3ex 0em 1ex 0em ;
1879 line-height: 1.3;
1880 }
1881
1882 h5 {
1883 margin: 3ex 0em 1ex 0em ;
1884 line-height: 1.3;
1885 }
1886
1887 h6 {
1888 margin: 3ex 0em 1ex 0em ;
1889 line-height: 1.3;
1890 }
1891
1892
1893 div.titlepage {
1894 text-align: center ;
1895 }
1896
1897 .footnotes {
1898 text-align: left ;
1899 font-size: .85em ;
1900 margin: 3ex 2em 0ex 2em ;
1901 border-top: 1px solid silver ;
1902 }
1903
1904 .marginpar, .marginparblock {
1905 max-width: 50%;
1906 float: right ;
1907 clear: both ;
1908 text-align: left ;
1909 margin: 1ex 0.5em 1ex 1em ;
1910 padding: 1ex 0.5em 1ex 0.5em ;
1911 font-size: 85% ;
1912 border-top: 1px solid silver ;
1913 border-bottom: 1px solid silver ;
1914 overflow-x: auto ;
1915 }
1916
1917 .marginpar br { margin-bottom: 2ex ; }
1918
1919 div.marginblock, div.marginparblock {
1920 max-width:50%;
1921 float:right;
1922 text-align:left;
1923 margin: 1ex 0.5em 1ex 1em ;
1924 padding: 1ex 0.5em 1ex 0.5em ;
1925 overflow-x: auto;
1926 }
1927
```

```
1928 div.marginblock div.minipage,
1929 div.marginparblock div.minipage {
1930     display: block ;
1931     margin: 0pt auto 0pt auto ;
1932 }
1933
1934 div.marginblock div.minipage p ,
1935 div.marginparblock div.minipage p
1936     { font-size: 85%}
1937
1938 div.marginblock br ,
1939 div.marginparblock br
1940     { margin-bottom: 2ex ; }
1941
1942 div.bodycontainer {
1943     float: left ;
1944     width: 80% ;
1945 }
1946
1947 div.bodywithoutsidetoc div.bodycontainer {
1948     float: none ;
1949     width: 100% ;
1950 }
1951
1952 section.textbody div.footnotes{
1953     margin: 3ex 2em 0ex 2em ;
1954     border-bottom: 2px solid silver ;
1955 }
1956
1957 .footnoteheader {
1958     border-top: 2px solid silver ;
1959     margin-top: 3ex ;
1960     padding-top: 1ex ;
1961     font-weight: bold ;
1962 }
1963
1964 .mpfootnotes {
1965     text-align: left ;
1966     font-size: .85em ;
1967     margin-left: 1em ;
1968     border-top: 1px solid silver ;
1969 }
1970
1971 /* Remove footnote top border in the title page. */
1972 div.titlepage div.mpfootnotes {
1973     border-top: none ;
1974 }
1975
1976
1977
```

```
1978 ol {
1979   margin: 1ex 1em 1ex 0em;
1980   line-height: 1.2;
1981 }
1982
1983 ul, body dir, body menu {
1984   margin: 3ex 1em 3ex 0em;
1985   line-height: 1.2;
1986 }
1987
1988 li { margin: 0ex 0em 1ex 0em; }
1989
1990 html {
1991   margin: 0;
1992   padding: 0;
1993 }
1994
1995 .programlisting {
1996   font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1997               "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1998               "Courier New", monospace;
1999   margin: 1ex 0ex 1ex 0ex ;
2000   padding: .5ex 0pt .5ex 0pt ;
2001   overflow-x: auto;
2002 }
2003
2004 section.textbody>pre.programlisting {
2005 border-top: 1px solid silver ;
2006 border-bottom: 1px solid silver ;
2007 }
2008
2009
2010 div.displaymath {
2011   text-align: center ;
2012 }
2013
2014 div.displaymathnumbered {
2015   text-align: right ;
2016   margin-left: 5% ;
2017   margin-right: 5% ;
2018   min-width: 2.5in ;
2019 }
2020
2021 @media all and (min-width: 400px) {
2022   div.displaymathnumbered {
2023     margin-left: 10% ;
2024     margin-right: 10% ;
2025   }
2026 }
2027
```

```
2028 @media all and (min-width: 800px) {
2029     div.displaymathnumbered {
2030         margin-right: 20% ;
2031     }
2032 }
2033
2034 @media all and (min-width: 1200px) {
2035     div.displaymathnumbered {
2036         margin-right: 30% ;
2037     }
2038 }
2039
2040
2041 .inlineprogramlisting {
2042     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2043         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2044         "Courier New", monospace;
2045     overflow-x: auto;
2046 }
2047
2048 span.listinglabel {
2049     display: inline-block ;
2050     font-size: 70% ;
2051     width: 4em ;
2052     text-align: right ;
2053     margin-right: 2em ;
2054 }
2055
2056 div.abstract {
2057     margin: 2em 5% 2em 5% ;
2058     padding: 1ex 1em 1ex 1em ;
2059     /* font-weight: bold ; */
2060     font-size: 90% ;
2061     text-align: left ;
2062 }
2063
2064 div.abstract dl {line-height:1.5;}
2065 div.abstract dt {color:#304070;}
2066
2067 div.abstracttitle{
2068     font-family: "URW Classico", Optima, "Linux Biolinum O",
2069         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2070         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2071     font-weight:bold;
2072     font-size:1.25em;
2073     text-align: center ;
2074 }
2075
2076 span.abstractrunintitle{
2077     font-family: "URW Classico", Optima, "Linux Biolinum O",
```

```
2078     "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2079     "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2080     font-weight:bold;
2081 }
2082
2083
2084 .verbatim {
2085     overflow-x: auto ;
2086 }
2087
2088 .alltt {
2089     overflow-x: auto ;
2090 }
2091
2092
2093 .bverbatim {
2094     margin: 1ex Opt 1ex Opt ;
2095     padding: .5ex Opt .5ex Opt ;
2096     overflow-x: auto ;
2097 }
2098
2099 .lverbatim {
2100     margin: 1ex Opt 1ex Opt ;
2101     padding: .5ex Opt .5ex Opt ;
2102     overflow-x: auto ;
2103 }
2104
2105 .fancyvrb {
2106     font-size:.85em ;
2107     margin: 3ex Opt 3ex Opt
2108 }
2109
2110 .fancyvrblabel {
2111     font-weight:bold;
2112     text-align: center ;
2113 }
2114
2115
2116 .verse {
2117     font-family: "Linux Libertine Mono O", "Lucida Console",
2118         "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2119         "Liberation Mono", "FreeMono", "Andale Mono",
2120         "Nimbus Mono L", "Courier New", monospace;
2121     margin-left: 1em ;
2122 }
2123
2124
2125 div.singlespace { line-height: 1.2 ; }
2126 div.onehalfspace { line-height: 1.5 ; }
2127 div.doublespace { line-height: 2 ; }
```

```
2128
2129
2130 /* Word processor format output: */
2131 div.wpfigure { border: 1px solid red ; margin: .5ex ; padding: .5ex ; }
2132 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
2133 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ;}
2134
2135
2136
2137
2138 /* Minipage environments, vertically aligned to top, center, bottom: */
2139 .minipage, .fminipage, .fcolorminipage {
2140     /* display: inline-block ; */
2141     /* Mini pages which follow each other will be tiled. */
2142     margin: .25em .25em .25em .25em;
2143     padding: .25em .25em .25em .25em;
2144     display: inline-flex;
2145     flex-direction: column ;
2146     overflow: auto;
2147 }
2148
2149 /* Paragraphs in the flexbox did not collapse their margins. */
2150 /* Have not yet researched this. */
2151 .minipage p {margin: .75ex 0em .75ex 0em ;}
2152
2153 .fboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
2154 .fcolorbox .minipage, .fcolorboxBlock .minipage
2155     {border: none ; background: none;}
2156
2157 .fbox, .fboxBlock { border: 1px solid black ; }
2158
2159 .fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
2160 .fminipage, .fcolorminipage
2161     {display: inline-block}
2162
2163 .shadowbox, .shabox {
2164     border: 1px solid black;
2165     box-shadow: 3px 3px 3px #808080 ;
2166     border-radius: 0px ;
2167     padding: .4ex .3em .4ex .3em ;
2168     margin: 0pt .3ex 0pt .3ex ;
2169     display: inline-block ;
2170 }
2171
2172 .doublebox {
2173     border: 3px double black;
2174     border-radius: 0px ;
2175     padding: .4ex .3em .4ex .3em ;
2176     margin: 0pt .3ex 0pt .3ex ;
2177     display: inline-block ;
```

```
2178 }
2179
2180 .ovalbox, .Ovalbox {
2181     border: 1px solid black;
2182     border-radius: 1ex ;
2183     padding: .4ex .3em .4ex .3em ;
2184     margin: 0pt .3ex 0pt .3ex ;
2185     display: inline-block ;
2186 }
2187
2188 .Ovalbox { border-width: 2px ; }
2189
2190 .framebox {
2191     border: 1px solid black;
2192     border-radius: 0px ;
2193     padding: .3ex .2em 0ex .2em ;
2194     margin: 0pt .1ex 0pt .1ex ;
2195     display: inline-block ;
2196 }
2197
2198
2199 .mdframed {
2200     padding: 0ex ;
2201     margin: 2ex 0em 2ex 0em ;
2202 }
2203
2204 .mdframed p { padding: 0ex .5em 0ex .5em ; }
2205
2206 .mdframed dl { padding: 0ex .5em 0ex .5em ; }
2207
2208 .mdframedtitle {
2209     padding: .5ex 0pt 0pt 0pt ;
2210     border-radius: 10pt 10pt 0pt 0pt ;
2211     display: block ;
2212     margin-bottom: 1ex ;
2213 }
2214
2215 .mdframedsubtitle {
2216     display: block ;
2217 }
2218
2219 .mdframedsubsubtitle {
2220     display: block ;
2221 }
2222
2223 .mdtheorem {
2224     padding: 0ex .5em 0ex .5em ;
2225     margin: 3ex 5% 3ex 5% ;
2226 }
2227
```

```
2228
2229 /* framed package */
2230 .framed, pre.boxedverbatim, fcolorbox {
2231     margin: 3ex 0em 3ex 0em ;
2232     border: 1px solid black;
2233     border-radius: 0px ;
2234     padding: .3ex 1em 0ex 1em ;
2235     display: block ;
2236 }
2237
2238 .shaded {
2239     margin: 3ex 0em 3ex 0em ;
2240     padding: .3ex 1em .3ex 1em ;
2241     display: block ;
2242 }
2243
2244 .snugframed {
2245     margin: 3ex 0em 3ex 0em ;
2246     border: 1px solid black;
2247     border-radius: 0px ;
2248     display: block ;
2249 }
2250
2251 .framedleftbar {
2252     margin: 3ex 0em 3ex 0em ;
2253     border-left: 3pt solid black;
2254     border-radius: 0px ;
2255     padding: .3ex .2em .3ex 1em ;
2256     display: block ;
2257 }
2258
2259 .framedtitle {
2260     margin: 0em ;
2261     padding: 0em ;
2262     font-size: 130%
2263 }
2264
2265 .framedtitle p { padding: .3em }
2266
2267
2268
2269 dl {
2270     margin: 1ex 2em 1ex 0em;
2271     line-height: 1.3;
2272 }
2273
2274 dl dt {
2275     margin-top: 1ex;
2276     margin-left: 1em ;
2277     font-weight: bold;
```

```
2278 }
2279
2280 dl dd p { margin-top: 0em; }
2281
2282
2283 nav {
2284     font-family: "URW Classico", Optima, "Linux Biolinum 0",
2285         "DejaVu Sans", "Bitstream Vera Sans",
2286         Geneva, Verdana, sans-serif ;
2287     margin-bottom: 4ex ;
2288 }
2289
2290 nav p {
2291     line-height: 1.2 ;
2292     margin-top: .5ex ;
2293     margin-bottom: .5ex;
2294     font-size: .9em ;
2295 }
2296
2297
2298
2299 img, img.hyperimage, img.borderimage {
2300     max-width: 600px;
2301     border: 1px solid silver;
2302     box-shadow: 3px 3px 3px #808080 ;
2303     padding: .5% ;
2304     margin: .5% ;
2305     background: none ;
2306 }
2307
2308 img.inlineimage{
2309     padding: 0px ;
2310     box-shadow: none ;
2311     border: none ;
2312     background: none ;
2313     margin: 0px ;
2314     display: inline-block ;
2315     border-radius: 0px ;
2316 }
2317
2318 img.logoimage{
2319     max-width: 300px ;
2320     box-shadow: 3px 3px 3px #808080 ;
2321     border: 1px solid black ;
2322     background:none ;
2323     padding:0 ;
2324     margin:.5ex ;
2325     border-radius: 10px ;
2326 }
2327
```

```
2328
2329 .section {
2330 /*
2331     To have each section float relative to each other:
2332 */
2333 /*
2334     display: block ;
2335     float: left ;
2336     position: relative ;
2337     background: white ;
2338     border: 1px solid silver ;
2339     padding: .5em ;
2340 */
2341     margin: 0ex .5em 0ex .5em ;
2342     padding: 0 ;
2343 }
2344
2345
2346 figure {
2347     margin: 5ex auto 5ex auto ;
2348     padding: 1ex 1em 1ex 1em ;
2349     overflow-x: auto ;
2350 }
2351
2352
2353 /* To automatically center images in figures: */
2354 /*
2355 figure img.inlineimage {
2356     margin: 0ex auto 0ex auto ;
2357     display: block ;
2358 }
2359 */
2360
2361 /* To automatically center minipages in figures: */
2362 /*
2363 figure div.minipage, figure div.minipage div.minipage {
2364     margin: 1ex auto 1ex auto ;
2365     display: block ;
2366 }
2367 */
2368
2369 figure figure { margin: 0pt }
2370
2371 figure div.minipage p { font-size: 85% ; }
2372
2373 figure.subfigure, figure.subtable {
2374     display: inline-block ; margin: 3ex 1em 3ex 1em ;
2375 }
2376
2377 div.figurecaption .minipage { margin:0 ; padding: 0 }
```

```
2378
2379 div.minipage figure { border: none ; box-shadow: none ; }
2380 div.minipage figure.table { margin: 0ex }
2381 div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }
2382
2383 div.floatrow { text-align: center; }
2384
2385 div.floatrow figure { display: inline-block ; margin: 1ex 2% ; }
2386
2387 div.floatfoot { font-size: .85em ;
2388     border-top: 1px solid silver ; line-height: 1.2 ; }
2389
2390 div.figurecaption , .lstlistingtitle {
2391     font-size: .85em ;
2392     text-align: center ;
2393     font-weight: bold ;
2394     margin-top: 1ex ;
2395     margin-bottom: 1ex ;
2396 }
2397
2398 figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
2399     border-bottom: none ; background: none ;
2400 }
2401
2402 div.nonfloatcaption {
2403     margin: 1ex auto 1ex auto ;
2404     font-size: .85em ;
2405     text-align: center ;
2406     font-weight: bold ;
2407 }
2408
2409 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
2410 figure div.floatrow div.minipage div.figurecaption {
2411     border: none ;
2412     background: none ;
2413 }
2414
2415
2416 /* For packages such as float, rotfloat, and algorithm2e: */
2417
2418 figure.boxed, figure.boxruled {
2419     border: 1px solid black ;
2420 }
2421
2422 figure.ruled {
2423     border-top: 1px solid black ;
2424     border-bottom: 1px solid black ;
2425     border-left: 0px ;
2426     border-right: 0px ;
2427     border-radius: 0px ;
```

```
2428     background: none ;
2429     box-shadow: none ;
2430 }
2431
2432 figure.ruled div.figurecaption, figure.boxrulled div.figurecaption {
2433     border-top: 1px solid silver ;
2434     border-bottom: 1px solid silver ;
2435 }
2436
2437
2438 table {
2439     margin: 1ex auto 1ex auto ;
2440     border-collapse: separate ;
2441     border-spacing: 0px ;
2442     line-height: 1.3 ;
2443 }
2444
2445 tr.hline td {border-top: 1px solid #808080 ; margin-top: 0ex ;
2446     margin-bottom: 0ex ; } /* for \hline */
2447
2448 tr.tbrule td {border-top: 1px solid black ; margin-top: 0ex ;
2449     margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
2450
2451 td {padding: .5ex .5em .5ex .5em ;}
2452
2453 table td.tdl { text-align: left ; vertical-align: middle ; }
2454 table td.tdc { text-align: center ; vertical-align: middle ; }
2455 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
2456 table td.tdbang { text-align: center ; vertical-align: middle ; }
2457 table td.tdr { text-align: right ; vertical-align: middle ; }
2458 table td.tdp { text-align: left ; vertical-align: bottom ; }
2459 table td.tdm { text-align: left ; vertical-align: middle ; }
2460 table td.tdb { text-align: left ; vertical-align: top ; }
2461 table td.tdP { text-align: center ; vertical-align: bottom ; }
2462 table td.tdM { text-align: center ; vertical-align: middle ; }
2463 table td.tdB { text-align: center ; vertical-align: top ; }
2464
2465 table td.tvertbarl { border-left: 1px solid black }
2466 table td.tvertbarldouble { border-left: 4px double black }
2467 table td.tvertbarr { border-right: 1px solid black }
2468 table td.tvertbarrdouble { border-right: 4px double black }
2469
2470 table td.tvertbarldash { border-left: 1px dashed black }
2471 table td.tvertbarldoubledash { border-left: 2px dashed black }
2472 table td.tvertbarrdash { border-right: 1px dashed black }
2473 table td.tvertbarrdoubledash { border-right: 2px dashed black }
2474
2475
2476 /* for cmidrules: */
2477 table td.tdrule {
```

```
2478     border-top: 1px solid #A0A0A0 ;
2479 }
2480
2481 table td.tdrule1 {
2482     border-top-left-radius:.5em ;
2483     border-top: 1px solid #A0A0A0 ;
2484 }
2485
2486 table td.tdruler {
2487     border-top-right-radius:.5em ;
2488     border-top: 1px solid #A0A0A0 ;
2489 }
2490
2491 table td.tdrule1r {
2492     border-top-left-radius:.5em ;
2493     border-top-right-radius:.5em ;
2494     border-top: 1px solid #A0A0A0 ;
2495 }
2496
2497
2498 /* Margins of paragraphs inside table cells: */
2499 td.tdp p , td.tdprule p , td.tdP p , td.tdPrule p { padding-top: 1ex ;
2500     padding-bottom: 1ex ; margin: 0ex ; }
2501 td.tdm p , td.tdmrule p , td.tdM p , td.tdMrule p { padding-top: 1ex ;
2502     padding-bottom: 1ex ; margin: 0ex ; }
2503 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
2504     padding-bottom: 1ex ; margin: 0ex ; }
2505
2506 td.tdp , td.tdprule , td.tdP , td.tdPrule
2507     { padding: 0ex .5em 0ex .5em ; }
2508 td.tdm , td.tdmrule , td.tdM , td.tdMrule
2509     { padding: 0ex .5em 0ex .5em ; }
2510 td.tdb , td.tdbrule , td.tdB , td.tdBrule
2511     { padding: 0ex .5em 0ex .5em ; }
2512
2513
2514 /* table notes: */
2515 .tnotes {
2516     margin: 0ex 5% 1ex 5% ;
2517     padding: 0.5ex 1em 0.5ex 1em;
2518     font-size:.85em;
2519     text-align: left ;
2520 }
2521
2522 .tnotes dl dt p {margin-bottom:0px;}
2523
2524 .tnoteitemheader {margin-right: 1em;}
2525
2526
2527 /* for colortbl and cell color */
```

```
2528 div.cellcolor {
2529     width: 100% ;
2530     padding: .5ex .5em .5ex .5em ;
2531     margin: -.5ex -.5em -.5ex -.5em ;
2532 }
2533
2534
2535 /* for bigdelim */
2536 .ldelim, .rdelim { font-size: 200% }
2537
2538
2539 /* center, flushleft, flushright environments */
2540 div.center{text-align:center;}
2541 div.center table {margin-left:auto;margin-right:auto;}
2542 div.flushleft{text-align:left;}
2543 div.flushleft table {margin-left:0em ; margin-right:auto;}
2544 div.flushright{text-align:right;}
2545 div.flushright table {margin-left:auto ; margin-right: 0em ;}
2546
2547
2548 /* Fancybox */
2549 div.Btrivlist table tr td {
2550     padding: .2ex 0em ;
2551 }
2552
2553
2554 /* program listing callouts: */
2555 span.callout {
2556     font-family: "DejaVu Sans", "Bitstream Vera Sans",
2557         Geneva, Verdana, sans-serif ;
2558     border-radius: .5em;
2559     background-color:black;
2560     color:white;
2561     padding:0px .25em 0px .25em;
2562     margin: 0 ;
2563     font-weight: bold;
2564     font-size:.72em ;
2565 }
2566
2567 div.programlisting pre.verbatim span.callout{
2568     font-size: .85em ;
2569 }
2570
2571 span.verbatim {
2572     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2573         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2574         "Courier New", monospace;
2575 }
2576
2577
```

```
2578
2579 div.published
2580 {
2581     text-align: center ;
2582     font-variant: normal ;
2583     font-style: italic ;
2584     font-size: 1em ;
2585     margin: 1ex 0em 1ex 0em ;
2586 }
2587
2588 div.subtitle
2589 {
2590     text-align: center ;
2591     font-variant: normal ;
2592     font-style: italic ;
2593     font-size: 1.25em ;
2594     margin: 1ex 0em 1ex 0em ;
2595 }
2596
2597 div.subtitle p { margin: 1ex ; }
2598
2599 div.author
2600 {
2601     font-variant: normal ;
2602     font-style: normal ;
2603     font-size: 1em ;
2604     margin: 1ex 0em 1ex 0em ;
2605 }
2606
2607 div.oneauthor {
2608     display: inline-block ;
2609     margin: 0ex 1em 0ex 1em ;
2610 }
2611
2612 /*
2613 div.author table {
2614     margin: 1ex auto 0ex auto ;
2615     background: none ;
2616 }
2617
2618 div.author table tbody tr td { padding: .25ex ; }
2619 */
2620
2621 span.affiliation {font-size: .85em ; font-variant: small-caps; }
2622
2623 div.titledate {
2624     text-align: center ;
2625     font-size: .85em ;
2626     font-style: italic;
2627     margin: 1ex 0em 1ex 0em ;
```

```
2628 }
2629
2630
2631 nav.topnavigation{
2632     text-align: left ;
2633     padding: 0.5ex 1em 0.5ex 1em ;
2634 /*     margin: 2ex 0em 3ex 0em ; */
2635     margin: 0 ;
2636     border-bottom: 1px solid silver ;
2637     border-top: 1px solid silver ;
2638     clear:both ;
2639 }
2640
2641 nav.botnavigation{
2642     text-align: left ;
2643     padding: 0.5ex 1em 0.5ex 1em ;
2644 /*     margin: 3ex 0em 2ex 0em ; */
2645     margin: 0 ;
2646     border-top: 1px solid silver ;
2647     border-bottom: 1px solid silver ;
2648     clear:both ;
2649 }
2650
2651
2652 header {
2653     line-height: 1.2 ;
2654     font-size: 1em ;
2655     border-bottom: 1px solid silver ;
2656     margin: 0px ;
2657     padding: 2ex 1em 2ex 1em ;
2658     text-align:left ;
2659 }
2660
2661
2662 footer {
2663     font-size: .85em ;
2664     line-height: 1.2 ;
2665     margin-top: 1ex ;
2666     border-top: 1px solid silver ;
2667     padding: 2ex 1em 2ex 1em ;
2668     clear:both ;
2669     text-align:left ;
2670 }
2671
2672
2673 a.linkhome { font-weight:bold ; font-size: 1em ;}
2674
2675
2676 div.lateximagesource { padding: 0px ; margin: 0px ; display: none; }
2677
```

```
2678 img.lateximage{
2679     padding: Opt ;
2680     margin: Opt ;
2681     box-shadow: none ;
2682     border: none ;
2683     background: none ;
2684     max-width: 100% ;
2685     border-radius: 0ex ;
2686     border: none ;
2687 }
2688
2689
2690 /* The -1px right margin compensates for the 1px right border. */
2691 /* Without this -1px margin, the body container appears below instead */
2692 /* of floating to the side. */
2693 div.sidetoccontainer {
2694     font-family: "DejaVu Serif", "Bitstream Vera Serif",
2695         "Lucida Bright", Georgia, serif;
2696     float: left ;
2697     width: 20%;
2698     margin: Opt -1px 3ex Opt ;
2699     border-right: 1px solid silver;
2700     border-bottom: 1px solid silver;
2701     background: #FAF7F4 ;
2702     font-size:.9em ;
2703     border-radius: 0px 0px 20px 0px ;
2704 }
2705
2706 div.sidetoccontents {
2707     overflow-y: auto ;
2708     width: 100% ;
2709     text-align: left ;
2710 }
2711
2712
2713 nav.sidetoc p {line-height:1.2 ; margin: 1ex .5em 1ex .5em ;
2714     text-indent: 0 ; }
2715
2716 nav.sidetoc p a {color:black ; font-size: .7em ;}
2717
2718 div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
2719     border-bottom: 1px solid silver ;    }
2720
2721 nav.sidetoc a:hover {text-decoration: underline ; }
2722
2723
2724
2725 section.textbody { margin: 0ex 1em 0ex 1em ;}
2726
2727
```

```
2728 div.multicolsheading { -webkit-column-span: all;
2729     -moz-column-span: all; column-span: all; }
2730 div.multicols { -webkit-columns: 3 380px ;
2731     -moz-columns: 3 380px ; columns: 3 380px ; }
2732 div.multicols p {margin-top: 0ex}
2733
2734
2735 /* Used for xfrac and nicefrac: */
2736 span.numerator {
2737     font-size: 60% ;
2738     vertical-align: .4em ;
2739 }
2740
2741 span.denominator {
2742     font-size: 60%
2743 }
2744
2745
2746 /* Used for algorithm2e: */
2747 div.alg2evline{
2748     margin-left: 1em ;
2749     padding-left: 1em ;
2750     border-left: 1px solid black ;
2751     border-radius: 0px 0px 0px 1ex ;
2752 }
2753
2754 div.alg2evsline{
2755     margin-left: 1em ;
2756     padding-left: 1em ;
2757     border-left: 1px solid black ;
2758 }
2759
2760 div.alg2enoline{
2761     margin-left: 1em ;
2762     padding-left: 1em ;
2763 }
2764
2765 span.alg2elinenumber{
2766     margin-right: .5em ;
2767     font-size: 50% ;
2768     color: red ;
2769 }
2770
2771
2772 /* Used for algorithmicx: */
2773 span.floatright { float: right ; }
2774
2775
2776
2777
```

```
2778 /* Native LaTeX theorems: */
2779
2780 .theoremcontents { font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ; }
2781 .theoremlabel { font-style: normal; font-weight: bold ; margin-right: .5em ; }
2782
2783
2784 /* theorem, amsthm, and ntheorem packages */
2785
2786 span.theoremheader,
2787 span.theoremheaderplain,
2788 span.theoremheaderdefinition,
2789 span.theoremheaderbreak,
2790 span.theoremheadermarginbreak,
2791 span.theoremheaderchangebreak,
2792 span.theoremheaderchange,
2793 span.theoremheadermargin
2794 {
2795     font-style:normal ; font-weight: bold ; margin-right: 1em ;
2796 }
2797
2798 span.amsthmnameplain,
2799 span.amsthmnamedefinition,
2800 span.amsthmnumberplain,
2801 span.amsthmnumberdefinition
2802 {
2803     font-style:normal ; font-weight: bold ;
2804 }
2805
2806
2807 span.amsthmnameremark,
2808 span.amsthmnumberremark
2809 {font-style:italic ; font-weight: normal ; }
2810
2811
2812 span.amsthmnoteplain,
2813 span.amsthmnotedefinition
2814 {font-style:normal ;}
2815
2816
2817 span.theoremheaderremark,
2818 span.theoremheaderproof,
2819 span.amsthmproofname
2820 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
2821
2822 span.theoremheadersc
2823 {
2824     font-style:normal ;
2825     font-variant: small-caps ;
2826     font-weight: normal ;
2827     margin-right: 1em ;
```

```
2828 }
2829
2830 .theoremdemark {float:right}
2831
2832 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
2833 div.theorembodybreak, div.theorembodynonumberbreak,
2834 div.theorembodymarginbreak,
2835 div.theorembodychangebreak,
2836 div.theorembodychange,
2837 div.theorembodymargin
2838 {
2839     font-style:italic;
2840     margin-top: 3ex ; margin-bottom: 3ex ;
2841 }
2842
2843 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
2844 div.theorembodyplainupright, nonumberplainuprightsc,
2845 div.amsthmbodydefinition, div.amsthmbodyremark,
2846 div.amsthmproof
2847 {
2848     font-style: normal ;
2849     margin-top: 3ex ; margin-bottom: 3ex ;
2850 }
2851
2852 span.amsthmnoteremark {}
2853
2854
2855 /*
2856 For CSS LaTeX and related logos:
2857 Based on spacing demonstrated by the metafont package.
2858 */
2859
2860 .latexlogofont {
2861     font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
2862         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2863     font-variant: normal ;
2864 }
2865
2866 .latexlogo {
2867     font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
2868         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2869     font-size: 1.1em;
2870 }
2871
2872 .latexlogosup {
2873     text-transform: uppercase;
2874     letter-spacing: .03em ;
2875     font-size: 0.7em;
2876     vertical-align: 0.25em;
2877     margin-left: -0.4em;
```

```
2878 margin-right: -0.15em;
2879 }
2880
2881 .latexlogosub {
2882   text-transform: uppercase;
2883   vertical-align: -0.27ex;
2884   margin-left: -0.08em;
2885   margin-right: -0.07em;
2886   font-size: 1em;
2887 }
2888
2889 .latexlogotwoe {
2890   text-transform: none ;
2891   font-variant-numeric: oldstyle-nums ;
2892 }
2893
2894 .latexlogotwoesub {
2895   font-style:italic ;
2896   vertical-align: -0.27ex;
2897   margin-left: -0.11em;
2898   margin-right: -0.1em;
2899   font-size: 1em;
2900 }
2901
2902 .xelatexlogo {
2903   font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
2904     "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2905   letter-spacing: .03em ;
2906   font-size: 1.1em;
2907 }
2908
2909 .xelatexlogosub {
2910   vertical-align: -0.27ex;
2911   margin-left: -0.0667em;
2912   margin-right: -.05em;
2913   font-size: 1em;
2914   letter-spacing: .03em ;
2915 }
2916
2917 .amslogo {
2918   font-family: "TeXGyreChorus","URW Chancery L",
2919     "Apple Chancery","ITC Zapf Chancery","Monotype Corsiva",
2920     "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
2921     "Hoefler Text", Times, "Times New Roman", serif ;
2922   font-style: italic ;
2923 }
2924
2925 .lyxlogo {
2926   font-family: "URW Classico", Optima, "Linux Biolinum O",
2927     "DejaVu Sans", "Bitstream Vera Sans", Geneva,
```

```
2928         Verdana, sans-serif ;
2929 }
2930
2931
2932 /* Only display top and bottom navigation if a small screen: */
2933 /* Hide the sidetoc if a small screen: */
2934 nav.topnavigation { display:none; }
2935 nav.botnavigation { display:none; }
2936
2937 /* Only display the sidetoc's webpage title if a small screen */
2938 span.sidetocthetitle { display: none }
2939
2940 @media screen and (max-width: 50em) {
2941     div.sidetoccontainer {
2942         float: none ;
2943         width: 100% ;
2944         padding: 0 ;
2945         border-radius: 0 ;
2946         border-bottom: 1px solid black ;
2947         border-top: 1px solid black ;
2948         box-shadow: none ;
2949     }
2950     span.sidetocthetitle { display: inline }
2951     nav.botnavigation { display:block }
2952     div.bodycontainer { width: 100% }
2953     .marginpar {
2954         max-width: 100%;
2955         float: none;
2956         display:block ;
2957         margin: 1ex 1em 1ex 1em ;
2958     }
2959 }
2960
2961 @media print {
2962     body {
2963         font-family: "Linux Libertine O",
2964             "DejaVu Serif", "Bitstream Vera Serif",
2965             "Liberation Serif", "Nimbus Roman No 9 L",
2966             "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2967     }
2968     div.sidetoccontainer { display:none; }
2969     nav.topnavigation { display: none; }
2970     nav.botnavigation { display: none; }
2971     div.bodycontainer { width: 100% }
2972 }
2973
2974 @media handheld {
2975     div.sidetoccontainer { display:none; }
2976     nav.topnavigation { display:block }
2977     nav.botnavigation { display:block }
```

```

2978     div.bodycontainer { width: 100% }
2979 }
2980
2981 @media projection {
2982     div.sidetoccontainer { display:none; }
2983     nav.topnavigation { display:block }
2984     nav.botnavigation { display:block }
2985     div.bodycontainer { width: 100% }
2986 }
2987 \end{filecontents*}
2988 % \end{Verbatim}% for syntax highlighting
2989 \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: 2990 \begin{LWRwriteconf}
2991 \begin{filecontents*}{lwarp_sagebrush.css}
2992 @import url("lwarp.css") ;
2993
2994
2995 A:link {color:#105030 ; text-decoration: none ; }
2996 A:visited {color:#705030 ; text-shadow:1px 1px 2px #a0a0a0;}
2997 A:hover {color:#006000 ; text-decoration: underline ; text-shadow:0px 0px 2px #a0a0a0;}
2998 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
2999
3000
3001
3002 h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3003 {
3004     font-family: "URW Classico", Optima, "Linux Biolinum 0",
3005         "Linux Libertine 0", "Liberation Serif",
3006         "Nimbus Roman No 9 L", "FreeSerif",
3007         "Hoefler Text", Times, "Times New Roman", serif;
3008     font-variant: small-caps ;
3009     font-weight: normal ;
3010     color: #304070 ;
3011     text-shadow: 2px 2px 3px #808080;
3012 }
3013
3014 h1 { /* title of the entire website, used on each page */
3015     font-variant: small-caps ;
3016     color: #304070 ;
3017     text-shadow: 2px 2px 3px #808080;

```

```
3018     background-color: #F7F7F0 ;
3019     background-image: linear-gradient(to bottom, #F7F7F0, #COCOC4);
3020 }
3021
3022 h1 {
3023     border-bottom: 1px solid #304070;
3024 /* border-top: 2px solid #304070; */
3025 }
3026
3027 h2 {
3028     border-bottom: 1px solid #304070;
3029 /* border-top: 2px solid #304070; */
3030     background-color: #F7F7F0 ;
3031     background-image: linear-gradient(to bottom, #F7F7F0, #DADOC0);
3032 }
3033
3034
3035
3036 div.abstract {
3037     background: #f5f5eb ;
3038     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3039
3040     border: 1px solid silver;
3041     border-radius: 1em ;
3042 }
3043
3044 div.abstract dl {line-height:1.5;}
3045 div.abstract dt {color:#304070;}
3046
3047 div.abstracttitle{
3048     font-family: "URW Classico", Optima, "Linux Biolinum O",
3049         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3050         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3051     font-weight:bold;
3052     font-variant: small-caps ;
3053     font-size:1.5em;
3054     border-bottom: 1px solid silver ;
3055     color: #304070 ;
3056     text-align: center ;
3057     text-shadow: 1px 1px 2px #808080;
3058 }
3059
3060 span.abstracruntintitle{
3061     font-family: "URW Classico", Optima, "Linux Biolinum O",
3062         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3063         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3064     font-weight:bold;
3065 }
3066
3067
```

```
3068 div.epigraph, div.dictum {
3069     background: #f5f5eb ;
3070     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3071
3072     border: 1px solid silver ;
3073     border-radius: 1ex ;
3074     box-shadow: 3px 3px 3px #808080 ;
3075 }
3076
3077
3078 .example {
3079     background-color: #f5f5eb ;
3080     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3081
3082 }
3083
3084 div.exampletitle{
3085     font-family: "URW Classico", Optima, "Linux Biolinum O",
3086         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3087         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3088     font-weight:bold;
3089     font-variant: small-caps ;
3090     border-bottom: 1px solid silver ;
3091     color: #304070 ;
3092     text-align: center ;
3093     text-shadow: 1px 1px 2px #808080;
3094 }
3095
3096
3097 .sidebar {
3098     background-color: #f5f5eb ;
3099     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3100
3101 }
3102
3103 div.sidebartitle{
3104     font-family: "URW Classico", Optima, "Linux Biolinum O",
3105         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3106         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3107     font-weight:bold;
3108     font-variant: small-caps ;
3109     border-bottom: 1px solid silver ;
3110     color: #304070 ;
3111     text-align: center ;
3112     text-shadow: 1px 1px 2px #808080;
3113 }
3114
3115
3116 .fancyvlabel {
3117     font-family: "URW Classico", Optima, "Linux Biolinum O",
```

```
3118         "Linux Libertine 0", "Liberation Serif", "Nimbus Roman No 9 L",
3119         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3120     font-weight:bold;
3121     font-variant: small-caps ;
3122     font-size: 1.5em ;
3123     color: #304070 ;
3124     text-align: center ;
3125     text-shadow: 1px 1px 2px #808080;
3126 }
3127
3128 div.minipage {
3129     background-color: #eeeeee7 ;
3130     border: 1px solid silver ;
3131     border-radius: 1ex ;
3132 }
3133
3134 table div.minipage { background: none ; border: none ; }
3135
3136 div.framebox div.minipage {border:none ; background:none}
3137
3138 section.textbody > div.minipage {
3139     box-shadow: 3px 3px 3px #808080 ;
3140 }
3141
3142 div.fboxBlock div.minipage { box-shadow: none ; }
3143
3144 .framed .minipage , .framedleftbar .minipage {
3145     border: none ;
3146     background: none ;
3147     padding: 0ex ;
3148     margin: 0ex ;
3149 }
3150
3151 figure.figure .minipage, div.figurecaption .minipage { border: none; }
3152
3153 div.marginblock div.minipage ,
3154 div.marginparblock div.minipage
3155     { border: none; }
3156
3157 figure , div.marginblock {
3158     background-color: #eeeeee7 ;
3159     border: 1px solid silver ;
3160     border-radius: 1ex ;
3161     box-shadow: 3px 3px 3px #808080 ;
3162 }
3163
3164 figure figure {
3165     border: 1px solid silver ;
3166     margin: 0em ;
3167     box-shadow: none ;
```

```
3168 }
3169
3170 /*
3171 div.figurecaption {
3172     border-top: 1px solid silver ;
3173     border-bottom: 1px solid silver ;
3174     background-color: #e8e8e8 ;
3175 }
3176 */
3177
3178
3179 div.table {
3180     box-shadow: 3px 3px 3px #808080 ;
3181 }
3182
3183 /*
3184 .tnotes {
3185     background: #e8e8e8;
3186     border: 1px solid silver;
3187 }
3188 */
3189
3190
3191 nav.topnavigation{
3192     background-color: #b0b8b0 ;
3193     background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0) ;
3194 }
3195
3196 nav.botnavigation{
3197     background-color: #b0b8b0 ;
3198     background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
3199 }
3200
3201
3202
3203 header{
3204     background-color: #F7F7F0 ;
3205     background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
3206 }
3207
3208 footer{
3209     background-color: #F7F7F0 ;
3210     background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
3211 }
3212
3213
3214
3215 div.sidetoccontainer {
3216     background-color: #F7F7F0 ;
3217     background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
```

```
3218     box-shadow: 3px 3px 3px #808080 ;
3219     }
3220
3221 div.sidetoctitle {color: #304070 ; }
3222
3223 nav.sidetoc a:hover {
3224     color:#006000 ;
3225     text-decoration: none ;
3226     text-shadow:0px 0px 2px #a0a0a0;
3227 }
3228
3229
3230 @media screen and (max-width: 45em) {
3231     div.sidetoccontainer { border-radius: 0 ; }
3232 }
3233
3234
3235 \end{filecontents*}
3236 % \end{Verbatim}% for syntax highlighting
3237 \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: 3238 \begin{LWRwriteconf}
3239 \begin{filecontents*}{lwarp_formal.css}
3240 @import url("lwarp.css") ;
3241
3242
3243
3244 A:link {color:#802020 ; text-decoration:none; }
3245 A:visited {color:#802020 ; text-shadow:none ;}
3246 A:hover {color:#400000 ; text-shadow:none ;}
3247 A:active {color:#C00000 ; text-shadow:none ;}
3248
3249
3250 body {
3251     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3252         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3253         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3254         "Times New Roman", serif;
3255     background: #fffcf5;
3256 }
3257
```

```
3258 span.textrm {
3259     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3260         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3261         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3262         "Times New Roman", serif;
3263 }
3264
3265 span.textsf {
3266     font-family: "DejaVu Sans", "Bitstream Vera Sans",
3267         Geneva, Verdana, sans-serif ;
3268 }
3269
3270
3271
3272 h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3273 {
3274     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3275         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3276         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3277         "Times New Roman", serif;
3278     color: #800000 ;
3279     text-shadow: none ;
3280 }
3281
3282 h1, h2 {
3283     background-color: #fffcf5 ;
3284     background-image: none ;
3285     border-bottom: 1px solid #808080;
3286 /*     border-top: 2px solid #808080; */
3287 }
3288
3289 div.abstracttitle {
3290     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3291         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3292         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3293         "Times New Roman", serif;
3294     color: black ;
3295     text-shadow: none ;
3296 }
3297
3298 span.abstracrunintitle {
3299     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3300         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3301         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3302         "Times New Roman", serif;
3303     color: black ;
3304     text-shadow: none ;
3305 }
3306
3307 div.abstract { font-size: 100% }
```

```
3308
3309 .sidebar {
3310     background: #fffcf5;
3311     background-image: none ;
3312     margin: 2em 5% 2em 5%;
3313     padding: 0.5em 1em;
3314     border: none ;
3315     border-top : 1px solid silver;
3316     border-bottom : 1px solid silver;
3317     font-size: 90% ;
3318 }
3319
3320 div.sidebartitle{
3321     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3322         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3323         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3324         "Times New Roman", serif;
3325     color: #800000 ;
3326     text-shadow: none ;
3327     border: none ;
3328 }
3329
3330 .example {
3331     background: #fffcf5;
3332     background-image: none ;
3333     margin: 2em 5% 2em 5%;
3334     padding: 0.5em 1em;
3335     border: none ;
3336     border-top : 1px solid silver;
3337     border-bottom : 1px solid silver;
3338 }
3339
3340 div.exampletitle{
3341     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3342         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3343         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3344         "Times New Roman", serif;
3345     color: #800000 ;
3346     text-shadow: none ;
3347     border: none ;
3348 }
3349
3350 div.fancyvrblabel{
3351     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3352         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3353         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3354         "Times New Roman", serif;
3355     color: #800000 ;
3356     text-shadow: none ;
3357     border: none ;
```

```
3358 }
3359
3360
3361
3362 figure {
3363     margin: 5ex 5% 5ex 5% ;
3364     padding: 1ex 1em 1ex 1em ;
3365     background-color: #ffffcf5 ;
3366     overflow-x: auto ;
3367     border: none ;
3368 /*     border-top: 1px solid silver; */
3369 /*     border-bottom: 1px solid silver; */
3370 }
3371
3372
3373 div.figurecaption , .lstlisting {
3374     border: none ;
3375 /*     border-top: 1px solid silver ; */
3376 /*     border-bottom: 1px solid silver ; */
3377     background-color: #ffffcf5 ;
3378 }
3379
3380 .tnotes {
3381     background: #ffffcf5 ;
3382 }
3383
3384 .theorem {
3385     background: none ;
3386 }
3387
3388 .minipage {
3389     background-color: #ffffcf5 ;
3390     border: none ;
3391 }
3392
3393 div.floatrow figure { border: none ; }
3394
3395 figure figure { border: none ; }
3396
3397
3398 nav.toc, nav.lof, nav.lot, nav.lol {
3399     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3400         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3401         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3402         "Times New Roman", serif;
3403 }
3404
3405 div.sidetoccontainer {
3406     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3407         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
```

```

3408     "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3409     "Times New Roman", serif;
3410     background-image: linear-gradient(to bottom, #fffcf5, #COCOCO);
3411 }
3412
3413 div.sidetocitle{
3414     color: #800000 ;
3415 }
3416
3417 header{
3418     background-color: #e0e0e0 ;
3419     background-image: linear-gradient(to top, #fffcf5, #b0b0b0);
3420     text-align:center ;
3421 }
3422
3423 footer{
3424     background-color: #e0e0e0 ;
3425     background-image: linear-gradient(to bottom, #fffcf5, #b0b0b0);
3426     padding: 2ex 1em 2ex 1em ;
3427     text-align:left ;
3428 }
3429
3430 nav.botnavigation {
3431     background: #dedcd5 ;
3432     border-top: 1px solid black ;
3433 }
3434 \end{filecontents*}
3435 % \end{Verbatim}% for syntax highlighting
3436 \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: 3437 \begin{LWRwriteconf}
3438 \begin{filecontents*}{sample_project.css}
3439 /* ( --- Start of project.css --- ) */
3440 /* ( --- A sample project-specific CSS file for lwarp --- ) */
3441
3442 /* Uncomment one of the following: */
3443 @import url("lwarp.css") ;
3444 /* @import url("lwarp_formal.css") ; */
3445 /* @import url("lwarp_sagebrush.css") ; */
3446
3447 /* Project-specific CSS setting follow here. */

```

```

3448 /* . . . */
3449
3450 /* ( --- End of project.css --- ) */
3451 \end{filecontents*}
3452 % \end{Verbatim}% for syntax highlighting
3453 \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:

```

3454 \begin{LWRwriteconf}
3455 \begin{filecontents*}{lwarp.ist}
3456 preamble
3457 "\begin{theindex}
3458   \providecommand*\lettergroupDefault[1]{}
3459   \providecommand*\lettergroup[1]{%
3460     \par\textbf{#1}\par
3461     \nopagebreak
3462   }
3463 "
3464 headings_flag 1
3465 heading_prefix "
3466   \lettergroup{"
3467 heading_suffix "}"
3468 delim_0 ", \hyperindexref{"
3469 delim_1 ", \hyperindexref{"
3470 delim_2 ", \hyperindexref{"
3471 delim_n "}, \hyperindexref{"
3472 delim_r "} -- \hyperindexref{"
3473 delim_t "}"
3474 page_compositor "."
3475 \end{filecontents*}
3476 % \end{Verbatim}% for syntax highlighting
3477 \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: 3478 \begin{LWRwriteconf}
3479 \begin{filecontents*}{lwarp.xdy}
3480 (require "tex/inputenc/latin.xdy")
3481 (merge-rule "\\PS *" "Postscript")
3482 (require "texindy.xdy")
3483 (require "page-ranges.xdy")
3484 (require "book-order.xdy")
3485 (define-location-class "arabic-page-numbers"
3486   ("arabic-numbers") :min-range-length 1)
3487 (require "makeindex.xdy")
3488 (define-attributes (("hyperindexref")))
3489 (markup-locref :open "\hyperindexref{" :close "}")
3490 (markup-locref :open "\hyperindexref{" :close "}" :attr "hyperpage")
3491 (markup-locref :open "\textbf{\hyperindexref{" :close "}" :attr "textbf")
3492 (markup-locref :open "\textit{\hyperindexref{" :close "}" :attr "textit")
3493 (define-location-class-order ("roman-page-numbers"
3494   "arabic-page-numbers"
3495   "alpha-page-numbers"
3496   "Roman-page-numbers"
3497   "Alpha-page-numbers"
3498   "see"
3499   "seealso"))
3500 \end{filecontents*}
3501 % \end{Verbatim}% for syntax highlighting
3502 \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 `lateximages.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:

```

3503 \begin{LWRwriteconf}
3504 \begin{filecontents*}{lwarp_one_limage.txt}
3505 @echo off
3506 pdfseparate -f %1 -l %1 %4_html.pdf lateximages\lateximagetemp-%d.pdf
3507 pdfcrop --hires lateximages\lateximagetemp-%1.pdf lateximages\%3.pdf
3508 pdftocairo -svg -noshrink lateximages\%3.pdf lateximages\%3.svg
3509 del lateximages\%3.pdf
3510 del lateximages\lateximagetemp-%1.pdf
3511 exit
3512 \end{filecontents*}
3513 \end{LWRwriteconf}

```

40.11 lwarp_mathjax.txt

File lwarp_mathjax.txt Used by lwarp when using MATHJAX.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

Config file:

```

3514 \begin{LWRwriteconf}
3515 \begin{filecontents*}{lwarp_mathjax.txt}
3516 <!-- https://groups.google.com/forum/#!topic/
3517                               mathjax-users/jUtewUcE2bY -->
3518 <script type="text/x-mathjax-config">
3519 MathJax.Hub.Register.StartupHook("TeX AMSmath Ready",function () {
3520     var seteqsectionDefault = {name: "", num: 0};
3521     var seteqsections = {}, seteqsection = seteqsectionDefault;
3522     var TEX = MathJax.InputJax.TeX, PARSE = TEX.Parse;
3523     var AMS = MathJax.Extension["TeX/AMSmath"];
3524     TEX.Definitions.Add({
3525     macros: {
3526         seteqsection: "mySection",
3527         seteqnumber: "mySetEqNumber"
3528     }
3529     });
3530
3531     PARSE.Augment({
3532     mySection: function (name) {
3533         seteqsection.num = AMS.number;
3534         var n = this.GetArgument(name);
3535         if (n === "") {
3536             seteqsection = seteqsectionDefault;
3537         } else {
3538             if (!seteqsections["_"+n])
3539                 seteqsections["_"+n] = {name:n, num:0};
3540             seteqsection = seteqsections["_"+n];
3541         }
3542         AMS.number = seteqsection.num;

```

```
3543     },
3544     mySetEqNumber: function (name) {
3545         var n = this.GetArgument(name);
3546         if (!n || !n.match(/^ *[0-9]+ *$/))
3547             n = "";
3548         else
3549             n = parseInt(n)-1;
3550         <!-- $ syntax highlighting -->
3551         if (n === "" || n < 1)
3552             TEX.Error
3553             ("Argument to "+name+" should be a positive integer");
3554         AMS.number = n;
3555     }
3556 });
3557 MathJax.Hub.Config({
3558   TeX: {
3559     equationNumbers: {
3560       formatTag: function (n) {
3561         <!-- if not numeric, don't include the chapter -->
3562         if (!n.match(/^ *[0-9]+ *$/ ))
3563           <!-- $ syntax highlighting -->
3564           return "("+n.replace(/^\.\/, "")+")" ;
3565         else
3566           return "("+(seteqsection.name+"."+n).replace(/^\.\/, "")+")" ;
3567       },
3568       formatID: function (n) {
3569         n = (seteqsection.name+'.'+n).replace
3570           (/[<>]/g, "").replace(/^\.\/, "");
3571         return 'mjax-eqn-' + n;
3572       }
3573     }
3574   }
3575 });
3576 });
3577 </script>
3578
3579 <!-- http://docs.mathjax.org/en/latest/options/ThirdParty.html -->
3580 <script type="text/x-mathjax-config">
3581   MathJax.Ajax.config.path["Contrib"] =
3582     "https://cdn.mathjax.org/mathjax/contrib";
3583 </script>
3584
3585 <script type="text/x-mathjax-config">
3586 MathJax.Hub.Config({
3587   TeX: {
3588     equationNumbers: {
3589       autoNumber: "AMS"
3590     }
3591   }
3592 });
```

```

3593 </script>
3594
3595 <!-- Alternative CDN provider: -->
3596 <script type="text/javascript" async
3597 src="https://cdnjs.cloudflare.com/ajax/libs/mathjax/2.7.4/MathJax.js?config=TeX-AMS_HTML-full">
3598 </script>
3599
3600 <!-- No longer supported after April 30, 2017: -->
3601 <!--
3602 <script
3603   src="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=TeX-AMS_HTML-full">
3604 </script>
3605 -->
3606
3607 \end{filecontents*}
3608 % \end{Verbatim}% for syntax highlighting
3609 \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.

```

3610 \begin{LWR@createlwarpmk}

3611 \begin{filecontents*}{lwarpmk.lua}
3612 #!/usr/bin/env texlua
3613
3614 -- Copyright 2016-2018 Brian Dunn
3615
3616
3617 printversion = "v0.65"
3618 requiredconfversion = "1" -- also at *lwarpmk.conf

```

```
3619
3620 function printhelp ()
3621 print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.") ;
3622 end
3623
3624
3625 function printusage ()
3626 --
3627 -- Print the usage of the lwarpmk command:
3628 --
3629 print ( [[
3630
3631 lwarpmk print [-p project]: Compile the print version if necessary.
3632 lwarpmk print1 [-p project]: Forced single compile of the print version.
3633 lwarpmk printindex [-p project]: Process print indexes.
3634 lwarpmk printglossary [-p project]: Process the glossary for the print version.
3635 lwarpmk html [-p project]: Compile the HTML version if necessary.
3636 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
3637 lwarpmk htmlindex [-p project]: Process HTML indexes.
3638 lwarpmk htmlglossary [-p project]: Process the glossary for the html version.
3639 lwarpmk again [-p project]: Touch the source code to trigger recompiles.
3640 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
3641 lwarpmk pdftohtml [-p project]:
3642     For use with latexmk or a Makefile:
3643     Converts project_html.pdf to project_html.html and individual HTML files.
3644     Finishes the HTML conversion even if there was a compile error.
3645 lwarpmk pdftosvg <list of file names>: Converts each PDF file to SVG.
3646 lwarpmk epstopdf <list of file names>: Converts each EPS file to PDF.
3647 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
3648     *.idx, *.ind, *.log, *_html_inc.*, .gl*
3649 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
3650 lwarpmk cleanlimages: Removes all images from the "lateximages" directory.
3651 lwarpmk -h: Print this help message.
3652 lwarpmk --help: Print this help message.
3653
3654 ]] )
3655 -- printconf ()
3656 end
3657
3658
3659 function splitfile (destfile,sourcefile)
3660 --
3661 -- Split one large sourcefile into a number of files,
3662 -- starting with destfile.
3663 -- The file is split at each occurrence of <!--|Start file|newfilename|*
3664 --
3665 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
3666 local sfile = io.open(sourcefile)
3667 io.output(destfile)
3668 for line in sfile:lines() do
```

```
3669 i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*)|") ;
3670 if ( (i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
3671     -- split the file
3672     io.output(newfilename) ;
3673 else
3674     -- not a splitpoint
3675     io.write (line .. "\n") ;
3676 end
3677 end -- do
3678 io.close(sfile)
3679 end -- function
3680
3681
3682 function cvalueerror ( line, linenum , cvalue )
3683 --
3684 -- Incorrect value, so print an error and exit.
3685 --
3686     print ("lwarpmk: ===")
3687     print ("lwarpmk: " .. linenum .. " : " .. line ) ;
3688     print (
3689         "lwarpmk: incorrect variable value \"\" .. cvalue ..
3690         "\"\" in lwarpmk.conf.\n"
3691     ) ;
3692     print ("lwarpmk: ===")
3693 --     printconf () ;
3694     os.exit(1) ;
3695 end
3696
3697
3698 function ignoreconf ()
3699 -- Global argument index
3700 argindex = 2
3701 end
3702
3703 function loadconf ()
3704 --
3705 -- Load settings from the project's "lwarpmk.conf" file:
3706 --
3707 -- Default configuration filename:
3708 local conffile = "lwarpmk.conf"
3709 local confroot = "lwarpmk"
3710 -- Global argument index
3711 argindex = 2
3712 -- Optional configuration filename:
3713 if ( arg[argindex] == "-p" ) then
3714     argindex = argindex + 1
3715     confroot = arg[argindex]
3716     conffile = confroot.."lwarpmkconf"
3717     argindex = argindex + 1
3718 end
```

```

3719 -- Additional defaults:
3720 conversion = "0"
3721 opsystem = "Unix"
3722 latexmk = "false"
3723 printlatexcmd = ""
3724 HTMLlatexcmd = ""
3725 printindexcmd = ""
3726 HTMLindexcmd = ""
3727 latexmkindexcmd = ""
3728 -- to be removed:
3729 -- indexprog = "makeindex"
3730 -- makeindexstyle = "lwarp.ist"
3731 -- xindylanguage = "english"
3732 -- xindycodepage = "utf8"
3733 -- xindystyle = "lwarp.xdy"
3734 -- pdftotextenc = "UTF-8"
3735 glossarycmd = "makeglossaries"
3736 -- Verify the file exists:
3737 if (lfs.attributes(conffile,"mode")==nil) then
3738     -- file not exists
3739     print ("lwarpmk: ===")
3740     print ("lwarpmk: File \"\" .. conffile ..\"\" does not exist.")
3741     print ("lwarpmk: Move to the project's source directory,")
3742     print ("lwarpmk: recompile using pdflatex, xelatex, or lualatex,")
3743     print ("lwarpmk: then try using lwarpmk again.")
3744     if ( arg[argindex] ~= nil ) then
3745         print (
3746             "lwarpmk: (\"\" .. confroot ..
3747             \"\" does not appear to be a project name.)"
3748         )
3749     end
3750     print ("lwarpmk: ===")
3751     printhelp () ;
3752     os.exit(1) -- exit the entire lwarpmk script
3753 else -- file exists
3754 -- Read the file:
3755 print ("lwarpmk: Reading \"\" .. conffile ..".")
3756 local cfile = io.open(conffile)
3757 -- Scan each line, parsing each line as: name = [[string]]
3758 local linenum = 0
3759 for line in cfile:lines() do -- scan lines
3760 linenum = linenum + 1
3761 i,j,cvarname,cvalue = string.find (line,"([%w-]*)%s*=%s*%[[^%]]*)%]" ) ;
3762 -- Error if incorrect enclosing characters:
3763 if ( i == nil ) then
3764     print ("lwarpmk: ===")
3765     print ("lwarpmk: \"\" .. linenum .. \"\" : \"\" .. line ) ;
3766     print ("lwarpmk: Incorrect entry in \"\" .. conffile ..\"\".\\n" ) ;
3767     print ("lwarpmk: ===")
3768 --     printconf () ;

```

```
3769     os.exit(1) ;
3770 end -- nil
3771 if ( cvarname == "confversion" ) then
3772     confversion = cvalue
3773 elseif ( cvarname == "opssystem" ) then
3774     -- Verify choice of opssystem:
3775     if ( (cvalue == "Unix") or (cvalue == "Windows") ) then
3776         opssystem = cvalue
3777     else
3778         cvalueerror ( line, linenum , cvalue )
3779     end
3780 elseif ( cvarname == "sourcename" ) then sourcename = cvalue
3781 elseif ( cvarname == "homehtmlfilename" ) then homehtmlfilename = cvalue
3782 elseif ( cvarname == "htmlfilename" ) then htmlfilename = cvalue
3783 elseif ( cvarname == "latexmk" ) then latexmk = cvalue
3784 elseif ( cvarname == "printlatexcmd" ) then printlatexcmd = cvalue
3785 elseif ( cvarname == "HTMLlatexcmd" ) then HTMLlatexcmd = cvalue
3786 elseif ( cvarname == "printindexcmd" ) then printindexcmd = cvalue
3787 elseif ( cvarname == "HTMLindexcmd" ) then HTMLindexcmd = cvalue
3788 elseif ( cvarname == "latexmkindexcmd" ) then latexmkindexcmd = cvalue
3789 elseif ( cvarname == "glossarycmd" ) then glossarycmd = cvalue
3790 elseif ( cvarname == "pdftotextenc" ) then pdftotextenc = cvalue
3791 else
3792     print ("lwarpmk: ===")
3793     print ("lwarpmk: " .. linenum .. " : " .. line ) ;
3794     print (
3795         "lwarpmk: Incorrect variable name \" .. cvarname .. "\" in " ..
3796         conffile .. ".\n"
3797     ) ;
3798     print ("lwarpmk: ===")
3799 --     printconf ( ) ;
3800 os.exit(1) ;
3801 end -- cvarname
3802 end -- do scan lines
3803 io.close(cfile)
3804 end -- file exists
3805 -- Error if sourcename is "lwarp".
3806 -- This could happen if a local copy of lwarp has recently been recompiled.
3807 if sourcename=="lwarp" then
3808     print ("lwarpmk: ===")
3809     print ("lwarpmk: lwarp.sty has recently been recompiled in this directory,")
3810     print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
3811     print ("lwarpmk: Recompile your own project using pdf/luaxelatex <projectname>.")
3812     print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
3813     print ("lwarpmk: and you may again use lwarpmk.")
3814     print ("lwarpmk: ===")
3815     os.exit(1)
3816 end -- sourcename of "lwarp"
3817 -- Select some operating-system commands:
3818 if opssystem=="Unix" then -- For Unix / Linux / Mac OS:
```

```
3819     rmname = "rm"
3820     mvname = "mv"
3821     cpname = "cp"
3822     touchnamepre = "touch"
3823     touchnamepost = ""
3824     newtouchname = "touch"
3825     dirslash = "/"
3826     opquote= "\'"
3827     cmdgroupopenname = " ( "
3828     cmdgroupclosename = " ) "
3829     seqname = " && "
3830     bgname = " &"
3831 elseif opsystem=="Windows" then -- For Windows
3832     rmname = "DEL"
3833     mvname = "MOVE"
3834     cpname = "COPY"
3835     touchnamepre = "COPY /b"
3836     touchnamepost = "+,,"
3837     newtouchname = "echo empty >"
3838     dirslash = "\\\"
3839     opquote= "\""
3840     cmdgroupopenname = ""
3841     cmdgroupclosename = ""
3842     seqname = " & "
3843     bgname = ""
3844 else
3845     print ("lwarpmk: ===")
3846     print ("lwarpmk: Select Unix or Windows for opsystem." )
3847     print ("lwarpmk: ===")
3848     os.exit(1)
3849 end --- for Windows
3850 -- Warning if the operating system does not appear to be correct,
3851 -- in case files were transferred to another system.
3852 if ( (package.config:sub(1,1)) ~= dirslash ) then
3853     print ("lwarpmk: ===")
3854     print ("lwarpmk: It appears that lwarpmk.conf is for a different operating system." )
3855     print ("lwarpmk: To adjust lwarpmk.conf for the current operating system," )
3856     print ("lwarpmk:   recompile the original document using xe/luapdfplatex." )
3857     print ("lwarpmk: ")
3858     print ("lwarpmk: lwarpmk shall attempt to continue...")
3859     print ("lwarpmk: ===")
3860 end
3861 -- Error if the configuration file's version is not current:
3862 if ( confversion ~= requiredconfversion ) then
3863     print ("lwarpmk: ===")
3864     print ("lwarpmk: The configuration files lwarpmk.conf and "..sourcename..".lwarpmkconf" )
3865     print ("lwarpmk:   must be updated. To update the configuration files," )
3866     print ("lwarpmk:   recompile "..sourcename..".tex using xe/luapdfplatex," )
3867     print ("lwarpmk:   then use lwarpmk again.")
3868     print ("lwarpmk: ===")
```

```
3869     os.exit(1)
3870 end
3871 end -- loadconf
3872
3873
3874 function executecheckerror ( executecommands , errormessage )
3875 --
3876 -- Execute an operating system call,
3877 -- and maybe exit with an error message.
3878 --
3879 local err
3880 err = os.execute ( executecommands )
3881 if ( err ~= 0 ) then
3882     print ("lwarpmk: ===")
3883     print ("lwarpmk: " .. errormessage )
3884     print ("lwarpmk: ===")
3885     os.exit(1)
3886 end
3887 end -- executecheckerror
3888
3889
3890 function refreshdate ()
3891 os.execute(touchnamepre .. " " .. sourcename .. ".tex " .. touchnamepost)
3892 end
3893
3894
3895
3896 function reruntoget (filesource)
3897 --
3898 -- Scan the LaTeX log file for the phrase "Rerun to get",
3899 -- indicating that the file should be compiled again.
3900 -- Return true if found.
3901 --
3902 local fsource = io.open(filesource)
3903 for line in fsource:lines() do
3904 if ( string.find(line,"Rerun to get") ~= nil ) then
3905     io.close(fsource)
3906     return true
3907 end -- if
3908 end -- do
3909 io.close(fsource)
3910 return false
3911 end
3912
3913
3914
3915 function onetime (latexcmd, fsuffix)
3916 --
3917 -- Compile one time, return true if should compile again.
3918 -- fsuffix is "" for print, "_html" for HTML output.
```

```
3919 --
3920 print("lwarpmk: Compiling with: " .. latexcmd)
3921 executecheckerror (
3922     latexcmd ,
3923     "Compile error."
3924 )
3925 return (reruntoget(sourcename .. fsuffix .. ".log") ) ;
3926 end
3927
3928
3929 function manytimes (latexcmd, fsuffix)
3930 --
3931 -- Compile up to five times.
3932 -- fsuffix is "" for print, "_html" for HTML output
3933 --
3934 if onetime(latexcmd, fsuffix) == true then
3935 if onetime(latexcmd, fsuffix) == true then
3936 if onetime(latexcmd, fsuffix) == true then
3937 if onetime(latexcmd, fsuffix) == true then
3938 if onetime(latexcmd, fsuffix) == true then
3939 end end end end end
3940 end
3941
3942
3943 function verifyfileexists (filename)
3944 --
3945 -- Exit if the given file does not exist.
3946 --
3947 if (lfs.attributes ( filename , "modification" ) == nil ) then
3948     print ("lwarpmk: ===")
3949     print ("lwarpmk: " .. filename .. " not found." ) ;
3950     print ("lwarpmk: ===")
3951     os.exit (1) ;
3952 end
3953 end
3954
3955
3956
3957 function pdftohtml ()
3958 --
3959 -- Convert <project>_html.pdf into HTML files:
3960 --
3961 -- Convert to text:
3962 print ("lwarpmk: Converting " .. sourcename
3963     .. "_html.pdf to " .. sourcename .. "_html.html")
3964 os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
3965     .. sourcename .. "_html.pdf " .. sourcename .. "_html.html")
3966 -- Split the result into individual HTML files:
3967 splitfile (homehtmlfilename .. ".html" , sourcename .. "_html.html")
3968 end
```

```
3969
3970
3971function removeaux ()
3972--
3973-- Remove auxiliary files:
3974-- All .aux files are removed since there may be many bbl*.aux files.
3975--
3976os.execute ( rmname .. " *.aux " ..
3977    sourcename .. ".toc " .. sourcename .. "_html.toc " ..
3978    sourcename .. ".lof " .. sourcename .. "_html.lof " ..
3979    sourcename .. ".lot " .. sourcename .. "_html.lot " ..
3980    " *.idx " ..
3981    " *.ind " ..
3982    sourcename .. ".ps " .. sourcename .. "_html.ps " ..
3983    sourcename .. ".log " .. sourcename .. "_html.log " ..
3984    sourcename .. ".gl*" .. sourcename .. "_html.gl*" ..
3985    " *_html_inc.* "
3986    )
3987end
3988
3989function checkhtmlpdfexists ()
3990--
3991-- Error if the HTML document does not exist.
3992-- The lateximages are drawn from the HTML PDF version of the document,
3993-- so "lwarpmk html" must be done before "lwarpmk limages".
3994--
3995local htmlpdffile = io.open(sourcename .. "_html.pdf", "r")
3996if ( htmlpdffile == nil ) then
3997    print ("")
3998    print ("lwarpmk: ===")
3999    print ("lwarpmk: The HTML version of the document does not exist.")
4000    print ("lwarpmk: Enter \"lwarpmk html\" to compile the HTML version.")
4001    print ("lwarpmk: ===")
4002    os.exit(1)
4003end
4004io.close (htmlpdffile)
4005end -- checkhtmlpdfexists
4006
4007
4008function warnlimages ()
4009--
4010-- Warning of a missing lateximages.txt file:
4011--
4012    print ("lwarpmk: ===")
4013    print ("lwarpmk: \"lateximages.txt\" does not exist.")
4014    print ("lwarpmk: Your project does not use SVG math or other lateximages,")
4015    print ("lwarpmk: or the file has been deleted somehow.")
4016    print ("lwarpmk: Use \"lwarpmk html\" to recompile your project")
4017    print ("lwarpmk: and recreate \"lateximages.txt\".")
4018    print ("lwarpmk: If your project does not use SVG math or other lateximages,")
```

```
4019     print ("lwarpmk: then \"lateximages.txt\" will never exist, and")
4020     print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
4021     print ("lwarpmk: ===")
4022 end -- warnlimages
4023
4024
4025 function checklimages ()
4026 --
4027 -- Check lateximages.txt to see if need to recompile first.
4028 -- If any entry has a page number of zero, then there were incorrect images.
4029 --
4030 print ("lwarpmk: Checking for a valid lateximages.txt file.")
4031 local limagesfile = io.open("lateximages.txt", "r")
4032 if ( limagesfile == nil ) then
4033     warnlimages ()
4034     os.exit(1)
4035 end
4036 -- Track warning to recompile if find a page 0
4037 local pagezerowarning = false
4038 -- Scan lateximages.txt
4039 for line in limagesfile:lines() do
4040     -- lwimpage is the page number in the PDF which has the image
4041     -- lwimghash is true if this filename is a hash
4042     -- lwimname is the lateximage filename root to assign for the image
4043     i,j,lwimpage,lwimghash,lwimname = string.find (line,"|(.*)|(.*)|(.*)|")
4044     -- For each entry:
4045     if ( (i~=nil) ) then
4046         -- If the page number is 0, image references are incorrect
4047         -- and must recompile the soure document:
4048         if ( lwimpage == "0" ) then
4049             pagezerowarning = true
4050         end
4051     end -- if i~=nil
4052 end -- do
4053 if ( pagezerowarning ) then
4054     print ("")
4055     print ("lwarpmk: ===")
4056     print ("lwarpmk: The document must be recompiled before creating the lateximages.")
4057     print ("lwarpmk: Enter \"lwarpmk html\" again, then try \"lwarpmk limages\" again.")
4058     print ("lwarpmk: ===")
4059     os.exit(1) ;
4060 end -- pagezerowarning
4061 end -- checklimages
4062
4063
4064 function createuniximage ( lwimfullname )
4065 --
4066 -- Create one lateximage for Unix / Linux / Mac OS.
4067 --
4068 executecheckerror (
```

```

4069 cmdgroupopenname ..
4070 "pdfseparate -f " .. lwimgpage .. " -l " .. lwimgpage .. " " ..
4071     sourcename .. "_html.pdf" " ..
4072     "lateximages" .. dirslash .. "lateximagetemp-%d" .. ".pdf" ..
4073     seqname ..
4074 -- Crop the image:
4075 "pdfcrop --hires lateximages" .. dirslash .. "lateximagetemp-" ..
4076     lwimgpage .. ".pdf" " ..
4077     "lateximages" .. dirslash .. lwimgname .. ".pdf" ..
4078     seqname ..
4079 -- Convert the image to svg:
4080 "pdftocairo -svg -noshrink lateximages" .. dirslash .. lwimgname .. ".pdf" " ..
4081     "lateximages" .. dirslash .. lwimgname .. ".svg" ..
4082     seqname ..
4083 -- Remove the temporary files:
4084 rmname .. " lateximages" .. dirslash .. lwimgname .. ".pdf" .. seqname ..
4085 rmname .. " lateximages" .. dirslash .. "lateximagetemp-" .. lwimgpage .. ".pdf" ..
4086 cmdgroupclose " " >/dev/null " .. bname
4087 ,
4088 "File error trying to convert " .. lwimgfullname
4089 )
4090 -- Every 32 images, wait for completion at below normal priority,
4091 -- allowing other image tasks to catch up.
4092 numimageprocesses = numimageprocesses + 1
4093 if ( numimageprocesses > 32 ) then
4094     numimageprocesses = 0
4095     print ( "lwarpnk: waiting" )
4096     executecheckerror ( "wait" , "File error trying to wait." )
4097 end
4098 end -- createuniximage
4099
4100
4101 function createwindowsimage ( lwimgfullname )
4102 --
4103 -- Create one lateximage for Windows.
4104 --
4105 -- Every 32 images, wait for completion at below normal priority,
4106 -- allowing other image tasks to catch up.
4107 numimageprocesses = numimageprocesses + 1
4108 if ( numimageprocesses > 32 ) then
4109     numimageprocesses = 0
4110     thiswaitcommand = "/WAIT /BELOWNORMAL"
4111     print ( "lwarpnk: waiting" )
4112 else
4113     thiswaitcommand = ""
4114 end
4115 -- Execute the image generation command
4116 executecheckerror (
4117     "start /B " .. thiswaitcommand .. " \"\" lwarp_one_limage " ..
4118     lwimgpage .. " " ..

```

```
4119     lwimghash .. " " ..
4120     lwimgname .. " " ..
4121     sourcename .. " <nul >nul"
4122     ,
4123     "File error trying to create image."
4124 )
4125 end -- createwindowsimage
4126
4127
4128 function createonelateximage ( line )
4129 --
4130 -- Given the next line of lateximages.txt, convert a single image.
4131 --
4132 -- lwimgpage is the page number in the PDF which has the image
4133 -- lwimghash is true if this filename is a hash
4134 -- lwimgname is the lateximage filename root to assign for the image
4135 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4136 -- For each entry:
4137 if ( i~=nil ) then
4138     -- Skip if the page number is 0:
4139     if ( lwimgpage == "0" ) then
4140         pagezerowarning = true
4141     else
4142         -- Skip is this image is hashed and already exists:
4143         local lwimgfullname = "lateximages" .. dirslash .. lwimgname .. ".svg"
4144         if (
4145             (lwimghash ~= "true") or
4146             (lfs.attributes(lwimgfullname,"mode")==nil) -- file not exists
4147         )
4148         then -- not hashed or not exists:
4149             -- Print the name of the file being generated:
4150             print ( "lwarpmk: " .. lwimgname )
4151             -- Touch/create the dest so that only once instance tries to build it:
4152             executecheckerror (
4153                 newtouchname .. " " .. lwimgfullname ,
4154                 "File error trying to touch " .. lwimgfullname
4155             )
4156             -- Separate out the image into its own single-page pdf:
4157             if opsystem=="Unix" then
4158                 createuniximage (lwimgfullname)
4159             elseif opsystem=="Windows" then
4160                 createwindowsimage (lwimgfullname)
4161             end
4162         end -- not hashed or not exists
4163     end -- not page 0
4164 end -- not nil
4165 end -- createonelateximage
4166
4167
4168 function createlateximages ()
```

```
4169 --
4170 -- Create lateximages based on lateximages.txt:
4171 --
4172 -- See if the document must be recompiled first:
4173 checklimages ()
4174 -- See if the print version exists:
4175 checkhtmlpdfexists ()
4176 -- Attempt to create the lateximages:
4177 print ("lwarpmk: Creating lateximages.")
4178 local limagesfile = io.open("lateximages.txt", "r")
4179 if ( limagesfile == nil ) then
4180     warnlateximages ()
4181     os.exit(1)
4182 end
4183 -- Create the lateximages directory, ignore error if already exists
4184 err = os.execute("mkdir lateximages")
4185 -- For Windows, create lwarp_one_limage.cmd from lwarp_one_limage.txt:
4186 if opsystem=="Windows" then
4187     executecheckerror (
4188         cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd" ,
4189         "File error trying to copy lwarp_one_limage.txt to lwarp_one_limage.cmd"
4190     )
4191 end -- create lwarp_one_limage.cmd
4192 -- Track the number of parallel processes
4193 numimageprocesses = 0
4194 -- Track warning to recompile if find a page 0
4195 pagezerowarning = false
4196 -- Scan lateximages.txt
4197 for line in limagesfile:lines() do
4198     createonelateximage ( line )
4199 end -- do
4200 io.close(limagesfile)
4201 print ( "lwarpmk limages: ===" )
4202 print ( "lwarpmk limages: Wait a moment for the images to complete" )
4203 print ( "lwarpmk limages:  before reloading the page." )
4204 print ( "lwarpmk limages: ===" )
4205 print ( "lwarpmk limages: Done." )
4206 if ( pagezerowarning == true ) then
4207     print ( "lwarpmk limages: WARNING: Images will be incorrect." )
4208     print ( "lwarpmk limages:  Enter \"lwarpmk cleanlimages\", then" )
4209     print ( "lwarpmk limages:  recompile the document one more time, then" )
4210     print ( "lwarpmk limages:  repeat \"lwarpmk images\" again." )
4211 end -- pagezerowarning
4212 end -- function
4213
4214
4215 function convertepstopdf ()
4216 --
4217 -- Converts EPS files to PDF files.
4218 -- The filenames are arg[argindex] and up.
```

```
4219 -- arg[1] is the command "pdftosvg".
4220 --
4221 ignoreconf ()
4222 for i = argindex , #arg do
4223   if (lfs.attributes(arg[i],"mode")==nil) then
4224     print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4225   else
4226     print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4227     os.execute ( "epstopdf " .. arg[i] )
4228   end -- if
4229 end -- do
4230 end --function
4231
4232
4233 function convertpdftosvg ()
4234 --
4235 -- Converts PDF files to SVG files.
4236 -- The filenames are arg[argindex] and up.
4237 -- arg[1] is the command "pdftosvg".
4238 --
4239 ignoreconf ()
4240 for i = argindex , #arg do
4241   if (lfs.attributes(arg[i],"mode")==nil) then
4242     print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4243   else
4244     print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4245     os.execute ( "pdftocairo -svg " .. arg[i] )
4246   end -- if
4247 end -- do
4248 end --function
4249
4250
4251 -- Force an update and conclude processing:
4252 function updateanddone ()
4253 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
4254 refreshdate ()
4255 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
4256 print ("lwarpmk: Done.")
4257 end -- function
4258
4259
4260 -- Start of the main code: --
4261
4262
4263 -- lwarpmk --version :
4264
4265 if (arg[1] == "--version") then
4266 print ( "lwarpmk: " .. printversion )
4267
4268 else -- not --version
```

```
4269
4270
4271-- print intro:
4272
4273print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX lwarp package.")
4274
4275
4276-- lwarpmk print:
4277
4278if arg[1] == "print" then
4279loadconf ()
4280if ( latexmk == "true" ) then
4281    print ("lwarpmk: Compiling with: " .. printlatexcmd)
4282    executecheckerror (
4283        printlatexcmd ,
4284        "Compile error."
4285    )
4286    print ("lwarpmk: Done.")
4287else -- not latexmk
4288    verifyfileexists (sourcename .. ".tex") ;
4289    -- See if up to date:
4290    if (
4291        ( lfs.attributes ( sourcename .. ".pdf" , "modification" ) == nil ) or
4292        (
4293            lfs.attributes ( sourcename .. ".tex" , "modification" ) >
4294            lfs.attributes ( sourcename .. ".pdf" , "modification" )
4295        )
4296    ) then
4297        -- Recompile if not yet up to date:
4298        manytimes(printlatexcmd, "")
4299        print ("lwarpmk: Done.") ;
4300    else
4301        print ("lwarpmk: " .. sourcename .. ".pdf is up to date.") ;
4302    end
4303end -- not latexmk
4304
4305
4306-- lwarpmk print1:
4307
4308elseif arg[1] == "print1" then
4309    loadconf ()
4310    verifyfileexists (sourcename .. ".tex") ;
4311    onetime(printlatexcmd, "")
4312    print ("lwarpmk: Done.") ;
4313
4314
4315-- lwarpmk printindex:
4316-- Compile the index then touch the source
4317-- to trigger a recompile of the document:
4318
```

```
4319 elseif arg[1] == "printindex" then
4320 loadconf ( )
4321 os.execute ( printindexcmd )
4322 print ("lwarpmk: -----")
4323 updateanddone ( )
4324
4325
4326 -- lwarpmk printglossary:
4327 -- Compile the glossary then touch the source
4328 -- to trigger a recompile of the document:
4329
4330 elseif arg[1] == "printglossary" then
4331 loadconf ( )
4332 print ("lwarpmk: Processing the glossary.")
4333
4334 os.execute(glossarycmd .. " " .. sourcename)
4335 updateanddone ( )
4336
4337
4338 -- lwarpmk html:
4339
4340 elseif arg[1] == "html" then
4341 loadconf ( )
4342 if ( latexmk == "true" ) then
4343     print ("lwarpmk: Compiling with: " .. HTMLlatexcmd)
4344     executecheckerror (
4345         HTMLlatexcmd ,
4346         "Compile error."
4347     )
4348     pdftohtml ( )
4349     print ("lwarpmk: Done.")
4350 else -- not latexmk
4351     verifyfileexists ( sourcename .. ".tex" ) ;
4352     -- See if exists and is up to date:
4353     if (
4354         ( lfs.attributes ( homehtmlfilename .. ".html" , "modification" ) == nil ) or
4355         (
4356             lfs.attributes ( sourcename .. ".tex" , "modification" ) >
4357             lfs.attributes ( homehtmlfilename .. ".html" , "modification" )
4358         )
4359     ) then
4360         -- Recompile if not yet up to date:
4361         manytimes(HTMLlatexcmd, "_html")
4362         pdftohtml ( )
4363         print ("lwarpmk: Done.")
4364     else
4365         print ("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
4366     end
4367 end -- not latexmk
4368
```

```
4369
4370-- lwarpmk html1:
4371
4372elseif arg[1] == "html1" then
4373    loadconf ()
4374    verifyfileexists ( sourcename .. ".tex" ) ;
4375    onetime(HTMLlatexcmd, "_html")
4376    pdftohtml ()
4377    print ("lwarpmk: Done.")
4378
4379
4380-- lwarpmk pdftohtml:
4381elseif arg[1] == "pdftohtml" then
4382    loadconf ()
4383    pdftohtml ()
4384
4385
4386-- lwarpmk htmlindex:
4387-- Compile the index then touch the source
4388-- to trigger a recompile of the document:
4389
4390elseif arg[1] == "htmlindex" then
4391loadconf ()
4392os.execute ( HTMLindexcmd )
4393print ("lwarpmk: -----")
4394updateanddone ()
4395
4396
4397-- lwarpmk htmlglossary:
4398-- Compile the glossary then touch the source
4399-- to trigger a recompile of the document.
4400-- The <sourcename>.xdy file is created by the glossaries package.
4401
4402elseif arg[1] == "htmlglossary" then
4403loadconf ()
4404print ("lwarpmk: Processing the glossary.")
4405os.execute(glossarycmd .. " " .. sourcename .. "_html")
4406updateanddone ()
4407
4408
4409-- lwarpmk limages:
4410-- Scan the lateximages.txt file to create lateximages.
4411
4412elseif arg[1] == "limages" then
4413loadconf ()
4414print ("lwarpmk: Processing images.")
4415createlateximages ()
4416print ("lwarpmk: Done.")
4417
4418
```

```
4419 -- lwarpmk again:
4420 -- Touch the source to trigger a recompile.
4421
4422 elseif arg[1] == "again" then
4423 loadconf ()
4424 updateanddone ()
4425
4426
4427 -- lwarpmk clean:
4428 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
4429
4430 elseif arg[1] == "clean" then
4431 loadconf ()
4432 removeaux ()
4433 print ("lwarpmk: Done.")
4434
4435
4436 -- lwarpmk cleanall
4437 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
4438 -- and also project.pdf, project.dvi, *.html
4439
4440 elseif arg[1] == "cleanall" then
4441 loadconf ()
4442 removeaux ()
4443 os.execute ( rmname .. " " ..
4444     sourcename .. ".pdf " .. sourcename .. "_html.pdf " ..
4445     sourcename .. ".dvi " .. sourcename .. "_html.dvi " ..
4446     "*.html"
4447 )
4448 print ("lwarpmk: Done.")
4449
4450
4451 -- lwarpmk cleanimages
4452 -- Remove images from the lateximages directory.
4453
4454 elseif arg[1] == "cleanimages" then
4455 loadconf ()
4456 os.execute ( rmname .. " lateximages/*" )
4457 print ("lwarpmk: Done.")
4458
4459 -- lwarpmk epstopdf <list of file names>
4460 -- Convert EPS files to PDF using epstopdf
4461 elseif arg[1] == "epstopdf" then
4462 convertepstopdf ()
4463 print ("lwarpmk: Done.")
4464
4465
4466 -- lwarpmk pdftosvg <list of file names>
4467 -- Convert PDF files to SVG using pdftocairo
4468 elseif arg[1] == "pdftosvg" then
```

```

4469 convertpdftosvg ()
4470 print ("lwarpmk: Done.")
4471
4472
4473 -- lwarpmk with no argument :
4474
4475 elseif (arg[1] == nil) then
4476 printhelp ()
4477
4478
4479 -- lwarpmk -h or lwarpmk --help :
4480
4481 elseif (arg[1] == "-h" ) or (arg[1] == "--help") then
4482 printusage ()
4483
4484
4485 -- Unknown command:
4486
4487 else
4488 printhelp ()
4489 print ("\nlwarpmk: ***** Unknown command \""..arg[1]..\"". *****\n")
4490 end
4491
4492 end -- not --version
4493 \end{filecontents*}
4494 % \end{Verbatim}% for syntax highlighting

4495 \end{LWR@createlwarpmk}

```

41 Stacks

for HTML output: 4496 \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:

```
4497 \newcommand*\LWR@depthnone}{-5}
```

all sectioning depths are deeper than LWR@depthfinished:

```
4498 \newcommand*\LWR@depthfinished}{-4}
4499 \newcommand*\LWR@depthpart}{-1}
4500 \newcommand*\LWR@depthchapter}{0}
4501 \newcommand*\LWR@depthsection}{1}
4502 \newcommand*\LWR@depthsubsection}{2}
4503 \newcommand*\LWR@depthsubsubsection}{3}
4504 \newcommand*\LWR@depthparagraph}{4}
4505 \newcommand*\LWR@depthsubparagraph}{5}
```

used by \itemize, \enumerate, \description:

```
4506 \newcommand*\LWR@depthlist}{6}
```

used by \item:

```
4507 \newcommand*\LWR@depthlistitem}{7}
```

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.

```
4508 \newcommand*\LWR@closeone}{}% top of the stack
4509 \newcommand*\LWR@closetwo}{}
4510 \newcommand*\LWR@closethree}{}
4511 \newcommand*\LWR@closefour}{}
4512 \newcommand*\LWR@closefive}{}
4513 \newcommand*\LWR@closesix}{}
4514 \newcommand*\LWR@closeseven}{}
4515 \newcommand*\LWR@closeeight}{}
4516 \newcommand*\LWR@closenine}{}
4517 \newcommand*\LWR@closeten}{}
4518 \newcommand*\LWR@closeeleven}{}
4519 \newcommand*\LWR@closetwelve}{}

```

41.3 Closing depths

A stack to record the depth of each level:

 Note that nested L^AT_EX structures may push depths which are non-sequential.

Ex:

```

\begin{itemize}
  \item{A}
  \begin{description}
    \item{B}
  \end{description}
\end{itemize}

```

```

4520 \newcommand*{\LWR@closedepthone}{\LWR@depthnone}% top of the stack
4521 \newcommand*{\LWR@closedepthtwo}{\LWR@depthnone}
4522 \newcommand*{\LWR@closedepththree}{\LWR@depthnone}
4523 \newcommand*{\LWR@closedepthfour}{\LWR@depthnone}
4524 \newcommand*{\LWR@closedepthfive}{\LWR@depthnone}
4525 \newcommand*{\LWR@closedepthsix}{\LWR@depthnone}
4526 \newcommand*{\LWR@closedepthseven}{\LWR@depthnone}
4527 \newcommand*{\LWR@closedeptheight}{\LWR@depthnone}
4528 \newcommand*{\LWR@closedepthnine}{\LWR@depthnone}
4529 \newcommand*{\LWR@closedephten}{\LWR@depthnone}
4530 \newcommand*{\LWR@closedeptheleven}{\LWR@depthnone}
4531 \newcommand*{\LWR@closedephtwelve}{\LWR@depthnone}

```

41.4 Pushing and popping the stack

`\pushclose` $\langle action \rangle$ $\langle depth \rangle$

Pushes one return action and its L^AT_EX depth onto the stacks.

```

4532 \NewDocumentCommand{\pushclose}{m m}
4533 {
4534 \global\let\LWR@closetwelve\LWR@closeeeleven
4535 \global\let\LWR@closeeeleven\LWR@closeeten
4536 \global\let\LWR@closeeten\LWR@closeenine
4537 \global\let\LWR@closeenine\LWR@closeeeight
4538 \global\let\LWR@closeeeight\LWR@closeeseven
4539 \global\let\LWR@closeeseven\LWR@closesix
4540 \global\let\LWR@closesix\LWR@closefive

```

```

4541 \global\let\LWR@closefive\LWR@closefour
4542 \global\let\LWR@closefour\LWR@closethree
4543 \global\let\LWR@closethree\LWR@closetwo
4544 \global\let\LWR@closetwo\LWR@closeone
4545 \global\let\LWR@closeone#1
4546 \global\let\LWR@closedepthtwelve\LWR@closedeptheleven
4547 \global\let\LWR@closedeptheleven\LWR@closedephten
4548 \global\let\LWR@closedephten\LWR@closedepthnine
4549 \global\let\LWR@closedepthnine\LWR@closedeptheight
4550 \global\let\LWR@closedeptheight\LWR@closedepthseven
4551 \global\let\LWR@closedepthseven\LWR@closedepthsix
4552 \global\let\LWR@closedepthsix\LWR@closedepthfive
4553 \global\let\LWR@closedepthfive\LWR@closedepthfour
4554 \global\let\LWR@closedepthfour\LWR@closedepththree
4555 \global\let\LWR@closedepththree\LWR@closedepthtwo
4556 \global\let\LWR@closedepthtwo\LWR@closedepthone
4557 \global\let\LWR@closedepthone#2
4558 }

```

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

```

4559 \newcommand*{\popclose}
4560 {
4561 \global\let\LWR@closeone\LWR@closetwo
4562 \global\let\LWR@closetwo\LWR@closethree
4563 \global\let\LWR@closethree\LWR@closefour
4564 \global\let\LWR@closefour\LWR@closefive
4565 \global\let\LWR@closefive\LWR@closesix
4566 \global\let\LWR@closesix\LWR@closeseven
4567 \global\let\LWR@closeseven\LWR@closeeight
4568 \global\let\LWR@closeeight\LWR@closenine
4569 \global\let\LWR@closenine\LWR@closeten
4570 \global\let\LWR@closeten\LWR@closeeleven
4571 \global\let\LWR@closeeleven\LWR@closetwelve
4572 \global\let\LWR@closedepthone\LWR@closedepthtwo
4573 \global\let\LWR@closedepthtwo\LWR@closedepththree
4574 \global\let\LWR@closedepththree\LWR@closedepthfour
4575 \global\let\LWR@closedepthfour\LWR@closedepthfive
4576 \global\let\LWR@closedepthfive\LWR@closedepthsix
4577 \global\let\LWR@closedepthsix\LWR@closedepthseven
4578 \global\let\LWR@closedepthseven\LWR@closedeptheight
4579 \global\let\LWR@closedeptheight\LWR@closedepthnine
4580 \global\let\LWR@closedepthnine\LWR@closedephten
4581 \global\let\LWR@closedephten\LWR@closedeptheleven
4582 \global\let\LWR@closedeptheleven\LWR@closedepthtwelve
4583 }

4584 \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: 4585 `\begin{warpHTML}`

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

```
4586 \NewDocumentCommand{\LWR@setexparray}{m m m}{%
4587   \xdef\LWR@thisexparrayname{#1#2}%
4588   \ifstrempy{#3}%
4589   {\csgdef{\LWR@thisexparrayname}{}}%
4590   {\csxdef{\LWR@thisexparrayname}{#3}}%
4591 }
```

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

```
4592 \newcommand*{\LWR@getexparray}[2]{%
4593   \@nameuse{#1#2}%
4594 }

4595 \end{warpHTML}
```

43 Localizing catcodes

for HTML & PRINT: 4596 `\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.

```
4597 \newcommand{\StartDefiningTabulars}{%
4598 \LWR@traceinfo{StartDefiningTabulars}%
4599 \warpHTMLOnly{\catcode'\&=\active}%
4600 }
```

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

```
4601 \newcommand{\StopDefiningTabulars}{%
4602 \LWR@traceinfo{StopDefiningTabulars}%
4603 \warpHTMLOnly{\catcode'\&=4}%
4604 }
```

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.

```
4605 \newbool{LWR@mathmacro}
4606 \boolfalse{LWR@mathmacro}
```

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

```
4607 \newcommand{\StartDefiningMath}{%
4608 \LWR@traceinfo{StartDefiningMath}%
4609 \warpHTMLOnly{\catcode'\$=\active}%
4610 }
```

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

```
4611 \newcommand{\StopDefiningMath}{%
4612 \LWR@traceinfo{StopDefiningMath}%
4613 \warpHTMLOnly{\catcode'\$=3}% math shift
4614 }

4615 \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: 4616 `\begin{warpall}`

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

```
4617 \newbool{LWR@dynamicmath}
4618 \boolfalse{LWR@dynamicmath}
```

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

```
4619 \newcommand{\inlinemathother}{%
4620 \LWR@traceinfo{inlinemathother}%
4621 \booltrue{LWR@dynamicmath}%
4622 }
```

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

```
4623 \newcommand{\inlinemathnormal}{%
4624 \LWR@traceinfo{inlinemathnormal}%
4625 \boolfalse{LWR@dynamicmath}%
4626 }
```

```
4627 \end{warpall}
```

45 Sanitizing labels and filenames

Special handling for underscores in labels and filenames.

for HTML output: 4628 \begin{warpHTML}

\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.

```
4629 \newcommand*\LWR@sanitized{}
```

\LWR@sanitize {<text>}

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

```
4630 \newcommand*\LWR@sanitize}[1]{%
4631 \LWR@traceinfo{LWR@sanitize: !#1!}%
4632 \edef\LWR@sanitized{#1}%
4633 \LWR@traceinfo{LWR@sanitize expanded: !\LWR@sanitized!}%
4634 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
4635 \LWR@traceinfo{LWR@sanitize result: !\LWR@sanitized!}%
4636 }

4637 \end{warpHTML}
```

46 HTML entities

for HTML output: 4638 \begin{warpHTML}

HTML Unicode entities:

```
4639 \let\LWR@origampersand\&
```

\HTMLentity {<entitytag>}

```
4640 \newcommand*\HTMLentity}[1]{%
4641 % \LWR@traceinfo{HTMLentity \detokenize{#1}}%
4642 \begingroup%
4643 \LWR@FBcancel%
4644 \LWR@origampersand#1;%
4645 \endgroup%
4646 % \LWR@traceinfo{HTMLentity done}%
4647 }
```

```

\HTMLUnicode  {\langle hex_unicode \rangle}

4648 \newcommand*{\HTMLUnicode}[1]{\HTMLentity{\LWR@origpound{x#1}}

\&

4649 \renewrobustcmd*{\&}{\HTMLentity{amp}}

\textless
\textgreater
4650 \let\LWR@origtextless\textless
4651 \renewcommand*{\textless}{\HTMLentity{lt}}
4652
4653 \let\LWR@origtextgreater\textgreater
4654 \renewcommand*{\textgreater}{\HTMLentity{gt}}

4655 \end{warpHTML}

```

47 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: 4656 `\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.

```
4657 \providecommand*{\BaseJobname}{\jobname}
```

`\HTMLFilename` The prefix for all generated HTML files other than the home page, defaulting to empty. See section [8.4.1](#).

```
4658 \providecommand*{\HTMLFilename}{}
```

`\HomeHTMLFilename` The filename of the home page, defaulting to the `\BaseJobname`. See section [8.4.1](#).

```
4659 \providecommand*{\HomeHTMLFilename}{\BaseJobname}
```

`\SetHTMLFileNumber` $\{ \langle number \rangle \}$

Sets the file number for the next file to be generated. 0 is the home page. Use just before the next sectioning command, and set it to one less than the desired number of the next section. May be used to generate numbered groups of nodes such as 100+ for one chapter, 200+ for another chapter, etc.

```
4660 \newcommand*{\SetHTMLFileNumber}[1]{%
4661 \setcounter{LWR@htmlfilenumber}{#1}%
4662 }
```

Bool `FileSectionNames` Selects how to create HTML file names.

Defaults to use section names in the filenames.

```
4663 \newbool{FileSectionNames}
4664 \booltrue{FileSectionNames}
```

```
4665 \end{warpall}
```

for HTML output: `4666 \begin{warpHTML}`

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

```
4667 \newcounter{LWR@htmlfilenumber}
4668 \setcounter{LWR@htmlfilenumber}{0}
```

`\LWR@htmlsectionfilename` $\{ \langle htmlfilenumber \text{ or } name \rangle \}$

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

```
4669 \newcommand*{\LWR@htmlsectionfilename}[1]{%
4670 \LWR@traceinfo{LWR@htmlsectionfilename A !\detokenize{#1}!}%
```

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

```
4671 % \LWR@traceinfo{about to assign temp}%
4672 \edef\LWR@tempone{#1}%
4673 \LWR@traceinfo{about to compare with ??}%
4674 \ifthenelse{\equal{\LWR@tempone}{??}}{%
4675 {\LWR@traceinfo{found ??}}%
4676 {\LWR@traceinfo{not found ??}}%
4677 \LWR@traceinfo{about to compare with zero or empty}%
4678 \ifthenelse{%
4679     \equal{\LWR@tempone}{0}}%
```

```

4680 \OR \equal{\LWR@tempone}{}%
4681 \OR \equal{\LWR@tempone}{??}%
4682 }%
4683 {%
4684 \LWR@traceinfo{LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
4685 \HomeHTMLFilename.html%
4686 }%

```

For a L^AT_EX section named “Index” or “index” without a prefix, create a filename with a leading underscore to avoid colliding with the HTML filename `index.html`:

```

4687 {%
4688 \LWR@traceinfo{LWR@htmlsectionfilename C \LWR@tempone}%
4689 \ifthenelse{%
4690 \equal{\HTMLFilename}{ } \AND
4691 \equal{\LWR@tempone}{Index} \OR
4692 \equal{\LWR@tempone}{index}}%
4693 }%
4694 {%
4695 \LWR@traceinfo{Prefixing the index name with an underscore.}%
4696 \_#1.html%
4697 }%

```

Otherwise, create a filename with the chosen prefix:

```

4698 {\HTMLFilename\LWR@isolate{#1}.html}%
4699 }%
4700 \LWR@traceinfo{LWR@htmlsectionfilename Z}%
4701 }

```

`\LWR@htmlrefsectionfilename` $\{ \langle label \rangle \}$

Prints the filename for the given label

```

4702 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
4703 \LWR@traceinfo{LWR@htmlrefsectionfilename: !\detokenize{#1}!}%

```

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

```

4704 \begingroup%
4705 \LWR@nullfonts%
4706 \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
4707 \endgroup%
4708 \LWR@traceinfo{LWR@htmlrefsectionfilename: done}%
4709 }

4710 \end{warpHTML}

```

48 Homepage link

for HTML & PRINT: 4711 `\begin{warpall}`

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

```
4712 \newcommand{\linkhomename}{Home}
```

```
4713 \end{warpall}
```

for HTML output: 4714 `\begin{warpHTML}`

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

```
4715 \newcommand*{\LinkHome}{%
```

```
4716 \LWR@subhyperrefclass{\HomeHTMLFilename.html}{\linkhomename}{\linkhome}%
```

```
4717 }
```

```
4718 \end{warpHTML}
```

for PRINT output: 4719 `\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.

```
4720 \AtBeginDocument{
```

```
4721 \@ifundefined{hyperref}{
```

```
4722   \newcommand*{\LinkHome}{\linkhomename\ --- page \pageref{page-LWRfirstpage}}
```

```
4723 }{
```

```
4724   \newcommand*{\LinkHome}{\hyperref[page-LWRfirstpage]{\linkhomename}}
```

```
4725 }
```

```
4726 }
```

```
4727
```

```
4728 \AfterEndPreamble{\label{page-LWRfirstpage}}
```

```
4729 \end{warpprint}
```

for HTML output: 4730 `\begin{warpHTML}`

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

```

4731 \newcommand*{\LWR@topnavigation}{
4732 \LWR@html@elementclassline{nav}{topnavigation}{\LinkHome}
4733 }

```

`\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.

```

4734 \newcommand*{\LWR@botnavigation}{
4735 \LWR@html@elementclassline{nav}{botnavigation}{\LinkHome}
4736 }

```

```

4737 \end{warpHTML}

```

49 `\LWRPrintStack` diagnostic tool



Diagnostics tool: Prints the \LaTeX nesting depth values for the stack levels. `\LWR@startpars` is used before printing the stack, so that `\LWRPrintStack` may be called from anywhere in the normal text flow.

for HTML output: 4738 `\begin{warpHTML}`

`\LWRPrintStack` Prints the closedepth stack.

```

4739 \newcommand*{\LWR@subprintstack}{
4740 \LWR@closedepthone\ \LWR@closedepthtwo\ \LWR@closedepththree\
4741 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\
4742 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\
4743 \LWR@closedephten\ \LWR@closedeptheleven\ \LWR@closedephtwelve\
4744 }
4745
4746 \newcommand*{\LWRPrintStack}{
4747 \LWR@startpars
4748 \LWR@subprintstack
4749 }

```

```

4750 \end{warpHTML}

```

for PRINT output: 4751 `\begin{warpprint}`

```

4752 \newcommand*{\LWRPrintStack}{}

```

```

4753 \end{warpprint}

```

50 Closing stack levels

for HTML output: 4754 \begin{warpHTML}

Close one nested level:

```
4755 \newcommand*{\LWR@closeoneprevious}{%
4756
4757 \LWR@closeone
4758
4759 \popclose
4760 }
```

\LWR@closeprevious $\langle depth \rangle$ Close everything up to the given depth:

```
4761 \newcommand*{\LWR@closeprevious}[1]{
4762 \LWR@traceinfo{\LWR@closeprevious to depth #1, depths are \LWR@subprintstack}%
```

Close any pending paragraph:

```
4763 \LWR@stoppars%
```

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

```
4764 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}>{\#1}}}%
4765 {%
4766   \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
4767   \LWR@closeoneprevious%
4768 }%
4769 \ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}={\#1}}}%
4770 {%
4771   \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
4772   \LWR@closeoneprevious%
4773 }{}%
4774 \LWR@traceinfo{\LWR@closeprevious: done, depths are \LWR@subprintstack}%
4775 }

4776 \end{warpHTML}
```

51 PDF pages and styles

for HTML output: 4777 \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.

```
4778 \newcommand{\LWR@forcenewpage}{%
4779 \LWR@traceinfo{\LWR@forcenewpage}%
4780 \ifinner\else%
4781 \LWR@stoppars\LWR@orignewpage\LWR@startpars%
4782 \fi%
4783 }
```

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

`\pagestyle` $\langle style \rangle$

```
4784 \renewcommand*\pagestyle}[1]{}

```

`\thispagestyle` $\langle style \rangle$

```
4785 \renewcommand*\thispagestyle}[1]{}

```

`\markboth` $\langle left \rangle$ $\langle right \rangle$

```
4786 \renewcommand*\markboth}[2]{}

```

`\markright` $\langle right \rangle$

```
4787 \renewcommand*\markright}[1]{}

```

`\raggedbottom`

```
4788 \renewcommand*\raggedbottom{}

```

`\flushbottom`

```
4789 \renewcommand*\flushbottom{}

```

`\sloppy`

```
4790 \renewcommand*\sloppy{}

```

`\fussy`

```
4791 \renewcommand*\fussy{}

```

```
\pagenumbering * {\commands}
```

```
4792 \RenewDocumentCommand{\pagenumbering}{s m}{}

```

```
4793 \end{warpHTML}

```

52 HTML tags, spans, divs, elements

for HTML output: 4794 \begin{warpHTML}

52.1 Mapping L^AT_EX sections to HTML sections

```
4795 \newcommand*\LWR@tagtitle}{h1}
4796 \newcommand*\LWR@tagtitleend}{/h1}
4797 \newcommand*\LWR@tagpart}{h2}
4798 \newcommand*\LWR@tagpartend}{/h2}
4799 \newcommand*\LWR@tagchapter}{h3}
4800 \newcommand*\LWR@tagchapterend}{/h3}
4801 \newcommand*\LWR@tagsection}{h4}
4802 \newcommand*\LWR@tagsectionend}{/h4}
4803 \newcommand*\LWR@tagsubsection}{h5}
4804 \newcommand*\LWR@tagsubsectionend}{/h5}
4805 \newcommand*\LWR@tagsubsubsection}{h6}
4806 \newcommand*\LWR@tagsubsubsectionend}{/h6}
4807 \newcommand*\LWR@tagparagraph}{span class="paragraph"}
4808 \newcommand*\LWR@tagparagraphend}{/span}
4809 \newcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
4810 \newcommand*\LWR@tagsubparagraphend}{/span}
4811
4812 \newcommand*\LWR@tagregularparagraph}{p}

```

52.2 Babel-French tag modifications

Adjust babel-french for HTML spaces. So far, this only works for *pdf_latex* and *xelatex*.

(Emulates or patches code by DANIEL FLIPO.)

```
4813 \providecommand*\LWR@FBcancel}{}
4814
4815 \AtBeginDocument{%
4816 \@ifundefined{frenchbsetup}%
4817 {}%
4818 {%

```

```

4819   \frenchbsetup{FrenchFootnotes=false}%

4820 %
4821   \LetLtxMacro\LWR@FBcancel\NoAutoSpacing%
4822   \renewrobustcmd*{\FBcolonspace}{%
4823     \begingroup%
4824     \LWR@FBcancel%
4825     \LWR@origampersand{}nbsp;%
4826     \endgroup%
4827   }%
4828   \renewrobustcmd*{\FBthinspace}{%
4829     \begingroup%
4830     \LWR@FBcancel%
4831     \LWR@origampersand\LWR@origpound{}x202f;% \,
4832     \endgroup%
4833   }%
4834   \renewrobustcmd*{\FBguillspace}{%
4835     \begingroup%
4836     \LWR@FBcancel%
4837     \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}
4838     \endgroup%
4839   }%
4840   \DeclareDocumentCommand{\FBmedkern}{-}{%
4841     \begingroup%
4842     \LWR@FBcancel%
4843     \LWR@origampersand\LWR@origpound{}x202f;% \,
4844     \endgroup%
4845   }%
4846   \DeclareDocumentCommand{\FBthickkern}{-}{%
4847     \begingroup%
4848     \LWR@FBcancel%
4849     \LWR@origampersand{}nbsp;% ~
4850     \endgroup%
4851   }%
4852   \renewrobustcmd*{~}{\HTMLentity{nbsp}}% was overwritten by babel-french
4853   \iffBunicode%
4854   \else%
4855     \DeclareTextSymbol{\FBtextellipsis}{LY1}{133}%
4856     \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
4857   \fi%
4858 }%
4859 }

```

52.3 HTML tags

`\LWR@htmltag` `{<tag>}` Break ligatures and use upright apostrophes in HTML tags.

`\protect` is in case the tag appears in TOC, LOF, LOT.

```

4860 \newcommand*\LWR@htmltagc}[1]{%
4861 \LWR@traceinfo{LWR@htmltagc !\detokenize{#1}!}%
4862 \begingroup%
4863 \LWR@FBcancel%
4864 \ifmode\else\protect\LWR@origttfamily\fi%
4865 \protect\LWR@origtextless%
4866 \LWR@isolate{#1}%
4867 \protect\LWR@origtextgreater%
4868 \endgroup%
4869 % \LWR@traceinfo{LWR@htmltagc: done}%
4870 }

```

Env `LWR@nestspan` Disable minipage, `\parbox`, and HTML `<div>`s inside a ``.

- ⚠ `\begin{LWR@nestspan}` must follow the opening `` tag to allow a paragraph to start if the span is at the beginning of a new paragraph.
- ⚠ `\end{LWR@nestspan}` must follow the `` or a `<p>` may appear inside the span.

```

4871 \newcommand*\LWR@nestspanitem}{%
4872 \ifnewlist\else{\LWR@htmltagc{br /}}\fi%
4873 \LWR@origitem%
4874 }
4875
4876 \newenvironment*LWR@nestspan}
4877 {%
4878 \LWR@traceinfo{LWR@nestspan starting}%
4879 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
4880 {%
4881   \LWR@traceinfo{LWR@nestspan: inside a lateximage}%
4882 }%
4883 {% not in a lateximage
4884   \LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
4885   \addtocounter{LWR@spandepth}{1}%
4886   \RenewDocumentEnvironment{minipage}{0{t} o 0{t} m}{-}{-}%
4887   \RenewDocumentEnvironment{BlockClass}{o m}{-}{-}%
4888   \renewcommand{\BlockClassSingle}[2]{##2}%
4889   \renewcommand{\LWR@forcenewpage}{-}%
4890   \renewcommand{\LWR@liststart}{-}%
4891   \let\item\LWR@nestspanitem%
4892   }%
4893   \renewcommand{\LWR@listend}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
4894 }% not in a lateximage
4895 \LWR@traceinfo{LWR@nestspan starting: done}%
4896 }% starting env
4897 {% ending env
4898 \LWR@traceinfo{LWR@nestspan ending}%

```

```

4899 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
4900 {}%
4901 {\addtocounter{LWR@spandepth}{-1}}%
4902 \LWR@traceinfo{LWR@nestspan ending: done}%
4903 }
4904
4905 \AfterEndEnvironment{LWR@nestspan}{\global\let\par\LWR@closeparagraph}

```

`\LWR@htmlspan` $\langle tag \rangle$ $\langle text \rangle$



`\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.

```

4906 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
4907 \LWR@ensuredoingapar%
4908 \LWR@htmltagc{#1}%
4909 \begin{LWR@nestspan}%
4910 #2%
4911 \LWR@htmltagc{/#1}%
4912 \end{LWR@nestspan}%
4913 }

```

`\LWR@htmlspanclass` [$\langle style \rangle$] $\langle class \rangle$ $\langle text \rangle$

```

4914 \NewDocumentCommand{\LWR@htmlspanclass}{o m +m}{%
4915 \LWR@traceinfo{LWR@htmlspanclass |#1|#2|}%
4916 \LWR@ensuredoingapar%
4917 \LWR@subhtmlclass{span}[#1]{#2}%
4918 \begin{LWR@nestspan}%
4919 #3%
4920 \LWR@htmltagc{/span}%
4921 \LWR@traceinfo{LWR@htmlspanclass done}%
4922 \end{LWR@nestspan}%
4923 }

```

`\LWR@htmltag` $\langle tag \rangle$

Print an HTML tag: `<tag>`

```

4924 \newcommand*{\LWR@htmltag}[1]{%
4925 % \LWR@traceinfo{LWR@htmltagb !\detokenize{#1}!}%
4926 \LWR@htmltagc{#1}%
4927 % \LWR@traceinfo{LWR@htmltagb: done}%
4928 }

```

52.4 Block tags and comments

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

```

\LWR@htmlopencomment
\LWR@htmlclosecomment
4929 \newcommand*{\LWR@htmlopencomment}{%
4930 {%
4931 % \LWR@traceinfo{\LWR@htmlopencomment}%
4932 \begingroup%
4933 \LWR@FBcancel%
4934 \ifmode\else\protect\LWR@origttfamily\fi%
4935 \LWR@print@mbox{\LWR@origtextless{!-/-}%
4936 \endgroup%
4937 }%
4938 }
4939
4940 \newcommand*{\LWR@htmlclosecomment}{%
4941 {%
4942 % \LWR@traceinfo{\LWR@htmlclosecomment}%
4943 \begingroup%
4944 \LWR@FBcancel%
4945 \ifmode\else\protect\LWR@origttfamily\fi%
4946 \LWR@print@mbox{-/-\LWR@origtextgreater}%
4947 \endgroup%
4948 }%
4949 }

\LWR@htmlcomment  {<comment>}

4950 \newcommand{\LWR@htmlcomment}[1]{%
4951 \LWR@htmlopencomment}%
4952 {%
4953 \LWR@origttfamily% break ligatures
4954 #1%
4955 }%
4956 \LWR@htmlclosecomment{}}

\LWR@htmlblockcomment  {<comment>}

4957 \newcommand{\LWR@htmlblockcomment}[1]
4958 {\LWR@stoppars\LWR@htmlcomment{#1}\LWR@startpars}

\LWR@htmlblocktag  {<tag>} print a stand-alone HTML tag

```

```

4959 \newcommand*{\LWR@htmlblocktag}[1]{%
4960 \LWR@stoppars%
4961 \LWR@htmltag{#1}%
4962 \LWR@startpars%
4963 }

```

52.5 Div class and element class

```
\LWR@subhtmlclass {<element>} [<style>] {<class>}
```

Factored and reused in several places.

The trailing spaces allow more places for a line break.

The use of `\textquotedbl` instead of `"` provides improved compatibility with xeCJK.

```

4964 \NewDocumentCommand{\LWR@subhtmlclass}{m O{} m}{%
4965 \LWR@traceinfo{\LWR@subhtmlclass !#1!#2!#3!}%
4966 \ifblank{#2}%
4967 {% empty option
4968   \LWR@htmltag{#1 class=\textquotedbl#3\textquotedbl}%
4969 }%
4970 {% non-empty option
4971   \LWR@htmltag{%
4972     #1 % space
4973     class=\textquotedbl#3\textquotedbl\ % space
4974     style=\textquotedbl#2\textquotedbl%
4975   }%
4976 }%
4977 \LWR@traceinfo{\LWR@subhtmlclass done}%
4978 }

```

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

```

4979 \NewDocumentCommand{\LWR@htmlclass}{m o m}{%
4980 \LWR@stoppars%
4981 \LWR@subhtmlclass{#1}[#2]{#3}%
4982 \LWR@startpars%
4983 }

```

```
\LWR@htmlclassend {<element>} {<class>}
```

```

4984 \newcommand*{\LWR@htmlclassend}[2]{%
4985 \LWR@stoppars%
4986 \LWR@htmltag{/#1}%

```

```

4987 \ifbool{HTMLDebugComments}{%
4988   \LWR@htmlcomment{End of #1 ‘‘#2’’}%
4989 }{}%
4990 \LWR@startpars%
4991 }

```

`\LWR@htmldivclass` [`<style>`] [`<class>`]

```

4992 \NewDocumentCommand{\LWR@htmldivclass}{o m}{%
4993 \LWR@htmlclass{div}[#1]{#2}%
4994 }

```

`\LWR@htmldivclassend` [`<class>`]

```

4995 \newcommand*{\LWR@htmldivclassend}[1]{%
4996 \LWR@htmlclassend{div}{#1}%
4997 }

```

52.6 Single-line elements

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

`\LWR@htmlclassline` [`<element>`] [`<style>`] [`<class>`] [`<text>`]

```

4998 \NewDocumentCommand{\LWR@htmlclassline}{m o m +m}{%
4999 \LWR@stoppars
5000 \LWR@subhtmlclass{#1}[#2]{#3}%
5001 #4%
5002 \LWR@htmltag{/#1}
5003 \LWR@startpars
5004 }

```

52.7 HTML5 semantic elements

`\LWR@htmllement` [`<element>`]

```

5005 \newcommand*{\LWR@htmllement}[1]{%
5006 \LWR@htmlblocktag{#1}
5007 }

```

`\LWR@htmllementend` $\{\langle element \rangle\}$

```
5008 \newcommand*\LWR@htmllementend}[1]{%
5009 \LWR@stoppars
5010 \LWR@htmltag{/#1}
5011 \LWR@startpars
5012 }
5013
5014 \end{warpHTML}
```

52.8 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 89.

Env `BlockClass` $[\langle style \rangle] \{\langle class \rangle\}$ High-level interface for `<div>` classes.

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

for PRINT output:

```
5015 \begin{warpprint}
5016 \NewDocumentEnvironment{BlockClass}{o m}{-}{-}%
5017 \end{warpprint}
```

for HTML output:

```
5018 \begin{warpHTML}
5019 \NewDocumentEnvironment{LWR@print@BlockClass}{o m}{-}{-}%
5020 \NewDocumentEnvironment{LWR@HTML@BlockClass}{o m}%
5021 {%
5022     \LWR@origpar%
5023     \LWR@htmldivclass[#1]{#2}%
5024 }
5025 {\LWR@htmldivclassend{#2}}
5026
5027 \LWR@formattedenv{BlockClass}
5028 \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:

```
5029 \begin{warpall}
5030 \newcommand{\BlockClassSingle}[2]{#2}
5031 \end{warpall}
```

for HTML output: 5032 `\begin{warpHTML}`
 5033 `\newcommand{\LWR@HTML@BlockClassSingle}[2]{%`
 5034 `\LWR@origpar%`
 5035 `\LWR@html@elementclassline{div}{#1}{#2}%`
 5036 `}`
 5037
 5038 `\LWR@formatted{BlockClassSingle}`
 5039 `\end{warpHTML}`

`\InlineClass` (`<<WP style>>`) [`<<style>>`] [`<<class>>`] [`<<text>>`]

High-level interface for inline span classes.

`<<WP style>>` is CSS styling to add when formatting for a word processor import.

`<<style>>` is the CSS styling to add when not formatting for a word processor.

for PRINT output: 5040 `\begin{warpprint}`
 5041 `\NewDocumentCommand{\InlineClass}{D{({})}{ } o m +m}{#4}%`
 5042 `\end{warpprint}`

for HTML output: 5043 `\begin{warpHTML}`
 5044 `\NewDocumentCommand{\LWR@print@InlineClass}{D{({})}{ } o m +m}{#4}%`
 5045
 5046 `\NewDocumentCommand{\LWR@HTML@InlineClass}{D{({})}{ } o m +m}{%`
 5047 `\ifbool{FormatWP}{%`
 5048 `\LWR@htmlspanclass[#1]{#3}{#4}%`
 5049 `}{%`
 5050 `\LWR@htmlspanclass[#2]{#3}{#4}%`
 5051 `}%`
 5052 `}`
 5053
 5054 `\LWR@formatted{InlineClass}`
 5055 `\end{warpHTML}`

Env `LWR@BlockClassWP` [`<<WPstyle>>`] [`<<HTMLstyle>>`] [`<<class>>`] Low-level interface for `<div>` classes with an automatic float ID. These are often used when `\ifbool{FormatWP}`.

The use of `\textquotedbl` instead of `"` provides improved compatibility with XeCJK.

for PRINT output: 5056 `\begin{warpprint}`
 5057 `\NewDocumentEnvironment{LWR@BlockClassWP}{m m m}{ }{ }%`
 5058 `\end{warpprint}`

for HTML output: 5059 `\begin{warpHTML}`
 5060 `\NewDocumentEnvironment{LWR@print@LWR@BlockClassWP}{m m m}{ }{ }%`
 5061 `\NewDocumentEnvironment{LWR@HTML@LWR@BlockClassWP}{m m m}{%`
 5062 `{%`

```

5063 \LWR@stoppars%
5064 \ifbool{FormatWP}%
5065 {%
5066   \addtocounter{LWR@thisautoidWP}{1}%

5067   \LWR@htmltag{%
5068     div class=\textquotedbl#3\textquotedbl\ % space
5069     id=\textquotedbl%
5070     \LWR@print@mbbox{autoidWP-\arabic{LWR@thisautoidWP}}%
5071     \textquotedbl%
5072     \ifblank{#1}{\{ style=\textquotedbl#1\textquotedbl}%
5073   }%
5074 }% FormatWP
5075 {% not FormatWP
5076   \LWR@htmltag{%
5077     div class=\textquotedbl#3\textquotedbl%
5078     \ifblank{#2}{\{ style=\textquotedbl#2\textquotedbl}%
5079   }%
5080 }% not FormatWP
5081 \LWR@startpars%
5082 }
5083 {\LWR@htmldivclassend{#3}}
5084
5085 \LWR@formattedenv{LWR@BlockClassWP}
5086 \end{warpHTML}

```

52.9 Closing HTML tags

for HTML output: 5087 \begin{warpHTML}

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

```

5088 \newcommand*{\LWR@printclosepart}
5089   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{}}
5090 \newcommand*{\LWR@printclosechapter}
5091   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
5092 \newcommand*{\LWR@printclosesection}
5093   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
5094 \newcommand*{\LWR@printclosesubsection}
5095   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
5096 \newcommand*{\LWR@printclosesubsubsection}
5097   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsubsection}}{}}
5098 \newcommand*{\LWR@printcloseparagraph}
5099   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
5100 \newcommand*{\LWR@printclosesubparagraph}
5101   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}

```

Lists require closing HTML tags:

```

5102 \newcommand*{\LWR@printcloselistitem}
5103     {\LWR@htmltag{/li}}
5104 \newcommand*{\LWR@printclosedescitem}
5105     {\LWR@htmltag{/dd}}
5106 \newcommand*{\LWR@printcloseitemize}
5107     {\LWR@htmltag{/ul}}
5108 \newcommand*{\LWR@printcloseenumerate}
5109     {\LWR@htmltag{/ol}}
5110 \newcommand*{\LWR@printclosedescription}
5111     {\LWR@htmltag{/dl}}

5112 \end{warpHTML}

```

53 Paragraph handling

These commands generate the HTML paragraph tags when allowed and required.

Paragraph tags are or are not allowed depending on many conditions. Section 54 has high-level commands which allow paragraph-tag generation to start/stop. Even when allowed (`\LWR@doingstartpars`), tags are not generated until a \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: 5113 `\begin{warpHTML}`

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

```

5114 \newcounter{LWR@spandepth}
5115 \setcounter{LWR@spandepth}{0}

```

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

```

5116 \newbool{LWR@doingstartpars}
5117 \boolfalse{LWR@doingstartpars}

```

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

```

5118 \newbool{LWR@doingapar}
5119 \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:

```
5120 \newcommand*{\LWR@ensuredoingapar}{%
5121 \ifbool{LWR@doingstartpars}%
5122 {\global\booltrue{LWR@doingapar}}%
5123 {}%
5124 }
```

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

```
5125 \def\P@parnotes@auto{}
```

`\LWR@openparagraph`

```
5126 \newcommand*{\LWR@openparagraph}
5127 {%
```

See if paragraph handling is enabled:

```
5128 \ifbool{LWR@doingstartpars}%
5129 {% handling pars
```

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

```
5130 \ifboolexpr{
5131   test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5132   test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5133 }% nested par tags?
```

If so: Do nothing if already started a `lateximage` page. Cannot nest a `lateximage`. Also do nothing if already inside a ``. Do not nest paragraph tags inside a ``.

```
5134 {}% no nested par tags
```

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

```
5135 {% yes nest par tags
```

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

```
5136 \PN@parnotes@auto%
```

The opening paragraph tag:

```
5137      \LWR@htmltagc{\LWR@tagregularparagraph}%
```

Now have started a paragraph.

```
5138      \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.)

```
5139      \let\par\LWR@closeparagraph%
5140      }% end of yes nest par tags
5141 }% end of handling pars
5142 {}% not handling pars
5143 }
```

\LWR@closeparagraph

```
5144 \newcommand*{\LWR@closeparagraph}
5145 {%
5146 % \LWR@traceinfo{\LWR@closeparagraph}%
```

See if paragraph handling is enabled:

```
5147 \ifbool{\LWR@doingapar}%
```

If currently in paragraph mode:

```
5148 {% handling pars
```

See if already started a lateximage or a :

```
5149      \ifboolexpr{
5150          test {\ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}} or
5151          test {\ifnumcomp{\value{\LWR@spandepth}}{>}{0}}
5152      }%
```

Do nothing if already started a lateximage or a , but add a parbreak if in a span but not a lateximage.

```
5153      {% no nested par tags
5154          \ifboolexpr{
5155              test {\ifnumcomp{\value{\LWR@spandepth}}{>}{0}} and
5156              test {\ifnumcomp{\value{\LWR@lateximagedepth}}{=} {0}}
5157          }%
```

```

5158     {\ifbool{LWR@intabularmetadata}{}{\unskip\LWR@htmltagc{br /}}}%
5159     {}}%
5160   }% no nested par tags

```

If have not already started a lateximage or a :

```

5161   {% yes nest par tags

```

Print a closing tag and some extra vertical space.

```

5162     \unskip%
5163     \LWR@htmltagc{/\LWR@tagregularparagraph}%
5164     \LWR@orignewline%

```

No longer doing a paragraph:

```

5165     \global\boolfalse{LWR@doingapar}%

```

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

```

5166     \global\boolfalse{LWR@minipagethispar}%

```

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

```

5167     \PN@parnotes@auto%
5168   }% end of yes nest par tags
5169 }% end of handling pars

```

Add a parbreak if in a span, but not in a table outside a row:

```

5170 {% not handling pars
5171   \ifnumcomp{\value{LWR@spandepth}}{>}{0}%
5172   {\ifbool{LWR@intabularmetadata}{}{\unskip\LWR@htmltagc{br /}}}%
5173   {}}%
5174 }% not handling pars

```

In most cases, finish with a L^AT_EX \par, but in the case of paragraphs between lines in a tabular fetch the next token instead:

```

5175 \ifboolexpr{%
5176   not bool {LWR@doingapar} and
5177   test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
5178   test {
5179     \ifnumcomp{\value{LWR@tabulardepth}}{=} {\value{LWR@tabularpardepth}}
5180   } and
5181   bool {LWR@intabularmetadata} and
5182   not bool {LWR@tableparcell} and

```

```

5183   test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}}
5184 }%
5185 {%
5186   \LWR@getmynexttoken%
5187 }{%
5188   \LWR@origpar%
5189 }%
5190 }

5191 \end{warpHTML}

```

54 Paragraph start/stop handling

These commands allow/disallow the generation of HTML paragraph tags.

Section 53 has the commands which actually generate the tags.

The `everyhook` package is used to generate the opening paragraph tags. The closing tags are generated by `\par`.

for HTML output: 5192 `\begin{warpHTML}`

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

```

5193 \newcommand*{\LWR@startpars}%
5194 {%
5195 % \LWR@traceinfo{\LWR@startpars}%

```

Ignore if inside a span:

```

5196 \ifnumcomp{\value{LWR@spandepth}}{>}{0}%
5197 }{%
5198 {%

```

See if currently handling HTML paragraphs:

```

5199   \ifbool{LWR@doingstartpars}%

```

If already in paragraph mode, do nothing.

```

5200   }%

```

If not currently in paragraph mode:

5201 {%

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

5202 \PushPreHook{par}{\LWR@openparagraph}%

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

5203 \let\par\LWR@closeparagraph

5204

5205 }% an intentionally blank line

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

5206 \global\setbool{LWR@doingstartpars}{true}%

No <par> tag yet to undo:

5207 \global\boolfalse{LWR@doingapar}%

5208 }% nestspan

5209 % \LWR@traceinfo{LWR@startpars: done}%

5210 }

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

5211 \newcommand*{\LWR@stoppars}%

5212 {%

Ignore if inside a span:

5213 \ifnumcomp{\value{LWR@spandepth}}{>}{0}%

5214 {}%

5215 {%

See if currently handling HTML paragraphs:

5216 \ifbool{LWR@doingapar}%

if currently in an HTML paragraph:

5217 {%

Print a closing tag:

5218 \unskip%

```
5219      \LWR@htmltagc{/\LWR@tagregularparagraph}%
5220      \LWR@orignewline%
```

No longer have an open HTML paragraph:

```
5221      \global\boolfalse{LWR@doingapar}%
```

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

```
5222      \global\boolfalse{LWR@minipagethispar}
5223
5224      }% an intentionally blank line
```

If was not in an HTML paragraph:

```
5225      {}%
```

See if currently allowing HTML paragraphs:

```
5226      \ifbool{LWR@doingstartpars}%
```

If so: clear the par hook to no longer catch paragraphs:

```
5227      {\ClearPreHook{par}}%
```

Else: Do nothing:

```
5228      {}%
```

No longer in paragraph mode:

```
5229      \global\setbool{LWR@doingstartpars}{false}%
```

No <p> tag to undo:

```
5230      \global\boolfalse{LWR@doingapar}%
5231      }% nestspan
5232      }
```

```
5233 \end{warpHTML}
```

55 Page headers and footers

for HTML & PRINT: 5234 \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.

```
5235 \newcommand{\LWR@firstpagetop}{} % for the home page alone
5236 \newcommand{\LWR@pagetop}{} % for all other pages
5237 \newcommand{\LWR@pagebottom}{}

```

`\HTMLFirstPageTop` $\{ \langle \textit>text and logos \rangle \}$

```
5238 \newcommand{\HTMLFirstPageTop}[1]{%
5239   \renewcommand{\LWR@firstpagetop}{#1}%
5240 }

```

`\HTMLPageTop` $\{ \langle \textit>text and logos \rangle \}$

```
5241 \newcommand{\HTMLPageTop}[1]{%
5242   \renewcommand{\LWR@pagetop}{#1}%
5243 }

```

`\HTMLPageBottom` $\{ \langle \textit>text and logos \rangle \}$

```
5244 \newcommand{\HTMLPageBottom}[1]{%
5245   \renewcommand{\LWR@pagebottom}{#1}%
5246 }

```

```
5247 \end{warpall}

```

56 CSS

for HTML output: 5248 `\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.

```
5249 \newcommand*{\LWR@currentcss}{lwarp.css}

```

`\CSSFilename` $\{ \langle \textit>new-css-filename.css \rangle \}$ Assigns the CSS file to be used by the following HTML pages.

```
5250 \newcommand*{\CSSFilename}[1]{%
5251 \renewcommand*{\LWR@currentcss}{#1}%

```

```

5252 \@onelevel@sanitize\LWR@currentcss%
5253 }
5254
5255 \end{warpHTML}

```

for PRINT output:

```

5256 \begin{warpprint}
5257 \newcommand*{\CSSFilename}[1]{}
5258 \end{warpprint}

```

57 Title, HTML meta author, HTML meta description

for HTML output:

```

5259 \begin{warpHTML}

```

`\title` $\{\langle title \rangle\}$ Modified to remember `\thetitle`, which is used to set the HTML page titles.

```

5260 \let\LWR@origtitle\title
5261
5262 \renewcommand*{\title}[1]{%
5263   \LWR@origtitle{#1}%
5264   \begingroup%
5265     \renewcommand{\thanks}[1]{}%
5266     \protected@xdef\thetitle{#1}%
5267   \endgroup%
5268 }

```

```

5269 \end{warpHTML}

```

for HTML & PRINT:

```

5270 \begin{warppall}

```

`\HTMLTitle` $\{\langle Titlename \rangle\}$ The Title to place into an HTML meta tag. The default is to use the document `\title`'s setting.

```

5271 \providecommand{\thetitle}{}
5272
5273 \newcommand{\theHTMLTitle}{\thetitle}
5274
5275 \newcommand{\HTMLTitle}[1]{\renewcommand{\theHTMLTitle}{#1}}

```

`\HTMLAuthor` $\{\langle authorname \rangle\}$ 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.

```

5276 \providecommand{\theauthor}{}
5277
5278 \newcommand{\theHTMLAuthor}{\theauthor}
5279
5280 \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` `{\langleNew HTML meta description.\rangle}` Assigns the HTML file's description meta tag.

```

5281 \newcommand{\LWR@currentHTMLDescription}{}
5282
5283 \newcommand{\HTMLDescription}[1]{%
5284 \renewcommand{\LWR@currentHTMLDescription}{#1}
5285 }
5286
5287 \end{warpall}

```

58 Footnotes

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.

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

```

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

```

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

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.

58.1 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^AT_EX box `\LWR@footnotes`. 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 58.4 for the implementation.

58.2 Minipage footnotes

See section 58.5 for how minipage footnotes are gathered. See section 88.3 for how minipage footnotes are placed into the document.

58.3 Titlepage thanks

See section 65.7 for titlepage footnotes.

58.4 Regular page footnote implementation

for HTML & PRINT: 5288 `\begin{warpall}`

Ctrl `FootnoteDepth` Determines how deeply to place footnotes in the HTML files, similar to `tocdepth`.
 Default: 3 The default of 3 places footnotes before each `\subsubsection` or higher. See table 9 for a table of L^AT_EX section headings.

```
5289 \newcounter{FootnoteDepth}
5290 \setcounter{FootnoteDepth}{3}
```

```
5291 \end{warpall}
```

for HTML output: 5292 `\begin{warpHTML}`

Patch L^AT_EX 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.

```
5293 \newbox\LWR@footnotes
```

Much of the following has unneeded print-mode formatting removed.

```
\@makefntext {{text}}
```

```
5294 \long\def\@makefntext#1{\textsuperscript{\@thefnmark}~#1}
```

```
\@makefnmark
```

```
5295 \def\@makefnmark{%
5296     \textsuperscript{\@thefnmark}%
5297 }
```

Footnotes may be in regular text, in which case paragraphs are tagged, or in a table data cell or `lateximage`, in which case paragraph tags must be added manually.

In a `lateximage` during HTML output, the `lateximage` is placed inside a print-mode `minipage`, but the footnotes are broken out by:

```
\def\@mpfn{footnote}
\def\thempfn{\thefootnote}
\let\@footnotetext\LWR@footnotetext
```

```
\LWR@footnotetext {{text}}
```

```
5298 \long\def\LWR@footnotetext#1{%
5299 \LWR@traceinfo{LWR@footnotetext}%
5300 \global\setbox\LWR@footnotes=\vbox{%
```

Add to any current footnotes:

```
5301     \unvbox\LWR@footnotes%
```

Remember the footnote number for `\ref`:

```
5302     \protected@edef\@currentlabel{%
5303         \csname p@footnote\endcsname\@thefnmark%
5304     }% \@currentlabel
```

Open a group:

```
5305     \color@begingroup%
```

Use HTML superscripts in the footnote even inside a lateximage:

```
5306 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a lateximage:

```
5307 \ifthenelse{%
5308     \boolean{LWR@doingstartpars} \AND%
5309     \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
5310 }{%
5311   {}%
5312   {\LWR@htmltagc{\LWR@tagregularparagraph}}%
```

Append the footnote to the list:

```
5313 \@makefntext{#1}%
```

Closing paragraph tag:

```
5314 \ifthenelse{%
5315     \boolean{LWR@doingstartpars} \AND%
5316     \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
5317 }{%
5318   {\par}%
5319   {%
5320     \LWR@htmltagc{/\LWR@tagregularparagraph}%
5321     \LWR@orignewline%
5322   }%
```

Close the group:

```
5323 \color@endgroup%
5324 }% vbox
```

Paragraph handling:

```
5325 \LWR@ensuredoingapar%
5326 }%
```

```
\@footnotetext {<text>}
```

```
5327 \LetLtxMacro\@footnotetext\LWR@footnotetext
```

58.5 Minipage footnote implementation

Patch L^AT_EX minipage footnotes to use a new `\box` instead of an insert for lwarp minipage footnotes. This avoids having the original `\@mpfootins` appear at the bottom of a `lateximage`, which is on its own new page.

```
5328 \newbox\LWR@mpfootnotes
```

```
\@mpfootnotetext {<{text}>}
```

```
5329 \long\def\@mpfootnotetext#1{%
5330 \LWR@traceinfo{\@mpfootnotetext}%
5331 \global\setbox\LWR@mpfootnotes\vbox{%
5332   \unvbox\LWR@mpfootnotes%
5333   \reset@font\footnotesize%
5334   \hsize\columnwidth%
5335   \@parboxrestore%
5336   \protected@edef\@currentlabel%
5337     {\csname p@mpfootnote\endcsname\@thefnmark}%
5338   \color@begingroup%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
5339   \ifthenelse{%
5340     \boolean{LWR@doingstartpars} \AND%
5341     \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
5342   }%
5343   {}%
5344   {\LWR@htmltagc{\LWR@tagregularparagraph}}%

5345   \@makefntext{%
5346     \ignorespaces#1%
5347   }%
```

Don't add the closing paragraph tag if are inside a `lateximage`:

```
5348   \ifthenelse{\cnttest{\value{LWR@lateximagedepth}}{>}{0}}%
5349   {}%
5350   {%
5351     \LWR@htmltagc{/\LWR@tagregularparagraph}%
5352     \LWR@orignewline%
5353   }%
5354   \color@endgroup%
5355 }% vbox
```

Paragraph handling:

```

5356 \LWR@ensuredoingapar%
5357 \LWR@traceinfo{@mpfootnotetext: done}%
5358 }

```

`\thempfootnote` Redefined to remove the `\itshape`, which caused an obscure compiling error in some situations.

```

5359 \AtBeginDocument{
5360 \def\thempfootnote{@\alph@c@mpfootnote}
5361 }

```

58.6 Printing pending footnotes

`\LWR@printpendingfootnotes` Enclose the footnotes in a class, print, then clear.

```

5362 \newcommand*{\LWR@printpendingfootnotes}{%
5363 \ifvoid\LWR@footnotes\else
5364   \LWR@forcenewpage
5365   \begin{BlockClass}{footnotes}
5366   \LWR@origmedskip
5367   \unvbox\LWR@footnotes
5368   \setbox\LWR@footnotes=\vbox{}
5369   \end{BlockClass}
5370 \fi
5371 }

```

`\LWR@maybeprintpendingfootnotes` `{<depth>}` Used to print footnotes before sections only if formatting for an EPUB or word processor:

```

5372 \newcommand*{\LWR@maybeprintpendingfootnotes}[1]{%
5373 \ifboolexpr{
5374   not test{\ifnumcomp{#1}{>}{\value{FootnoteDepth}}} or
5375   bool{FormatEPUB} or
5376   bool{FormatWP}
5377 }%
5378 {\LWR@printpendingfootnotes}%
5379 {}%
5380 }

```

`\LWR@printpendingmpfootnotes` Enclose the minipage footnotes in a class, print, then clear.

```

5381 \newcommand*{\LWR@printpendingmpfootnotes}{%
5382 \ifvoid\LWR@mpfootnotes\else
5383   \LWR@forcenewpage

```

```

5384 \begin{BlockClass}{footnotes}
5385 \LWR@print@vspace*{\baselineskip}
5386 \unvbox\LWR@mpfootnotes
5387 \setbox\LWR@mpfootnotes=\vbox{}
5388 \end{BlockClass}
5389 \fi
5390 }

5391 \end{warpHTML}

```

59 Marginpars

`\marginpar` [*left*] [*right*] `\marginpar` may contains paragraphs, but in order to remain inline with the surrounding text lwarp nullifies block-related macros inside the `\marginpar`. Paragraph breaks are converted to `
` tags.

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

for HTML output: 5392 `\begin{warpHTML}`

`\marginpar` [*left*] [*right*]

```

5393 \renewcommand{\marginpar}[2] [] {%
5394 \ifbool{FormatWP}%
5395 {%
5396 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
5397 #2
5398 \end{LWR@BlockClassWP}
5399 }%
5400 {%
5401 \LWR@htmlspanclass{marginpar}{#2}%
5402 }%
5403 }

```

`\marginparBlock` [*left*] [*right*]

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

HTML version.

```

5404 \newcommand{\marginparBlock}[2] [] {%

```

```

5405 \ifbool{FormatWP}%
5406 {%
5407 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
5408 #2
5409 \end{LWR@BlockClassWP}
5410 }%
5411 {%
5412 \begin{BlockClass}[width:2in; float:right; margin:10pt]{\marginparblock}
5413 #2
5414 \end{BlockClass}
5415 }%
5416 }

```

`\reversemarginpar`

```
5417 \renewcommand*{\reversemarginpar}{}

```

`\normalmarginpar`

```
5418 \renewcommand*{\normalmarginpar}{}

```

```
5419 \end{warpHTML}

```

for PRINT output: `5420 \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.

```
5421 \LetLtxMacro\marginparBlock\marginpar

```

```
5422 \end{warpprint}

```

60 Splitting HTML files

- Files are split according to FileDepth and CombineHigherDepths.
- Filenames are sanitized by `\LWR@filenameno blanks`.
- `\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: 5423 `\begin{warpall}`

Ctrl FileDepth `{\langle section depth \rangle}` determines how deeply to break into new HTML files, similar to `tocdepth`. The default of `-5` produces one large HTML file.

```
5424 \newcounter{FileDepth}
5425 \setcounter{FileDepth}{-5}
```

Bool CombineHigherDepths Combine higher-level sections together into one file?

```
5426 \newbool{CombineHigherDepths}
5427 \booltrue{CombineHigherDepths}
```

```
5428 \end{warpall}
```

for HTML output: 5429 `\begin{warpHTML}`

`\LWR@thisfilename` The currently-active filename or number.

```
5430 \newcommand*\LWR@thisfilename{}
```

`\LWR@thisnewfilename` The filename being sanitized.

```
5431 \newcommand*\LWR@thisnewfilename{}
```

`\LWR@filenamenooblanks` `{\langle filename \rangle}`

Convert blanks into dashes, removes short words, store result in `\LWR@thisfilename`.

 **duplicate filename** Be sure that this does not result in duplicate filenames! Use the optional TOC caption entry parameter for formatting. Remember to `\protect` L^AT_EX commands which appear in section names and TOC captions.

```
5432 \newcommand*\LWR@filenamenooblanks[1]{%
5433 \begingroup
```

Locally temporarily disable direct-formatting commands, not used in filenames:

```
5434 \LWR@nullfonts%
5435 \renewcommand*\LWR@htmltagc[1]{%
```

Replaces common symbols and short words with hyphens:

```
5436 \edef\LWR@thisnewfilename{#1}%
5437 \LWR@traceinfo{\LWR@filenamenooblanks edef: !\LWR@thisnewfilename!}%
5438 \fullexpandarg%
```

Convert spaces into hyphens:

```
5439 \StrSubstitute{\LWR@thisnewfilename}{\ }{-}[\LWR@thisnewfilename]
5440 \StrSubstitute{\LWR@thisnewfilename}{ }{-}[\LWR@thisnewfilename]
```

Convert punctutation into hyphens:

```
5441 \StrSubstitute{\LWR@thisnewfilename}{,}{-}[\LWR@thisnewfilename]
5442 \StrSubstitute{\LWR@thisnewfilename}{'}{-}[\LWR@thisnewfilename]
5443 \StrSubstitute{\LWR@thisnewfilename}{%}
5444   {\LWR@origampersand}{-}[\LWR@thisnewfilename]
5445 \StrSubstitute{\LWR@thisnewfilename}{+}{-}[\LWR@thisnewfilename]
5446 \StrSubstitute{\LWR@thisnewfilename}{,}{-}[\LWR@thisnewfilename]
5447 \StrSubstitute{\LWR@thisnewfilename}{/}{-}[\LWR@thisnewfilename]
5448 \StrSubstitute{\LWR@thisnewfilename}{:}{-}[\LWR@thisnewfilename]
5449 \StrSubstitute{\LWR@thisnewfilename}{;}{-}[\LWR@thisnewfilename]
5450 \StrSubstitute{\LWR@thisnewfilename}{=}{-}[\LWR@thisnewfilename]
5451 \StrSubstitute{\LWR@thisnewfilename}{?}{-}[\LWR@thisnewfilename]
5452 \StrSubstitute{\LWR@thisnewfilename}{@}{-}[\LWR@thisnewfilename]
5453 \StrSubstitute{\LWR@thisnewfilename}{"}{-}[\LWR@thisnewfilename]
5454 \StrSubstitute{\LWR@thisnewfilename}{%}
5455   {\textless}{-}[\LWR@thisnewfilename]
5456 \StrSubstitute{\LWR@thisnewfilename}{%}
5457   {\textgreater}{-}[\LWR@thisnewfilename]
5458 \StrSubstitute{\LWR@thisnewfilename}{\LWR@origpound}{-}[\LWR@thisnewfilename]
```

```
5459 \StrSubstitute{\LWR@thisnewfilename}{\_}{-}[\LWR@thisnewfilename]
5460 \StrSubstitute{\LWR@thisnewfilename}{\%}{-}[\LWR@thisnewfilename]
5461 \StrSubstitute{\LWR@thisnewfilename}{\}{-}[\LWR@thisnewfilename]
5462 \StrSubstitute{\LWR@thisnewfilename}{\}{-}[\LWR@thisnewfilename]
5463 \StrSubstitute{\LWR@thisnewfilename}{|}{-}[\LWR@thisnewfilename]
5464 \StrSubstitute{\LWR@thisnewfilename}{%}
5465   {\textbackslash}{-}[\LWR@thisnewfilename]
5466 \StrSubstitute{\LWR@thisnewfilename}{^}{-}[\LWR@thisnewfilename]
5467 \StrSubstitute{\LWR@thisnewfilename}{~}{-}[\LWR@thisnewfilename]
5468 \StrSubstitute{\LWR@thisnewfilename}{~}{-}[\LWR@thisnewfilename]
5469 %   "~{}" for babel
5470 \StrSubstitute{\LWR@thisnewfilename}{[]}{-}[\LWR@thisnewfilename]
5471 \StrSubstitute{\LWR@thisnewfilename}{[]}{-}[\LWR@thisnewfilename]
5472 \StrSubstitute{\LWR@thisnewfilename}{' }{-}[\LWR@thisnewfilename]
```

Convert short words:

```
5473 \StrSubstitute{\LWR@thisnewfilename}{-s-}{-}[\LWR@thisnewfilename]
5474 \StrSubstitute{\LWR@thisnewfilename}{-S-}{-}[\LWR@thisnewfilename]
5475 \StrSubstitute{\LWR@thisnewfilename}{-a-}{-}[\LWR@thisnewfilename]
5476 \StrSubstitute{\LWR@thisnewfilename}{-A-}{-}[\LWR@thisnewfilename]
5477 \StrSubstitute{\LWR@thisnewfilename}{-an-}{-}[\LWR@thisnewfilename]
```

```

5478 \StrSubstitute{\LWR@thisnewfilename}{-AN-}{-}[\LWR@thisnewfilename]
5479 \StrSubstitute{\LWR@thisnewfilename}{-to-}{-}[\LWR@thisnewfilename]
5480 \StrSubstitute{\LWR@thisnewfilename}{-TO-}{-}[\LWR@thisnewfilename]
5481 \StrSubstitute{\LWR@thisnewfilename}{-by-}{-}[\LWR@thisnewfilename]
5482 \StrSubstitute{\LWR@thisnewfilename}{-BY-}{-}[\LWR@thisnewfilename]
5483 \StrSubstitute{\LWR@thisnewfilename}{-of-}{-}[\LWR@thisnewfilename]
5484 \StrSubstitute{\LWR@thisnewfilename}{-OF-}{-}[\LWR@thisnewfilename]
5485 \StrSubstitute{\LWR@thisnewfilename}{-and-}{-}[\LWR@thisnewfilename]
5486 \StrSubstitute{\LWR@thisnewfilename}{-AND-}{-}[\LWR@thisnewfilename]
5487 \StrSubstitute{\LWR@thisnewfilename}{-for-}{-}[\LWR@thisnewfilename]
5488 \StrSubstitute{\LWR@thisnewfilename}{-FOR-}{-}[\LWR@thisnewfilename]
5489 \StrSubstitute{\LWR@thisnewfilename}{-the-}{-}[\LWR@thisnewfilename]
5490 \StrSubstitute{\LWR@thisnewfilename}{-THE-}{-}[\LWR@thisnewfilename]

```

Convert multiple hyphens:

```

5491 \StrSubstitute{\LWR@thisnewfilename}{-----}{-}[\LWR@thisnewfilename]
5492 \StrSubstitute{\LWR@thisnewfilename}{----}{-}[\LWR@thisnewfilename]
5493 \StrSubstitute{\LWR@thisnewfilename}{---}{-}[\LWR@thisnewfilename]
5494 \StrSubstitute{\LWR@thisnewfilename}{--}{-}[\LWR@thisnewfilename]

```

If pdf_{La}TeX and not utf8 encoding, don't try to convert emdash, endash:

```

5495 \ifPDFTeX% pdflatex or dvi latex
5496 \ifdefstring{\inputencodingname}{utf8}{%
5497 \StrSubstitute{\LWR@thisnewfilename}{--}{-}[\LWR@thisnewfilename]
5498 %      emdash
5499 \StrSubstitute{\LWR@thisnewfilename}{-}{-}[\LWR@thisnewfilename]
5500 %      endash
5501 }{}%
5502 \else% not PDFTeX
5503 \StrSubstitute{\LWR@thisnewfilename}{--}{-}[\LWR@thisnewfilename]
5504 \StrSubstitute{\LWR@thisnewfilename}{-}{-}[\LWR@thisnewfilename]
5505 \fi%

```

Return the global result:

```

5506 \global\let\LWR@thisfilename\LWR@thisnewfilename%
5507 \endgroup%
5508 \LWR@traceinfo{LWR@filenamenooblanks: result is \LWR@thisfilename}%
5509 }

```

Ctrl Remembers which autopage label was most recently generated. Used to avoid duplicates.

```

5510 \newcounter{LWR@previousautopagelabel}
5511 \setcounter{LWR@previousautopagelabel}{-1}

```

`\LWR@newautopagelabel` $\langle\textit{pagenumber counter}\rangle$

```

5512 \newcommand*\LWR@newautopagelabel}[1]{%
5513 \ifnumequal{\value{LWR@previousautopagelabel}}{\value{page}}%
5514 {}% no action if this autopage label has already been defined
5515 {%
5516   \label{autopage-\arabic{#1}}%
5517   \setcounter{LWR@previousautopagelabel}{\value{page}}
5518 }%
5519 }

```

60.1 Customizing MATHJAX

`\LWR@customizedMathJax` Additional MATHJAX definitions to be added to the start of each HTML page.

```

5520 \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}}}

```

```

5521 \newcommand*\CustomizeMathJax}[1]{%
5522   \appto{\LWR@customizedMathJax}{%
5523     \(#1)\par
5524   }%
5525 }

```

`\LWR@customizeMathJax`

```

5526 \newcommand*\LWR@customizeMathJax-{}%
5527 \ifbool{mathjax}{

```

```

5528 \LWR@stoppars
5529 \LWR@htmlcomment{Nullify \textbackslash{}ensuremath, footnotes for MathJax:}
5530

```

```

5531 \(\newcommand\ensuremath[1]{##1}\)
5532
5533 \(\newcommand\footnote[2][]{\text{( Footnote ##1 )}}\)\)
5534
5535 \(\newcommand\footnotemark[1][]{\text{( Footnote ##1 )}}\)\)
5536
5537 \LWR@htmlcomment{Additional customizations for MathJax:}
5538
5539 \LWR@customizedMathJax
5540
5541 \LWR@startpars
5542 }{}
5543 }

5544 \end{warpHTML}

```

for PRINT output: 5545 \begin{warpprint}

\CustomizeMathJax The print-mode version:

```

5546 \newcommand*\CustomizeMathJax[1]{}
5547 \end{warpprint}

```

for HTML output: 5548 \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.

```

5549 \newcommand*\LWR@newhtmlfile[1]{
5550 \LWR@traceinfo{\LWR@newhtmlfile}

```

At the bottom of the ending file:

```

5551 \LWR@htmlclassend{section}{textbody}
5552 \LWR@htmlclassend{div}{bodycontainer}
5553 \LWR@htmlclassend{div}{bodyandsidetoc}
5554
5555 \LWR@printpendingfootnotes
5556

```

No footer between files if EPUB:

```

5557 \ifbool{FormatEpub}
5558 {}
5559 {
5560   \LWR@html element{footer}
5561
5562   \LWR@pagebottom
5563
5564   \LWR@html elementend{footer}
5565 }

```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```

5566 \ifthenelse{\boolean{FormatEpub}\OR\boolean{FormatWP}}
5567 {}
5568 {\ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}}

```

End of this HTML file:

```

5569 \LWR@stoppars
5570 \LWR@htmltag{/body}\LWR@orignewline
5571 \LWR@htmltag{/html}\LWR@orignewline
5572 \LWR@traceinfo{LWR@newhtmlfile: about to LWR@orignewpage}
5573 \LWR@orignewpage
5574
5575 \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.

```

5576 \ifbool{FileSectionNames}%
5577 {%

```

Convert the section name to a filename with blanks and common words removed. The resulting filename is in \LWR@thisfilename.

```

5578   \LWR@filenameno blanks{#1}%

```

Create a macro name from the MD5 hash of the file name.

```

5579   \edef\LWR@hashedname{\LWR@mdfive{\LWR@thisfilename}}%

```

If the macro name is not yet defined, this filename is unique.

```

5580   \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.

```
5581     \csdef{LWR@filename\LWR@hashedname}{}%
5582     }{%
```

If the filename is not unique, create an error.

```
5583     \PackageError{lwarp}
5584     {
5585         Section name ‘#1’, at the line number listed below,
5586         generates the filename ‘\LWR@thisfilename’,
5587         which appears to be a duplicate%
5588     }
5589     {
5590         Look for another section of the same type with a similar
5591         or identical name.
5592         (Lwarp sanitizes most symbols and common short words
5593         when generating file names, and this may cause a conflict.)
5594     }
5595 }
5596 }
```

If using file numbers instead of names, the name is set to the next file number.

```
5597 {\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.

```
5598 \LWR@traceinfo{LWR@newhtmlfile: about to print start file}%
```

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

```
5599 \begingroup%
5600 \LWR@nullfonts%
5601 \LWR@htmlblockcomment{%
5602 |Start file|%
5603 \LWR@htmlsectionfilename{\LWR@thisfilename}|%
5604 }
5605 \endgroup%
```

At the top of the starting file:

```
5606 \LWR@stoppars
5607
```

Start a new file with the given section name:

```
5608 \LWR@filestart[#1]
5609
```

Track the page numbers:

```
5610 \setcounter{LWR@latestautopage}{\value{page}}%
5611 \LWR@newautopagelabel{LWR@latestautopage}%
```

No navigation between files if formatting for an EPUB or word processor:

```
5612 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
5613 {}
5614 {\LWR@topnavigation}
5615
```

No header if between files if formatting for an EPUB or word processor:

```
5616 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
5617 {}
5618 {
5619     \LWR@htmllement{header}
5620
5621     \LWR@pagetop
5622
5623     \LWR@htmllementend{header}
5624 }
5625
```

The container for the sidetoc and text body:

```
5626 \LWR@htmllementclass{div}{bodyandsidetoc}
```

No sidetoc if formatting for an EPUB or word processor:

```
5627 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
5628 {}
5629 {\LWR@sidetoc}
5630
```

Start of the <textbody>:

```
5631 \LWR@htmllementclass{div}{bodycontainer}
5632 \LWR@htmllementclass{section}{textbody}
5633
```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```
5634 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}{%
5635     {}%
5636     {%
5637         \ifcsvoid{thetitle}{-}{%
5638             \LWR@printthetitle%
5639         }%
5640     }%
```

Keep paragraph tags disabled for now:

```
5641 \LWR@stoppars
5642
```

If using MATHJAX, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
5643 \LWR@customizeMathJax

5644 \LWR@traceinfo{LWR@newhtmlfile: done}
5645 }

5646 \end{warpHTML}
```

61 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 Section names and the resulting filenames with accented characters are partially supported, depending on the ability of *pdflatex* to generate characters and *pdftotext*

 **accents in filenames** to read them. If extra symbols appear in the text, it may be that *pdflatex* is actually producing a symbol over or under a character, resulting in *pdftotext* picking up the accent symbol separately.

X \LaTeX and Lua \LaTeX directly support accented section and file names.

for HTML output: 5647 `\begin{warpHTML}`

61.1 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.

```
5648 \newbool{LWR@forcinghtmlpage}
5649 \boolfalse{LWR@forcinghtmlpage}
5650
5651 \newcommand*{\ForceHTMLPage}{%
5652 \global\booltrue{LWR@forcinghtmlpage}%
5653 }
```

`\ForceHTMLTOC` For HTML output, forces the next section to have a TOC entry, even if starred. For use with `\printindex` and others which generate a starred section which should be in the TOC so that it may be accessed via HTML. Not necessary if used with `tocbind`. Also see `\ForceHTMLPage`.

For print output, no effect.

```
5654 \newbool{LWR@forcinghtmltoc}
5655 \boolfalse{LWR@forcinghtmltoc}
5656
5657 \newcommand*{\ForceHTMLTOC}{%
5658 \global\booltrue{LWR@forcinghtmltoc}%
5659 }
```

```
5660 \end{warpHTML}
```

for PRINT output:

```
5661 \begin{warpprint}
5662 \newcommand*{\ForceHTMLPage}{}
5663 \newcommand*{\ForceHTMLTOC}{}
5664 \end{warpprint}
```

for HTML output:

```
5665 \begin{warpHTML}
```

61.2 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.

```
5666 \newbool{LWR@mainmatter}
```

```
5667 \DeclareDocumentCommand{\mainmatter}{}{}%
5668 \booltrue{LWR@mainmatter}%
5669 }
```

`\frontmatter` Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```
5670 \DeclareDocumentCommand{\frontmatter}{}{}%
5671 \boolfalse{LWR@mainmatter}%
5672 }
```

`\backmatter` Declare the back matter section of the document. Does not reset the page number.

```
5673 \DeclareDocumentCommand{\backmatter}{}{}%
5674 \boolfalse{LWR@mainmatter}
5675 }
```

61.3 Sectioning support macros

`\LWR@sectionnumber` $\langle section\ type \rangle$

Typeset a section number and its trailing space with css formatting:

```
5676 \newcommand*{\LWR@sectionnumber}[1]{}%
5677 \InlineClass{sectionnumber}{#1}%
5678 }
```

`autosec` A tag used by the toc and index.

`\LWR@createautosec` $\langle section\ type \rangle$

Create an autosection tag.

```
5679 \newcommand*{\LWR@createautosec}[1]{}%
5680 \LWR@htmltag{%
5681     #1 % space
5682     id=\textquotedbl\LWR@print@mbox{autosec-\arabic{page}}\textquotedbl%
5683 }%
5684 }
```

`\LWR@pushoneclose` $\langle depth \rangle$ $\langle printclose \rangle$ 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.

```
5685 \NewDocumentCommand{\LWR@pushoneclose}{m m}{%
5686 \LWR@traceinfo{\LWR@pushoneclose #1}%
5687   \pushclose{#2}{#1}%
5688 }
```

`\LWR@startnewdepth` $\langle depth \rangle$ $\langle printclose \rangle$

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.

```
5689 \NewDocumentCommand{\LWR@startnewdepth}{m m}{%
```

Close any stacked sections up to this new one.

```
5690 \LWR@closeprevious{#1}%
```

Push a new section depth:

```
5691 \LWR@pushoneclose{#1}{#2}%
5692 }
```

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.

```
5693 \newcounter{LWR@prevFileDepth}
5694 \setcounter{LWR@prevFileDepth}{\LWR@depthsubparagraph}
```

`\@secCNTformat` $\langle sectiontype \rangle$

```
5695 \def\@secCNTformat#1{\csname the#1\endcsname\quad}
```

`\simplechapterdelim` Used by `tocbibind` and `anonchap`.

```
5696 \newcommand*\simplechapterdelim{}
```

`\@chapCNTformat` $\langle sectiontype \rangle$

`\let` to `\@secCNTformat` by default, but may be redefined by `\simplechapter` and `\restorechapter` from `tocbibind` or `anonchap`.

```
5697 \let\@chapcntformat\@secCNTformat
```

```
\@partcntformat  {\langle sectiontype \rangle}
```

\let to \@secCNTformat by default, but may be redefined by ctex.

```
5698 \let\@partcntformat\@secCNTformat
```

```
\@partnameformat  Prints “Part” for part sections.
```

Nullified by ctex.

```
5699 \newcommand*{\@partnameformat}{\LWR@isolate{\partname}~}%
```

```
Ctr  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.
```

```
5700 \newcounter{LWR@currentautosec}
```

```
\LWR@section * [\langle TOC name \rangle] {\langle name \rangle} {\langle sectiontype \rangle}
```

The common actions for the high-level sectioning commands.

```
5701 \DeclareDocumentCommand{\LWR@section}{m m m m}{%
```

```
5702 \LWR@traceinfo{LWR@section: starting}%
```

```
5703 \LWR@stoppars%
```

Cancel special minipage horizontal space interaction:

```
5704 \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^AT_EX page so that TOC and index page number points to the section:

```
5705 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}%
```

```
5706 \IfBooleanT{#1}{\LWR@traceinfo{LWR@section: starred}}%
```

```
5707 \ifbool{LWR@forcinghtmlpage}{\LWR@traceinfo{LWR@section: forcinghtmlpage}}{}%
```

```
5708 \ifthenelse{%
```

```
5709     \(%
```

```
5710     \(\NOT\equal{#1}{\BooleanTrue})\)\OR%
```

```
5711     \(\cnttest{\@nameuse{LWR@depth#4}}{=} {\LWR@depthpart})\)\OR%
```

```

5712      \(\boolean{LWR@forcinghtmlpage}\)%
5713      \)%
5714      \AND%
5715      \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{FileDepth}}%
5716      \AND%
5717      \(%
5718          \NOT\boolean{CombineHigherDepths}\OR%
5719          \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{LWR@prevFileDepth}}%
5720      \)%
5721      \AND%

5722      \(% phantomsection
5723          \NOT\isempty{#3}%
5724          \OR%
5725          \(\NOT\equal{#1}{\BooleanTrue}\)%
5726      \)%
5727 }%

```

If so: start a new HTML file:

```

5728 {% new file
5729     \LWR@traceinfo{LWR@section: new HTML file}%

```

See if there was an optional toc name entry:

```

5730     \IfNoValueTF{#2}%

```

If no optional entry

```

5731         {\LWR@newhtmlfile{#3}}%

```

If yes an optional entry

```

5732         {\LWR@newhtmlfile{#2}}%
5733 }% new file

```

Else: No new HTML file:

```

5734 {% not new file

```

Generate a new L^AT_EX page so that toc and index page number points to the section:

```

5735     \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
5736     \LWR@orignewpage%
5737 }% not new file
5738

```

Remember this section's name for \nameref:

```
5739 \IfValueT{#3}{%
5740   \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
5741   \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
5742 }%
```

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.

```
5743
5744 \ifbool{HTMLDebugComments}{%
5745   \begingroup%
5746   \LWR@nullfonts%
5747   \IfBooleanTF{#1}% starred
5748   {\LWR@htmlcomment{Opening #4*}}%
5749   {%
5750     \IfNoValueTF{#2}% short TOC
5751     {\LWR@htmlcomment{Opening #4 ‘#3’}}%
5752     {\LWR@htmlcomment{Opening #4 ‘#2’}}%
5753   }
5754   \endgroup%
5755 }{}%
5756
```

For inline sections paragraph and subparagraph, start a new paragraph now:

```
5757 \ifthenelse{%
5758   \cnttest{\@nameuse{LWR@depth#4}}{>=}{\LWR@depthparagraph}%
5759 }%
5760 {\LWR@startpars}%
5761 {}%
```

Create the opening tag with an autosec:

```
5762 \LWR@traceinfo{LWR@section: about to LWR@createautosec}%
5763 \LWR@createautosec{\@nameuse{LWR@tag#4}}%
```

```
5764 \setcounter{LWR@currentautosec}{\value{page}}%
```

Check if starred:

```
5765 \IfBooleanTF{#1}%
5766 {%
5767   \LWR@traceinfo{LWR@section: starred}%
```

Starred, but also forcing a toc entry, so add unnumbered toc name or regular name:

```

5768     \ifbool{LWR@forcinghtmltoc}%
5769     {%
5770         \addcontentsline{toc}{#4}{%
5771             \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
5772         }%
5773     }%
5774     {}%
5775 }% starred

```

Not starred, so step counter and add to toc:

```

5776 {% not starred

```

Only add a numbered toc entry if section number is not too deep:

```

5777     \ifthenelse{%
5778         \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
5779     }%
5780     {% if secnumdepth

```

If in the main matter, step the counter and add the toc entry. For article class, lwarp assumes that all is mainmatter.

```

5781         \LWR@traceinfo{LWR@section: about to test main matter}%
5782         \ifbool{LWR@mainmatter}%
5783         {%
5784             \LWR@traceinfo{LWR@section: yes mainmatter}%
5785             \refstepcounter{#4}%

```

Add main matter numbered toc entry with the toc name or the regular name:

```

5786         \LWR@traceinfo{LWR@section: about to addcontentsline}%
5787         \addcontentsline{toc}{#4}%
5788         {%
5789             \protect\numberline{%
5790                 \@nameuse{pre#4name}%
5791                 \@nameuse{the#4}%
5792                 \@nameuse{post#4name}%
5793             }%
5794             {%
5795                 \ignorespaces%
5796                 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}\protect\relax%
5797             }%
5798         }%
5799         \LWR@traceinfo{LWR@section: finished addcontentsline}%
5800     }% end of if main matter

```

If not main matter, add unnumbered toc name or regular name:

```

5801     {% not main matter
5802         \LWR@traceinfo{LWR@section: no main matter}%
5803         \addcontentsline{toc}{#4}{%
5804             \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
5805         }%
5806     }% end of not main matter
5807 }% end of secnumdepth

```

Deeper than secnumdepth, so add an unnumbered toc entry:

```

5808     {%
5809         \addcontentsline{toc}{#4}{%
5810             \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
5811         }%
5812     }%

```

For part, print “Part”:

```

5813     \ifbool{LWR@mainmatter}%
5814     {%
5815         \ifthenelse{%
5816             \(\cnttest{\@nameuse{LWR@depth#4}}{<=} %
5817             {\value{secnumdepth}}\)\ \AND%
5818             \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}\)\) %
5819         }%
5820         {\@partnameformat}%
5821     }%

```

Print the section number:

```

5822         \LWR@traceinfo{LWR@section: about to print section number}%
5823         \ifthenelse{%
5824             \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
5825         }%
5826         {%
5827             \ifstrequal{#4}{part}%
5828             {\protect\LWR@sectionnumber{\@partcntformat{#4}}}%
5829             {%
5830                 \ifstrequal{#4}{chapter}%
5831                 {\protect\LWR@sectionnumber{\@chapcntformat{#4}}}%
5832                 {\protect\LWR@sectionnumber{\@seccntformat{#4}}}%
5833             }%
5834         }%
5835     }%
5836     \LWR@traceinfo{LWR@section: finished print section number}%
5837 }{}%
5838 }% end of not starred

```

Print the section name:

```
5839 \LWR@traceinfo{LWR@section: about to print the section name}%
5840 \LWR@isolate{#3}%
```

Close the heading tag, such as /H2:

```
5841 \LWR@traceinfo{LWR@section: about to close the heading tag}%
5842 \LWR@htmltag{\@nameuse{LWR@tag#4end}}%
```

Generate a L^AT_EX label:

```
5843 \LWR@traceinfo{LWR@section: about to create the LaTeX label}%
5844 \LWR@newautopagelabel{LWR@currentautosec}%
```

Start paragraph handling unless is an inline paragraph or subparagraph:

```
5845 \ifthenelse{%
5846   \cnttest{\@nameuse{LWR@depth#4}}{<}{\LWR@depthparagraph}%
5847 }%
5848 {\LWR@startpars}%
5849 {}%
```

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.

```
5850 \ifthenelse{%
5851   \NOT\equal{#1}{\BooleanTrue}\OR%
5852   \cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}%
5853 }%
5854 {% not starred
5855   \setcounter{LWR@prevFileDepth}{\@nameuse{LWR@depth#4}}%
5856 }% not starred
5857 {}%
```

Reset to defaults if not a phantomsection:

```
5858 \ifstrempy{#3}%
5859 {}%
5860 {%
5861 \global\boolfalse{LWR@forcinghtmlpage}%
```

```

5862 \global\boolfalse{LWR@forcinghtmltoc}%
5863 }%
5864 %
5865 \LWR@traceinfo{LWR@section: done}%
5866 }

```

61.4 Pre- and post- sectioning names

`\prepartname` Usually null, but is used by `uj*` and `ut*` Japanese classes.
`\postpartname`

```

5867 \providecommand*\prepartname{}
5868 \providecommand*\postpartname{}

```

`\prechaptername` Usually null, but is used by `uj*` and `ut*` Japanese classes.
`\postchaptername`

```

5869 \providecommand*\prechaptername{}
5870 \providecommand*\postchaptername{}

```

`\presectionname` Always null, but provided here for algorithmic simplicity in `\LWR@section`.
`\postsectionname`

```

5871 \providecommand*\presectionname{}
5872 \let\postsectionname\presectionname
5873
5874 \let\presubsectionname\presectionname
5875 \let\postsubsubsectionname\postsectionname
5876
5877 \let\presubsubsectionname\presectionname
5878 \let\postsubsubsectionname\postsectionname
5879
5880 \let\preparagraphname\presectionname
5881 \let\postparagraphname\postsectionname
5882
5883 \let\presubparagraphname\presectionname
5884 \let\postsubparagraphname\postsectionname

```

61.5 `\section` and friends

`\part` * [*TOC name*] {*name*}

```

5885 \newcommand{\part@preamble}{}% for koma-script
5886
5887 \DeclareDocumentCommand{\part}{s o m}{}%

```

```

5888 \LWR@maybeprintpendingfootnotes{\LWR@depthpart}%
5889 \LWR@stoppars%
5890
5891 \LWR@startnewdepth{\LWR@depthpart}{\LWR@printclosepart}%
5892
5893 \LWR@section{#1}{#2}{#3}{part}%
5894
5895 \part@preamble% for koma-script
5896 \renewcommand{\part@preamble}{}%
5897 }

```

`\chapter` * [*(TOC name)*] [*(heading name)*] {*(name)*}

```

5898 \let\@printcites\relax% for quotchap package
5899
5900 \newcommand{\chapter@preamble}{}% for koma-script
5901
5902 \@ifundefined{chapter}
5903 {}
5904 {%
5905 \DeclareDocumentCommand{\chapter}{s o o m}{%
5906 \IfValueTF{#2}{
5907 \LWR@traceinfo{chapter #2}%
5908 }{
5909 \LWR@traceinfo{chapter #4}%
5910 }
5911 \LWR@maybeprintpendingfootnotes{\LWR@depthchapter}%
5912 \LWR@stoppars%
5913
5914 \LWR@startnewdepth{\LWR@depthchapter}{\LWR@printclosechapter}%
5915
5916 \LWR@section{#1}{#2}{#4}{chapter}%
5917
5918 \@printcites% for quotchap package
5919
5920 \chapter@preamble% for koma-script
5921 \renewcommand{\chapter@preamble}{}%
5922 }
5923 }

```

`\section` * [*(TOC name)*] [*(heading name)*] {*(name)*}

```

5924 \DeclareDocumentCommand{\section}{s o o m}{%
5925 \LWR@traceinfo{section: starting}%
5926 \LWR@maybeprintpendingfootnotes{\LWR@depthsection}%
5927 \LWR@stoppars%
5928
5929 \LWR@startnewdepth{\LWR@depthsection}{\LWR@printclosesection}%

```

```
5930
5931 \LWR@section{#1}{#2}{#4}{section}%
5932 }
```

`\subsection` * [*TOC name*] {*name*}

```
5933 \DeclareDocumentCommand{\subsection}{s o m}{%
5934 \LWR@maybeprintpendingfootnotes{\LWR@depthsubsection}%
5935 \LWR@stoppars%
5936
5937 \LWR@startnewdepth{\LWR@depthsubsection}{\LWR@printclosesubsection}%
5938
5939 \LWR@section{#1}{#2}{#3}{subsection}%
5940 }
```

`\subsubsection` * [*TOC name*] {*name*}

```
5941 \DeclareDocumentCommand{\subsubsection}{s o m}{%
5942 \LWR@maybeprintpendingfootnotes{\LWR@depthsubsubsection}%
5943 \LWR@stoppars%
5944
5945 \LWR@startnewdepth{\LWR@depthsubsubsection}%
5946 {\LWR@printclosesubsubsection}%
5947
5948 \LWR@section{#1}{#2}{#3}{subsubsection}%
5949 }
```

`\paragraph` * [*TOC name*] {*name*}

```
5950 \DeclareDocumentCommand{\paragraph}{s o m}{%
5951 \LWR@maybeprintpendingfootnotes{\LWR@depthparagraph}%
5952 \LWR@stoppars%
5953
5954 \LWR@startnewdepth{\LWR@depthparagraph}{\LWR@printcloseparagraph}%
5955
5956 \LWR@section{#1}{#2}{#3}{paragraph}%
5957 }
```

`\subparagraph` * [*TOC name*] {*name*}

```
5958 \DeclareDocumentCommand{\subparagraph}{s o m}{%
5959 \LWR@maybeprintpendingfootnotes{\LWR@depthsubparagraph}%
5960 \LWR@stoppars%
5961
5962 \LWR@startnewdepth{\LWR@depthsubparagraph}{\LWR@printclosesubparagraph}%
5963
5964 \LWR@section{#1}{#2}{#3}{subparagraph}%
5965 }
```

```
5965 }
```

```
5966 \end{warpHTML}
```

62 Starting a new file

for HTML & PRINT: 5967 \begin{warppall}

`\HTMLLanguage` Default language for the HTML lang tag.

```
5968 \newcommand*{\LWR@currentHTMLLanguage}{en-US}
5969
5970 \newcommand*{\HTMLLanguage}[1]{%
5971 \renewcommand*{\LWR@currentHTMLLanguage}{#1}%
5972 }
```

`\theHTMLTitleSeparator` May be used inside `\theHTMLTitleSection` to separate the website's overall HTML title and the particular page's section name.

```
5973 \ifPDFTeX% pdflatex or dvi latex
5974   \ifdefstring{\inputencodingname}{utf8}{%
5975     \newcommand*{\theHTMLTitleSeparator}{ -- }% EMDash
5976   }{%
5977     \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
5978   }%
5979 \else%
5980   \ifpTeX
5981     \newcommand*{\theHTMLTitleSeparator}{ - }% hyphen
5982   \else
5983     \newcommand*{\theHTMLTitleSeparator}{ -- }% EMDash
5984   \fi%
5985 \fi%
```

`\HTMLTitleBeforeSection` Sets the HTML page's meta title tag to show the website title before the section name.

```
5986 \newcommand*{\HTMLTitleBeforeSection}{%
5987   \def\theHTMLTitleSection{%
5988     \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
5989   }%
5990 }
```

`\HTMLTitleAfterSection` Sets the HTML page's meta title tag to show the section name before the website title.

```
5991 \newcommand*\HTMLTitleAfterSection}{%
5992     \def\theHTMLTitleSection{%
5993         \theHTMLSection\theHTMLTitleSeparator\theHTMLTitle%
5994     }%
5995 }
```

`\theHTMLTitleSection` Forms the HTML page's meta title tag. The default is to show the website title before the section name.

```
5996 \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.

```
5997 \newcommand*\theHTMLSection}{%
5998 \end{warpall}}
```

for HTML output: `5999 \begin{warpHTML}`

`\LWR@filestart` [`<sectionname>`] Creates the opening HTML tags.

```
6000 \newcommand*\LWR@filestart}[1] [] {%
6001 \LWR@traceinfo{LWR@filestart !#1!}%
```

Locally temporarily disable direct-formatting commands:

```
6002 \begingroup%
6003 \LWR@nullfonts%
```

Save the section name for use while creating the HTML meta title tag:

```
6004 \edef\theHTMLSection{#1}%
```

Create the page's HTML header:

```
6005 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline
```

The language is user-adjustable:

```
6006 \LWR@htmltag{%
6007     html lang=\textquotedbl\LWR@currentHTMLLanguage\textquotedbl%
6008 }\LWR@orignewline
```

Start of the meta data:

```
6009 \LWR@htmltag{head}\LWR@orignewline
```

Charset is fixed at UTF-8:

```
6010 \LWR@htmltag{%
6011     meta charset=\textquotedbl{}UTF-8\textquotedbl\ /\%
6012 }\LWR@orignewline
```

Author:

```
6013 \ifthenelse{\equal{\theHTMLAuthor}{}}%
6014 {}%
6015 {%
6016     \LWR@htmltag{%
6017         meta name=\textquotedbl{}author\textquotedbl\ % space
6018         content=\textquotedbl{}theHTMLAuthor\textquotedbl\ /\%
6019     }\LWR@orignewline%
6020 }%
```

lwarp is the generator:

```
6021 \LWR@htmltag{%
6022     meta % space
6023     name=\textquotedbl{}generator\textquotedbl\ % space
6024     content=\textquotedbl{}LaTeX lwarp package\textquotedbl\ /\%
6025 }\LWR@orignewline%
```

If there is a description, add it now:

```
6026 \ifdefempty{\LWR@currentHTMLDescription}{}%
6027     \LWR@htmltag{%
6028         meta name=\textquotedbl{}description\textquotedbl\ % space
6029         content=\textquotedbl{}LWR@currentHTMLDescription\textquotedbl\ /\%
6030     }\LWR@orignewline
6031 }%
```

Mobile-friendly viewport:

```
6032 \LWR@htmltag{%
6033     meta % space
6034     name=\textquotedbl{}viewport\textquotedbl\ % space
6035     content=\textquotedbl{}width=device-width, initial-scale=1.0\textquotedbl\ /\%
6036 }\LWR@orignewline
```

IE patch:

```

6037 \LWR@htmltag{!-\/-[if lt IE 9]}\LWR@orignewline
6038 \LWR@htmltag{%
6039     script % space
6040     src=\textquotedbl{}%
6041         http://html5shiv.googlecode.com/svn/trunk/html5.js%
6042     \textquotedbl{}%
6043 }%
6044 \LWR@htmltag{/script}\LWR@orignewline
6045 \LWR@htmltag{![endif]-\/-}\LWR@orignewline

```

The page's title, if there is one. A section name is also added if given.

```

6046 \ifthenelse{\equal{\theHTMLTitle}{}}%
6047 {}%
6048 {%
6049     \LWR@htmltag{title}%
6050     \ifdefempty{\theHTMLSection}%
6051         {\theHTMLTitle}%
6052         {\theHTMLTitleSection}%
6053     \LWR@htmltag{/title}\LWR@orignewline%
6054 }%

```

The page's stylesheet:

```

6055 \LWR@htmltag{%
6056     link % space
6057     rel=\textquotedbl{}stylesheet\textquotedbl\ % space
6058     type=\textquotedbl{}text/css\textquotedbl\ % space
6059     href=\textquotedbl\LWR@currentcss\textquotedbl\ /%
6060 }%
6061 \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.

```

6062 \ifbool{mathjax}%
6063 {%
6064     \begingroup%
6065     \LWR@restoreoriglists%
6066     \boolfalse{LWR@verbtags}%
6067         \verbatiminput{lwarp_mathjax.txt}%
6068     \booltrue{LWR@verbtags}%
6069     \endgroup%
6070     \LWR@stoppars%
6071 }% end of mathjax
6072 {}%

```

End of the header:

```
6073 \LWR@htmltag{/head}\LWR@orignewline
```

Start of the body:

```
6074 \LWR@htmltag{body}\LWR@orignewline
6075 \endgroup
6076 \LWR@traceinfo{LWR@filestart: done}
6077 }

6078 \end{warpHTML}
```

63 Starting HTML output

for HTML output: 6079 \begin{warpHTML}

`\LWR@LwarpStart` Executed at the beginning of the entire document.

The use of `\textquotedbl` instead of `"` improves compatibility with `xeCJK`.

```
6080 \catcode'\$=\active
6081 \newcommand*{\LWR@LwarpStart}
6082 {%
6083 \LWR@traceinfo{LWR@lwarpStart}
```

If formatting for a word processor, force `filedepth` to single-file only, force HTML debug comments off.

```
6084 \ifbool{FormatWP}{%
6085   \setcounter{FileDepth}{-5}%
6086   \boolfalse{HTMLDebugComments}%
6087 }{}
```

Expand and detokenize `\HomeHTMLFilename` and `\HTMLFilename`:

```
6088 \edef\LWR@strresult{\HomeHTMLFilename}
6089 \edef\HomeHTMLFilename{\detokenize\expandafter{\LWR@strresult}}
6090 \edef\LWR@strresult{\HTMLFilename}
6091 \edef\HTMLFilename{\detokenize\expandafter{\LWR@strresult}}
```

Force `onecolumn` and empty page style:

```
6092 \LWR@origonecolumn%
6093 \LWR@origpagestyle{empty}%
```

No black box for overfull lines:

```
6094 \overfullrule=0pt
```

Reduce chance of line overflow when HTML tags are added:

```
6095 \LWR@print@footnotesize%
```

In PDF output, don't allow line breaks to interfere with HTML tags:

```
6096 \LWR@print@raggedright%
6097 \LetLtxMacro{\}\{\LWR@endofline}%
```

Spread the lines for *pdftotext* to read them well:

```
6098 \linespread{1.3}%
```

For *pdftotext* to reliably identify paragraph splits:

```
6099 \setlength{\parindent}{0pt}
6100 \setlength{\parskip}{2ex}
```

For the lateximages record file:

```
6101 \immediate\openout\LWR@lateximagesfile=lateximages.txt
```

Removes space around the caption in the HTML:

```
6102 \setlength{\belowcaptionskip}{0ex}
6103 \setlength{\abovecaptionskip}{0ex}
```

Redefine the plain page style to be empty when used by index pages:

```
6104 \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:

```
6105 \let\LWR@origcaption\caption
```

Labels: `\ltx@label` is used in `amsmath` environments and is also patched by `cleveref`.

Label in HTML

```
6106 \let\LWR@origltx@label\ltx@label
6107 \let\ltx@label\LWR@htmlmathlabel
```

Logos:

```
6108 \LetLtxMacro\TeX\LWR@TeX
6109 \LetLtxMacro\LaTeX\LWR@LaTeX
6110 \LetLtxMacro\LuaTeX\LWR@LuaTeX
6111 \LetLtxMacro\LuaLaTeX\LWR@LuaLaTeX
6112 \LetLtxMacro\XeTeX\LWR@XeTeX
6113 \LetLtxMacro\XeLaTeX\LWR@XeLaTeX
6114 \LetLtxMacro\ConTeXt\LWR@ConTeXt
```

Not yet started any paragraph handling:

```
6115 \global\boolfalse{LWR@doingapar}
6116 \global\boolfalse{LWR@doingstartpars}
```

Document and page settings:

```
6117 \mainmatter
6118 \LWR@origpagenumbering{arabic}
```

Start a new HTML file and a header:

```
6119 \LWR@traceinfo{LWR@lwarpStart: Starting new file.}
6120 \LWR@filestart
6121 \LWR@traceinfo{LWR@lwarpStart: Generating first header.}
6122 \LWR@htmltag{header}\LWR@orignewline
6123 \LWR@startpars
6124 \LWR@firstpagetop
6125 \LWR@stoppars
6126 \LWR@htmltag{/header}\LWR@orignewline

6127 \LWR@htmlclass{div}{bodywithoutstoc}
6128 \LWR@htmlclass{div}{bodycontainer}
6129 \LWR@traceinfo{LWR@lwarpStart: Generating textbody.}
6130 \LWR@htmlclass{section}{textbody}
```

Patch the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native \LaTeX environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```
6131 \LWR@patchlists
```

Ensure that math mode is active to call lwarp's patches:

```
6132 \catcode'\$=\active
```

Required for `\nameref` to work with SVG math:

```
6133 \immediate\write\@mainaux{\catcode'\string$\active}%
6134 \LetLtxMacro\LWR@syntaxhighlightone$% balance for editor syntax highlighting
```

Allow HTML paragraphs to begin:

```
6135 \LWR@startpars
```

If using MATHJAX, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
6136 \LWR@customizeMathJax

6137 \LWR@traceinfo{LWR@lwarpStart: done}
6138 }
6139 \catcode'\$=3% math shift until lwarp starts

6140 \end{warpHTML}
```

64 Ending HTML output

for HTML output: 6141 `\begin{warpHTML}`

`\LWR@requesttoc` $\langle\mathit{boolean}\rangle$ $\langle\mathit{suffix}\rangle$ Requests that a TOC, LOF, or LOT be generated.

```
6142 \newcommand*\LWR@requesttoc}[2]{%
6143 \ifbool{#1}
6144 {
6145   \expandafter\newwrite\@nameuse{tf@#2}
6146   \immediate\openout \@nameuse{tf@#2} \jobname.#2\relax
6147 }-{}
6148 }
```

`\LWR@LwarpEnd` Final stop of all HTML output:

```
6149 \newcommand*\LWR@LwarpEnd}
6150 {
6151 \LWR@stoppars
6152 \LWR@closeprevious{\LWR@depthfinished}
```

At the bottom of the ending file:

Close the textbody:

```
6153 \LWR@html\element\classend{section}{tbody}
6154 \LWR@html\element\classend{div}{bodycontainer}
6155 \LWR@html\element\classend{div}{bodyandsidetoc}
```

Print any pending footnotes:

```
6156 \LWR@printpendingfootnotes
```

Create the footer:

```
6157 \LWR@html\element{footer}
6158
6159 \LWR@pagebottom
6160
6161 \LWR@html\elementend{footer}
```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```
6162 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6163 {}
6164 {
6165   \ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}
6166 }
```

```
6167 \LWR@stoppars% final stop of all paragraphs
```

Finish the HTML file:

```
6168 \LWR@htmltag{/body}\LWR@orignewline
6169 \LWR@htmltag{/html}\LWR@orignewline
```

Seems to be required sometimes:

```
6170 \LWR@orignewpage
```

For lateximage commands:

```
6171 \immediate\closeout\LWR@lateximagesfile
6172 }
```

```
6173 \end{warpHTML}
```

65 Title page

package support lwarp supports the native L^AT_EX 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 65.8.

affiliation lwarp provides for the `\author` macro an additional `\affiliation` macro to provide an affiliation and other additional information for each author in the title page. The affiliation information is removed when using `titlingpage`'s `\theauthor` in the main text.

reusing titlepage information The `titling` package maintains the definitions of `\thetitle`, `\theauthor`, etc., after the title has been typeset. These commands are to be used to refer to the document's title and author, etc., in the main text. These definitions have the `\thanks` and `\affiliation` removed, and for `\author` the `\and` is replaced to generate a simple inline list of authors separated by commas. Note: `\theauthor` does not work well with `authblk` unless the traditional L^AT_EX 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.

65.1 Setting the title, etc.

The following provide setting commands for both HTML and print outputs.

`\author` `{\author}` While using `\maketitle` and print mode, the author is treated as a single-column tabular and the `\and` feature finishes the current tabular then starts a new one for the next author. Each author thus is placed into its own tabular, and an affiliation may be placed on its own line such as

```
\author{Name \\ Affiliation \and Second Name \\ Second Affiliation}
```

For HTML, the entire author block is placed inside a `<div>` of class `author`, and each individual author is inside a `<div>` of class `oneauthor`.

`\@title` `\@title`, `\@author`, etc. store the values as originally assigned, including any `\@author` `\thanks`, `\and`, or `\affiliation`. These are low-level macros intended to be used by `\@date`

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

```
\HTMLPageBottom{
\begin{center}\textcopyright~2016 \theauthor\end{center}
}
```

⚠ `\theauthor`, `authblk` `\theauthor` does not work well if `authblk` is used. If `\theauthor` is important, it is recommended to use the standard L^AT_EX syntax for `\author`, optionally with `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.

65.2 `\if@titlepage`

for HTML & PRINT: 6174 `\begin{warpall}`

`\if@titlepage` Some classes do not provide `\if@titlepage`. In this case, provide it and force it false.

```
6175 \ifcsvoid{@titlepagefalse}{
6176   \newif\if@titlepage
6177   \@titlepagefalse
6178 }{}

6179 \end{warpall}
```

65.3 Changes for `\affiliation`

`\affiliation` $\{ \langle text \rangle \}$

Adds the affiliation to the author for use in `\maketitle`.

Inside `titlepage`, this macro prints its argument. Outside, it is null.

for HTML & PRINT:

```
6180 \begin{warpall}
6181 \providerobustcmd{\affiliation}[1]{}
6182 \end{warpall}
```

for PRINT output:

```
6183 \begin{warpprint}
```

```
6184 \AtBeginEnvironment{titlepage}{
6185 \renewrobustcmd{\affiliation}[1]{\ \ \ \textsc{\small#1}}
6186 }
6187
6188 \AtBeginDocument{
6189 \@ifpackageloaded{titling}{
6190 \AtBeginEnvironment{titlingpage}{
6191 \renewrobustcmd{\affiliation}[1]{\ \ \ \textsc{\small#1}}
6192 }
6193 }{}% titling loaded
6194 }% AtBeginDocument

6195 \end{warpprint}
```

for HTML output:

```
6196 \begin{warpHTML}
```

Env `titlepage` Sets up a `<div>` of class `titlepage`. Provided even for memoir class, since it is used by `\maketitle`.

```
6197 \DeclareDocumentEnvironment{titlepage}{}
6198 {
```

```

6199 \renewrobustcmd{\affiliation}[1]{\ \ \InlineClass{affiliation}{##1}}
6200 \LWR@printpendingfootnotes
6201 \LWR@forcenewpage
6202 \BlockClass{titlepage}
6203 }
6204 {
6205 \endBlockClass
6206 \LWR@printpendingfootnotes
6207 }

6208 \end{warpHTML}

```

65.4 Printing the thanks

for HTML & PRINT: 6209 \begin{warpall}

`\printthanks` Forces the `\thanks` to be printed.

This is necessary in a `titlingpage` environment when `\maketitle` was not used.

```

6210 \newcommand*{\printthanks}{\@thanks}

6211 \end{warpall}

```

65.5 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: 6212 \begin{warpHTML}

`\printtitle`

```

6213 \newcommand*{\printtitle}
6214 {%
6215   \LWR@stoppars%
6216   \LWR@htmltag{\LWR@tagtitle}%
6217   \@title%
6218   \LWR@htmltag{\LWR@tagtitleend}%
6219   \LWR@startpars%
6220 }

```

`\LWR@printthetitle` A private version which prints the title without footnotes, used to title each HTML page.

```
6221 \newcommand*\LWR@printthetitle{
6222 {%
6223   \LWR@stoppars%
6224   \LWR@htmltag{\LWR@tagtitle}%
6225   \thetitle%
6226   \LWR@htmltag{\LWR@tagtitleend}%
6227   \LWR@startpars%
6228 }
```

`\printauthor` HTML version.

```
6229 \newcommand*\printauthor}{
```

The entire author block is contained in a `<div>` named `author`:

```
6230 \begin{BlockClass}{author}
```

`\and` finishes one author and starts the next:

```
6231 \renewcommand{\and}{%
6232 \end{BlockClass}
6233 \begin{BlockClass}{oneauthor}
6234 }
```

Individual authors are contained in a `<div>` named `oneauthor`:

```
6235 \begin{BlockClass}{oneauthor}
6236 \@author
6237 \end{BlockClass}
6238 \end{BlockClass}
6239 }
```

`\printdate`

```
6240 \newcommand*\printdate}{%
6241 \begin{BlockClass}{titledate}
6242 \@date
6243 \end{BlockClass}
6244 }
```

```
6245 \end{warpHTML}
```

65.6 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: 6246 `\begin{warpprint}`

`\printtitle`

```
6247 \newcommand*\printtitle>{{\Huge\@title}}
```

`\printauthor` Print mode.

```
6248 \newcommand*\printauthor
```

```
6249     {{\large\begin{tabular}[t]{c}\@author\end{tabular}}}
```

`\printdate`

```
6250 \newcommand*\printdate>{{\small\textit{\@date}}}
```

```
6251 \end{warpprint}
```

65.7 `\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 58 for other kinds of footnotes.

See `\thanksmarkseries{series}`, below, to set the style of the footnote marks.

for HTML output: 6252 `\begin{warppHTML}`

```
6253 \@ifclassloaded{memoir}
```

```
6254 {
```

```
6255 \newcommand{\LWR@setfootnoteseries}{%
```

```
6256     \renewcommand\thefootnote{\@arabic\c@footnote}%
```

```
6257 }
```

```
6258 }{% not memoir
```

```
6259 \if@titlepage
```

```
6260 \newcommand{\LWR@setfootnoteseries}{%
```

```
6261     \renewcommand\thefootnote{\@arabic\c@footnote}%
```

```
6262 }
```

```
6263 \else
```

```

6264 \newcommand{\LWR@setfootnoteseries}{%
6265     \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
6266 }
6267 \fi
6268 }% not memoir

```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```

6269 \newcommand*{\LWR@maketitlesetup}{%

```

Redefine the footnote mark:

```

6270 \LWR@setfootnoteseries%
6271 \def\@makefnmark{\textsuperscript{\thefootnote}}

        \thefootnote ⇒ \nameuse{arabic}{footnote}, or
        \thefootnote ⇒ \nameuse{fnsymbol}{footnote}

```

Redefine the footnote text:

```

6272 \long\def\@makefntext##1{%

```

Make the footnote mark and some extra horizontal space for the tags:

```

6273 \textsuperscript{\@thefnmark}~%

        \makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
        \@thefnmark ⇒ \itshape a (or similar)

```

Print the text:

```

6274 ##1%
6275 }%
6276 }

```

`\@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*.

```

6277 \def\@fnsymbol#1{\ifcase#1\or *\or \HTMLentity{dagger}\or \HTMLentity{Dagger}\or
6278     \HTMLentity{sect}\or \HTMLentity{para}\or \text{\HTMLUnicode{2016}}\or
6279     **\or \HTMLentity{dagger}\HTMLentity{dagger} \or
6280     \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.

```
6281 \renewcommand*\maketitle}{%
```

An HTML titlepage `<div>` is used for all classes.

```
6282 \begin{titlepage}
```

Set up special patches:

```
6283 \LWR@maketitlesetup
```

Typeset the title, etc:

```
6284 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
6285 \@thanks
```

Close the HTML titlepage div and cleanup:

```
6286 \end{titlepage}
6287 \setcounter{footnote}{0}%
6288 \global\let\thanks\relax
6289 \global\let\maketitle\relax
6290 \global\let\@maketitle\relax
6291 \global\let\@thanks\@empty
6292 \global\let\@author\@empty
6293 \global\let\@date\@empty
6294 \global\let\@title\@empty
6295 \global\let\title\relax
6296 \global\let\author\relax
6297 \global\let\date\relax
6298 \global\let\and\relax
6299 }
```

`\@maketitle` HTML mode. Typesets the title, etc.:

```
6300 \DeclareDocumentCommand{\@maketitle}{-}{%
6301   \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}%
6302   \@title%
6303   \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars%
6304   \begin{BlockClass}{author}%
```

For IEEEtran class:

```

6305 \renewcommand*\cr{}%
6306 \renewcommand*\crr{}%
6307 \renewcommand*\noalign{}%

6308 \renewcommand{\and}{%
6309 \end{BlockClass}%
6310 \begin{BlockClass}{oneauthor}%
6311 }%
6312 \begin{BlockClass}{oneauthor}%
6313 \@author%
6314 \end{BlockClass}%
6315 \end{BlockClass}%
6316 \begin{BlockClass}{titledate}%
6317 \@date%
6318 \end{BlockClass}%
6319 }

```

`\LWR@titlingmaketitle` \maketitle for use inside an HTML titlingpage environment.

```
6320 \newcommand*\LWR@titlingmaketitle{%
```

Keep pending footnotes out of the title block:

```
6321 \@thanks
```

Set up special patches:

```
6322 \LWR@maketitlesetup
```

Typeset the title, etc:

```
6323 \@maketitle
```

Immediately generate any \thanks footnotes:

```
6324 \@thanks
```

```
6325 }
```

```
6326 \end{warpHTML}
```

65.8 \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: 6327 `\begin{warpall}`

`\AddSubtitlePublished` Adds `\published` and `\subtitle`, and related.

```

6328 \newcommand*{\AddSubtitlePublished}{%
6329 \@ifpackageloaded{titling}{% yes titling package
6330   \newcommand{\@published}{}%
6331   \newcommand{\published}[1]{\gdef\@published{##1}}%
6332   \renewcommand*\maketitlehooka{\printpublished}%
6333   \newcommand*\printpublished{%
6334     \warpprintonly{\begin{center}\unskip}%
6335     \begin{BlockClass}{published}%
6336     \warpprintonly{\large\itshape}%
6337     \@published%
6338     \end{BlockClass}%
6339     \warpprintonly{\end{center}}}%
6340   }%
6341   \newcommand{\@subtitle}{}%
6342   \newcommand{\subtitle}[1]{\gdef\@subtitle{##1}}%
6343   \renewcommand*\maketitlehookb{\printsubtitle}%
6344   \newcommand*\printsubtitle{%
6345     \warpprintonly{\begin{center}\unskip}%
6346     \begin{BlockClass}{subtitle}%
6347     \warpprintonly{\Large\itshape}%
6348     \@subtitle%
6349     \end{BlockClass}%
6350     \warpprintonly{\end{center}}}%
6351   }%
6352 }% yes titling package
6353 {% no titling package
6354   \newcommand{\published}[1]{}%
6355   \newcommand*\printpublished{}%
6356   \newcommand{\subtitle}{}%
6357   \newcommand*\printsubtitle{}%
6358 }% no titling package
6359 }% \AddSubtitlePublished

```

```
6360 \end{warpall}
```

66 Abstract

The following code replaces the L^AT_EX default, and will itself be replaced later if the abstract package is loaded.

for HTML output: 6361 \begin{warpHTML}

`\abstractname` User-redefinable title for the abstract.

Also over-written by the babel package.

```
6362 \providecommand*\abstractname{Abstract}
```

Some classes allow an optional name, so it is allowed here.

Env `abstract`

```
6363 \DeclareDocumentEnvironment{abstract}{0{\abstractname}}
6364 {
6365 \LWR@forcenewpage
6366 \BlockClass{abstract}
6367 \BlockClassSingle{abstracttitle}{#1}
6368 }
6369 {
6370 \endBlockClass
6371 }

6372 \end{warpHTML}
```

67 Quote and verse

67.1 Attributions

`\attribution` For use with quote, quotation, verse:

Ex: "A quotation." `\attribution{\textsc{Author Name}}\textsl{Book Title}`

for HTML output: 6373 \begin{warpHTML}

```

6374 \newcommand{\attribution}[1]{%
6375     \begin{BlockClass}{attribution}
6376     #1
6377     \end{BlockClass}
6378 }
6379 \end{warpHTML}

```

for PRINT output:

```

6380 \begin{warpprint}
6381 \newcommand{\attribution}[1]{
6382     \begin{flushright}
6383     \unskip
6384     #1
6385     \end{flushright}}%
6386 }
6387 \end{warpprint}

```

67.2 Quotes, quotations

for HTML output: 6388 \begin{warpHTML}

Env quote

```

6389 \renewenvironment*{quote}
6390 {
6391 \LWR@forcenewpage
6392 \LWR@htmlblocktag{blockquote}
6393 }
6394 {\LWR@htmlblocktag{/blockquote}}
6395
6396 \renewenvironment*{quotation}
6397 {
6398 \LWR@forcenewpage
6399 \LWR@htmlblocktag{blockquotation}
6400 }
6401 {\LWR@htmlblocktag{/blockquotation}}
6402 \end{warpHTML}

```

67.3 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	<code>\vleftskip</code>	These lengths are used by <code>verse</code> and <code>memoir</code> to control the left margin, and they may already be set by the user for print output. New lengths <code>\HTMLvleftskip</code> and <code>\HTMLleftmargini</code> are provided to control the margins in HTML output. These new lengths may be set by the user before any <code>verse</code> environment, and persist until they are manually changed again. One reason to change <code>\HTMLleftmargini</code> is if there is a wide <code>\flagverse</code> in use, such as the word “Chorus”, in which case the value of <code>\HTMLleftmargini</code> should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.
Len	<code>\vleftmargini</code>	
Len	<code>\HTMLvleftskip</code>	
Len	<code>\HTMLleftmargini</code>	

 **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.

67.3.1 L^AT_EX core verse environment

for HTML output: 6403 `\begin{warpHTML}`

Env `verse`

```
6404 \renewenvironment{verse}
6405     {\let\\newline% lwarp
6406     \list{}{\itemsep \z@
6407     \itemindent -1.5em%
6408     \listparindent\itemindent
6409     \rightmargin \leftmargin
6410     \advance\leftmargin 1.5em}%
6411     \item\relax}
6412     {\endlist}

6413 \end{warpHTML}
```

for HTML & PRINT: 6414 `\begin{warpall}`

67.3.2 verse and memoir

The following lengths are used by `verse` and `memoir`. They may be set in either print or HTML output, but are only used in HTML. This allows the user to set `\leftskip` and `\leftmargini` for print output, and optionally select different values for HTML.

Len `\HTMLvleftskip` Sets `\vleftskip` inside a verse environment in HTML.

```
6415 \newlength{\HTMLvleftskip}
6416 \setlength{\HTMLvleftskip}{1em}
```

Len `\HTMLleftmargini` Sets `\leftmargini` inside a verse environment in HTML.

```
6417 \newlength{\HTMLleftmargini}
6418 \setlength{\HTMLleftmargini}{4.5em}
```

```
6419 \end{warpall}
```

68 Verbatim and tabbing

for HTML & PRINT: 6420 `\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.

```
6421 \newlength{\VerbatimHTMLWidth}
6422 \setlength{\VerbatimHTMLWidth}{4in}
6423 \end{warpall}
```

for HTML output: 6424 `\begin{warpHTML}`

Bool `LWR@verbtags` Used to temporarily turn off verbatim tags while doing `\verbatiminput` in the HTML head.

```
6425 \newbool{LWR@verbtags}
6426 \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.

```
6427 \newcommand*\LWR@atbeginverbatim}[3] []
6428 {%
```

Avoid excessive space between lines:

```
6429 \setlength{\parskip}{0ex}%
```

Stop generating HTML paragraph tags:

```
6430 \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.

```
6431 \ifbool{LWR@verbtags}{%
6432   \LWR@htmltag{pre class=\textquotedbl#3\textquotedbl%
6433     \ifthenelse{equal{#1}{}}{ style=\textquotedbl#1\textquotedbl}%
6434   }%
6435   \LWR@orignewline% pre
6436   \leavevmode\unskip\LWR@print@vspace*{-#2\baselineskip}%
6437 }{}}%
```

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.

```
6438 \begingroup%
```

```
6439 % \LWR@print@normalsize%
6440 \LWR@origttfamily%
6441 \LWR@print@small%
```

Since inside a `<pre>`, restore the original list processing:

```
6442 \LWR@restoreoriglists%
```

Turn off babel-french extra space before punctuation:

```
6443 \LWR@FBcancel%
```

Do not produce HTML tags for `\hspace` inside a `verse` par. Restore plain L^AT_EX `\hspace` functionality:

```
6444 \LWR@select@print@hspace%
6445 }
```

```
\LWR@afterendverbatim {(\negative \baselineskip \vspace)}
```

Finishes enclosing a verbatim environment.

```
6446 \newcommand*\LWR@afterendverbatim}[1]{%
6447 \endgroup%
6448 \par%
```

At the end of the environment, close the pre:

```
6449 \ifbool{LWR@verbtags}{%
6450   \LWR@print@vspace*{-#1\baselineskip}%
6451   \noindent\LWR@htmltag{/pre}\LWR@orignewline% pre
6452 }{}%
```

Resume regular paragraph handling:

```
6453 \LWR@startpars%
6454 }
```

`\verbatiminput` $\{ \langle filename \rangle \}$

Patch `\verbatiminput` to add HTML tags:

```
6455 \let\LWRV@origverbatim@input\verbatim@input
6456
6457 \renewcommand{\verbatim@input}[2]{%
6458 \ifbool{LWR@verbtags}{\LWR@forcenewpage}{}%
6459 \LWR@atbeginverbatim{2.5}{Verbatim}%
6460 \LWRV@origverbatim@input{#1}{#2}%
6461 \LWR@afterendverbatim{1.5}%
6462 }
```

Env `verbatim`

```
6463 \AfterEndPreamble{
6464 \LWR@traceinfo{Patching verbatim.}
6465 \AtBeginEnvironment{verbatim}{%
6466 \LWR@forcenewpage%
6467 \LWR@atbeginverbatim{2.5}{verbatim}%
6468 }
6469 \AfterEndEnvironment{verbatim}{%
6470   \LWR@afterendverbatim{1}%
6471 }
6472 }
```

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.

```

6473 \newcommand*\LWR@HTML@tabbing}{%
6474 \LWR@forcenewpage%
6475 \LWR@atbeginverbatim{3}{tabbing}%
6476 \LWR@print@tabbing%
6477 }
6478
6479 \newcommand*\LWR@HTML@endtabbing}{%
6480   \LWR@print@endtabbing%
6481   \LWR@afterendverbatim{1}%
6482 }
6483
6484 \LWR@formatted{tabbing}
6485 \LWR@formatted{endtabbing}

6486 \end{warpHTML}

```

69 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 `` of class `theoremlabel`.
- The contents are placed inside a `<div>` of class `theoremcontents`.

for HTML output: `6487 \begin{warpHTML}`

`\@begintheorem` $\{\langle name \rangle\}$ $\{\langle number \rangle\}$

```

6488 \renewcommand{\@begintheorem}[2]{%
6489 \LWR@forcenewpage
6490 \BlockClass{theoremcontents}
6491 \trivlist
6492 \item[\InlineClass{theoremlabel}{#1\ #2\ }]\itshape
6493 }

```

`\@opargbegintheorem` $\{\langle name \rangle\}$ $\{\langle number \rangle\}$ $\{\langle oparg \rangle\}$

```

6494 \renewcommand{\@opargbegintheorem}[3]{%
6495 \LWR@forcenewpage
6496 \BlockClass{theoremcontents}
6497 \trivlist
6498 \item[\InlineClass{theoremlabel}{#1\ #2\ (#3)\ }]\itshape
6499 }

```

`\@endtheorem`

```

6500 \renewcommand*\@endtheorem}{%
6501 \endtrivlist
6502 \endBlockClass% theoremcontents
6503 }

6504 \end{warpHTML}

```

70 Lists

The environments `itemize`, `enumerate`, and `description` are patched when `lwarp` is started. These patches support the standard \LaTeX 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 \LaTeX 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 \TeX 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`.

70.1 List environment

for HTML output: 6505 `\begin{warpHTML}`

`\LWR@printcloseslist` May be locally redefined by `enumerate` or `description`.

```
6506 \newcommand*{\LWR@printcloseslist}{\LWR@printcloseitemize}
```

`\LWR@printopenlist` May be locally redefined by `enumerate` or `description`.

```
6507 \newcommand*{\LWR@printopenlist}{ul style="\LWR@print@mbbox{list-style-type:none}"}
```

`\@mklab` Removes PDF spacing.

```
6508 \AtBeginDocument{
6509 \def\@mklab#1{%
6510 % \hfil %
6511 #1}
6512 \let\makelabel\@mklab
6513 }
```

`\@donoparitem` Modified for HTML output by replacing TeX boxes with plain text. Also removes PDF spacing.

```
6514 \def\@donoparitem{%
6515 \@noperitemfalse
6516 % \global\setbox\@labels\hbox{\hskip -\leftmargin
6517 % \unhbox\@labels
6518 % \hskip \leftmargin}%
6519 % \if@minipage\else
6520 % \@tempskipa\lastskip
6521 % \vskip -\lastskip
6522 % \advance\@tempskipa\@outerparskip
6523 % \advance\@tempskipa -\parskip
6524 % \vskip\@tempskipa
6525 % \fi
6526 }
```

`\@item` Modified for HTML output by replacing TeX boxes with plain text. Also removes PDF spacing.

```
6527 \def\LWR@HTML@item[#1]{%
6528 \LWR@traceinfo{@item}
6529 \if@noparitem
6530 \@donoparitem
6531 \else
6532 % \if@inlabel
6533 % \indent
6534 % \par
6535 % \fi
6536 \ifhmode
6537 % \unskip\unskip
6538 % \par
6539 \fi
6540 \if@newlist
6541 \if@nobreak
6542 \@nbitem
6543 \else
6544 % \addpenalty\@beginparpenalty
6545 % \addvspace\@topsep
6546 % \addvspace{-\parskip}%
6547 \fi
6548 \else
6549 % \addpenalty\@itempenalty
6550 % \addvspace\itemsep
6551 \fi
6552 \global\@inlabeltrue
6553 \fi
6554 % \everypar{%
6555 % \@minipagefalse
6556 % \global\@newlistfalse

6557 % \if@inlabel
6558 % \global\@inlabelfalse

6559 % {\setbox\z@\lastbox
6560 % \ifvoid\z@
6561 % \kern-\itemindent
6562 % \fi}%

6563 % \box\@labels
6564 % \penalty\z@
6565 % \fi

6566 % \if@nobreak
6567 % \@nobreakfalse
6568 % \clubpenalty \@M
6569 % \else
6570 % \clubpenalty \@clubpenalty
6571 % \everypar{}}
```

```

6572 %      \fi}%

6573 \if@noitemarg
6574   \@noitemargfalse
6575   \if@nmbrrlist

6576       \refstepcounter\@listctr
6577   \fi
6578 \fi

6579   \makelabel{#1} % extra space
6580 %   \sbox\@tempboxa{\makelabel{#1}}%
6581 %   \global\setbox\@labels\hbox{%
6582 %     \unhbox\@labels
6583 %     \hskip \itemindent
6584 %     \hskip -\labelwidth
6585 %     \hskip -\labelsep
6586 %     \ifdim \wd\@tempboxa >\labelwidth
6587 %       \box\@tempboxa

6588 %     \else
6589 %       \hbox to\labelwidth {\unhbox\@tempboxa}%
6590 %     \fi
6591 %     \hskip \labelsep}%
6592 \ignorespaces%
6593 }

```

\@nbitem

```

6594 \def\@nbitem{%
6595 %   \@tempskipa\@outerparskip
6596 %   \advance\@tempskipa -\parskip
6597 %   \addvspace\@tempskipa
6598 }

```

\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.

```

6599 \newcommand*\LWR@listitem}{%
6600 \LWR@stoppars%
6601 \LWR@startnewdepth{\LWR@depthlistitem}{\LWR@printcloselistitem}%
6602 \LWR@htmltag{li}%
6603 \LWR@startpars%

```

```
6604 \LWR@origitem%
6605 }
```

`\LWR@nulllistfills` Nullifies various TeX fill commands, in case they are used inside `\makeLabel`. Problems are caused when these are nullified all the time.

```
6606 \newcommand*\LWR@nulllistfills{%
6607 \renewcommand*\hss{}%
6608 \renewcommand*\llap[1]{##1}%
6609 \renewcommand*\rlap[1]{##1}%
6610 \renewcommand*\hfil{}%
6611 \renewcommand*\hfilneg{}%
6612 \renewcommand*\hfill{}%
6613 }
```

Env `list` `{(label)}` `{(commands)}`

```
6614 \newcommand*\LWR@liststart{%
6615 \LWR@traceinfo{LWR@liststart}%
6616 \LWR@stoppars%
6617 \LWR@pushoneclose{\LWR@depthlist}{\LWR@printcloselist}%
6618 \LWR@htmltag{\LWR@printopenlist}\LWR@orignewline%
6619 \LWR@startpars%
6620 \setlength{\topsep}{0pt}%
6621 \setlength{\partopsep}{0pt}%
6622 \setlength{\itemsep}{0pt}%
6623 \setlength{\parsep}{0pt}%
6624 \setlength{\leftmargin}{0pt}%
6625 \setlength{\rightmargin}{0pt}%
6626 \setlength{\listparindent}{0pt}%
6627 \setlength{\itemindent}{0pt}%
6628 \setlength{\labelsep}{1em}%
6629 \LWR@nulllistfills%
6630 }
```

```
6631 \newcommand*\LWR@listend{%
6632 \LWR@traceinfo{LWR@listend}%
6633 \LWR@stoppars%
6634 \LWR@closeprevious{\LWR@depthlist}%
6635 \LWR@startpars%
6636 }
```

70.2 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.

```
6637 \newcommand*\LWR@itemizeitem}{%
6638 \LWR@stoppars%
6639 \LWR@startnewdepth{\LWR@depthlistitem}{\LWR@printcloseitem}%
6640 \LWR@htmltag{li}%
6641 \LWR@startpars%
6642 \LWR@origitem%
6643 }
```

Env `itemize` [*options*]

```
6644 \newcommand*\LWR@itemizestart}{%
6645 \renewcommand*\LWR@printcloseitem}{\LWR@printcloseitemize}
6646 \renewcommand*\LWR@printopenitem}{ul style="\LWR@print@mbx{list-style-type:none}}
6647 \let\item\LWR@itemizeitem%
6648 \LWR@nulllistfills%
6649 }
```

70.3 Enumerate

An HTML unordered list is used with customized L^AT_EX-generated labels.

Env `enumerate` [*options*]

```
6650 \newcommand*\LWR@enumeratestart}{%
6651 \renewcommand*\LWR@printcloseitem}{\LWR@printcloseitemize}
6652 \renewcommand*\LWR@printopenitem}{ul style="\LWR@print@mbx{list-style-type:none}}
6653 \let\item\LWR@itemizeitem%
6654 \LWR@nulllistfills%
6655 }
```

70.4 Description

`\LWR@descitem` [*label*] Handles an `\item` inside a description.

```
6656 \newcommand*\LWR@descitem}[1][]{%
6657 {%
6658 \LWR@stoppars%
```

```
6659 \LWR@setlatestname{#1}%
6660 \LWR@startnewdepth{\LWR@depthlistitem}{\LWR@printclosedescitem}%
```

Temporarily disable `\hspace`, which `article.cls`, etc. use per `\item` for descriptions only. This causes `lwarp` to mistakenly place an empty span between HTML list tags.

```
6661 \LWR@select@html@nohspace%
```

Process the original `\item` code:

```
6662 \LWR@origitem[]%
```

Restore `\hspace` for use in the item text:

```
6663 \LWR@select@html@hspace%
```

```
6664 \LWR@htmltag{dt}#1\LWR@htmltag{/dt}%
6665 \LWR@orignewline%
6666 \LWR@htmltag{dd}%
6667 \LWR@startpars%
6668 }
```

Env `description` [*options*]

```
6669 \newcommand*{\LWR@descriptionstart}{%
6670 \renewcommand*{\LWR@printcloselist}{\LWR@printclosedescription}
6671 \renewcommand*{\LWR@printopenlist}{dl}
6672 \let\item\LWR@descitem%
6673 \LWR@nulllistfills%
6674 }
```

70.5 Patching the lists

`\LWR@patchlists` Patches list environments.

`\LWR@patchlists` remembers `\item` as defined by whatever packages have been loaded, then patches the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native L^AT_EX environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```
6675 \newcommand*{\LWR@patchlists}{%
6676   \LetLtxMacro\item\LWR@listitem%
6677   \LetLtxMacro\@item\LWR@HTML@item%
6678   \renewcommand*{\@trivlist}{%
```

```

6679     \LWR@traceinfo{@trivlist start}%
6680     \LWR@liststart%
6681     \LWR@orig@trivlist%
6682     \LWR@traceinfo{@trivlist done}%
6683 }%
6684 \renewcommand*{\trivlist}{%
6685     \LWR@traceinfo{trivlist}%
6686     \LWR@origtrivlist%
6687 }%
6688 \renewcommand*{\endtrivlist}{%
6689     \LWR@traceinfo{endtrivlist start}%
6690     \LWR@origendtrivlist\LWR@listend%
6691     \LWR@traceinfo{endtrivlist done}%
6692 }%
6693 \renewcommand*{\itemize}{%
6694     \LWR@itemizestart\LWR@origitemize%
6695 }%
6696 \renewcommand*{\enumerate}{%
6697     \LWR@enumeratestart\LWR@origenumerate%
6698 }%
6699 \renewcommand*{\description}{%
6700     \LWR@descriptionstart\LWR@origdescription%
6701 }%
6702 }

```

`\LWR@restoreoriglists` Restores the original trivlist environment.

```

6703 \newcommand*{\LWR@restoreoriglists}{%
6704 \LWR@traceinfo{\LWR@restoreoriglists}%
6705 \LetLtxMacro\item\LWR@origitem%
6706 \LetLtxMacro\@item\LWR@orig@item%
6707 \let\@trivlist\LWR@orig@trivlist%
6708 \let\trivlist\LWR@origtrivlist%
6709 \let\endtrivlist\LWR@origendtrivlist%
6710 \LetLtxMacro\itemize\LWR@origitemize%
6711 \LetLtxMacro\enditemize\LWR@endorigitemize%
6712 \LetLtxMacro\enumerate\LWR@origenumerate%
6713 \LetLtxMacro\endenumerate\LWR@endorigenumerate%
6714 \LetLtxMacro\description\LWR@origdescription%
6715 \LetLtxMacro\enddescription\LWR@endorigdescription%
6716 \let\@mklab\LWR@orig@mklab%
6717 \let\makelabel\LWR@origmakelabel%
6718 \let\@donoparitem\LWR@orig@donoparitem%
6719 \let\@nbitem\LWR@orig@nbitem%
6720 }

6721 \end{warpHTML}

```

71 Tabular

This is arguably the most complicated part of the entire package. Numerous tricks are employed to handle the syntax of the L^AT_EX core and the various tabular-related packages.

71.1 Limitations

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, * column specifiers, siunitx S columns, or the packages multirow, longtable, supertabular, or xtab.

Defining 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:

⚠ `\multirow`

- 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.

```
... & \multirow{2}{.5in}{text} & ...
... & \mrowcell & ...
```

`vposn`

Note that recent versions of `\multirow` include a new optional `vposn` argument.

- 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.
- See section 299.2 for `\multicolumnrow`.

⚠ `\multicolumn & \multirow`

`lwarp` does not support directly combining `\multicolumn` and `\multirow`. Use `\multicolumnrow` instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}{c}{3}[0]{1in}[Opt]{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:

⚠ `empty cells`

```
... & \multicolumnrow{2}{c}{c}{3}[0]{1in}[Opt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
... & \mcolrowcell & \mcolrowcell & ...
```

`vposn`

Note that recent versions of `\multirow` include a new optional `vposn` argument.

⚠ `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:

⚠ `* column specification`

- `*` in a column specification is not used (so far). Repeat the column type the correct number of times.

`@ 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 1.

Rules:

vertical rules

- Doubled `\hlines`, `\midrules`, and vertical rules are supported.
- Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.

width and trim

- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim.

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.

⚠ `\warpprintonly`
⚠ Misplaced `\noalign`

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

```
This & That \endhead
```

to

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

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

colortbl:

⚠ row/cell color

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

`colortbl` ignores the overhang arguments.

Other:

longtable headings

- `tabularx` ignores the width, but X columns do produce paragraph columns or multicolumns.
- For `longtable`, place headings and footings which do not apply to HTML inside `\warpprintonly{}`.

⚠ 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 \\}
```

for HTML output: 6722 `\begin{warpHTML}`

71.2 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.

71.2.1 arydashln

Emulated by the original L^AT_EX non-dashed versions.

```
6723 \LetLtxMacro\hdashline\hline
6724 \LetLtxMacro\cdashline\cline
6725 \LetLtxMacro\firsthdashline\hline
6726 \LetLtxMacro\lasthdashline\hline
```

71.3 Token lookahead

Used by `\LWR@futurenonpacelet` to look at the next token.

`\LWR@mynexttoken`

```
6727 \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`

```
6728 \def\LWR@futurenonpacelet#1{\def\LWR@cs{#1}%
6729 \afterassignment\LWR@fnslone\let\nexttoken= }
6730 \def\LWR@fnslone{\expandafter\futurelet\LWR@cs\LWR@fnsltwo}
6731 \def\LWR@fnsltwo{%
```

```

6732 \expandafter\ifx\LWR@cs\@sptoken\let\next=\LWR@fnslthree%
6733 \else\let\next=\nexttoken\fi\next}
6734 \def\LWR@fnslthree{\afterassignment\LWR@fnslone\let\next= }

```

`\LWR@getmynexttoken` Looks ahead and copies the next token into `\LWR@mynexttoken`.

```

6735 \newcommand*{\LWR@getmynexttoken}{%
6736 \LWR@traceinfo{\LWR@getmynexttoken}%
6737 % nothing must follow this next line
6738 \LWR@futurenonSPACElet\LWR@mynexttoken\LWR@tabledatacolumnntag
6739 }

```

71.4 Tabular variables

Bool `LWR@startedrow` True if should print a row tag before this column.

```

6740 \newbool{LWR@startedrow}
6741 \boolfalse{LWR@startedrow}

```

Bool `LWR@tabularcelladded` True if have added a data cell for this position.

```

6742 \newbool{LWR@tabularcelladded}
6743 \boolfalse{LWR@tabularcelladded}

```

Ctr `LWR@hlines` Number of `\hlines` or `\midrules` above the next row.

```

6744 \newcounter{LWR@hlines}

```

Ctr `LWR@hdashedlines` Number of `\arydshln` dashed lines above the next row.

```

6745 \newcounter{LWR@hdashedlines}

```

Bool `LWR@doingtbrule` True if the next row will have a top/bottom rule above it.

```

6746 \newbool{LWR@doingtbrule}
6747 \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`.

```

6748 \newbool{LWR@doingcmidrule}
6749 \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.
- 6750 \newbool{LWR@tableparcell}
- Bool LWR@skippingmrowcell True if are doing an empty \multirow cell, and thus there is no data tag to close.
- 6751 \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.
- 6752 \newbool{LWR@skippingmcolrowcell}
- Bool LWR@skipatbang True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.
- 6753 \newbool{LWR@skipatbang}
- Bool LWR@emptyatbang True if finishing a row and should print empty @ or ! column table data cells.
- 6754 \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.
- 6755 \newbool{LWR@intabularmetadata}
- 6756 \boolfalse{LWR@intabularmetadata}
- Ctr LWR@tabularDepth Tracks whether & is being used inside a tabular.
- 6757 \newcounter{LWR@tabulardepth}
- 6758 \setcounter{LWR@tabulardepth}{0}
- Ctr LWR@tabularpardepth Tracks whether should look ahead at the next token when encountering a \par while processing tabular contents.
- When LWR@tabularpardepth is deeper than LWR@tabulardepth then lwarp has started looking at the contents of the tabular, and thus any \pars encountered must be followed by another token lookahead.
- 6759 \newcounter{LWR@tabularpardepth}
- 6760 \setcounter{LWR@tabularpardepth}{0}
- 6761 \newcommand*{\LWR@colsresult}{}%temp storage for column format results
- 6762 \newcommand*{\LWR@pposition}{}
- 6763 \newcommand*{\LWR@pleft}{}
- 6764 \newcommand*{\LWR@pright}{}

- `LWR@tablecolspec` Holds the parsed column specification, of total width `LWR@tabletotalLaTeXcols`, not counting `@` and `!` columns.
- Will contain a string such as `llrrccpc`, exactly one letter per \LaTeX table column, without `@`, `!`, `>`, `<`, or the vertical bar.
- `\LWR@strresult` Holds the result of `Str` functions.
- ```
6765 \providecommand*\LWR@strresult{}
6766 \providecommand*\LWR@strresulttwo{}
```
- `\LWR@origcolspec` Holds the original column specs given to `tabular`.
- ```
6767 \newcommand*\LWR@origcolspec{}
```
- Ctr `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 \LaTeX columns in the table.)
- ```
6768 \newcounter{LWR@tablecolspecwidth}
```
- Ctr `LWR@tablecolspecindex` While parsing the  $\LaTeX$  table column specification, starts at 1 and is incremented per token of the specification.
- ```
6769 \newcounter{LWR@tablecolspecindex}
```
- Ctr `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.
- ```
6770 \newcounter{LWR@tableLaTeXcolindex}
```
- Ctr `LWR@tabletotalLaTeXcols` While parsing a table column specification, begins at 0 and increments by 1 per  $\LaTeX$  table column. Eventually holds the final number of  $\LaTeX$  table columns in each row, not counting `@` and `!` columns. (In `HTML`, `@` and `!` cells become their own columns, but are not included in `LWR@tabletotalLaTeXcols`.)
- ```
6771 \newcounter{LWR@tabletotalLaTeXcols}
```
- Ctr `LWR@tabletotalLaTeXcolsnext` Holds the next \LaTeX table column index while parsing, equal to one more than `LWR@tabletotalLaTeXcols`.
- ```
6772 \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.

## 71.5 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`

```
6773 \newcommand*\LWR@insertatbangcols}{%
6774 \ifbool{LWR@skipatbang}%
6775 {}%
6776 {%
6777 \LWR@printatbang{at}{\arabic{LWR@tableLaTeXcolindex}}%
6778 \LWR@printatbang{bang}{\arabic{LWR@tableLaTeXcolindex}}%
6779 }%
6780 }
```

`\LWR@closetabledatacell` If `LWR@skippingmrowcell` or `LWR@skippingmcolrowcell` then there is no data tag to close. Otherwise, close any paragraphs, then close the data tag.

```
6781 \newcommand*\LWR@closetabledatacell}{%
6782 \LWR@stoppars%
6783 \global\booltrue{LWR@intabularmetadata}%
6784 \ifbool{LWR@exitingtabular}{}%
6785 {% not exiting tabular
6786 \ifboolexpr{bool{LWR@skippingmrowcell} or bool{LWR@skippingmcolrowcell}}%
6787 {%
```

If not skipping a `\multicolumnrow` cell, insert the @ and ! columns after this non-existent column.

```
6788 \ifbool{LWR@skippingmcolrowcell}%
6789 {}%
```

```

6790 {\LWR@insertatbangcols}%
6791 }%
6792 {% not skippingmrowcell

```

Insert any < then any @ and ! column contents, unless muted for the \bottomrule or a \multicolumn:

```

6793 \unskip%
6794 \ifboolexpr{%
6795 bool{LWR@tabularmutemods} or
6796 bool{LWR@skipatbang} or
6797 bool{LWR@emptyatbang}
6798 }%
6799 {%
6800 {\LWR@getexparray{LWR@colafterspec}{\arabic{LWR@tableLaTeXcolindex}}}%

```

Close paragraphs:

```

6801 \ifbool{LWR@tableparcell}{\LWR@stoppars}{}%
6802 \global\boolfalse{LWR@tableparcell}%

```

Close the table data cell.

Close any color <div>s.

```

6803 \whileboolexpr{test {\ifnumcomp{\value{LWR@cellcolordepth}}{>}{0}}}{%
6804 \LWR@htmltag{/div}\LWR@orignewline%
6805 \addtocounter{LWR@cellcolordepth}{-1}%
6806 }%

```

Skip the @ and ! cells if are closing a multicolumn cell.

```

6807 \leavevmode\unskip\LWR@htmltag{/td}\LWR@orignewline%
6808 \global\booltrue{LWR@tabularcelladded}%
6809 \LWR@insertatbangcols%
6810 }% not skipping mrowcell
6811 }% not exiting tabular
6812 \global\boolfalse{LWR@skippingmrowcell}%
6813 \global\boolfalse{LWR@skippingmcolrowcell}%
6814 \global\boolfalse{LWR@skipatbang}%

```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```

6815 \gdef\LWR@cellHTMLcolor{}
6816 \gdef\LWR@columnHTMLcolor{}
6817 \setcounter{LWR@cellcolordepth}{0}
6818 }

```

When not used inside a tabular, & performs its original function as recorded here ( with catcode 4 ).

```
6819 \let\LWR@origampmacro&
```

```
6820 \end{warpHTML}
```

### 71.5.1 Handling &

**for HTML output:** 6821 \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.

```
6822 \newcommand*{\LWR@tabularampersand}{%
6823 \LWR@traceinfo{\LWR@tabularampersand}%
6824 \ifnumcomp{\value{\LWR@tabulardepth}}{>}{0}%
6825 {%
```

If not skipping a multirow cell, close the current data cell.

```
6826 \unskip%
6827 \LWR@closetabledatacell%
```

Move to the next column.

```
6828 \addtocounter{\LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
6829 \global\boolfalse{\LWR@tabularcelladded}%
```

Look at the next token to decide multi or single column data tag.

```
6830 \LWR@getmynexttoken%
6831 }%
```

If not inside a tabular, performs the original action:

```
6832 {\LWR@origampmacro}%
6833 }
```

& 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.

### 71.5.2 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.

```
6834 \newcommand*{\LWR@tabularfinishrow}{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```
6835 \ifboolexpr{%
6836 not bool {LWR@exitingtabular} or%
6837 bool{LWR@doingtbrule} or%
6838 bool{LWR@doingcmidrule} or%
6839 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
6840 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
6841 bool{LWR@startedrow}}%
6842 }{%
```

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:

```
6843 \ifbool{LWR@exitingtabular}{%
6844 \global\booltrue{LWR@tabularmutemods}%
6845 }{%
6846 \global\boolfalse{LWR@tabularmutemods}%
6847 }%
```

Locally reenables the table data tags until finished with the final row:

```
6848 \global\boolfalse{LWR@exitingtabular}%
```

Generate table data tags and ampersands until the right edge:

```

6849 \whileboolexpr{%
6850 test {
6851 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}
6852 } or %
6853 (%
6854 bool{LWR@intabularmetadata} and%
6855 not bool{LWR@tabularcelladded} and%
6856 test {
6857 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{\value{LWR@tabletotalLaTeXcols}}
6858 }%
6859)%
6860 }%
6861 {%
6862 \LWR@tabledatasinglecolumn%

```

The following is essentially `\LWR@tabularampersand` with `LWR@emptyatbang` added to empty the following cells:

```

6863 \LWR@closetabledatacell%
6864 \addtocounter{LWR@tableLaTeXcolindex}{1}%
6865 \global\boolfalse{LWR@tabularcelladded}%
6866 \global\booltrue{LWR@emptyatbang}%

```

Starts the next cell:

```

6867 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}%
6868 {\LWR@getmynexttoken}%
6869 }%
6870 }%

```

Reenable the original `LWR@exitingtabular` to close the entire table:

```

6871 \ifbool{LWR@tabularmutemods}{%
6872 \global\booltrue{LWR@exitingtabular}%
6873 }{%
6874 \global\boolfalse{LWR@exitingtabular}%
6875 }%
6876 \global\boolfalse{LWR@tabularmutemods}%

6877 \global\boolfalse{LWR@emptyatbang}%
6878 }}% ifboolexpr
6879 }

```

## 71.6 Handling \\

Inside tabular, \\ is redefined to \LWR@tabularendofline

Throws away options \\[dim] or \\\*

\LWR@tabularendofline

```
6880 \NewDocumentCommand{\LWR@tabularendofline}{s o}{%
```

Finish the row:

```
6881 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}{%
6882 {\LWR@tabularfinishrow}%
6883 {\LWR@closetabledatacell}%
6884 \LWR@htmltag{/tr}\LWR@orignewline%
```

xcolor row color support:

```
6885 \@rowcolor%
```

No longer inside a data cell:

```
6886 \global\booltrue{LWR@intabularmetadata}%
```

Not yet started a table row:

```
6887 \global\boolfalse{LWR@startedrow}%
```

Additional setup:

```
6888 \setcounter{LWR@hlines}{0}%
6889 \setcounter{LWR@hdashedlines}{0}%
6890 \global\boolfalse{LWR@doingtbrule}%
6891 \global\boolfalse{LWR@doingcmidrule}%
6892 \LWR@clearmidrules%
6893 \gdef\LWR@rowHTMLcolor{}
```

Start at first column:

```
6894 \setcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
6895 \global\boolfalse{LWR@tabularcelladded}%
```

Allow T<sub>E</sub>X to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

```
6896 \LWR@stoppars
6897 \LWR@origpar
```

Look at the next token to decide between single column data tag or a special case:

```
6898 \LWR@getmynexttoken%
6899 }
```

## 71.7 Looking ahead in the column specifications

`\LWR@columnspeclookahead`  $\langle offset \rangle$

Looks `offset` tokens ahead in the column specification, setting `\LWR@strresulttwo`.

The `w` column alignment will be seen as a single unit such as `{c}`.

```
6900 \newcommand*\LWR@columnspeclookahead[1]{%
6901 \setcounter{LWR@tempcountone}{\value{LWR@tablecolspecindex}}%
6902 \addtocounter{LWR@tempcountone}{#1}%
6903 \fullexpandarg%
6904 \StrChar{\LWR@origcolspec}{\arabic{LWR@tempcountone}}[\LWR@strresulttwo]%
```

Get the contents of the first group in `\LWR@strresulttwo`:

```
6905 \exploregroups%
6906 \StrChar{\LWR@strresulttwo}{1}[\LWR@strresulttwo]%
6907 \noexploregroups%
6908 }
```

## 71.8 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```
6909 \newcommand*\LWR@colparameter{-}
```

`\LWR@parseatcolumn` Handles `@{text}` columns.

```
6910 \newcommand*\LWR@parseatcolumn{-}
```

Move to the next token after the '@':

```
6911 \LWR@traceinfo{at column}%
6912 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token into \LWR@colparameter, expanding once:

```
6913 \LWR@traceinfo{about to read the next token:}%
6914 \expandarg%
6915 \StrChar{\LWR@origcolspec}%
6916 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]
6917 \fullexpandarg%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```
6918 \LWR@traceinfo{have now read the next token}%
6919 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=} {0}%
6920 {% left edge of the table:
6921 \LWR@traceinfo{at the left edge}%
6922 \LWR@setexparray{LWR@colatspec}{leftedge}{\LWR@colparameter}%
6923 \LWR@traceinfo{at the left edge: %
6924 \LWR@getexparray{LWR@colatspec}{leftedge}}%
6925 }%
6926 {% not at the left edge:
6927 \LWR@traceinfo{not at the left edge}%
6928 \LWR@setexparray{LWR@colatspec}%
6929 {\arabic{LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
6930 \LWR@traceinfo{at \arabic{LWR@tabletotalLaTeXcols}: %
6931 \LWR@getexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcols}}}%
6932 }%
6933 \let\LWR@colparameter\relax%
6934 \global\booltrue{LWR@validtablecol}%
6935 }
```

`\LWR@parsebangcolumn` Handles `!{text}` columns.

```
6936 \newcommand*{\LWR@parsebangcolumn}{%
```

Move to the next token after the '!':

```
6937 \LWR@traceinfo{bang column}%
6938 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token into \LWR@colparameter, expanding once:

```
6939 \LWR@traceinfo{about to read the next token:}%
6940 \expandarg%
```

```

6941 \StrChar{\LWR@origcolspec}%
6942 {\arabic{\LWR@tablecolspecindex}}[\LWR@colparameter]
6943 \fullexpandarg%

```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

6944 \LWR@traceinfo{have now read the next token}%
6945 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=}{0}%
6946 {% left edge of the table:
6947 \LWR@traceinfo{at the left edge}%
6948 \LWR@setexparray{\LWR@colbangspec}{leftedge}{\LWR@colparameter}%
6949 }%
6950 {% not at the left edge:
6951 \LWR@traceinfo{not at the left edge}%
6952 \LWR@setexparray{\LWR@colbangspec}%
6953 {\arabic{\LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
6954 \LWR@traceinfo{bang \arabic{\LWR@tabletotalLaTeXcols}: \LWR@colparameter!}%
6955 }%
6956 \let\LWR@colparameter\relax%
6957 \global\booltrue{\LWR@validtablecol}%
6958 }

```

\LWR@parsebeforecolumn Handles >{text} columns.

```

6959 \newcommand*{\LWR@parsebeforecolumn}{%

```

Move to the next token after the '>':

```

6960 \addtocounter{\LWR@tablecolspecindex}{1}%

```

Read the next token, expanding once into \LWR@colparameter:

```

6961 \expandarg%
6962 \StrChar{\LWR@origcolspec}%
6963 {\arabic{\LWR@tablecolspecindex}}[\LWR@colparameter]%
6964 \fullexpandarg%

```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

6965 \LWR@setexparray{\LWR@colbeforerespec}%
6966 {\arabic{\LWR@tabletotalLaTeXcolsnext}}{\LWR@colparameter}%
6967 \let\LWR@colparameter\relax%
6968 \global\booltrue{\LWR@validtablecol}%
6969 }

```

\LWR@parseaftercolumn Handles <{text} columns.

```

6970 \newcommand*{\LWR@parseaftercolumn}{%

```

Move to the next token after the '<':

```
6971 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into \LWR@colparameter:

```
6972 \expandarg%
6973 \StrChar{\LWR@origcolspec}%
6974 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
6975 \fullexpandarg%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```
6976 \LWR@setexparray{LWR@colafterspec}%
6977 {\arabic{LWR@tabletotalLaTeXcols}}{\LWR@colparameter}%
6978 \let\LWR@colparameter\relax%
6979 \global\booltrue{LWR@validtablecol}%
6980 }
```

\LWR@parsebarcolumn      Handles vertical rules.

```
6981 \newcommand*{\LWR@parsebarcolumn}{%
6982 \LWR@traceinfo{LWR@parsebarcolumn}%
```

Remember the bar at this position:

```
6983 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
6984 {% left edge of the table:
6985 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
6986 \ifdefstring{\LWR@tempone}{tvertbarl}%
6987 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldouble}}%
6988 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarl}}%
6989 }%
6990 {% not at the left edge:
6991 \edef\LWR@tempone{%
6992 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
6993 }%
6994 \ifdefstring{\LWR@tempone}{tvertbarr}%
6995 {%
6996 \LWR@setexparray{LWR@colbarspec}%
6997 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdouble}%
6998 }%
6999 {%
7000 \LWR@setexparray{LWR@colbarspec}%
7001 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarr}%
7002 }%
7003 }%
7004 \global\booltrue{LWR@validtablecol}%
```

7005 }

`\LWR@parsecoloncolumn`      Handles vertical rules.

```
7006 \newcommand*{\LWR@parsecoloncolumn}{%
7007 \LWR@traceinfo{\LWR@parsecoloncolumn}}%
```

Remember the bar at this position:

```
7008 \ifnumcomp{\value{\LWR@tabletotalLaTeXcols}}{=} {0}%
7009 {% left edge of the table:
7010 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{leftedge}}%
7011 \ifdefstring{\LWR@tempone}{tvertbarldash}%
7012 {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarldoubledash}}%
7013 {\LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarldash}}%
7014 }%
7015 {% not at the left edge:
7016 \edef\LWR@tempone{%
7017 \LWR@getexparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalLaTeXcols}}%
7018 }%
7019 \ifdefstring{\LWR@tempone}{tvertbarrdash}%
7020 {\LWR@setexparray{\LWR@colbarspec}%
7021 {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdoubledash}}%
7022 {\LWR@setexparray{\LWR@colbarspec}%
7023 {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdash}}%
7024 }%
7025 \global\booltrue{\LWR@validtablecol}%
7026 }
```

`\LWR@parsesemicoloncolumn`      Handles vertical rules.

```
7027 \newcommand*{\LWR@parsesemicoloncolumn}{%
```

Treat ; as a : column:

```
7028 \LWR@parsecoloncolumn%
```

Skip the following width token:

```
7029 \addtocounter{\LWR@tablecolspecindex}{1}%
7030 }
```

## 71.9 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.

```

7031 \newcommand*\LWR@parsenormalcolumn}[1]{%
7032 \addtocounter{LWR@tabletotalLaTeXcols}{1}%
7033 \addtocounter{LWR@tabletotalLaTeXcolsnext}{1}%

7034 \LWR@setexparray{LWR@tablecolspec}{\arabic{LWR@tabletotalLaTeXcols}}{#1}%

7035 \LWR@traceinfo{normal column \arabic{LWR@tabletotalLaTeXcols}: #1}%
7036 \LWR@setexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7037 \LWR@setexparray{LWR@colbangspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7038 \LWR@setexparray{LWR@colbeforespec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7039 \LWR@setexparray{LWR@colafterspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7040 \LWR@setexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcolsnext}}{}%
7041 \global\booltrue{LWR@validtablecol}%
7042 }
```

## 71.10 Parsing ‘p’, ‘m’, or ‘b’ columns

`\LWR@parsepcolumn`  $\{ \langle thiscolumn \rangle \}$  The width will be ignored.

```

7043 \newcommand*\LWR@parsepcolumn}[1]{%

Converts to the given column type:

7044 \LWR@parsenormalcolumn{#1}%

Skips the following width token:

7045 \addtocounter{LWR@tablecolspecindex}{1}%
7046 }
```

## 71.11 Parsing ‘w’ columns

`\LWR@parsewcolumn` The width will be ignored.

```

7047 \newcommand*\LWR@parsewcolumn}{%

7048 \LWR@columnspeclookahead{1}%
7049 \expandafter\LWR@parsenormalcolumn\expandafter{\LWR@strresulttwo}%

```

Table 10: Tabular baseline

|   |     |     |     |   |
|---|-----|-----|-----|---|
| l | p   | m   | b   | r |
|   |     |     | bot |   |
|   |     | mid | bot |   |
| l | par | mid | bot | r |
|   | par | mid |     |   |
|   | par |     |     |   |

Skips the following width and alignment tokens:

```
7050 \addtocounter{LWR@tablecolspecindex}{2}%
7051 }
```

## 71.12 Parsing ‘D’ columns

From the dcolumn package.

`\LWR@parseDcolumn`  $\langle thiscolumn \rangle$  The three parameters will be ignored.

```
7052 \newcommand*\LWR@parseDcolumn}[1]{%
```

Converts to the given column type.

```
7053 \LWR@parsenormalcolumn{#1}%
```

Skips the following three parameters.

```
7054 \addtocounter{LWR@tablecolspecindex}{3}%
7055 }
```

## 71.13 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.

Table 11: Tabular HTML column conversions

- 
- l, r, c:** Converted to table cells without paragraph tags.  
Uses CSS `vertical-align:middle` so that top or bottom-aligned cells may go above or below this cell.
- p:** Converted to table cells with paragraph tags. Ref: Table 10,  $\LaTeX$  places the top line of a parbox aligned with the rest of the text line, so CSS `vertical-align:bottom` is used to have the HTML result appear with the paragraph extending below the L, R, C cells at the middle, if possible. This may be confusing as a P cell may not top-align with an L,R,C cell in the HTML conversion, especially in the presence of a B cell, and two P cells side-by-side will be aligned at the bottom instead of the top. Some adjustment of the CSS may be desired, changing `td.tdp`, `td.tdP`, `td.tdprule`, and `td.tdPrule` to `vertical-align: middle`. Another possibility is to change L,R,C, and P to `vertical-align: top` and not worry about the alignment of B and M cells or trying to approximate  $\LaTeX$  baselines.
- m:** With paragraph tags, CSS `vertical-align:middle`.
- b:** With paragraph tags, CSS `vertical-align:top` so that the bottom of the text is closest to the middle of the text line.
- P, M, B:** Horizontally-centered versions.
- S:** Converted to 'r'. Ignores optional argument. From the `siunitx` package.
- D:** Converted to 'c'. From the `dcolumn` package.
- @, !, >, <:** One each, in that order.
- |:** Vertical rule.
- Unknown:** Converted to 'l'.
- \newcolumn:** Currently treated as unknown.
-

Bool LWR@validtablecol True if found a valid table column type.

```
7056 \newbool{LWR@validtablecol}
```

Bool LWR@opttablecol True if found a table column optional argument.

```
7057 \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.

```
7058 \newcommand*{\LWR@parsetablecols}[1]{%
7059 \LWR@traceinfo{LWR@parsetablecols}%
```

Remember the original supplied column spec:

```
7060 \renewcommand*{\LWR@origcolspec}{#1}%
```

Remove spaces:

```
7061 \expandarg%
7062 \StrSubstitute{\LWR@origcolspec}{ }{[\LWR@origcolspec]}%
```

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:

```
7063 \setcounter{LWR@tabletotalLaTeXcols}{0}%
7064 \setcounter{LWR@tabletotalLaTeXcolsnext}{1}%
7065 \LWR@setexparray{LWR@colatspec}{leftedge}{}%
7066 \LWR@setexparray{LWR@colatspec}{1}{}%
7067 \LWR@setexparray{LWR@colatspec}{2}{}%
7068 \LWR@setexparray{LWR@colatspec}{3}{}%
7069 \LWR@setexparray{LWR@colbangspec}{leftedge}{}%
7070 \LWR@setexparray{LWR@colbangspec}{1}{}%
7071 \LWR@setexparray{LWR@colbangspec}{2}{}%
7072 \LWR@setexparray{LWR@colbangspec}{3}{}%
7073 \LWR@setexparray{LWR@colbeforespec}{1}{}%
7074 \LWR@setexparray{LWR@colbeforespec}{2}{}%
```

```

7075 \LWR@setexparray{LWR@colbeforespec}{3}{}%
7076 \LWR@setexparray{LWR@colafterspec}{1}{}%
7077 \LWR@setexparray{LWR@colafterspec}{2}{}%
7078 \LWR@setexparray{LWR@colafterspec}{3}{}%
7079 \LWR@setexparray{LWR@colbarspec}{leftedge}{}%
7080 \LWR@setexparray{LWR@colbarspec}{1}{}%
7081 \LWR@setexparray{LWR@colbarspec}{2}{}%
7082 \LWR@setexparray{LWR@colbarspec}{3}{}%

```

Starting at the first column specification:

```
7083 \setcounter{LWR@tablecolspecindex}{1}%
```

Place the colspecs string length into `\LWR@strresult`, and remember the number of characters in the column specification:

```

7084 \expandarg%
7085 \StrLen{LWR@origcolspec}[LWR@strresult]%
7086 \fullexpandarg%
7087 \LWR@traceinfo{original column spec length: LWR@strresult}%
7088 \setcounter{LWR@tablecolspecwidth}{LWR@strresult}%

```

Haven't seen any optional arguments so far

```
7089 \global\boolfalse{LWR@opttablecol}%
```

Scan through the column specifications:

```

7090 \whileboolexpr{%
7091 not test{%
7092 \ifnumcomp{value{LWR@tablecolspecindex}}{>}%
7093 {value{LWR@tablecolspecwidth}}%
7094 }%
7095 }%
7096 {%

```

Place the next single-character column type into `\LWR@strresult`:

```

7097 \expandarg%
7098 \StrChar{LWR@origcolspec}{arabic{LWR@tablecolspecindex}}[LWR@strresult]%
7099 \LWR@traceinfo{position arabic{LWR@tablecolspecindex}: LWR@strresult}%
7100 \fullexpandarg%

```

Not yet found a valid column type:

```
7101 \global\boolfalse{LWR@validtablecol}%
```

Skip over any optional arguments, such as siunitx S column:

```
7102 \IfStrEq{\LWR@strresult}{[]}{\global\booltrue{\LWR@opttablecol}}{}
```

Throw away anything found inside the optional argument:

```
7103 \ifbool{\LWR@opttablecol}%
7104 {}% inside an optional argument
7105 {}% not an optional tabular argument
```

Not inside an optional argument, so consider the column type:

```
7106 \IfStrEq{\LWR@strresult}{l}{\LWR@parsenormalcolumn{l}}{}%
7107 \IfStrEq{\LWR@strresult}{c}{\LWR@parsenormalcolumn{c}}{}%
7108 \IfStrEq{\LWR@strresult}{r}{\LWR@parsenormalcolumn{r}}{}%
7109 \IfStrEq{\LWR@strresult}{L}{\LWR@parsenormalcolumn{l}}{}%
7110 \IfStrEq{\LWR@strresult}{C}{\LWR@parsenormalcolumn{c}}{}%
7111 \IfStrEq{\LWR@strresult}{R}{\LWR@parsenormalcolumn{r}}{}%
7112 \IfStrEq{\LWR@strresult}{J}{\LWR@parsenormalcolumn{l}}{}%

7113 \IfStrEq{\LWR@strresult}{S}{\LWR@parsenormalcolumn{c}}{}%
7114 \IfStrEq{\LWR@strresult}{s}{\LWR@parsenormalcolumn{c}}{}%

7115 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@parseatcolumn}{}%
7116 \IfStrEq{\LWR@strresult}{!}{\LWR@parsebangcolumn}{}%
7117 \IfStrEq{\LWR@strresult}{>}{\LWR@parsebeforecolumn}{}%
7118 \IfStrEq{\LWR@strresult}{<}{\LWR@parseaftercolumn}{}%
7119 \IfStrEq{\LWR@strresult}{|}{\LWR@parsebarcolumn}{}%
7120 \IfStrEq{\LWR@strresult}{:}{\LWR@parsecoloncolumn}{}%
7121 \IfStrEq{\LWR@strresult}{;}{\LWR@parsesemicoloncolumn}{}%

7122 \IfStrEq{\LWR@strresult}{p}{\LWR@parsepcolumn{p}}{}%
7123 \IfStrEq{\LWR@strresult}{m}{\LWR@parsepcolumn{m}}{}%
7124 \IfStrEq{\LWR@strresult}{b}{\LWR@parsepcolumn{b}}{}%

7125 \IfStrEq{\LWR@strresult}{w}{\LWR@parsewcolumn}{}%
7126 \IfStrEq{\LWR@strresult}{W}{\LWR@parsewcolumn}{}%


```

From the dcolumn package:

```
7127 \IfStrEq{\LWR@strresult}{D}{\LWR@parseDcolumn{c}}{}
```

From the tabularx package. X column has no parameter, but will be given paragraph tags.

```
7128 \IfStrEq{\LWR@strresult}{X}{\LWR@parsenormalcolumn{X}}{}
```

---

Many people define centered versions “P”, “M”, and “B”:

```
\newcolumnntype{P}[1]{>{\centering\arraybackslash}p{#1}}
```

---

```
7129 \IfStrEq{\LWR@strresult}{P}{\LWR@parsepcolumn{P}}{}%
7130 \IfStrEq{\LWR@strresult}{M}{\LWR@parsepcolumn{M}}{}%
7131 \IfStrEq{\LWR@strresult}{B}{\LWR@parsepcolumn{B}}{}%
```

If this column was an invalid column type, convert it to an 1 column:

```
7132 \ifbool{LWR@validtablecol}{}{%
7133 \LWR@traceinfo{invalid column type: \LWR@strresult}%
7134 \LWR@parsenormalcolumn{1}%
7135 }%
7136 }% not an optional column argument
```

If read the closing bracket, no longer inside the optional argument:

```
7137 \IfStrEq{\LWR@strresult}{}}{\global\boolfalse{LWR@opttablecol}}{}%
```

Move to the next character:

```
7138 \addtocounter{LWR@tablecolspecindex}{1}%
7139 }% whiledo
7140 }%
```

## 71.14 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.

```
7141 \@ifundefined{rownum}{\newcount\rownum}{}%
```

`\@rowcolors` Emulated in case xcolor is not used.

```
7142 \newcommand*{\@rowcolors}{}%
```

`\@rowc@lors` Emulated in case xcolor is not used.

7143 `\newcommand*\@rowc@lors{}`

`\LWR@xcolorrowHTMLcolor` Emulated xcolor row color.

7144 `\newcommand*\LWR@xcolorrowHTMLcolor{}`

`\LWR@columnHTMLcolor` HTMLstyle code for the column color.

7145 `\def\LWR@columnHTMLcolor{}`

`\LWR@rowHTMLcolor` HTMLstyle code for the row color.

7146 `\def\LWR@rowHTMLcolor{}`

`\LWR@cellHTMLcolor` HTMLstyle code for the cell color.

7147 `\def\LWR@cellHTMLcolor{}`

`\LWR@ruleHTMLcolor` HTMLstyle code for the cell color.

7148 `\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`.

7149 `\newcommand*\rowcolor{\LWR@getmynexttoken}%`

`\arrayrulecolor` [*model*] {*color*}

`\arrayrulecolornexttoken` [*model*] {*color*}

Print versions for use outside and inside a tabular:

7150 `\newcommand{\arrayrulecolor}[2][named]{}`

7151 `\newcommand{\arrayrulecolornexttoken}[2][named]{\LWR@getmynexttoken}`

`\doublerulesepcolor` [*model*] {*color*}

```
\doublerulesepcolornexttoken [⟨model⟩] {⟨color⟩}
```

Print versions for use inside and outside a tabular:

```
7152 \newcommand{\doublerulesepcolor}[2][named]{}
7153 \newcommand{\doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
```

## 71.15 Starting a new row

`\LWR@maybe newtablerow` 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.

```
7154 \newcommand*{\LWR@maybe newtablerow}
7155 {%
7156 \ifbool{LWR@startedrow}%
7157 {}% started the row
7158 {% not started the row
```

Remember that now have started the row:

```
7159 \global\booltrue{LWR@startedrow}%
```

Create the row tag, with a class if necessary.

```
7160 \global\booltrue{LWR@intabularmetadata}%
7161 \ifbool{LWR@startedrow}%
7162 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
7163 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}}%
7164 }%
7165 {%
7166 \LWR@htmltag{tr class="hline" }%
7167 \LWR@orignewline%
7168 }%
7169 {% not doing hline
7170 \ifbool{LWR@doingtbrule}%
7171 {%
7172 \ifdefvoid{\LWR@ruleHTMLcolor}%
7173 \LWR@htmltag{tr class="tbrule"}%
7174 }{%
7175 \LWR@htmltag{%
7176 tr class="tbrule" % space
7177 style="border-top: 1px solid % space
7178 \LWR@origpound\LWR@ruleHTMLcolor "%
7179 }%
7180 }%
7181 \LWR@orignewline%
```

```

7182 }%
7183 {\LWR@htmltag{tr}\LWR@orignewline}%
7184 }% end of not doing hline
7185 }% end of not started the row
7186 }

```

## 71.16 Printing vertical bar tags

`\LWR@printbartag`  $\langle index \rangle$

Adds to a tabular data cell an HTML class name for a left/right vertical bar.

```

7187 \newcommand*\LWR@printbartag}[1]{%
7188 \LWR@traceinfo{\LWR@printbartag !#1!}%
7189 \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}%
7190 {}% muting or empty
7191 {}% not muting
7192 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{#1}}%
7193 \ifdefempty{\LWR@tempone}{\LWR@tempone}%
7194 }% not muting
7195 \LWR@traceinfo{\LWR@printbartag done}%
7196 }

```

## 71.17 Printing at or bang tags

`\LWR@printatbang`  $\langle at -or- bang \rangle$   $\langle index \rangle$

```

7197 \newcommand*\LWR@printatbang}[2]{%

```

Fetch the column at or bang spec:

```

7198 \xdef\LWR@atbangspec{\LWR@getexparray{\LWR@col#1spec}{#2}}%
7199 \LWR@traceinfo{atbang: #2 !\LWR@atbangspec!}%

```

Only generate if is not empty;

```

7200 \ifdefempty{\LWR@atbangspec}%
7201 {}%
7202 {}% not empty
7203 \LWR@htmltag{%
7204 td class="td#1%
7205 \LWR@subaddcmidruletrim{}{}%
7206 \LWR@printbartag{#2}%

```

```

7207 "%
7208 \LWR@tdstartstyles%
7209 \LWR@addcmidrulewidth%
7210 \LWR@addcdashline%
7211 \LWR@addtabularrulecolors%
7212 \LWR@tdendstyles%
7213 }%

```

Create an empty cell if muting for the `\bottomrule`:

```

7214 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
7215 {}%
7216 {\LWR@atbangspec}%
7217 %
7218 \LWR@htmltag{/td}\LWR@orignewline%
7219 \global\booltrue{LWR@tabularcelladded}%
7220 }% not empty
7221 }%

```

`\LWR@addleftmostbartag`

```

7222 \newcommand*{\LWR@addleftmostbartag}{%
7223 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}{%
7224 \LWR@printbartag{leftedge}%
7225 }{}%
7226 }

```

`\LWR@tabularleftedge`

```

7227 \newcommand*{\LWR@tabularleftedge}{%
7228 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{1}%
7229 {%
7230 \LWR@printatbang{at}{leftedge}%
7231 \LWR@printatbang{bang}{leftedge}%
7232 }% left edge
7233 {}% not left edge
7234 }

```

## 71.18 Data opening tag

`\LWR@thiscolspec` Temporary storage.

```

7235 \newcommand*{\LWR@thiscolspec}{}

```

`\LWR@tabledatasinglecolumn` Print a table data opening tag with style for alignment and color.

```
7236 \newcommand*{\LWR@tabledatasinglecolumn}{%
7237 {%
7238 \LWR@traceinfo{\LWR@tabledatasinglecolumn}{%
7239 \LWR@maybenewtablerow%
```

Don't start a new paragraph tag if have already started one:

```
7240 \ifbool{\LWR@intabularmetadata}{%
7241 {%
```

If have found the end of tabular command, do not create the next data cell:

```
7242 \ifbool{\LWR@exitingtabular}{}%
7243 {% not exiting tabular
```

Print the @ and ! contents before first column:

```
7244 \LWR@tabularleftedge%
```

Fetch the current column's alignment character into `\LWR@strresult`:

```
7245 \xdef\LWR@strresult{%
7246 \LWR@getexparray{\LWR@tablecolspec}{\arabic{\LWR@tableLaTeXcolindex}}%
7247 }%
```

print the start of a new table data cell:

```
7248 \LWR@traceinfo{\LWR@tabledatasinglecolumn: about to print td tag}{%
7249 \LWR@htmltag{td class="td%
```

append this column's spec:

```
7250 \LWR@strresult%
```

If this column has a `cmidrule`, add "rule" to the end of the HTML class tag. Also add vertical bar tags.

```
7251 \LWR@addcmidruletrim%
7252 \LWR@addleftmostbartag%
7253 \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%
7254 "%
```

Add styles for rules, alignment:

```
7255 \LWR@tdstartstyles%
```

```

7256 \LWR@addcmidrulewidth%
7257 \LWR@addcdashline%

7258 \xdef\LWR@thiscolspec{%
7259 \LWR@getexparray{LWR@tablecolspec}{\arabic{LWR@tableLaTeXcolindex}}%
7260 }%
7261 \LWR@addformatwppalignment{\LWR@thiscolspec}%

```

Add styles for cell and rule colors:

```

7262 \LWR@addtabulararrowcolor%
7263 \LWR@addtabularrulecolors%

7264 \LWR@tdendstyles%
7265 }% HTML td
7266 \LWR@traceinfo{LWR@tabledatasinglecolumn tag: done printing td tag}%

```

If this is a p, m, b, or X column, allow paragraphs:

```

7267 \ifboolexpr{%
7268 test{ \ifdefstring{\LWR@strresult}{p} } or
7269 test{ \ifdefstring{\LWR@strresult}{m} } or
7270 test{ \ifdefstring{\LWR@strresult}{b} } or
7271 test{ \ifdefstring{\LWR@strresult}{P} } or
7272 test{ \ifdefstring{\LWR@strresult}{M} } or
7273 test{ \ifdefstring{\LWR@strresult}{B} } or
7274 test{ \ifdefstring{\LWR@strresult}{X} }
7275 }%
7276 {% allow pars
7277 \LWR@traceinfo{LWR@tabledatasinglecolumn tag: about to LWR@startpars}%
7278 \global\booltrue{LWR@tableparcell}%
7279 \LWR@startpars%
7280 \LWR@traceinfo{LWR@tabledatasinglecolumn tag: done with LWR@startpars}%
7281 }% allow pars
7282 }% no pars

```

Print the > contents unless muted for the \bottomrule:

```

7283 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
7284 }%
7285 {%
7286 \LWR@getexparray{LWR@colbeforespec}{\arabic{LWR@tableLaTeXcolindex}}%
7287 }%
7288 \global\boolfalse{LWR@intabularmetadata}%
7289 }% not exiting tabular
7290 }% in tabular metadata
7291 \LWR@traceinfo{LWR@tabledatasinglecolumn tag: done}%
7292 }%

```

## 71.19 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 1 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.

```
7293 \newcounter{LWR@midrulecounter}
```

`Len \LWR@heavyrulewidth` The default width of the rule.

```
7294 \newlength{\LWR@heavyrulewidth}
7295 \setlength{\LWR@heavyrulewidth}{.08em}
```

`Len \LWR@lightrulewidth` The default width of the rule.

```
7296 \newlength{\LWR@lightrulewidth}
7297 \setlength{\LWR@lightrulewidth}{.05em}
```

`Len \LWR@cmidrulewidth` The default width of the rule.

```
7298 \newlength{\LWR@cmidrulewidth}
7299 \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.

```
7300 \newlength{\LWR@thiscmidrulewidth}
7301 \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.

```
7302 \newcommand*{\LWR@clearmidrules}
```

```

7303 {%
7304 \setcounter{LWR@midrulecounter}{1}%
7305 \whileboolexpr{%
7306 not test{%
7307 \ifnumcomp{\value{LWR@midrulecounter}}{>}%
7308 {\value{LWR@tablettotalLaTeXcols}}%
7309 }%
7310 }%
7311 {%
7312 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{Opt}%
7313 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
7314 \LWR@setexparray{LWR@trimlrules}{\arabic{LWR@midrulecounter}}{}%
7315 \LWR@setexparray{LWR@trimrrules}{\arabic{LWR@midrulecounter}}{}%
7316 \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{N}%
7317 \addtocounter{LWR@midrulecounter}{1}%
7318 }%
7319 }

```

`\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.

```

7320 \newcommand*{\LWR@subcmidrule}[4]{%
7321 \setcounter{LWR@midrulecounter}{#3}%
7322 \whileboolexpr{%
7323 not test {%
7324 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
7325 }%
7326 }%
7327 {%
7328 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{#1}%
7329 \addtocounter{LWR@midrulecounter}{1}%
7330 }% whiledo
7331 \IfSubStr{#2}{l}{\LWR@setexparray{LWR@trimlrules}{#3}{l}}{}%
7332 \IfSubStr{#2}{r}{\LWR@setexparray{LWR@trimrrules}{#4}{r}}{}%
7333 \global\booltrue{LWR@doingcmidrule}%
7334 }

```

`\LWR@docmidrule`  $[\langle width \rangle]$   $(\langle trim \rangle)$   $\langle leftcolumn-rightcolumn \rangle$

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.

```

7335 \NewDocumentCommand{\LWR@docmidrule}

```

```
7336 {0{\LWR@cmidrulewidth} D()} >{\SplitArgument{1}{-}}m}
7337 {\LWR@subcmidrule{#1}{#2}#3}
```

`\LWR@subcdashline`  $\{ \langle leftcolumn \rangle \} \{ \langle rightcolumn \rangle \}$

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.

```
7338 \newcommand*{\LWR@subcdashline}[2]{%
7339 \setcounter{LWR@midrulecounter}{#1}%
7340 \whileboolexpr{%
7341 not test {%
7342 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#2}%
7343 }%
7344 }%
7345 {%
7346 \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{Y}%
7347 \addtocounter{LWR@midrulecounter}{1}%
7348 }% whiledo
7349 \global\booltrue{LWR@doingcmidrule}%
7350 }
```

`\LWR@docdashline`  $\{ \langle leftcolumn-rightcolumn \rangle \}$

Marks `LWR@cdashlines` data array elements to be Y from left to right columns.

```
7351 \NewDocumentCommand{\LWR@docdashline}
7352 {>{\SplitArgument{1}{-}}m}%
7353 {%
7354 \LWR@subcdashline#1%
7355 }
```

Used to compute margins, tabular trims, column offsets:

```
7356 \newlength{\LWR@templengthone}
7357 \newlength{\LWR@templengthtwo}
7358 \newlength{\LWR@templengththree}
7359 \newcounter{LWR@tempcountone}
```

Used to add a style to a table data cell:

```
7360 \newbool{LWR@tdhavecellstyle}
```

`\LWR@tdstartstyles` Begins possibly adding a table data cell style.

```
7361 \newcommand*{\LWR@tdstartstyles}{\global\boolfalse{\LWR@tdhavecellstyle}}
```

`\LWR@tdaddstyle` Starts adding a table data cell style.

```
7362 \newcommand*{\LWR@tdaddstyle}{%
7363 \ifbool{\LWR@tdhavecellstyle}%
7364 {; }%
7365 { style="%}
7366 \booltrue{\LWR@tdhavecellstyle}%
7367 }
```

`\LWR@tdendstyles` Finishes possibly adding a table data cell style. Prints the closing quote.

```
7368 \newcommand*{\LWR@tdendstyles}{%
7369 \ifbool{\LWR@tdhavecellstyle}{%
7370 "%
7371 \global\boolfalse{\LWR@tdhavecellstyle}%
7372 }{}%
7373 }
```

`\LWR@subaddcmidruletrim` `{\lefttrim}` `{\righttrim}` Adds a `\cmidrule` with optional trim.

```
7374 \newcommand*{\LWR@subaddcmidruletrim}[2]{%
7375 \setlength{\LWR@templengthone}{%
7376 \LWR@getexparray{\LWR@midrules}{\arabic{\LWR@tableLaTeXcolindex}}%
7377 }%
7378 \ifdimcomp{\LWR@templengthone}{>}{0pt}%
7379 {%
```

Print the class with left and right trim letters appended:

```
7380 \LWR@origtilde tdrule#1#2%
```

Remember the width of the rule:

```
7381 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
7382 }%
7383 {%
7384 \setlength{\LWR@thiscmidrulewidth}{0pt}%
7385 }%
7386 }
```

`\LWR@addcmidruletrim` Adds left or right trim to a `\cmidrule`.

```
7387 \newcommand*{\LWR@addcmidruletrim}{%
7388 \LWR@subaddcmidruletrim%
```

```

7389 {\LWR@getexparray{\LWR@trimlrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
7390 {\LWR@getexparray{\LWR@trimrrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
7391 }

```

`\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`.

```

7392 \newcommand{\LWR@addrulewidth}[2]{%

```

Only add a custom width if `thiswidth` is different than the `defaultwidth`, or if a color is being used:

```

7393 \ifboolexpr{%
7394 test{\ifdimcomp{#1}{=}{Opt}} or
7395 (
7396 (test{\ifdimcomp{#1}{=}{#2}} and not bool{FormatWP})
7397 and (test {\ifdefvoid{\LWR@ruleHTMLcolor}})
7398)
7399 }%
7400 {}% default width and color
7401 {% custom width and/or color

```

Ensure that the width is wide enough to display in the browser:

```

7402 \LWR@forceminwidth{#1}%

```

Begin adding another style:

```

7403 \LWR@tdaddstyle%

```

The style itself:

```

7404 border-top:\LWR@printlength{\LWR@atleastonept} solid %

```

If default gray, the darkness of the color depends on the thickness of the rule:

```

7405 \ifdefvoid{\LWR@ruleHTMLcolor}{%
7406 \ifdimcomp{#1}{<}{\LWR@lightrulewidth}%
7407 {\LWR@origpound}{AOA0A0}%
7408 {% lightrule or heaver
7409 \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}%
7410 {\LWR@origpound}{808080}%
7411 {black}%

```

```

7412 }% lightrule or heavier
7413 }{%
7414 \LWR@origpound\LWR@ruleHTMLcolor%
7415 }
7416 }% custom width and/or color
7417 }

```

`\LWR@addcmidrulewidth` Adds a style for the rule width.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

7418 \newcommand{\LWR@addcmidrulewidth}{%
7419 \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
7420 }

```

`\LWR@addcdashline` Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

7421 \newcommand{\LWR@addcdashline}{%
7422 \edef\LWR@tempone{%
7423 \LWR@getexparray{\LWR@cdashlines}{\arabic{\LWR@tableLaTeXcolindex}}%
7424 }%
7425 \ifdefstring{\LWR@tempone}{Y}{%
7426 \LWR@tdaddstyle%
7427 border-top: 1pt dashed %
7428 \ifdefvoid{\LWR@ruleHTMLcolor}%
7429 {black}%
7430 {\LWR@origpound\LWR@ruleHTMLcolor}%
7431 }{}%
7432 }

```

`\LWR@WPcell` `{\text-align}` `{\vertical-align}`

```

7433 \newcommand*{\LWR@WPcell}[2]{%
7434 \LWR@tdaddstyle%
7435 \LWR@print@mbbox{text-align:#1}; \LWR@print@mbbox{vertical-align:#2}%
7436 }

```

`\LWR@addformatwpalignment` If `FormatWP`, adds a style for the alignment.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

7437 \newcommand*{\LWR@addformatwpalignment}[1]{%
7438 \ifbool{FormatWP}{%
7439 \IfSubStr{#1}{l}{\LWR@WPcell{left}{middle}}{}%
7440 \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{}%
7441 \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{}%

```

```

7442 \IfSubStr{#1}{p}{\LWR@WPcell{left}{bottom}}{}%
7443 \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{}%
7444 \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{}%
7445 \IfSubStr{#1}{P}{\LWR@WPcell{center}{bottom}}{}%
7446 \IfSubStr{#1}{M}{\LWR@WPcell{center}{middle}}{}%
7447 \IfSubStr{#1}{B}{\LWR@WPcell{center}{top}}{}%
7448 }{}%
7449 }

```

## 71.20 Cell colors

`\LWR@addtabulararrowcolor` Adds a cell's row color style, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```

7450 \newcommand*{\LWR@addtabulararrowcolor}{%
7451 \ifbool{LWR@tabularmutemods}{}{%
7452 \ifdefvoid{\LWR@rowHTMLcolor}{%
7453 \ifdefvoid{\LWR@xcolorrowHTMLcolor}{}%
7454 {% xcolor row color
7455 \LWR@tdaddstyle%
7456 background:\LWR@origpound\LWR@xcolorrowHTMLcolor%
7457 }%
7458 }%
7459 {% explicit row color
7460 \LWR@tdaddstyle%
7461 background:\LWR@origpound\LWR@rowHTMLcolor%
7462 }%
7463 }%
7464 }

```

`\LWR@addtabularhrulecolor` Adds a cell's horizontal rule color style, if needed.

```
7465 \newcommand*{\LWR@addtabularhrulecolor}{%
```

If either form of horizontal rule is requested:

```

7466 \ifboolexpr{%
7467 test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
7468 test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
7469 bool{LWR@doingtbrule}%
7470 }{}%

```

If there is a no custom color:

```

7471 \ifdefvoid{\LWR@ruleHTMLcolor}%
7472 {%
7473 \ifnumcomp{\value{LWR@hlines}}{>}{1}%
7474 {%
7475 \LWR@tdaddstyle%
7476 border-top: 4px double%
7477 }{% else
7478 \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
7479 {%
7480 \LWR@tdaddstyle%
7481 border-top: 2px dashed%
7482 }{% else
7483 \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
7484 {%
7485 \LWR@tdaddstyle%
7486 border-top: 1px dashed%
7487 }{}}}%

```

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

```

7488 }%

```

If there is a custom color:

```

7489 {%
7490 \ifnumcomp{\value{LWR@hlines}}{>}{1}%
7491 {%
7492 \LWR@tdaddstyle%
7493 border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
7494 }{% else
7495 \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
7496 {%
7497 \LWR@tdaddstyle%
7498 border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
7499 }{% else
7500 \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
7501 {%
7502 \LWR@tdaddstyle%
7503 border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
7504 }{% else
7505 \LWR@tdaddstyle%
7506 border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
7507 }{}}%
7508 }%
7509 }{}}%
7510 }

```

`\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.

```
7511 \newcommand*{\LWR@addtabularrulecolors}{%
```

Custom horizontal rule color:

```
7512 \LWR@addtabularhrulecolor%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
7513 \ifbool{\LWR@tabularmutemods}{-}{%
```

If at the leftmost cell, possibly add a leftmost vertical rule:

```
7514 \ifnumequal{\value{\LWR@tableLaTeXcolindex}}{1}{%
```

Fetch the left edge's vertical bar specification:

```
7515 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{leftedge}}%
```

Add a custom style if a vertical bar was requested:

```
7516 \ifdefstring{\LWR@tempone}{tvertbarl}{%
7517 \LWR@tdaddstyle%
7518 border-left: 1px solid % space
7519 \LWR@vertruleHTMLcolor%
7520 }{}%
7521 \ifdefstring{\LWR@tempone}{tvertbarldouble}{%
7522 \LWR@tdaddstyle%
7523 border-left: 4px double % space
7524 \LWR@vertruleHTMLcolor%
7525 }{}%
7526 \ifdefstring{\LWR@tempone}{tvertbarldash}{%
7527 \LWR@tdaddstyle%
7528 border-left: 1px dashed % space
7529 \LWR@vertruleHTMLcolor%
7530 }{}%
7531 \ifdefstring{\LWR@tempone}{tvertbarldoubledash}{%
7532 \LWR@tdaddstyle%
7533 border-left: 2px dashed % space
7534 \LWR@vertruleHTMLcolor%
7535 }{}%
7536 }{}%
```

Possibly add a right vertical rule for this cell:

```
7537 \edef\LWR@tempone{%
7538 \LWR@getexparray{\LWR@colbarspec}{\arabic{\LWR@tableLaTeXcolindex}}%
```

```

7539 }%
7540 \ifdefstring{\LWR@tempone}{tvertbarr}{%

```

Add a custom style if a vertical bar was requested:

```

7541 \LWR@tdaddstyle%
7542 border-right: 1px solid \LWR@vertruleHTMLcolor%
7543 }{}%
7544 \ifdefstring{\LWR@tempone}{tvertbarrdouble}{%
7545 \LWR@tdaddstyle%
7546 border-right: 4px double \LWR@vertruleHTMLcolor%
7547 }{}%
7548 \ifdefstring{\LWR@tempone}{tvertbarrdash}{%
7549 \LWR@tdaddstyle%
7550 border-right: 1px dashed \LWR@vertruleHTMLcolor%
7551 }{}%
7552 \ifdefstring{\LWR@tempone}{tvertbarrdoubledash}{%
7553 \LWR@tdaddstyle%
7554 border-right: 2px dashed \LWR@vertruleHTMLcolor%
7555 }{}%
7556 }%
7557 }

```

Ctrl LWR@cellcolordepth Counts how many cell color <div>s were added to the current tabular data cell.

```

7558 \newcounter{\LWR@cellcolordepth}

```

\LWR@subaddtabularcellcolor {<HTML color>}

```

7559 \newcommand*{\LWR@subaddtabularcellcolor}[1]{%
7560 \LWR@htmltag{div class="cellcolor" style="%
7561 background:\LWR@origpound{ }{ }#1 %
7562 " }%
7563 \addtocounter{\LWR@cellcolordepth}{1}%
7564 }

```

\LWR@addtabularcellcolor Adds a cell color style, if needed.

```

7565 \newcommand*{\LWR@addtabularcellcolor}{%
7566 \ifdefvoid{\LWR@cellHTMLcolor}%
7567 {%
7568 \ifdefvoid{\LWR@rowHTMLcolor}%
7569 {%
7570 \ifdefvoid{\LWR@xcolorrowHTMLcolor}%
7571 {%
7572 \ifdefvoid{\LWR@columnHTMLcolor}%
7573 {}%

```

```

7574 {\LWR@subadddtabularcellcolor{\LWR@columnHTMLcolor}}%
7575 }%
7576 {\LWR@subadddtabularcellcolor{\LWR@xcolorrowHTMLcolor}}%
7577 }%
7578 {\LWR@subadddtabularcellcolor{\LWR@rowHTMLcolor}}%
7579 }%
7580 {\LWR@subadddtabularcellcolor{\LWR@cellHTMLcolor}}%
7581 }

```

## 71.21 Multicolumns

### 71.21.1 Parsing multicolumns

```
7582 \newcounter{LWR@tablemulticolwidth}
```

Indexes into the multicolumn specification:

```
7583 \newcounter{LWR@tablemulticolspos}
```

Remembers multicolumn vertical rules if found in the column spec.

```

7584 \newcounter{LWR@mcolvertbarsl}
7585 \newcounter{LWR@mcolvertbarsr}
7586 \newcounter{LWR@mcolvertbarsldash}
7587 \newcounter{LWR@mcolvertbarsrdash}
7588 \newbool{LWR@mcolvertbaronleft}%

```

`\LWR@printmccoltype` `{\colspec}` Print any valid column type found. Does not print @, !, >, or < columns or their associated tokens.

This is printed as part of the table data tag's class.

```

7589 \newcommand*{\LWR@printmccoltype}[1]{%
7590 \LWR@traceinfo{lwr@printmccoltype -#1-}%

```

Get one token of the column spec:

```
7591 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
```

Add to the HTML tag depending on which column type is found:

```

7592 \IfStrEq{\LWR@strresult}{l}{l}{}%
7593 \IfStrEq{\LWR@strresult}{c}{c}{}%
7594 \IfStrEq{\LWR@strresult}{r}{r}{}%
7595 \IfStrEq{\LWR@strresult}{p}{p}{}%

```

```

7596 \IfStrEq{\LWR@strresult}{m}{m}{}%
7597 \IfStrEq{\LWR@strresult}{b}{b}{}%
7598 \IfStrEq{\LWR@strresult}{P}{P}{}%
7599 \IfStrEq{\LWR@strresult}{M}{M}{}%
7600 \IfStrEq{\LWR@strresult}{B}{B}{}%

7601 \IfStrEq{\LWR@strresult}{w}{w}{}%
7602 \IfStrEq{\LWR@strresult}{W}{W}{}%

7603 \IfStrEq{\LWR@strresult}{S}{c}{}%
7604 \IfStrEq{\LWR@strresult}{s}{c}{}%

7605 \IfStrEq{\LWR@strresult}{X}{p}{}%

7606 \IfStrEq{\LWR@strresult}{|}{}%
7607 {%
7608 \ifbool{LWR@mcolvertbaronleft}{%
7609 {\addtocounter{LWR@mcolvertbarsl}{1}}% left edge
7610 {\addtocounter{LWR@mcolvertbarsr}{1}}% not left edge
7611 }%
7612 {%
7613 \IfStrEq{\LWR@strresult}{:}{%
7614 {%
7615 \ifbool{LWR@mcolvertbaronleft}{%
7616 {\addtocounter{LWR@mcolvertbarsldash}{1}}% left edge
7617 {\addtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
7618 }%
7619 }%
7620 \IfStrEq{\LWR@strresult}{;}{%
7621 {%
7622 \ifbool{LWR@mcolvertbaronleft}{%
7623 {\addtocounter{LWR@mcolvertbarsldash}{1}}% left edge
7624 {\addtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
7625 }%
7626 {\boolfalse{LWR@mcolvertbaronleft}}%
7627 }%
7628 }%
7629 \LWR@traceinfo{lwr@printmccoltype done}%
7630 }

```

`\LWR@mcolpartext`  $\langle num\ parameters \rangle$  Print the data with paragraph tags, advance to bypass the given number of parameters.

```

7631 \newcommand*{\LWR@mcolpartext}[1]{%
7632 \LWR@startpars%
7633 \LWR@mcoltext%
7634 \addtocounter{LWR@tablemulticolspos}{#1}%

```

```
7635 \LWR@stoppars%
7636 }
```

`\LWR@multicolother` `{<colspec>}` For @, !, >, <, print the next token without paragraph tags:

```
7637 \newcommand*{\LWR@multicolother}[1]{%
7638 \addtocounter{LWR@tablemulticolspos}{1}%
7639 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
7640 \LWR@strresult%
```

A valid column data type was found:

```
7641 \global\booltrue{LWR@validtablecol}%
7642 }
```

`\LWR@multicolskip` Nothing to print for this column type.

```
7643 \newcommand*{\LWR@multicolskip}{%
```

A valid column data type was found:

```
7644 \global\booltrue{LWR@validtablecol}%
7645 }
```

`\LWR@printmccoldata` `{<colspec>}` Print the data for any valid column type found.

```
7646 \newcommand*{\LWR@printmccoldata}[1]{%
7647 \LWR@traceinfo{lw@printmccoldata -#1}%
```

Not yet found a valid column type:

```
7648 \global\boolfalse{LWR@validtablecol}%
```

Get one token of the column spec:

```
7649 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```
7650 \IfStrEq{\LWR@strresult}{l}{\LWR@multicoltext}{}%
7651 \IfStrEq{\LWR@strresult}{c}{\LWR@multicoltext}{}%
7652 \IfStrEq{\LWR@strresult}{r}{\LWR@multicoltext}{}%
7653 \IfStrEq{\LWR@strresult}{D}{}%
7654 \addtocounter{LWR@tablemulticolspos}{3}% skip parameters
7655 \LWR@multicoltext%
7656 }{}%
```

```

7657 \IfStrEq{\LWR@strresult}{p}{\LWR@multicolpartext{0}}{}%
7658 \IfStrEq{\LWR@strresult}{m}{\LWR@multicolpartext{0}}{}%
7659 \IfStrEq{\LWR@strresult}{b}{\LWR@multicolpartext{0}}{}%
7660 \IfStrEq{\LWR@strresult}{P}{\LWR@multicolpartext{0}}{}%
7661 \IfStrEq{\LWR@strresult}{M}{\LWR@multicolpartext{0}}{}%
7662 \IfStrEq{\LWR@strresult}{B}{\LWR@multicolpartext{0}}{}%

7663 \IfStrEq{\LWR@strresult}{w}{\LWR@multicolpartext{3}}{}%
7664 \IfStrEq{\LWR@strresult}{W}{\LWR@multicolpartext{3}}{}%

7665 \IfStrEq{\LWR@strresult}{S}{\LWR@multicoltext}{}%
7666 \IfStrEq{\LWR@strresult}{s}{\LWR@multicoltext}{}%

7667 \IfStrEq{\LWR@strresult}{X}{\LWR@multicolpartext{0}}{}%
7668 \IfStrEq{\LWR@strresult}{|}{\LWR@multicolskip}{}%
7669 \IfStrEq{\LWR@strresult}{:}{\LWR@multicolskip}{}%
7670 \IfStrEq{\LWR@strresult}{;}{;}{}%
7671 \LWR@multicolskip%
7672 \addtocounter{LWR@tablemulticolspos}{1}% skip parameter
7673 }{}%
7674 \IfStrEq{\LWR@strresult}{\detokenize@}{\LWR@multicolother{#1}}{}%
7675 \IfStrEq{\LWR@strresult}{\detokenize!}{\LWR@multicolother{#1}}{}%
7676 \IfStrEq{\LWR@strresult}{\detokenize>}{\LWR@multicolother{#1}}{}%
7677 \IfStrEq{\LWR@strresult}{\detokenize<}{\LWR@multicolother{#1}}{}%

```

If an invalid column type:

```
7678 \ifbool{LWR@validtablecol}{\LWR@multicoltext}%
```

Tracing:

```
7679 \LWR@traceinfo{lwarp@printmccoldata done}%
7680 }
```

`\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.

```

7681 \newcommand*{\LWR@parsemulticolumnalignment}[2]{%
7682 \setcounter{LWR@tablemulticolspos}{1}%
7683 \StrLen{#1}[\LWR@strresult]%
7684 \setcounter{LWR@tablemulticolwidth}{\LWR@strresult}%

```

Scan across the tokens in the column spec:

```

7685 \whileboolexpr{%
7686 not test {%
7687 \ifnumcomp{\value{LWR@tablemulticolspos}}{>}%
7688 {\value{LWR@tablemulticolwidth}}%
7689 }%
7690 }%
7691 {%

```

Execute the assigned print function for each token in the column spec:

```
7692 #2{#1}%
```

Move to the next token in the column spec:

```

7693 \addtocounter{LWR@tablemulticolspos}{1}%
7694 }%
7695 }

```

### 71.21.2 Multicolumn factored code

`\LWR@addmulticolvertrulecolor`

```
7696 \newcommand*{\LWR@addmulticolvertrulecolor}{%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
7697 \ifbool{LWR@tabularmutemods}{}{%
```

Left side:

```

7698 \ifnumcomp{\value{LWR@mcolvertbars1}}{=}{1}{%
7699 \LWR@tdaddstyle%
7700 border-left: 1px solid \LWR@vertruleHTMLcolor%
7701 }{}%
7702 \ifnumcomp{\value{LWR@mcolvertbars1}}{>}{1}{%
7703 \LWR@tdaddstyle%
7704 border-left: 4px double \LWR@vertruleHTMLcolor%
7705 }{}%
7706 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{%
7707 \LWR@tdaddstyle%
7708 border-left: 1px dashed \LWR@vertruleHTMLcolor%
7709 }{}%
7710 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{%
7711 \LWR@tdaddstyle%
7712 border-left: 2px dashed \LWR@vertruleHTMLcolor%
7713 }{}%

```

Right side:

```

7714 \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{%
7715 \LWR@tdaddstyle%
7716 border-right: 1px solid \LWR@vertruleHTMLcolor%
7717 }{}%
7718 \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{%
7719 \LWR@tdaddstyle%
7720 border-right: 4px double \LWR@vertruleHTMLcolor%
7721 }{}%
7722 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{%
7723 \LWR@tdaddstyle%
7724 border-right: 1px dashed \LWR@vertruleHTMLcolor%
7725 }{}%
7726 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{%
7727 \LWR@tdaddstyle%
7728 border-right: 2px dashed \LWR@vertruleHTMLcolor%
7729 }{}%
7730 }%
7731 }

```

```
7732 \newcommand{\LWR@multicoltext}{}

```

To find multicolumn right trim:

```
7733 \newcounter{LWR@lastmulticolumn}

```

```
\LWR@domulticolumn [1: vpos] [2: #rows] [3: numLaTeXcols] [4: numHTMLcols] [5: colspec]
[6: text]
```

```

7734 \NewDocumentCommand{\LWR@domulticolumn}{o o m m m +m}{%
7735 \LWR@traceinfo{LWR@domulticolumn -#1- -#2- -#4- -#5-}%

```

Remember the text to be inserted, and remember that a valid column type was found:

```

7736 \renewcommand{\LWR@multicoltext}{%
7737 #6%
7738 \global\booltrue{LWR@validtablecol}%
7739 }%

```

Compute the rightmost column to be included. This is used to create the right trim.

```

7740 \setcounter{LWR@lastmulticolumn}{\value{LWR@tableLaTeXcolindex}}%
7741 \addtocounter{LWR@lastmulticolumn}{#3}%
7742 \addtocounter{LWR@lastmulticolumn}{-1}%

```

Row processing:

7743 \LWR@maybenewtablerow%

Begin the opening table data tag:

7744 \LWR@htmltag{td colspan="#4" %

7745 \IfValueT{#2}{ % rows?

7746 rowspan="#2" %

7747 \IfValueT{#1}{% vpos?

7748 \ifstrequal{#1}{b}{style="\LWR@print@mbbox{vertical-align:bottom}" }{ }%

7749 \ifstrequal{#1}{t}{style="\LWR@print@mbbox{vertical-align:top}" }{ }%

7750 }% vpos?

7751 }% rows?

7752 class="td%

Print the column type and vertical bars:

7753 \setcounter{LWR@mcolvertbarsl}{0}%

7754 \setcounter{LWR@mcolvertbarsr}{0}%

7755 \setcounter{LWR@mcolvertbarsldash}{0}%

7756 \setcounter{LWR@mcolvertbarsrdash}{0}%

7757 \booltrue{LWR@mcolvertbaronleft}%

7758 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoltype}%

If this column has a cmidrule, add “rule” to the end of the HTML class tag.

If this position had a “Y” then add “rule” for a horizontal rule:

7759 \LWR@subaddcmidruletrim%

7760 {\LWR@getexparray{LWR@trimlrules}{\arabic{LWR@tableLaTeXcolindex}}}%

7761 {\LWR@getexparray{LWR@trimrrules}{\arabic{LWR@lastmulticolumn}}}%

Also add vertical bar class.

7762 \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{ tvertbarl}{ }%

7763 \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{ tvertbarldouble}{ }%

7764 \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{ tvertbarr}{ }%

7765 \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{ tvertbarrdouble}{ }%

7766 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{ tvertbarldash}{ }%

7767 \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{ tvertbarldoubledash}{ }%

7768 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{ tvertbarrdash}{ }%

7769 \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{ tvertbarrdoubledash}{ }%

Close the class tag's opening quote: " NOT A TYPO

7770 %

```

7771 \LWR@tdstartstyles%

7772 \LWR@addtabulararrowcolor%

7773 \LWR@addcmidrulewidth%
7774 \LWR@addcdashline%
7775 \LWR@addtabularhrulecolor%
7776 \LWR@addmulticolvertrulecolor%
7777 \LWR@addformatwppalignment{#5}%
7778 \LWR@tdendstyles%
7779 }% end of the opening table data tag
7780 \global\boolfalse{LWR@intabularmetadata}%
7781 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoldata}%
7782 }

```

### 71.21.3 Multicolumn

`\LWR@htmlmulticolumn`  $\{ \langle numcols \rangle \} \{ \langle alignment \rangle \} \{ \langle text \rangle \}$

```

7783 \NewDocumentCommand{\LWR@htmlmulticolumn}{m m +m}%
7784 {%

```

Figure out how many extra HTML columns to add for @ and ! columns:

```

7785 \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}

```

Create the multicolumn tag:

```

7786 \LWR@domulticolumn{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#3}%

```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```

7787 \addtocounter{LWR@tableLaTeXcolindex}{#1}%
7788 \addtocounter{LWR@tableLaTeXcolindex}{-1}%

```

Skip any trailing @ or ! columns for this cell:

```

7789 \global\booltrue{LWR@skipatbang}%
7790 }

```

### 71.21.4 Longtable captions

longtable captions use `\multicolumn`.

Bool LWR@starredlongtable Per the caption package, step the counter if longtable\*.

```
7791 \newbool{LWR@starredlongtable}
7792 \boolfalse{LWR@starredlongtable}
```

Per the caption package. User-redefinable float type.

```
7793 \providecommand*{\LTcapttype}{table}
```

\LWR@longtabledatacaptiontag \* [*(toc entry)*] {*(caption)*}

```
7794 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m}
7795 {%
```

Remember the latest name for \nameref:

```
7796 \IfValueTF{#2}{% optional given?
7797 \ifblank{#2}{% optional empty?
7798 {\LWR@setlatestname{#3}}% empty
7799 {\LWR@setlatestname{#2}}% given and non-empty
7800 }% optional given
7801 {\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:

```
7802 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalLaTeXcols}}
```

Create the multicolumn tag:

```
7803 \LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcols}}%
7804 {\arabic{LWR@tabhtmlcoltotal}}%
7805 {P}%
7806 {% \LWR@domulticolumn
7807 \IfBooleanTF{#1}{% star?
```

Star version, show a caption but do not make a LOT entry:

```
7808 {% yes star
7809 \LWR@figcaption%
7810 \LWR@isolate{#3}%
7811 \endLWR@figcaption%
7812 }%
7813 {% No star:
```

Not the star version:

Don't step the counter if `\caption[] {A caption.}`

```

7814 \ifbool{LWR@starredlongtable}%
7815 {%
7816 \ifblank{#2}% TOC entry
7817 }%
7818 {%
7819 \refstepcounter{\LTcaption}%
7820 \protected@edef\@currentlabel{%
7821 \@nameuse{p@\LTcaption}\@nameuse{the\LTcaption}%
7822 }%
7823 }%
7824 }{}%
```

Create an HTML caption. Afterwards, maybe make a LOT entry.

```

7825 \LWR@figcaption%
7826 \LWR@isolate{\@nameuse{fnum@\LTcaption}}%
7827 \CaptionSeparator%
7828 \LWR@isolate{#3}%
7829 \endLWR@figcaption%
```

See if an optional caption was given:

```
7830 \ifblank{#2}% TOC entry empty
```

if the optional caption was given, but empty, do not form a TOC entry

```
7831 }{}%
```

If the optional caption was given, but might only be []:

```

7832 {% TOC entry not empty
7833 \IfNoValueTF{#2}% No TOC entry?
```

The optional caption is []:

```

7834 {% No TOC entry
7835 \addcontentsline%
7836 {\@nameuse{ext@\LTcaption}}%
7837 {\LTcaption}%
7838 {%
7839 \protect\numberline%
7840 {\LWR@isolate{\@nameuse{p@\LTcaption}}\@nameuse{the\LTcaption}}%
7841 {\ignorespaces \LWR@isolate{#3}\protect\relax}%
7842 }%
7843 }% end of No TOC entry
```

The optional caption has text enclosed:

```

7844 {% yes TOC entry
7845 \addcontentsline%
7846 {\@nameuse{ext@LTcaption}}%
7847 {\LTcaption}%
7848 {%
7849 \protect\numberline%
7850 {\LWR@isolate{\@nameuse{p@LTcaption}}\@nameuse{theLTcaption}}%
7851 {\ignorespaces \LWR@isolate{#2}\protect\relax}%
7852 }%
7853 }% end of yes TOC entry
7854 }% end of TOC entry not empty
7855 }% end of no star

```

Skip any trailing @ or ! columns for this cell:

```

7856 \global\booltrue{LWR@skipatbang}%
7857 }% end of \LWR@domulticolumn
7858
7859 \addtocounter{LWR@tableLaTeXcolindex}{\arabic{LWR@tabletotalLaTeXcols}}
7860 \addtocounter{LWR@tableLaTeXcolindex}{-1}
7861
7862 }

```

### 71.21.5 Counting HTML tabular columns

The L<sup>A</sup>T<sub>E</sub>X specification for a table includes a number of columns separated by the & character. These columns differ in content from line to line. Additional virtual columns may be specified by the special @ and ! columns. These columns are identical from line to line, but may be skipped during a multicolumn cell.

For HTML output, @ and ! columns are placed into their own tabular columns. Thus, a L<sup>A</sup>T<sub>E</sub>X \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.

```

7863 \newcounter{LWR@tabhtmlcolindex}
7864 \newcounter{LWR@tabhtmlcolend}
7865 \newcounter{LWR@tabhtmlcoltotal}

```

\LWR@subtabularhtmlcolumns {<index>}

Factored from \LWR@tabularhtmlcolumns, which follows.

```

7866 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%

```

Temporarily define a macro equal to the @ specification for this column:

```
7867 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colatspec}{#1}}%
```

If the @ specification is not empty, add to the count:

```
7868 \ifdefempty{\LWR@atbangspec}%
7869 {}%
7870 {\addtocounter{LWR@tabhtmlcoltotal}{1}}%
```

Likewise for the ! columns:

```
7871 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colbangspec}{#1}}%
7872 \ifdefempty{\LWR@atbangspec}%
7873 {}%
7874 {\addtocounter{LWR@tabhtmlcoltotal}{1}}%
7875 }
```

```
\LWR@tabularhtmlcolumns {<starting LATEX column>} {<number LATEX columns>}
```

Compute the total number of HTML columns being spanned, considering the starting L<sup>A</sup>T<sub>E</sub>X table column and the number of L<sup>A</sup>T<sub>E</sub>X tabular columns being spanned. Any @ and ! columns within this span are included in the total count. The resulting number of HTML columns is returned in the counter LWR@tabhtmlcoltotal.

```
7876 \newcommand*{\LWR@tabularhtmlcolumns}[2]{%
```

Count the starting index, compute ending index, and begin with the count being the L<sup>A</sup>T<sub>E</sub>X span, to which additional @ and ! columns may be added:

```
7877 \setcounter{LWR@tabhtmlcolindex}{#1}%
7878 \setcounter{LWR@tabhtmlcoltotal}{#2}%
7879 \setcounter{LWR@tabhtmlcolend}{#1}%
7880 \addtocounter{LWR@tabhtmlcolend}{#2}%
```

If at the left edge, add the at/bang columns for the left edge:

```
7881 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{=} {1}{%
7882 \LWR@subtabularhtmlcolumns{leftedge}%
7883 }{ }%
```

Walk across the L<sup>A</sup>T<sub>E</sub>X columns looking for @ and ! columns:

```
7884 \whileboolexpr{%
7885 test {%
7886 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{<}{\value{LWR@tabhtmlcolend}}%
7887 }%
```

```

7888 }%
7889 {%
7890 \LWR@subtabularhtmlcolumns{\arabic{LWR@tabhtmlcolindex}}%
7891 \addtocounter{LWR@tabhtmlcolindex}{1}%
7892 }% whiledo
7893 }

7894 \end{warpHTML}

```

## 71.22 Multirow if not loaded

A default definition in case multirow is not loaded. This is used during table parsing.

```

7895 \begin{warpHTML}
7896 \newcommand{\multirow}[2][c]{}
7897 \end{warpHTML}

```

## 71.23 Multicolumnrow

A print-mode version is defined here, and is also used during HTML output while inside a lateximage.

See section 299 for the HTML versions.

**for HTML & PRINT:** 7898 \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.

```
7899 \AtBeginDocument{
```

`\@ifundefined{@xmultirow}` determines if multirow was never loaded.

Null action if not loaded:

```
7900 \@ifundefined{@xmultirow}
```

```

7901 {
7902 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
7903 {+m +m +0{c} +m +0{0} +m +0{Opt} +m}%
7904 {}%
7905 }% no version of multirow was loaded
7906 {% \@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:

```

7907 \@ifpackageloaded{multirow}{% v2.0 or newer
7908 \@ifpackagelater{multirow}{2016/09/01}% 2016/09/27 for v2.0
7909 {% v2.0+:
7910 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
7911 {+m +m +0{c} +m +0{0} +m +0{Opt} +m}%
7912 {\multicolumn{#1}{#2}{\@xmultirow[#3][#4][#5][#6][#7][#8]}}%
7913 }
7914 {% loaded but older, probably not executed:
7915 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
7916 {+m +m +0{c} +m +0{0} +m +0{Opt} +m}%
7917 {\multicolumn{#1}{#2}{\@xmultirow[#4][#5][#6][#7][#8]}}%
7918 }
7919 }% 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.

```

7920 {% v1.6 or older did not \ProvidePackage
7921 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
7922 {+m +m +0{c} +m +0{0} +m +0{Opt} +m}%
7923 {\multicolumn{#1}{#2}{\@xmultirow[#4][#5][#6][#7][#8]}}%
7924 }
7925
7926 }% \@ifundefined{@xmultirow}
7927
7928 \providecommand*{\multicolumnrow}{\LWR@print@multicolumnrow}
7929
7930 }% AtBeginDocument

7931 \end{warpall}

```

## 71.24 Utility macros inside a table

for HTML output: 7932 `\begin{warpHTML}`

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```
7933 \newcommand*{\LWR@donothing}{}
```

In case array is not loaded:

```
7934 \let\firsthline\relax
7935 \let\lasthline\relax
7936 \newcommand*{\firsthline}{}
7937 \newcommand*{\lasthline}{}

```

In case bigdelim is not loaded:

```
7938 \newcommand*{\ldelim}{}
7939 \newcommand*{\rdelim}{}

```

```
7940 \end{warpHTML}
```

## 71.25 Special-case tabular markers

**for HTML & PRINT:** 7941 \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 9.9.

```
7942 \newcommand*{\TabularMacro}{}

```

```
7943 \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:** 7944 \begin{warpHTML}

```

7945 \newcommand*{\ResumeTabular}{%
7946 \global\boolfalse{LWR@exitingtabular}%
7947 \global\boolfalse{LWR@tabularmutemods}%
7948 \LWR@getmynexttoken%
7949 }

```

```

7950 \end{warpHTML}

```

**for PRINT output:** 7951 \begin{warpprint}

```

7952 \newcommand*{\ResumeTabular}{}

```

```

7953 \end{warpprint}

```

## 71.26 Checking for a new table cell

**for HTML output:** 7954 \begin{warpHTML}

Bool LWR@exitingtabular When \end is found, turns off the next opening data tag.

```

7955 \newbool{LWR@exitingtabular}

```

Bool LWR@tabularmutemods Mutes HTML output for @, !, < and >.

This is used while printing the final row to generate \bottomrules.

```

7956 \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:

```
7957 \newcommand*{\LWR@tabledatacolumnstag}%
7958 {%
7959 \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:

```
7960 \global\let\LWR@mynextaction\LWR@tabledatasinglecolumnstag%
```

If exiting the tabular:

```
7961 \ifdefequal{\LWR@mynexttoken}{\end}%
7962 {\global\booltrue{\LWR@exitingtabular}}{}%
```

`longtable` can have a caption in a cell

```
7963 \ifdefequal{\LWR@mynexttoken}{\caption}%
7964 {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

Look for other things which would not start a table cell:

```
7965 \ifdefequal{\LWR@mynexttoken}{\multicolumn}%
7966 {\global\let\LWR@mynextaction\LWR@donothing}{}%
7967 \ifdefequal{\LWR@mynexttoken}{\multirow}%
7968 {\global\let\LWR@mynextaction\LWR@donothing}{}%
7969 \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%
7970 {\global\let\LWR@mynextaction\LWR@donothing}{}%
7971 \ifdefequal{\LWR@mynexttoken}{\noalign}%
7972 {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

If an `\mrowcell`, this is a cell to be skipped over:

```
7973 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%
7974 {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

If an `\mcolrowcell`, this is a cell to be skipped over:

```
7975 \ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
7976 {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

```
7977 \ifdefequal{\LWR@mynexttoken}{\TabularMacro}%
7978 {\global\let\LWR@mynextaction\LWR@donothing}{}%
```

```
7979 \ifdefequal{\LWR@mynexttoken}{\hline}%
7980 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7981 \ifdefequal{\LWR@mynexttoken}{\firsthline}%
7982 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7983 \ifdefequal{\LWR@mynexttoken}{\lasthline}%
7984 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7985 \ifdefequal{\LWR@mynexttoken}{\toprule}%
7986 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7987 \ifdefequal{\LWR@mynexttoken}{\midrule}%
7988 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7989 \ifdefequal{\LWR@mynexttoken}{\cmidrule}%
7990 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7991 \ifdefequal{\LWR@mynexttoken}{\morecmidrules}%
7992 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7993 \ifdefequal{\LWR@mynexttoken}{\specialrule}%
7994 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7995 \ifdefequal{\LWR@mynexttoken}{\cline}%
7996 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7997 \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
7998 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

7999 \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
8000 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

8001 \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
8002 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

8003 \ifdefequal{\LWR@mynexttoken}{\doublerulesepcolor}%
8004 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

8005 \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
8006 {\global\let\LWR@mynextaction\LWR@donothing}{-}%

8007 \ifdefequal{\LWR@mynexttoken}{\warpHTMLonly}%
8008 {\global\let\LWR@mynextaction\LWR@donothing}{-}%
```

```
8009 \ifdefequal{\LWR@mynexttoken}{\ldelim}%
8010 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
8011 \ifdefequal{\LWR@mynexttoken}{\rdelim}%
8012 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

For arydshln:

```
8013 \ifdefequal{\LWR@mynexttoken}{\hdashline}%
8014 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
8015 \ifdefequal{\LWR@mynexttoken}{\cdashline}%
8016 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
8017 \ifdefequal{\LWR@mynexttoken}{\firsthdashline}%
8018 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

```
8019 \ifdefequal{\LWR@mynexttoken}{\lasthdashline}%
8020 {\global\let\LWR@mynextaction\LWR@donothing}{}}%
```

Ignore an empty line between rows:

```
8021 \ifdefequal{\LWR@mynexttoken}{\par}%
8022 {\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:

```
8023 \LWR@traceinfo{\LWR@tabledatacolumnntag: about to do mynext}%
8024 \LWR@mynextaction%
8025 \LWR@traceinfo{\LWR@tabledatacolumnntag: done}%
8026 }
```

```
8027 \end{warpHTML}
```

## 71.27 `\mrowcell`

**for HTML & PRINT:** 8028 `\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.

```
8029 \newcommand*{\mrowcell}{}

```

```
8030 \end{warpall}

```

## 71.28 `\mcolrowcell`

**for HTML & PRINT:** 8031 `\begin{warpall}`

 `\mcolrowcell` The user must insert `\mcolrowcell` into any `\multicolumnrow` cells which must be skipped. This command has no action during print output.

```
8032 \newcommand*{\mcolrowcell}{}

```

```
8033 \end{warpall}

```

## 71.29 HTML tabular environment

**for HTML output:** 8034 `\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`.

```
8035 \LetLtxMacro\toprule\relax
8036 \LetLtxMacro\midrule\relax
8037 \LetLtxMacro\cmidrule\cline
8038 \LetLtxMacro\bottomrule\relax
8039 \LetLtxMacro\addlinespace\relax
8040 \LetLtxMacro\morecmidrules\relax
8041 \LetLtxMacro\specialrule\relax
8042
8043 \newcommand*{\toprule}[1][1][\hline]
8044 \newcommand*{\midrule}[1][1][\hline]
8045 \LetLtxMacro\cmidrule\cline
8046 \newcommand*{\bottomrule}[1][1][\hline]
8047 \newcommand*{\addlinespace}[1][1]{}
8048 \newcommand*{\morecmidrules}{}
8049 \newcommand*{\specialrule}[3][\hline]

```

`\noalign` `{\text}` Redefined for use inside `tabular`.

```

8050 \LetLtxMacro\LWR@orignoalign\noalign
8051
8052 \newcommand{\LWR@tabularnoalign}[1]{%
8053 \begingroup%
8054 \global\advance\rownum\m@ne%
8055 \renewcommand*\LWR@xcolorrowHTMLcolor}{}%
8056 \multicolumn{\value{\LWR@tabletotalLaTeXcols}}{1}{#1} \\
8057 \endgroup%
8058 % \@rowcolors%
8059 \LWR@getmynexttoken%
8060 }

```

`\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.

```

8061 \AtBeginDocument{
8062 \@ifpackageloaded{lwarp-tbls}
8063 {
8064 \newcommand*\LWR@HTMLhline[1] [] [%
8065 \ifbool{FormatWP}%
8066 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
8067 {\addtocounter{\LWR@hlines}{1}}%
8068 \LWR@getmynexttoken}%
8069 }
8070 {
8071 \newcommand*\LWR@HTMLhline{%
8072 \ifbool{FormatWP}%
8073 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
8074 {\addtocounter{\LWR@hlines}{1}}%
8075 \LWR@getmynexttoken}%
8076 }
8077 }% AtBeginDocument

```

`\LWR@HTMLcline` `{\langle columns \rangle}`

```

8078 \NewDocumentCommand{\LWR@HTMLcline}{m}%
8079 {\LWR@docmidrule{#1}\LWR@getmynexttoken}%

```

`\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`.

```

8080 \AtBeginDocument{
8081 \@ifundefined{frenchbsetup}%
8082 {% no babel-french
8083 \newcommand*\LWR@nullifyNoAutoSpacing{}
8084 }% no babel-french

```

```

8085 {% yes babel-french
8086 \newcommand*\LWR@nullifyNoAutoSpacing}{%
8087 \NoAutoSpacing%
8088 \renewcommand*\NoAutoSpacing}{}%
8089 \renewcommand*\LWR@FBcancel}{}%
8090 }
8091 }% yes babel-french
8092 }% AtBeginDocument

```

Env `tabular` <direction> [*<verticalposition>*] {<colspecs>}

The <direction> is from plect for Japanese documents, and is ignored.

```

8093 \StartDefiningTabulars
8094
8095 \NewDocumentCommand{\LWR@HTML@tabular}{d< o m}
8096 {%
8097 \LWR@traceinfo{\LWR@HTML@tabular started}%
8098 \addtocounter{\LWR@tabulardepth}{1}%

```

Not yet started a table row:

```
8099 \global\boolfalse{\LWR@startedrow}%
```

Not yet doing any rules:

```

8100 \setcounter{\LWR@hlines}{0}%
8101 \setcounter{\LWR@hdashedlines}{0}%
8102 \global\boolfalse{\LWR@doingtbrule}%
8103 \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.

```
8104 \LWR@nullifyNoAutoSpacing%
```

Have not yet found the end of tabular command. Unmute the @ and ! columns.

```

8105 \global\boolfalse{\LWR@exitingtabular}%
8106 \global\boolfalse{\LWR@tabularmutemods}%

```

Create the table tag:

```

8107 \global\booltrue{\LWR@intabularmetadata}%
8108 \LWR@traceinfo{\LWR@tabular: About to \LWR@forecnewpage.}%
8109 \LWR@forcenewpage
8110 \LWR@htmlblocktag{table}%

```

Parse the table columns:

```
8111 \LWR@parsetablecols{#3}%
```

Table col spec is: \LWR@tablecolspec which is a string of llccrr, etc.

Do not place the table inside a paragraph:

```
8112 \LWR@stoppars%
```

Track column #:

```
8113 \setcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
8114 \global\boolfalse{LWR@tabularcelladded}%
```

Start looking for midrules:

```
8115 \LWR@clearmidrules%
```

\\ becomes a macro to end the table row:

```
8116 \LetLtxMacro{\\}{\LWR@tabularendoffline}%
```

The following adjust for colortbl.

```
8117 \LetLtxMacro\arrayrulecolor\arrayrulecolornexttoken%
8118 \LetLtxMacro\doublerulesepcolor\doublerulesepcolornexttoken%
8119 \gdef\LWR@columnHTMLcolor{}%
8120 \gdef\LWR@rowHTMLcolor{}%
8121 \gdef\LWR@cellHTMLcolor{}%
8122 \@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.

```
8123 \ifdefvoid{\LWR@ruleHTMLcolor}%
8124 {\edef\LWR@vertruleHTMLcolor{black}}%
8125 {\edef\LWR@vertruleHTMLcolor{\LWR@origpound\LWR@ruleHTMLcolor}}%
```

Tracking the depth of cell color <div>s:

```
8126 \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 `tabls` package.

```

8127 \LWR@traceinfo{\LWR@HTML@tabular: redefining macros}%
8128 \LetLtxMacro\noalign\LWR@tabularnoalign%
8129 \LetLtxMacro\hline\LWR@HTMLhline%
8130 \LetLtxMacro\cline\LWR@HTMLcline%

8131 \DeclareDocumentCommand{\hdashline}{o}{%
8132 \ifbool{FormatWP}%
8133 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8134 {\addtocounter{LWR@hdashedlines}{1}}%
8135 \LWR@getmynexttoken%
8136 }%

8137 \DeclareDocumentCommand{\cdashline}{m}{%
8138 \LWR@docdashline{##1}\LWR@getmynexttoken%
8139 }%

8140 \DeclareDocumentCommand{\firsthdashline}{o}{%
8141 \ifbool{FormatWP}%
8142 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8143 {\addtocounter{LWR@hdashedlines}{1}}%
8144 \LWR@getmynexttoken%
8145 }%

8146 \DeclareDocumentCommand{\lasthdashline}{o}{%
8147 \ifbool{FormatWP}%
8148 {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
8149 {\addtocounter{LWR@hdashedlines}{1}}%
8150 \LWR@getmynexttoken%
8151 }%

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.

8152 \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
8153 \renewcommand*\mrowcell{%
8154 \LWR@maybeowntablerow%
8155 \LWR@tabularleftedge%
8156 \global\booltrue{LWR@skippingmrowcell}%
8157 }%
8158 \renewcommand*\mcolrowcell{%
8159 \LWR@maybeowntablerow%
8160 \global\booltrue{LWR@skippingmcolrowcell}%

```

```
8161 }%
8162 \LetLtxMacro\caption\LWR@longtabledatacaptiontag%
```

Reset for new processing:

```
8163 \global\boolfalse{LWR@tableparcell}%
8164 \global\boolfalse{LWR@skippingmrowcell}%
8165 \global\boolfalse{LWR@skippingmcolrowcell}%
8166 \global\boolfalse{LWR@skipatbang}%
8167 \global\boolfalse{LWR@emptyatbang}%
```

Set & for its special meaning inside the tabular:

```
8168 \StartDefiningTabulars%
8169 \protected\gdef&{\LWR@tabularampersand}%
```

Nest one level deeper of tabular paragraph handling:

```
8170 \addtocounter{LWR@tabularpardepth}{1}%
```

Look ahead for a possible table data cell:

```
8171 \LWR@traceinfo{LWR@HTML@tabular: about to LWR@getmynexttoken}%
8172 \LWR@getmynexttoken%
8173 }%
```

Ending the environment:

```
8174 \newcommand*{\LWR@HTML@endtabular}
8175 {%
8176 \LWR@traceinfo{LWR@HTML@endtabular}%
```

Unnest one level of tabular paragraph handling:

```
8177 \addtocounter{LWR@tabularpardepth}{-1}%
8178 \ifboolexpr{%
8179 test {%
8180 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}{\value{LWR@tabletotalLaTeXcols}}
8181 } or %
8182 (%
8183 bool{LWR@intabularmetadata} and%
8184 not bool{LWR@tabularcelladded} and%
8185 test {%
8186 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}{\value{LWR@tabletotalLaTeXcols}}%
8187 }%
8188)%
8189 }%
8190 {%
```

```

8191 \LWR@tabularfinishrow%
8192 }%
8193 {%
8194 \LWR@closetabledatacell%
8195 }%
8196 \LWR@htmlblocktag{/tr}%

```

xcolor row color support:

```

8197 \@rowc@lors%

8198 \LWR@htmlblocktag{/table}%
8199 \global\boolfalse{LWR@intabularmetadata}%

```

Unnest one level of tabular:

```

8200 \addtocounter{LWR@tabulardepth}{-1}%

```

Restore & to its usual meaning:

```

8201 \protected\gdef&{\LWR@origampmacro}%
8202 \StopDefiningTabulars%
8203 \LWR@traceinfo{LWR@HTML@endtabular finished}%
8204 }
8205
8206 \csletcs{LWR@HTML@endtabular*}{LWR@HTML@endtabular}
8207
8208 \StopDefiningTabulars

```

siunitx may redefine tabular, so set the following later:

```

8209 \AtBeginDocument{
8210 \LetLtxMacro\LWR@origendtabular\endtabular
8211 \csletcs{LWR@origendtabular*}{endtabular*}
8212 \LWR@formatted{@tabular}
8213 \LWR@formatted{endtabular}
8214 \LWR@formatted{endtabular*}
8215 }

8216 \end{warpHTML}

```

## 72 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.

The zref package is used to remember section name, file, and lateximage depth and number for each label.

Table 12 shows the data structures related to cross-referencing.

**for HTML output:** 8217 `\begin{warpHTML}`

### 72.1 Setup

`\@currentlabelname` To remember the most recently defined section name, description, or caption, for `\nameref`.

```
8218 \providecommand*\@currentlabelname{}
```

`\LWR@stripperperiod` `{\text}` [`(.)`]

Removes a trailing period.

```
8219 \def\LWR@stripperperiod#1.\ltx@empty#2\@nil{#1}%
```

`\LWR@setlatestname` `{\object name}`

Removes `\label`, strips any final period, and remembers the result.

```
8220 \newcommand*\LWR@setlatestname}[1]{%
```

Remove `\label` and other commands from the name, the strip any final period. See `zref-titleref` and `getttitlestring`.

```
8221 \GetTitleStringExpand{#1}%
```

```
8222 \edef\@currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
```

```
8223 \edef\@currentlabelname{%
```

```
8224 \expandafter\LWR@stripperperiod\@currentlabelname%
```

```
8225 \ltx@empty.\ltx@empty\@nil%
```

```
8226 }%
```

```
8227 }
```

Table 12: Cross-referencing data structures

---

|                                                                                                                                                                                    |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Original L<sup>A</sup>T<sub>E</sub>X:</b>                                                                                                                                       | (print and HTML) |
| <b>\refstepcounter:</b> Steps the counter and sets \@currentlabel.                                                                                                                 |                  |
| <b>\@currentlabel:</b> \p@<ctr>\the<ctr> Updated by \refstepcounter.                                                                                                               |                  |
| <b>\label:</b> Writes to the .aux file:<br>\newlabel{<label>}{\@currentlabel}{\thepage}}                                                                                           |                  |
| <b>\newlabel:</b> When the .aux file is read, sets \r@<label>.                                                                                                                     |                  |
| <b>\r@&lt;label&gt;:</b> Set to: {\@currentlabel}{\thepage}}                                                                                                                       |                  |
| <b>\ref:</b> Returns the first part of \r@<label>.                                                                                                                                 |                  |
| <b>\pageref:</b> Returns the second part of \r@<label>.                                                                                                                            |                  |
| <b>Added by lwarp:</b>                                                                                                                                                             | (HTML only)      |
| <b>\label:</b> Adds HTML tags (section 72.3), plus \splabel data (section 72.2):                                                                                                   |                  |
| <b>zLWR@name:</b> The section name for this label.                                                                                                                                 |                  |
| <b>zLWR@htmlfilenumber:</b> The file number or name for this label.                                                                                                                |                  |
| <b>zLWR@lateximagedepth:</b> The lateximagedepth for this label.                                                                                                                   |                  |
| <b>zLWR@lateximagenumber:</b> The lateximagenumber for this label.                                                                                                                 |                  |
| <b>\nameref:</b> Emulated from hyperref for lwarp. See section 72.4.                                                                                                               |                  |
| <b>\ref and \nameref:</b> Adds HTML tags. See section 72.4.                                                                                                                        |                  |
| <b>Added by amsmath:</b>                                                                                                                                                           | (print and HTML) |
| <b>\label:</b> Execution is delayed until the math environment is completed.                                                                                                       |                  |
| <b>\ltx@label:</b> L <sup>A</sup> T <sub>E</sub> X \label, (HTML: patched by lwarp,) later patched by cleveref.                                                                    |                  |
| <b>Added by cleveref:</b>                                                                                                                                                          | (print and HTML) |
| <b>\refstepcounter:</b> Added: sets \cref@currentlabel.                                                                                                                            |                  |
| <b>\cref@currentlabel:</b> (<type>=<ctr> unless an alias is used):<br>[<type>] [\arabic{<ctr>}][<parent ctrs>]{\p@<ctr>\the<ctr>} Also see<br>section 58.4 for use with footnotes. |                  |
| <b>\label:</b> Writes to the .aux file:<br>\newlabel{<label>@cref}{\cref@currentlabel}{\thepage}}                                                                                  |                  |
| <b>\newlabel:</b> (Unchanged.) When the .aux file is read, sets \r@<label>@cref.                                                                                                   |                  |
| <b>\r@&lt;label&gt;@cref:</b> Set to: {\cref@currentlabel}{\thepage}}                                                                                                              |                  |
| <b>Utility functions:</b> See \cref@getlabel, \cref@gettype, \cref@getcounter,<br>\cref@getprefix.                                                                                 |                  |
| <b>Cross-referencing names:</b> \crefname and \Crefname assign human-readable<br>names for references to this counter type.                                                        |                  |
| <b>Additionally patched by lwarp:</b>                                                                                                                                              | (HTML only)      |
| <b>\cref, etc.:</b> Modified for lwarp. See section 86.                                                                                                                            |                  |
| <b>\label inside math:</b> See section 78.7.1.                                                                                                                                     |                  |
| <b>Footnotes:</b> See \noteentry in section 58.4.                                                                                                                                  |                  |

---

## 72.2 zref setup

See:

[http://tex.stackexchange.com/questions/57194/  
extract-section-number-from-equation-reference](http://tex.stackexchange.com/questions/57194/extract-section-number-from-equation-reference)

Create a new property list called special:

```
8228 \zref@newlist{special}
```

Define a new property which has the name of the most recently declared section:

```
8229 \zref@newprop{zLWR@name}{\@currentlabelname}
```

Define a new property which has either a filename or a file number:

```
8230 \zref@newprop{zLWR@htmlfilenumber}{%
8231 \ifbool{FileSectionNames}{\LWR@thisfilename}{\arabic{LWR@htmlfilenumber}}%
8232 }%
```

Additional properties for lateximages:

```
8233 \zref@newprop{zLWR@lateximagedepth}{\arabic{LWR@lateximagedepth}}
8234 \zref@newprop{zLWR@lateximagenumber}{\arabic{LWR@lateximagenumber}}
```

zLWR@htmlfilenumber property holds the file number or name

Add a LWR@htmlfilenumber property, and lateximage properties to special:

```
8235 \zref@addprop{special}{zLWR@name}
8236 \zref@addprop{special}{zLWR@htmlfilenumber}
8237 \zref@addprop{special}{zLWR@lateximagedepth}
8238 \zref@addprop{special}{zLWR@lateximagenumber}
```

Returns the selected field:

```
8239 \newcommand*\LWR@spref}[2]{%
8240 \zref@extractdefault{#1}{#2}{??}%
8241 }
```

`\LWR@nameref`  $\langle label \rangle$  Returns the section name for this label:

```
8242 \newcommand*\LWR@nameref}[1]{%
8243 \LWR@spref{#1}{zLWR@name}%
8244 }
```

`\LWR@htmlfileref`  $\langle label \rangle$  Returns the file number or name for this label:

```
8245 \newcommand*\LWR@htmlfileref}[1]{%
DO NOT USE \LWR@traceinfo HERE! Will be expanded.
8246 \LWR@spref{#1}{zLWR@htmlfilenumber}%
8247 }
```

`\LWR@lateximagedepthref`  $\langle label \rangle$  Returns the lateximagedepth for this label:

```
8248 \newcommand*\LWR@lateximagedepthref}[1]{%
8249 \LWR@spref{#1}{zLWR@lateximagedepth}%
8250 }
```

`\LWR@lateximagenumberref`  $\langle label \rangle$  Returns the lateximagenumber for this label:

```
8251 \newcommand*\LWR@lateximagenumberref}[1]{%
8252 \LWR@spref{#1}{zLWR@lateximagenumber}%
8253 }
```

`\LWR@splabel`  $\langle label \rangle$  Sanitize the name and then creates the label:

```
8254 \newcommand*\LWR@splabel}[1]{%
8255 \LWR@traceinfo{LWR@splabel !#1!}%
8256 \LWR@setlatestname{\@currentlabelname}%
8257 \zref@labelbylist{#1}{special}%
8258 }
```

### 72.3 Labels

`\LWR@sublabel`  $\langle label \rangle$  Creates an HTML id tag.

`\detokenize` is used to allow underscores in the labels.

```
8259 \newcommand*\LWR@sublabel}[1]{%
8260 \LWR@traceinfo{LWR@sublabel !#1!}%
```

Create an HTML id tag unless are inside a lateximage, since it would appear in the image:

```
8261 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8262 }{%
8263 }{% not lateximage
```

If not doing a lateximage, create an HTML ID tag: (To be factored...)

```

8264 \LWR@sanitize{#1}%
8265 \ifbool{LWR@doingstartpars}%
8266 {% pars allowed
8267 \ifbool{LWR@doingapar}%
8268 {% par started
8269 \LWR@htmltag{a \LWR@print@mbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8270 }% par started
8271 {% par not started
8272 \LWR@stoppars%
8273 \LWR@htmltag{a \LWR@print@mbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8274 \LWR@startpars%
8275 }% par not started
8276 }% pars allowed
8277 {% pars not allowed
8278 \LWR@htmltag{a \LWR@print@mbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
8279 }% pars not allowed
8280 }% not lateximage
8281 }

```

`\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 regular  $\LaTeX$  `\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.

```

8282 \NewDocumentCommand{\LWR@new@label}{d() m o}{%
8283 \LWR@traceinfo{LWR@new@label: starting}%
8284 \LWR@traceinfo{LWR@new@label: !#2!}%
8285 % \@bsphack%

```

Create a traditional  $\LaTeX$  label, as modified by `cleveref`:

```
8286 \LWR@orig@label{#2}%
```

Create a special label which holds the section number, `LWR@htmlfilenumber`, `LWR@lateximagedepth`, and `LWR@lateximagenumber`:

```

8287 \LWR@traceinfo{LWR@new@label: filesectionnames is \ifbool{FileSectionNames}{true}{false}}%
8288 \LWR@traceinfo{LWR@new@label: LWR@thisfilename is !\LWR@thisfilename!}%
8289 \LWR@traceinfo{LWR@new@label: LWR@htmlfilenumber is \arabic{LWR@htmlfilenumber}}%
8290 \LWR@splabel{#2}%
8291 \LWR@sublabel{#2}%
8292 % \@esphack%
8293 \LWR@traceinfo{LWR@new@label: done}%
8294 }

```

## 72.4 References

`\LWR@startref` `{\label}` (Common code for `\ref` and `\nameref`.)

Open an HTML tag reference to a filename, # character, and a label.

```

8295 \newcommand*{\LWR@startref}[1]
8296 {%
8297 \edef\LWR@lidref{\LWR@lateximagedepthref{#1}}%
8298 \LWR@sanitize{#1}%
8299 \LWR@traceinfo{LWR@startref A: !#1!}%

```

Create the filename part of the link:

```

8300 \LWR@htmltag{a href="%
8301 \LWR@traceinfo{LWR@startref B}%
8302 \LWR@print@mbbox{\LWR@htmlrefsectionfilename{#1}}%
8303 \LWR@traceinfo{LWR@startref C}%
8304 \LWR@origpound%

```

Create the destination id:

See if `LWR@lateximagedepth` is unknown:

```

8305 \LWR@traceinfo{LWR@startref D: !#1!}%
8306 \ifthenelse{\equal{\LWR@lidref}{??}}%

```

“??” if `LWR@lateximagedepth` is unknown, so create a link with an unknown destination:

```

8307 {%
8308 \LWR@traceinfo{LWR@startref D0: ??}%
8309 ??%
8310 }%

```

If `LWR@lateximagedepth` is known. Use a `lateximage` if the depth is greater than zero, or a regular link otherwise:

```

8311 {%
8312 \LWR@traceinfo{LWR@startref D1: \LWR@lidref}%
8313 \ifthenelse{\cnttest{\LWR@lidref}{>}{0}}%
8314 {%
8315 \LWR@traceinfo{LWR@startref D2: \LWR@lidref}%
8316 lateximage\LWR@lateximagenumberref{#1}%
8317 }%
8318 {%
8319 \LWR@traceinfo{LWR@startref D3}%

```

`\detokenize` is used to allow underscores in the labels:

```

8320 \LWR@print@mbx{\LWR@sanitized}%
8321 }%
8322 }%
8323 \LWR@traceinfo{LWR@startref E}%

```

Closing quote:

```

8324 "%
8325 \LWR@traceinfo{LWR@startref F}%
8326 }

```

`\LWR@subnewref` `{<label>}` `{<label or sub@label>}`

Factored for the subfig package. Uses the original label for the hyper-reference, but prints its own text, such as “1 (b)”.

```

8327 \NewDocumentCommand{\LWR@subnewref}{m m}{%
8328 \LWR@traceinfo{LWR@subnewref #1 #2}%
8329 \LWR@startref{#1}%
8330 \LWR@print@ref{#2}%
8331 \LWR@htmltag{/a}%
8332 }

```

`\ref` \* `{<label>}` `\ref` is redefined to `\LWR@HTML@ref`, except inside the text part of a `\hyperref`, where it is redefined to `\LWR@ref@ignorestar`.

`\LWR@HTML@ref` \* `{<label>}` Create an internal document reference link, or without a link if starred per `\hyperref`.

```

8333 \NewDocumentCommand{\LWR@HTML@ref}{s m}{%
8334 \LWR@traceinfo{LWR@HTML@ref !#2!}%
8335 \IfBooleanTF{#1}%

```

```

8336 {\LWR@print@ref{#2}}%
8337 {\LWR@subnewref{#2}{#2}}%
8338 }
8339
8340 \LWR@formatted{ref}

```

`\LWR@ref@ignorestar` \* `{\label}` For use inside `\hyperref`. Ignores the star, then uses the original `\ref`.

```

8341 \NewDocumentCommand{\LWR@ref@ignorestar}{s m}{%
8342 \LWR@print@ref{#2}}%
8343 }

```

`\pagerefPageFor` Text for page references.

```
8344 \newcommand*{\pagerefPageFor}{see }
```

`\pageref` \* `{\label}` Create an internal document reference, or just the unlinked number if starred, per `\hyperref`.

```

8345 \NewDocumentCommand{\LWR@new@pageref}{s m}{%
8346 \IfBooleanTF{#1}%
8347 {(\pagerefPageFor\LWR@print@ref{#2})}%
8348 {(\cpageref{#2})}%
8349 }

```

`\nameref` `{\label}`

```

8350 \newrobustcmd*{\nameref}[1]{%
8351 \LWR@traceinfo{nameref}%
8352 \LWR@startref{#1}%
8353 \LWR@traceinfo{nameref B}%
8354 \LWR@nameref{#1}%
8355 \LWR@traceinfo{nameref C}%
8356 \LWR@htmltag{/a}%
8357 \LWR@traceinfo{nameref: done}%
8358 }

```

`\Nameref` `{\label}` In print, adds the page number. In HTML, does not.

```
8359 \LetLtxMacro\Nameref\nameref
```

## 72.5 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.

```
8360 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it:
8361 % \EmulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.
```

Emulates `hyperref`:

`\@currentHref` Added to support `backref`.

```
8362 \AtBeginDocument{
8363 \def\@currentHref{%
8364 autopage-\theLWR@currentautosec%
8365 }
8366 }
```

`\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.

```
8367 \NewDocumentCommand{\LWR@subhyperref}{m}{%
8368 \LWR@traceinfo{\LWR@subhyperref !#1!}%
8369 \LWR@sanitize{#1}%
8370 \LWR@htmltag{%
8371 a href="\LWR@sanitized" %
8372 target="_{}blank"\LWR@orignewline%
8373 }%
8374 }
```

`\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.

```
8375 \newcommand{\LWR@subhyperreftext}[1]{%
```

```

8376 #1%
8377 \LWR@htmltag{/a}%
8378 \LWR@ensuredoingapar%
8379 }

```

`\LWR@subhyperrefclass` `{<URL>}` `{<text>}` `{<htmlclass>}`

```

8380 \NewDocumentCommand{\LWR@subhyperrefclass}{m +m m}{%
8381 \LWR@htmltag{%
8382 a href="%
8383 \begingroup\@sanitize#1\endgroup%
8384 " %
8385 class="#3"\LWR@orignewline%
8386 }%
8387 #2%
8388 \LWR@htmltag{/a}%
8389 \LWR@ensuredoingapar%
8390 }

```

`\href` [`<options>`] `{<URL>}`

Create a link with accompanying text:

```

8391 \DeclareDocumentCommand{\LWR@hrefb}{0{} m}{%
8392 \LWR@ensuredoingapar%
8393 \LWR@subhyperref{#2}%
8394 \endgroup% restore catcodes
8395 \LWR@subhyperreftext%
8396 }
8397
8398 \newrobustcmd*{\href}{%
8399 \begingroup%
8400 \catcode'\#=12%
8401 \catcode'\%=12%
8402 \catcode'\&=12%
8403 \catcode'\~=12%
8404 \catcode'_ =12%
8405 \LWR@hrefb%
8406 }

```

`\nolinkurl` `{<URL>}`

Print the name of the link without creating the link:

```

8407 \newcommand*{\LWR@nolinkurlb}[1]{%
8408 \LWR@ensuredoingapar%
8409 \def\LWR@templink{#1}%

```

```

8410 \@onelevel@sanitize\LWR@templink%
8411 \LWR@templink%
8412 \endgroup%
8413 }
8414
8415 \newrobustcmd*{\nolinkurl}{%
8416 \begingroup%
8417 \catcode'\#=12%
8418 \catcode'\%=12%
8419 \catcode'\&=12%
8420 \catcode'\~=12%
8421 \catcode'_ =12%
8422 \LWR@nolinkurlb%
8423 }

```

`\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@url` here and also redefined by `lwarp-url`.

```

8424 \DeclareDocumentCommand{\LWR@urlb}{m}{%
8425 \LWR@ensuredoingapar%
8426 \def\LWR@templink{#1}%
8427 \@onelevel@sanitize\LWR@templink%
8428 \href{\LWR@templink}{\LWR@templink}%
8429 \endgroup%
8430 }
8431
8432 \newrobustcmd*{\url}{%
8433 \begingroup%
8434 \catcode'\#=12%
8435 \catcode'\%=12%
8436 \catcode'\&=12%
8437 \catcode'\~=12%
8438 \catcode'_ =12%
8439 \LWR@urlb%
8440 }

```

`\LWR@subinlineimage`  $[\langle alttag \rangle] \{\langle class \rangle\} \{\langle filename \rangle\} \{\langle extension \rangle\} \{\langle style \rangle\}$

```

8441 \newcommand*{\LWR@subinlineimage}[5] [] {%
8442 \ifblank{#1}%
8443 {\LWR@htmltag![#1](#3.#4)

```

8446 \end{warpHTML}

Table 13: Float data structures

---

For each `<type>` of float (figure, table, etc.) there exists the following:

---

**counter `<type>`:** A counter called `<type>`, such as `figure`, `table`.

`\<type>name`: Name. `\figurename` prints “Figure”, etc.

`\ext@<type>`: File extension. `\ext@figure` prints “lof”, etc.

`\fps@<type>`: Placement.

`\the<type>`: Number. `\thetable` prints the number of the table, etc.

`\p@<type>`: Parent’s number. Prints the number of the [within] figure, etc.

`\fnum@<type>`: Prints the figure number for the caption.

`\<type>name \the<type>`, “Figure 123”.

`\<type>`: Starts the float environment. `\figure` or `\begin{figure}`

`\end<type>`: Ends the float environment. `\endfigure` or `\end{figure}`

`\tf@<ext>`: The L<sup>A</sup>T<sub>E</sub>X file identifier for the output file.

`LWR@have<type>`: A boolean remembering whether a `\listof` was requested for a float of this type.

**File with extension `lo<f,t,a-z>`:** An output file containing the commands to build the `\listof<type>` “table-of-contents” structure.

**Cross-referencing names:** For `cleveref`’s `\cref` and related, `\crefname` and `\Crefname` assign human-readable names for references to this float type.

---

## 73 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”.

### 73.1 Float environment

**for HTML output:** 8447 `\begin{warpHTML}`

`\LWR@floatbegin`  $\langle type \rangle$  [ $\langle placement \rangle$ ] Begins a `\newfloat` environment.

```
8448 \NewDocumentCommand{\LWR@floatbegin}{m o}{%
8449 \ifbool{FormatWP}{\newline}{}%
8450 \LWR@stoppars
```

There is a new float, so increment the unique float counter:

```
8451 \addtocounter{LWR@thisautoid}{1}%
8452 \booltrue{LWR@freezethisautoid}%
```

```
8453 \begingroup%
```

Settings while inside the environment:

```
8454 \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.

```
8455 \LWR@htmltag{%
8456 figure id="\LWR@print@mbbox{autoid-\arabic{LWR@thisautoid}}" % space
8457 class="#1 \@nameuse{LWR@floatstyle@#1}"%
8458 }%
8459 \ifbool{FormatWP}{%
8460 \LWR@orignewline%
8461 \LWR@BlockClassWP}{-}{wp#1}%
8462 }{ }%
```

Update the caption type:

```
8463 \renewcommand*{\@capttype}{#1}%
8464 \caption@settype{#1}%
```

Mark the float for a word processor conversion:

```
8465 \LWR@startpars%
8466 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
8467
8468 === begin #1 ===
8469
8470 }{ }%
```

Look for `\centering`, etc:

```
8471 \LWR@futurenonspacel\LWR@mynexttoken\LWR@floatalignment%
8472 }
```

For koma-script. The following does not work for tables.

```
8473 \AtBeginDocument{
8474 \@ifpackageloaded{tocbasic}{
8475 \appto\figure@atbegin{%
8476 \LWR@futurenonspacel\LWR@mynexttoken\LWR@floatalignment%
8477 }
8478 }{}
8479 }
```

`\@float` Support packages which create floats directly.  
`\@dblfloat`

```
8480 \let\@float\LWR@floatbegin
8481 \let\@dblfloat\LWR@floatbegin
```

`\LWR@floatend` Ends a `\newfloat` environment.

```
8482 \newcommand*{\LWR@floatend}{%
```

If saw a `\centering`, finish the center environment:

```
8483 \LWR@endfloatalignment%
```

Mark the float end for a word processor conversion:

```
8484 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{}%
8485
8486 === end ===
8487
8488 }{}%
8489 \LWR@stoppars%
```

Close an HTML figure tag:

```
8490 \ifbool{FormatWP}{\endLWR@BlockClassWP}{}%
8491 \LWR@htmlElementend{figure}%
8492 \endgroup%
8493 \boolfalse{LWR@freezethisautoid}%
8494 \LWR@startpars%
8495 \ifbool{FormatWP}{\newline}{}%
8496 }
```

`\end@float` Support packages which create floats directly.  
`\end@dblfloat`

```
8497 \let\end@float\LWR@floatend
8498 \let\end@dblfloat\LWR@floatend
```

## 73.2 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.

```
8499 \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.

```
8500 \newcounter{LWR@thisautoidWP}
```

**Bool** `LWR@freezethisautoid` Prevents multiple increments of `\LWR@thisautoid` inside a float.

```
8501 \newbool{LWR@freezethisautoid}
8502 \boolfalse{LWR@freezethisautoid}
```

`\LWR@newautoidanchor` Adds a new `<autoid>` anchor.

```
8503 \newcommand*{\LWR@newautoidanchor}{%
8504 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8505 }%
8506 {
8507 \ifbool{LWR@freezethisautoid}{}{%
8508 \addtocounter{LWR@thisautoid}{1}%
8509 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}"%
8510 \LWR@htmltag{/a}%
8511 }%
8512 }
8513 }
```

`\@capttype` Remembers which float type is in use.

```
8514 \newcommand*{\@capttype}{}%
```

`\LWR@floatalignmentname` Set to center, flushleft, or flushright if saw `\centering`, `\raggedright`, or `\raggedleft`.

```
8515 \newcommand*{\LWR@floatalignmentname}{}%
```

`\LWR@floatalignment` If sees a `\centering`, `\raggedleft`, or `\raggedright`, creates a center, flushright, or flushleft environment.

```

8516 \newcommand*\LWR@floatalignment}{%
8517 \ifdefstrequal{\LWR@mynexttoken}{\centering}{%
8518 \center%
8519 \renewcommand*\LWR@floatalignmentname}{center}%
8520 }{}%
8521 \ifdefstrequal{\LWR@mynexttoken}{\raggedright}{%
8522 \flushleft%
8523 \renewcommand*\LWR@floatalignmentname}{flushleft}%
8524 }{}%
8525 \ifdefstrequal{\LWR@mynexttoken}{\raggedleft}{%
8526 \flushright%
8527 \renewcommand*\LWR@floatalignmentname}{flushright}%
8528 }{}%
8529 }
```

`\LWR@endfloatalignment` Closes an environment from `\LWR@floatalignment`.

```

8530 \newcommand*\LWR@endfloatalignment}{%
8531 \ifdefvoid{\LWR@floatalignmentname}{}\@nameuse{end\LWR@floatalignmentname}}%
8532 \renewcommand*\LWR@floatalignmentname}{}%
8533 }
```

### 73.3 Caption inside a float environment

`\CaptionSeparator` How to separate the float number and the caption text.

```

8534 \AtBeginDocument{\providecommand*\CaptionSeparator}{:~}}
```

`\@makecaption` `{\langle name and num \rangle} {\langle text \rangle}`

Prints the float type and number, the caption separator, and the caption text.

```

8535 \AtBeginDocument{\renewcommand{\@makecaption}[2]{%
8536 \LWR@traceinfo{\@makecaption}%
8537 \LWR@isolate{#1}\CaptionSeparator\LWR@isolate{#2}%
8538 \LWR@traceinfo{\@makecaption: done}%
8539 }%
8540 }
```

### 73.4 Caption and LOF linking and tracking

When a new HTML file is marked in the L<sup>A</sup>T<sub>E</sub>X PDF file, the L<sup>A</sup>T<sub>E</sub>X page number at that point is stored in LWR@latestautopage, (and the associated filename is remembered by the special L<sup>A</sup>T<sub>E</sub>X labels). This page number is used to generate an autopage HTML <id> in the HTML output at the start of the new HTML file. Meanwhile, there is a float counter used to generate an HTML autoid <id> at the start of the float itself in the HTML file. The autopage and autoid values to use for each float are written to the .lof, etc. files just before each float's entry. These values are used by \l@figure, etc. to create the HTML links in the List of Figures, etc.

Ctrl LWR@nextautoid Tracks autoid for floats. Tracks autopage for floats.

Ctrl LWR@nextautopage These are updated per float as the .lof, .lot file is read.

```
8541 \newcounter{LWR@nextautoid}
8542 \newcounter{LWR@nextautopage}
```

\LWRsetnextfloat {<autopage>} {<autoid>}

This is written to the .lof, .lot file just before each float's usual entry. The autopage and autoid are remembered for \l@figure to use when creating the HTML links.

```
8543 \newcommand*\LWRsetnextfloat}[2]{%
8544 \setcounter{LWR@nextautopage}{#1}%
8545 \setcounter{LWR@nextautoid}{#2}%
8546 }
```

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.

```
8547 \newcounter{LWR@latestautopage}
8548 \setcounter{LWR@latestautopage}{1}
```

Env LWR@figcaption An HTML <figcaption> is not allowed in places where L<sup>A</sup>T<sub>E</sub>X does allow a figure caption, such as inside a longtable where the tabular has already started, or inside a center environment. Therefore, a <div> of class figurecaption is used instead.

```
8549 \newenvironment*LWR@figcaption}
8550 {
8551 \ifbool{FormatWP}{%
8552 \BlockClass[font-style:italic]{figurecaption}
8553 }{\LWR@print@vspace*{\baselineskip}
8554 }{
8555 \BlockClass{figurecaption}
8556 }%
```

```
8557 }
8558 {\endBlockClass}
```

`\LWR@HTML@caption@begin`  $\langle type \rangle$

Low-level patches to create HTML tags for captions.

```
8559 \newcommand*{\LWR@HTML@caption@begin}[1]
8560 {
8561 \LWR@traceinfo{\LWR@HTML@caption@begin}%
```

Keep par and minipage changes local:

```
8562 \begingroup%
```

The caption code was not allowing the closing par tag:

```
8563 \@setpar{\LWR@closeparagraph\@par}%
```

No need for a minipage or `\parbox` inside the caption:

```
8564 \RenewDocumentEnvironment{minipage}{0{t} o 0{t} m}{-}{-}%
8565 \RenewDocumentCommand{\parbox}{0{t} 0{ } 0{t} m +m}{##5}%
```

Enclose the original caption code inside an HTML tag:

```
8566 \LWR@figcaption%
8567 \LWR@traceinfo{\LWR@HTML@caption@begin: about to LWR@origcaption@begin}%
8568 \LWR@print@caption@begin{#1}%
8569 \LWR@traceinfo{\LWR@HTML@caption@begin: done}%
8570 }
```

`\LWR@HTML@caption@end` Low-level patches to create HTML tags for captions.

```
8571 \newcommand*{\LWR@HTML@caption@end}
8572 {%
8573 \LWR@traceinfo{\LWR@HTML@caption@end}%
8574 \LWR@print@caption@end%
```

Closing tag:

```
8575 \endLWR@figcaption%
8576 \endgroup%
8577 % \leavevmode% avoid bad space factor (0) error
8578 \LWR@traceinfo{\LWR@HTML@caption@end: done}%
8579 }
```

`\caption@begin` Low-level patches to create HTML tags for captions. These are assigned `\AtBeginDocument`  
`\caption@end` so that other packages which modify captions will have already been loaded before saving the print-mode version.

```
8580 \AtBeginDocument{
8581 \LWR@formatted{caption@begin}
8582 \LWR@formatted{caption@end}
8583 }
```

`\captionlistentry` Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```
8584 \let\LWR@origcaptionlistentry\captionlistentry
8585
8586 \renewcommand*{\captionlistentry}{%
8587 \LWR@ensuredoingapar%
8588 \LWR@origcaptionlistentry%
8589 }
8590
8591 \def\LWR@LTcaptionlistentry{%
8592 \LWR@ensuredoingapar%
8593 \LWR@htmltag{a id="\LWR@print@mbbox{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
8594 \bgroup
8595 \@ifstar{\egroup\LWR@LT@captionlistentry}% gobble *
8596 {\egroup\LWR@LT@captionlistentry}}%
8597 \def\LWR@LT@captionlistentry#1{%
8598 \caption@listentry\@firstoftwo[LTcatype]{#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

```
8599 \let\LWR@origaddcontentsline\addcontentsline
8600
8601 \renewcommand*{\addcontentsline}[3]{%
8602 \ifstrequal{#1}{toc}{-}{% not TOC

8603 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8604 {}%
8605 {\LWR@newautoidanchor}%

8606 \ifcsvoid{ext@#2}{\csdef{ext@#2}{#1}}{-%

8607 \addtocontents{\@nameuse{ext@#2}}{-%
```

```

8608 \protect\LWRsetnextfloat%
8609 {\arabic{LWR@latestautopage}}%
8610 {\arabic{LWR@thisautoid}}%
8611 }%
8612 }% not TOC
8613 \LWR@origaddcontentsline{#1}{#2}{#3}%
8614 }

```

Pkg `capt-of` Either package provides `\captionof`, which is later patched at the beginning of the document.

Pkg `caption` document.

`\captionof` Patched to handle paragraph tags.

```

8615 \AtBeginDocument{
8616 \let\LWR@origcaptionof\captionof
8617
8618 \renewcommand*{\captionof}{%
8619 \LWR@stoppars
8620 \LWR@origcaptionof%
8621 }
8622 }

8623 \end{warpHTML}

```

## 74 Table of Contents, LOF, LOT

This section controls the generation of the TOC, LOF, and LOT.

The `.toc`, `.lof`, and `.lot` files are named by the source code `\jobname`.

In HTML, the printed tables are placed inside a `<div>` of class `toc`, `lof`, or `lot`.

A “`sidetoc`” is provided which prints a subset of the TOC on the side of each page other than the homepage.

The regular L<sup>A</sup>T<sub>E</sub>X infrastructure is used for TOC, along with some patches to generate HTML output.

**for HTML output:** 8624 `\begin{warpHTML}`

### 74.1 Reading and printing the toc

`\LWR@myshorttoc` `{\{toc/lof/lot/sidetoc\}}`

Reads in and prints the TOC/LOF/LOT at the current position. While doing so, makes the @ character into a normal letter to allow formatting commands in the section names.

Unlike in regular L<sup>A</sup>T<sub>E</sub>X, the file is not reset after being read, since the sideroc may be referred to again in each HTML page.

```
8625 \newcommand*{\LWR@myshorttoc}[1]{%
8626 \LWR@traceinfo{\LWR@myshorttoc: #1}%
8627 \LWR@ensuredoingapar%
```

Only if the file exists:

```
8628 \IfFileExists{\jobname.#1}{%
8629 \LWR@traceinfo{\LWR@myshorttoc: loading}%
```



Many of the commands in the file will have @ characters in them, so @ must be made a regular letter.

```
8630 \begingroup%
8631 \makeatletter%
```

Read in the TOC file:

```
8632 \@input{\jobname.#1}%
8633 \endgroup%
8634 }%
8635 {}%
8636 \LWR@traceinfo{\LWR@myshorttoc: done}%
8637 }
```

```
\LWR@subtableofcontents {<toc/lof/lot>} {<sectionstarname>}
```

Places a TOC/LOF/LOT at the current position.

```
8638 \NewDocumentCommand{\LWR@subtableofcontents}{m m}{%
```

Closes previous levels:

```
8639 \@ifundefined{chapter}
8640 {\LWR@closeprevious{\LWR@depthsection}}
8641 {\LWR@closeprevious{\LWR@depthchapter}}
```

Prints any pending footnotes so that they appear above the potentially large TOC:

```
8642 \LWR@printpendingfootnotes
```

Place the list into its own chapter (if defined) or section:

```
8643 \@ifundefined{chapter}{\section*{#2}}{\chapter*{#2}}
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
8644 \LWR@htmlclass{nav}{#1}
```

Create the actual list:

```
8645 \LWR@myshorttoc{#1}
```

Close the nav:

```
8646 \LWR@htmlclassend{nav}{#1}
8647 }
```

```
\@starttoc {<ext>}
```

Patch \@starttoc to encapsulate the TOC inside HTML tags:

```
8648 \let\LWR@orig@starttoc\@starttoc
8649
8650 \renewcommand{\@starttoc}[1]{
8651 \LWR@htmlclass{nav}{#1}
8652 \LWR@orig@starttoc{#1}
8653 \LWR@htmlclassend{nav}{#1}
8654 }
```

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.)

```
8655 \newbool{LWR@copiedsidetoc}
8656 \boolfalse{LWR@copiedsidetoc}
```

\tableofcontents Patch \tableofcontents, etc. to print footnotes first. newfloat uses \listoffigures for all future float types.

```
8657 \AtBeginDocument{
8658 \let\LWR@origtableofcontents\tableofcontents
8659
8660 \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:

```
8661 \ifboolexpr{bool{FormatWP} and bool{WPMarkTOC}}{
8662
8663 === table of contents ===
8664
8665 }
8666 {
```

Copy the .toc file to .sidedoc for printing the sideroc. The original .toc file is renewed when \tableofcontents is finished.

```
8667 \ifbool{LWR@copiedsidedoc}{}{%
8668 \LWR@copyfile{\jobname.toc}{\jobname.sidedoc}%
8669 \booltrue{LWR@copiedsidedoc}%
8670 }%
8671 \LWR@printpendingfootnotes
8672 \LWR@origtableofcontents
8673 }
8674 }% \tableofcontents
8675 }% AtBeginDocument
```

#### \listoffigures

```
8676 \let\LWR@origlistoffigures\listoffigures
8677
8678 \renewcommand*{\listoffigures}{
8679 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
8680
8681 === list of figures ===
8682
8683 }
8684 {
8685 \LWR@printpendingfootnotes
8686 \LWR@origlistoffigures
8687 }
8688 }
```

#### \listoftables

```
8689 \let\LWR@origlistoftables\listoftables
8690
8691 \renewcommand*{\listoftables}{
8692 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
8693
8694 === list of tables ===
8695 }
```

```

8696 }
8697 {
8698 \LWR@printpendingfootnotes
8699 \LWR@origlistoftables
8700 }
8701 }

```

## 74.2 High-level TOC commands

`\listof`  $\langle type \rangle$   $\langle title \rangle$

Emulate the `\listof` command from the float package (section 213). Used to create lists of custom float types. Also used to redefine the standard L<sup>A</sup>T<sub>E</sub>X `\listoffigures` and `\listoftables` commands.

```

8702 \NewDocumentCommand{\listof}{m +m}{%
8703 \@ifundefined{l@#1}{%
8704 \csdef{l@#1}##1##2{\hypertocfloat{1}{#1}{\@nameuse{ext@#1}}{##1}{##2}}%
8705 }{ }%
8706 \LWR@subtableofcontents{\@nameuse{ext@#1}}{#2}
8707 \expandafter\newwrite\csname tf@\csname ext@#1\endcsname\endcsname
8708 \immediate\openout \csname tf@\csname ext@#1\endcsname\endcsname
8709 \jobname.\@nameuse{ext@#1}\relax
8710 }

```

## 74.3 Side TOC

The “side TOC” is a table-of-contents positioned to the side.

It may be renamed by redefining `\sidetocname`, and may contain paragraphs.

css may be used to format the sideTOC:

*CSS related to sideTOC:*

---

**div.sidetoccontainer:** The entire sideroc.

**div.sidetoctitle:** The title.

**div.sidetoccontents:** The table of contents.

---

```

8711 \end{warpHTML}

```

**for HTML & PRINT:** 8712 `\begin{warpall}`

Ctrl SideTOCDepth Controls how deep the side-TOC gets. Use a standard L<sup>A</sup>T<sub>E</sub>X section level similar to `tocdepth`.

```
8713 \newcounter{SideTOCDepth}
8714 \setcounter{SideTOCDepth}{1}
```

`\sitetocname` Holds the default name for the sideroc.

```
8715 \newcommand{\sitetocname}{Contents}

8716 \end{warpall}
```

**for HTML output:** 8717 `\begin{warpHTML}`

`\LWR@sitetoc` Creates the actual side-TOC.

```
8718 \newcommand*{\LWR@sitetoc}{
8719 \LWR@forcenewpage
8720 \LWR@stoppars
8721
```

The entire sideroc is placed into a `nav` of class `sitetoc`.

```
8722 \LWR@htmlclass{div}{sitetoccontainer}
8723 \LWR@htmlclass{nav}{sitetoc}
8724
8725 \setcounter{tocdepth}{\value{SideTOCDepth}}
8726
```

The title is placed into a `<div>` of class `sitetoctitle`, and may contain paragraphs.

```
8727 \begin{BlockClass}{sitetoctitle}
8728 \ifcvoid{thetitle}{\InlineClass{sitetocthetitle}{\thetitle}\par}
8729 \sitetocname
8730 \end{BlockClass}
```

The table of contents is placed into a `<div>` of class `sitetoccontents`.

```
8731 \begin{BlockClass}{sitetoccontents}
8732 \LinkHome
8733
8734 \LWR@myshorttoc{sitetoc}
8735 \end{BlockClass}
8736 \LWR@htmlclassend{nav}{sitetoc}
8737 \LWR@htmlclassend{div}{sitetoccontainer}
8738 }
```

## 74.4 Low-level toc line formatting

`\numberline`  $\langle number \rangle$

(Called from each line in the .aux, .lof files.)

Record this section number for further use:

```
8739 \newcommand*\LWR@numberline[1]{%
8740 \LWR@sectionnumber{#1}\quad%
8741 }
8742
8743 \LetLtxMacro\numberline\LWR@numberline
```

`\hypertoc`  $\langle 1: depth \rangle$   $\langle 2: type \rangle$   $\langle 3: name \rangle$   $\langle 4: page \rangle$

Called by `\l@section`, etc. to create a hyperlink to a section.

The autopage label is always created just after the section opens.

**#1** is depth

**#2** is section, subsection, etc.

**#3** the text of the caption

**#4** page number

```
8744 \NewDocumentCommand{\hypertoc}{m m +m m}{%
8745 \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
```

Respond to `tocdepth`:

```
8746 \ifthenelse{\cnttest{#1}{<=}{\value{tocdepth}}}{%
8747 \LWR@startpars%
```

Create an HTML link to `filename#autosec-(page)`, with the name, of the given HTML class.

```
8748 \LWR@subhyperrefclass{%
8749 \LWR@htmlrefsectionfilename{autopage-#4}\LWR@origpound\LWR@print@mbbox{autosec-#4}%
8750 }{#3}{toc#2}%
8751 \LWR@stoppars%
8752 }%
8753 {}%
8754 \LWR@traceinfo{hypertoc done}%
8755 }
```

Ctrl `lofdepth` TOC depth for figures.

```
8756 \@ifclassloaded{memoir}{}{
8757 \newcounter{lofdepth}
8758 \setcounter{lofdepth}{1}
8759 }
```

Ctrl `lotdepth` TOC depth for tables.

```
8760 \@ifclassloaded{memoir}{}{
8761 \newcounter{lotdepth}
8762 \setcounter{lotdepth}{1}
8763 }
```

`\hypertocfloat`  $\{ \langle 1: depth \rangle \} \{ \langle 2: type \rangle \} \{ \langle 3: ext of parent \rangle \} \{ \langle 4: caption \rangle \} \{ \langle 5: page \rangle \}$

**#1** is depth

**#2** is figure, table, etc.

**#3** is lof, lot, of the parent.

**#4** the text of the caption

**#5** page number

```
8764 \newcommand{\hypertocfloat}[5]{%
8765 \LWR@startpars
```

If some float-creation package has not yet defined the float type's `lofdepth` counter, etc, define it here:

```
8766 \@ifundefined{c@#3depth}{%
8767 \newcounter{#3depth}%
8768 \setcounter{#3depth}{1}%
8769 }{ }%
```

Respond to `lofdepth`, etc.:

```
8770 \LWR@traceinfo{hypertocfloat depth is #1 #3depth is \arabic{#3depth}}%
8771 \ifthenelse{\cnttest{#1}{<=} {\arabic{#3depth}}}{%
8772 \LWR@startpars%
```

Create an HTML link to `filename#autoid-(float number)`, with text of the caption, of the given HTML class.

```

8773 \LWR@subhyperrefclass{%
8774 \LWR@htmlrefsectionfilename{autopage-\arabic{LWR@nextautopage}}%
8775 \LWR@origpound\LWR@print@mbox{autoid-\arabic{LWR@nextautoid}}}%
8776 {#4}{toc#2}%
8777 \LWR@stoppars%
8778 }{}%
8779 }

```

Automatically called by `\contentsline`:

`\l@part` `{<name>}` `{<page>}`

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\part`.

```
8780 \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`.

```

8781 \@ifundefined{chapter}
8782 {}
8783 {
8784 \DeclareDocumentCommand{\l@chapter}{m m}
8785 {\hypertoc{0}{chapter}{#1}{#2}}
8786 }

```

`\l@section` `{<name>}` `{<page>}`

```
8787 \renewcommand{\l@section}[2]{\hypertoc{1}{section}{#1}{#2}}
```

`\l@subsection` `{<name>}` `{<page>}`

```
8788 \renewcommand{\l@subsection}[2]{\hypertoc{2}{subsection}{#1}{#2}}
```

`\l@subsubsection` `{<name>}` `{<page>}`

```
8789 \renewcommand{\l@subsubsection}[2]{\hypertoc{3}{subsubsection}{#1}{#2}}
```

`\l@paragraph` `{<name>}` `{<page>}`

```
8790 \renewcommand{\l@paragraph}[2]{\hypertoc{4}{paragraph}{#1}{#2}}
```

`\l@subparagraph` `{<name>}` `{<page>}`

```
8791 \renewcommand{\l@subparagraph}[2]{\hypertoc{5}{subparagraph}{#1}{#2}}
```

`\l@figure` `{<name>}` `{<page>}`

```
8792 \renewcommand{\l@figure}[2]{\hypertocfloat{1}{figure}{lof}{#1}{#2}}
```

`\l@table` `{<name>}` `{<page>}`

```
8793 \renewcommand{\l@table}[2]{\hypertocfloat{1}{table}{lot}{#1}{#2}}
```

```
8794 \end{warpHTML}
```

## 75 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:** `8795 \begin{warpHTML}`

```
8796 \newcounter{LWR@autoindex}
```

```
8797 \setcounter{LWR@autoindex}{0}
```

```
8798
```

```
8799 \newcounter{LWR@autoglossary}
```

```
8800 \setcounter{LWR@autoglossary}{0}
```

Env `theindex`

```
8801 \@ifundefined{chapter}
```

```
8802 {\newcommand*\LWR@indexsection[1]{\section*{#1}}}
```

```
8803 {\newcommand*\LWR@indexsection[1]{\chapter*{#1}}}
```

```
8804
```

```
8805 \AtBeginDocument{
```

```
8806 \renewenvironment*{theindex}{%
```

```
8807 \LWR@indexsection{\indexname}%
```

```
8808 \let\item\LWR@indexitem%
```

```

8809 \let\subitem\LWR@indexsubitem%
8810 \let\subsubitem\LWR@indexsubsubitem%
8811 }{}
8812 }% AtBeginDocument

```

`\LWR@indexitem` [*(index key)*] The optional argument is added to support repeatindex.

```

8813 \newcommand{\LWR@indexitem}[1][\@empty]{
8814
8815 \InlineClass{indexitem}{#1%
8816 }

```

`\LWR@indexsubitem`

```

8817 \newcommand{\LWR@indexsubitem}{
8818
8819 \InlineClass{indexsubitem}{
8820 }

```

`\LWR@indexsubsubitem`

```

8821 \newcommand{\LWR@indexsubsubitem}{
8822
8823 \InlineClass{indexsubsubitem}{
8824 }

```

`\@wrindex` *{(term)}* Redefined to write the LWR@autoindex counter instead of page.

```

8825 \def\LWR@wrindex#1{%
8826 \addtocounter{LWR@autoindex}{1}%
8827 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
8828 \protected@write\@indexfile{%
8829 {\string\indexentry{#1}{\arabic{LWR@autoindex}}}%
8830 \endgroup
8831 \@esphack}
8832
8833 \AtBeginDocument{
8834 \let\@wrindex\LWR@wrindex
8835 }

```

`\@wrglossary` *{(term)}* Redefined to write the LWR@latestautopage counter instead of page.

```

8836 \def\@wrglossary#1{%
8837 \addtocounter{LWR@autoglossary}{1}%
8838 \LWR@new@label{LWRglossary-\theLWR@autoglossary}%
8839 \protected@write\@glossaryfile{%

```

```
8840 {\string\glossaryentry{#1}{\theLWR@autoglossary}}%
8841 \endgroup
8842 \@esphack}
```

`\LWR@indexnameref`  $\{\langle LWR@autoindex \rangle\}$

Creates a hyperlink based on the given entry's autoindex.

```
8843 \newcommand*\LWR@indexnameref[1]{\nameref{LWRindex-#1}}
```

`\LWR@doindexentry`  $\{\langle LWR@autoindex, or macros. \rangle\}$

Creates a hyperlink, or handles `\see`, `\textbf`, etc.

```
8844 \newrobustcmd{\LWR@doindexentry}[1]{%
8845 \IfInteger{#1}%
8846 {\LWR@indexnameref{#1}}%
8847 {#1}%
8848 }
```

`\LWR@hyperindexrefnullified` Handles macros commonly seen inside an `\index` entry.

To handle additional macros:

```
\appto\LWR@hyperindexrefnullified{...}
```

```
8849 \newcommand{\LWR@hyperindexrefnullified}{%
8850 \renewrobustcmd{\emph}[1]{\LWR@HTML@emph{\LWR@doindexentry{##1}}}%
8851 \renewrobustcmd{\textbf}[1]{\LWR@HTML@textbf{\LWR@doindexentry{##1}}}%
8852 \renewrobustcmd{\textrm}[1]{\LWR@HTML@textrm{\LWR@doindexentry{##1}}}%
8853 \renewrobustcmd{\textsf}[1]{\LWR@HTML@textsf{\LWR@doindexentry{##1}}}%
8854 \renewrobustcmd{\texttt}[1]{\LWR@HTML@texttt{\LWR@doindexentry{##1}}}%
8855 \renewrobustcmd{\textup}[1]{\LWR@HTML@textup{\LWR@doindexentry{##1}}}%
8856 \renewrobustcmd{\textsc}[1]{\LWR@HTML@textsc{\LWR@doindexentry{##1}}}%
8857 \renewrobustcmd{\textsi}[1]{\LWR@HTML@textsi{\LWR@doindexentry{##1}}}%
8858 \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
8859 \renewrobustcmd{\textsl}[1]{\LWR@HTML@textsl{\LWR@doindexentry{##1}}}%
8860 }
```

`\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`.

```
8861 \newcommand{\hyperindexref}[1]{%
8862 \IfInteger{#1}%
```

```

8863 {\LWR@indexnameref{#1}}%
8864 {%
8865 \begingroup%
8866 \LWR@hyperindexrefnullified
8867 #1%
8868 \endgroup%
8869 }%
8870 }

```

```
8871 \end{warpHTML}
```

**for PRINT output:** A null command for print mode, in case hyperref was not used:

```

8872 \begin{warpprint}
8873 \newcommand{\hyperindexref}[1]{#1}
8874 \end{warpprint}

```

**for HTML & PRINT:** For the glossaries package, try to prevent an error where \glo@name was not found:

```

8875 \begin{warpall}
8876 \providecommand{\glo@name}{}
8877 \end{warpall}

```

## 76 Bibliography presentation

**for HTML output:** 8878 \begin{warpHTML}

\bibliography {(\filenames)}

Modified to use the base jobname instead of the \_html jobname.

```

8879 \def\bibliography#1{%
8880 \if@filesw
8881 \immediate\write\@auxout{\string\bibdata{#1}}%
8882 \fi
8883 % \@input@{\jobname.bbl}% original
8884 \begingroup%
8885 \@input@{\BaseJobname.bbl}% lwarp
8886 \endgroup%
8887 }

```

\@biblabel {(\text-refnumber)}

```
8888 \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>

```

8889 \AtBeginDocument{
8890 \AtBeginEnvironment{thebibliography}{
8891 \providecommand*\LWR@newem}[1]{\textit{#1}}
8892
8893 \renewrobustcmd{\em}{%
8894 \begingroup
8895 \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
8896 \afterassignment\LWR@em@after
8897 \toks@\bgroup
8898 }
8899
8900 \def\LWR@em@finish#1{%
8901 \xdef\LWR@em@after{\noexpand#1\the\toks@}}%
8902 \endgroup
8903 \LWR@em@after\egroup
8904 }
8905 }% \AtBeginEnvironment{thebibliography}
8906 }% \AtBeginDocument

8907 \end{warpHTML}

```

## 77 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:** `8908 \begin{warpHTML}`

```

8909 \newcommand*\LWR@restoreorigformatting}{%
8910 \LWR@traceinfo{\LWR@restoreorigformatting}%

```

Numerous macros change their print/HTML meaning depending on \LWR@formatting:

```

8911 \renewcommand*{\LWR@formatting}{print}%
8912 \linespread{1}%

8913 \let\par\LWR@origpar%

8914 \LWR@select@print@hspace%

8915 \LetLtxMacro\hfil\LWR@origfil%
8916 \let\hss\LWR@orighss%
8917 \let\llap\LWR@origllap%
8918 \let\rlap\LWR@origrlap%
8919 \let\hfilneg\LWR@origfilneg%

8920 \let\,\LWR@origcomma% disable HTML short unbreakable space
8921 \let\thinspace\LWR@origthinspace% disable HTML short unbreakable space
8922 \let\negthinspace\LWR@orignegthinspace% disable HTML negative short unbreakable space
8923 \let\textellipsis\LWR@origtextellipsis%
8924 \let\textless\LWR@origtextless%
8925 \let\textgreater\LWR@origtextgreater%
8926 \LetLtxMacro\rmfamily\LWR@origrmfamily%
8927 \LetLtxMacro\sffamily\LWR@origsffamily%
8928 \LetLtxMacro\ttfamily\LWR@origttfamily%
8929 \LetLtxMacro\bfseries\LWR@origbfseries%
8930 \LetLtxMacro\mdseries\LWR@origmdseries%
8931 \LetLtxMacro\upshape\LWR@origupshape%
8932 \LetLtxMacro\slshape\LWR@origslshape%
8933 \LetLtxMacro\scshape\LWR@origscshape%

8934 \LetLtxMacro\sisshape\LWR@origsisshape%

8935 \LetLtxMacro\itshape\LWR@origitshape%
8936 \LetLtxMacro\em\LWR@origem%
8937 \LetLtxMacro\normalfont\LWR@orignormalfont%
8938 \let\sp\LWR@origsp%
8939 \let\sb\LWR@origsb%
8940 \LetLtxMacro\textsuperscript\LWR@origtextsuperscript%
8941 \LetLtxMacro\@textsuperscript\LWR@orig@textsuperscript%
8942 \LetLtxMacro\textsubscript\LWR@origtextsubscript%
8943 \LetLtxMacro\@textsubscript\LWR@orig@textsubscript%
8944 \LetLtxMacro\underline\LWR@origunderline%
8945 \let-\LWR@origtilde%
8946 \let\enskip\LWR@origenskip%
8947 \let\quad\LWR@origquad%
8948 \let\qquad\LWR@origqquad%

```

`\endtabular` must be restored to its original, instead of relying on lwarp's `\LWR@formatted` mechanism:

```

8949 \LetLtxMacro\endtabular\LWR@origendtabular%
8950 \csletcs{endtabular*}{LWR@origendtabular*}%

8951 \LetLtxMacro\noalign\LWR@orignoalign%
8952 \LetLtxMacro\hline\LWR@orighline%

8953 \let\newline\LWR@orignewline%
8954 \LetLtxMacro\includegraphics\LWR@origincludegraphics%
8955 \let\TeX\LWR@origTeX%
8956 \let\LaTeX\LWR@origLaTeX%
8957 \let\LaTeXe\LWR@origLaTeXe%
8958 \renewcommand*{\Xe}{X\textsubscript{E}}%

8959 \LetLtxMacro\@ensuredmath\LWR@origensuredmath%
8960 %
8961 \LWR@restoreorigaccents%
8962 \LWR@restoreoriglists%
8963 %
8964 \LWR@FBcancel%
8965 }

8966 \end{warpHTML}

```

## 78 Math

### 78.1 Limitations

#### 78.1.1 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 L<sup>A</sup>T<sub>E</sub>X-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 11 regarding EPUB output with MATHJAX.

### 78.1.2 svg option

**SVG math option** For SVG math, math is rendered as usual by L<sup>A</sup>T<sub>E</sub>X into the initial PDF file using the current font<sup>18</sup>, 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<sup>A</sup>T<sub>E</sub>X 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<sup>A</sup>T<sub>E</sub>X code which generated the math, allowing copy/paste of the L<sup>A</sup>T<sub>E</sub>X 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<sup>A</sup>T<sub>E</sub>X code for the math expression. For  $\mathcal{A}\mathcal{M}\mathcal{S}$  environments with multiple numbers in the same environment, only the first and last is copy/pasted, as a range. No tags are listed inside a starred  $\mathcal{A}\mathcal{M}\mathcal{S}$  environment, although the `\tag` macro will still appear inside the L<sup>A</sup>T<sub>E</sub>X math expression.

 **SVG math in T<sub>E</sub>X boxes** SVG math does not work inside T<sub>E</sub>X boxes, since a `\newpage` is required before and after each image.

<sup>18</sup>See section 456 regarding fonts and fractions.

### 78.1.3 MATHJAX option

**MATHJAX math option** The popular MATHJAX alternative ([mathjax.org](http://mathjax.org)) may be used to display math.

Prog MathJax

When MATHJAX is enabled, math is rendered twice:

1. As regular L<sup>A</sup>T<sub>E</sub>X PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of L<sup>A</sup>T<sub>E</sub>X, and
2. As detokenized printed L<sup>A</sup>T<sub>E</sub>X 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<sup>A</sup>T<sub>E</sub>X values, and the MATHJAX cross-referencing system is ignored in favor of the L<sup>A</sup>T<sub>E</sub>X internal system, seamlessly integrating with the rest of the L<sup>A</sup>T<sub>E</sub>X code.

### 78.1.4 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}}}
```

### 78.1.5 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<sup>A</sup>T<sub>E</sub>X 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](#)

⚠ [siunitx inside an equation](#)

- 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.

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

Also see section [9.6.10](#).

[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.

### 78.1.6 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.

### 78.1.7 Complicated inline math objects

`\inlinemathnormal`  
`\inlinemathother`

[changing contents complicated alt tag](#)

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](#).

### 78.1.8 Complicated display math objects

`\displaymathnormal` By default, or when selecting `\displaymathnormal`, MATHJAX math display environments print their contents as text into HTML, and SVG display math environments render their contents as SVG images and use their contents as the alt tag of HTML output. To do so, the contents are loaded into a macro for reuse. In some cases, such as complicated Tikz pictures, compilation will fail.

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

MathJax unsupported  
complicated alt tag

## 78.2 HTML alt tag names

Redefinable names for the HTML alt tags, for translation according to the reader’s native language.

**for HTML & PRINT:** 8967 `\begin{warpall}`

`\mathimagenam` The HTML alt tag for an SVG math image.  
Default: “math image”

8968 `\newcommand*{\mathimagenam}{math image}`

`\packagediagramname` Appended to the lateximage HTML alt tag for the images generated by many packages.  
Default: “diagram”

8969 `\newcommand*{\packagediagramname}{diagram}`

8970 `\end{warpall}`

## 78.3 Inline and display math

**for HTML output:** 8971 `\begin{warpHTML}`

Ctrl LWR@externalfilecnt Counter for the external files which are generated and then referenced from the HTML:

8972 `\newcounter{LWR@externalfilecnt}`

`LWR@indisplaymathimage` Bool True if processing display math for SVG output. Inside a `lateximage`, display math is only set to print-mode output if `LWR@indisplaymathimage` is false. Used to avoid nullifying display math before it has been completed.

```
8973 \newbool{LWR@indisplaymathimage}
```

`\$` 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.

```
8974 \let\LWR@origtextdollar\$
8975
8976 \renewcommand*{\$}{\%
8977 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8978 {\LWR@origtextdollar}%
8979 {\HTMLentity{dollar}}%
8980 }
```

`lwarp_baseline_marker.png` File A marker to be used to help *pdfcrop* identify the inline math baseline and width. If either `graphicx` or `graphics` is loaded, this marker is placed at the lower left and lower right corners of the inline math. *pdfcrop* is then able to identify the width of the image, and also the height of an image such as a horizontal dash which does not otherwise touch the baseline.

`lwarp_baseline_marker.eps` File

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.

```
8981 \AtBeginDocument{
8982
8983 \ifpdf
8984 \newcommand*{\LWR@baselinename}{lwarp_baseline_marker.png}
8985 \else
8986 \ifXeTeX
8987 \newcommand*{\LWR@baselinename}{lwarp_baseline_marker.png}
8988 \else
8989 \newcommand*{\LWR@baselinename}{lwarp_baseline_marker.eps}
```

```

8990 \fi
8991 \fi
8992
8993 \IfFileExists{\LWR@baselinename}%
8994 {
8995 \@ifpackageloaded{graphicx}{
8996 \newcommand*\LWR@addbaselinemarker}{%
8997 \LWR@originincludegraphics{\LWR@baselinename}%
8998 }
8999 }{
9000 \@ifpackageloaded{graphics}{
9001 \newcommand*\LWR@addbaselinemarker}{%
9002 \LWR@originincludegraphics{\LWR@baselinename}%
9003 }
9004 }{
9005 \PackageWarning{lwarp}{Load graphicx or graphics
9006 for improved SVG math baselines,}
9007 \newcommand*\LWR@addbaselinemarker}{
9008 }
9009 }
9010 }{% lwarp_baseline_marker.png or .eps is not present
9011 \PackageWarning{lwarp}{File \LWR@baselinename\space is not installed alongside
9012 the lwarp-*.sty files, so SVG math baselines may not be accurate,}
9013 \newcommand*\LWR@addbaselinemarker}{
9014 }
9015
9016 }% 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 T<sub>E</sub>X 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.

```

9017 \newlength{\LWR@singledollarwidth}

```

```

9018 \newlength{\LWR@singledollarheight}
9019 \newlength{\LWR@singledollardepth}
9020
9021 \newsavebox{\LWR@singledollarbox}
9022
9023 \NewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
9024 \LWR@traceinfo{\LWR@subsingledollar}%

9025 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
9026 {%
9027 \LWR@traceinfo{\LWR@subsingledollar: already in a lateximage}%
9028 #4% contents
9029 }%
9030 {% not in a lateximage
9031 \begingroup%

```

MathJax cannot parse the often complicated T<sub>E</sub>X expressions which appear in the various uses of `\ensuredmath`. `\ensuremath` forces the alt tag to “(math image)”, as translated according to `\mathimagenam`. 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:

```

9032 \ifboolexpr{%
9033 (
9034 bool{mathjax} or
9035 (bool{FormatWP} and bool{WPMarkMath})
9036) and
9037 (not test { \ifstrequal {#2} {(\mathimagenam)} }) and % from \ensuredmath
9038 (not bool{\LWR@dynamicmath})
9039 }%

```

For MATHJAX, print the math between `\(` and `\)`:

```

9040 {%
9041 \LWR@traceinfo{\LWR@subsingledollar: Mathjax}%
9042 {\textbackslash(\LWR@HTMLSanitize{#4}\textbackslash)}%
9043 }% mathjax

```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the L<sup>A</sup>T<sub>E</sub>X code, and a CSS style to control the baseline adjustment.

```

9044 {% not mathjax
9045 \LWR@traceinfo{\LWR@subsingledollar: NOT mathjax, or is ensuremath, or is dynamic}%

```

Measure the depth, width, and height of the math image:

```
9046 \begingroup%
```

Temporarily disable formatting while measuring the image parameters:

```
9047 \LWR@restoreorigformatting%
9048 \RenewDocumentEnvironment{lateximage}{s o o o}{-}{-}% inside group
9049 \LWR@print@normalsize%
```

Temporarily set font for the HTML PDF output:

```
9050 \LWR@traceinfo{Using font family \LWR@f@family}%
9051 \@nameuse{LWR@orig\LWR@f@family family}%
9052 \LWR@traceinfo{Using font series \LWR@f@series}%
9053 \@nameuse{LWR@orig\LWR@f@series series}%
9054 \LWR@traceinfo{Using font shape \LWR@f@shape}%
9055 \@nameuse{LWR@orig\LWR@f@shape shape}%
```

`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.

```
9056 \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”.

```
9057 \ifmmode%
9058 \global\abox{\LWR@singledollarbox}{#4}%
9059 \else%
9060 \ifbool{LWR@dynamicmath}{%
9061 \ifbool{mathjax}{%
9062 \global\abox{\LWR@singledollarbox}{\LWR@origensuredmath{#4}}%
9063 }{%
```

```

9064 \global\sbox{\LWR@singledollarbox}{#4}%
9065 }%
9066 }{%
9067 \global\sbox{\LWR@singledollarbox}{#4}%
9068 }%
9069 \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.

```

9070 \global\sbox{\LWR@singledollarbox}{%
9071 \usebox{\LWR@singledollarbox}%
9072 \raisebox{-\dp\LWR@singledollarbox}{%
9073 \LWR@addbaselinemarker%
9074 }%
9075 }%

```

More low-level code to undo the counter change.

```

9076 \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.

```

Measure the depth:

```

9077 \setlength{\LWR@singledollardepth}{%
9078 \LateximageFontScale\dp\LWR@singledollarbox%
9079 }%

```

Make the length a global change:

```

9080 \global\LWR@singledollardepth=\LWR@singledollardepth%

```

Likewise for width:

```

9081 \setlength{\LWR@singledollarwidth}{%
9082 \LateximageFontScale\wd\LWR@singledollarbox%
9083 }%
9084 \global\LWR@singledollarwidth=\LWR@singledollarwidth%

```

Likewise for total height:

```

9085 \setlength{\LWR@singledollarheight}{%
9086 \LateximageFontScale\ht\LWR@singledollarbox%
9087 }%
9088 \addtolength{\LWR@singledollarheight}{%
9089 \LateximageFontScale\dp\LWR@singledollarbox%

```

```

9090 }%
9091 \global\LWR@singledollarheight=\LWR@singledollarheight%

9092 \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:

```

9093 \ifdimgreater{\LWR@singledollarwidth}{.7\LWR@singledollarheight}{%
9094 \def\LWR@singledollarstyle{%
9095 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
9096 }%
9097 }{%
9098 \def\LWR@singledollarstyle{%
9099 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
9100 }%
9101 }%

```

If a very narrow width, use the height.

```

9102 \ifdimless{\LWR@singledollarwidth}{.2em}%
9103 {%
9104 \def\LWR@singledollarstyle{%
9105 height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
9106 }%
9107 }%
9108 {}%

```

If very wide and short, use the width:

```

9109 \ifdimless{\LWR@singledollarheight}{.2em}%
9110 {%
9111 \def\LWR@singledollarstyle{%
9112 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
9113 }%
9114 }%
9115 {}%

```

If there is significant text depth, add the depth to the style.

```

9116 \ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
9117 \def\LWR@singledollardepthstyle{%
9118 \ ; % extra space
9119 \LWR@print@mbbox{%
9120 vertical-align:-\LWR@convertto{em}{\the\LWR@singledollardepth} em%
9121 } % extra space

```

```

9122 }%
9123 }{%
9124 \def\LWR@singledollardepthstyle{%
9125 }%

```

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.

```

9126 \ifbool{LWR@dynamicmath}{%
9127 \LWR@traceinfo{subsingledollar: dynamic}%
9128 \begin{lateximage}% no hashing
9129 [(\mathimagename)]% alt tag
9130 []% no add'l hashing
9131 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9132 }{%
9133 \LWR@traceinfo{subsingledollar: static}%
9134 \IfValueTF{#1}{%
9135 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
9136 \begin{lateximage}*% use hashing
9137 [#2]% alt
9138 [% add'l hashing
9139 #3%
9140 FM\LWR@f@family%
9141 SR\LWR@f@series%
9142 SH\LWR@f@shape%
9143 CL\LWR@tempcolor%
9144]%
9145 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9146 }{%
9147 \begin{lateximage}% no hashing
9148 [#2]% alt
9149 []% no add'l hashing
9150 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
9151 }%
9152 }%

```

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.)

```

9153 \LWR@addbaselinemarker%

```

Typeset the contents:

```
9154 \usebox{\LWR@singledollarbox}%
```

The closing baseline marker:

```
9155 \LWR@addbaselinemarker%
```

```
9156 \end{lateximage}%
```

```
9157 %
```

```
9158 }% not mathjax
```

```
9159 \endgroup%
```

```
9160 }% not in a lateximage
```

```
9161 \LWR@traceinfo{LWR@subsingledollar: done}%
```

```
9162 }
```

```
9163 \LetLtxMacro\LWR@origdollar$
```

```
9164 \LetLtxMacro\LWR@secondorigdollar$% balance for editor syntax highlighting
```

```
9165 \LetLtxMacro\LWR@origopenparen\
9166 \LetLtxMacro\LWR@origcloseparen\
9167 \LetLtxMacro\LWR@origopenbracket\
9168 \LetLtxMacro\LWR@origclosebracket\
9169 \
```

```
9166 \LetLtxMacro\LWR@origcloseparen\
9167 \LetLtxMacro\LWR@origopenbracket\
9168 \LetLtxMacro\LWR@origclosebracket\
9169 \
```

```
9167 \LetLtxMacro\LWR@origopenbracket\
9168 \LetLtxMacro\LWR@origclosebracket\
9169 \
```

**\$** Redefine the dollar sign to place math inside a lateximage, or use MATHJAX:  
**\$\$**

```
9169 \begingroup
```

```
9170 \catcode'\$=\active%
```

```
9171 \protected\gdef$\{\@ifnextchar$\LWR@doubledollar\LWR@singledollar}%
```

Used by chemformula to escape single-dollar math:

```
9172 \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:

```
9173 \protected\gdef\LWR@doubledollar##1$${%
```

If MATHJAX or formatting for a word processor, print the L<sup>A</sup>T<sub>E</sub>X expression:

```
9174 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
```

For MATHJAX, print the math between \[ and \]:

```
9175 {
```

```
9176
```

```
9177 \textbackslash[
9178 \LWR@HTMLsanitize{#1}%
9179 \textbackslash]
```

```
9178 \LWR@HTMLsanitize{#1}%
```

```
9179 \textbackslash]
```

```
9180
9181 }% mathjax
```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the L<sup>A</sup>T<sub>E</sub>X code:

```
9182 {% not mathjax
9183 \begin{BlockClass}{displaymath}%
9184 \LWR@newautoidanchor%
9185 \booltrue{LWR@indisplaymathimage}%
9186 \begin{lateximage}%
9187 [%
9188 \textbackslash{[] % extra space
9189 \LWR@HTMLsanitize{#1} % extra space
9190 \textbackslash{]}%
9191]%
9192 \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
9193 \end{lateximage}%
9194 \end{BlockClass}%
9195 }% not mathjax
9196 }%
```

`\LWR@singledollar` `{<alt text>} {<math expression>}`

```
9197 \protected\gdef\LWR@singledollar#1${%
9198 \ifbool{mathjax}{%
9199 \LWR@subsingledollar*%
9200 {% alt tag
9201 \textbackslash(%
9202 \LWR@HTMLsanitize{#1} % extra space
9203 \textbackslash)%
9204 }%
9205 {singledollar}% add'l hashing
9206 {#1}% contents
9207 }% not mathjax
9208 \LWR@subsingledollar*%
9209 {% alt tag
9210 \textbackslash(%
9211 \LWR@HTMLsanitize{#1} % extra space
9212 \textbackslash)%
9213 }%
9214 {singledollar}% add'l hashing
9215 {\LWR@origensuredmath{#1}}% contents
9216 }% not mathjax
9217 }
```

`\C` Redefine to the above dollar macros.

`\[`

```
9218 \AtBeginDocument{
```

```

9219 \protected\gdef\(#1\){$#1$}
9220 \protected\gdef\[#1\]{$$#1$$}
9221 }
9222
9223 \endgroup

9224 \AtBeginDocument{
9225 \LetLtxMacro\LWR@openbracketnormal\[
9226 \LetLtxMacro\LWR@closebracketnormal\]
9227 }

```

`\@ensuredmath`  $\{(\textit{expression})\}$

If MathJax, a `lateximage` is used, since `\ensuremath` is often used for complex TEX expressions which MathJax may not render. If SVG math, a hashed file is used with a simple `alt` tag, but additional hashing provided by the contents.

```

9228 \LetLtxMacro\LWR@origensuredmath\@ensuredmath
9229
9230 \renewcommand{\@ensuredmath}[1]{%
9231 \ifbool{mathjax}{%
9232 \LWR@subsingledollar*{\mathimagername)}{%
9233 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
9234 }{\relax%
9235 \LWR@origensuredmath{#1}}%
9236 }%
9237 }{% SVG math

```

If already inside a `lateximage` in math mode, continue as-is.

```

9238 \ifmmode%
9239 \LWR@origensuredmath{#1}%
9240 \else%

```

Create an inline math `lateximage` with a simple `alt` tag and additional hashing according to the contents.

```

9241 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{%
9242 {\LWR@origensuredmath{#1}}%
9243 {%
9244 \LWR@subsingledollar*{\mathimagername)}{%
9245 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
9246 }{%
9247 \LWR@origensuredmath{#1}}%
9248 }%
9249 }%
9250 \fi%

```

```
9251 }%
9252 }
```

Remove the old math and displaymath environments:

```
9253 \let\math\relax
9254 \let\endmath\relax
9255 \let\displaymath\relax
9256 \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`.

```
9257 \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`.

```
9258 \NewEnviron{LWR@displaymathnormal}{\expandafter\[\BODY\]\@ignoretrue}
```

Set the default displaymath to the normal version:

```
9259 \LetLtxMacro\[\LWR@openbracketnormal%
9260 \LetLtxMacro\]\LWR@closebracketnormal%
9261 \LetLtxMacro\displaymath\LWR@displaymathnormal%
9262 \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.

```
9263 \newenvironment{LWR@displaymathother}
9264 {%
9265 \begin{BlockClass}{displaymath}%
9266 \LWR@newautoanchor%
9267 \booltrue{LWR@indisplaymathimage}%
9268 \begin{lateximage}%
9269 [(display math)]%
9270 \LWR@origdollar\LWR@origdollar%
9271 }
9272 {%
9273 \LWR@origdollar\LWR@origdollar%
9274 \end{lateximage}%
9275 \end{BlockClass}%
9276 }
```

Env LWR@equationother A version of `displaymath` which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```

9277 \newenvironment{LWR@equationother}
9278 {%
9279 \begin{BlockClass}{displaymathnumbered}%
9280 \LWR@newautoidanchor%
9281 \booltrue{LWR@indisplaymathimage}%
9282 \begin{lateximage}%
9283 [(display math)]%
9284 \LWR@origequation%
9285 }
9286 {%
9287 \LWR@origendequation%
9288 \end{lateximage}%
9289 \end{BlockClass}%
9290 }
```

## 78.4 MATHJAX support

Ctrl LWR@nextequation Used to add one to compute the next equation number.

```
9291 \newcounter{LWR@nextequation}
```

`\LWR@syncmathjax` Sets the MATHJAX equation format and number for the following equations.

These MATHJAX commands are printed inside “\(" and “\)” characters. They are printed to HTML output, not interpreted by L<sup>A</sup>T<sub>E</sub>X.

```
9292 \newcommand*{\LWR@syncmathjax}{%
```

If using chapters, place the chapter number in front of the equation. Otherwise, use the simple equation number.

```

9293 \ifcsdef{thechapter}{
9294 \InlineClass{hidden}{
9295 \textbackslash(
9296 \textbackslash{}seteqsection \{\thechapter\}
9297 \textbackslash)
9298 }
9299 }
9300 {}% not using chapters
```

MATHJAX doesn't allow setting the equation number to 1:

```
9301 \ifthenelse{\cnttest{\value{equation}}>0}
9302 {
```

Tell MATHJAX that the next set of equations begins with the current L<sup>A</sup>T<sub>E</sub>X equation number, plus one.

```
9303 \setcounter{LWR@nextequation}{\value{equation}}
9304 \addtocounter{LWR@nextequation}{1}
```

Place the MATHJAX command inside “\(<” and “\)>” characters, to be printed to HTML, not interpreted by L<sup>A</sup>T<sub>E</sub>X.

```
9305 \InlineClass{hidden}{
9306 \textbackslash(
9307 \textbackslash{seteqnumber \{\arabic{LWR@nextequation}\}
9308 \textbackslash)}
9309 }
9310 }{}% not eq > 0
9311 }
```

`\LWR@hidelatexequation`  $\{ \langle environment \rangle \} \{ \langle contents \rangle \}$

Creates the L<sup>A</sup>T<sub>E</sub>X version of the equation inside an HTML comment.

```
9312 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
```

Stop HTML paragraph handling and open an HTML comment:

```
9313 \LWR@stoppars
9314 \LWR@htmlopencomment
9315
```

Start the L<sup>A</sup>T<sub>E</sub>X math environment inside the HTML comment:

```
9316 \begingroup
9317 \@nameuse{LWR@orig#1}
```

While in the math environment, restore various commands to their L<sup>A</sup>T<sub>E</sub>X meanings.

```
9318 \LWR@restoreorigformatting
```

See `\LWR@htmlmathlabel` in section [78.7.1](#).

Print the contents of the equation:

```
9319 #2
```

End the L<sup>A</sup>T<sub>E</sub>X math environment inside the HTML comment:

```
9320 \@nameuse{LWR@origend#1}
9321 \endgroup
9322
```

Close the HTML comment and resume HTML paragraph handling:

```
9323 \LWR@htmlclosecomment
9324 \LWR@startpars
9325 }
```

```
\LWR@addmathjax {<environment>} {<contents>}
```

Given the name of a math environment and its contents, create a MATHJAX instance. The contents are printed to HTML output, not interpreted by L<sup>A</sup>T<sub>E</sub>X.

```
9326 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%
```

Enclose the MATHJAX environment inside printed “\ (“ and “\)” characters.

```
9327 \LWR@origtilde\LWR@orignewline
9328 \textbackslash{}begin\{#1\}
```

Print the contents, sanitizing for HTML special characters.

```
9329 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#2}}
```

Close the MATHJAX environment:

```
9330 \textbackslash{}end\{#1\}
9331 \LWR@orignewline
9332 }
```

## 78.5 Equation environment

Remember existing equation environment:

```
9333 \AtBeginDocument{
9334 \let\LWR@origequation\equation
9335 \let\LWR@origendequation\endequation
9336 \csletcs{LWR@origequation*}{equation*}
9337 \csletcs{LWR@origendequation*}{endequation*}
9338 }
```

```
\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.

```
9339 \newcommand*{\LWR@doequation}[2]{%
9340
```

If `mathjax` or `FormatWP`, print the  $\LaTeX$  expression:

```
9341 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
```

MATHJAX output:

```
9342 {
```

Print commands to synchronize MATHJAX's equation number and format to the current  $\LaTeX$  chapter/section and equation number:

```
9343 \LWR@syncmathjax
```

Print the  $\LaTeX$  math inside an HTML comment:

```
9344 \LWR@hidelatexequation{#2}{#1}
9345 }
```

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`.

```
9346 {% not mathjax
```

Begin the `lateximage` with an `<alt>` tag containing the math source:

```
9347 \ifstrequal{#2}{equation*}{%
9348 \begin{BlockClass}{displaymath}%
9349 }{%
9350 \begin{BlockClass}{displaymathnumbered}%
9351 }%
9352 \LWR@newautoidanchor%
9353 \booltrue{LWR@indisplaymathimage}%
9354 \begin{lateximage}{%
9355 \ifstrequal{#2}{equation*}{%
```

```

9356 \ifdefequal{\LWR@equationtag}{\theequation}{%
9357 % no tag was given
9358 }{%
9359 (\LWR@equationtag) % tag was given
9360 }%
9361 }{%
9362 (\LWR@equationtag) % automatic numbering
9363 }%
9364 \textbackslash{begin\{#2\}} % extra space
9365 \LWR@HTMLSanitizeExpand{\detokenize\expandafter{#1}} % extra space
9366 \textbackslash{end\{#2\}}%
9367 }% alt tag

```

Create the actual L<sup>A</sup>T<sub>E</sub>X-formatted equation inside the `lateximage` using the contents of the environment.

```

9368 \@nameuse{LWR@orig#2}%
9369 #1% contents collected by \collect@body
9370 \@nameuse{LWR@origend#2}%
9371 \end{lateximage}%
9372 \end{BlockClass}%
9373 }% not mathjax
9374 }

```

After the environment, if `MATHJAX`, print the math to the HTML output for `MATHJAX` processing:

```

9375 \newcommand*\LWR@doendequation}[1]{%
9376 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
9377 {%
9378 \LWR@addmathjax{#1}{\BODY}%
9379 }{%
9380
9381 }

```

Remove existing equation environment:

```

9382 \AtBeginDocument{
9383 \let\equation\relax
9384 \let\endequation\relax
9385 \csletcs{equation*}{relax}
9386 \csletcs{endequation*}{relax}
9387 }

```

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`.

```

9388 \AtBeginDocument{
9389 \NewEnviron{equation}%
9390 {\LWR@doequation{\BODY}{equation}}%
9391 [\LWR@doendequation{equation}]
9392
9393 \LetLtxMacro\LWR@equationnormal\equation
9394 \LetLtxMacro\endLWR@equationnormal\endequation
9395 }

```

Env `equation*`

```

9396 \AtBeginDocument{
9397 \NewEnviron{equation*}%
9398 {\LWR@doequation{\BODY}{equation*}}%
9399 [\LWR@doendequation{equation*}]
9400
9401 \csletcs{LWR@equationnormalstar}{equation*}
9402 \csletcs{LWR@endequationnormalstar}{endequation*}
9403 }

```

Remember the “less” version of `equation`, which uses `MATHJAX` and `alt` tags, but does not support complicated contents such as some `Tikz` expressions.

```

9404 \AtBeginDocument{
9405 \LetLtxMacro\LWR@equationless\equation
9406 \LetLtxMacro\endLWR@equationless\endequation
9407 \csletcs{LWR@equationlessstar}{equation*}
9408 \csletcs{LWR@endequationlessstar}{endequation*}
9409 }

```

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

**MathJax unsupported  
complicated alt tag**

`\displaymathnormal` Use when display math environments have simple math which is to sent to MATHJAX or included in HTML alt tags.

```

9410 \newcommand*{\displaymathnormal}{%
9411 \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}%
9412 \LetLtxMacro\[\LWR@openbracketnormal%
9413 \LetLtxMacro\]\LWR@closebracketnormal%
9414 \LetLtxMacro\displaymath\LWR@displaymathnormal%
9415 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
9416 \LetLtxMacro\equation\LWR@equationnormal%
9417 \LetLtxMacro\endequation\endLWR@equationnormal%
9418 \csletcs{equation*}{LWR@equationnormalstar}%
9419 \csletcs{endequation*}{LWR@endequationnormalstar}%
9420 }
```

`\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.

```

9421 \newcommand*{\displaymathother}{%
9422 \boolfalse{mathjax}%
9423 \LetLtxMacro\displaymath\LWR@displaymathother%
9424 \LetLtxMacro\enddisplaymath\endLWR@displaymathother%
9425 \LetLtxMacro\[\LWR@displaymathother%
9426 \LetLtxMacro\]\endLWR@displaymathother%
9427 \LetLtxMacro\equation\LWR@equationother%
9428 \LetLtxMacro\endequation\endLWR@equationother%
9429 \csletcs{equation*}{\displaymath}%
9430 \csletcs{endequation*}{\enddisplaymath}%
9431 }
```

```
9432 \end{warpHTML}
```

**for PRINT output:** 9433 `\begin{warpprint}`

Print-mode versions:

```

9434 \newcommand*{\displaymathnormal}{}
9435 \newcommand*{\displaymathother}{}

```

```
9436 \end{warpprint}
```

**for HTML output:** 9437 `\begin{warpHTML}`

## 78.7 AMS Math environments

### 78.7.1 Support macros

Bool LWR@amsmultline True if processing a multiline environment.

To compensate for multiline-specific code, LWR@amsmultline is used to add extra horizontal space in \LWR@htmlmathlabel if is used in an amsmath environment which is not a multiline environment and not an equation.

```
9438 \newbool{LWR@amsmultline}
9439 \boolfalse{LWR@amsmultline}
```

\LWR@htmlmathlabel {<label>}

lwarp points \ltx@label here. This is used by \label when inside a L<sup>A</sup>T<sub>E</sub>X AMS math environment's math display environment.

\LWR@origltx@label points to the L<sup>A</sup>T<sub>E</sub>X original, modified by lwarp, then by amsmath, then by cleveref.

```
9440 \newcommand*{\LWR@htmlmathlabel}[1]{%
9441 \LWR@traceinfo{LWR@htmlmathlabelb #1}%
```

If mathjax or FormatWP, print the L<sup>A</sup>T<sub>E</sub>X expression:

```
9442 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
9443 {%
```

The combined L<sup>A</sup>T<sub>E</sub>X & HTML label is printed in a \text field:

```
9444 \text{%
```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
9445 \ifbool{LWR@amsmultline}{\hspace*{\totwidth@}}%
```

Temporarily end the HTML comment, insert the L<sup>A</sup>T<sub>E</sub>X & HTML label, then resume the HTML comment. \@firstofone is required to remove extra braces introduced by the amsmath package.)

```
9446 \LWR@htmlclosecomment%
9447 \LWR@origltx@label{#1}%
9448 \LWR@htmlopencomment%
9449 }% text
```

```

9450 }% mathjax
9451 {%
9452 \LWR@origltx@label{#1}%
9453 }%
9454 }

```

`\LWR@beginhideamsmath` Starts hiding L<sup>A</sup>T<sub>E</sub>X math inside an HTML comment.

```

9455 \newcommand*{\LWR@beginhideamsmath}{
9456 \LWR@stoppars
9457 \LWR@origtilde\LWR@orignewline
9458 \LWR@htmlopencomment
9459
9460 \begingroup
9461 \LWR@restoreorigformatting
9462 }

```

`\LWR@endhideamsmath` Ends hiding L<sup>A</sup>T<sub>E</sub>X math inside an HTML comment.

```

9463 \newcommand*{\LWR@endhideamsmath}{
9464 \endgroup
9465
9466 \LWR@htmlclosecomment
9467 \LWR@orignewline
9468 \LWR@startpars
9469 }

```

### 78.7.2 Environment patches

The amsmath environments already collect their contents in `\@envbody` for further processing. `eqnarray` is not an  $\mathcal{A}\mathcal{M}\mathcal{S}$  package, and thus requires special handling.

For SVG math: Each environment is encapsulated inside a `lateximage` environment, along with a special optional argument of `\LWR@amsmathbody` or `\LWR@amsmathbodynumbered` telling `lateximage` to use as the HTML `<alt>` tag the environment's contents which were automatically captured by the  $\mathcal{A}\mathcal{M}\mathcal{S}$  environment.

For MATHJAX: Each environment is syched with L<sup>A</sup>T<sub>E</sub>X's equation numbers, typeset with L<sup>A</sup>T<sub>E</sub>X inside an HTML comment, then printed to HTML output for MATHJAX to process.

Env `eqnarray` This environmnet 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`.

```

9470 \let\LWR@origeqnarray\eqnarray
9471 \let\LWR@origendeqnarray\endeqnarray

```

To remember whether the starred environment was used, and thus whether to number the equations:

```
9472 \newbool{LWR@numbereqnarray}
9473 \booltrue{LWR@numbereqnarray}
```

Common code used by eqnarray and Beqnarray (from fancybox):

```
9474 \newcommand{\LWR@eqnarrayfactor}{%
```

If mathjax or FormatWP, print the L<sup>A</sup>T<sub>E</sub>X expression:

```
9475 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
9476 {%
```

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:

```
9477 \LWR@syncmathjax
9478 \boolfalse{LWR@amsmultiline}
9479 \ifbool{LWR@numbereqnarray}
9480 {
```

If numbering the equations, execute a copy inside an HTML comment block:

```
9481 \LWR@beginhideamsmath
9482 \LWR@origeqnarray
9483 \BODY
9484 \LWR@origendeqnarray
9485 \LWR@endhideamsmath
```

Then print the (sanitized) contents to the output for MATHJAX to interpret:

```
9486 \LWR@addmathjax{eqnarray}{\BODY}
9487 }%
9488 {% not LWR@numbereqnarray
```

If not numbering equations, just create the contents for MATHJAX:

```
9489 \LWR@addmathjax{eqnarray*}{\BODY}
9490 }% LWR@numbereqnarray
9491 }% mathjax
9492 {% not mathjax
9493 \ifbool{LWR@numbereqnarray}
9494 {
```

For numbered svg equations, first create a lateximage with an alt attribute containing sanitized copy of the source code:

```

9495 \begin{BlockClass}{displaymathnumbered}%
9496 \LWR@newautoidanchor%
9497 \booltrue{LWR@indisplaymathimage}%
9498 \begin{lateximage}[{\LWR@startingequationtag--\LWR@equationtag}
9499 \LWR@addmathjax{eqnarray}{\BODY}]

```

Then create the image contents using an actual eqnarray:

```

9500 \LWR@origeqnarray
9501 \BODY
9502 \LWR@origendeqnarray
9503 \end{lateximage}
9504 \end{BlockClass}
9505 }%
9506 {% not LWR@numbereqnarray

```

If not numbered, do the same, but an extra `\nonumber` seems to be required:

```

9507 \begin{BlockClass}{displaymath}
9508 \LWR@newautoidanchor%
9509 \booltrue{LWR@indisplaymathimage}%
9510 \begin{lateximage}[\LWR@addmathjax{eqnarray*}{\BODY}]
9511 \LWR@origeqnarray
9512 \BODY
9513 \nonumber
9514 \LWR@origendeqnarray
9515 \end{lateximage}
9516 \end{BlockClass}
9517 }% LWR@numbereqnarray
9518 }% not mathjax

```

Default to number equations in the future:

```

9519 \booltrue{LWR@numbereqnarray}
9520 }

```

eqnarray itself is made with a blank line before and after to force it to be on its own line:

```

9521 \RenewEnviron{eqnarray}
9522 {%
9523
9524 \LWR@eqnarrayfactor
9525
9526 }

```

The starred version is patched to turn off the numbering:

```
9527 \csgpreto{eqnarray*}{\boolfalse{LWR@numbereqnarray}}
```

```
9528 \end{warpHTML}
```

## 79 Lateximages

### 79.1 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 77.)

A `lateximage` is typeset on its own PDF page inside an HTML comment which starts on the preceding page and ends on following page, and instructions are written to `lateximage.txt` for `lwarpmk` to extract the `lateximage` from the page of the PDF file then generate an accompanying `.svg` file image file. Meanwhile, instructions to show this image are placed into the HTML file after the comment.

An HTML `<span>` is created to hold both the HTML comment, which will have the `pdftotext` conversion, and also the link to the final `.svg` image.

A  $\LaTeX$  label is used to remember which PDF page has the image. A label is used because footnotes, endnotes, and pagenotes may cause the image to appear at a later time. The label is declared along with the image, and so it correctly remembers where the image finally ended up.

**HTML alt tag** The HTML `alt` tag is set to the  $\LaTeX$  source for `svg math`, some chemistry expressions, and perhaps some other expressions which make sense for text copy/paste. In some other cases, the `alt` tag is set according to the package name.

When creating an `svg math` image, its `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 `\mathimagename`, and the image is not reused.

This 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 `\packagediagramname`. 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 `lateximages`.

**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}
```

## 79.2 Support counters and macros

**for HTML output:** 9529 `\begin{warpHTML}`

Ctrl LWR@lateximagenumber Sequence the images.

```
9530 \newcounter{LWR@lateximagenumber}
9531 \setcounter{LWR@lateximagenumber}{0}
```

Ctrl LWR@lateximagedepth Do not create `\lateximage` inside of `\lateximage`.

```
9532 \newcounter{LWR@lateximagedepth}
9533 \setcounter{LWR@lateximagedepth}{0}
```

A few utility macros to write special characters:

```
9534 \edef\LWR@hashmark{\string#} % for use in \write
9535 \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 `lateximages.txt`.

```
9536 \newcounter{LWR@LIpage}
```

```
9537 \end{warpHTML}
```

### 79.3 Font size

**for HTML & PRINT:** 9538 \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.*

```
9539 \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 `.75`, but it may be redefined as needed depending on the HTML font.

```
9540 \newcommand*{\LateximageFontScale}{.75}
```

```
9541 \end{warpall}
```

### 79.4 Sanitizing math expressions for HTML

**for HTML output:** 9542 \begin{warpHTML}

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

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...

```
9543 \newrobustcmd{\LWR@HTMLsanitize}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
9544 \begingroup%
```

```
9545 \LWR@FBcancel%
```

```
9546 \fullexpandarg%
```

The `&`, `<`, and `>` may be interpreted by the browser:

```
9547 \protect\StrSubstitute{\detokenize{#1}}%
9548 {\detokenize{&}}{\detokenize{&}}[\LWR@strresult]%

9549 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
9550 {\detokenize{<}}{\detokenize{<}}[\LWR@strresult]%

9551 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
9552 {\detokenize{>}}{\detokenize{>}}[\LWR@strresult]%
```

The double quote occasionally causes problems.

```
9553 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
9554 {\detokenize{"}}{\detokenize{"}}[\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.

```
9555 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
9556 {\detokenize{##}}{\LWR@origpound}[\LWR@strresult]%

9557 \LWR@strresult%
9558 \endgroup%
9559 }
```

```
\LWR@HTMLsanitizeexpand {(text)}
```

This version expands the argument before sanitizing it.

```
9560 \newrobustcmd{\LWR@HTMLsanitizeexpand}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
9561 \begingroup%
9562 \LWR@FBcancel%
9563 \fullexpandarg%
```

The difference between this and `\LWR@HTMLsanitize` (without “expand”) is the following `\expandafter`:

```
9564 \protect\StrSubstitute{\detokenize\expandafter{#1}}%
9565 {\detokenize{&}}{\detokenize{&}}[\LWR@strresult]%
```

```
9566 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
9567 {\detokenize{<}}{\detokenize{<}}[\LWR@strresult]%
```

```
9568 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
9569 {\detokenize{>}}{\detokenize{>}}[\LWR@strresult]%
```

```
9570 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
9571 {\detokenize{"}}{\detokenize{"}}[\LWR@strresult]%
```

`\LWR@HTMLsanitizeexpand` is not used for defining new MathJax macros, so the `##` conversion is not needed here.

```
9572 \LWR@strresult%
9573 \endgroup%
9574 }
```

## 79.5 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.

```
9575 \newcounter{LWR@startingequation}
9576
9577 \@ifundefined{chapter}
9578 {
9579 \renewcommand{\theLWR@startingequation}{%
9580 \arabic{LWR@startingequation}%
9581 }
9582 }
9583 {% chapter defined
9584 \renewcommand{\theLWR@startingequation}{%
9585 \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}%
9586 \arabic{LWR@startingequation}%
9587 }
9588 }
```

`Bool` `LWR@isstartingequation` True for the first equation tag, false for later tags in the same environment.

```
9589 \newbool{LWR@isstartingequation}
```

`\LWR@startingequationtag` Prints the starting equation number or tag.

```
9590 \let\LWR@startingequationtag\theLWR@startingequation
```

`\LWR@equationtag` Prints the ending equation number or tag.

This is reset by `lateximage`, may be temporarily overwritten by `\tag` calling `\LWR@remembertag`.

```
9591 \newcommand*{\LWR@equationtag}{}

```

Only if `svg math`, patch `\tag` after packages have loaded, in case someone else modified `\tag`.

```
9592 \AtBeginDocument{
9593
9594 \ifbool{mathjax}{}{% not mathjax

```

`\LWR@remembertag` `{\langle tag \rangle}`

For use inside the math environments while using `svg math`. Sets `\theLWR@startingequation` and `\theequation` to the given tag.

```
9595 \NewDocumentCommand{\LWR@remembertag}{m}{%
9596 \ifbool{LWR@isstartingequation}%
9597 {%
9598 \global\boolfalse{LWR@isstartingequation}%
9599 \xdef\LWR@startingequationtag{#1}%
9600 }{}%
9601 \xdef\LWR@equationtag{#1}%
9602 }%

9603 }% not mathjax
9604 }% AtBeginDocument

```

## 79.6 HTML alt tags

`\LWR@amsmathbody` `{\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.

```
9605 \newcommand*{\LWR@amsmathbody}[1]
9606 {%
9607 \textbackslash\{begin\}\{#1\} % extra space
9608 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{\the\@envbody}}%
9609 \textbackslash\{end\}\{#1\}%
9610 }

```

`\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.

```
9611 \newcommand*\LWR@amsmathbodynumbered}[1]
9612 {%
9613 \ifnumcomp{\value{LWR@startingequation}}{=} {\value{equation}}%
9614 {\LWR@equationtag}}%
9615 {\LWR@startingequationtag--\LWR@equationtag} % extra space
9616 \LWR@amsmathbody{#1} % extra space
9617 }
```

## 79.7 lateximage environment

Env `lateximage` \* [ $\langle 2: alt \text{ tag} \rangle$ ] [ $\langle 3: add'l \text{ hashing} \rangle$ ] [ $\langle 4: css \text{ style} \rangle$ ]

Typesets the contents and then renders the result as an SVG file. Star causes the image to be hashed for reuse.

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<sub>E</sub>X 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.

```
9618 \catcode'\$=\active%
9619
9620 \NewDocumentEnvironment{lateximage}{s O{(image)} O{} O{}}
9621 {%
9622 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
9623 \LWR@traceinfo{lateximage: entering depth is \arabic{LWR@lateximagedepth}}%
```

Nested `lateximages` remain one large `lateximage`:

```
9624 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
```

If nesting inside an already-existing lateximage, simply record one more level.  $\mathcal{A}\mathcal{M}\mathcal{S}$  packages redefine `\addtocounter` to do nothing if inside a `\text`, so lower-level  $\text{\TeX}$  macros are used for tracking nested lateximages.

```
9625 {%
9626 % \addtocounter{LWR@lateximagedepth}{1}%
9627 % \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
9628 }%
```

Otherwise, this is the outer-most lateximage:

```
9629 {% start of outer-most lateximage
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

```
9630 \LWR@traceinfo{lateximage: starting outer-most lateximage}%
9631 \setcounter{LWR@startingequation}{\value{equation}}%
9632 \addtocounter{LWR@startingequation}{1}%
9633 \booltrue{LWR@isstartingequation}%
9634 \let\LWR@startingequationtag\theLWR@startingequation%
```

The default equation tag, unless overwritten by `\tag`:

```
9635 \let\LWR@equationtag\theequation%
```

Starting a new lateximage:

```
9636 \addtocounter{LWR@lateximagenumber}{1}%
9637 \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}%
```

While inside a lateximage, locally do not use mathjax:

```
9638 \boolfalse{mathjax}%
```

Be sure that are doing a paragraph:

```
9639 \LWR@ensuredoingapar%
```

Next file:

```
9640 \addtocounter{LWR@externalfilecnt}{1}%
9641 \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 `LWRlateximageXXX`:

```
9642 \setcounterpageref{LWR@LIpage}{LWR@lateximage\arabic{LWR@lateximagenumber}}%
9643 \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:

```
9644 \LWR@htmltag{span id="lateximage\arabic{LWR@lateximagenumber}" % extra space
9645 class="lateximagesource"}%
```

Write instructions to the `lateximages.txt` file:

```
9646 \LWR@traceinfo{lateximage: about to write to lateximages.txt}%
9647 \IfBooleanTF{#1}% starred
9648 {% hash
9649 \LWR@traceinfo{lateximage: hash true, adding %
9650 !\detokenize\expandafter{#2}!\detokenize\expandafter{#3}!}%
```

Compute and save the hashed file name for later use:

```
9651 \edef\LWR@hashedname{%
9652 \LWR@mdfive{\detokenize\expandafter{#2}-!-#3}%
9653 % \LWR@mdfive{\detokenize\expandafter{#2}-!\detokenize\expandafter{#3}}%
9654 }%
9655 \LWR@traceinfo{lateximage: hash is \LWR@hashedname}%
```

Write the page, hashing, and hashed name:

```
9656 \immediate\write\LWR@lateximagesfile{%
9657 |\arabic{LWR@LIpage}|true|\LWR@hashedname|%
9658 }%
9659 }% hash
9660 {% no hash
```

No hash, so write the page, no hashing, and the image number:

```
9661 \LWR@traceinfo{lateximage: hash false}%
9662 \immediate\write\LWR@lateximagesfile{%
9663 |\arabic{LWR@LIpage}|false|lateximage-\arabic{LWR@externalfilecnt}|%
9664 }%
9665 }% no hash
```

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by *pdftotext*.

```
9666 \LWR@traceinfo{lateximage: about to create open comment}%
9667 \LWR@htmlopencomment%
```

One level deeper. At this outer-most `lateximage`, it is known that this is not being used inside an  $\mathcal{AMS}$  `\text`, since the outer-most level will never be in math mode.

```
9668 \addtocounter{LWR@lateximagedepth}{1}%
```

Start the new PDF page:

```
9669 \LWR@traceinfo{lateximage: about to create a new page}%
9670 \LWR@orignewpage%
```

Typeset the image in a “standard” width page and font size:

```
9671 \LWR@traceinfo{lateximage: about to create minipage}%
9672 \LWR@print@minipage{6in}%
9673 \@nameuse{LWR@print@\LateximageFontSizeName}%
```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for `\hspace`, etc. inside a `lateximage`.

```
9674 \LWR@traceinfo{lateximage: about to temporarily restore formatting}%
9675 \LWR@restoreorigformatting%
```

Use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

```
9676 \def\@mpfn{footnote}%
9677 \def\thempfn{\thefootnote}%
9678 \LetLtxMacro\@footnotetext\LWR@footnotetext%
```

Create the `LWRlateximage<number>` label:

```
9679 \LWR@traceinfo{lateximage: about to create label}%
9680 \LWR@orig@label{LWRlateximage\arabic{LWR@lateximagenumber}}%
9681 \LWR@traceinfo{lateximage: finished creating the label}%
```

Enable print-mode math functions:

```
9682 \LetLtxMacro$\LWR@origdollar%
9683 \catcode'\$=3% math shift
9684 \LetLtxMacro\(\LWR@origopenparen%
9685 \LetLtxMacro)\LWR@origcloseparen%
```

Only enable print-mode display math if are not already inside display math:

```
9686 \ifbool{LWR@indisplaymathimage}{-}{% not in display math
9687 \LetLtxMacro\[LWR@origopenbracket%
9688 \LetLtxMacro\]LWR@origclosebracket%
```

```

9689 \let\equation\LWR@origequation%
9690 \let\endequation\LWR@origendequation%
9691 \csletcs{equation*}{LWR@origequation*}%
9692 \csletcs{endequation*}{LWR@origendequation*}%
9693 }% not in display math

```

For chemformula:

```

9694 \LetLtxMacro\LWR@newsingledollar$%
9695 \LetLtxMacro\LWR@newsingledollar$% syntax highlighting

9696 }% end of outer-most lateximage
9697 \LWR@traceinfo{lateximage: finished start of environment}%
9698 }% end of \begin{lateximage}

```

`\endlateximage` When the environment closes:

```

9699 {% start of \end{lateximage}
9700 \LWR@traceinfo{lateximage: starting end of lateximage}%

```

Nested more than one deep?

```

9701 \LWR@traceinfo{lateximage: internal depth was \arabic{LWR@lateximagedepth}}%
9702 \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  $\mathcal{A}\mathcal{M}\mathcal{S}$  `\text` change of `\addtocounter`.

```

9703 {%
9704 \LWR@traceinfo{lateximage: unnesting}%
9705 \global\advance\c@LWR@lateximagedepth -1\relax%
9706 }%

```

If this is the outer-most lateximage:

```

9707 {% end of outer-most lateximage

```

Finish the lateximage minipage and start a new PDF page:

```

9708 \LWR@traceinfo{lateximage: ending outer-most lateximage}%
9709 \endLWR@print@minipage%
9710 \LWR@orignewpage%
9711 \LWR@print@scriptsize%

```

Close the HTML comment which encapsulated any traces of the lateximage picked up by *pdftotext*:

```

9712 \LWR@print@vspace*{.5\baselineskip}%
9713 \LWR@htmlclosecomment%
9714 \LWR@traceinfo{lateximage: The page after the image is \arabic{page}}%

```

Create a link to the lateximage, allowing its natural height:

```

9715 \IfBooleanTF{#1}% starred
9716 {% hash
9717 \LWR@subinlineimage[#2]{lateximage}%
9718 {%
9719 lateximages\OSPathSymbol%
9720 \LWR@print@mbbox{\LWR@hashedname}%
9721 }{svg}{#4}%
9722 }% hash
9723 {% no hash
9724 \LWR@subinlineimage[#2]{lateximage}%
9725 {%
9726 lateximages\OSPathSymbol%
9727 \LWR@print@mbbox{lateximage-\theLWR@externalfilecnt}%
9728 }{svg}{#4}%
9729 }% no hash

```

Be sure that are doing a paragraph:

```

9730 \LWR@ensuredoingapar%

```

Close the HTML span which has the *pdfotext* comment and also the link to the .svg image:

```

9731 \LWR@htmltag{/span}%
9732 \ifbool{HTMLDebugComments}{%
9733 \LWR@htmlcomment{End of lateximage}%
9734 }{}%

```

Undo one lateximage level. This is not inside an  $\text{\textit{AMS}} \text{\textit{L}} \text{\textit{A}} \text{\textit{T}} \text{\textit{E}} \text{\textit{X}}$  \text, so regular \addtocounter may be used here.

```

9735 \addtocounter{LWR@lateximagedepth}{-1}%
9736 }% end of outer-most lateximage
9737 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
9738 \LWR@traceinfo{lateximage: done}%
9739 }%
9740 \catcode'\$=3% math shift
9741 \end{warpHTML}

```

**for PRINT output:** 9742 \begin{warpprint}

Env lateximage [ $\langle alt \rangle$  tag] [ $\langle css style \rangle$ ]

`varwidth` is used to create a box of the natural width of its contents.

```

9743 \NewDocumentEnvironment{lateximage}{s o o o}
9744 {\begin{varwidth}[b]{\linewidth}}
9745 {\end{varwidth}}

9746 \end{warpprint}

```

## 80 center, flushleft, flushright

**for HTML output:** 9747 `\begin{warppHTML}`

Env `center` Replace center functionality with CSS tags:

```

9748 \renewenvironment*{center}
9749 {
9750 \LWR@forcenewpage
9751 \ifbool{FormatWP}
9752 {\BlockClass[\LWR@print@mbox{text-align:center}]{center}}
9753 {\BlockClass{center}}
9754 }
9755 {\endBlockClass}

```

Env `flushright`

```

9756 \renewenvironment*{flushright}
9757 {
9758 \LWR@forcenewpage
9759 \ifbool{FormatWP}
9760 {\BlockClass[\LWR@print@mbox{text-align:right}]{flushright}}
9761 {\BlockClass{flushright}}
9762 }
9763 {\endBlockClass}

```

Env `flushleft`

```

9764 \renewenvironment*{flushleft}
9765 {
9766 \LWR@forcenewpage
9767 \ifbool{FormatWP}
9768 {\BlockClass[\LWR@print@mbox{text-align:left}]{flushleft}}
9769 {\BlockClass{flushleft}}
9770 }
9771 {\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`

```
9772 \newcommand*{\LWR@HTML@centering}{%
9773 \ifbool{HTMLDebugComments}{%
9774 \LWR@htmlcomment{centering}%
9775 }{}%
9776 }
9777 \LWR@formatted{centering}
```

#### `\raggedleft`

```
9778 \newcommand*{\LWR@HTML@raggedleft}{%
9779 \ifbool{HTMLDebugComments}{%
9780 \LWR@htmlcomment{raggedleft}%
9781 }{}%
9782 }
9783 \LWR@formatted{raggedleft}
```

#### `\raggedright`

```
9784 \newcommand*{\LWR@HTML@raggedright}{%
9785 \ifbool{HTMLDebugComments}{%
9786 \LWR@htmlcomment{raggedright}%
9787 }{}%
9788 }
9789 \LWR@formatted{raggedright}
```

#### `\leftline` $\{ \langle text \rangle \}$

```
9790 \renewcommand{\leftline}[1]{\begin{flushleft}#1\end{flushleft}}
```

#### `\centerline` $\{ \langle text \rangle \}$

```
9791 \renewcommand{\centerline}[1]{\begin{center}#1\end{center}}
```

#### `\rightline` $\{ \langle text \rangle \}$

```
9792 \renewcommand{\rightline}[1]{\begin{flushright}#1\end{flushright}}
```

```
9793 \end{warpHTML}
```

## 81 Preloaded packages

for HTML output: 9794 `\begin{warpHTML}`

If the given package was loaded before or by lwarp, load the lwarp version as well.

`\LWR@PreloadedPackage` `{\langle packagename \rangle}`

```

9795 \newcommand*\LWR@PreloadedPackage}[1]{%
9796 \ifpackageloaded{#1}%
9797 {%
9798 \AtBeginDocument{
9799 \LWR@origRequirePackage{lwarp-#1}%
9800 }
9801 }%
9802 }%
9803 }
```

If textcomp was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
9804 \LWR@PreloadedPackage{textcomp}
```

If xunicode was loaded before lwarp, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
9805 \LWR@PreloadedPackage{xunicode}
```

If graphics or graphicx were loaded before lwarp, perhaps by xunicode, explicitly load the lwarp patches now:

```

9806 \LWR@PreloadedPackage{graphics}
9807 \LWR@PreloadedPackage{graphicx}
```

ulem may be preloaded by ctex, ctart, and related classes.

```
9808 \LWR@PreloadedPackage{ulem}
```

xetexko-vertical may be preloaded by xetexko.

```
9809 \LWR@PreloadedPackage{xetexko-vertical}
```

geometry is preloaded by lwarp, and perhaps by various classes.

```
9810 \LWR@PreloadedPackage{geometry}
```

plex is preloaded by some CJK classes.

```
9811 \LWR@PreloadedPackage{plex}
```

stfloats is preloaded by ltj\* classes.

```
9812 \LWR@PreloadedPackage{stfloats}
```

lltjtext is preloaded by ltj\* classes.

```
9813 \LWR@PreloadedPackage{lltjtext}
```

```
9814 \end{warpHTML}
```

## 82 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.

 `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:** 9815 `\begin{warpHTML}`

Options for siunitx:

```
9816 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}C}
9817 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
9818 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLUnicode{2032}}
9819 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLUnicode{2033}}
9820 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLUnicode{0127}}}}
9821
9822 \appto\LWR@restoreorigformatting{%
9823 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}C}}%
9824 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}%
9825 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}%

```

```

9826 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{\hat{\prime}\prime}}}%
9827 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}%
9828 }
9829
9830 \PassOptionsToPackage{
9831 detect-mode=true,
9832 per-mode=symbol,% fraction is not seen by pdftotext
9833 text-celsius = {\LWR@siunitx@textcelsius},
9834 text-degree = {\LWR@siunitx@textdegree},
9835 text-arcminute = {\LWR@siunitx@textprime} ,
9836 text-arcsecond = {\LWR@siunitx@textdblprime} ,
9837 }{siunitx}

9838 \end{warpHTML}

```

## 83 Graphics print-mode modifications

### 83.1 General limitations

`\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` 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 of “(image)”.

**`\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.

## 83.2 Print-mode modifications

**for PRINT output:** For print output, accept and then discard the new `class` key:

```
9839 \begin{warpprint}
9840 \define@key{Gin}{class}{}
9841 \define@key{Gin}{alt}{}

```

Print-mode additions for the `overpic` package. See section 315 for the HTML version.

```
9842 \AtBeginDocument{
9843 \ifpackageloaded{overpic}{
9844 \newcommand*\overpicfontsize{12}
9845 \newcommand*\overpicfontskip{14}
9846 }{}
9847 }
9848 \end{warpprint}

```

## 84 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:** 9849 `\begin{warpall}`

*After `xparse` may have been loaded ...*

```
9850 \AtBeginDocument{
... and only if xcolor was loaded:
9851 \ifpackageloaded{xcolor}{
9852 \LWR@traceinfo{patching xcolor}

```

The print version:

`\colorboxBlock` `\colorboxBlock` is the same as `\colorbox`:

```
9853 \LetLtxMacro\colorboxBlock\colorbox
```

The original definition is reused by the new versions:

```
9854 \LetLtxMacro\LWR@orig@print@fcolorbox\fcolorbox
```

`\fcolorbox` [*framemodel*] {*framecolor*} [*boxmodel*] {*boxcolor*} {*text*}

In print mode, `\fcolorbox` is modified to accept a background color of none.

(`\fcolorbox` is particular about its optional arguments, thus the elaborate combinations of `\ifthenelse`.)

```
9855 \newsavebox{\LWR@colorminipagebox}
```

```
9856
```

```
9857 \NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%
```

```
9858 \LWR@traceinfo{\LWR@print@fcolorbox #2 #4}%
```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```
9859 \begin{lrbox}{\LWR@colorminipagebox}%
```

```
9860 #5%
```

```
9861 \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.

```
9862 \ifstrequal{#4}{none}%
```

```
9863 {% #4 none
```

```
9864 \LWR@traceinfo{background is none}%
```

```
9865 {% scope the \colorlet
```

```
9866 \colorlet{\LWR@currentcolor}{.}%
```

```
9867 \color{#2}%
```

```
9868 \fbox{%
```

```
9869 \color{\LWR@currentcolor}%
```

```
9870 \usebox{\LWR@colorminipagebox}%
```

```
9871 }% fbox
```

```
9872 }% colorlet
```

```
9873 }% #4 none
```

```
9874 {% #4 not none
```

```
9875 \LWR@traceinfo{background not none}%
```

```
9876 \IfValueTF{#1}%
```

```
9877 {%
```

```

9878 \IfValueTF{#3}%
9879 {\LWR@orig@print@fcolorbox[#1]{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
9880 {\LWR@orig@print@fcolorbox[#1]{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
9881 }%
9882 {% no value #1
9883 \IfValueTF{#3}%
9884 {\LWR@orig@print@fcolorbox{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
9885 {\LWR@orig@print@fcolorbox{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
9886 }% no value #1
9887 }% #4 not none
9888 \LWR@traceinfo{\LWR@print@fcolorbox done}%
9889 }
9890
9891 \renewcommand*{\fcolorbox}{\LWR@print@fcolorbox}

```

`\fcolorboxBlock` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

In print mode, `\fcolorboxBlock` is the same as `\fcolorbox`.

```

9892 \newcommand*{\LWR@print@fcolorboxBlock}{\LWR@print@fcolorbox}
9893 \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:

```

9894 \NewDocumentEnvironment{\LWR@print@fcolorminipage}{o m o m O{c} O{ } o m}
9895 {%
9896 \LWR@traceinfo{*** fcolorminipage: #2 #4 #8}%

```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```

9897 \begin{lrbox}{\LWR@colorminipagebox}%

```

If inner alignment is not given, use the outer alignment instead:

```

9898 \IfValueTF{#7}%
9899 {\begin{minipage}[#5][#6][#7]{#8}}%
9900 {\begin{minipage}[#5][#6][#5]{#8}}%
9901 }%
9902 {%
9903 \end{minipage}%
9904 \end{lrbox}%
9905 \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.

```

9906 \ifstrequal{#4}{none}%
9907 {% #4 none
9908 {% scope the \colorlet
9909 \colorlet{LWR@currentcolor}{.}%
9910 \color{#2}%
9911 \fbox{%
9912 \color{LWR@currentcolor}%
9913 \usebox{\LWR@colorminipagebox}%
9914 }% fbox
9915 }% colorlet
9916 }% #4 none
9917 {% #4 not none
9918 \IfValueTF{#1}%
9919 {%
9920 \IfValueTF{#3}%
9921 {\LWR@orig@print@fcolorbox[#1]{#2}{#3}{#4}{\usebox{\LWR@colorminipagebox}}}%
9922 {\LWR@orig@print@fcolorbox[#1]{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
9923 }%
9924 {% no value #1
9925 \IfValueTF{#3}%
9926 {\LWR@orig@print@fcolorbox{#2}{#3}{#4}{\usebox{\LWR@colorminipagebox}}}%
9927 {\LWR@orig@print@fcolorbox{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
9928 }% no value #1
9929 }% #4 not none
9930 \LWR@traceinfo{*** finished end fcolorminipage}%
9931 }
9932
9933 \newenvironment*{fcolorminipage}
9934 {\LWR@print@fcolorminipage}
9935 {\endLWR@print@fcolorminipage}

9936 \LWR@traceinfo{xcolor patches done}
9937 }{}% xcolor loaded
9938 }% AtBeginDocument

9939 \end{warpall}

```

## 85 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:** 9940 `\begin{warpprint}`

9941 `\AtBeginDocument{`  
 9942 `\@ifpackageloaded{chemmacros}{`

Env `polymerdelims`

9943 `\DeclareDocumentEnvironment{polymerdelims}{}`  
 9944 `{}`

Env `redoxreaction` `{\space above}` `{\space below}`

For print output, extra space is include above and below the image, and a `lateximage` is not necessary. This extra space must be enforced, even inside a float, so zero-width rules are used.

For the HTML version, see section 159.4.

9945 `\DeclareDocumentEnvironment{redoxreaction}{m m}`  
 9946 `{\rule{0pt}{#1}}{\rule[-#2]{0pt}{#2}}`

9947 `}%` chemmacros  
 9948 `}%` AtBeginDocument

9949 `\end{warpprint}`

## 86 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 576 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 491 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:** 9950 `\begin{warpHTML}`

`\AtEndPreamble` forces cleveref to be loaded last:

```
9951 \AtEndPreamble{
9952 \RequirePackage{cleveref}
9953 }
```

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.

```
9954 \AfterEndPreamble{
9955 \LWR@traceinfo{Patching cleveref.}
```

```
\@@@setcref {<kindofref>} {<label>}
```

`\@templabel` becomes the section number.

```
9956 \def\LWR@orig@@@setcref#1#2{\cref@getlabel{#2}{\@templabel}#1{\@templabel}{-}}%
9957
9958 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% before v0.21
9959 \renewcommand*{\@@@setcref}[2]{#1{\ref{#2}}{-}}
9960 }{
9961 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
9962 \renewcommand*{\@@@setcref}[2]{#1{\ref{#2}}{-}}
9963 }{
9964 \PackageWarning{lwarp-cleveref}{
9965 Unknown version of cleveref.
9966 \protect\cref\space will fail.
9967 }%
9968 }
9969 }
```

```
\@@@setcrefrange {<text>} {<label>} {<label>}
```

```

9970 \def\LWR@orig@@setcrefrange#1#2#3{%
9971 \cref@getlabel{#2}{\@labela}%
9972 \cref@getlabel{#3}{\@labelb}%
9973 #1{\@labela}{\@labelb}{-}{-}{-}}%
9974
9975 \ifdefequal{\@@setcrefrange}{\LWR@orig@@setcrefrange}{
9976 \renewcommand{\@@setcrefrange}[3]{%
9977 #1{\ref{#2}}{\ref{#3}}{-}{-}{-}}%
9978 }
9979 }{
9980 \ifdefequal{\@@setcrefrange}{\LWR@orig@@setcrefrange}{
9981 \renewcommand{\@@setcrefrange}[3]{%
9982 #1{\ref{#2}}{\ref{#3}}{-}{-}{-}}%
9983 }
9984 }{
9985 \PackageWarning{lwarp-cleveref}{
9986 Unknown version of cleveref.
9987 \protect\crefrange\space will fail.
9988 }
9989 }
9990 }
9991

```

`\cpagerefFor` Redefinable word between “page(s)” and the page numbers.

```

9992 \newcommand*{\cpagerefFor}{for}

```

`\@@@setcpageref`  $\langle\textit{typeofref}\rangle$   $\langle\textit{label}\rangle$ , where *typeofref* is “page” or “pages”

```

9993 \def\LWR@orig@@setcpageref#1#2{% before v0.21
9994 \cref@getpageref{#2}{\@temppage}#1{\@temppage}{-}{-}}%
9995
9996 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
9997 \cpageref@getlabel{#2}{\@temppage}#1{\@temppage}{-}{-}}%
9998
9999 \ifdefequal{\@@setcpageref}{\LWR@orig@@setcpageref}{
10000 \renewcommand*{\@@setcpageref}[2]{%
10001 #1{\cpagerefFor\ \cref{#2}}{-}{-}}%
10002 }
10003 }{
10004 \ifdefequal{\@@setcpageref}{\LWR@orig@@@setcpageref}{
10005 \renewcommand*{\@@setcpageref}[2]{%
10006 #1{\cpagerefFor\ \cref{#2}}{-}{-}}%
10007 }
10008 }
10009 {
10010 \PackageWarning{lwarp-cleveref}{

```

```

10011 Unknown version of cleveref.
10012 \protect\cpageref\space will fail.
10013 }
10014 }
10015 }

10016 \def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
10017 \cref@getpageref{#2}{\@pagea}%
10018 \cref@getpageref{#3}{\@pageb}%
10019 #1{\@pagea}{\@pageb}{-}{-}{-}%
10020
10021 \def\LWR@orig@@setcpagerefrange#1#2#3{% as of v0.21
10022 \cpageref@getlabel{#2}{\@pagea}%
10023 \cpageref@getlabel{#3}{\@pageb}%
10024 #1{\@pagea}{\@pageb}{-}{-}{-}%
10025
10026 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
10027 \renewcommand*{\@@setcpagerefrange}[3]{%
10028 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{-}{-}{-}%
10029 }
10030 }{
10031 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
10032 \renewcommand*{\@@setcpagerefrange}[3]{%
10033 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{-}{-}{-}%
10034 }
10035 }
10036 {
10037 \PackageWarning{lwarp-cleveref}{
10038 Unknown version of cleveref.
10039 \protect\cpagerefrange\space will fail.
10040 }
10041 }
10042 }
10043
10044 }% AfterEndPreamble

```

Remember and patch some label-related defintions. 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.

```

10045 \LetLtxMacro\LWR@orig@label\label
10046 \RenewDocumentCommand{\label}{-}{\LWR@new@label}
10047
10048 \LetLtxMacro\LWR@orig@pageref\pageref
10049 \RenewDocumentCommand{\pageref}{-}{\LWR@new@pageref}
10050 \end{warpHTML}

```

## 87 picture environment

Env `picture` The `picture` environment is enclosed inside a `\lateximage`.

for HTML output: 10051 `\begin{warpHTML}`

Env `picture`

```
10052 \BeforeBeginEnvironment{picture}{\begin{lateximage}[(picture)]}
10053
10054 \AfterEndEnvironment{picture}{\end{lateximage}}

10055 \end{warpHTML}
```

## 88 Boxes and Minipages

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.

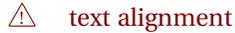
**side-by-side** Side-by-side minipages may be separated by `\quad`, `\qquad`, `\enskip`, `\hspace`, `\hfill`, or a `\rule`. When inside a `center` environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.

**in a span** There is limited support for minipages inside an HTML `<span>`. An HTML `<div>` cannot appear inside a `<span>`. While in a `<span>`, minipages, and parboxes, and any enclosed lists have limited HTML tags, resulting in an “inline” format, without markup except for HTML breaks. Use `\newline` or `\par` for an HTML break.

**size** When using `\linewidth`, `\textwidth`, and `\textheight`, widths and heights are scaled proportionally to a 6×9 inch text area.

**no-width minipages** A minipage of width exactly `\linewidth` is automatically given no HTML width.

**full-width minipages** A new macro `\minipagefullwidth` requests that the next minipage be generated without an HTML width attribute, allowing it to be the full width of the display rather than the fixed width given.

**text alignment**

Nested minipages adopt their parent's text alignment in HTML, whereas in regular L<sup>A</sup>T<sub>E</sub>X PDF output they do not. Use a `flushleft` or similar environment in the child minipage to force a text alignment.

**for HTML output:** 10056 `\begin{warpHTML}`

## 88.1 Counters and lengths

**Ctrl** `LWR@minipagedepth` Used to only reset the line width at the outermost minipage.

```
10057 \newcounter{LWR@minipagedepth}
10058 \setcounter{LWR@minipagedepth}{0}
```

**Len** `\LWR@minipagewidth` Used to convert the width into printable units.

```
10059 \newlength{\LWR@minipagewidth}
```

**Len** `\LWR@minipageheight` Used to convert the height into printable units.

```
10060 \newlength{\LWR@minipageheight}
```

## 88.2 Footnote handling

Also see section 58 for other forms of footnotes. Minipage footnotes are gathered in section 58.5, and then placed into the document in section 88.3.

## 88.3 Minipage handling

**Bool** `LWR@minipagefullwidth` Should the next minipage have no HTML width?

```
10061 \newbool{LWR@minipagefullwidth}
10062 \boolfalse{LWR@minipagefullwidth}
```

`\minipagefullwidth` Requests that the next minipage have no width tag in HTML:

**for HTML output:** 10063 `\newcommand*{\minipagefullwidth}{\booltrue{LWR@minipagefullwidth}}`  
10064 `\end{warpHTML}`

**for PRINT output:** 10065 `\begin{warpprint}`  
10066 `\newcommand*{\minipagefullwidth}{}`  
10067 `\end{warpprint}`

**for HTML output:** 10068 `\begin{warpHTML}`

Bool `LWR@minipagethispar` Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

```
10069 \newbool{LWR@minipagethispar}
10070 \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.

```
10071 \NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m m}
10072 {%
10073 \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.

```
10074 \begingroup
```

Compute width, adjusted for frames:

```
10075 \setlength{\LWR@minipagewidth}{#4}%
10076 \ifthenelse{\cinttest{\value{LWR@minipagedepth}}{=}{0}}{-%
```

Only create a new page if not yet nested:

```
10077 \LWR@orignewpage%
```

Adjust virtual page size:

```
10078 \addtolength{\LWR@minipagewidth}{3em}% room for frames
10079 \setlength{\linewidth}{6in}%
10080 \setlength{\textwidth}{6in}%
10081 \setlength{\textheight}{9in}%
10082 }{}%
10083 \LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%
```

Compute height:

```
10084 \setlength{\LWR@minipageheight}{\textheight}% default unless specified
10085 \ifblank{#2}{\setlength{\LWR@minipageheight}{#2}}%
```

Track nesting depth:

```
10086 \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.

```
10087 \ifbool{FormatWP}{\newline}{}%
```

```
10088 \LWR@stoppars%
```

If FormatWP, add a text frame:

```
10089 \ifbool{FormatWP}{%
```

```
10090
```

```
10091 \addtocounter{LWR@thisautoidWP}{1}%
```

```
10092 \LWR@htmltag{%
```

```
10093 div id="\LWR@print@mbox{autoidWP-\arabic{LWR@thisautoidWP}}" %
```

```
10094 class="wpmminipage"%
```

```
10095 }%
```

```
10096
```

```
10097 }{}%
```

Create the <div> tag with optional alignment style:

```
10098 \LWR@traceinfo{minipage: creating div class}%
```

```
10099 \LWR@htmltag{div class="minipage" style="%
```

```
10100 \ifthenelse{equal{#1}{t}}{\LWR@print@mbox{vertical-align:bottom} ; }{}%
```

```
10101 \ifthenelse{equal{#1}{c}}{\LWR@print@mbox{vertical-align:middle} ; }{}%
```

```
10102 \ifthenelse{equal{#1}{b}}{\LWR@print@mbox{vertical-align:top} ; }{}%
```

```
10103 \ifthenelse{equal{#3}{t}}{\LWR@print@mbox{justify-content:flex-start} ; }{}%
```

```
10104 \ifthenelse{equal{#3}{c}}{\LWR@print@mbox{justify-content:center} ; }{}%
```

```
10105 \ifthenelse{equal{#3}{b}}{\LWR@print@mbox{justify-content:flex-end} ; }{}%
```

```
10106 \ifthenelse{equal{#3}{s}}{\LWR@print@mbox{justify-content:space-between} ; }{}%
```

Print the width and optional height styles:

```
10107 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
```

```
10108 \ifbool{LWR@minipagefullwidth}%
```

```
10109 {\boolfalse{LWR@minipagefullwidth}}%
```

```
10110 {%
```

```
10111 \ifthenelse{\lengthtest{#4}=\linewidth}%
```

```
10112 }{}%
```

```
10113 {width:\LWR@printlength{\LWR@minipagewidth} ; }%
```

```
10114 }%
```

```
10115 \LWR@traceinfo{minipage: about to print the height}%
```

```
10116 \ifblank{#2}{-}{height:\LWR@printlength{\LWR@minipageheight} ; }%
```

```
10117 "%
```

Finish with an empty line to start the contents on a new line.

```
10118
10119 % 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.

```
10120 \setlength{\linewidth}{#4}% the original width
10121 \setlength{\textwidth}{6in}%
10122 \setlength{\textheight}{9in}%
```

`\raggedright` cancels hyphenation, which will be done by HTML instead.

```
10123 \LWR@print@raggedright%
```

Set minipage footnotes:

```
10124 \def\@mpfn{mpfootnote}%
10125 \def\thempfn{\thempfootnote}\c@mpfootnote\z@%
10126 \let\@footnotetext\@mpfootnotetext%
```

Resume paragraph tag handling for the contents of the minipage:

```
10127 \LWR@startpars%
10128 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
10129
10130 === begin minipage ===
10131
10132 }{}%
10133 \LWR@traceinfo{minipage: finished starting the minipage}%
10134 }% finished \minipage
10135 {% \endminipage
```

Print pending minipage footnotes:

```
10136 \LWR@printpendingmpfootnotes%
```

End the environment with closing tag:

```
10137 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
10138
10139 === end minipage ===
10140
10141 }{}%
10142 \LWR@stoppars%
```

The following used to be an actual L<sup>A</sup>T<sub>E</sub>X minipage.

```

10143 \endgroup%
10144
10145 \ifbool{FormatWP}{-%
10146
10147 \LWR@htmllementend{div}%
10148
10149 }{ }%
10150 \LWR@htmldivclassend{minipage}%
10151
10152 \addtocounter{LWR@minipagedepth}{-1}%
10153 \LWR@startpars%
10154 \ifbool{FormatWP}{\newline}{ }%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

10155 \global\booltrue{LWR@minipagethispar}%
10156 \LWR@traceinfo{LWR@minipage: done}%
10157 }
10158
10159 \NewDocumentEnvironment{LWR@HTML@minipage}{0{t} 0{ } 0{t} m}
10160 {\LWR@HTML@sub@minipage{#1}{#2}{#3}{#4}}
10161 {\endLWR@HTML@sub@minipage}
10162
10163 \LWR@formattedenv{minipage}

```

## 88.4 \parbox, \mbox, \makebox, \framebox, \fbox, \raisebox

for HTML output:

```
\parbox [⟨pos⟩] [⟨height⟩] [⟨inner-pos⟩] {⟨width⟩} {⟨text⟩}
```

A parbox uses the minipage code:

```

10164 \NewDocumentCommand{\LWR@HTML@parbox}{0{t} 0{ } 0{t} m +m}
10165 {
10166 \LWR@traceinfo{parbox of width #4}%
10167 \begin{minipage}[#1][#2][#3]{#4}%
10168 #5
10169 \end{minipage}%
10170 }
10171
10172 \LWR@formatted{parbox}

```

`\mbox`  $\langle\textit{text}\rangle$  Nullified for HTML.

```
10173 \newcommand*\LWR@HTML@mbox}[1]{#1}
10174
10175 \LWR@formatted{mbox}
```

`\makebox`  $\langle(\langle\rangle)\textit{posn}\rangle$   $[\langle\textit{width}\rangle]$   $[\langle\textit{pos}\rangle]$   $\langle\textit{text}\rangle$

```
10176 \NewDocumentCommand{\LWR@HTML@makebox}{d() o o m}{%
```

Check for the optional width:

```
10177 \IfValueTF{#2}%
10178 {%
```

Check for the horizontal text alignment. For stretched, the best HTML can do is justified alignment.

```
10179 {% scope
10180 \def\LWR@align{center}%
10181 \ifstrequal{#3}{l}{\def\LWR@align{left}}{}%
10182 \ifstrequal{#3}{r}{\def\LWR@align{right}}{}%
10183 \ifstrequal{#3}{s}{\def\LWR@align{justify}}{}%
```

To print the width argument:

```
10184 \setlength{\LWR@tempwidth}{#2}%
```

inline-block allows width and text-alignment to be used in a `<span>`.

```
10185 \InlineClass[%
10186 \LWR@print@mbox{display:inline-block} ; %
10187 \LWR@print@mbox{text-align}:\LWR@align\ ; %
10188 width:\LWR@printlength{\LWR@tempwidth}%
10189]%
10190 {makebox}%

10191 {#4}%
10192 }% scope
10193 }%
```

Without a width argument, the text is simply used inline:

```
10194 {#4}% no width
10195 }
10196
10197 \LWR@formatted{makebox}
```

`\framebox` [*<width>*] [*<pos>*] {*<text>*}

```
10198 \LetLtxMacro\LWR@origframebox\framebox
10199
10200 \NewDocumentCommand{\LWR@HTML@framebox}{o o m}{%
10201 \fbox{\makebox[#1][#2]{#3}}%
10202 }
10203
10204 \LWR@formatted{framebox}
```

`\LWR@forceminwidth` {*<legth>*}

Sets `\LWR@atleastonept` to be at least 1pt.

```
10205 \newlength{\LWR@atleastonept}
10206
10207 \newcommand*{\LWR@forceminwidth}[1]{%
10208 \setlength{\LWR@atleastonept}{#1}%
10209 \ifthenelse{%
10210 \lengthtest{\LWR@atleastonept>0pt}\AND%
10211 \lengthtest{\LWR@atleastonept<1pt}}%
10212 }%
10213 {\setlength{\LWR@atleastonept}{1pt}}%
10214 {}%
10215 }
```

`\LWR@blackborderpadding` Prints the HTML attributes for a black border and padding.

`\LWR@forceminwidth` must be used first in order to set the border width.

```
10216 \newcommand*{\LWR@blackborderpadding}{%
10217 border:\LWR@printlength{\LWR@atleastonept} solid black ; %
10218 padding:\LWR@printlength{\fboxsep}%
10219 }
```

`\fbox` {*<text>*}

Creates a framed inline span enclosing the text.

Create a new HTML version, but don't use it until after `xcolor` may have loaded:

```
10220 \newcommand{\LWR@HTML@fbox}[1]{%
10221 \LWR@traceinfo{HTML fbox}%
10222 \LWR@forceminwidth{\fboxrule}%
10223 \InlineClass[%
10224 \LWR@blackborderpadding%
10225]{fbox}{#1}
10226 }
```

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:

```
10227 \AtBeginDocument{\LWR@formatted{fbox}}
```

`\fboxBlock` `{\langle 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 warppall.

**for HTML & PRINT:**

```
10228 \end{warppHTML}
10229 \begin{warppall}
10230 \let \fboxBlock \fbox
10231 \end{warppall}
10232 \begin{warppHTML}
```

**for HTML output:** Next, an HTML version:

```
10233 \newcommand{\LWR@HTML@fboxBlock}[1]{%
10234 \LWR@forceminwidth{\fboxrule}%
10235 \begin{BlockClass}[%
10236 \LWR@blackborderpadding%
10237]{fboxBlock}
10238 #1
10239 \end{BlockClass}
10240 }
10241
10242 \LWR@formatted{fboxBlock}
10243
10244 \end{warppHTML}
```

Env `fminipage` `[\langle align \rangle] [\langle height \rangle] [\langle align \rangle] {\langle width \rangle}`

Creates a framed HTML <div> around its contents.

**for HTML & PRINT:** Print version:

```
10245 \begin{warppall}
10246
10247 \newsavebox{\LWR@fminipagebox}
10248
10249 \NewDocumentEnvironment{\LWR@print@fminipage}{0{t} o 0{t} m}
10250 {%
```

An outer minipage will be used for vertical alignment. An inner minipage will be framed with \fbox.

If the optional inner alignment is not given, use the outer instead:

```

10251 \IfValueTF{#3}%
10252 {\def\LWR@thisalign{#3}}
10253 {\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.

```

10254 \IfValueTF{#2}%
10255 {\minipage[#1][#2+2\fbboxsep+2\fbboxrule][\LWR@thisalign]{#4+2\fbboxsep+2\fbboxrule}}%
10256 {\minipage[#1]{#4+2\fbboxsep+2\fbboxrule}}%

```

Capture the contents of the environment:

```

10257 \begin{lrbox}{\LWR@fminipagebox}%

```

Nest the contents inside an inner minipage of the desired size:

```

10258 \IfValueTF{#2}%
10259 {\minipage[#1][#2][\LWR@thisalign]{#4}}%
10260 {\minipage[#1]{#4}}%
10261 }
10262 {%

```

Close the inner minipage and the LR box with the contents:

```

10263 \endminipage%
10264 \end{lrbox}%

```

Create a frame around the contents of the environment:

```

10265 \fbox{\usebox{\LWR@fminipagebox}}%

```

The entire thing is placed inside the outer minipage:

```

10266 \endminipage%
10267 }
10268
10269 \LetLtxMacro\fminipage\LWR@print@fminipage
10270 \LetLtxMacro\endfminipage\endLWR@print@fminipage
10271 % \newenvironment{fminipage}{\LWR@print@fminipage}{\endLWR@print@fminipage}
10272
10273 \end{warpall}

```

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

```

10274 \begin{warpHTML}
10275
10276 \NewDocumentEnvironment{LWR@HTML@fminipage}{0{t} o 0{t} m}
10277 {%
10278 \LWR@traceinfo{fminipage #1 #2 #3 #4}%

```

```

10279 \LWR@forceminwidth{\fboxrule}%
10280 \setlength{\LWR@tempwidth}{#4}%
10281 \IfValueT{#2}{\setlength{\LWR@tempheight}{#2}}%

10282 \LWR@stoppars%

10283 \begin{BlockClass}[%
10284 \LWR@blackborderpadding ; %
10285 \IfValueT{#2}{height:\LWR@printlength{\LWR@tempheight} ; }%
10286 width:\LWR@printlength{\LWR@tempwidth}%
10287]{fminipage}%
10288 }
10289 {%
10290 \end{BlockClass}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

10291 \global\booltrue{LWR@minipagethispar}%
10292 \LWR@traceinfo{fminipage done}%
10293 }
10294
10295 \LWR@formattedenv{fminipage}

10296 \end{warpHTML}

```

`\raisebox`  $\langle raiselen \rangle$  [ $\langle height \rangle$ ] [ $\langle depth \rangle$ ]  $\langle text \rangle$

```

10297 \begin{warpHTML}
10298
10299 \NewDocumentCommand{\LWR@HTML@raisebox}{m o o m}{%
10300 #4%
10301 }
10302
10303 \LWR@formatted{raisebox}

10304 \end{warpHTML}

```

## 89 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 52.8.

**for HTML output:** 10305 `\begin{warpHTML}`

`\emph`  $\{ \langle text \rangle \}$

```
10306 \DeclareRobustCommand{\LWR@HTML@emph}[1]{%
10307 {%
10308 \itshape%
10309 \LWR@htmlspan{em}{#1}%
10310 }%
10311 }
10312 \LWR@formatted{emph}
10313
10314 \DeclareRobustCommand{\LWR@null@emph}[1]{#1}
```

`\textmd`  $\{ \langle text \rangle \}$

```
10315 \DeclareRobustCommand{\LWR@HTML@textmd}[1]{%
10316 {%
10317 \mdseries%
10318 \InlineClass(font-weight:normal){textmd}{#1}%
10319 }%
10320 }
10321 \LWR@formatted{textmd}
10322
10323 \DeclareRobustCommand{\LWR@null@textmd}[1]{#1}
```

`\textbf`  $\{ \langle text \rangle \}$

```
10324 \DeclareRobustCommand{\LWR@HTML@textbf}[1]{%
10325 {%
10326 \bfseries%
10327 \LWR@htmlspan{b}{#1}%
10328 }%
10329 }
10330 \LWR@formatted{textbf}
```

```
10331
10332 \DeclareRobustCommand{\LWR@null@textbf}[1]{#1}
```

`\textrm`  $\langle text \rangle$

```
10333 \DeclareRobustCommand{\LWR@HTML@textrm}[1]{%
10334 {%
10335 \rmfamily%
10336 \InlineClass(font-family:serif){textrm}{#1}%
10337 }%
10338 }
10339 \LWR@formatted{textrm}
10340
10341 \DeclareRobustCommand{\LWR@null@textrm}[1]{#1}
```

`\textsf`  $\langle text \rangle$

```
10342 \DeclareRobustCommand{\LWR@HTML@textsf}[1]{%
10343 {%
10344 \sffamily%
10345 \InlineClass(font-family:sans){textsf}{#1}%
10346 }%
10347 }
10348 \LWR@formatted{textsf}
10349
10350 \DeclareRobustCommand{\LWR@null@textsf}[1]{#1}
```

`\texttt`  $\langle text \rangle$

```
10351 \DeclareRobustCommand{\LWR@HTML@texttt}[1]{%
10352 {%
10353 \ttfamily%
10354 \LWR@htmlspan{kbd}{#1}%
10355 }%
10356 }
10357 \LWR@formatted{texttt}
10358
10359 \DeclareRobustCommand{\LWR@null@texttt}[1]{#1}
```

`\textup`  $\langle text \rangle$

```
10360 \DeclareRobustCommand{\LWR@HTML@textup}[1]{%
10361 {%
10362 \upshape%
10363 \InlineClass(font-style:normal){textup}{#1}%
10364 }%
10365 }
```

```

10366 \LWR@formatted{textup}
10367
10368 \DeclareRobustCommand{\LWR@null@textup}[1]{#1}

```

`\textit`  $\{ \langle text \rangle \}$

```

10369 \DeclareRobustCommand{\LWR@HTML@textit}[1]{%
10370 {%
10371 \itshape%
10372 \LWR@htmlspan{i}{#1}%
10373 }%
10374 }
10375 \LWR@formatted{textit}
10376
10377 \DeclareRobustCommand{\LWR@null@textit}[1]{#1}

```

`\textsc`  $\{ \langle text \rangle \}$

```

10378 \DeclareRobustCommand{\LWR@HTML@textsc}[1]{%
10379 {%
10380 \scshape%
10381 \InlineClass(
10382 font-variant: small-caps ;
10383 font-variant-numeric: oldstyle-nums ;
10384){textsc}{#1}%
10385 }%
10386 }
10387 \LWR@formatted{textsc}
10388
10389 \DeclareRobustCommand{\LWR@null@textsc}[1]{#1}

```

`\textsi`  $\{ \langle text \rangle \}$

```

10390 \@ifundefined{textsi}{
10391 \LetLtxMacro\LWR@print@textsi\LWR@print@textsc
10392 }{}
10393
10394 \DeclareRobustCommand{\LWR@HTML@textsi}[1]{%
10395 {%
10396 \sishape%
10397 \InlineClass(
10398 font-style: italic;
10399 font-variant: small-caps ;
10400 font-variant-numeric: oldstyle-nums ;
10401){textsi}{#1}%
10402 }%
10403 }
10404 \LWR@formatted{textsi}

```

```
10405
10406 \DeclareRobustCommand{\LWR@null@textsi}[1]{#1}
```

`\textsl`  $\langle text \rangle$

```
10407 \DeclareRobustCommand{\LWR@HTML@textsl}[1]{%
10408 {%
10409 \slshape%
10410 \InlineClass(font-style:oblique){textsl}{#1}%
10411 }%
10412 }
10413 \LWR@formatted{textsl}
10414
10415 \DeclareRobustCommand{\LWR@null@textsl}[1]{#1}
```

`\textnormal`  $\langle text \rangle$

```
10416 \DeclareRobustCommand{\LWR@HTML@textnormal}[1]{\textmd{\textrm{\textup{#1}}}}
10417 \LWR@formatted{textnormal}
10418
10419 \DeclareRobustCommand{\LWR@null@textnormal}[1]{#1}
```

```
10420 \DeclareRobustCommand{\LWR@null@rmfamily}{}
10421 \DeclareRobustCommand{\LWR@null@sffamily}{}
10422 \DeclareRobustCommand{\LWR@null@ttfamily}{}
10423 \DeclareRobustCommand{\LWR@null@bfseries}{}
10424 \DeclareRobustCommand{\LWR@null@mdseries}{}
10425 \DeclareRobustCommand{\LWR@null@upshape}{}
10426 \DeclareRobustCommand{\LWR@null@slshape}{}
10427 \DeclareRobustCommand{\LWR@null@scshape}{}
10428 \DeclareRobustCommand{\LWR@null@itshape}{}
10429 \DeclareRobustCommand{\LWR@null@normalfont}{}

```

```
10430 \DeclareRobustCommand{\LWR@null@em}{}

```

`\LWR@nullfonts` Removes formatting during filename operations.

 **Use only inside a group.**

The following are *not* made robust, since they must be expanded to their nullified versions.

```
10431 \newcommand*{\LWR@nullfonts}{%
10432 \LetLtxMacro\emph\LWR@null@emph%
10433 \LetLtxMacro\textmd\LWR@null@textmd%
10434 \LetLtxMacro\textbf\LWR@null@textbf%
```

```

10435 \LetLtxMacro\textrm\LWR@null@textrm%
10436 \LetLtxMacro\textsf\LWR@null@textsf%
10437 \LetLtxMacro\texttt\LWR@null@texttt%
10438 \LetLtxMacro\textup\LWR@null@textup%
10439 \LetLtxMacro\textit\LWR@null@textit%
10440 \LetLtxMacro\textsc\LWR@null@textsc%
10441 \LetLtxMacro\textsi\LWR@null@textsi%
10442 \LetLtxMacro\textsl\LWR@null@textsl%
10443 \LetLtxMacro\textnormal\LWR@null@textnormal%
10444 \LetLtxMacro\rmfamily\LWR@null@rmfamily%
10445 \LetLtxMacro\sffamily\LWR@null@sffamily%
10446 \LetLtxMacro\ttfamily\LWR@null@ttfamily%
10447 \LetLtxMacro\bfseries\LWR@null@bfseries%
10448 \LetLtxMacro\mdseries\LWR@null@mdseries%
10449 \LetLtxMacro\upshape\LWR@null@upshape%
10450 \LetLtxMacro\slshape\LWR@null@slshape%
10451 \LetLtxMacro\scshape\LWR@null@scshape%

10452 \LetLtxMacro\sisshape\LWR@null@sisshape%

10453 \LetLtxMacro\itshape\LWR@null@itshape%
10454 \LetLtxMacro\normalfont\LWR@null@normalfont%
10455 \LetLtxMacro\em\LWR@null@em%

10456 \renewcommand*{\,}{-}%
10457 \renewcommand*{~}{-}%
10458 \renewcommand*{\newline}{ }%
10459 \renewcommand*{\textellipsis}{-}%

10460 \renewcommand*{\HTMLunicode}[1]{}%
10461 \renewcommand*{\HTMLentity}[1]{}%

Ampersand becomes “and”, which is a short word and is then removed from the
filename.

10462 \renewcommand*{\&}{and}%

10463 \renewcommand{\textsuperscript}[1]{##1}%
10464 \renewcommand{\textsubscript}[1]{##1}%

10465 \renewcommand{\underline}[1]{##1}%

10466 \RenewDocumentCommand{\LWR@htmlspanclass}{o m +m}{##3}%
10467 \DeclareExpandableDocumentCommand{\InlineClass}{D{({})}{ } o m +m}{##4}%

```

Nullify math macros.

```
10468 \def\(\##1\){}%
10469 \def\[##1\]{}%
10470 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
```

Use the simpler form with `\texorpdfstring`:

```
10471 \let\texorpdfstring\relax%
10472 \newcommand{\texorpdfstring}[2]{##2}%
10473 }
```

Remembers the current font family, series, and shape.

```
10474 \newcommand*{\LWR@f@family}{rm}
10475 \newcommand*{\LWR@f@series}{md}
10476 \newcommand*{\LWR@f@shape}{up}
```

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

Prints the text with the current font choices. Avoids nesting repeated font selections.

```
10477 \newcounter{LWR@textcurrentfontdepth}
10478 \setcounter{LWR@textcurrentfontdepth}{0}
10479
10480 \newcommand*{\LWR@textcurrentfont}[1]{%
10481 \ifnumcomp{\value{LWR@textcurrentfontdepth}}{>}{0}%
10482 {%
10483 \addtocounter{LWR@textcurrentfontdepth}{1}%
10484 #1%
10485 \addtocounter{LWR@textcurrentfontdepth}{-1}%
10486 }%
10487 {%
10488 \addtocounter{LWR@textcurrentfontdepth}{1}%
10489 \InlineClass{%
10490 text\LWR@f@family\LWR@origtilde{}%
10491 text\LWR@f@series\LWR@origtilde{}%
10492 text\LWR@f@shape%
10493 }%
10494 {#1}%
10495 \addtocounter{LWR@textcurrentfontdepth}{-1}%
10496 }%
10497 }
```

Env `\LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```
10498 \newenvironment*{\LWR@blocktextcurrentfont}{%
```

```
10499 \BlockClass{%
10500 text\LWR@f@family\LWR@origtilde{}%
10501 text\LWR@f@series\LWR@origtilde{}%
10502 text\LWR@f@shape%
10503 }%
10504 }\endBlockClass}
```

`\mdseries`

```
10505 \renewrobustcmd*{\mdseries}{\renewcommand*{\LWR@f@series}{md}}
```

`\bfseries`

```
10506 \renewrobustcmd*{\bfseries}{\renewcommand*{\LWR@f@series}{bf}}
```

`\rmfamily`

```
10507 \renewrobustcmd*{\rmfamily}{\renewcommand*{\LWR@f@family}{rm}}
```

`\sffamily`

```
10508 \renewrobustcmd*{\sffamily}{\renewcommand*{\LWR@f@family}{sf}}
```

`\ttfamily`

```
10509 \renewrobustcmd*{\ttfamily}{\renewcommand*{\LWR@f@family}{tt}}
```

`\upshape`

```
10510 \renewrobustcmd*{\upshape}{\renewcommand*{\LWR@f@shape}{up}}
```

`\itshape`

```
10511 \renewrobustcmd*{\itshape}{\renewcommand*{\LWR@f@shape}{it}}
```

`\scshape`

```
10512 \renewrobustcmd*{\scshape}{\renewcommand*{\LWR@f@shape}{sc}}
```

`\sishape`

```
10513 \ifundefined{sishape}{
```

```

10514 \newrobustcmd*\sishape{\renewcommand*\LWR@f@shape}{si}}
10515 }{
10516 \renewrobustcmd*\sishape{\renewcommand*\LWR@f@shape}{si}}
10517 }

```

`\slshape`

```
10518 \renewrobustcmd*\slshape{\renewcommand*\LWR@f@shape}{sl}}
```

`\normalfont`

```
10519 \renewrobustcmd*\normalfont{\rmfamily\mdseries\upshape}
```

`\sp`  $\langle text \rangle$

For siunitx. Must work in math mode.

```
10520 \renewcommand{\sp}[1]{\text{^{#1}}{}}
```

`\sb`  $\langle text \rangle$

For siunitx. Must work in math mode.

```
10521 \renewcommand{\sb}[1]{\text{_{#1}}{}}
```

`\textsuperscript`  $\langle text \rangle$

```
10522 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\@textsuperscript`  $\langle text \rangle$

```
10523 \renewcommand{\@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\textsubscript`  $\langle text \rangle$

```

10524 \AtBeginDocument{
10525 \renewrobustcmd{\textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
10526 }

```

`\@textsubscript`  $\langle text \rangle$

```

10527 \AtBeginDocument{
10528 \renewcommand{\@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
10529 }

```

`\up`  $\langle text \rangle$  Prints superscript.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
10530 \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.

```
10531 \AtBeginDocument{\let\fup\textsuperscript}
```

`\underline`  $\langle text \rangle$

```
10532 \renewcommand{\underline}[1]{%
10533 \InlineClass%
10534 (text-decoration:underline; text-decoration-skip: auto)%
10535 {underline}{#1}%
10536 }
```

`\LWR@overline`  $\langle text \rangle$

```
10537 \newcommand{\LWR@overline}[1]{%
10538 \InlineClass%
10539 (text-decoration:overline; text-decoration-skip: auto)%
10540 {overline}{#1}%
10541 }
```

`\LWR@currenttextcolor` The color to use for text and `\rule`, defaulting to black:

```
10542 \newcommand*{\LWR@currenttextcolor}{black}
```

`\LWR@tempcolor` The color converted to HTML colorspace.

`\LWR@tempcolortwo`

```
10543 \newcommand*{\LWR@tempcolor}{%
10544 \newcommand*{\LWR@tempcolortwo}{%
```

`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```
10545 \newcommand*{\LWR@findcurrenttextcolor}{%
10546 \renewcommand{\LWR@tempcolor}{black}%
10547 }
```

`\LWR@textcurrentcolor`  $\langle text \rangle$  Like `\textcolor` but uses the current `\color` instead.

```
10548 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%
10549 \renewcommand*{\LWR@currenttextcolor}{black}%
10550 #1%
10551 }

10552 \end{warpHTML}
```

**for PRINT output:** 10553 `\begin{warpprint}`

`\LWR@textcurrentfont`  $\langle text \rangle$

Prints the text with the current font choices.

```
10554 \newcommand*{\LWR@textcurrentfont}[1]{#1}
```

Env `LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```
10555 \newenvironment*{LWR@blocktextcurrentfont}{}{}
```

```
10556 \end{warpprint}
```

## 90 Skips, spaces, font sizes

**for HTML output:** 10557 `\begin{warpHTML}`

`\`, and `\thinspace` may be redefined by other packages, so are redefined `\AtBeginDocument` here.

Direct-formatting space commands become HTML entities:

```
10558 \AtBeginDocument{
10559 \renewrobustcmd*{\,}{\HTMLUnicode{202f}} % HTML thin non-breakable space
10560 \renewrobustcmd*{\thinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
10561 \renewrobustcmd*{\negthinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
10562 \renewrobustcmd*{~}{\HTMLentity{nbsp}}
10563 \renewrobustcmd*{\textellipsis}{\HTMLUnicode{2026}}
10564 }
```

Direct-formatting font sizes are ignored:

```
10565 \newrobustcmd*{\LWR@HTML@normalsize}{}{}
```

```
10566 \LWR@formatted{normalsize}
10567
10568 \newrobustcmd*{\LWR@HTML@small}{-}
10569 \LWR@formatted{small}
10570
10571 \newrobustcmd*{\LWR@HTML@footnotesize}{-}
10572 \LWR@formatted{footnotesize}
10573
10574 \newrobustcmd*{\LWR@HTML@scriptsize}{-}
10575 \LWR@formatted{scriptsize}
10576
10577 \newrobustcmd*{\LWR@HTML@tiny}{-}
10578 \LWR@formatted{tiny}
10579
10580 \newrobustcmd*{\LWR@HTML@large}{-}
10581 \LWR@formatted{large}
10582
10583 \newrobustcmd*{\LWR@HTML@Large}{-}
10584 \LWR@formatted{Large}
10585
10586 \newrobustcmd*{\LWR@HTML@LARGE}{-}
10587 \LWR@formatted{LARGE}
10588
10589 \newrobustcmd*{\LWR@HTML@huge}{-}
10590 \LWR@formatted{huge}
10591
10592 \newrobustcmd*{\LWR@HTML@Huge}{-}
10593 \LWR@formatted{Huge}

10594 \DeclareDocumentCommand{\onecolumn}{-}{-}
10595
10596 \DeclareDocumentCommand{\twocolumn}{0}{-}{-}
10597
10598 #1
10599
10600 }

\hfill

10601 \newcommand*{\LWR@HTML@hfill}{\quad}
10602 \LWR@formatted{hfill}

\hrulefill

10603 \newcommand*{\LWR@HTML@hrulefill}{\rule{1in}{1pt}}
10604 \LWR@formatted{hrulefill}
```

`\dotfill`

```
10605 \newcommand*\LWR@HTML@dotfill}{\dots}
10606 \LWR@formatted{dotfill}
```

`\newpage`

```
10607 \renewcommand*\newpage}{
10608
10609 }
```

`\newline` Uses the HTML `<br />` element.

```
10610 \newrobustcmd*\LWR@newlinebr}{\unskip\LWR@htmltag{br /}\LWR@orignewline}%
10611 \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`.

```
10612 \LetLtxMacro\LWR@origendofline\\
10613 \NewDocumentCommand{\LWR@endofline}{s O{0pt}}
10614 {%
10615 \newline%

10616 \setlength{\LWR@templengthone}{#2}%
10617 \ifdimgreater{\LWR@templengthone}{0pt}{\newline}{}%
10618 }
```

`\LWR@minipagestartpars` Minipages are often placed side-by-side inside figures, with a bit of horizontal space to separate them. Since HTML does not allow a `<div>` to be inside a `p`, paragraphs must be turned off during the generation of the minipage, then turned on after the minipage is complete. When this occurs between side-by-side minipages, `lwarp` correctly suppresses the paragraph tags between the minipages, unless some other text is between the minipages. Such text forms its own paragraph, resulting in text after a minipage to be on its own line. Since people often place small horizontal space between minipages, it is desirable to maintain this space if possible. `lwarp` tries to do this by remembering that a minipage has been seen, in which case paragraph tags are suppressed around `\hspace`, `\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.

```
10619 \newcommand*{\LWR@minipagestartpars}{%
10620 \ifbool{LWR@minipagethispar}{\LWR@startpars}{}%
10621 }
```

`\LWR@minipagestoppars` Placed just after `\hspace`, `\quad`, or `\qqquad`'s HTML output.

```
10622 \newcommand*{\LWR@minipagestoppars}{%
10623 \ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%
10624 }
```

`\quad` Handles special minipage & horizontal space interactions. Uses 2003 EM SPACE to pass validation.

```
10625 \renewrobustcmd*{\quad}{%
10626 \LWR@minipagestoppars%
10627 \HTMLUnicode{2003}%
10628 \LWR@minipagestartpars%
10629 }
```

`\qqquad` Handles special minipage & horizontal space interactions.

```
10630 \renewrobustcmd*{\qqquad}{\quad\quad}
```

`\enskip` Handles special minipage & horizontal space interactions.

```
10631 \renewrobustcmd*{\enskip}{%
10632 \LWR@minipagestoppars%
10633 \HTMLUnicode{2002}%
10634 \LWR@minipagestartpars%
10635 }
```

Len `\LWR@tempwidth` Used to compute span width, height, raise for `\hspace` and `\rule`:

Len `\LWR@tempheight`

Len `\LWR@tempraise`

```
10636 \newlength{\LWR@tempwidth}
10637 \newlength{\LWR@tempheight}
10638 \newlength{\LWR@tempraise}
```

```
\LWR@select@html@hspace * {\length} * {\length}
\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`.

```
10639 \newcommand{\LWR@select@html@hspace}{%
10640 \RenewDocumentCommand{\hspace}{s m}{%
10641 \setlength{\LWR@tempwidth}{##2}}%
```

If `\fill`, change to `\quad`:

```
10642 \ifnum\gluestretchorder\LWR@tempwidth>0%
10643 \setlength{\LWR@tempwidth}{2em}%
10644 \fi%
```

Only if the width is not zero:

```
10645 \ifdimcomp{\LWR@tempwidth}{=}{0pt}{}{%}
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
10646 \LWR@minipagestoppars%
```

Support the HTML thin wrappable space:

```
10647 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
10648 {%
10649 \HTMLunicode{2009}% thin breakable space
10650 }%
```

Print the span with the converted width. Not rounded.

```
10651 {%
10652 \LWR@htmltagc{%
10653 span style="width:\LWR@printlength{\LWR@tempwidth}; % extra space
10654 display:inline-block"%
10655 }%
```

If formatting for a word processor, approximate with a number of `\quads`, in case a span of a given width is not supported:

```
10656 \ifbool{FormatWP}{%
10657 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
10658 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
10659 \quad%
10660 \addtolength{\LWR@templengthone}{-1em}}%
```

```
10661 }%
10662 }{}%
```

Close the span:

```
10663 \LWR@htmltagc{/span}%
10664 }%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
10665 \LWR@minipagestartpars%
10666 }% width not 0
10667 }%
10668 }
```

```
\LWR@select@html@nohspace * {<length>}
 \hspace
```

Used to disable \hspace while creating description \items.

```
10669 \newcommand{\LWR@select@html@nohspace}{%
10670 \RenewDocumentCommand{\hspace}{s m}{}%
10671 }
```

```
\LWR@select@print@hspace
```

```
10672 \newcommand*{\LWR@select@print@hspace}{%
10673 \renewrobustcmd\hspace{\@ifstar\@hspace\@hspace}%
10674 }
```

```
\hspace * {<length>}
```

Handles special minipage & horizontal space interactions.

```
10675 \LWR@select@html@hspace
```

```
\LWR@vspace * {<length>} Nullified vspace.
```

```
10676 \NewDocumentCommand{\LWR@HTML@vspace}{s m}{%
10677
10678 \LWR@formatted{vspace}}
```

```
\linebreak [num] Inserts an HTML br tag.
```

```
10679 \renewcommand*{\linebreak}[1] []{\newline}
```

`\nolinebreak` [ $\langle num \rangle$ ]

```
10680 \renewcommand*\nolinebreak[1] [] {}
```

`\pagebreak` [ $\langle num \rangle$ ] Starts a new paragraph.

```
10681 \renewcommand*\pagebreak[1] [] {
10682
10683 }
```

`\nopagebreak` [ $\langle num \rangle$ ]

```
10684 \renewcommand*\nopagebreak[1] [] {}
```

`\enlargethispage` \*  $\langle len \rangle$

```
10685 \RenewDocumentCommand{\enlargethispage}{s m}{}
```

`\clearpage`  
`\cleardoublepage`

```
10686 \renewcommand*\clearpage{}
10687 \renewcommand*\cleardoublepage{}
```

`\rule` [ $\langle raise \rangle$ ]  $\langle width \rangle$   $\langle height \rangle$

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.

```
10688 \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:

```
10689 \setlength{\LWR@tempwidth}{#2}%
```

If it's zero-width then skip the entire rule:

```
10690 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}
10691 {}% zero- width
10692 {% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```

10693 \ifthenelse{%
10694 \lengthtest{\LWR@tempwidth>0pt}\AND%
10695 \lengthtest{\LWR@tempwidth<1pt}%
10696 }%
10697 {\setlength{\LWR@tempwidth}{1pt}}{}}%

```

Likewise with height:

```

10698 \setlength{\LWR@tempheight}{#3}%
10699 \ifthenelse{%
10700 \lengthtest{\LWR@tempheight>0pt}\AND%
10701 \lengthtest{\LWR@tempheight<1pt}%
10702 }%
10703 {\setlength{\LWR@tempheight}{1pt}}{}}%

```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```

10704 \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.

```

10705 \LWR@findcurrenttextcolor%
10706 \LWR@htmltagc{%
10707 span
10708 style="%

```

The background color is used to draw the filled rule. The color may be changed by `\textcolor`.

```

10709 \ifbool{FormatWP}{-}{background:\LWR@currenttextcolor ; }%

```

The width and height are printed, converted to PT:

```

10710 width:\LWR@printlength{\LWR@tempwidth} ; %
10711 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.

```

10712 \ifblank{#1}%
10713 {}%
10714 {%
10715 \setlength{\LWR@tempraise}{Opt-#1}%
10716 \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
10717 \LWR@orignewline%
10718 -ms-transform: translate(Opt,\LWR@printlength{\LWR@tempraise}); %
10719 \LWR@orignewline%
10720 -webkit-transform: translate(Opt,\LWR@printlength{\LWR@tempraise}); %
10721 \LWR@orignewline%
10722 transform: translate(Opt,\LWR@printlength{\LWR@tempraise}); %
10723 \LWR@orignewline%
10724 }%

```

Display inline-block to place the span inline with the text:

```

10725 display:inline-block;"%
10726 }%

```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```

10727 \ifbool{FormatWP}{%
10728 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
10729 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
10730 _f}%
10731 \addtolength{\LWR@templengthone}{-1em}%
10732 }%
10733 }{}%

```

Close the span:

```

10734 \LWR@htmltagc{/span}%

```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```

10735 \LWR@minipagestartpars%
10736 }% non-zero width
10737 }
10738
10739 \LWR@formatted{rule}

```

```

10740 \end{warpHTML}

```

## 91 `\phantomsection`

**for HTML output:** 10741 `\begin{warpHTML}`

`\phantomsection` Emulate the hyperref `\phantomsection` command, often used to insert the bibliography into the table of contents. Ignores `\ForceHTMLTOC`.

```
10742 \DeclareDocumentCommand{\phantomsection}{}{%
10743 \begingroup%
10744 \boolfalse{LWR@forcinghtmltoc}%
10745 \section*{}%
10746 \endgroup%
10747 }
```

```
10748 \end{warpHTML}
```

## 92 `\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 `\let` in `\LWR@LwarpStart`.

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.

### 92.1 HTML logos

**for HTML output:** 10749 `\begin{warpHTML}`

`\TeX` `\TeX`

`latexlogo` is a CSS class used to properly typeset the E and A in  $\LaTeX$  and friends.

`latexlogofont` is a CSS class used to select the font for the rest of the logo in  $\LaTeX$ , Lua $\TeX$ , Con $\TeX$ t, etc.

```
10750 \LetLtxMacro\LWR@origTeX\TeX
```

```

10751
10752 \newrobustcmd*{\LWR@TeX}
10753 {%
10754 \InlineClass{latexlogofont}%
10755 {%
10756 \InlineClass{latexlogo}%
10757 {%
10758 T%
10759 \InlineClass{latexlogosub}{e}%
10760 X%
10761 }%
10762 }%
10763 }

```

\LaTeX L<sup>A</sup>T<sub>E</sub>X, L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>

\LaTeXe

```

10764 \LetLtxMacro\LWR@origLaTeX\LaTeX
10765
10766 \newrobustcmd*{\LWR@LaTeX}
10767 {%
10768 \InlineClass{latexlogofont}%
10769 {%
10770 \InlineClass{latexlogo}%
10771 {%
10772 L%
10773 \InlineClass{latexlogosup}{a}%
10774 T%
10775 \InlineClass{latexlogosub}{e}%
10776 X%
10777 }%
10778 }%
10779 }
10780
10781 \LetLtxMacro\LWR@origLaTeXe\LaTeXe
10782
10783 \renewrobustcmd*{\LaTeXe}
10784 {%
10785 \LaTeX%
10786 \InlineClass{latexlogofont}{%
10787 \InlineClass{latexlogotwoe}{%
10788 2%
10789 \InlineClass{latexlogotwoesub}{\HTMLUnicode{03B5}}%
10790 }%
10791 }%
10792 }

```

\LuaTeX LuaT<sub>E</sub>X, LuaL<sup>A</sup>T<sub>E</sub>X

\LuaLaTeX

```
10793 \newrobustcmd*{\LWR@LuaTeX}{\InlineClass{latexlogofont}{Lua}\TeX}
10794 \newrobustcmd*{\LWR@LuaLaTeX}{\InlineClass{latexlogofont}{Lua}\LaTeX}
```

`\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.

```
10795 \newrobustcmd*{\Xe}
10796 {%
10797 X%
10798 \InlineClass{xelatexlogosub}{\HTMLUnicode{18e}}%
10799 }
10800
10801 \newrobustcmd*{\LWR@XeTeX}{\InlineClass{xelatexlogo}{\Xe}\TeX}
10802
10803 \newrobustcmd*{\LWR@XeLaTeX}{\InlineClass{xelatexlogo}{\Xe}\LaTeX}
```

`\ConTeXt`  $ConTeXt$

```
10804 \newrobustcmd*{\LWR@ConTeXt}
10805 {\InlineClass{latexlogofont}{Con}\TeX}%
10806 \InlineClass{latexlogofont}{t}}
```

`\BibTeX`  $B\TeX$ , *MakeIndex*

`\MakeIndex`

```
10807 \providerobustcmd*{\BibTeX}
10808 {\InlineClass{latexlogofont}{B\textsc{ib}}\TeX}
10809
10810 \newrobustcmd*{\MakeIndex}
10811 {\InlineClass{latexlogofont}{\textit{MakeIndex}}}
```

`\AmS`  $\mathcal{AMS}$

`amslogo` is a CSS class used for the  $\mathcal{AMS}$  logo.

```
10812 \AtBeginDocument{%
10813 \DeclareDocumentCommand{\AmS}{}
10814 {%
10815 \InlineClass{amslogo}{%
10816 \textit{%
10817 A%
10818 \InlineClass{latexlogosub}{M}%
10819 S%
```

```

10820 }%
10821 }%
10822 }%
10823 }

```

`\MiKTeX` `MiKTeX`

```
10824 \newrobustcmd*{\MiKTeX}{\InlineClass{latexlogofont}{MiK}\TeX}
```

`\LyX` `LyX`

lyxlogo is a CSS class used for the LyX logo.

```
10825 \newrobustcmd*{\LyX}{\InlineClass{lyxlogo}{LyX}}
```

```
10826 \end{warpHTML}
```

## 92.2 Print logos

**for PRINT output:**

```

10827 \begin{warpprint}
10828
10829 \newrobustcmd*{\XeTeXrevE}
10830 {\hspace{-.1667em}\raisebox{-.5ex}{E}\hspace{-.125em}}
10831
10832 \AtBeginDocument{
10833 \ifpackageloaded{graphics}{
10834 \renewrobustcmd*{\XeTeXrevE}
10835 {\hspace{-.1667em}\raisebox{-.5ex}{\reflectbox{E}}\hspace{-.125em}}
10836 }{
10837 \PackageWarning{lwarp}{Load graphicx or graphics
10838 for improved XeTeX logo}
10839 }
10840 }
10841
10842 \providerobustcmd*{\XeTeX}{\mbox{X\XeTeXrevE\TeX}}
10843 \providerobustcmd*{\XeLaTeX}{\mbox{X\XeTeXrevE\LaTeX}}
10844 \providerobustcmd*{\AmS}{%
10845 \leavevmode\hbox{$\mathcal A\kern-.2em\lower.376ex%
10846 \hbox{$\mathcal M$}\kern-.2em\mathcal S$}%
10847 }
10848 \newrobustcmd*{\LyX}{\textsf{LyX}}
10849 \providerobustcmd*{\LuaTeX}{\mbox{Lua\TeX}}
10850 \providerobustcmd*{\LuaLaTeX}{\mbox{Lua\LaTeX}}
10851 \providerobustcmd*{\BibTeX}{\mbox{B\textsc{ib}\TeX}}
10852 \providerobustcmd*{\MakeIndex}{\mbox{\textit{MakeIndex}}}
10853 \providerobustcmd*{\ConTeXt}{\mbox{Con\TeX{t}}}

```

```
10854 \providerobustcmd*{\MiKTeX}{\mbox{MiK\TeX}}
10855 \end{warpprint}
```

## 93 \AtBeginDocument, \AtEndDocument

**for HTML output:** 10856 \begin{warpHTML}

`\LWR@LwarpStart` Automatically sets up the HTML-related actions for the start and end of the document.  
`\LWR@LwarpEnd`

```
10857 \AfterEndPreamble{\LWR@LwarpStart}
10858 \AtEndDocument{\LWR@LwarpEnd}

10859 \end{warpHTML}
```

## 94 KOMA-SCRIPT classes

Load patches to koma-script.

**for HTML output:** 10860 \begin{warpHTML}

```
10861 \@ifclassloaded{scrbook}{\RequirePackage{lwarp-patch-komascript}}{}
10862 \@ifclassloaded{scrartcl}{\RequirePackage{lwarp-patch-komascript}}{}
10863 \@ifclassloaded{scrreprt}{\RequirePackage{lwarp-patch-komascript}}{}

10864 \end{warpHTML}
```

## 95 MEMOIR class

Load patches to memoir.

**for HTML output:** 10865 \begin{warpHTML}

```
10866 \@ifclassloaded{memoir}{\RequirePackage{lwarp-patch-memoir}}{}

10867 \end{warpHTML}
```

## 96 ut\* classes

Load patches to uj\* and ut\* classes, as well as ltj\* classes.

**for HTML output:** 10868 \begin{warpHTML}

```
10869 \newcommand*{\LWR@patchujtclasses}{
```

uj/t does not use \partname

```
10870 \def\@partnameformat{}

10871 \def\@partcntformat##1{%
10872 \prepartname%
10873 \csname the##1\endcsname%
10874 \postpartname%
10875 \quad%
10876 }
10877 \@ifundefined{chapter}{-}{
10878 \def\@chapcntformat##1{%
10879 \prechaptername%
10880 \csname the##1\endcsname%
10881 \postchaptername%
10882 \quad%
10883 }
10884 }
```

Use decimal points instead of centered dots:

```
10885 \renewcommand{\thepart}{\@Roman\c@part}
10886 \@ifundefined{chapter}{
10887 \renewcommand{\thesection}{\@arabic\c@section}
10888 }{
10889 \renewcommand{\thechapter}{\@arabic\c@chapter}
10890 \renewcommand{\thesection}{\thechapter.\@arabic\c@section}
10891 }
10892 \renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}
10893 \renewcommand{\thesubsubsection}{%
10894 \thesubsection.\@arabic\c@subsubsection}
10895 \renewcommand{\theparagraph}{%
10896 \thesubsubsection.\@arabic\c@paragraph}
10897 \renewcommand{\thesubparagraph}{%
10898 \theparagraph.\@arabic\c@subparagraph}
10899 \@ifundefined{chapter}{
10900 \renewcommand{\thefigure}{\@arabic\c@figure}
10901 \renewcommand{\thetable}{\@arabic\c@table}
10902 }
```

```

10903 \renewcommand{\thefigure}{%
10904 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@figure}
10905 \renewcommand{\thetable}{%
10906 \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@table}
10907 }
10908 }
10909
10910 \@ifclassloaded{ujarticle}{\LWR@patchujtclasses}{}
10911 \@ifclassloaded{ujbook}{\LWR@patchujtclasses}{}
10912 \@ifclassloaded{ujreport}{\LWR@patchujtclasses}{}
10913 \@ifclassloaded{utarticle}{\LWR@patchujtclasses}{}
10914 \@ifclassloaded{utbook}{\LWR@patchujtclasses}{}
10915 \@ifclassloaded{utreport}{\LWR@patchujtclasses}{}
10916 \@ifclassloaded{ltjarticle}{\LWR@patchujtclasses}{}
10917 \@ifclassloaded{ltjbook}{\LWR@patchujtclasses}{}
10918 \@ifclassloaded{ltjreport}{\LWR@patchujtclasses}{}
10919 \@ifclassloaded{ltjsarticle}{\LWR@patchujtclasses}{}
10920 \@ifclassloaded{ltjsbook}{\LWR@patchujtclasses}{}
10921 \@ifclassloaded{ltjsreport}{\LWR@patchujtclasses}{}
10922 \@ifclassloaded{ltjskiyou}{\LWR@patchujtclasses}{}
10923 \@ifclassloaded{ltjspf}{\LWR@patchujtclasses}{}
10924 \@ifclassloaded{ltjtarticle}{\LWR@patchujtclasses}{}
10925 \@ifclassloaded{ltjtbook}{\LWR@patchujtclasses}{}
10926 \@ifclassloaded{ltjtreport}{\LWR@patchujtclasses}{}

10927 \end{warpHTML}

```

## 97 CTEXpatch

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:** 10928 \begin{warpHTML}

\AtBeginDocument in case the user set FileSectionNames in the preamble.

```

10929 \AtBeginDocument{
10930 \@ifpackageloaded{ctexpatch}{%
10931 \def\@partcntformat#1{%
10932 \LWR@isolate{\CTEX@partname}~%
10933 \CTEX@part@aftername%
10934 }%
10935
10936 \def\@partnameformat{}

```

```
10937
10938 \def\@chapcntformat#1{%
10939 \LWR@isolate{\CTEX@chaptername}~%
10940 \CTEX@chapter@aftername%
10941 }%
10942 }{}
10943 }

10944 \end{warpHTML}
```

---

File 2 **lwarp-2in1.sty**

§ 98 Package **2in1**

Pkg 2in1 2in1 is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{2in1}

---

File 3 **lwarp-2up.sty**

§ 99 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**

§ 100 Package **a4**

Pkg a4 a4 is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a4}

---

```
2 \newcommand*{\WideMargins}{}
```

---

File 5 **lwarp-a4wide.sty**

§ 101 Package **a4wide**

Pkg a4wide a4wide is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a4wide}

---

File 6 **lwarp-a5comb.sty**

§ 102 Package **a5comb**

Pkg a5comb a5comb is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a5comb}

---

File 7 **lwarp-abstract.sty**

§ 103 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}

3 \AtBeginDocument{
4 \BeforeBeginEnvironment{abstract}{
5 \LWR@forcenewpage
6 \BlockClass{abstract}
7 }
8 \AfterEndEnvironment{abstract}{\endBlockClass}
9 }
10
11 \renewcommand{\@bsrunintitle}{%
12 \hspace*{\abstitlestitle}%
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{\abstitlestitle}%
37 \fi
38 \fi
39 \vspace{\abstitlestitle}%
40 \fi
41 \put@bsintoc%
42 \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
43 {\par\end{@bstr@ctlist}\vfil\null%\endtitlepage
44 }
45 }{% not memoir
46 \if@titlepage
47 \renewenvironment{abstract}{%
48 % \titlepage
49 \null\vfil

```

```

50 \@beginparpenalty\@lowpenalty
51 \if@bsrunin
52 \else
53 \if@bsstyle
54 \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
55 \else
56 \ifnumber@bs
57 \num@bs
58 \else
59 \begin{\absnamepos}%
60 \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}
61 \endparpenalty\@M
62 \end\absnamepos%
63 %% \vspace{\abstitleskip}%
64 \fi
65 \fi
66 \vspace{\abstitleskip}%
67 \fi
68 \put@bsintoc%
69 \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
70 {\par\end{@bstr@ctlist}\vfil\null%\endtitlepage
71 }
72 \else
73 \renewenvironment{abstract}{%
74 \if@bsrunin
75 \else
76 \if@bsstyle
77 \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
78 \else
79 \ifnumber@bs
80 \num@bs
81 \else
82 \begin{\absnamepos}%
83 \abstractnamefont\BlockClassSingle{abstracttitle}{\abstractname}%
84 \end\absnamepos%
85 %% \vspace{\abstitleskip}%
86 \fi
87 \fi
88 \vspace{\abstitleskip}%
89 \fi
90 \put@bsintoc%
91 \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
92 {\par\end{@bstr@ctlist}}
93 \fi
94 }% not memoir

```

---

 File 8 **lwarp-accsupp.sty**

 § 104 Package **accsupp**

Pkg accsupp accsupp is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{accsupp}

2 \newcommand*{\BeginAccSupp}[1]{ }
3 \newcommand*{\EndAccSupp}[1]{ }
```

---

 File 9 **lwarp-acro.sty**

 § 105 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}
```

`\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 __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 10 **lwarp-acronym.sty**§ 106 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}`

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 } }
```

Modified for `cleveref` and `zref`:

```
8 \renewcommand*\AC@und@newl@bel[3]{%
9 \@ifundefined{#1@#3}%
10 {%
11 \global\expandafter\let\csname#2@#3\endcsname\@nnil
12 \global\expandafter\let\csname#2@#3@cref\endcsname\@nnil% lwarp
13 }%
14 {%
15 \global\expandafter\let\csname#1@#3\endcsname\relax
16 \global\expandafter\let\csname#1@#3@cref\endcsname\relax% lwarp
17 \global\expandafter\let\csname Z@R@#3\endcsname\relax% lwarp
18 }%
19 }% }
```

Modified for `cleveref` and `zref`:

```
20 \renewcommand*\AC@testdef[3]{%
21 \ifstrequal{#1}{Z@R}{-}{-}% lwarp
```

```

22 \@ifundefined{s@#2}\@secondoftwo\@firstofone
23 {%
24 \expandafter\ifx\csname s@#2\endcsname\empty
25 \expandafter\@firstofone
26 \else
27 \expandafter\xdef\csname s@#2\endcsname{%
28 \expandafter\expandafter
29 \expandafter\@gobble
30 \csname s@#2\endcsname
31 }%
32 \expandafter\@gobble
33 \fi
34 }%
35 {%
36 \@testdef{#1}{#2}{#3}%
37 }%
38 }% lwarp
39 }%

```

---

File 11 `lwarp-adjmulticol.sty`

§ 107 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}`

`2 \RequirePackage{multicol}`

`adjmulticols` \* `{<numcols>}{<left margin>}{<right margin>}`

`3 \NewDocumentEnvironment{adjmulticols}{s m m}`

`4 {%`

Compute the margins, and limit to positive only:

`5 \setlength{\LWR@templengthone}{#3}%`

`6 \ifdimcomp{\LWR@templengthone}{<}{0pt}{\setlength{\LWR@templengthone}{0pt}}{ }%`

`7 \setlength{\LWR@templengthtwo}{#4}`

`8 \ifdimcomp{\LWR@templengthtwo}{<}{0pt}{\setlength{\LWR@templengthtwo}{0pt}}{ }%`

If one column is specified, use a <div> of class singlecolumn, else use multicols:

```
9 \newcommand*\LWR@mccolstype{multicols}%
10 \ifnumcomp{#2}{=} {1}{\renewcommand*\LWR@mccolstype{singlecolumn}}{}
```

Help avoid page overflow:

```
11 \LWR@forcenewpage%
```

Create the <div> with the given margin and class:

```
12 \BlockClass[%
13 \LWR@print@mbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
14 \LWR@print@mbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}%
15]{\LWR@mccolstype}%
16 }
17 {\endBlockClass}
```

## File 12 lwarp-addlines.sty

### § 108 Package **addlines**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg addlines addlines is emulated.

**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 13 lwarp-afterpage.sty

### § 109 Package **afterpage**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg afterpage Emulated.

**for HTML output:** Discard all options for lwarp-afterpage:

```
1 \LWR@ProvidesPackageDrop{afterpage}
2 \newcommand{\afterpage}[1]{#1}
```

---

File 14 **lwarp-algorithm2e.sty**

§ 110 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}`

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@everyparnl\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@algotcf@dopars}% lwarp
66 }

```

Line numbers are printed in a `<span>` of class `alg2elinelnumber`:

```

67 \renewcommand{\algotcf@printnl}[1]{%
68 \InlineClass{alg2elinelnumber}{\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\@algotcf@init{%
71 \edef\LWR@floatstyle@figure{\LWR@floatstyle@algotcf}%
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{\@algotcf@start}{%
74 \let\@mathsemicolon=\; \def\;{\ifmmode\@mathsemicolon\else\@endalgoln\fi}%
75 \raggedright%
76 \AlFnt{}%
77 \booltrue{LWR@algotcf@dopars}% lwarp
78 }
79
80 \renewcommand{\@algotcf@finish}{%
81 \boolfalse{LWR@algotcf@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 15 `lwarp-algorithmicx.sty`

### § 111 Package **algorithmicx**

*(Emulates or patches code by SZÁSZ JÁNOS.)*

Pkg `algorithmicx` `algorithmicx` is supported with minor adjustments.

**for HTML output:** `1 \LWR@ProvidesPackagePass{algorithmicx}`

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 [429.1](#).

**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 16 **lwarp-alltt.sty**

§ 112 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}

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 17 **lwarp-amsmath.sty**

§ 113 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}
```

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@remember@tag{#1}%
11 \LWR@origmake@df@tag@@{#1}%
12 }
13
14 \renewcommand*\make@df@tag@@@[1]{%
15 \LWR@remember@tag{#1}%
16 \LWR@origmake@df@tag@@@{#1}%
17 }
18
19 }% not mathjax
```

The following  $\mathcal{AMS}$  environments are more easily patched in-place:

Env `multline`

```
20 \BeforeBeginEnvironment{multline}{
21
22 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
23 {
24 \LWR@syncmathjax
25 \booltrue{LWR@amsmultline}
26 \LWR@beginhideamsmath
27 }
28 {
29 \begin{BlockClass}{displaymathnumbered}
30 \LWR@newautoidanchor%
31 \booltrue{LWR@indisplaymathimage}%
32 \begin{lateximage}[\LWR@amsmathbodynumbered{multline}]
33 }
34 }
35
36 \AfterEndEnvironment{multline}{
37
```

```

38 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
39 {
40 \LWR@endhideamsmath
41 \boolfalse{LWR@amsmultiline}
42 \LWR@addmathjax{multiline}{\the\@envbody}
43 }
44 {\end{lateximage}\end{BlockClass}}
45
46 }

```

Env `multiline*`

```

47 \BeforeBeginEnvironment{multiline*}{
48
49 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
50 {
51 \LWR@syncmathjax
52 \booltrue{LWR@amsmultiline}
53 \LWR@beginhideamsmath
54 }
55 {
56 \begin{BlockClass}{displaymath}
57 \LWR@newautoidanchor
58 \booltrue{LWR@indisplaymathimage}%
59 \begin{lateximage}[\LWR@amsmathbody{multiline*}]
60 }
61 }
62
63 \AfterEndEnvironment{multiline*}{
64
65 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
66 {
67 \LWR@endhideamsmath
68 \boolfalse{LWR@amsmultiline}
69 \LWR@addmathjax{multiline*}{\the\@envbody}
70 }
71 {\end{lateximage}\end{BlockClass}}
72
73 }
74

```

Env `gather`

```

75 \BeforeBeginEnvironment{gather}{
76
77 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
78 {
79 \LWR@syncmathjax

```

```

80 \boolfalse{LWR@amsmultline}
81 \LWR@beginhideamsmath
82 }
83 {
84 \begin{BlockClass}{displaymathnumbered}
85 \LWR@newautoidanchor%
86 \booltrue{LWR@indisplaymathimage}%
87 \begin{lateximage}[\LWR@amsmathbodynumbered{gather}]
88 }
89 }
90
91 \AfterEndEnvironment{gather}{
92
93 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
94 {
95 \LWR@endhideamsmath
96 \LWR@addmathjax{gather}{\the\@envbody}
97 }
98 {\end{lateximage}\end{BlockClass}}
99
100 }

```

Env **gather\***

```

101 \BeforeBeginEnvironment{gather*}{
102
103 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
104 {
105 \LWR@syncmathjax
106 \boolfalse{LWR@amsmultline}
107 \LWR@beginhideamsmath
108 }
109 {
110 \begin{BlockClass}{displaymath}
111 \LWR@newautoidanchor%
112 \booltrue{LWR@indisplaymathimage}%
113 \begin{lateximage}[\LWR@amsmathbody{gather*}]
114 }
115 }
116
117 \AfterEndEnvironment{gather*}{
118
119 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
120 {
121 \LWR@endhideamsmath
122 \LWR@addmathjax{gather*}{\the\@envbody}
123 }
124 {\end{lateximage}\end{BlockClass}}
125

```

126 }

Env align

```

127 \BeforeBeginEnvironment{align}{
128
129 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
130 {
131 \LWR@syncmathjax
132 \boolfalse{LWR@amsmultiline}
133 \LWR@beginhideamsmath
134 }
135 {
136 \begin{BlockClass}{displaymathnumbered}
137 \LWR@newautoidanchor%
138 \booltrue{LWR@indisplaymathimage}%
139 \begin{lateximage}[\LWR@amsmathbodynumbered{align}]
140 }
141 }
142
143 \AfterEndEnvironment{align}{
144
145 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
146 {
147 \LWR@endhideamsmath
148 \LWR@addmathjax{align}{\the\@envbody}
149 }
150 {\end{lateximage}\end{BlockClass}}
151
152 }
```

Env align\*

```

153 \BeforeBeginEnvironment{align*}{
154
155 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
156 {
157 \LWR@syncmathjax
158 \boolfalse{LWR@amsmultiline}
159 \LWR@beginhideamsmath
160 }
161 {
162 \begin{BlockClass}{displaymath}
163 \LWR@newautoidanchor%
164 \booltrue{LWR@indisplaymathimage}%
165 \begin{lateximage}[\LWR@amsmathbody{align*}]
166 }
167 }
```

```

168
169 \AfterEndEnvironment{align*}{
170
171 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
172 {
173 \LWR@endhideamsmath
174 \LWR@addmathjax{align*}{\the\@envbody}
175 }
176 {\end{lateximage}\end{BlockClass}}
177
178 }

```

Env `flalign`

```

179 \BeforeBeginEnvironment{flalign}{
180
181 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
182 {
183 \LWR@syncmathjax
184 \boolfalse{LWR@amsmultiline}
185 \LWR@beginhideamsmath
186 }
187 {
188 \begin{BlockClass}{displaymathnumbered}
189 \LWR@newautoidanchor%
190 \booltrue{LWR@indisplaymathimage}%
191 \begin{lateximage}[\LWR@amsmathbodynumbered{flalign}]
192 }
193 }
194
195 \AfterEndEnvironment{flalign}{
196
197 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
198 {
199 \LWR@endhideamsmath
200 \LWR@addmathjax{flalign}{\the\@envbody}
201 }
202 {\end{lateximage}\end{BlockClass}}
203
204 }

```

Env `flalign*`

```

205 \BeforeBeginEnvironment{flalign*}{
206
207 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
208 {
209 \LWR@syncmathjax

```

```

210 \boolfalse{LWR@amsmultline}
211 \LWR@beginhideamsmath
212 }
213 {
214 \begin{BlockClass}{displaymath}
215 \LWR@newautoidanchor%
216 \booltrue{LWR@indisplaymathimage}%
217 \begin{lateximage}[\LWR@amsmathbody{flalign*}]
218 }
219 }
220
221 \AfterEndEnvironment{flalign*}{
222
223 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
224 {
225 \LWR@endhideamsmath
226 \LWR@addmathjax{flalign*}{\the\@envbody}
227 }
228 {\end{lateximage}\end{BlockClass}}
229
230 }

```

Env alignat

```

231 \BeforeBeginEnvironment{alignat}{
232
233 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
234 {
235 \LWR@syncmathjax
236 \boolfalse{LWR@amsmultline}
237 \LWR@beginhideamsmath
238 }
239 {
240 \begin{BlockClass}{displaymathnumbered}
241 \LWR@newautoidanchor%
242 \booltrue{LWR@indisplaymathimage}%
243 \begin{lateximage}[\LWR@amsmathbodynumbered{alignat}]
244 }
245 }
246
247 \AfterEndEnvironment{alignat}{
248
249 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
250 {
251 \LWR@endhideamsmath
252 \LWR@addmathjax{alignat}{\the\@envbody}
253 }
254 {\end{lateximage}\end{BlockClass}}
255

```

256 }

Env `alignat*`

```

257 \BeforeBeginEnvironment{alignat*}{
258
259 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
260 {
261 \LWR@syncmathjax
262 \boolfalse{LWR@amsmultline}
263 \LWR@beginhideamsmath
264 }
265 {
266 \begin{BlockClass}{displaymath}
267 \LWR@newautoidanchor%
268 \booltrue{LWR@indisplaymathimage}%
269 \begin{lateximage}[\LWR@amsmathbody{alignat*}]
270 }
271 }
272
273 \AfterEndEnvironment{alignat*}{
274
275 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
276 {
277 \LWR@endhideamsmath
278 \LWR@addmathjax{alignat*}{\the\@envbody}
279 }
280 {\end{lateximage}\end{BlockClass}}
281
282 }
```

---

File 18 `lwarp-amsthm.sty`

§ 114 Package **amsthm**

*(Emulates or patches code by PUBLICATIONS TECHNICAL GROUP — AMERICAN MATHEMATICAL SOCIETY.)*

The original source code is located in `amsclass.dtx`, and printed in `amsclass.pdf`.

Pkg `amsthm` `amsthm` is patched for use by `lwarp`.

**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 \detokenize{\usepackage}{mdframed}.
6 Package amsthm may be loaded by something else, which must also be moved
7 before mdframed.%
8 }
9 }
10 {}

11 \LWR@ProvidesPackagePass{amsthm}

```

Storage for the style being used for new theorems:

```
12 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```

13 \renewcommand{\theoremstyle}[1]{%
14 \@ifundefined{th@#1}{%
15 \PackageWarning{amsthm}{Unknown theoremstyle '#1'}%
16 \thm@style{plain}%
17 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
18 }{%
19 \thm@style{#1}%
20 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
21 }%
22 }

```

Patched to remember the style for this theorem type:

```

23 \def\xnthm#1#2{%
24 \csedef{LWR@thmstyle#2}{\LWR@newtheoremstyle}% lwarp

```

```

25 \let\@tempa\relax
26 \@xp\@ifdefinable\csname #2\endcsname{%
27 \global\@xp\let\csname end#2\endcsname\@endtheorem
28 \ifx *#1% unnumbered, need to get one more mandatory arg
29 \edef\@tempa##1{%
30 \gdef\@xp\@nx\csname#2\endcsname{%
31 \@nx\@thm{\@xp\@nx\csname th@\the\thm@style\endcsname}%
32 }{##1}}}%
33 \else % numbered theorem, need to check for optional arg
34 \def\@tempa{\@oparg{\@ynthm{#2}}{}}}%
35 \fi
36 \AtBeginEnvironment{#2}{\edef\LWR@thmsthmstyle{\@nameuse{LWR@thmsthmstyle#2}}}% lwarp
37 }%
38 \@tempa
39 }

```

Patched to enclose with css:

```

40 \newcommand{\LWR@haveamsthmname}{
41 \renewcommand{\thmname}[1]{\InlineClass{amsthmname\LWR@thmsthmstyle}{##1}}
42 }
43
44 \newcommand{\LWR@haveamsthmnumber}{
45 \renewcommand{\thmnumber}[1]{\InlineClass{amsthmnumber\LWR@thmsthmstyle}{##1}}
46 }
47
48 \newcommand{\LWR@haveamsthmnote}{
49 \renewcommand{\thmnote}[1]{\InlineClass{amsthmnote\LWR@thmsthmstyle}{##1}}
50 }
51
52 \LWR@haveamsthmname
53 \LWR@haveamsthmnumber
54 \LWR@haveamsthmnote

```

Patches for CSS:

```

55 \def\@begintheorem#1#2[#3]{%
56 \item[
57 % \deferred@thm@head{
58 % \the\thm@headfont \thm@indent
59 % \@ifempty{#1}{\let\thmname\@gobble}{\LWR@haveamsthmname}% lwarp
60 % \@ifempty{#2}{\let\thmnumber\@gobble}{\LWR@haveamsthmnumber}% lwarp
61 % \@ifempty{#3}{\let\thmnote\@gobble}{\LWR@haveamsthmnote}% lwarp
62 % \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
63 % \the\thm@headpunct~
64 % \thmheadnl % possibly a newline.
65 % \hskip\thm@headsep
66 % }%
67]

```

```
68 \ignorespaces}
```

Patched for CSS:

```
69 \def\@thm#1#2#3{%
70 \ifhmode\unskip\unskip\par\fi
71 \normalfont
72 \LWR@forcenewpage% lwarp
73 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
74 \trivlist
75 \let\thmheadnl\relax
76 \let\thm@swap@gobble
77 \thm@notefont{\fontseries\mdefault\upshape}%
78 \thm@headpunct{.}% add period after heading
79 \thm@headsep 5\p@ plus\p@ minus\p@\relax
80 \thm@space@setup
81 #1% style overrides
82 \@topsep \thm@preskip % used by thm head
83 \@topsepadd \thm@postskip % used by \@endparenv
84 \def\@tempa{#2}\ifx\@empty\@tempa
85 \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}{}%
86 \else
87 \refstepcounter{#2}%
88 \def\@tempa{\@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}{}%
89 \fi
90 \@tempa
91 }
```

cleveref patches \@thm to do \cref@thmoptarg if an optional argument is given. lwarp then patches \cref@thmoptarg \@AtBeginDocument.

```
92 \@AtBeginDocument{
93 \def\cref@thmoptarg[#1]#2#3#4{%
94 \ifhmode\unskip\unskip\par\fi%
95 \normalfont%
96 \LWR@forcenewpage% lwarp
97 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
98 \trivlist%
99 \let\thmheadnl\relax%
100 \let\thm@swap@gobble%
101 \thm@notefont{\fontseries\mdefault\upshape}%
102 \thm@headpunct{.}% add period after heading
103 \thm@headsep 5\p@ plus\p@ minus\p@\relax%
104 \thm@space@setup%
105 #2% style overrides
106 \@topsep \thm@preskip % used by thm head
107 \@topsepadd \thm@postskip % used by \@endparenv
108 \def\@tempa{#3}\ifx\@empty\@tempa%
109 \def\@tempa{\@oparg{\@begintheorem{#4}{}}{}}{}%
```

```

110 \else%
111 \refstepcounter[#1]{#3}% <<< cleveref modification
112 \def\@tempa{\@oparg{\@begintheorem{#4}{\csname the#3\endcsname}}{}}%
113 \fi%
114 \@tempa
115 }%
116 }% AtBeginDocument
117
118 \def\@endtheorem{\endtrivlist\endBlockClass\@endpefalse }

```

Proof QED symbol:

```

119 \AtBeginDocument{
120 \ifundefined{LWR@orig@openbox}{
121 \LetLtxMacro\LWR@orig@openbox\openbox
122 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
123 \LetLtxMacro\LWR@orig@Box\Box
124
125 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
126 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
127 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
128
129 \appto\LWR@restoreorigformatting{%
130 \LetLtxMacro\openbox\LWR@orig@openbox%
131 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
132 \LetLtxMacro\Box\LWR@orig@Box%
133 }% appto
134 }{}% \ifundefined
135 }% AtBeginDocument

```

Patched for CSS:

```

136 \renewenvironment{proof}[1][\proofname]{\par
137 \LWR@forcenewpage% lwarp
138 \BlockClass{amsthmproof}% lwarp
139 \pushQED{\qed}%
140 \normalfont \topsep6\p@\@plus6\p@\relax
141 \trivlist
142 \item[
143 \InlineClass{amsthmproofname}{#1\@addpunct{.}}\ignorespaces% changes
144]{}%
145 \InlineClass{theoremendmark}{\popQED}\endtrivlist%
146 \endBlockClass% lwarp
147 \@endpefalse
148 }

```

File 19 **lwarp-anonchap.sty**§ 115 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.

The code is shared by tocbibind.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{anonchap}

2 \newcommand{\simplechapter}[1][\@empty]{%
3 \def\@chapcntformat##1{%
4 #1~\csname the##1\endcsname\simplechapterdelim\quad%
5 }%
6 }
7
8 \newcommand{\restorechapter}{%
9 \let\@chapcntformat\@seccntformat%
10 }

```

File 20 **lwarp-anysize.sty**§ 116 Package **anysize***(Emulates or patches code by MICHAEL SALZENBERG, THOMAS ESSER.)*Pkg **anysize** anysize is emulated.**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{anysize}

2 \def\papersize#1#2{}
3 \def\marginsize#1#2#3#4{}

```

**tocloft & other packages**

---

File 21 **lwarp-appendix.sty**

§ 117 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}

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 22 **lwarp-arabicfront.sty**

§ 118 Package **arabicfront**

Pkg arabicfront arabicfront is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{arabicfront}
```

---

 File 23 **lwarp-array.sty**

 § 119 Package **array**

Pkg `array` `array` is used as-is for print output, and emulated for HTML.

`plarray` and `plextarray` 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}

5 \newcommand*\LWR@HTML@firstline{\LWR@HTMLhline}%
6 \LWR@expandableformatted{firstline}
7
8 \newcommand*\LWR@HTML@lastline{\LWR@HTMLhline}%
9 \LWR@expandableformatted{lastline}

```

---

 File 24 **lwarp-arydshln.sty**

 § 120 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}

```

Ignored, but included for source compatibility:

```

3 \newdimen\dashlinedash \dashlinedash4pt %
4 \newdimen\dashlinegap \dashlinegap4pt %
5 \let\hdashlinewidth\dashlinedash
6 \let\hdashlinegap\dashlinegap
7
8 \def\ADLnullwide{}
9 \def\ADLsomewide{}
10 \def\ADLnullwidehline{}
11 \def\ADLsomewidehline{}
12
13 \def\ADLactivate{}
14 \def\ADLinactivate{}
15 \newcommand*\ADLdrawingmode[1]{}
16 \newcommand*\ADLnoshorthanded{}
17 \newcommand*\dashgapcolor[2] [] {}
18 \newcommand*\nodashgapcolor{}

```

In a lateximage, revert to solid vertical rules:

```

19 \appto\LWR@restoreorigformatting{%
20 \newcolumntype{:}{|}%
21 \newcolumntype{;}[1]{|}%
22 \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\doublerulesep \adl@hline\relax\doublerulesep}
52 \def\adl@hline#1#2{%
53 % \@tempcnta#2
54 % \global\advance\adl@totalheight\@tempcnta
55 % \xdef\adl@rowsL{\adl@rowsL
56 % (#1/\number\@tempcnta);}
57 % \xdef\adl@rowsR{\adl@rowsR
58 % (#1/\number\@tempcnta);}
59 }
60
61 \def\cdashline#1{\noalign{\ifnum0='}\fi
62 % \@ifnextchar [%]
63 % {\adl@cdline[#1]}%
64 % {\adl@cdline[#1] [\dashlinedash/\dashlinegap]}
65 % {\adl@inactivecdl[#1]}%
66 % {\adl@inactivecdl[#1] [\dashlinedash/\dashlinegap]}
67 }
68
69 \def\adl@inactivecdl[#1-#2] [#3]{\ifnum0='{ \fi}\cline{#1-#2}}

```

---

File 25 **lwarp-asymptote.sty**

§ 121 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}

2 \BeforeBeginEnvironment{asy}{\begin{lateximage}[(-asymptote--\packagediagramname)]}
3 \AfterEndEnvironment{asy}{\end{lateximage}}
4
5 \xpatchcmd{\asyinclude}
6 {\begingroup}
7 {\begin{lateximage}[(-asymptote--\packagediagramname)]}
8 {}
9 {\LWR@patcherror{asymptote}{asyinclude-begingroup}}
10
11 \xpatchcmd{\asyinclude}
12 {\endgroup}
13 {\end{lateximage}}
14 {}
15 {\LWR@patcherror{asymptote}{asyinclude-endgroup}}

```

---

File 26 **lwarp-atbegshi.sty**

§ 122 Package **atbegshi**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg atbegshi Emulated.

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{Opt}
14 \def\AtBeginShipoutBoxHeight{Opt}
15 \def\AtBeginShipoutBoxDepth{Opt}
16

```

---

File 27 **lwarp-attachfile.sty**

§ 123 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}

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 28 `lwarp-attachfile2.sty`

### § 124 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}`

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\endcsname
70 % \else
71 % \makebox[\atfi@appearancewidth]{}%
72 \fi
73 \endgroup
74 }
```

---

File 29 **lwarp-authblk.sty**

§ 125 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 `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 65.8.

*(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}
```

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 30 `lwarp-axessibility.sty`

§ 126 Package **axessibility**

Pkg `axessibility` `axessibility` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{axessibility}`

```
2 \newcommand{\wrap}[1]{}
```

---

File 31 **lwarp-axodraw2.sty**

§ 127 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}

2 \BeforeBeginEnvironment{axopicture}{\begin{lateximage}[(-axopicture--\packagediagramname)]}
3
4 \AfterEndEnvironment{axopicture}{\end{lateximage}}
```

---

File 32 **lwarp-backref.sty**

§ 128 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}
```

Force the hyperref option:

```

2 \def\backref{}\let\backrefxxx\hyper@section@backref
```

---

File 33 **lwarp-balance.sty**

§ 129 Package **balance**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg balance Emulated.

**for HTML output:**

Discard all options for lwarp-balance:

```
1 \LWR@ProvidesPackageDrop{balance}

2 \newcommand*{\balance}{}
3 \newcommand*{\nobalance}{}

```

---

File 34 **lwarp-biblatex.sty**

§ 130 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 C<sub>T</sub>E<sub>X</sub>-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}

```

---

File 35 **lwarp-bibunits.sty**

§ 131 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}`

---

```
2 \def\bu@bibdata{\BaseJobname}
```

---

File 36 **lwarp-bigdelim.sty**

§ 132 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{\}{2}{.25in}[left] & c & d \\
\mrowcell & e & f \\
<empty> & g & h \\
\end{tabular}
```

---

```
<> a b
 {
left { c d
 { e f
 {
<> g h
```

---

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}

\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 37 **lwarp-bigstrut.sty**

§ 133 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}

2 \LetLtxMacro\LWR@origbigstrut\bigstrut
3
4 \renewcommand\bigstrut[1][x]{%
5
6 \appto\LWR@restoreorigformatting{%
7 \LetLtxMacro\bigstrut\LWR@origbigstrut%
8 }

```

---

File 38 **lwarp-bitpattern.sty**

§ 134 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}

2 \xpatchcmd{\bitpattern}
3 {\begingroup}
4 {\begin{lateximage}[(-bitpattern--\packagediagramname)]}

```

---

```

5 {}
6 {\LWR@patcherror{bitpattern}{bitpattern}}
7
8 \xpatchcmd{\bp@Done}
9 {\endgroup}
10 {\end{lateximage}}
11 {}
12 {\LWR@patcherror{bitpattern}{bp@Done}}

```

---

File 39 **lwarp-blowup.sty**

§ 135 Package **blowup**

Pkg blowup blowup is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{blowup}

2 \newcommand*\blowUp[1]{}

```

---

File 40 **lwarp-booklet.sty**

§ 136 Package **booklet**

*(Emulates or patches code by PETER WILSON.)*

Pkg booklet booklet is nullified.

**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 41 **lwarp-bookmark.sty**

§ 137 Package **bookmark**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg bookmark bookmark is emulated.

**for HTML output:** Discard all options for lwarp-bookmark:

```
1 \LWR@ProvidesPackageDrop{bookmark}

2 \newcommand*\bookmarksetup[1]{}
3 \newcommand*\bookmarksetupnext[1]{}
4 \newcommand*\bookmark[2][1]{}
5 \newcommand*\bookmarkdefinestyle[2]{}
6 \newcommand*\bookmarkget[1]{}
7 \newcommand*\BookmarkAtEnd[1]{}

```

---

File 42 **lwarp-booktabs.sty**

§ 138 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}

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@tablettotalLaTeXcols}}\LWR@getmynexttoken}%
66
67 \LWR@expandableformatted{specialrule}

```

---

File 43 **lwarp-bophook.sty**

§ 139 Package **bophook**

Pkg bophook bophook is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{bophook}

2 \newcommand*{\AtBeginPage}[1]{}
3 \newcommand*{\PageLayout}[1]{}

```

---

File 44 **lwarp-bounddvi.sty**

§ 140 Package **bounddvi**

Pkg bounddvi bounddvi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{bounddvi}

```

---

File 45 **lwarp-boxedminipage2e.sty**

§ 141 Package **boxedminipage2e**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg boxedminipage2e boxedminipage2e is emulated.

**for HTML output:** Discard all options for lwarp-boxedminipage2e:

```

1 \LWR@ProvidesPackageDrop{boxedminipage2e}

2 \newenvironment{boxedminipage}{%
3 \begin{BlockClass}{framebox}%

```

---

```

4 \minipage%
5 }
6 {
7 \endminipage%
8 \end{BlockClass}
9 }

```

---

File 46 **lwarp-breakurl.sty**

§ 142 Package **breakurl**

*(Emulates or patches code by VILAR CAMARA NETO.)*

Pkg breakurl breakurl is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{breakurl}

2 \LetLtxMacro\burl\url
3
4 \NewDocumentCommand{\LWR@burlaltb}{0{} +m m}{%
5 \LWR@ensuredoingapar%
6 \LWR@subhyperref{#2}%
7 \LWR@subhyperrefreftext{#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@burlaltb%
19 }
20
21 \LetLtxMacro\urlalt\burlalt

```

---

File 47 **lwarp-breqn.sty**

§ 143 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}
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- \mathimagename]
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*- \mathimagename]
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- \mathimagename]
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* - \mathim名称]
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 - \mathim名称]
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* - \mathim名称]
67 }
68
69 \AfterEndEnvironment{dgroup*}{
70 \end{lateximage}\end{BlockClass}
71 }

```

---

File 48 **lwarp-bsheaders.sty**

§ 144 Package **bsheaders**

Pkg bsheaders bsheaders is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bsheaders}[1997/10/06]

---

File 49 **lwarp-bxpapersize.sty**

§ 145 Package **bxpapersize**

Pkg bxpapersize bxpapersize is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bxpapersize}

---

```
2 \providecommand*\papersizesetup{\bxpapersizesetup}
3 \newcommand*\bxpapersizesetup[1]{}
```

---

File 50 **lwarp-bytefield.sty**

§ 146 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}

```
2 \BeforeBeginEnvironment{bytefield}{\begin{lateximage}[(-bytefield~\packagediagramname)]}
3
4 \AfterEndEnvironment{bytefield}{\end{lateximage}}
```

---

File 51 **lwarp-cancel.sty**

§ 147 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}

\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 \ifcempty{#2}%
14 {\InlineClass(#5){#3}{#1}}%
15 {\LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}}%
16 }

```

`\cancel`    `{<text>}`

```

17 \DeclareRobustCommand{\cancel}[1]{%
18 \begingroup%
19 \CancelColor%
20 \LWR@findcurrenttextcolor%
21 \color{black}%
22 \LWR@cancelcolor{#1}{LWR@tempcolor}{sout}{text-decoration-color}%
23 {text-decoration:line-through}%
24 \endgroup%
25 }
26
27 \LetLtxMacro\bcancel\cancel
28 \LetLtxMacro\xcancel\cancel

```

---

File 52 `lwarp-canonicleayout.sty`

§ 148    Package **canonicleayout**

Pkg `canonicleayout`    `canonicleayout` is ignored.

**for HTML output:**    `s1 \LWR@ProvidesPackageDrop{canonicleayout}`

```

2 \newcommand*{\currentfontletters}{}
3 \newcommand*{\charactersperpage}{}

```

---

File 53 `lwarp-caption.sty`

§ 149    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}`

```

2 \renewcommand\caption@ibox[3]{%
3 \@testopt{\caption@ibox{#1}{#2}{#3}}{%
4 \wd\@tempboxa%

```

```

5 \linewidth% lwarp
6 }%
7 \LWR@traceinfo{caption@ibox: done}%
8 }

9 \long\def\caption@iiibox#1#2#3[#4]{%
10 \@testopt{\caption@iiibox{#1}{#2}{#3}{#4}}\captionbox@hj@default
11 }

12 \long\def\caption@iiibox#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@iiibox 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@iiibox 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 \else
59 \caption@prepareanchor{#1}{#2}%
60 \memcaptioninfo{#1}{\csname the#1\endcsname}{#2}{#3}%
61 \@nameuse{nag@hascaptiontrue}%
62 \fi

63 \par
64 \caption@beginex{#1}{#2}{#3}%
65 \caption@setfloatcapt{%
66 \caption@boxrestore
67 \if@minipage
68 \@setminipage
69 \fi
70 \caption@normalsize
71 \ifcaption@star
72 \let\caption@makeanchor\@firstofone
73 \fi
74 \@makecaption{\csname fnum@#1\endcsname}%
75 {\ignorespaces\caption@makeanchor{#3}}\par
76 \caption@if@minipage\@minipagetrue\@minipagefalse}%
77 \caption@end%
78 }

```

```

\caption@@@make {\langle caption label \rangle} {\langle caption text \rangle}

79 \renewcommand\caption@@@make [2]{%
80 \LWR@startpars% lwarp
81 % \sbox\@tempboxa{#1}%
82 % \ifdim\wd\@tempboxa=\z@
83 % \let\caption@lsep\relax
84 % \fi
85 \caption@ifempty{#2}{%
86 \let\caption@lsep\@empty
87 \let\caption@tfmt\@firstofone
88 }%
89 \@setpar{\LWR@closeparagraph\@@par}% lwarp
90 \caption@applyfont
91 \caption@fmt
92 {\ifcaption@star\else
93 \begingroup
94 \captionlabelfont
95 #1%

```

```

96 \endgroup
97 \fi}%
98 {\ifcaption@star\else
99 \begingroup
100 \caption@iflf\captionlabelfont
101 \relax\caption@lsep
102 \endgroup
103 \fi}%
104 {\captiontextfont
105 \caption@ifstrut
106 {\vrule\@height\ht\strutbox\@width\z@}%
107 {}}%
108 \nobreak\hskip\z@skip % enable hyphenation
109 \caption@tfmt{#2}
110 \LWR@ensuredoingapar% lwarp
111 \caption@ifstrut
112 {\ifhmode\@finalstrut\strutbox\fi}%
113 {}}%
114 \par}}
115 \LWR@stoppars% lwarp
116 }

\caption@@make@ {<>} {<>}

117 \renewcommand{\caption@@make@}[2]{%
118 \caption@stepthecounter
119 \caption@beginhook
120 \caption@@make{#1}{#2}%
121 \caption@endhook
122 }

123 % \DeclareCaptionBox{none}{#2}
124 \DeclareCaptionBox{parbox}{%
125 #2%
126 }
127 \DeclareCaptionBox{colorbox}{%
128 #2%
129 }

```

---

File 54 **lwarp-cases.sty**

§ 150 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}

2 \BeforeBeginEnvironment{numcases}{
3 \begin{BlockClass}{displaymathnumbered}
4 \LWR@newautoidanchor%
5 \booltrue{LWR@indisplaymathimage}%
6 \begin{lateximage}[-cases- \mathimagenam]
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- \mathimagenam]
18 }
19
20 \AfterEndEnvironment{subnumcases}{
21 \end{lateximage}\end{BlockClass}
22 }
```

---

File 55 **lwarp-changebar.sty**

§ 151 Package **changebar**

Pkg changebar changebar is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{changebar}[2018/03/09]

2 \newcommand*{\cbstart}{}
3 \newcommand*{\cbend}{}
4 \newenvironment*{\changebar}{}{}
5 \newcommand*{\cbdelete}{}
6 \newcommand*{\nochnagebars}{}
7 \newcommand*{\cbcolor}[1]{}
8 \newlength{\changebarwidth}
9 \newlength{\deletebarwidth}
10 \newlength{\changebarsep}
11 \newcounter{changebargrey}
```

---

 File 56 **lwarp-changepage.sty**

 § 152 Package **changepage**

*(Emulates or patches code by PETER WILSON.)*

Pkg changepage changepage is emulated.

**for HTML output:** Discard all options for lwarp-changepage:

```

1 \LWR@ProvidesPackageDrop{changepage}

2 \newif\ifoddpge
3 \DeclareRobustCommand{\checkoddpge}{\oddpgetrue}
4 \DeclareRobustCommand{\changetext}[5]{}
5 \DeclareRobustCommand{\changege}[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 57 **lwarp-chngpage.sty**

 § 153 Package **chngpage**

*(Emulates or patches code by PETER WILSON.)*

Pkg chngpage chngpage is emulated.

**for HTML output:** Discard all options for lwarp-chngpage:

```

1 \LWR@ProvidesPackageDrop{chngpage}
2 \LWR@origRequirePackage{lwarp-changege}

```

File 58 **lwarp-chappg.sty**

§ 154 Package **chappg**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg chappg chappg is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{chappg}

2 \renewcommand{\pagenumbering}[2] [] {}
3 \providecommand{\chappgsep}{--}
```

File 59 **lwarp-chapterbib.sty**

§ 155 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}

2 \xdef\@savedjobname{\BaseJobname}
3 \let\@currentipfile\@savedjobname
```

File 60 **lwarp-chemfig.sty**

§ 156 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~\packagediagramname)]
\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 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
3
4 \DeclareDocumentCommand\chemfig{s O{} O{} m}{%
5 \begin{lateximage}[(-chemfig--\packagediagramname)]%
6 \IfBooleanTF{#1}{%
7 \LWR@chemfig@origchemfig*{#2}{#3}{#4}%
8 }{%
9 \LWR@chemfig@origchemfig{#2}{#3}{#4}%
10 }
11 \end{lateximage}%
12 }
13
14 \LetLtxMacro\LWR@chemfig@origCF@lewis@b\CF@lewis@b
15
16 \def\CF@lewis@b#1#2{%
17 \begin{lateximage}[(-chemfig--\packagediagramname)]%
18 \LWR@chemfig@origCF@lewis@b{#1}{#2}%
19 \end{lateximage}%
20 }
21
22 \preto{\schemestart}{\begin{lateximage}[(-chemfig--\packagediagramname)]}
23 \appto{\CF@schemestop}{\end{lateximage}}
24
25 \LetLtxMacro\LWR@chemfig@origchemleft\chemleft
26
27 \def\chemleft#1#2\chemright#3{%
28 \begin{lateximage}[(-chemfig--\packagediagramname)]%
29 \LWR@chemfig@origchemleft#1#2\chemright#3%
30 \end{lateximage}%
31 }
32
33 \LetLtxMacro\LWR@chemfig@origchemup\chemup
34
35 \def\chemup#1#2\chemdown#3{%
36 \begin{lateximage}[(-chemfig--\packagediagramname)]%
37 \LWR@chemfig@origchemup#1#2\chemdown#3%
38 \end{lateximage}%
39 }

```

File 61 `lwarp-chemformula.sty`

§ 157 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 { 0{}m }
4 {%
```

To work inside `align` with `\displaymathother`, 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 \l__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 \l__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 \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:nm {#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 __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 62 **lwarp-chemgreek.sty**

§ 158 Package **chemgreek**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg `chemgreek` chemgreek is patched for use by lwarp.

**Greek symbols** 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.

⚠ package selection

⚠ `XYLATEX`, `LuaATEX` If using `XYLATEX` or `LuaATEX`, 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 63 **lwarp-chemmacros.sty**

§ 159 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}`

SVG file hashing assumes that the relevant options are constant for the entire document.

## § 159.1 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)-[@{c1,0.25}]}
\makepolymerdelims{5pt}[27pt]{op}{c1}
\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}
```

## § 159.2 Code

### § 159.3 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
```

## § 159.4 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` `{\space above}` `{\space below}`

For HTML output, the above and below space is ignored, and a `lateximage` is used instead. For the print output version, see section 85.

```

12 \DeclareDocumentEnvironment{redoxreaction}{m m}
13 {\begin{lateximage}[(-chemmacros- redoxreaction)]}
14 {\end{lateximage}}
```

```

15 \ExplSyntaxOn
```

## § 159.5 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 {0{}}
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

```

## § 159.6 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

```

## § 159.7 Nomenclature

```

139 \AtBeginDocument{
140 \@ifchemmacrosmoduleloaded{nomenclature}{
141 \PackageInfo{lwarp}{Patching~chemmacros~module~nomenclature}
142
143 \cs_gset_protected:Npn \chemmacros_charge:n #1
144 {
145 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}
146 {\chemmacros_chemformula:n { }^{#1} }
147 {
148 \ifmmode
149 {\chemmacros_chemformula:n { }^{#1} }
150 \else
151 { \textsuperscript{\ensuremath{#1}} }
152 \fi
153 }
154 }
155
156
157 \LetLtxMacro\LWR@chemmacros@origchemprime\chemprime
158
159 \protected\def\chemprime { \HTMLUnicode{2032} }
160
161 \appto\LWR@restoreorigformatting{%
162 \LetLtxMacro\chemprime\LWR@chemmacros@origchemprime%
163 }

164 \ChemCompatibilityFrom{5.8}
165 \cs_gset_protected:Npn __chemmacros_cip:n #1
166 {
167 \tl_set:Nn \l__chemmacros_tmpa_tl {#1}
168 \int_step_inline:nnnn {0} {1} {9}
169 {
170 \tl_replace_all:Nnn \l__chemmacros_tmpa_tl
171 {##1}
172 { { \l__chemmacros_cip_number_tl ##1} }
173 }
174 {
175 \l__chemmacros_cip_inner_tl
176 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
177 \l__chemmacros_tmpa_tl
178 }}% lwarp
179 }
180 }

```

```
181 \EndChemCompatibility

182 \RenewDocumentCommand \Sconf { 0{S} } {
183 \begin{lateximage}[\textbackslash{}Sconf{[]#1{}}]
184 \chemmacros_sconf:n {#1}
185 \end{lateximage}
186 }
187
188 \RenewDocumentCommand \Rconf { 0{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:nmmn
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:nmmn
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

```

## § 159.8 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

```

## § 159.9 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

```

## § 159.10 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
```

### § 159.11 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
```

### § 159.12 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

```

### § 159.13 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:nm {#3+0} {m} }
474 {
475 \boolfalse{mathjax}% lwarp
476 \chemmacros_add_reaction_description:n {##1}
477 __chemmacros_begin_reaction:
478 \chemmacros_reaction_read:nnw {#2} {#4}
479 }
480 {
481 __chemmacros_end_reaction:
482 }
483 }
484 \cs_generate_variant:Nn \chemmacros_declare_reaction_env:nnnn {nnnV}
485
486 \RenewChemReaction {reaction} {equation}
487 \RenewChemReaction {reaction*} {equation*}
488 \RenewChemReaction {reactions} {align}
489 \RenewChemReaction {reactions*} {align*}
490
491 }{}% \@ifchemmacrosmoduleloaded
492 }% AtBeginDocument

```

### § 159.14 Redox

```

493 \AtBeginDocument{
494 \@ifchemmacrosmoduleloaded{redox}{
495 \PackageInfo{lwarp}{Patching~chemmacros~module~redox}
496
497 \NewDocumentCommand \LWR@chemmacros@ox { s m >{\SplitArgument{1}{,}}m }
498 {
499 \IfBooleanTF {#1}
500 { \chemmacros_ox:nnnn {#1} {#2} #3 }
501 { \chemmacros_ox:nnnn { } {#2} #3 }

```

```

502 }
503
504 \RenewDocumentCommand \ox { s O{ } m }
505 {
506 \begingroup
507 \boolfalse{mathjax}
508 \IfBooleanTF {#1}
509 {
510 \LWR@subsingledollar*{% yes hash
511 \textbackslash}ox*\{\LWR@HTMLSanitize{#3}\}% alt
512 }{%
513 star \protect\LWR@HTMLSanitize{\detokenize\expandafter{#2}}%
514 }{%
515 \LWR@chemmacros@ox* {#2} {#3}% contents
516 }%
517 }
518 {
519 \LWR@subsingledollar*{% yes hash
520 \textbackslash}ox*\{\LWR@HTMLSanitize{#3}\}% alt
521 }{%
522 \protect\LWR@HTMLSanitize{\detokenize\expandafter{#2}}%
523 }{%
524 \LWR@chemmacros@ox {#2} {#3}% contents
525 }%
526 }
527 \endgroup
528 }
529
530 }{}% \@ifchemmacrosmoduleloaded
531 }% AtBeginDocument

```

### § 159.15 Scheme

Fix for chemmacros as of v5.8b, when using newfloat and babel:

```

532 \AtBeginDocument{
533 \@ifchemmacrosmoduleloaded{scheme}{
534 \PackageInfo{lwarp}{Patching~chemmacros~module~scheme}
535
536 \ifdefstring{\schemename}{los}{
537 \SetupFloatingEnvironment{scheme}{
538 name = \chemmacros_translate:n {scheme-name}
539 }
540 }{}
541
542 }{}% \@ifchemmacrosmoduleloaded
543 }% AtBeginDocument

```

## § 159.16 Spectroscopy

```
544 \AtBeginDocument{
545 \@ifchemmacrosmoduleloaded{spectroscopy}{
546 \PackageInfo{lwarp}{Patching~chemmacros~module~spectroscopy}
547
548 \ChemCompatibilityTo{5.8}
549 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
550 {
551 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
552 {
553 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
554 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
555 }
556 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
557 % \chemmacros_chemformula:n { ^{#1} }
558 #1
559 \bool_if:NTF \l__chemmacros_nmr_parse_bool
560 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
561 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
562 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
563 \tl_use:N \l__chemmacros_nmr_method_tl
564 }
565 \EndChemCompatibility
566 \ChemCompatibilityFrom{5.8}
567 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
568 {
569 \group_begin:
570 \tl_use:N \l__chemmacros_nmr_base_format_tl
571 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
572 {
573 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
574 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
575 }
576 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
577 % \chemmacros_chemformula:n { ^{#1} }
578 #1
579 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
580 {
581 \bool_if:NTF \l__chemmacros_nmr_parse_bool
582 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
583 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
584 }
585 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
586 \tl_use:N \l__chemmacros_nmr_method_tl
587 \group_end:
588 }
589 \EndChemCompatibility
590
591
```

```
592 \cs_gset_protected:Npn \chemmacros_nmr_position:n #1
593 {
594 \chemmacros_chemformula:x
595 {
596 \exp_not:V \g__chemmacros_nmr_element_tl
597 \bool_if:NF \l__chemmacros_nmr_position_side_bool
598 {
599 \tl_if_eq:NnTF \l__chemmacros_nmr_position_tl {^}% lwarp
600 { \textsuperscript{\exp_not:n { {#1} }} }% lwarp
601 { \textsubscript{\exp_not:n { {#1} }} }% lwarp
602 }
603 \exp_not:V \l__chemmacros_nmr_position_tl
604 \exp_not:n { {#1} }
605 }
606 \bool_if:NT \l__chemmacros_nmr_position_side_bool
607 {
608 \tl_use:N \l__chemmacros_nmr_position_tl
609 __chemmacros_nmr_position:n {#1}
610 }
611 }
612
613 \cs_gset_protected:Npn __chemmacros_nmr_coupling:w (#1;#2)
614 {
615 \tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
616 {
617 \l__chemmacros_nmr_coupling_bonds_pre_tl
618 #1
619 \l__chemmacros_nmr_coupling_bonds_post_tl
620 }
621 \bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
622 {
623 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
624 {
625 \c_math_subscript_token
626 \textsubscript% lwarp
627 {
628 \l__chemmacros_nmr_coupling_nuclei_pre_tl
629 \chemmacros_chemformula:n {#2}
630 \l__chemmacros_nmr_coupling_nuclei_post_tl
631 }
632 }
633 }
634 {
635 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
636 {
637 \l__chemmacros_nmr_coupling_nuclei_pre_tl
638 \chemmacros_chemformula:n {#2}
639 \l__chemmacros_nmr_coupling_nuclei_post_tl
640 }
641 }
```

```

642 _chemmacros_nmr_coupling_aux_i:w
643 }
644
645 \AfterEndPreamble{% After \AtBeginDocument
646 % \NMR{<num>,<elem>}{<num>,<unit>}[<solvent>] ALL arguments are optional
647 % \NMR* same but without ": δ" at end
648 \cs_gset_protected:Npn \chemmacros_nmr:nnnn #1#2#3#4
649 {
650 \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
651 \group_begin:
652 \chemmacros_leave_vmode:
653 \bool_set_false:N \l__chemmacros_nmr_frequency_bool
654 \bool_set_false:N \l__chemmacros_nmr_solvent_bool
655 \tl_if_empty:nF {#3}
656 { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
657 \tl_if_empty:nF {#4}
658 { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
659 \bool_if:nT
660 {
661 \l__chemmacros_nmr_frequency_bool
662 ||
663 \l__chemmacros_nmr_solvent_bool
664 }
665 { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
666 \bool_if:nT
667 {
668 \l__chemmacros_nmr_frequency_bool
669 &&
670 \l__chemmacros_nmr_solvent_bool
671 }
672 { \bool_set_true:N \l__chemmacros_nmr_comma_bool }
673 \tl_if_empty:nTF {#2}
674 {
675 _chemmacros_nmr_nucleus:VV
676 \l__chemmacros_nmr_isotope_default_tl
677 \l__chemmacros_nmr_element_default_tl
678 }
679 { _chemmacros_nmr_nucleus:w #2 \q_stop }
680 \mode_if_math:TF
681 {
682 \text
683 {
684 \group_begin:
685 \tl_use:N \l__chemmacros_nmr_format_tl
686 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
687 _chemmacros_nmr_base:VV
688 \g__chemmacros_nmr_isotope_tl
689 \g__chemmacros_nmr_element_tl
690 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
691 { ~ ()

```

```

692 \bool_if:NT \l__chemmacros_nmr_frequency_bool
693 { __chemmacros_nmr_frequency:n {#3} }
694 \bool_if:NT \l__chemmacros_nmr_comma_bool
695 { , ~ }
696 \bool_if:NT \l__chemmacros_nmr_solvent_bool
697 { \chemmacros_chemformula:n {#4} }
698 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
699 {) }
700 \tl_if_blank:nT {#1} {:~}
701 }}% lwarp
702 \group_end:
703 }
704 \tl_if_blank:nT {#1}
705 {
706 \delta
707 \text { \l__chemmacros_nmr_delta_tl }
708 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {=}
709 }
710 }
711 {
712 \group_begin:
713 \tl_use:N \l__chemmacros_nmr_format_tl
714 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
715 __chemmacros_nmr_base:VV
716 \g__chemmacros_nmr_isotope_tl
717 \g__chemmacros_nmr_element_tl
718 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
719 {~()}
720 \bool_if:NT \l__chemmacros_nmr_frequency_bool
721 { __chemmacros_nmr_frequency:n {#3} }
722 \bool_if:NT \l__chemmacros_nmr_comma_bool
723 { , ~ }
724 \bool_if:NT \l__chemmacros_nmr_solvent_bool
725 {
726 \bool_if:NTF \l__chemmacros_nmr_parse_bool

727 % { \chemformula_ch:nn { } {#4} }% original
728 {\ch{#4}}% lwarp
729 {#4}
730 }
731 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
732 {}
733 }}% lwarp
734 \tl_if_blank:nT {#1} {:}
735 \group_end:
736 \tl_if_blank:nT {#1}
737 {
738 \tl_use:N \c_space_tl
739 \c_math_toggle_token

```

```

740 \delta
741 \c_math_toggle_token
742 \l__chemmacros_nmr_delta_tl
743 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {~=}
744 }
745 }
746 \group_end:
747 }
748 }% AfterEndPreamble
749
750
751 \RenewDocumentCommand \chemmacros_data:w { smo }
752 {
753 \bool_if:NT \l__chemmacros_nmr_list_bool { \item }
754 {
755 \tl_use:N \l__chemmacros_nmr_format_tl #2
756 \tl_use:N \l__chemmacros_nmr_format_tl
757 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
758 #2
759 \IfNoValueF {#3} { ~ (#3) }
760 \IfBooleanT {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { : } }
761 }}% lwarp
762 }
763 \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
764 }
765
766 }{}% \@ifchemmacrosmoduleloaded
767 }% AtBeginDocument

```

## § 159.17 Thermodynamics

```

768 \AtBeginDocument{
769 \@ifchemmacrosmoduleloaded{thermodynamics}{
770 \PackageInfo{lwarp}{Patching~chemmacros~module~thermodynamics}
771
772 \cs_gset_protected:Npn \chemmacros_state:nn #1#2
773 {
774 \group_begin:
775 \boolfalse{mathjax}
776 \chemmacros_set_keys:nn {thermodynamics} {#1}
777 \LWR@subsingledollar*{% yes hashing
778 \textbackslash}state\{\LWR@HTMLsanitize{#2}\}% alt
779 }{%
780 chemmacros_state% add'l hashing
781 #1% options
782 LSP \tl_use:N \l__chemmacros_state_sp_left_tl% super/subscripts
783 LSB \tl_use:N \l__chemmacros_state_sb_left_tl
784 RSP \tl_use:N \l__chemmacros_state_sp_right_tl
785 RSB \tl_use:N \l__chemmacros_state_sb_right_tl

```

```

786 }
787 {
788 \LWR@origensuredmath{
789 \chemmacros_text:V \l__chemmacros_state_pre_tl
790 \c_math_superscript_token
791 { \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*.

```

792 \tl_if_empty:NTF \l__chemmacros_state_sb_left_tl
793 {}
794 {
795 \c_math_subscript_token
796 { \chemmacros_text:V \l__chemmacros_state_sb_left_tl }
797 }
798 #2
799 \c_math_superscript_token
800 { \chemmacros_text:V \l__chemmacros_state_sp_right_tl }
801 \tl_if_empty:NTF \l__chemmacros_state_sb_right_tl
802 {}
803 {
804 \c_math_subscript_token
805 { \chemmacros_text:V \l__chemmacros_state_sb_right_tl }
806 }
807 \chemmacros_text:V \l__chemmacros_state_post_tl
808 }
809 }
810 \group_end:
811 }
812 \cs_generate_variant:Nn \chemmacros_state:nn { nV }
813
814 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
815 {
816 \chemmacros_define_keys:xn
817 {thermodynamics/\chemmacros_remove_backslash:N #1}
818 {
819 pre .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
820 post .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
821 superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
822 superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,
823 superscript .meta:n = { superscript-right = ##1 } ,
824 subscript-left .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
825 subscript-right .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
826 subscript .meta:n = { subscript-left = ##1 } ,
827 subscript-pos .choices:nn =
828 { left , right }
829 { \tl_set_eq:NN \l__chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
830 symbol .tl_set:N = \l__chemmacros_state_symbol_tl ,

```

```

831 unit .tl_set:N = \l__chemmacros_state_unit_tl
832 }
833 \DeclareDocumentCommand #1 { sO{}D(){}m }
834 {
835 \group_begin:
836 \chemmacros_set_keys:nx
837 {thermodynamics/\chemmacros_remove_backslash:N #1}
838 {#2}
839 \tl_if_blank:nF {##3}
840 {
841 \chemmacros_set_keys:nx {thermodynamics}
842 { subscript-\l__chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
843 }
844 \chemmacros_state:nV {##2} \l__chemmacros_state_symbol_tl
845 \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
846 \IfBooleanF {##1} { = ~ \SI {##4} { \l__chemmacros_state_unit_tl } }
847 \group_end:
848 }
849 }

```

The pre-existing macros are redefined with the new definition:

```

850 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
851 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
852 \RenewChemState \gibbs { symbol = G , unit = \kilo\joule\per\mole }
853
854 }{}% \@ifchemmacrosmoduleloaded
855 }% AtBeginDocument

856 \ExplSyntaxOff

```

---

File 64 **lwarp-chemnum.sty**

§ 160 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}

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_t1 }
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_t1 }
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 65 **lwarp-chkfloat.sty**

§ 161 Package **chkfloat**

Pkg `chkfloat` `chkfloat` is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]

---

File 66 **lwarp-cite.sty**

§ 162 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}

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 67 **lwarp-CJK.sty**

§ 163 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}
```

File 68 **lwarp-CJKutf8.sty**

§ 164 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}
```

---

File 69 `lwarp-clrdblpg.sty`

§ 165 Package **clrdblpg**

Pkg `clrdblpg` `clrdblpg` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{clrdblpg}`

---

File 70 `lwarp-cmdtrack.sty`

§ 166 Package **cmdtrack**

Pkg `cmdtrack` `cmdtrack` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]`

`2 \newcommand{\untrack}[1] {}`

---

File 71 `lwarp-color.sty`

§ 167 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@ProvidesPackagePass{color}`  
`2 \RequirePackage{xcolor}`

---

File 72 `lwarp-colortbl.sty`

§ 168 Package **colortbl**

Pkg `colortbl` `colortbl` is emulated.

 **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}
```

The following \LWR@HTML versions are used inside an HTML tabular.

`\columncolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

\LWR@getmynexttoken is not used here because \columncolor is not used inside the data area of the tabular.

```
4 \NewDocumentCommand{\LWR@HTML@columncolor}{O{named} m o o}{%
5 \convertcolorspec{#1}{#2}{HTML}\LWR@columnHTMLcolor%
6 \LWR@addtabularcellcolor%
7 }
8
9 \AtBeginDocument{\LWR@formatted{columncolor}}
```

\LWR@getmynexttoken is used for \rowcolor because it is used inside the data area of the tabular.

`\rowcolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

```
10 \NewDocumentCommand{\LWR@HTML@rowcolor}{O{named} m o o}{%
11 \convertcolorspec{#1}{#2}{HTML}\LWR@rowHTMLcolor%
12 \LWR@getmynexttoken%
13 }
14
15 \AtBeginDocument{\LWR@expandableformatted{rowcolor}}
```

`\cellcolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

```
16 \NewDocumentCommand{\LWR@HTML@cellcolor}{O{named} m o o}{%
17 \convertcolorspec{#1}{#2}{HTML}\LWR@cellHTMLcolor%
18 \LWR@addtabularcellcolor%
19 }
20
21 \AtBeginDocument{\LWR@formatted{cellcolor}}
```

`\arrayrulecolor` [*model*] {*color*}

The HTML version for use outside a tabular. Inside a tabular, \LWR@HTML@arrayrulecolornexttoken is used instead.

```
22 \newcommand{\LWR@HTML@arrayrulecolor}[2][named]{%
```

```

23 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
24 }
25
26 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolor}}

```

`[<model>] {<color>}`

`\LWR@arrayrulecolornexttoken` The HTML version for use inside a tabular.

```

27 \newcommand{\LWR@HTML@arrayrulecolornexttoken}[2][named]{%
28 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
29 \LWR@getmynexttoken%
30 }
31
32 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolornexttoken}}

```

`\doublerulesepcolor` `[<model>] {<color>}`

The version for use outside a tabular.

```

33 \newcommand{\LWR@HTML@doublerulesepcolor}[2][named]{%
34
35 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolor}}

```

`[<model>] {<color>}`

`\LWR@doublerulesepcolornexttoken` The version for use inside a tabular.

```

36 \newcommand{\LWR@HTML@doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
37
38 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolornexttoken}}

```

---

### File 73 `lwarp-continue.sty`

#### § 169 Package **continue**

Pkg `continue` `continue` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{continue}`

```

2 \newcommand*{\flagcont}{}
3 \newcommand*{\flagend}{}
4 \newcommand*{\flagword}{}
5 \newcommand*{\preflagword}{}
6 \newcommand*{\postflagword}{}
7 \newlength\contsep
8 \newlength\contdrop

```

---

 File 74 **lwarp-copyrightbox.sty**

 § 170 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}
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 75 **lwarp-crop.sty**

 § 171 Package **crop**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg `crop` Emulated.

**for HTML output:** Discard all options for `lwarp-crop`:

---

```

1 \LWR@ProvidesPackageDrop{crop}

2 \newcommand*{\crop}[1] [] {}
3 \newcommand*{\cropdef}[6] [] {}

```

---

File 76 **lwarp-cuted.sty**

§ 172 Package **cuted**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg cuted cuted is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{cuted}

2 \newenvironment{strip}{}{}
3 \newskip\stripsep
4 \def\oldcolsbreak#1{}

```

---

File 77 **lwarp-cutwin.sty**

§ 173 Package **cutwin**

*(Emulates or patches code by PETER WILSON AND ALAN HOENIG.)*

Pkg cutwin Emulated.

**for HTML output:** Discard all options for lwarp-cutwin:

```

1 \LWR@ProvidesPackageDrop{cutwin}

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 78 **lwarp-dblfloatfix.sty**

§ 174 Package **dblfloatfix**

Pkg dbfloatfix dbfloatfix is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{dblfloatfix}

---

File 79 **lwarp-dblfnote.sty**

§ 175 Package **dblfnote**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg dblfnote dblfnote is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{dblfnote}

```

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 80 **lwarp-dcolumn.sty**

§ 176 Package **dcolumn**

Pkg dcolumn dcolumn is emulated by the lwarp core.

```
1 \LWR@ProvidesPackageDrop{dcolumn}
```

---

File 81 **lwarp-diagbox.sty**

§ 177 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}

To restore print-mode inside a lateximage:

```
2 \LetLtxMacro\LWR@origdiagbox@double\diagbox@double
3 \LetLtxMacro\LWR@origdiagbox@triple\diagbox@triple
4
5 \appto\LWR@restoreorigformatting{%
6 \LetLtxMacro\diagbox@double\LWR@origdiagbox@double%
7 \LetLtxMacro\diagbox@triple\LWR@origdiagbox@triple%
8 }
```

```
\LWR@diagbox@AB {\langle E/W \rangle} {\langle A \rangle} {\langle E/W \rangle} {\langle B \rangle}
9 \newcommand{\LWR@diagbox@AB}[4]{
10 \begingroup%
11 \LetLtxMacro\\\newline%
12 \BlockClassSingle{diagbox#1}{#2}%
13 \BlockClassSingle{diagbox#3}{#4}%
14 \endgroup%
15 \LWR@stoppars%
16 }
```

```
\LWR@diagboxNW {\langle A \rangle} {\langle B \rangle}
```

```

17 \newcommand{\LWR@diagboxNW}[2]{%
18 \LWR@diagbox@AB{E}{#2}{W}{#1}%
19 }

```

Likewise for NE, SW, SE:

```

20 \newcommand{\LWR@diagboxNE}[2]{%
21 \LWR@diagbox@AB{W}{#1}{E}{#2}%
22 }
23
24 \let\LWR@diagboxSW\LWR@diagboxNE
25 \let\LWR@diagboxSE\LWR@diagboxNW

```

```

\LWR@diagbox@double {<keys>}{<A>}{}

26 \def\LWR@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 }

```

```

\LWR@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 82 **lwarp-dprogress.sty**

§ 178 Package **dprogress**

Pkg dprogress dprogress is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]

---

File 83 **lwarp-draftcopy.sty**

§ 179 Package **draftcopy**

Pkg draftcopy draftcopy is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{draftcopy}

```

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 84 **lwarp-draftfigure.sty**

§ 180 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 85 **lwarp-draftwatermark.sty**

§ 181 Package **draftwatermark**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg `draftwatermark` `draftwatermark` is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{draftwatermark}

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 86 **lwarp-easy-todo.sty**

§ 182 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}

```

`\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 }

```

`\todoii` Modified to use `\textcolor` instead of `\color`.

```

10 \renewcommand{\todoii}[2]{%
11 \ifthenelse{\equal{\@todoobeyfinal}{true}}{%
12 \ifoptionfinal{\todoenable{false}}{\todoenable{true}}%
13 }{}%
14 \ifthenelse{\equal{\@todoenable}{true}}{%
15 \refstepcounter{todos}%
16 \noindent{%
17 \todocolor%
18 \LWR@textcurrentcolor{%
19 \normalfont\scriptsize{\bfseries{\thetodos.#1}}%
20 }%
21 }%
22 \addcontentsline{lod}{todos}{\protect{\thetodos. }\LWR@isolate{#2}}%
23 }{}%
24 }

```

---

File 87 **lwarp-ebook.sty**

§ 183 Package **ebook**

*(Emulates or patches code by JØRGEN STEENSGAARD.)*

Pkg ebook ebook is emulated.

**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 88 **lwarp-ellipsis.sty**§ 184 Package **ellipsis***(Emulates or patches code by PETER J. HESLIN.)*

Pkg ellipsis ellipsis is emulated.

```

1 \LWR@ProvidesPackageDrop{ellipsis}
2
3 \newcommand{\ellipsisgap}{0.1em}
4
5 \newcommand*{\midwordellipsis}{\,\textellipsis\,}

```

File 89 **lwarp-embrac.sty**§ 185 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}

2 \LetLtxMacro\LWR@orig@HTML@emph\LWR@HTML@emph
3 \RenewDocumentCommand{\LWR@HTML@emph}{s m}{\LWR@orig@HTML@emph{#2}}
4
5 \LetLtxMacro\LWR@orig@HTML@textit\LWR@HTML@textit
6 \RenewDocumentCommand{\LWR@HTML@textit}{s m}{\LWR@orig@HTML@textit{#2}}
7
8 \LetLtxMacro\LWR@orig@HTML@textsl\LWR@HTML@textsl
9 \RenewDocumentCommand{\LWR@HTML@textsl}{s m}{\LWR@orig@HTML@textsl{#2}}
10
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{texts1}
21 \ifxetexorluatex
22 \LWR@formatted{texts1}
23 \fi
24 }
25
26 \newcommand{\LWR@HTML@EmbracOff}{}
27 \LWR@formatted{EmbracOff}
28
29 \newcommand{\LWR@HTML@EmbracOn}{}
30 \LWR@formatted{EmbracOn}

```

---

File 90 **lwarp-emptypage.sty**

§ 186 Package **emptypage**

Pkg emptypage emptypage is ignored.

**for HTML output:** Discard all options for lwarp-emptypage:

```
1 \LWR@ProvidesPackageDrop{emptypage}
```

---

File 91 **lwarp-endfloat.sty**

§ 187 Package **endfloat**

Pkg endfloat endfloat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{endfloat}

```

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{}

```

---

File 92 **lwarp-endheads.sty**

§ 188 Package **endheads**

Pkg endheads endheads is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{endheads}

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 93 **lwarp-endnotes.sty**

§ 189 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 94 **lwarp-enumerate.sty**

§ 190 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}

---

File 95 **lwarp-enumitem.sty**

§ 191 Package **enumitem**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg `enumitem` `enumitem` is supported with minor adjustments.

**for HTML output:** 1 \LWR@ProvidesPackagePass{enumitem}

**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 96 **lwarp-epigraph.sty**

§ 192 Package **epigraph**

*(Emulates or patches code by PETER WILSON.)*

Pkg epigraph epigraph is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{epigraph}

```
2 \DeclareDocumentCommand{\qitem}{m m}
3 {
4 \begin{BlockClass}{qitem}
5 #1
6 \ifbool{FormatWP}
7 {\begin{BlockClass}[border-top:1px solid gray]{epigraphsource}}
8 {\begin{BlockClass}{epigraphsource}}
9 #2
10 \end{BlockClass}
11 \end{BlockClass}
12 }
```

```

13 \DeclareDocumentCommand{\epigraph}{m m}
14 {
15 \begin{LWR@BlockClassWP}{\LWR@print@mbbox{text-align:right}}{\epigraph}
16 \qitem{#1}{#2}
17 \end{LWR@BlockClassWP}
18 }
19
20 \DeclareDocumentEnvironment{epigraphs}{}
21 {\LWR@BlockClassWP{\LWR@print@mbbox{text-align:right}}{\epigraph}}
22 {\endLWR@BlockClassWP}

```

Use CSS to format epigraphs.

The following are null commands for source compatibility:

```

23 \newenvironment*{flushepinormal}{}{}

24 \@ifclassloaded{memoir}{
25 \setlength{\epigraphwidth}{.5\linewidth}
26 \renewcommand{\textflush}{flushepinormal}
27 \renewcommand{\epigraphhead}[2][0]{#2}
28 \renewcommand{\dropchapter}[1]{}
29 \renewcommand*{\undodrop}{}
30 }{% not memoir
31 \newlength{\epigraphwidth}
32 \setlength{\epigraphwidth}{.5\linewidth}
33 \newcommand{\textflush}{flushepinormal}
34 \newcommand{\epigraphflush}{flushright}
35 \newcommand{\sourceflush}{flushright}
36 \newcommand*{\epigraphsize}{\small}
37 \newlength{\epigraphrule}
38 \newlength{\beforeepigraphskip}
39 \newlength{\afterepigraphskip}
40 \newcommand{\epigraphhead}[2][0]{#2}
41 \newcommand{\dropchapter}[1]{}
42 \newcommand*{\undodrop}{}
43 }% not memoir
44
45 \let\cleartoevenpage\relax% also in nextpage
46 \newcommand{\cleartoevenpage}[1][{}]{

```

---

File 97 **lwarp-epsfig.sty**

§ 193 Package **epsfig**

Pkg epsfig epsfig is emulated for use by lwarp.



Only the L<sup>A</sup>T<sub>E</sub>X2e syntax is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{epsfig}[2017/06/25]

A few additional keys to capture the filename:

```

2 \RequirePackage{graphics}
3
4 \define@key{igraph}{file}{%
5 \xdef\LWR@epsfig@filename{#1}%
6 }
7
8 \define@key{igraph}{figure}{%
9 \xdef\LWR@epsfig@filename{#1}%
10 }
11
12 \define@key{igraph}{prolog}{}
13
14 \define@key{igraph}{silent}[]{}

```

The captured filename is used as the argument to `\includegraphics`:

```

15 \newcommand{\epsfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}
16
17 \newcommand{\psfig}[1]{\includegraphics[#1]{\LWR@epsfig@filename}}

```

File 98 **lwarp-epstopdf.sty**

§ 194 Package **epstopdf**

Pkg epstopdf Previous versions of lwarp had a nullified verison, 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 99 **lwarp-epstopdf-base.sty**

§ 195 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 100 **lwarp-errata.sty**

§ 196 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 101 **lwarp-eso-pic.sty**

§ 197 Package **eso-pic**

*(Emulates or patches code by ROLF NIEPRASCHK.)*

Pkg eso-pic eso-pic is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{eso-pic}

2 \newcommand*{\LenToUnit}{}
3 \newcommand{\AtPageUpperLeft}[1]{}
4 \newcommand{\AtPageLowerLeft}[1]{}
5 \newcommand{\AtPageCenter}[1]{}
6 \newcommand{\AtStockLowerLeft}[1]{}
7 \newcommand{\AtStockUpperLeft}[1]{}
8 \newcommand{\AtStockCenter}[1]{}
9 \newcommand{\AtTextUpperLeft}[1]{}
10 \newcommand{\AtTextLowerLeft}[1]{}

```

---

```

11 \newcommand{\AtTextCenter}[1]{}
12 \NewDocumentCommand{\AddToShipoutPictureBG}{s +m}{}

13 \newcommand{\AddToShipoutPicture}{\AddToShipoutPictureBG}
14 \NewDocumentCommand{\AddToShipoutPictureFG}{s +m}{}
15 \newcommand*{\ClearShipoutPictureBG}{}
16 \newcommand*{\ClearShipoutPicture}{}
17 \newcommand*{\ClearShipoutPictureFG}{}
18 \newcommand{\gridSetup}[6][1]{}

```

---

File 102 **lwarp-everypage.sty**

§ 198 Package **everypage**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg `everypage` everypage is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{everypage}

2 \newcommand*{\AddEverypageHook}[1]{}
3 \newcommand*{\AddThispageHook}[1]{}

```

---

File 103 **lwarp-everyshi.sty**

§ 199 Package **everyshi**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg `everyshi` Emulated.

**for HTML output:** Discard all options for lwarp-everyshi:

```

1 \LWR@ProvidesPackageDrop{everyshi}

2 \newcommand*{\EveryShipout}[1]{}
3 \newcommand*{\AtNextShipout}[1]{}

```

---

File 104 **lwarp-extramarks.sty**

§ 200 Package **extramarks**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg extramarks extramarks is emulated.

**for HTML output:** Discard all options for lwarp-extramarks:

```

1 \LWR@ProvidesPackageDrop{extramarks}

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*{\firstleftmark}{}
12 \newcommand*{\lastrightmark}{}

```

---

File 105 **lwarp-fancybox.sty**

§ 201 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.

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

**△ sectioning or displaymath**

```

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

```

and likewise for equations or display math.

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

```
1 \LWR@ProvidesPackagePass{fancybox}
```

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@footnotes=\vbox\bgroup%

```

Add to any current footnotes:

```
11 \unvbox\LWR@footnotes%
```

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 \cntttest{\value{LWR@lateximagedepth}}{=}{0}%
19 }%
20 {}%
21 {\LWR@htmltagc{\LWR@tagregularparagraph}}%

```

Append the footnote to the list:

```

22 \@makefnctext{}%
23 \bgroup%
24 \aftergroup{\V@@@footnotetext}%
25 \ignorespaces%
26 }%

27 }% AfterEndPreamble

28 \renewcommand*{\@shadowbox}[1]{%
29 \ifbool{FormatWP}%
30 {\InlineClass[border:1px solid black]{shadowbox}{#1}}%
31 {\InlineClass{shadowbox}{#1}}%
32 }
33
34 \renewcommand*{\@doublebox}[1]{%
35 \ifbool{FormatWP}%
36 {\InlineClass[border:1px double black]{doublebox}{#1}}%
37 {\InlineClass{doublebox}{#1}}%
38 }
39
40 \renewcommand*{\@ovalbox}[2]{%
41 \ifbool{FormatWP}%
42 {\InlineClass[border:1px solid black; border-radius:1ex]{ovalbox}{#2}}%
43 {%
44 \ifthenelse{\isequivalentto{#1}{\thinlines}}%
45 {\InlineClass{ovalbox}{#2}}%
46 {\InlineClass{Ovalbox}{#2}}%
47 }%
48 }

```

Convert minipages, parboxes, and lists into linear text using the LWR@nestspan environment:

```

49 \let\LWR@origSbox\Sbox
50
51 \def\Sbox{\LWR@origSbox\LWR@nestspan}
52
53
54 \let\LWR@origendSbox\endSbox
55
56 \def\endSbox{\endLWR@nestspan\LWR@origendSbox}

```

Beqnarray is adapted for MATHJAX or enclosed inside a lateximage:

```

57 \RenewEnviron{Beqnarray}
58 {\LWR@eqnarrayfactor}

```

```
59
60 \csgpreto{Beqarray*}{\boolfalse{LWR@numbereqarray}}
```

`\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 {\l/c/r} [\t/c/b]

66 \RenewDocumentEnvironment{Btrivlist}{m o}
67 {%
68 \begin{BlockClass}{Btrivlist}%
69 \tabular{#1}%
70 }
71 {%
72 \endtabular%
73 \end{BlockClass}%
74 }
```

`Btrivlist` is also neutralized when used inside a span:

```
75 \AtBeginEnvironment{LWR@nestspan}{%
76 \RenewDocumentEnvironment{Btrivlist}{m o}{-}{-}%
77 }
```

lwarp's handling of `\item` is patched to accept fancybox's optional arguments:

```
78 \let\LWRFB@origitemizeitem\LWR@itemizeitem
79 \let\LWRFB@origdescitem\LWR@descitem
80
81 \RenewDocumentCommand{\LWR@itemizeitem}{d()o}{%
82 \IfValueTF{#2}{%
83 \LWRFB@origitemizeitem[#2]%
84 }{%
85 \LWRFB@origitemizeitem%
86 }%
87 }
88
89 \RenewDocumentCommand{\LWR@descitem}{d()o}{%
90 \IfValueTF{#2}{%
91 \LWRFB@origdescitem[#2]~%
92 }{%
```

```

93 \LWRFB@origdescitem%
94 }%
95 }

96 \RenewDocumentCommand{\LWR@nestspanitem}{d()}{%
97 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
98 \LWR@origitem%
99 }

```

The various boxed lists become regular lists:

```

100 \renewenvironment{Bitemize}[1] [] {\begin{itemize}}{\end{itemize}}
101 \renewenvironment{Benumerate}[1] [] {\begin{enumerate}}{\end{enumerate}}
102 \renewenvironment{Bdescription}[1] [] {\begin{description}}{\end{description}}

```

`\boxput` simply prints one then the other argument, side-by-side instead of above and behind:

```

103 \RenewDocumentCommand{\boxput}{s d() m m}{%
104 \IfBooleanTF{#1}{#3\quad#4}{#4\quad#3}%
105 }

```

Neutralized commands:

```

106 \RenewDocumentCommand{\fancyput}{s d() m}{%}
107 \RenewDocumentCommand{\thisfancyput}{s d() m}{%}
108
109 \RenewDocumentCommand{\fancypage}{m m}{%}
110 \RenewDocumentCommand{\thisfancypage}{m m}{%}
111
112 \def \LandScape#1{}
113 \def \endLandScape{}
114 \def \@Landscape#1#2#3{}
115 \def \endLandscape{}

```

Low-level patches for `UseVerbatim` and friends:

```

116 \let \LWRFB@UseVerbatim \UseVerbatim
117 \renewcommand*{\UseVerbatim}[1]{%
118 \LWR@atbeginverbatim{3}{Verbatim}%
119 \LWRFB@UseVerbatim{#1}%
120 \LWR@afterendverbatim{.5}%
121 }
122
123 \let \LWRFB@LUseVerbatim \LUseVerbatim
124
125 \renewcommand*{\LUseVerbatim}[1]{%

```

---

```

126 \LWR@atbeginverbatim{3}{LVerbatim}%
127 \noindent%
128 \LWRFB@LUseVerbatim{#1}%
129 \LWR@afterendverbatim{.5}%
130 }
131
132 \def\@BUseVerbatim[#1]#2{%
133 \LWR@atbeginverbatim{3}{BVerbatim}%
134 \LWRFB@UseVerbatim{#2}%
135 \LWR@afterendverbatim{.5}%
136 }

```

---

File 106 **lwarp-fancyhdr.sty**

§ 202 Package **fancyhdr**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg fancyhdr fancyhdr is nullified.

**for HTML output:** Discard all options for lwarp-fancyhdr:

```

1 \LWR@ProvidesPackageDrop{fancyhdr}

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*{\fancyheadoffset}[2] [] {}
15 \newcommand*{\fancyfootoffset}[2] [] {}
16 \newcommand*{\fancyhfoffset}[2] [] {}
17 \newcommand*{\iffloatpage}[2] {#2}
18 \newcommand*{\ifftopfloat}[2] {#2}
19 \newcommand*{\iffbotfloat}[2] {#2}

```

---

File 107 `lwarp-fancyref.sty`

§ 203 Package **fancyref**

Pkg fancyref fancyref is emulated.

for HTML output: `1 \LWR@ProvidesPackagePass{fancyref}`

To remove the margin option, if `\fancyrefhook` is anything other than the paren option, then force it to the default instead. (Comparing to the margin option was not possible since 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{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 108 **lwarp-fancytabs.sty**

§ 204 Package **fancytabs**

Pkg fancytabs fancytabs is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{fancytabs}

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 109 **lwarp-fancyvrb.sty**

§ 205 Package **fancyvrb**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg fancyvrb fancyvrb is supported with some patches.

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

⚠ **sectioning or displaymath**

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

and likewise for equations or display math.

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

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{fancyvrb}
```

Initial default patch for fancyvrb:

```
4 \fvset{frame=none}%
```

After the preamble is loaded, after any patches to Verbatim:

```
5 \AfterEndPreamble{
6 \LWR@traceinfo{Patching fancyvrb.}
```

`\VerbatimFootnotes` Patched to use the new version.

```
7 \def\VerbatimFootnotes{%
8 \let\@footnotetext\V@footnotetext%
9 \let\footnote\V@footnote%
10 \let\LWR@footnotetext\V@footnotetext% lwarp
11 }
```

`\V@footnotetext` Patches in a subset of lwarp's `\LWR@footnotetext` to the fancyvrb version of `\V@footnotetext`.

```
12 \def\V@footnotetext{%
13 \LWR@traceinfo{V@footnotetext}%
14 \global\setbox\LWR@footnotes=\vbox\bgroup%
```

Add to any current footnotes:

```
15 \unvbox\LWR@footnotes%
```

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 \cntttest{\value{LWR@lateximagedepth}}{=}{0}%
23 }%
```

```

24 {}%
25 {\LWR@htmltagc{\LWR@tagregularparagraph}}%

```

Append the footnote to the list:

```

26 \@makefnctext{}%

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[\LWR@FVstyle]{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 \LWR@atbeginverbatim[\LWR@FVstyle]{0}{verbatim}%
61 % }%
62 }
63
64 \newcommand*\LWR@fvendnone}{%
65 \LWR@traceinfo{fvendnone}%
66 % \hbox to\z@{
67 \LWR@afterendverbatim{0}%
68 % }%
69 }
70
71 \newcommand*\LWR@fvstartsingle}{%
72 \LWR@traceinfo{fvstartsingle}%
73 \LWR@fvstartnone%
74 \FV@BeginListFrame@Single%
75 }
76
77 \newcommand*\LWR@fvendsingle}{%
78 \LWR@traceinfo{fvendsingle}%
79 \FV@endListFrame@Single%
80 \LWR@fvendnone%
81 }
82
83 \newcommand*\LWR@fvstartline}{%
84 \LWR@traceinfo{fvstartline}%
85 \LWR@fvstartnone%
86 % \setlength{\LWR@templengthone}{\baselineskip}%
87 \FV@BeginListFrame@Lines%
88 % \setlength{\baselineskip}{\LWR@templengthone}%
89 % \setlength{\baselineskip}{5pt}%
90 }
91
92 \newcommand*\LWR@fvendline}{%
93 \LWR@traceinfo{fvendline}%
94 \FV@endListFrame@Lines%
95 \LWR@fvendnone%
96 }

```

The following patches select the start/left/right/end behaviors depending on frame. Original code is from the fancyvrb package.

```

97 \newcommand*\LWR@FVfindbordercolor}{%

```

```

98 \FancyVerbRuleColor%
99 \LWR@findcurrenttextcolor%
100 \color{black}%
101 }
102
103 % border width of \FV@FrameRule
104 \newcommand*{\LWR@FVborderstyle}[1]{%
105 padding#1: \strip@pt\dimexpr \FV@FrameSep\relax\relax pt ; %
106 \LWR@FVfindbordercolor %
107 border#1: \strip@pt\dimexpr \FV@FrameRule\relax\relax pt %
108 solid \LWR@origpound\LWR@tempcolor ; %
109 }
110
111 \def\FV@Frame@none{%
112 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle}%
113 \let\FV@BeginListFrame\LWR@fvstartnone%
114 \let\FV@LeftListFrame\relax%
115 \let\FV@RightListFrame\relax%
116 \let\FV@endListFrame\LWR@fvendnone}
117
118 \FV@Frame@none% default values
119
120 \def\FV@Frame@single{%
121 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{}}%
122 \let\FV@BeginListFrame\LWR@fvstartsingle%
123 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
124 \let\FV@RightListFrame\FV@RightListFrame@Single%
125 \let\FV@endListFrame\LWR@fvendsingle}
126
127 \def\FV@Frame@lines{%
128 \renewcommand*{\LWR@FVstyle}{%
129 \LWR@currenttextcolorstyle\LWR@FVborderstyle{-top}\LWR@FVborderstyle{-bottom}}%
130 }%
131 \let\FV@BeginListFrame\LWR@fvstartline%
132 \let\FV@LeftListFrame\relax%
133 \let\FV@RightListFrame\relax%
134 \let\FV@endListFrame\LWR@fvendline}
135
136 \def\FV@Frame@topline{%
137 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-top}}%
138 \let\FV@BeginListFrame\LWR@fvstartline%
139 \let\FV@LeftListFrame\relax%
140 \let\FV@RightListFrame\relax%
141 \let\FV@endListFrame\LWR@fvendnone}
142
143 \def\FV@Frame@bottomline{%
144 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-bottom}}%
145 \let\FV@BeginListFrame\LWR@fvstartnone%
146 \let\FV@LeftListFrame\relax%
147 \let\FV@RightListFrame\relax%

```

```

148 \let\FV@EndListFrame\LWR@fvendline}
149
150 \def\FV@Frame@leftline{%
151 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-left}}%
152 % To define the \FV@FrameFillLine macro (from \FV@BeginListFrame)
153 \ifx\FancyVerbFillColor\relax%
154 \let\FV@FrameFillLine\relax%
155 \else%
156 \@tempdima\FV@FrameRule\relax%
157 \multiply\@tempdima-\tw@%
158 \edef\FV@FrameFillLine{%
159 {\noexpand\FancyVerbFillColor{\vrule\@width\number\@tempdima sp}}%
160 \kern-\number\@tempdima sp}}%
161 \fi%
162 \let\FV@BeginListFrame\LWR@fvstartnone%
163 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
164 \let\FV@RightListFrame\relax%
165 \let\FV@EndListFrame\LWR@fvendnone}

```

Adds the optional label to the top and bottom edges. Original code is from the fancyvrb package.

```

166 \def\FV@SingleFrameLine#1{%
167 % \hbox to\z@{%
168 % \kern\leftmargin
169 \ifnum#1=\z@\relax
170 \let\FV@Label\FV@LabelBegin
171 \else
172 \let\FV@Label\FV@LabelEnd
173 \fi
174 \ifx\FV@Label\relax
175 % \FancyVerbRuleColor{\vrule \@width\linewidth \@height\FV@FrameRule}%
176 \else
177 \ifnum#1=\z@
178 % \setbox\z@\hbox{\strut\enspace\FV@LabelBegin\enspace\strut}%
179 \ifx\FV@LabelPositionTopLine\relax
180 \else
181 \LWR@FVfindbordercolor
182 \LWR@htmltagc{%
183 div class="fancyvrblabel" % extra space
184 style="color: \LWR@origpound\LWR@tempcolor"%
185 }
186 \LWR@print@textrm{\FV@LabelBegin}% \textrm preserves emdash
187 \LWR@htmltagc{/div}
188 \fi
189 \else
190 % \setbox\z@\hbox{\strut\enspace\FV@LabelEnd\enspace\strut}%
191 \ifx\FV@LabelPositionBottomLine\relax
192 \else

```

```

193 \LWR@FVfindbordercolor
194
195 \LWR@htmltagc{%
196 div class="fancyvrblabel" % extra space
197 style="color: \LWR@origpound\LWR@tempcolor"%
198 }
199 \LWR@print@textrm{\FV@LabelEnd}
200 \LWR@htmltagc{/div}
201 \fi
202 \fi
203 \fi
204 % \hss
205 % }
206 }

```

Processes each line, adding optional line numbers. Original code is from the fancyvrb package.

```

207 \def\FV@ListProcessLine#1{%
208 \hbox to \hsize{%
209 % \kern\leftmargin
210 \hbox to \VerbatimHTMLWidth {%
211 \ifcvoid{FV@LeftListNumber}{}{\kern 2.5em}%
212 \FV@LeftListNumber%
213 % \FV@LeftListFrame
214 \FancyVerbFormatLine{#1}%
215 \hss%
216 % \FV@RightListFrame
217 \FV@RightListNumber%
218 }%
219 \hss% required to avoid underfull hboxes
220 }
221 }

```

Env BVerbatim

```

222 \AtBeginEnvironment{BVerbatim}
223 {%
224 \LWR@forcenewpage% instead of \preto
225 \LWR@atbeginverbatim{0}{bverbatim}%
226 }
227
228 \AfterEndEnvironment{BVerbatim}
229 {%
230 \LWR@afterendverbatim{0}%
231 }

```

End of the modifications to make at the end of the preamble:

```
232 } % \AfterEndPreamble
```

---

File 110 **lwarp-figcaps.sty**

§ 206 Package **figcaps**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg figcaps Emulated.

**for HTML output:** Discard all options for lwarp-figcaps:

```
1 \LWR@ProvidesPackageDrop{figcaps}

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 111 **lwarp-figsize.sty**

§ 207 Package **figsize**

*(Emulates or patches code by ANTHONY A. TANBAKUCHI.)*

Pkg figsize figsize is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{figsize}

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 112 **lwarp-fix2col.sty**

§ 208 Package **fix2col**

Pkg `fix2col` `fix2col` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{fix2col}`

---

File 113 **lwarp-fixme.sty**

§ 209 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}`

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 114 **lwarp-fixmetodonotes.sty**

§ 210 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}

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 115 **lwarp-flafter.sty**

§ 211 Package **flafter**

Pkg flafter flafter is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{flafter}
2 \providecommand\fl@trace[1]{}

```

---

File 116 **lwarp-flippdf.sty**

§ 212 Package **flippdf**

Pkg flippdf flippdf is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]
2 \newcommand\FlipPDF{}
3 \newcommand\UnFlipPDF{}

```

---

File 117 **lwarp-float.sty**

§ 213 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 74.2 for the \listof command.

\LWR@floatstyle The default float style:

```
2 \newcommand*\LWR@floatstyle{plain}
```

\newfloat *{<1: type>}{<2: placement>}{<3: ext>}[<4: within>]*

Emulates the \newfloat command from the float package.

“placement” is ignored.

```
3 \NewDocumentCommand{\newfloat}{m m m o}{%
4 \IfValueTF{#4}%
5 {\DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}}%
6 {\DeclareFloatingEnvironment[fileext=#3]{#1}}%
```

Remember the float style:

```
7 \csedef\LWR@floatstyle@#1{\LWR@floatstyle}%
```

newfloat package automatically creates the \listof command for new floats, but float does not, so remove \listof here in case it is manually created later.

```
8 \cslet{listof#1s}\relax%
9 \cslet{listof#1es}\relax%
```

Likewise, newfloat also creates \l@<type>, but float does not, so remove it here:

```
10 \cslet{l@#1}\relax%
11 }
```

\floatname *{<type>}{<name>}*

Sets the text name of the float, such as “Figure”.

```
12 \NewDocumentCommand{\floatname}{m +m}{%
13 \SetupFloatingEnvironment{#1}{name=#2}%
14 }
```

```
\floatplacement {\langle type \rangle} {\langle placement \rangle}
Float placement is ignored.
15 \newcommand*{\floatplacement}[2]{%
16 \SetupFloatingEnvironment{#1}{placement=#2}%
17 }
```

```
\floatstyle {\langle style \rangle}
Remember the style for future floats:
18 \newcommand{\floatstyle}[1]{%
19 \def\LWR@floatstyle{#1}%
20 }
```

```
\restylefloat *{\langle type \rangle}
Remember the style for this float:
21 \NewDocumentCommand{\restylefloat}{s m}{%
22 \csedef\LWR@floatstyle@#2{\LWR@floatstyle}%
23 }
```

File 118 **lwarp-floatflt.sty**

§ 214 Package **floatflt**

*(Emulates or patches code by MATS DAHLGREN.)*

Pkg floatflt Emulated.

**for HTML output:** Discard all options for lwarp-floatflt:

```
1 \LWR@ProvidesPackageDrop{floatflt}
```

```
Env [⟨⟩] offset {\langle type \rangle} {\langle width \rangle} Borrowed from the lwarp version of keyfloat:
2 \NewDocumentEnvironment{KFLIfloatflt@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 119 **lwarp-floatpag.sty**

§ 215 Package **floatpag**

*(Emulates or patches code by VYTAS STATULEVIČIUS AND SIGITAS TOLUŠIS.)*

Pkg floatpag Emulated.

**for HTML output:** Discard all options for lwarp-floatpag:

```

1 \LWR@ProvidesPackageDrop{floatpag}

2 \newcommand*{\floatpagestyle}[1]{}
3 \newcommand*{\rotfloatpagestyle}[1]{}
4 \newcommand*{\thisfloatpagestyle}[1]{}

```

---

File 120 **lwarp-floatrow.sty**

§ 216 Package **floatrow**

*(Emulates or patches code by OLGA LAPKO.)*

Pkg floatrow floatrow is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{floatrow}

- ⚠ **Misplaced alignment tab character &** Use `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros using `\ttabbox` with a tabular inside. See section 9.9.
- ⚠ **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 capttype*} [*3 width*] [*4 height*] [*5 vert pos*] {*6 caption*} {*7 object*}

Only parameters for `capttype`, `width`, `caption`, and `object` are used.

`LWR@insubfloatrow` is true if inside a `subfloatrow` environment.

There are two actions, depending on the use of `subcaption` or `subfig`.

```
9 \NewDocumentCommand{\floatbox}{o m o o o +m +m}{%
10 \ifbool{LWR@subcaptionloaded}%
11 {% subcaption
```

For `subcaption`:

```
12 \ifbool{LWR@insubfloatrow}%
13 {% subcaption in a subfloatrow
```

`subfigure` and `subtable` environments take `width` as an argument.

```

14 \IfValueTF{#3}%
15 {\@nameuse{sub#2}{#3}}%
16 {\@nameuse{sub#2}{\linewidth}}%
17 }% subcaption in a subfloatrow
18 {% subcaption not in subfloatrow

```

figure and table environments do not take a width argument.

```

19 \@nameuse{#2}%
20 }% subcaption not in subfloatrow
21 #6
22
23 #7

```

End the environments:

```

24 \ifbool{LWR@insubfloatrow}%
25 {\@nameuse{endsub#2}}%
26 {\@nameuse{end#2}}%
27 }% subcaption
28 {% assume subfig

```

For subfig:

```

29 \ifbool{LWR@insubfloatrow}%
30 {% subfig in a subfloatrow

```

`\subfloat` is a macro, not an environment.

Package subfig's `\subfloat` command takes an optional argument which is the caption, but `\floatbox` argument #6 contains commands to create the caption and label, not the caption itself. Thus, `\caption` is temporarily disabled to return its own argument without braces.

```

31 \begingroup
32 \let\caption\@firstofone
33 \subfloat[#6]{#7}
34 \endgroup
35 }% subfig in a subfloatrow
36 {% subfig package, but not a subfig

```

figure and table are environments:

```

37 \@nameuse{#2}
38 #6
39
40 #7
41 \@nameuse{end#2}
42 }% subfig package, but not a subfig
43 }% assume subfig
44 }

```

Not used:

```

45 \newcommand*\nocapbeside{}
46 \newcommand*\capbeside{}
47 \newcommand*\captop{}
48 \newlength{\FBwidth}
49 \setlength{\FBwidth}{.3\linewidth}
50 \newlength{\FBheight}
51 \setlength{\FBheight}{2in}
52 \newcommand*\useFCwidth{}
53 \newcommand{\floatsetup}[2] [] {}
54 \newcommand{\thisfloatsetup}[1] {}
55 \newcommand{\clearfloatsetup}[1] {}
56 \newcommand*\killfloatstyle{}

```

`\newfloatcommand` [*⟨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{\buildFBBBOX}[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@insubfloatrow}
134 \boolfalse{LWR@insubfloatrow}

```

Env `subfloatrow` [ $\langle num\_floats \rangle$ ]

```
135 \newenvironment*{subfloatrow}[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@insubfloatrow` is set true, which tells `\floatbox` to use `\subfigure` or `\subtable`.

```
139 \begingroup
140 \booltrue{LWR@insubfloatrow}
141 }
142 {
143 \endgroup
144 \endBlockClass
145 \boolfalse{LWR@insubfloatrow}
146 }
```

---

File 121 `lwarp-fltrace.sty`

§ 217 Package **fltrace**

Pkg `fltrace` `fltrace` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{fltrace}`

```
2 \def\tracefloats{}
3 \def\tracefloatsoff{}
4 \def\tracefloatvals{}
```

---

File 122 `lwarp-flushend.sty`

§ 218 Package **flushend**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg `flushend` Emulated.

**for HTML output:** Discard all options for `lwarp-flushend`:

```
1 \LWR@ProvidesPackageDrop{flushend}
```

---

```

2 \newcommand*\flushend{}
3 \newcommand*\raggedend{}
4 \newcommand*\flushcolsend{}
5 \newcommand*\raggedcolsend{}
6 \newcommand*\atColsBreak[1]{}
7 \newcommand*\atColsEnd[1]{}
8 \newcommand*\showcolsendrule{}

```

---

File 123 **lwarp-fnbreak.sty**

§ 219 Package **fnbreak**

Pkg fnbreak fnbreak is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{fnbreak}

2 \newcommand*\fnbreakverbose{}
3 \newcommand*\fnbreaknonverbose{}
4 \newcommand*\fnbreaklabel{}
5 \newcommand*\fnbreaknolabel{}

```

---

File 124 **lwarp-fncychap.sty**

§ 220 Package **fncychap**

*(Emulates or patches code by ULF A. LINDGREN.)*

Pkg fncychap fncychap is emulated.

**for HTML output:** Discard all options for lwarp-fncychap:

```

1 \LWR@ProvidesPackageDrop{fncychap}

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 125 **lwarp-fnlineno.sty**

§ 221 Package **fnlineno**

Pkg **fnlineno** fnlineno is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnlineno}

---

File 126 **lwarp-fnpos.sty**

§ 222 Package **fnpos**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg **fnpos** fnpos is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fnpos}

```

2 \newcommand*{\makeFNbottom}{}
3 \newcommand*{\makeFNmid}{}
4 \newcommand*{\makeFNbelow}{}
5 \newcommand*{\makeFNabove}{}

```

---

File 127 **lwarp-fontenc.sty**

§ 223 Package **fontenc**

Pkg **fontenc** If using pdf<sup>L</sup>A<sup>T</sup>E<sup>X</sup>, 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}`

File 128 `lwarp-footmisc.sty`

§ 224 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}
```

Some nullified commands:

```
2 \newcommand{\footnotelayout}{}
3 \newcommand{\setfnsymbol}[1]{}
4 \NewDocumentCommand{\DefineFNsymbols}{s m o m}{}
5
6 \newdimen\footnotemargin
7 \footnotemargin1.8em\relax
8
9 \newcommand*\hangfootparskip{0.5\baselineskip}
10 \newcommand*\hangfootparindent{0em}%
11
12 \let\pagefootnoterule\footnoterule
13 \let\mpfootnoterule\footnoterule
14 \def\splitfootnoterule{\kern-3\p@ \hrule \kern2.6\p@}
15
16 \providecommand*\multiplefootnotemarker}{3sp}
17 \providecommand*\multfootsep}{,}
```

Using `cleveref`:

```
18 \providecommand*\footref}[1]{\labelcref{#1}}
```

The following work as-is:

```
19 \newcommand\mpfootnotemark{%
20 \@ifnextchar [%
```

```

21 \@xmpfootnotemark%
22 {%
23 \stepcounter\@mpfn%
24 \protected@xdef\@thefnmark{\thempfn}%
25 \@footnotemark%
26 }%
27 }
28 \def\@xmpfootnotemark[#1]{%
29 \begingroup%
30 \csname c@\@mpfn\endcsname #1\relax%
31 \unrestored@protected@xdef\@thefnmark{\thempfn}%
32 \endgroup%
33 \@footnotemark%
34 }

```

---

File 129 **lwarp-footnote.sty**

§ 225 Package **footnote**

*(Emulates or patches code by MARK WOODING.)*

Pkg `footnote` `footnote` is used with minor patches.

**for HTML output:** `1 \LWR@ProvidesPackagePass{footnote}`

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 \fn@prefntext%
17 \ignorespaces%
18 }

```

Removed print-version formatting, added closing paragraph tag:

```

19 \def\fn@endfntext{%
20 \LWR@htmltagc{/\LWR@tagregularparagraph}%
21 \LWR@orignewline%
22 \fn@postfntext%
23 \egroup%
24 \begingroup%
25 \let\@makefntext\@empty%
26 \let\@finalstrut\@gobble%
27 \LetLtxMacro\rule\@gobbletwo% *8* also the optional argument?
28 \@footnotetext{\unvbox\z@}%
29 \endgroup%
30 }

```

These have been redefined, so re-\let them again:

```

31 \let\endfootnote\fn@endfntext
32 \let\endfootnotetext\endfootnote

```

---

File 130 **lwarp-footnotehyper.sty**

§ 226 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}

```

---

File 131 **lwarp-footnoterange.sty**

§ 227 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}

2 \csletcs{footnoterange}{footnoterange*}
3 \csletcs{endfootnoterange}{endfootnoterange*}

```

---

File 132 **lwarp-footnpag.sty**

§ 228 Package **footnpag**

Pkg footnpag footnpag is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{footnpag}

---

File 133 **lwarp-forest.sty**

§ 229 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}

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]% lwarp
15 \forest@next{#3}%
16 \end{lateximage}% lwarp
17 }
```

---

File 134 **lwarp-framed.sty**

§ 230 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}
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}{}{Opt}{Opt}{Opt}{Opt}{\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 135 **lwarp-ftnright.sty**

§ 231 Package **ftnright**

Pkg ftnright ftnright is ignored.

**for HTML output:** Discard all options for lwarp-ftnright:

```
1 \LWR@ProvidesPackageDrop{ftnright}
```

---

File 136 **lwarp-fullminipage.sty**

§ 232 Package **fullminipage**

Pkg fullminipage fullminipage is nullified.

---

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]  
2 \newenvironment{fullminipage}[1] [] {}{}

---

File 137 **lwarp-fullpage.sty**

§ 233 Package **fullpage**

Pkg fullpage fullpage is ignored.

**for HTML output:** Discard all options for lwarp-fullpage:

1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]

---

File 138 **lwarp-fullwidth.sty**

§ 234 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}  
2 \newenvironment\*{fullwidth}[1] [] {%  
3 \minipagefullwidth%  
4 \minipage{\linewidth}%  
5 }  
6 {%  
7 \endminipage%  
8 }

---

File 139 **lwarp-fwlw.sty**

§ 235 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@fwlthead{}
6 \def\ps@NextWordFoot{}

```

---

File 140 **lwarp-gentombow.sty**

§ 236 Package **gentombow**

Pkg gentombow gentombow is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{gentombow}

```

2 \newcommand{\settombowbanner}[1]{}
3 \newcommand{\settombowbannerfont}[1]{}
4 \newcommand{\settombowwidth}[1]{}
5 \newcommand{\settombowbleed}[1]{}
6 \newcommand{\settombowcolor}[1]{}

```

---

File 141 **lwarp-geometry.sty**

§ 237 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@ProvidesPackageDrop{geometry}

2 \renewcommand*{\geometry}[1]{}
3 \renewcommand*{\newgeometry}[1]{}
4 \renewcommand*{\restoregeometry}{}
5 \renewcommand*{\savegeometry}[1]{}
6 \renewcommand*{\loadgeometry}[1]{}

```

File 142 **lwarp-glossaries.sty**

§ 238 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* command.

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 \LWR@ProvidesPackagePass{glossaries}
3 \setupglossaries{nonumberlist}
4 \setglossarystyle{index}

```

Patched to fix TOC pointing to the previous page:

```

5 \renewcommand*{\@p@glossarysection}[2]{%
6 \glsclearpage
7 \phantomsection
8 \ifdefempty\@glossarysecstar
9 {%
10 \csname\@glossarysec\endcsname{#2}%
11 }%
12 {%

```

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:

```

13 \csname\@glossarysec\endcsname*{#2}%
14 \@gls@toc{#1}{\@glossarysec}% Moved after the previous line.
15 }%
16 \@glossaryseclabel
17 }

```

`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`.

---

```

18 \newcommand*\LWR@comp@glossaryname{\translate{Glossary}}
19
20 \ifdefstrequal{\glossaryname}{\LWR@comp@glossaryname}{
21 \translatelet\LWR@translatetemp{Glossary}
22 \edef\glossaryname{\LWR@translatetemp}
23 }{}
24
25 \newcommand*\LWR@comp@acronymname{\translate{Acronym}}
26
27 \ifdefstrequal{\acronymname}{\LWR@comp@acronymname}{
28 \translatelet\LWR@translatetemp{Acronym}
29 \edef\acronymname{\LWR@translatetemp}
30 }{}
31
32 \newcommand*\LWR@comp@glssymbolsgroupname{\translate{Symbols (glossaries)}}
33
34 \ifdefstrequal{\glssymbolsgroupname}{\LWR@comp@glssymbolsgroupname}{
35 \translatelet\LWR@translatetemp{Symbols (glossaries)}
36 \edef\glssymbolsgroupname{\LWR@translatetemp}
37 }{}
38
39 \newcommand*\LWR@comp@glnumbersgroupname{\translate{Numbers (glossaries)}}
40
41 \ifdefstrequal{\glnumbersgroupname}{\LWR@comp@glnumbersgroupname}{
42 \translatelet\LWR@translatetemp{Numbers (glossaries)}
43 \edef\glnumbersgroupname{\LWR@translatetemp}
44 }{}

```

---

File 143 **lwarp-geometric.sty**

§ 239 Package **geometric**

Pkg `geometric` `geometric` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{geometric}`

---

File 144 **lwarp-graphics.sty**

§ 240 Package **graphics**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg `graphics` `graphics` is emulated.

**for HTML output:** `1 \LWR@ProvidesPackagePass{graphics}`

## § 240.1 Graphics extensions

`\DeclareGraphicsExtensions`  $\{ \langle list \rangle \}$

`\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

```

## § 240.2 Length conversions and graphics options



**whitespace**

A scaled image in  $\LaTeX$  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}{(image)}
```

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 \renewcommand*\LWR@igxscale}{#1}%
80 \renewcommand*\LWR@igyscale}{#1}%
81 }

```

Numerous ignored keys:

```

82 \define@key{igraph}{bb}{-}
83 \define@key{igraph}{bbllx}{-}
84 \define@key{igraph}{bbly}{-}
85 \define@key{igraph}{bburx}{-}
86 \define@key{igraph}{bbury}{-}

```

```

87 \define@key{igraph}{natwidth}{}
88 \define@key{igraph}{natheight}{}
89 \define@key{igraph}{hiresbb}[true]{}
90 \define@key{igraph}{viewport}{}
91 \define@key{igraph}{trim}{}
92 \define@key{igraph}{totalheight}{}
93 \define@key{igraph}{keepaspectratio}[true]{}
94 \define@key{igraph}{clip}[true]{}
95 \define@key{igraph}{draft}[true]{}
96 \define@key{igraph}{type}{}
97 \define@key{igraph}{ext}{}
98 \define@key{igraph}{read}{}
99 \define@key{igraph}{command}{}

```

New in v1.1a:

```

100 \define@key{igraph}{quite}{}
101 \define@key{igraph}{page}{}
102 \define@key{igraph}{pagebox}{}
103 \define@key{igraph}{interpolate}[true]{}

```

New in v1.1b:

```

104 \define@key{igraph}{decodearray}{}

```

### § 240.3 **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.

```

105 \newcommand*{\LWR@rotstyle}[2]{%
106 #1transform:rotate(-#2deg);
107 }

```

`\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.

```

108 \newcommand*{\LWR@scalestyle}[3]{%
109 #1transform:scale(#2,#3);
110 }

```

## § 240.4 `\includegraphics`

Bool `LWR@infloatrow` Used to compute `\linewidth`.

```
111 \newbool{LWR@infloatrow}
112 \boolfalse{LWR@infloatrow}
```

`\LWR@opacity` For HTML, used only for `\includegraphics`.

`\LWR@opacity` may be set by the transparent package.

```
113 \def\LWR@opacity{1}
```

`\LWR@imagesizebox` Used to determine the actual image size if needed.

```
114 \newsavebox{\LWR@imagesizebox}
```

`\LWR@HTML@Gin@setfile` `{<w>}{<h>}{<filename>}` Sets the parsed filename for HTML output.

```
115 \newcommand*{\LWR@HTML@Gin@setfile}[3]{%
116 \xdef\LWR@parsedfilename{#3}%
117 }
```

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`.

```
118 \AtBeginDocument{
119 \define@key{Gin}{class}{}
120 \define@key{Gin}{alt}{}
121 }
```

`\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.

```
122 \AtBeginDocument{
123 \@ifpackageloaded{epstopdf}
124 {
125 \newcommand*{\LWR@replaceEPSSVG}{}
126 }{%
127 \newcommand*{\LWR@replaceEPSSVG}{%
128 \StrSubstitute{\LWR@tempone}{.eps}{.svg}[\LWR@tempone]%
129 \StrSubstitute{\LWR@tempone}{.EPS}{.SVG}[\LWR@tempone]%
130 }
131 }%
132 }
```

```
\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.

```
133 \NewDocumentCommand{\LWR@includegraphicsb}{s o o m}
134 {%
```

Start the image tag on a new line, allow PDF output word wrap:

```
135 \LWR@origtilde \LWR@orignewline%
```

Temporarily compute `\linewidth`, `\textwidth`, `\textheight` arguments with a 6x9 inch size until the next `\endgroup`.

```
136 \begingroup%
137 \ifthenelse{\cinttest{\value{LWR@minipagedepth}}{=}{0}}%
138 {%
139 \ifbool{LWR@infloatrow}%
140 {}
141 {% not in a minipage or a floatrow:
142 \setlength{\linewidth}{6in}%
143 \setlength{\textwidth}{6in}%
144 \setlength{\textheight}{9in}%
145 }%
146 }{}}%
```

For correct em sizing during the width and height conversions:

```
147 \large%
```

Reset some defaults, possibly will be changed below if options were given:

```
148 \setlength{\LWR@igwidth}{0pt}%
149 \setlength{\LWR@igheight}{0pt}%
150 \renewcommand*{\LWR@igwidthstyle}{}%
151 \renewcommand*{\LWR@igheightstyle}{}%
152 \renewcommand*{\LWR@igorigin}{}%
153 \renewcommand*{\LWR@igangle}{}%
154 \renewcommand*{\LWR@igxscale}{1}%
155 \renewcommand*{\LWR@igyyscale}{1}%
156 \renewcommand*{\LWR@igclass}{inlineimage}%
```

```
157 \renewcommand*{\LWR@igalt}{(image)}%
```

If #3 is empty, only one optional argument was given, thus graphicx syntax:

```
158 \IfValueF{#3}{%
159 \IfValueTF{#2}{%
160 {\setkeys{igraph}{#2}}%
161 {\setkeys{igraph}{}}%
162 }%
```

Fully expand and detokenize the filename, changing the file extension to .svg if necessary.

```
163 \begingroup%
164 \LetLtxMacro\Gin@setfile\LWR@HTML@Gin@setfile%
165 \edef\LWR@tempone{#4}%
166 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
167 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
168 \LWR@replaceEPSSVG%
169 \xdef\LWR@parsedfilename{\LWR@tempone}%
170 \Gin@include@graphics{\detokenize\expandafter{\LWR@tempone}}%
171 \endgroup%
172 \filename@parse{\LWR@parsedfilename}%
173 \LWR@traceinfo{\LWR@parsedfilename is \LWR@parsedfilename}%
174 % \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:

```
175 \ifbool{FormatWP}{%
176 \begingroup%
177 \LWR@restoreorigformatting%
178 \ifpdf%
179 \appto\LWR@restoreorigformatting{%
180 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
181 }%
182 \else% \ifpdf
183 \ifXeTeX%
184 \appto\LWR@restoreorigformatting{%
185 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
186 }%
187 \else%
188 \appto\LWR@restoreorigformatting{%
189 \DeclareGraphicsExtensions{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
190 }%
191 \fi%
192 \fi% \ifpdf
193 \define@key{Gin}{angle}{}%
194 \IfBooleanTF{#1}%
```

```

195 {% starred
196 \IfValueTF{#3}%
197 {%
198 \global\sbox{\LWR@imagesizebox}{\LWR@originincludegraphics* [#2] [#3] {#4}}%
199 }%
200 {%
201 \IfValueTF{#2}%
202 {%
203 \global\sbox{\LWR@imagesizebox}{\LWR@originincludegraphics* [#2] {#4}}%
204 }-{%
205 \global\sbox{\LWR@imagesizebox}{\LWR@originincludegraphics* {#4}}%
206 }%
207 }%
208 }% starred
209 {% not starred
210 \IfValueTF{#3}%
211 {%
212 \global\sbox{\LWR@imagesizebox}{\LWR@originincludegraphics [#2] [#3] {#4}}%
213 }%
214 {%
215 \IfValueTF{#2}%
216 {%
217 \global\sbox{\LWR@imagesizebox}{\LWR@originincludegraphics [#2] {#4}}%
218 }-{%
219 \global\sbox{\LWR@imagesizebox}{\LWR@originincludegraphics {#4}}%
220 }%
221 }%
222 }% not starred
223 \endgroup%
224 \settowidth{\LWR@igwidth}{\usebox{\LWR@imagesizebox}}%
225 \global\renewcommand*{\LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%
226 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
227 \global\renewcommand*{\LWR@igheightstyle}{height:\LWR@printlength{\LWR@igheight}}%
228 }-}% 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.

```

229 \LWR@traceinfo{\LWR@includegraphicsb: about to create href}%
230 \href{\LWR@parsedfilename}%
231 {% start of href
232 \LWR@traceinfo{\LWR@includegraphicsb: about to LWR@htmltag}%
233 \LWR@htmltag{% start of image tags
234 img src="%

235 \detokenize\expandafter{\LWR@parsedfilename}%

```

236 " \LWR@orignewline%

Only include a style tag if a width, height, angle, or scale was given:

```

237 \ifthenelse{
238 \NOT\equal{\LWR@igwidthstyle}{ } \OR
239 \NOT\equal{\LWR@igheightstyle}{ } \OR
240 \NOT\equal{\LWR@igorigin}{ } \OR
241 \NOT\equal{\LWR@igangle}{ } \OR
242 \NOT\equal{\LWR@igxscale}{1} \OR
243 \NOT\equal{\LWR@igyyscale}{1}
244 }%
245 {%
246 \LWR@origtilde{ } style="%
247 \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{ }}%
248 {\LWR@igwidthstyle; }{%
249 \ifthenelse{\NOT\equal{\LWR@igheightstyle}{ }}%
250 {\LWR@igheightstyle; }{%
251 \ifthenelse{\NOT\equal{\LWR@igorigin}{ }}%
252 {%
253 \LWR@origtilde{ } transform-origin: \LWR@originnames{\LWR@igorigin}; %
254 \LWR@orignewline%
255 }{%
256 \ifthenelse{\NOT\equal{\LWR@igangle}{ }}%
257 {%
258 \LWR@rotstyle{-ms-}{\LWR@igangle} % extra space
259 \LWR@rotstyle{-webkit-}{\LWR@igangle} % extra space
260 \LWR@rotstyle{}{\LWR@igangle }%
261 }{%
262 \ifthenelse{%
263 \NOT\equal{\LWR@igxscale}{1}\OR%
264 \NOT\equal{\LWR@igyyscale}{1}%
265 }%
266 {%
267 \LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyyscale} % extra space
268 \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyyscale} % extra space
269 \LWR@scalestyle{}{\LWR@igxscale}{\LWR@igyyscale}%
270 }{ } % extra space
271 %
272 \ifthenelse{\NOT\equal{\LWR@opacity}{1}}%
273 {opacity:\LWR@opacity; }{%
274 %
275 " \LWR@orignewline%
276 }{%

```

Set the class and alt tag:

```

277 \LWR@origtilde{ } class="\LWR@igclass" \LWR@orignewline%
278 \LWR@origtilde{ } alt="\LWR@igalt" \LWR@orignewline%

```

```
279 }% end of image tags
280 }% end of href
```

Return to original page size and font size:

```
281 \endgroup
282 \LWR@traceinfo{LWR@includegraphicsb done}%
283 }
```

`\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.

```
284 \AtBeginDocument{
285
286 \LWR@traceinfo{Patching includegraphics.}
287
288 \LetLtxMacro\LWR@originincludegraphics\includegraphics
289
290 \renewcommand*{\includegraphics}
291 {%
```

This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:

```
292 \LWR@traceinfo{includegraphics}%
293 \LWR@ensuredoingapar%
294 \LWR@includegraphicsb%
295 }% includegraphics
296 }% AtBeginDocument
```

## § 240.5 Boxes

`\LWR@rotboxorigin` Holds the origin key letters.

```
297 \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:

```
298 \newcommand*{\LWR@originname}[1]{%
299 \ifthenelse{\equal{#1}{t}}{top}{}%
300 \ifthenelse{\equal{#1}{b}}{bottom}{}%
```

```

301 \ifthenelse{\equal{#1}{c}}{center}{}%
302 \ifthenelse{\equal{#1}{l}}{left}{}%
303 \ifthenelse{\equal{#1}{r}}{right}{}%
304 }

```

`\LWR@originnames`  $\{\langle letters \rangle\}$

Given one- or two-letter L<sup>A</sup>T<sub>E</sub>X origin key values, translate into HTML origin words:

```

305 \newcommand*{\LWR@originnames}[1]{%
306 \StrChar{#1}{1}[\LWR@strresult]%
307 \LWR@originname{\LWR@strresult}
308 \StrChar{#1}{2}[\LWR@strresult]%
309 \LWR@originname{\LWR@strresult}
310 }

```

Handle the origin key for `\rotatebox`:

```

311 \define@key{krotbox}{origin}{%
312 \renewcommand*{\LWR@rotboxorigin}{#1}%
313 }

```

These keys are ignored:

```

314 \define@key{krotbox}{x}{}
315 \define@key{krotbox}{y}{}
316 \define@key{krotbox}{units}{}

```

`\rotatebox`  $[\langle keyval list \rangle] \{\langle angle \rangle\} \{\langle text \rangle\}$

```

317 \AtBeginDocument{

```

The HTML version:

```

318 \NewDocumentCommand{\LWR@HTML@rotatebox}{0{} m +m}{%

```

Reset the origin to “none-given”:

```

319 \renewcommand*{\LWR@rotboxorigin}{}

```

Process the optional keys, which may set `\LWR@rotateboxorigin`:

```

320 \setkeys{krotbox}{#1}%

```

Select inline-block so that HTML will transform this span:

```

321 \LWR@htmltagc{span style="display: inline-block; %

```

If an origin was given, translate and print the origin information:

```
322 \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{}}%
323 {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@origtilde{}}%
```

Print the rotation information:

```
324 \LWR@rotstyle{-ms-}{#2} % extra space
325 \LWR@rotstyle{-webkit-}{#2} % extra space
326 \LWR@rotstyle{}{#2} % extra space
327 "}\LWR@orignewline%
```

Print the text to be rotated:

```
328 \begin{LWR@nestspan}%
329 #3%
```

Close the span:

```
330 \LWR@htmltagc{/span}%
331 \end{LWR@nestspan}%
332 }
```

The high-level interface:

```
333 \LWR@formatted{rotatebox}
334
335 }% AtBeginDocument
```

`\scalebox`  $\langle h\text{-scale} \rangle$   $\langle v\text{-scale} \rangle$   $\langle text \rangle$

```
336 \AtBeginDocument{
```

The HTML version:

```
337 \NewDocumentCommand{\LWR@HTML@scalebox}{m o m}{%
```

Select inline-block so that HTML will transform this span:

```
338 \LWR@htmltagc{span style="display: inline-block; %
```

Print the scaling information:

```
339 \LWR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}} % extra space
340 \LWR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}} % extra space
341 \LWR@scalestyle{}{#1}{\IfNoValueTF{#2}{#1}{#2}} % extra space
342 "}%
```

Print the text to be scaled:

```
343 \begin{LWR@nestspan}%
344 #3%
```

Close the span:

```
345 \LWR@htmltagc{/span}%
346 \end{LWR@nestspan}%
347 }
```

The high-level interface:

```
348 \LWR@formatted{scalebox}
349
350 }% AtBeginDocument
```

`\reflectbox`  $\{\langle text \rangle\}$

```
351 \AtBeginDocument{
352
353 \newcommand{\LWR@HTML@reflectbox}[1]{%
354 \scalebox{-1}[1]{#1}%
355 }% \reflectbox
356
357 \LWR@formatted{reflectbox}
358
359 }% AtBeginDocument
```

`\resizebox`  $\{\langle h-length \rangle\} \{\langle v-length \rangle\} \{\langle text \rangle\}$

Simply prints its text argument.

```
360 \AtBeginDocument{
361
362 \NewDocumentCommand{\LWR@HTML@resizebox}{s m m m}{%
363 #4%
364 }
365
366 \LWR@formatted{resizebox}
367
368 }% AtBeginDocument
```

---

File 145 **lwarp-graphics.sty**

§ 241 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 146 **lwarp-grffile.sty**

§ 242 Package **grffile**

Pkg `grffile` `grffile` is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

 **matching PDF and SVG**

`lwarp-grffile` now exists as a placeholder since `grffile` used to be emulated by `lwarp`, and thus older versions of `lwarp-grffile` may exist and should be overwritten by this newer version.

**for HTML output:** `1 \LWR@ProvidesPackagePass{grffile}`

---

File 147 **lwarp-grid.sty**

§ 243 Package **grid**

Pkg `grid` `grid` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{grid}`

`2 \newenvironment*{gridenv}{}{}`

---

File 148 **lwarp-grid-system.sty**

§ 244 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 149 **lwarp-gridset.sty**

§ 245 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 150 **lwarp-hang.sty**

§ 246 Package **hang**

*(Emulates or patches code by ANDREAS NOLDA.)*

Pkg hang hang is emulated.

```

for HTML output: 1 \LWR@ProvidesPackageDrop{hang}

2 \newlength{\hangingindent}
3 \setlength{\hangingindent}{1em}
4 \newlength{\hangingleftmargin}
5 \setlength{\hangingleftmargin}{0em}
6
7 \newcommand*\LWR@findhangingleftmargin{%
8 \setlength{\LWR@templengthone}{\hangingleftmargin}%
9 \addtolength{\LWR@templengthone}{\hangingindent}%
10 }
11
12 \newenvironment{hangingpar}
13 {
14 \LWR@findhangingleftmargin%
15 \BlockClass [%
16 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
17 \LWR@print@mbx{text-indent:-\LWR@printlength{\hangingindent}}%
18]%
19 {hangingpar}%
20 }
21 {\endBlockClass}
22
23 \newenvironment{hanginglist}
24 {%
25 \renewcommand*\LWR@printcloselist{\LWR@printcloseitemize}%
26 \renewcommand*\LWR@printopenlist{%
27 \LWR@findhangingleftmargin%
28 ul style="%
29 \LWR@print@mbx{list-style-type:none;} % extra space
30 \LWR@print@mbx{%
31 margin-left:\LWR@printlength{\LWR@templengthone}%
32 } ; % extra space
33 \LWR@print@mbx{%
34 text-indent:-\LWR@printlength{\hangingindent}%
35 }%
36 "%

```

---

```

37 }%
38 \let\item\LWR@itemizeitem%
39 \list{ }{}%
40 }
41 {\endlist}
42
43 \newenvironment{compacthang}
44 {\hanginglist}
45 {\endhanginglist}
46
47 \newlength{\labeledleftmargin}
48 \setlength{\labeledleftmargin}{0em}
49
50 \newenvironment{labeledpar}[2]
51 {%
52 \BlockClass[%
53 \LWR@findhangingleftmargin%
54 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
55 \LWR@print@mbx{text-indent:-\LWR@printlength{\hangingindent}}%
56]{labeledpar}#2%
57 }
58 {\endBlockClass}
59
60 \newenvironment{labeledlist}[1]
61 {\hanginglist}
62 {\endhanginglist}
63
64 \newenvironment{compactlabel}[1]
65 {\hanginglist}
66 {\endhanginglist}

```

---

File 151 **lwarp-hanging.sty**

§ 247 Package **hanging**

Pkg hanging hanging is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hanging}

```

2 \@ifclassloaded{memoir}{
3 \let\hangpara\relax
4 \let\hangparas\relax
5 \let\endhangparas\relax
6 \let\hangpunct\relax
7 \let\endhangpunct\relax
8 }{}

```

```

\hangpara {<indent>} {<afternum>}
Use hangparas instead.
9 \newcommand*{\hangpara}[2]{

Env hangparas {<indent>} {<afternum>}
10 \newenvironment*{hangparas}[2]
11 {%
12 \BlockClass[%
13 \LWR@print@embox{margin-left:\LWR@printlength{#1}} ; %
14 \LWR@print@embox{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 152 **lwarp-hypcap.sty**

§ 248 Package **hypcap**

Pkg hypcap hypcap is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{hypcap}

2 \newcommand*{\capstart}{}
3 \newcommand*{\hypcapspace}{}
4 \newcommand*{\hypcapredef}[1]{}
5 \newcommand*{\capstartfalse}{}
6 \newcommand*{\capstarttrue}{}

```

---

File 153 **lwarp-hypdestopt.sty**

§ 249 Package **hypdestopt**

Pkg hypdestopt hypdestopt is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hypdestopt}

---

File 154 **lwarp-hypernat.sty**

§ 250 Package **hypernat**

Pkg hypernat hypernat is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hypernat}

---

File 155 **lwarp-hyperref.sty**

§ 251 Package **hyperref**

*(Emulates or patches code by SEBASTIAN RAHTZ, HEIKO OBERDIEK.)*

Pkg hyperref hyperref is emulated.

**for HTML output:**

```

1% \LWR@ProvidesPackageDrop{hyperref}
2\typeout{Using the lwarp html version of package 'hyperref', discarding options.}
3\typeout{ Are not using ProvidesPackage, so that other packages}
4\typeout{ do not attempt to patch lwarp's version of 'hyperref'.}
5% \ProvidesPackage{lwarp-#1-#2}
6\DeclareOption*{}
7\ProcessOptions\relax

8\newcommand*{\hypersetup}[1]{}
9\newcommand*{\hyperbaseurl}[1]{}

```

`\hyperimage` `{<URL>}{<alt text>}`

Insert an image with alt text:

```

10 \NewDocumentCommand{\LWR@hyperimageb}{m +m}{%
11 \LWR@ensuredoingapar%
12 \def\LWR@templink{#1}%
13 \@onelevel@sanitize\LWR@templink%
14 \LWR@htmltag{img src="\LWR@templink" alt="#2" class="hyperimage"}%
15 \LWR@ensuredoingapar%
16 \endgroup%
17 }
18
19 \newrobustcmd*{\hyperimage}{%
20 \begingroup%
21 \catcode'\#=12%
22 \catcode'\%=12%
23 \catcode'\&=12%
24 \catcode'\~=12%
25 \catcode'_ =12%
26 \LWR@hyperimageb%
27 }
28

```

`\hyperdef`  $\{\langle 1: category \rangle\} \{\langle 2: name \rangle\} \{\langle 3: text \rangle\}$

Creates an HTML anchor to `category.name` with the given text.

```

29 \NewDocumentCommand{\LWR@hyperdefb}{m m +m}{%
30 \LWR@ensuredoingapar%
31 \LWR@sublabel{#1.#2}%
32 #3%
33 \endgroup%
34 }
35
36 \newcommand*{\hyperdef}{%
37 \begingroup%
38 \catcode'\#=12%
39 \catcode'\%=12%
40 \catcode'\&=12%
41 \catcode'\~=12%
42 \catcode'_ =12%
43 \LWR@hyperdefb%
44 }
45

```

`\LWR@hyperrefb`  $\{\langle 1: URL \rangle\} \{\langle 2: category \rangle\} \{\langle 3: name \rangle\} \{\langle 4: text \rangle\}$

Creates an HTML link to `URL#category.name` with the given text.

```

46 \newcommand{\LWR@hyperreffinish}[1]{%
47 \begingroup%
48 \RenewDocumentCommand{\ref}{-}{\LWR@ref@ignorestar}%
49 #1%

```

```

50 \endgroup%
51 \LWR@htmltag{/a}%
52 }
53
54 \newcommand*{\LWR@hyperrefbb}[3]{%
55 \LWR@htmltag{%
56 a href="%
57 \detokenize\expandafter{#1}\LWR@hashmark%
58 \detokenize\expandafter{#2}.\detokenize\expandafter{#3}%
59 "%
60 }%
61 \endgroup%
62 \LWR@hyperreffinish%
63 }
64
65 \newrobustcmd*{\LWR@hyperrefb}{%
66 \begingroup%
67 \catcode'\#=12%
68 \catcode'\%=12%
69 \catcode'\&=12%
70 \catcode'\~=12%
71 \catcode'_=12%
72 \LWR@hyperrefbb%
73 }

```

`\LWR@hyperrefc` [*label*] {*text*}

Creates text as an HTML link to the  $\LaTeX$  label.

```

74
75 \NewDocumentCommand{\LWR@hyperrefcb}{0{label}}{%
76 \LWR@startref{#1}%
77 \endgroup%
78 \LWR@hyperreffinish%
79 }
80
81 \newcommand*{\LWR@hyperrefc}{%
82 \begingroup%
83 \catcode'\#=12%
84 \catcode'\%=12%
85 \catcode'\&=12%
86 \catcode'\~=12%
87 \catcode'_=12%
88 \LWR@hyperrefcb%
89 }

```

`\hyperref` {*1: URL*} {*2: category*} {*3: name*} {*4: text*} — or —  
 [*1: label*] {*2: text*}

```

90 \DeclareRobustCommand*\hyperref}{%

```

```

91 \LWR@ensuredoingapar%
92 \@ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
93 }

```

`\hypertarget`  $\{ \langle name \rangle \} \{ \langle text \rangle \}$

Creates an anchor to name with the given text.

```

94 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%
95 \label{LWR-ht-#1}%
96 #2%
97 \endgroup%
98 }
99
100 \newcommand*{\hypertarget}{%
101 \begingroup%
102 \catcode'\#=12%
103 \catcode'\%=12%
104 \catcode'\&=12%
105 \catcode'\~=12%
106 \catcode'_ =12%
107 \LWR@hypertargetb%
108 }

```

`\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.

```

109 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%
110 \LWR@hyperrefcb[LWR-ht-#1]%
111 }
112
113 \DeclareDocumentCommand{\hyperlink}{-}{%
114 \LWR@ensuredoingapar%
115 \begingroup%
116 \catcode'\#=12%
117 \catcode'\%=12%
118 \catcode'\&=12%
119 \catcode'\~=12%
120 \catcode'_ =12%
121 \LWR@hyperlinkb%
122 }

```

`\autoref`  $* \{ \langle label \rangle \}$

For HTML, `\cleveref` is used instead.

```

123 \NewDocumentCommand{\autoref}{s m}{%
124 \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%

```

125 }

`\autopageref` {<*label*>}

For HTML, `\cleveref` is used instead.

```
126 \NewDocumentCommand{\autopageref}{s m}{%
127 \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}}%
128 }
```

`\pdfstringdef` {<*macroname*>} {<*TEXstring*>}

```
129 \newcommand{\pdfstringdef}[2]{}
```

`\pdfbookmark` [*level*] {<*text*>} {<*name*>}

```
130 \newcommand{\pdfbookmark}[3] [] {}
```

`\currentpdfbookmark` {<*text*>} {<*name*>}

```
131 \newcommand{\currentpdfbookmark}[2] {}
```

`\subpdfbookmark` {<*text*>} {<*name*>}

```
132 \newcommand{\subpdfbookmark}[2] {}
```

`\belowpdfbookmark` {<*text*>} {<*name*>}

```
133 \newcommand{\belowpdfbookmark}[2] {}
```

`\texorpdfstring` {<*TEXstring*>} {<*PDFstring*>}

```
134 \newcommand{\texorpdfstring}[2] {#1}
```

`\hypercalcbp` {<*dimen*>} From `hyperref`.

```
135 \def\hypercalcbp#1{%
136 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
137 }%
```

`\Acrobatmenu` {<*menuoption*>} {<*text*>}

```
138 \newcommand{\Acrobatmenu}[2] {}
```

`\TextField` [*parameters*] {<*label*>}

```
139 \DeclareRobustCommand{\TextField}[2] [] {}
```

---

`\CheckBox` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   
140 `\DeclareRobustCommand{\CheckBox}[2] [] {}`

`\ChoiceMenu` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   $\{\langle choices \rangle\}$   
141 `\DeclareRobustCommand{\ChoiceMenu}[3] [] {}`

`\PushButton` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   
142 `\DeclareRobustCommand{\PushButton}[2] [] {}`

`\Submit` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   
143 `\DeclareRobustCommand{\Submit}[2] [] {}`

`\Reset` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   
144 `\DeclareRobustCommand{\Reset}[2] [] {}`

`\Gauge` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   
145 `\DeclareRobustCommand{\Gauge}[2] [] {}`

`\LayoutTextField`  $\{\langle label \rangle\}$   $\{\langle field \rangle\}$   
146 `\newcommand*\LayoutTextField[2] {}`

`\LayoutChoiceField`  $\{\langle label \rangle\}$   $\{\langle field \rangle\}$   
147 `\newcommand*\LayoutChoiceField[2] {}`

`\LayoutCheckField`  $\{\langle label \rangle\}$   $\{\langle field \rangle\}$   
148 `\newcommand*\LayoutCheckField[2] {}`

`\MakeRadioField`  $\{\langle width \rangle\}$   $\{\langle height \rangle\}$   
149 `\newcommand*\MakeRadioField[2] {}`

`\MakeCheckField`  $\{\langle width \rangle\}$   $\{\langle height \rangle\}$   
150 `\newcommand*\MakeCheckField[2] {}`

```
\MakeTextField {\langle width\rangle} {\langle height\rangle}
151 \newcommand*{\MakeTextField}[2]{}
```

```
\MakeChoiceField {\langle width\rangle} {\langle height\rangle}
152 \newcommand*{\MakeChoiceField}[2]{}
```

```
\MakeFieldButton {\langle text\rangle}
153 \newcommand{\MakeFieldButton}[1]{}
```

File 156 **lwarp-hyperxmp.sty**

§ 252 Package **hyperxmp**

Pkg hyperxmp Emulated.

**for HTML output:** Discard all options for lwarp-hyperxmp:

```
1 \LWR@ProvidesPackageDrop{hyperxmp}
```

File 157 **lwarp-hyphenat.sty**

§ 253 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}

```
2 \LetLtxMacro\LWRHYNAT@origtextnhtt\textnhtt
3 \LetLtxMacro\LWRHYNAT@originhttfamily\nhttfamily
4 \LetLtxMacro\LWRHYNAT@originohypens\nohypens
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@orignhttfamily%
26 \LetLtxMacro\nohyphens\LWRHYNAT@orignohyphens%
27 \LetLtxMacro\bshyp\LWRHYNAT@origbshyp%
28 \LetLtxMacro\fshyp\LWRHYNAT@origfshyp%
29 \LetLtxMacro\dothyp\LWRHYNAT@origdothyp%
30 \LetLtxMacro\colonhyp\LWRHYNAT@origcolonhyp%
31 \LetLtxMacro\hyp\LWRHYNAT@orighyp%
32 }

```

---

File 158 **lwarp-idxlayout.sty**

§ 254 Package **idxlayout**

*(Emulates or patches code by THOMAS TITZ.)*

Pkg idxlayout Emulated.

**for HTML output:** Discard all options for lwarp-idxlayout:

```

1 \LWR@ProvidesPackageDrop{idxlayout}

2 \newcommand{\LWR@indexprenote}{}
3
4 \preto\printindex{
5
6 \LWR@orignewpage
7 \LWR@startpars
8
9 \LWR@indexprenote
10
11 }
12
13 \newcommand{\setindexprenote}[1]{\renewcommand{\LWR@indexprenote}{#1}}
14 \newcommand*{\noindexprenote}{\renewcommand{\LWR@indexprenote}{} }
15

```

---

```

16 \newcommand{\idxlayout}[1]{}
17 \newcommand*\indexfont{}
18 \newcommand*\indexjustific{}
19 \newcommand*\indexsubsdelim{}
20 \newcommand*\indexstheadcase{}

```

---

File 159 **lwarp-ifoddpag.sty**

§ 255 Package **ifoddpag**

*(Emulates or patches code by MARTIN SCHARRER.)*

Pkg ifoddpag ifoddpag is emulated.

**for HTML output:** Discard all options for lwarp-ifoddpag:

```

1 \LWR@ProvidesPackageDrop{ifoddpag}

2 \newif\ifoddpag
3
4 \newif\ifoddpagoroneside
5
6 \DeclareRobustCommand{\checkoddpag}{\oddpagetrue\oddpagoronesidetrue}
7
8 \def\oddpag@pagel{1}
9
10 \def\@ifoddpag{%
11 \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpagoroneside{%
15 \expandafter\@firstoftwo
16 }

```

---

File 160 **lwarp-imakeidx.sty**

§ 256 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 9.5.15 for how to setup *lwarpmk* to process the indexes with `imakeidx`, both with and without shell escape.

**for HTML output:** `1 \LWR@ProvidesPackagePass{imakeidx}`

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{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{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  $\{\langle file \rangle\} \{\langle entry \rangle\} \{\langle page \rangle\}$

\imki@wrindexentryunique  $\{\langle file \rangle\} \{\langle entry \rangle\} \{\langle page \rangle\}$

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{LWR@index-\arabic{LWR@autoindex}}%
67 \expandafter\protected@write\csname#1@idxfile\endcsname{%
68 {\string\indexentry{#2}\arabic{LWR@autoindex}}}%
69 }
```

```

70
71 \renewcommand\imki@wrindexentryunique[3]{%
72 \addtocounter{LWR@autoindex}{1}%
73 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
74 \protected@write\indexfile{%
75 {\string\indexentry[#1]{#2}{\arabic{LWR@autoindex}}}%
76 }
77
78 \def\imki@wrindexsplit#1#2{%
79 \imki@wrindexentrysplit{#1}{#2}{\thepage}%
80 \endgroup\imki@showindexentry{#1}{#2}%
81 \esphack%
82 }
83
84 \def\imki@wrindexunique#1#2{%
85 \imki@wrindexentryunique{#1}{#2}{\thepage}%
86 \endgroup\imki@showindexentry{#1}{#2}%
87 \esphack%
88 }
89

```

#### `\LWR@imki@setxdydefopts`

Sets the xindy HTML options, ignoring the user's settings.

```

90 \newcommand*\LWR@imki@setxdydefopts{%
91 \edef\imki@options{ \space %
92 -M \space \LWR@xindyStyle\space %
93 -L \space \LWR@xindyLanguage\space %
94 -C \space \LWR@xindyCodepage\space %
95 }%
96 }

```

#### `\LWR@imki@setdefopts` $\{ \langle user options \rangle \}$

Sets the HTML options, added to the user's settings, depending on whether `makeindex` or `xindy` are used.

For *makeindex*, the user's choice is ignored, and only the lwarp version is used. (Only one style at a time is possible.)

For *xindy*, multiple modules may be specified, and the lwarp version is appended.

```

97 \newcommand*\LWR@imki@setdefopts}[1]{%
98 \ifblank{#1}{%
99 \edef\imki@options{\space -s \space \LWR@makeindexStyle \space}%
100 \ifdefstring{\imki@progdefault}{xindy}{\LWR@imki@setxdydefopts}{}%
101 \ifdefstring{\imki@progdefault}{texindy}{\LWR@imki@setxdydefopts}{}%
102 \ifdefstring{\imki@progdefault}{truexindy}{\LWR@imki@setxdydefopts}{}%
103 }{%
104 \edef\imki@options{\space #1 \space}%

```

```
105 }%
106 }
```

`\imki@makeindex` Use the new HTML options:

```
107 \xpatchcmd{\imki@makeindex}
108 {\let\imki@options\space}
109 {\LWR@imki@setdefopts{}}%
110 {}
111 {\LWR@patcherror{imakeidx}{makeindex}}
```

Use the new HTML options.

```
112 \define@key{imki}{options}{\LWR@imki@setdefopts{#1}}
```

`\imki@resetdefaults` Use the new HTML options:

```
113 \xpatchcmd{\imki@resetdefaults}
114 {\def\imki@options{ }}
115 {\LWR@imki@setdefopts{}}
116 {}
117 {\LWR@patcherror{imakeidx}{resetdefaults}}
```

`theindex` was already defined `\AtBeginDocument` by the `lwarp` core, so it must be redefined here similarly, but patched for `imakeidx`:

Env `theindex`

```
118 \AtBeginDocument{
119 \renewenvironment*{theindex}{%
120 \imki@maybeaddtoc
121 \imki@indexlevel{\indexname}
122 \let\item\LWR@indexitem%
123 \let\subitem\LWR@indexsubitem%
124 \let\subsubitem\LWR@indexsubsubitem%
125 }{}
126 }% AtBeginDocument
```

Update to the new defaults:

```
127 \imki@resetdefaults
```

Update to the new patches:

`\AtBeginDocument` is because `\@wrindex` is previously defined as `\AtBeginDocument` in the `lwarp` core.

```
128 \ifimki@splitindex
129 \let\imki@startidx\imki@startidxunique
130 \AtBeginDocument{\let\@wrindex\imki@wrindexunique}
```

```

131 \let\imki@putindex\imki@putindexunique
132 \let\imki@wrindexentry\imki@wrindexentryunique
133 \let\imki@startidxsplit\@undefined
134 \let\imki@wrindexsplit\@undefined
135 \let\imki@putindexsplit\@undefined
136 \else
137 \let\imki@startidx\imki@startidxsplit
138 \AtBeginDocument{\let\@wrindex\imki@wrindexsplit}
139 \let\imki@putindex\imki@putindexsplit
140 \let\imki@wrindexentry\imki@wrindexentrysplit
141 \let\imki@startidxunique\@undefined
142 \let\imki@wrindexunique\@undefined
143 \let\imki@putindexunique\@undefined
144 \fi

```

---

File 161 **lwarp-indentfirst.sty**

§ 257 Package **indentfirst**

Pkg `indentfirst` indentfirst is ignored.

Discard all options for lwarp-indentfirst:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{indentfirst}

---

File 162 **lwarp-index.sty**

§ 258 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}

Use `\theLWR@autoindex` instead of `\thepage`. `\@tempwatrue` 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 \@tempwatrue%
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 163 **lwarp-intopdf.sty**

§ 259 Package **intopdf**

Pkg intopdf intopdf is emulated.

The MIME type and description are ignored for now.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{intopdf}

2 \NewDocumentCommand{\attachandlink}{m o m m}{%
3 \href{#1}{#4}%
4 }

```

---

File 164 **lwarp-keyfloat.sty**

§ 260 Package **keyfloat**

*(Emulates or patches code by BRIAN DUNN.)*

Pkg keyfloat keyfloat is supported with minor adjustments.

 **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}

```

After `keyfloat` has loaded:

```
2 \AtBeginDocument{
3 \RenewDocumentCommand{\KFLT@onefigureimage}{}

```

```

4 {%
5 \LWR@traceinfo{KFLT@onefigureimage}%
6 % \begin{lrbox}{\KFLT@envbox}%
7 \ifthenelse{\NOT\equal{\KFLT@lw}{}}%
8 {\includegraphics%
9 [scale=\KFLT@s,width=\KFLT@imagewidth]{\KFLT@i}}%
10 {% not linewidth
11 \ifthenelse{\dimtest{\KFLT@w}{>}{Opt}}%
12 {% width is given
13 \ifthenelse{\dimtest{\KFLT@h}{>}{Opt}}%
14 {% w and h
15 \includegraphics%
16 [scale=\KFLT@s,%
17 width=\KFLT@imagewidth,height=\KFLT@h]{\KFLT@i}%
18 }% w and h
19 {% only w
20 \includegraphics%
21 [scale=\KFLT@s,width=\KFLT@imagewidth]{\KFLT@i}%
22 }% only w
23 }% width is given
24 {% width is not given
25 \ifthenelse{\dimtest{\KFLT@h}{>}{Opt}}%
26 {\includegraphics%
27 [scale=\KFLT@s,height=\KFLT@h]{\KFLT@i}}%
28 {\includegraphics%
29 [scale=\KFLT@s]{\KFLT@i}}%
30 }% width is not given
31 }% not linewidth
32 % \end{lrbox}%
33 % \unskip%
34 % \KFLT@findenvboxwidth%
35 % \begin{turn}{\KFLT@r}%
36 % \KFLT@frame{\usebox{\KFLT@envbox}}%
37 % \unskip%
38 % \end{turn}%
39 \LWR@traceinfo{KFLT@onefigureimage: done}%
40 }

41 \RenewDocumentEnvironment{KFLT@boxinner}{-}
42 {%
43 \LWR@traceinfo{KFLT@boxinner}%
44 \LWR@stoppars%
45 }
46 {
47 \LWR@startpars%
48 \LWR@traceinfo{KFLT@boxinner: done}%
49 }

50 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}

```

---

```

51 {%
52 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{marginblock}%
53 \captionsetup{type=#2}%
54 }
55 {%
56 \endLWR@BlockClassWP%
57 }

58 \DeclareDocumentEnvironment{marginfigure}{o}
59 {\begin{KFLT@marginfloat}{figure}}
60 {\end{KFLT@marginfloat}}
61
62 \DeclareDocumentEnvironment{margintable}{o}
63 {\begin{KFLT@marginfloat}{table}}
64 {\end{KFLT@marginfloat}}

65 \DeclareDocumentEnvironment{keywrap}{m +m}
66 {%
67 \LWR@ensuredoingapar%
68 \setlength{\LWR@templengthone}{#1}%
69 \begin{LWR@BlockClassWP}{%
70 float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
71 margin:10pt%
72 }%
73 {%
74 width:\LWR@printlength{\LWR@templengthone}%
75 }%
76 {marginblock}%
77 \setlength{\linewidth}{.95\LWR@templengthone}%
78 #2%
79 \end{LWR@BlockClassWP}%
80 }
81 {%
82 }

83 }% AtBeginDocument

```

---

File 165 **lwarp-layaureo.sty**

§ 261 Package **layaureo**

Pkg layaureo layaureo is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{layaureo}[2004/09/16]

File 166 **lwarp-layout.sty**

§ 262 Package **layout**

*(Emulates or patches code by KENT MCPHERSON, JOHANNES BRAAMS, HIDEO UMEKI.)*

Pkg layout layout is emulated.

**for HTML output:** Discard all options for lwarp-layout:

```
1 \LWR@ProvidesPackageDrop{layout}
2 \NewDocumentCommand{\layout}{s}{}

```

File 167 **lwarp-leading.sty**

§ 263 Package **leading**

Pkg leading leading is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{leading}[2008/12/11]

```
2 \newcommand\leading[1]{}

```

File 168 **lwarp-letterspace.sty**

§ 264 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}
2 \newcommand*\lsstyle{}
3 \newcommand\textls[2][1]{}

```

---

```
4 \def\textls#1#{}
5 \newcommand*\lslig[1]{#1}
```

---

File 169 **lwarp-lettrine.sty**

§ 265 Package **lettrine**

*(Emulates or patches code by DANIEL FLIPO.)*

Pkg lettrine Emulated.

**for HTML output:** Discard all options for lwarp-lettrine:

```
1 \LWR@ProvidesPackageDrop{lettrine}
```

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 170 **lwarp-lineno.sty**

§ 266 Package **lineno**

*(Emulates or patches code by STEPHAN I. BÖTTCHER.)*

Pkg `lineno` `lineno` is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{lineno}

2 \newcommand*{\resetlinenumber[1][\@ne]}{
3
4 \def\linenumber{%
5 \@ifnextchar[{\resetlinenumber}%]
6 {\@ifstar{\resetlinenumber}{}}%
7 }
8
9 \newcommand*{\nolinenumber}{}
10
11 \@namedef{linenumber*}{\par\linenumber*}
12 \@namedef{runninglinenumber*}{\par\runninglinenumber*}
13
14 \def\endlinenumber{\par}
15 \let\endrunninglinenumber\endlinenumber
16 \let\endpagewiselinenumber\endlinenumber
17 \expandafter\let\csname endlinenumber*\endcsname\endlinenumber
18 \expandafter\let\csname endrunninglinenumber*\endcsname\endlinenumber
19 \let\endnolinenumber\endlinenumber
20
21 \def\pagewiselinenumber{\linenumber\setpagewiselinenumber}
22
23 \def\runninglinenumber{\setrunninglinenumber\linenumber}
24
25 \def\setpagewiselinenumber{}
26
27 \def\setrunninglinenumber{}
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\switchlinenumber{\@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=\fboxrule
104
105 \newdimen\bframesep
106 \bframesep=\fboxsep
107
108 \newenvironment{bframe}
109 {%
110 \LWR@forceminwidth{\bframerule}%
111 \BlockClass[
112 border:\LWR@printlength{\LWR@atleastonept} solid black ; %
113 padding:\LWR@printlength{\bframesep}%
114]{bframe}
115 }
116 {\endBlockClass}

```

---

File 171 **lwarp-lips.sty**

§ 267 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}
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 172 **lwarp-listings.sty**

§ 268 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}

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}{1ol}{#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@framefshape\@empty
33 \lstframe@\lst@frameround ffff\relax%
34 \lst@multicols\@empty%
35 \LWR@origlst@Init{#1}\relax%

```

Avoids extra horizontal space:

```

36 \def\lst@framef{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 reenables 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@origl@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 \lst@makecaption\fnnum@lstlisting{\ignorespaces \lst@caption}
103 \else

```

New lwarp code to create a title:

```

104 % \lst@maketitle\lst@title % (AS)
105 \LWR@traceinfo{Making title: \lst@title}%
106 \begin{BlockClass}{lstlistingtitle}% lwarp
107 \lst@maketitle\lst@title% lwarp
108 \end{BlockClass}% lwarp
109 \fi
110 \LWR@traceinfo{About to assign label: !\lst@label!}%
111 \ifx\lst@label\@empty\else
112 \leavevmode% gets rid of bad space factor error
113 \GetTitleStringExpand{\lst@caption}%
114 \edef\LWR@lntemp{\GetTitleStringResult}%
115 \edef\@currentlabelname{\detokenize\expandafter{\LWR@lntemp}}%
116 \label{\lst@label}\fi
117 \LWR@traceinfo{Finished assigning the label.}%

```

Not needed for lwarp:

```

118 % \ifx #1b\allowbreak \fi
119 \endgroup{}%

```

```

120 \fi
121 \LWR@traceinfo{end of making a listings display caption}%
122 \else
123 \LWR@traceinfo{INLINE}%
124 \fi
125 \LWR@traceinfo{DONE WITH CAPTION at #1}%
126 }

```

**line numbers** Patched to keep left line numbers outside of the left margin, and place right line numbers in a field `\VerbatimHTMLWidth` wide.

```

127 \lst@Key{numbers}{none}{%
128 \let\lst@PlaceNumber\@empty
129 \lstKV@SwitchCases{#1}%
130 {none&\\%
131 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.

```

132 % \LWR@origllap{
133 \LWR@orignormalfont%
134 \lst@numberstyle{\the\lstnumber}\kern\lst@numbersep%
135 % }
136 }\\%
137 right&\def\lst@PlaceNumber{\LWR@origrlap{\LWR@orignormalfont
138 \kern 6in \kern\lst@numbersep
139 \lst@numberstyle{\the\lstnumber}}}%
140 }{\PackageError{Listings}{Numbers #1 unknown}\@ehc}

141 \end{warpHTML}

```

---

File 173 `lwarp-lltjext.sty`

§ 269 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}

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{Opt} O{c} m}{%
37 \booltrue[LWR@minipagefullwidth]%
38 \parbox{#2}{#4}%
39 }

```

---

File 174 **lwarp-longtable.sty**

§ 270 Package **longtable**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg longtable longtable is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{longtable}

 **Misplaced \noalign**

Longtable \endhead, \endfoot, and \endlastfoot rows are not used for HTML, and these rows should be disabled. Use

```
\warpprintonly{row contents}
```

instead of

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

Doing so helps avoid “Misplaced \noalign.” when using `\begin{warpprint}`.

Keep the `\endfirsthead` row, which is still relevant to HTML output.

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

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

or place it inside `\warpingprintonly`.

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

See:

<http://tex.stackexchange.com/questions/43006/why-is-input-not-expandable>

Env `longtable` \* [*horizontalment*] {*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 thrown away.

```
2 \newenvironment{longtable*}[2][]{%
3 \LWR@floatbegin{table}%
4 \setcaptiontype{\LTcaption}%
5 \caption@setoptions{longtable}%
6 \caption@setoptions{@longtable}%
7 \caption@LT@setup%
8 \booltrue{LWR@starredlongtable}%
9 \let\captionlistentry\LWR@LTcaptionlistentry%
10 \tabular{#2}
11 }
12 {\endtabular\LWR@floatend}
13
14 \newenvironment{longtable}[2][]{%
15 \LWR@floatbegin{table}%
16 \setcaptiontype{\LTcaption}%
17 \caption@setoptions{longtable}%
18 \caption@setoptions{@longtable}%
19 \caption@LT@setup%
20 \refstepcounter{\LTcaption}%
21 \let\captionlistentry\LWR@LTcaptionlistentry%
22 \tabular{#2}
```

```

23 }
24 {\endtabular\LWR@floatend}

```

Provided for compatibility, but ignored:

```

25 \newcounter{LTchunksiz}
26 \def\endhead{\LWR@tabularendofline}% throws away options //[dim] and /**
27 \def\endfirsthead{\LWR@tabularendofline}
28 \def\endfoot{\LWR@tabularendofline}
29 \def\endlastfoot{\LWR@tabularendofline}
30 \newcommand\tabularnewline{\LWR@tabularendofline}
31 \newcommand\setlongtables{}% Obsolete command, does nothing.
32 \newlength\LTleft}
33 \newlength\LTRight}
34 \newlength\LTpre}
35 \newlength\LTpost}
36 \newlength\LTcapwidth}

37 \LetLtxMacro\LWR@origkill\kill
38 \renewcommand*\kill{\LWR@tabularendofline}
39 \appto\LWR@restoreorigformatting{%
40 \LetLtxMacro\kill\LWR@origkill%
41 }

```

---

File 175 **lwarp-lscape.sty**

§ 271 Package **lscape**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg `lscape` `lscape` is emulated.

**for HTML output:** Discard all options for `lwarp-lscape`.

```

1 \LWR@ProvidesPackageDrop{lscape}
2 \newenvironment*{landscape}{}{}

```

---

File 176 **lwarp-ltablex.sty**

§ 272 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}
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 177 `lwarp-ltcaption.sty`

§ 273 Package **ltcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg `ltcaption` `ltcaption` is emulated.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{ltcaption}`

`\LTcapytype` 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 178 `lwarp-ltxgrid.sty`

§ 274 Package **ltxgrid**

Pkg `ltxgrid` `ltxgrid` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{ltxgrid}`

---

```

2 \newcommand*\onecolumngrid{}
3 \newcommand*\twocolumngrid{}
4 \newcommand*\removestuff{}
5 \newcommand*\addstuff[2]{}
6 \newcommand*\replacestuff[2]{}

```

---

File 179 **lwarp-ltxtable.sty**

§ 275 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}

```

\LTxtable {<width>}{<file>}
2 \newcommand*\LTxtable[2]{%
3 \input{#2}%
4 }

```

---

File 180 **lwarp-lua-check-hyphen.sty**

§ 276 Package **lua-check-hyphen**

Pkg lua-check-hyphen lua-check-hyphen is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{lua-check-hyphen}

```

2 \newcommand*\LuaCheckHyphen[1]{}

```

---

File 181 **lwarp-lua-visual-debug.sty**

§ 277 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 182 **lwarp-luacolor.sty**

§ 278 Package **luacolor**

Pkg luacolor luacolor is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{luacolor}
2 \newcommand{\luacolorProcessBox}[1]{}
```

---

File 183 **lwarp-luatodonotes.sty**

§ 279 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}
```

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 184 **lwarp-magaz.sty**

§ 280 Package **magaz**

Pkg magaz magaz is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{magaz}

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 185 **lwarp-makeidx.sty**

§ 281 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}`

`\@wrindex` is redefined `\AtBeginDocument` by the `lwarp` core.

`\printindex`

```
2 \preto\printindex{%
3 \LWR@orignewpage%
4 \LWR@startpars%
5 }
```

File 186 **lwarp-marginal.sty**

§ 282 Package **marginal**

Pkg `marginal` `marginal` is emulated.

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{marginal}`

```
2 \newcommand*{\showlostmarginals}{}
3 \newcommand*{\enlargefreelist}{}
4 \newcommand*{\onesidemarginals}{}

```

File 187 **lwarp-marginfit.sty**

§ 283 Package **marginfit**

Pkg `marginfit` `marginfit` is ignored.

**for HTML output:**

Discard all options for lwarp-marginfix:

```
1 \LWR@ProvidesPackageDrop{marginfix}
```

---

File 188 **lwarp-marginfix.sty**

§ 284 Package **marginfix**

*(Emulates or patches code by STEPHEN HICKS.)*

Pkg marginfix Emulated.

**for HTML output:** Discard all options for lwarp-marginfix:

```
1 \LWR@ProvidesPackageDrop{marginfix}

2 \newcommand*{\marginskip}[1]{}
3 \newcommand*{\clearmargin}{}
4 \newcommand*{\softclearmargin}{}
5 \newcommand*{\extendmargin}[1]{}
6 \newcommand*{\mparshift}[1]{}
7 \newdimen\marginheightadjustment
8 \newdimen\marginposadjustment
9 \newcommand*{\blockmargin}[1][{}]{
10 \newcommand*{\unblockmargin}[1][{}]{
11 \newcommand*{\marginphantom}[2][{}]
```

---

File 189 **lwarp-marginnote.sty**

§ 285 Package **marginnote**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg marginnote Emulated.

**for HTML output:** Discard all options for lwarp-marginnote:

```
1 \LWR@ProvidesPackageDrop{marginnote}

2 \NewDocumentCommand{\marginnote}{+o +m o}{\marginpar{#2}}

3 \newcommand*{\marginnoteleftadjust}{}
4 \newcommand*{\marginnoterightadjust}{}
5 \newcommand*{\marginnotetextwidth}{}

```

---

```

6 \let\marginnotetextwidth\textwidth
7 \newcommand*\marginnoteadjust{}
8 \newcommand*\marginfont{}
9 \newcommand*\raggedleftmarginnote{}
10 \newcommand*\raggedrightmarginnote{}

```

---

File 190 **lwarp-mcaption.sty**

§ 286 Package **mcaption**

*(Emulates or patches code by STEPHAN HENNIG.)*

Pkg mcaption mcaption is nullified.

**for HTML output:** Discard all options for lwarp-mcaption:

```

1 \LWR@ProvidesPackageDrop{mcaption}

2 \newenvironment{margincap}{}{}
3 \newcommand*\margincapalign{}
4 \newlength{\margincapsep}

```

---

File 191 **lwarp-mdframed.sty**

§ 287 Package **mdframed**

*(Emulates or patches code by MARCO DANIEL, ELKE SCHUBERT.)*

Pkg mdframed mdframed is loaded with options forced to framemethod=none.

#### § 287.1 **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.

## § 287.2 Package loading

**for HTML output:**

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackageDrop{mdframed}
```

Do not require `Tikz` or `pstricks`:

```
4 \LWR@origRequirePackage[framemethod=none]{mdframed}
```

## § 287.3 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

```

#### § 287.4 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}

```

#### § 287.5 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}

```

## § 287.6 Environment encapsulation

`\LWR@mdframedstart` Actions before an mdframe starts.

Encapsulate a frame inside a `<div>` of the desired class.

```
46 \newcommand*{\LWR@mdframedstart}{%
47 \LWR@traceinfo{\LWR@mdframedstart start}%
```

Turn off paragraph handling during the generation of the encapsulating tags:

```
48 \LWR@stoppars%
```

Open a `<div>` and with custom class and custom style. A `BlockClass` environment is not used because this `<div>` is created by the `mdframed startcode` and `endcode` settings, which do not properly nest the `<div>` inside the `mdframed` environment.

```
49 \LWR@htmltagc{div class="%
50 mdframed%
51 \ifdefstring{\LWR@mdthisenv}{mdframed}{-}{ \LWR@mdthisenv}%
52 " \LWR@orignewline
53 style=" \LWR@orignewline
```

Convert and print the background color:

```
54 background: \LWR@mdfprintcolor{backgroundcolor} ; \LWR@orignewline
```

Convert and print the border color and width:

```
55 border: \LWR@mdfprintlength{linewidth} solid
56 \LWR@mdfprintcolor{linecolor} ; \LWR@orignewline
```

Convert and print the border radius:

```
57 border-radius: \LWR@mdfprintlength{roundcorner} ; \LWR@orignewline
```

Convert and print the shadow:

```
58 \ifbool{mdf@shadow}{%
59 box-shadow:
60 \LWR@mdfprintlength{shadowsize}
61 \LWR@mdfprintlength{shadowsize}
62 \LWR@mdfprintlength{shadowsize}
63 \LWR@mdfprintcolor{shadowcolor} ;
64 }
65 {box-shadow: none ;}
66 \LWR@orignewline
67 "}
68 % \LWR@htmldivclass{\LWR@mdthisenv}
```

`mdframed` environment may not work with the HTML versions of the following, so restore them to their originals while inside `mdframed`:

```
69 \LWR@select@print@hspace%
70 \renewcommand*{\rule}{\LWR@print@rule}
71 \LetLtxMacro\makebox\LWR@print@makebox%
```

```

72 \LWR@startpars%
73 \LWR@traceinfo{LWR@mdframedstart done}%
74 }

```

`\LWR@mdframedend` Actions after an mdframe ends.

After closing the `<div>`, globally restore to the default environment type:

```

75 \newcommand*{\LWR@mdframedend}{
76 \LWR@traceinfo{LWR@mdframedend start}%

```

Close the custom `<div>`:

```

77 \LWR@htmldivclassend{\LWR@mdthisenv}

```

Reset future custom class to the default:

```

78 \gdef\LWR@mdthisenv{mdframed}

```

Resume paragraph handling:

```

79 \LWR@startpars%
80 \LWR@traceinfo{LWR@mdframedend done}%
81 }

```

## § 287.7 Mdfamed environment

```

82 \renewenvironment{mdframed}[1][]{%
83 \color@begingroup%
84 \mdfsetup{userdefinedwidth=\linewidth,#1}%
85 \mdf@startcode%
86 \mdf@preenvsetting%
87 \ifdefempty{\mdf@firstframetitle}{}%
88 {\let\mdf@frametitlesave\mdf@frametitle%
89 \let\mdf@frametitle\mdf@firstframetitle%
90 }%
91 \ifvmode\nointerlineskip\fi%
92 \ifdefempty{\mdf@frametitle}{}%
93 {\mdfframedtitleenv{\mdf@frametitle}%
94 % \mdf@@frametitle@use%
95 }%
96 \mdf@trivlist{\mdf@skipabove@length}%%
97 \mdf@settings%
98 % \mdf@lrbbox{\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 }

```

## § 287.8 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@frametitle@rule}{%
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]{mdframedtitle}%
```

Print the title inside the <div>:

```
148 \mdf@frametitlefont{\LWR@textcurrentfont{#1}}%
```

Close the <div>:

```

149 \end{BlockClass}%
150 \LWR@traceinfo{LWR@mdframedtitleenv end}%
151 }

```

```
\LWR@mdfsubtitlecommon {<sub -or- subsub>} [<options>] {<title>}
```

Common code for \LWR@mdfsubtitle and \LWR@mdfsubsubtitle.

Encapsulate the subtitle inside a <div> of class mdframedsubtitle:

```

152 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}
153 {% the following empty line is required
154
155 \LWR@traceinfo{LWR@mdframedsubtitlecommon start}%

```

Open a <div> with a custom class and custom style:

```
156 \begin{BlockClass}[%
```

Convert and print the background color:

```

157 background:
158 \LWR@mdfprintcolor{#1titlebackgroundcolor}
159 ; \LWR@orignewline

```

Convert and print the above line:

```

160 \ifbool{mdf@#1titleaboveline}{%
161 border-top:
162 \LWR@mdfprintlength{#1titleabovelinewidth}
163 solid
164 \LWR@mdfprintcolor{#1titleabovelinecolor}
165 ; \LWR@orignewline
166 }{}%

```

Convert and print the below line:

```

167 \ifbool{mdf@#1titlebelowline}{%
168 border-bottom:
169 \LWR@mdfprintlength{#1titlebelowlinewidth}
170 solid

```

```

171 \LWR@mdfprintcolor{#1titlebelowlinecolor}
172 ; \LWR@orignewline
173 }{}%

```

Finish the custom style and the opening <div> tag:

```
174]{mdframed#1title}%
```

Perform the original subtitle action:

```

175 \IfNoValueTF{#2}
176 {\@nameuse{LWR@origmdf#1title}-\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}%
177 {\@nameuse{LWR@origmdf#1title}[#2]-\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}%

```

Close the <div>:

```

178 \end{BlockClass}%
179 \LWR@traceinfo{LWR@mdframedsubtitlecommon end}%
180 }

```

```

\LWR@mdfsubtitle [⟨options⟩] {⟨title⟩}

181 \newcommand*{\LWR@mdfsubtitle}{%
182 \LWR@mdfsubtitlecommon{sub}%
183 }
184 \let\mdfsubtitle\LWR@mdfsubtitle

```

```

\LWR@mdfsubsubtitle [⟨options⟩] {⟨title⟩}

185 \newcommand*{\LWR@mdfsubsubtitle}{%
186 \LWR@mdfsubtitlecommon{subsub}%
187 }
188 \let\mdfsubsubtitle\LWR@mdfsubsubtitle

```

## § 287.9 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.

```

250 \DeclareDocumentCommand{\mdtheorem}{ O{} m o m o }%
251 {\ifcsdef{#2}%
252 {\mdf@PackageWarning{Environment #2 already exists\MessageBreak}}%
253 {%
254 \IfNoValueTF {#3}%
255 {%#3 not given -- number relationship
256 \IfNoValueTF {#5}%
257 {%#3+#5 not given
258 \@definecounter{#2}%
259 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
260 \newenvironment{#2}[1] [] {%
261 \refstepcounter{#2}%
262 \ifstrempy{##1}%
263 {\let\@temptitle\relax}%
264 {%
265 \def\@temptitle{\mdf@theoremseparator%
266 \mdf@theoremspace%
267 \mdf@theoremtitlefont%
268 \LWR@textcurrentfont{##1}}% lwarp
269 \mdf@thm@caption{#2}{#{4}{\csname the#2\endcsname}{##1}}%
270 }%
271 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
272 \@temptitle}]]%
273 {\end{mdframed}}%
274 \newenvironment{#2*}[1] [] {%
275 \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ ##1}}%
276 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
277 {\end{mdframed}}%
278 }%
279 {%#5 given -- reset counter
280 \@definecounter{#2}\@newctr{#2}[#5]%
281 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
282 \expandafter\xdef\csname the#2\endcsname{%
283 \expandafter\noexpand\csname the#5\endcsname \@thmcountersep%
284 \@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{0}{m o m o }{%
294 \ifboolexpr{ test {\IfNoValueTF {#3}} and test {\IfNoValueTF {#5}} }{%
295 {\newtheorem{#2}{#4}}%
296 {%
297 \IfValueT{#3}{\newtheorem{#2}{#3}{#4}}%
298 \IfValueT{#5}{\newtheorem{#2}{#4}{#5}}%
299 }%
300 \BeforeBeginEnvironment{#2}{%
301 \renewcommand*{\LWR@mdthisenv}{md#2}}%
302 \begin{mdframed}{#1}}%
303 \AfterEndEnvironment{#2}{%
304 \end{mdframed}}%
305 }

```

---

File 192 **lwarp-memhfixc.sty**

§ 288 Package **memhfixc**

Pkg memhfixc memhfixc is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{memhfixc}

---

File 193 **lwarp-metalogo.sty**

§ 289 Package **metalogo**

(Emulates or patches code by ANDREW GILBERT MOSCHOU.)

Pkg metalogo metalogo is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{metalogo}

```

2 \newcommand\setlogokern[2]{}
3 \newcommand\setlogodrop[2][XeTeX]{}
4 \newcommand\setLaTeXa[1]{}
5 \newcommand\setLaTeXee[1]{}

```

```
6 \newcommand\seteverylogo[1]{
7 \newcommand\everylogo[1]{}
```

File 194 **lwarp-mhchem.sty**

§ 290 Package **mhchem**

*(Emulates or patches code by MARTIN HENSEL.)*

Pkg mhchem mhchem is patched for use by lwarp.

mhchem expressions are converted to svg math. Inline expressions use hashed filenames to allow reuse, and assume that any mhchem options are global.

 **MATHJAX and mhchem** The MATHJAX mhchem extension is not yet used. If MATHJAX is used for math in the rest of the document, lwarp converts standalone mhchem expressions into svg math images, but expressions inside math must be placed between `\displaymathother` and `\displaymathnormal`:

```
\displaymathother
\[\ce{ ... } \
\displaymathnormal
```

 **nested math** When producing HTML output, 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}`

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 \begin{lateximage}*\textbackslash{ce}\{\LWR@HTMLsanitize{#1}\}}%
5 \LWR@mhchem@origce{#1}%
6 \end{lateximage}%
7 \endgroup%
8 \addtocounter{LWR@mhchem@cedepth}{-1}%
9 }
```

Only set math shift if outer depth:

```
10 \newcounter{LWR@mhchem@cedepth}
11 \setcounter{LWR@mhchem@cedepth}{0}
```

The new `\ce`. Sets math shift then continues.

```
12 \renewcommand{\ce}{%
13 \begingroup%
14 \ifnumequal{\value{LWR@mhchem@cedepth}}{0}{%
15 \catcode'\$=3% math shift
16 }{}%
17 \addtocounter{LWR@mhchem@cedepth}{1}%
18 \LWR@mhchem@HTML@ce%
19 }
```

The original definition of `\cesplit`:

```
20 \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.

```
21 \newcommand*{\LWR@mhchem@HTML@cesplit}[2]
22 {%
23 \begin{lateximage}*\textbackslash{cesplit}\{\LWR@HTMLsanitize{#2}\}}%
24 \LWR@mhchem@origcesplit{#1}{#2}%
25 \end{lateximage}%
26 \endgroup%
27 }
```

Only set math shift if outer depth:

```
28 \newcounter{LWR@mhchem@cesplitdepth}
29 \setcounter{LWR@mhchem@cesplitdepth}{0}
```

The new `\cesplit`. Sets math shift then continues.

```
30 \renewcommand{\cesplit}{%
31 \begingroup%
32 \ifnumequal{\value{LWR@mhchem@cesplitdepth}}{0}{%
33 \catcode'\$=3% math shift
34 }{}%
35 \addtocounter{LWR@mhchem@cesplitdepth}{1}%
36 \LWR@mhchem@HTML@cesplit%
37 }
```

Resore originals inside a lateximage:

```
38 \appto\LWR@restoreorigformatting{%
39 \LetLtxMacro\ce\LWR@mhchem@origce%
40 \LetLtxMacro\cesplit\LWR@mhchem@origcesplit%
41 }
```

File 195 `lwarp-microtype.sty`

§ 291 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}

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 196 **lwarp-midfloat.sty**

§ 292 Package **midfloat**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg midfloat midfloat is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{midfloat}

2 \newenvironment{strip}[1]{}{}
3 \newskip\stripsep

```

---

File 197 **lwarp-midpage.sty**

§ 293 Package **midpage**

Pkg midpage midpage is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{midpage}

2 \newenvironment{midpage}
3 {\begin{BlockClass}}{

```

---

```

4 \LWR@print@mbx{margin-top:6ex} ; \LWR@print@mbx{margin-bottom:6ex}%
5]{midpage}}
6 {\end{BlockClass}}

```

---

File 198 **lwarp-morefloats.sty**

§ 294 Package **morefloats**

Pkg morefloats morefloats is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{morefloats}

---

File 199 **lwarp-moreverb.sty**

§ 295 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}

3 \BeforeBeginEnvironment{verbatim}{%
4 \LWR@forcenewpage
5 \LWR@atbeginverbatim{3}{Verbatim}%
6 }
7 \AfterEndEnvironment{verbatim}{%
8 \LWR@afterendverbatim{1}%
9 }
10
11
12 \LetLtxMacro\LWRMV@orig@verbatim@input\@verbatim@input
13
14 \renewcommand{\@verbatim@input}[2] [] {%
15 \LWR@forcenewpage
16 \LWR@atbeginverbatim{3}{Verbatim}%
17 \LWRMV@orig@verbatim@input[#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 200 **lwarp-mparhack.sty**

§ 296 Package **mparhack**

Pkg mparhack Ignored.

for HTML output:

Discard all options for lwarp-mparhack:

```
1 \LWR@ProvidesPackageDrop{mparhack}
```

---

File 201 **lwarp-multicol.sty**

§ 297 Package **multicol**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg multicol multicol is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{multicol}[2015/09/13]

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 \*  $\langle numcols \rangle$  [*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}}
```

When done with the environment, close the <div>:

```
8 {\endBlockClass}
```

Emulated null functions which are not used in HTML:

```
9 \newcommand*{\columnbreak}{}
10 \newcommand*{\RLmulticolcolumns}{}
11 \newcommand*{\LRmulticolcolumns}{}
12
13 \newlength{\premulticols}
14 \newlength{\postmulticols}
15 \newlength{\multicolsep}
```

---

```

16 \newlength{\multicolbaselineskip}
17 \newlength{\multicoltolerance}
18 \newlength{\multicolpretolerance}
19 \newcommand*{\columnseprulecolor}{\normalcolor}
20 \newcounter{columnbadness}
21 \newcounter{finalcolumnbadness}
22 \newcounter{collectmore}
23 \newcounter{unbalance}
24 \newlength{\multicolovershoot}
25 \newlength{\multicolundershoot}

26 \NewDocumentCommand{\docolaction}{s o m m m}{%
27 \IfValueTF{#2}{#2}{#3}%
28 }

29 \end{warpHTML}

```

---

File 202 **lwarp-multicolrule.sty**

§ 298 Package **multicolrule**

Pkg multicolrule multicolrule is ignored.

**for HTML output:**

```

1 \RequirePackage{multicol}
2
3 \LWR@ProvidesPackageDrop{multicolrule}

4 \newcommand*{\SetMCRule}[1]{}

```

---

File 203 **lwarp-multirow.sty**

§ 299 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.

In a lateximage, the original print-mode versions are temporarily restored by `\LWR@restoreorigformatting`.

See section 71.23 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}
```

`\LWR@multirowborder` Set to left or right to create a thick border for the cell, for use by bigdelim:

```
3 \newcommand{\LWR@multirowborder}{}%
```

### § 299.1 **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 \LWR@maybenewtablerow%
8 \LWR@tabularleftedge%
```

Print the start of a new table data cell:

```
9 \LWR@htmltag{td rowspan="#2" %
```

The vertical alignment, if given:

```
10 \IfValueT{#1}{%
11 \ifstrequal{#1}{b}{style="\LWR@print@mbx{vertical-align:bottom}" }{}%
12 \ifstrequal{#1}{t}{style="\LWR@print@mbx{vertical-align:top}" }{}%
13 }%
```

The left/right border, if given:

```
14 \ifdefvoid{\LWR@multirowborder}{}{%
15 style="\LWR@print@mbx{border-\LWR@multirowborder:} 2px dotted black ; %
16 \LWR@print@mbx{padding-\LWR@multirowborder:} 2px" %
17 }%
```

A class adds the column spec and the rule:

```
18 class="td%
```

Append this column's spec:

```
19 \LWR@getexparray{\LWR@tablecolspec}{\arabic{\LWR@tableLaTeXcolindex}}%
```

If this column has a `cmidrule`, add “rule” to the end of the HTML class tag. Also add the vertical bar class.

```
20 \LWR@addcmidruletrim%
21 \LWR@addleftmostbartag%
22 \LWR@printbartag{\arabic{LWR@tableLaTeXcolindex}}%
23 "%
```

```
24 \LWR@tdstartstyles%
25 \LWR@addcmidrulewidth%
26 \LWR@addcdashline%
27 \LWR@addtabularrulecolors%
28 \LWR@tdendstyles%
29 }%
```

The column's < spec:

```
30 \LWR@getexparray{LWR@colbeforespec}{\arabic{LWR@tableLaTeXcolindex}}%
```

While printing the text, redefine `\` to generate a new line

```
31 \begingroup\LetLtxMacro{\}\{\LWR@endofline}\#6\endgroup%
32 \LWR@stoppars%
33 \global\boolfalse{LWR@intabularmetadata}%
34 \renewcommand{\LWR@multirowborder}{}%
35 \LWR@traceinfo{*** LWR@HTML@multirow done}%
36 }%
37
38 \LWR@formatted{multirow}
```

## § 299.2 Combined multicolumn and multirow

⚠ `\multicolumn` & `\multirow` lwarp does not support directly combining `\multicolumn` and `\multirow`. Use `\multicolumnrow` instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for `\multicolumn` come first, followed by the five arguments for `\multirow`, many of which are optional, followed by the contents.

⚠ **skipped cells** As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped:

⚠ **empty cells**

```

... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[Opt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
... & \mcolrowcell & \mcolrowcell & ...

```

**vposn** Note that recent versions of multirow include a new optional vposn argument.

```

\multicolumnrow {<1:cols>} {<2:halign>} [<3:vpos>] {<4:numrows>} [<5:bigstruts>] {<6:width>} [<7:fixup>]
{<8:text>}

```

`\@ifpackageloaded{multirow}` determines if v2.0 or later of multirow was used, which included the `\ProvidesPackage` macro.

The HTML version follows.

`\AtBeginDocument` because the print version had to see if multirow was loaded before determining how to define `\LWR@print@multicolumnrow`.

```

39 \AtBeginDocument{
40
41 \NewExpandableDocumentCommand{\LWR@HTML@multicolumnrow}{m m O{} m O{} m O{} +m}{%

```

Figure out how many extra HTML columns to add for @ and ! columns:

```

42 \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}

```

Create the multicolumn/multirow tag:

```

43 \begingroup%
44 \LetLtxMacro{\}\{\LWR@endofline}%
45 \LWR@domulticolumn[#3][#4]{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#8}%
46 \endgroup%

```

Move to the next L<sup>A</sup>T<sub>E</sub>X column:

```

47 \addtocounter{LWR@tableLaTeXcolindex}{#1}%
48 \addtocounter{LWR@tableLaTeXcolindex}{-1}%

```

Skip any trailing @ or ! columns for this cell:

```

49 \global\booltrue{LWR@skipatbang}%
50 }
51
52 \LWR@expandableformatted{multicolumnrow}
53
54 }% \AtBeginDocument

```

---

File 204 **lwarp-multitoc.sty**

§ 300 Package **multitoc**

Pkg multitoc multitoc is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{multitoc}

2 \newcommand{\multicolumntoc}{2}
3 \newcommand{\multicolumnlot}{2}
4 \newcommand{\multicolumnlof}{2}
5 \newcommand*{\immediateaddtocontents}[2]{}
```

---

File 205 **lwarp-musicography.sty**

§ 301 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, since the HTML fonts tend not to be the correct size. The HTML alt tag copies C and 3/2, etc. Hashes are used for the meter images, which are then reused as necessary.



Note that browser support for musical symbols may be buggy. Copy/paste into a text editor works well.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{musicography}[2018/05/21]

2 \RenewDocumentCommand{\musSymbol}{ 0{\musFont} m m m m }{%
3 \begin{lateximage}%
4 {#1\kern#2\raisebox{#3}{#5}\kern#4}%
5 \end{lateximage}%
6 }
7
8 \RenewDocumentCommand{\musStemmedNote}{ m }{%
9 \begin{lateximage}%
10 \musSymbol{0.05em}{0.5ex}{0.2em}{#1\musStem}%
11 \end{lateximage}%
12 }
13
```

```

14 \RenewDocumentCommand{\musFlaggedNote}{ m m }{%
15 \begin{lateximage}%
16 \musSymbol{0.05em}{0.5ex}{Opt}{#1\musStem}%
17 \musSymbol{Opt}{Opt}{0.9em}{#2}%
18 \end{lateximage}%
19 }
20
21 \RenewDocumentCommand{\musDottedNote}{ m }{%
22 \begin{lateximage}%
23 #1\musDot%
24 \end{lateximage}%
25 }
26
27 \RenewDocumentCommand{\musMeter}{ m m }{%
28 \begin{lateximage}* [#1/#2] [#1#2]%
29 \musStack{#1}{#2}\kern0.05em%
30 \end{lateximage}%
31 }
32
33 \RenewDocumentCommand{\meterCplus}{ m }{%
34 \begin{lateximage}* [C#1]%
35 \meterC{} \kern-0.7pt#1%
36 \end{lateximage}%
37 }
38
39 \RenewDocumentCommand{\meterC}{ }{%
40 \begin{lateximage}* [C]%
41 \musSymbolMeter{\symbol{83}}%
42 \end{lateximage}%
43 }
44
45 \RenewDocumentCommand{\meterCutC}{ }{%
46 \begin{lateximage}* [C|]%
47 \musSymbolMeter{\symbol{82}}%
48 \end{lateximage}%
49 }
50
51 \RenewDocumentCommand{\meterCThreeTwo}{ }{%
52 \begin{lateximage}* [C3/2]%
53 \meterCplus{\musStack{3}{2}}%
54 \end{lateximage}%
55 }
56
57 \RenewDocumentCommand{\musFlat} {}{\HTMLUnicode{266D}}
58 \RenewDocumentCommand{\musDoubleFlat} {}{\HTMLUnicode{1D12B}}
59 \RenewDocumentCommand{\musSharp} {}{\HTMLUnicode{266F}}
60 \RenewDocumentCommand{\musDoubleSharp} {}{\HTMLUnicode{1D12A}}
61 \RenewDocumentCommand{\musNatural} {}{\HTMLUnicode{266E}}
62
63 \RenewDocumentCommand{\musWhole} {}{\HTMLUnicode{1D15D}}

```

---

```

64 \RenewDocumentCommand{\musHalf}{}{\HTMLUnicode{1D15E}}
65 \RenewDocumentCommand{\musQuarter}{}{\HTMLUnicode{1D15F}}
66 \RenewDocumentCommand{\musEighth}{}{\HTMLUnicode{1D160}}
67 \RenewDocumentCommand{\musSixteenth}{}{\HTMLUnicode{1D161}}
68
69 \RenewDocumentCommand{\musWholeDotted}{}{\HTMLUnicode{1D15D}\HTMLUnicode{1D16D}}
70 \RenewDocumentCommand{\musHalfDotted}{}{\HTMLUnicode{1D15E}\HTMLUnicode{1D16D}}
71 \RenewDocumentCommand{\musQuarterDotted}{}{\HTMLUnicode{1D15F}\HTMLUnicode{1D16D}}
72 \RenewDocumentCommand{\musEighthDotted}{}{\HTMLUnicode{1D160}\HTMLUnicode{1D16D}}
73 \RenewDocumentCommand{\musSixteenthDotted}{}{\HTMLUnicode{1D161}\HTMLUnicode{1D16D}}

```

---

File 206 **lwarp-nameref.sty**

§ 302 Package **nameref**

Pkg **nameref** **nameref** is emulated by **lwarp**.

**for HTML output:** Discard all options for **lwarp-nameref**:

```

1 \typeout{Using the lwarp html version of package ‘nameref’, discarding options.}
2 \typeout{ Are not using ProvidesPackage, so that other packages}
3 \typeout{ do not attempt to patch lwarp’s version of ‘nameref’..}
4 \DeclareOption*{}
5 \ProcessOptions\relax

```

---

File 207 **lwarp-natbib.sty**

§ 303 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}`

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 208 `lwarp-nccfancyhdr.sty`

§ 304 Package **nccfancyhdr**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg nccfancyhdr nccfancyhdr is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{nccfancyhdr}

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}{}
27
28 \NewDocumentCommand{\newpagestyle}{m o m}{}
29
30 \newcommand*\iffloatpage}[2] {#2}
31 \newcommand*\ifftopfloat}[2] {#2}
32 \newcommand*\iffbotfloat}[2] {#2}

```

---

File 209 **lwrap-needspace.sty**

§ 305 Package **needspace**

*(Emulates or patches code by PETER WILSON.)*

Pkg `needspace` `needspace` is not used during HTML conversion.

**for HTML output:** Discard all options for `lwrap-needspace`:

```

1 \LWR@ProvidesPackageDrop{needspace}
2
3 \DeclareDocumentCommand{\needspace}{m}{}
4 \DeclareDocumentCommand{\Needspace}{s m}{}

```

---

File 210 **lwrap-nextpage.sty**

§ 306 Package **nextpage**

*(Emulates or patches code by PETER WILSON.)*

Pkg `nextpage` `nextpage` is nullified.

**for HTML output:** Discard all options for `lwrap-nextpage`.

```

1 \LWR@ProvidesPackageDrop{nextpage}

2 \DeclareDocumentCommand{\cleartoevenpage}{o}{}
3 \DeclareDocumentCommand{\movetoevenpage}{o}{}

```

---

```
4 \DeclareDocumentCommand{\cleartooddpage}{o}{}
5 \DeclareDocumentCommand{\movetooddpage}{o}{}
```

---

File 211 **lwarp-nicefrac.sty**

§ 307 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 212 **lwarp-nonfloat.sty**

§ 308 Package **nonfloat**

*(Emulates or patches code by KAI RASCHER.)*

Pkg nonfloat nonfloat is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{nonfloat}

2 \LetLtxMacro\topcaption\caption
3 \newcommand{\figcaption}{\def\capttype{figure}\caption}
4 \newcommand{\tabcaption}{\def\capttype{table}\topcaption}
5 \newenvironment{narrow}[2]{\{}}

```

---

File 213 **lwarp-nonumonpart.sty**

§ 309 Package **nonumonpart**

Pkg nonumonpart nonumonpart is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{nonumonpart}

```

---

File 214 **lwarp-nopageno.sty**

§ 310 Package **nopageno**

Pkg nopageno nopageno is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{nopageno}

```

---

File 215 **lwarp-notespages.sty**

§ 311 Package **notespages**

Pkg notespages notespages is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{notespages}

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*\definenotesoption}[2] {}
15 \newcommand*\definenotesstyle}[2] {}
16 \newcommand*\definetitlestyle}[2] {}
17 \newcommand*\nppatchchapter}[1] {}
18 \newcommand*\npunpatchchapter{}

```

---

File 216 **lwarp-nowidow.sty**

§ 312 Package **nowidow**

*(Emulates or patches code by RAPHAËL PINSON.)*

Pkg nowidow nowidow is not used during HTML conversion.

Discard all options for lwarp-nowidow:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nowidow}

```

\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 217 **lwarp-ntheorem.sty**

§ 313 Package **ntheorem**

*(Emulates or patches code by WOLFGANG MAY, ANDREAS SCHEDLER.)*

Pkg ntheorem ntheorem 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.

### § 313.1 Limitations

⚠ **Font control** This conversion is not total. Font control is via css, and the custom L<sup>A</sup>T<sub>E</sub>X font settings are ignored.

⚠ **Equation numbering** ntheorem has a bug with equation numbering in  $\mathcal{A}\mathcal{M}\mathcal{S}$  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.

### § 313.2 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@theoremmarks}
5 \boolfalse{LWR@theoremmarks}
6
7 \DeclareOption{thmmarks}{
8 \booltrue{LWR@theoremmarks}
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}

```

### § 313.3 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 \theoremstyle{#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@addtheorem#1\endcsname{%
151 \noexpand\@num@addtheoremline{#1}{#3}}%
152 \expandafter\protected@xdef\csname nonum@addtheorem#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@thmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
163 \fi}
164 }

```

#### § 313.4 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@mbx{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
169 \LWR@startpars%
170 }

```

#### § 313.5 \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 }

```

### § 313.6 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)\theorem@separator}\newline
197]}
198
199 \renewtheoremstyle{change}%
200 {\item[
201 \InlineClass{theoremheaderchange}{##2\ ##1\theorem@separator}]}%
202 {\item[
203 \InlineClass{theoremheaderchange}{##2\ ##1\ (##3)\theorem@separator}]}
204
205 \renewtheoremstyle{changebreak}%
206 {\item[
207 \InlineClass{theoremheaderchangebreak}%
208 {##2\ ##1\theorem@separator}\newline
209]}%
210 {\item[
211 \InlineClass{theoremheaderchangebreak}%
212 {##2\ ##1\ (##3)\theorem@separator}\newline
213]}
214
215 \renewtheoremstyle{margin}%
216 {\item[
217 \InlineClass{theoremheadermargin}{##2 \quad ##1\theorem@separator}
218]}%
219 {\item[
220 \InlineClass{theoremheadermargin}{##2 \quad ##1\ (##3)\theorem@separator}
221]}
222
223 \renewtheoremstyle{marginbreak}%
224 {\item[
225 \InlineClass{theoremheadermarginbreak}%
226 {##2 \quad ##1\theorem@separator}\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}

```

### § 313.7 Additional objects

The following manually adjust the CSS for the standard configuration objects which are not a purely plain style:

```
256 \ifbool{LWR@ntheoremamsthm}{-}{%
```

Upright text via CSS:

```

257 \newtheoremstyle{plainupright}%
258 {\item[
259 \InlineClass{theoremheaderplain}{##1\ ##2\theoremseparator}]}%
260 {\item[
261 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theoremseparator}]}

```

Upright text and small caps header via CSS:

```

262 \newtheoremstyle{nonumberplainuprightsc}%
263 {\item[

```

```

264 \InlineClass{theoremheadersc}{##1\theoremseparator}}}%
265 {\item[
266 \InlineClass{theoremheadersc}{##1\ (##3)\theoremseparator}}]
267 }% not amsthm

```

### § 313.8 Renewed standard configuration

The following standard configuration is renewed using the new css:

```

268 \ifbool{LWR@ntheoremamsthm}{-}{%

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

```

### § 313.9 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@inctheorem% lwarp
402 \item[
403 \InlineClass{theoremheaderproof}{##1.}
404]}%
405 \def\@opargbegintheorem##1##2##3{%
406 \LWR@inctheorem% 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

```

### § 313.10 **Ending a theorem**

Patched for CSS:

```

433 \let\LWR@origendtheorem\@endtheorem
434 \renewcommand{\@endtheorem}{%
435 \ifbool{LWR@ntheoremmarks}{%
436 \ifsetendmark%
437 \InlineClass{theoremendmark}{\csname\InTheoType Symbol\endcsname}%
438 \setendmarkfalse%
439 \fi%
440 }{}%
441 \LWR@origendtheorem% also does \@endtrivlist
442 \ifbool{LWR@ntheoremmarks}{\global\setendmarktrue}{}%
443 \endBlockClass%
444 }

```

§ 313.11 **\NoEndMark**

```
445 \gdef\NoEndMark{\global\setendmarkfalse}
```

§ 313.12 **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@htmlclass{nav}{lothm}%
456 \begingroup
457 \c@tocdepth=-2%
458 \def\thm@list{#1}\thm@processlist
459 \endgroup
460 \LWR@htmlclassend{nav}{lothm}%
461 }
```

§ 313.13 **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

```

### § 313.14 **Cross-referencing**

```
\thref {<label>}
```

```
481 \newcommand*{\thref}[1]{\cref{#1}}
```

---

### File 218 **lwarp-octave.sty**

## § 314 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 219 **lwarp-overpic.sty**

### § 315 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 [83.2](#) for the print-mode version of `\overpicfontsize` and `\overpicfontskip`.

```

for HTML output: 1 \LWR@ProvidesPackagePass{overpic}

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 220 `lwarp-pagegrid.sty`

§ 316 Package **pagegrid**

Pkg pagegrid pagegrid is ignored.

```

for HTML output: 1 \LWR@ProvidesPackageDrop{pagegrid}

2 \newcommand*{\pagegridsetup}[1]{

```

---

File 221 `lwarp-pagenote.sty`

§ 317 Package **pagenote**

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

```

for HTML output: 1 \DeclareOption{page}{}
2 \LWR@ProvidesPackagePass{pagenote}

```

---

File 222 **lwarp-pagesel.sty**

§ 318 Package **pagesel**

Pkg pagesel pagesel is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pagesel}

---

File 223 **lwarp-paralist.sty**

§ 319 Package **paralist**

*(Emulates or patches code by BERND SCHANDL.)*

Pkg paralist paralist is supported with minor changes.

**for HTML output:** 1 \LWR@ProvidesPackagePass{paralist}

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 224 **lwarp-parnotes.sty**

§ 320 Package **parnotes**

*(Emulates or patches code by CHELSEA HUGHES.)*

Pkg parnotes parnotes is supported with some patches.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{parnotes}

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}] []\theparnotemark%
12 }%
13 }%
14 \g@addto@macro\PN@text{%
15 \LWR@textcurrentfont{ lwarp
16 \parnotemark{#1}\nolinebreak\thinspace#2%
17 }%
18 }%
19 }
20
21 \def\PN@parnotes@real{%
22 % We call \par later, so this avoids recursion with \PN@parnotes@auto
23 \PN@inparnotestruer
24 \unless\ifvmode\par\fi
25 % Avoid page breaks between a paragraph and its parnotes
26 \nopagebreak\addvspace{\parnotevskip}%
27 \LWR@forcenewpage% lwarp
28 \begin{BlockClass}{footnotes}% lwarp
29 {\parnotefmt{\PN@text}\par}%
30 \end{BlockClass}% lwarp
31 \global\def\PN@text{}%
32 \addvspace{\parnotevskip}%
33 %
34 % These can be enabled or disabled by package options
35 %
36 \PN@disable@indent

```

---

```

37 \PN@reset@optional
38 \PN@inparnotesfalse
39 }
40
41 \AtBeginDocument{
42 \crefname{parnotemark}{paragraph note}{paragraph notes}
43 \Crefname{parnotemark}{Paragraph note}{Paragraph notes}
44 }

```

---

File 225 **lwarp-parskip.sty**

§ 321 Package **parskip**

Pkg `parskip` `parskip` is ignored.

**for HTML output:** Discard all options for `lwarp-parskip`.

```
1 \LWR@ProvidesPackageDrop{parskip}
```

---

File 226 **lwarp-pbox.sty**

§ 322 Package **pbox**

*(Emulates or patches code by SIMON LAW.)*

Pkg `pbox` `pbox` is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pbox}

2 \NewDocumentCommand{\pbox}{0{t} 0{} 0{t} m +m}{%
3 \booltrue{LWR@minipagefullwidth}%
4 \parbox[#1] [#2] [#3] {#4}{#5}%
5 }
6
7 \newcommand{\settominwidth}[3] [\columnwidth] {%
8 \settowidth{#2}{#3}%
9 }
10
11 \newcommand{\widthofpbox}[1] {%
12 \widthof{#1}%
13 }

```

---

File 227 **lwarp-pdfcomment.sty**

§ 323 Package **pdfcomment**

Pkg pdfcomment pdfcomment is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfcomment}[2016/06/13]

```

2 \newenvironment{pdfsidelinecomment}[2] [] {}{}
3 \newcommand{\pdfcomment}[2] [] {}
4 \newcommand{\pdfmargincomment}[2] [] {}
5 \newcommand{\pdfmarkupcomment}[3] [] {#2}
6 \newcommand{\pdfreetextcomment}[2] [] {}
7 \newcommand{\pdfsquarecomment}[2] [] {}
8 \newcommand{\pdfcirclecomment}[2] [] {}
9 \newcommand{\pdflinecomment}[2] [] {}
10 \newcommand{\pdftooltip}[3] [] {#2}
11 \newcommand{\pdfcommentsetup}[2] [] {}
12 \newcommand{\listofpdfcomments}[1] [] {}
13 \newcommand{\setliststyle}[1] {}
14 \newcommand{\defineliststyle}[2] {}
15 \newcommand{\defineavatar}[2] {}
16 \newcommand{\definestyle}[2] {}

```

---

File 228 **lwarp-pdflandscape.sty**

§ 324 Package **pdflandscape**

Pkg pdflandscape pdflandscape is ignored.

**for HTML output:** Discard all options for lwarp-pdflandscape:

```

1 \LWR@ProvidesPackageDrop{pdflandscape}

```

---

File 229 **lwarp-pdfmarginpar.sty**

§ 325 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 230 **lwarp-pdfpages.sty**

§ 326 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}

```

Disable option which have no meaning for HTML output:

```

2 \define@key{pdfpages}{fitpaper}[false]{}
3 \define@key{pdfpages}{landscape}[false]{}
4 \define@key{pdfpages}{openright}[false]{}
5 \define@key{pdfpages}{signature}{}
6 \define@key{pdfpages}{signature*}{}
7 \define@key{pdfpages}{booklet}[false]{}
8 \define@key{pdfpages}{rotateoversize}[false]{}
9 \define@key{pdfpages}{doublepages}[false]{}
10 \define@key{pdfpages}{doublepagestwist}[false]{}
11 \define@key{pdfpages}{doublepagestwistodd}[false]{}
12 \define@key{pdfpages}{doublepagestwist*}[false]{}
13 \define@key{pdfpages}{doublepagestwistodd*}[false]{}
14 \define@key{pdfpages}{duplicatepages}[2]{}
15 \define@key{pdfpages}{thread}[false]{}
16 \define@key{pdfpages}{threadname}{}
17 \define@key{pdfpages}{linkfit}{}
18 \define@key{pdfpages}{linktodoc}[false]{}
19 \define@key{pdfpages}{linktodocfit}{}
20 \define@key{pdfpages}{linkfilename}{}
21 \define@key{pdfpages}{survey}[false]{}

```

```

22 \define@key{pdfpages}{survey-nolink}[false]{}
23 \define@key{pdfpages}{newwindow}[false]{}

```

Use print mode while measuring the page numbers:

```

24 \xpretocmd{\AM@getpagecount}{\LWR@restoreorigformatting}{}{}

```

Emulate a bit of eso-pic:

```

25 \newif\ifESO@texcoord
26
27 \newcommand{\ESO@HookIIBG}{}
28
29 \renewcommand{\AM@AddToShipoutPicture}{\g@addto@macro\ESO@HookIIBG}
30
31 \renewcommand{\ClearShipoutPicture}{}

```

`\LWR@esopic@newpage` At each `\newpage`.

```

32 \newcommand*{\LWR@esopic@newpage}{%

```

Is there something to draw?

```

33 \ifdefvoid{\ESO@HookIIBG}%
34 {}%
35 {%

```

If the link option was specified, add a hyper target:

```

36 \ifAM@link%
37 \hypertarget{\AM@linkname.\AM@page}{}%
38 \fi%

```

Draw inside a picture environment of the size of a virtual page:

```

39 \begingroup%
40 \setlength{\unitlength}{1in}%
41 \begin{picture}(8,10.5)%
42 \ESO@HookIIBG%
43 \end{picture}%
44 \endgroup%
45 \global\let\ESO@HookIIBG\@empty%
46 }
47 }

```

`\AM@output` Patched to use `\LWR@esopic@newpage`.

```

48 \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 a reasonable paper size.

```

65 \xpretocmd{\includepdf}{%
66 \begingroup%
67 \setlength{\paperwidth}{8in}%
68 \setlength{\paperheight}{10.5in}%
69 }{}{}
70
71 \xapptocmd{\includepdf}{%
72 \endgroup%
73 }{}{}

```

`\includepdfmerge` Patched to set a reasonable paper size.

```

74 \xpretocmd{\includepdfmerge}{%
75 \begingroup%
76 \setlength{\paperwidth}{8in}%
77 \setlength{\paperheight}{10.5in}%
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 231 **lwarp-pdfprivacy.sty**

§ 327 Package **pdfprivacy**

Pkg pdfprivacy pdfprivacy is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfprivacy}

---

File 232 **lwarp-pdfrenderer.sty**

§ 328 Package **pdfrenderer**

Pkg pdfrenderer pdfrenderer is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfrenderer}

2 \newcommand\*{\pdfrenderer}[1]{}

3 \newcommand{\textpdfrenderer}[2]{#2}

---

File 233 **lwarp-pdfsync.sty**

§ 329 Package **pdfsync**

*(Emulates or patches code by J. LAURENS.)*

Pkg pdfsync Emulated.

**for HTML output:** Discard all options for lwarp-pdfsync:

1 \LWR@ProvidesPackageDrop{pdfsync}

2 \newcommand\*{\pdfsync}{}

3 \newcommand\*{\pdfsyncstart}{}

4 \newcommand\*{\pdfsyncstop}{}

---

File 234 **lwarp-pdftricks.sty**

§ 330 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}

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 235 **lwarp-pdfx.sty**

§ 331 Package **pdfx**

Pkg pdfx pdfx is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfx}

File 236 **lwarp-pfnote.sty**

§ 332 Package **pfnote**

Pkg pfnote pfnote is emulated.

 **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}`

File 237 **lwarp-phfqit.sty**

§ 333 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}`

```

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 238 **lwarp-placeins.sty**

§ 334 Package **placeins**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg placeins placeins is not used during HTML conversion.

Discard all options for lwarp-placeins:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{placeins}
2 \newcommand*{\FloatBarrier}{}
```

File 239 **lwarp-plarydshln.sty**

§ 335 Package **plarydshln**

Pkg plarydshln plarydshln is emulated by lwarp-arydshln.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{plarydshln}
2 \LWR@origRequirePackage{lwarp-arydshln}
```

File 240 **lwarp-plext.sty**

§ 336 Package **plext**

Pkg plext plext is preloaded by jrtarticle and related classes.

**for HTML output:**

```
1 \LWR@loadbefore{plext}
2
3 \LWR@ProvidesPackagePass{plext}[2017/07/21]

4 \let\tate\relax
5
6 \DeclareExpandableDocumentCommand{\rensuji}{s o m}{#3}
7
8 % \layoutfloat(width,height)[pos]#4
9 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
10
11 % \DeclareLayoutCaption{type} <dir>(width)[pos1pos2]
12 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
13
14 \LetLtxMacro\pcaption\caption
15
16 % \layoutcaption<dir>(width)[pos]
17 \DeclareDocumentCommand{\layoutcaption}{d<> d() o}{}
18
19 \let\captiondir\relax
```

Add the optional <t/y> direction:

```

20 \RenewDocumentEnvironment{LWR@HTML@minipage}{d<> O{t} O{ } O{t} m}
21 {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
22 {\endLWR@HTML@sub@minipage}
23
24 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{ } O{t} m +m}
25 {
26 \LWR@traceinfo{parbox of width #4}%
27 \begin{minipage}[#2][#3][#4]{#5}%
28 #6
29 \end{minipage}%
30 }
31
32 % \pbox <t/y> [width] [l/r] {contents}
33 \RenewDocumentCommand{\pbox}{d<> O{Opt} O{c} m}{%
34 \booltrue{LWR@minipagefullwidth}%
35 \parbox{#2}{#4}%
36 }

```

picture, as modified by pext, is encapsulated by the lwarp core.

File 241 `lwarp-plextarydshln.sty`

§ 337 Package **plextarydshln**

Pkg `plextarydshln` `plextarydshln` is emulated by `lwarp-arydshln`.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{plextarydshln}
2 \LWR@origRequirePackage{lwarp-arydshln}

```

File 242 `lwarp-plextcolortbl.sty`

§ 338 Package **plextcolortbl**

Pkg `plextcolortbl` `plextcolortbl` is emulated by `lwarp-arydshln`.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{plextcolortbl}
2 \LWR@origRequirePackage{lwarp-colortbl}

```

---

File 243 **lwarp-prelim2e.sty**

§ 339 Package **prelim2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg `prelim2e` Emulated.

**for HTML output:** Discard all options for `lwarp-prelim2e`:

```
1 \LWR@ProvidesPackageDrop{prelim2e}
2 \newcommand{\PrelimText}{}
3 \newcommand{\PrelimTextStyle}{}
4 \newcommand{\PrelimWords}{}

```

---

File 244 **lwarp-prettyref.sty**

§ 340 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}`

```
2 \newreformat{fig}{Figure \ref{#1}}
3 \newreformat{tab}{Table \ref{#1}}

```

---

File 245 **lwarp-preview.sty**

§ 341 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 246 **lwarp-psfrag.sty**

§ 342 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--\packagediagramname)]%
4 }
5
6 \AfterEndEnvironment{psfrags}{\end{lateximage}}

```

---

File 247 **lwarp-psfragx.sty**

§ 343 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--\packagediagramname)]%
4 \mbox{\pfx@overpix{#1}{#2}\endpfx@overpix}%
5 \end{lateximage}%
6 }
7
8 \def\@@@overpix[#1]<#2>[#3]#4{%
9 \begin{lateximage}[(-psfragx--\packagediagramname)]%
10 \pfx@overpix{#1,ovpfgd={#2},ovbgd={#3}}{#4}%
11 }
12
13 \def\endoverpix{%
14 \endpfx@overpix%
15 \end{lateximage}%
16 }

```

---

File 248 **lwarp-pst-eps.sty**

§ 344 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}

```

2 \renewenvironment{TeXtoEPS}{}{}
3 \renewcommand{\PSTtoEPS}[3] [] {}

```

---

File 249 **lwarp-pstool.sty**

§ 345 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}

Each image is placed inside a lateximage to capture the results of psfrag.

```
2 \renewcommand\pstool@alwaysprocess[3] [] {%
3 \begin{lateximage}[(-pstool--\packagediagramname)]%
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--\packagediagramname)]%
12 \includegraphics{#2.pdf}%
13 \end{lateximage}%
14 }
```

---

File 250 **lwarp-pstricks.sty**

§ 346 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}

```
2 \BeforeBeginEnvironment{pspicture}{\begin{lateximage}[(pspicture)]}
3 \AfterEndEnvironment{pspicture}{\end{lateximage}}
```

---

File 251 **lwarp-pxatbegshi.sty**

§ 347 Package **pxatbegshi**

Pkg pxatbegshi pxatbegshi is ignored.

---

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pratabegshi}  
2 \LWR@origRequirePackage{lwarp-atbegshi}

---

File 252 **lwarp-pxeveryshi.sty**

§ 348 Package **pxeveryshi**

Pkg pxeveryshi pxeveryshi is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxeveryshi}  
2 \LWR@origRequirePackage{lwarp-everyshi}

---

File 253 **lwarp-pxftnright.sty**

§ 349 Package **pxftnright**

Pkg pxftnright pxftnright is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxftnright}  
2 \LWR@origRequirePackage{lwarp-ftnright}

---

File 254 **lwarp-pxjahyper.sty**

§ 350 Package **pxjahyper**

Pkg pxjahyper pxjahyper is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxjahyper}

---

File 255 **lwarp-quotchap.sty**

§ 351 Package **quotchap**

*(Emulates or patches code by KARSTEN TINNEFELD, JAN KLEVER.)*

Pkg quotchap quotchap is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{quotchap}
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]{\begin{BlockClass}{qauthor}{#1}\end{BlockClass}}
```

\qsetcnfont is ignored:

```

23 \newcommand{\qsetcnfont}[1]{}
```

---

File 256 **lwarp-quoting.sty**

§ 352 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}

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}}
9 {}
10 {\LWR@patcherror{imakeidx}{endquoting}}
```

---

File 257 **lwarp-ragged2e.sty**

§ 353 Package **ragged2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg ragged2e ragged2e is not used during HTML conversion.

Discard all options for lwarp-ragged2e:

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{ragged2e}

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 258 **lwarp-realscripts.sty**

§ 354 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}

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}{\LWR@print@mbx{text-align:center} ; }%
16 }{}%
17 \ifthenelse{\equal{#1}{r}}{%
18 \renewcommand{\LWR@realscriptsalign}{\LWR@print@mbx{text-align:right} ; }%
19 }{}%
20 }
21
22 \DeclareDocumentCommand \textsubsuperscript {s O{1} mm} {%
23 \LWR@setrealscriptsalign{#2}%
24 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
25 #4\textsubscript{#3}%
26 }%

```

---

```

27 }
28
29 \DeclareDocumentCommand \textsupersubscript {s O{1} mm} {%
30 \LWR@setrealscriptsalign{#2}%
31 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
32 \textsubscript{#4}#3%
33 }%
34 }

```

---

File 259 **lwarp-refcheck.sty**

§ 355 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\checkunlbid{}
9 \def\ignoreunlbid{}
10 \newcommand*{\refcheckxrdoc}[2][] {}

```

---

File 260 **lwarp-register.sty**

§ 356 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}[2018/11/10]

```

2 \xpatchcmd{\register}
3 {\centering}
4 {\begin{center}\begin{lateximage}[(-register--\packagediagramname)]}
5 {}
6 {\LWR@patcherror{register}{register}}
7
8 \xpatchcmd{\endregister}

```

---

```

9 {\leftskip}
10 {%
11 \end{lateximage}\end{center}%
12 \leftskip%
13 }%
14 {}
15 {\LWR@patcherror{register}{endregister}}
16
17 \expandafter\xapptocmd\csname register*\endcsname
18 {\begin{center}\begin{lateximage}[(-register--\packagediagramname)]}
19 {}
20 {\LWR@patcherror{register}{register*}}
21
22 \expandafter\xpatchcmd\csname endregister*\endcsname
23 {\leftskip}
24 {%
25 \end{lateximage}\end{center}%
26 \leftskip%
27 }%
28 {}
29 {\LWR@patcherror{register}{endregister*}}
30
31 \setlength{\regWidth}{5in}

```

---

File 261 **lwarp-reysize.sty**

§ 357 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}

2 \let\LWR@origreysize\reysize
3 \LetLtxMacro\LWR@origlarger\larger

```

---

```

4 \LetLtxMacro\LWR@origsmaller\smaller
5 \let\LWR@relscale\relscale
6 \LetLtxMacro\LWR@origtextlarger\textlarger
7 \LetLtxMacro\LWR@origtextsmaller\textsmaller
8 \let\LWR@textscale\textscale
9
10 \appto\LWR@restoreorigformatting{%
11 \let\relsize\LWR@origrelsize%
12 \LetLtxMacro\larger\LWR@origlarger%
13 \LetLtxMacro\smaller\LWR@origsmaller%
14 \let\relscale\LWR@relscale%
15 \LetLtxMacro\textlarger\LWR@origtextlarger%
16 \LetLtxMacro\textsmaller\LWR@origtextsmaller%
17 \let\textscale\LWR@textscale%
18 }
19
20 \newcounter{LWR@relsizetemp}
21
22 \renewcommand*\relsize[1]{%
23 \renewcommand*\larger[1][1]{%
24 \renewcommand*\smaller[1][1]{%
25 \renewcommand*\relscale[1]{%
26
27 \renewcommand*\textlarger[2][1]{%
28 \setcounter{LWR@relsizetemp}{100+(#1*20)}%
29 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textlarger}{#2}%
30 }
31
32 \renewcommand*\textsmaller[2][1]{%
33 \setcounter{LWR@relsizetemp}{100-(#1*20)}%
34 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textsmaller}{#2}%
35 }
36
37 \renewcommand*\textscale[2]{%
38 \setcounter{LWR@relsizetemp}{100*\real{#1}}%
39 \InlineClass[font-size:\arabic{LWR@relsizetemp}\%]{textscale}{#2}%
40 }

```

---

File 262 **lwarp-repeatindex.sty**

§ 358 Package **repeatindex**

Pkg repeatindex repeatindex is emulated for lwarp.

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 263 `lwarp-resizegather.sty`

§ 359 Package **resizegather**

Pkg `resizegather` `resizegather` is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{resizegather}`

---

```
2 \newcommand*{\resizegathersetup}[1]{}
```

---

File 264 **lwarp-rmpage.sty**

§ 360 Package **rmpage**

Pkg rmpage rmpage is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{rmpage}

---

File 265 **lwarp-romanbar.sty**

§ 361 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}

```
2 \DeclareRobustCommand{\Roman@bar}[1]{% #1 is in Roman, i.e. MMXII
3 \InlineClass[%
4 text-decoration: overline underline ;
5]{romanbar}{#1}%
6 }
```

---

File 266 **lwarp-romanbarpagenumber.sty**

§ 362 Package **romanbarpagenumber**

Pkg romanbarpagenumber romanbarpagenumber is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{romanbarpagenumber}

File 267 **lwarp-rotating.sty**

§ 363 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}
2 \LetLtxMacro\sidewaystable\table
3 \let\endsidewaystable\endtable
4
5 \LetLtxMacro\sidewaysfigure\figure
6 \let\endsidewaysfigure\endfigure
7
8 \newenvironment*{sideways}{\}{}
9 \newenvironment*{turn}[1]{\}{}
10 \newenvironment*{rotate}[1]{\}{}
11 \NewDocumentCommand{\turnbox}{m +m}{#2}
12 \let\rotcaption\caption
13 \let\@makerotcaption\@makecaption

```

File 268 **lwarp-rotfloat.sty**

§ 364 Package **rotfloat**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg rotfloat rotfloat is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{rotfloat}[2004/01/04]
2
3 \RequirePackage{float}

```

`\newfloat`  $\langle 1: type \rangle \langle 2: placement \rangle \langle 3: ext \rangle [\langle 4: within \rangle]$

Emulates the `\newfloat` command from the `float` package. Sideways floats are `\let` to the same as regular floats.

“placement” is ignored.

```

4 \RenewDocumentCommand{\newfloat}{m m m o}{%
5 \IfValueTF{#4}{%
6 {%
7 \DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}%
8 }%
9 {%
10 \DeclareFloatingEnvironment[fileext=#3]{#1}%
11 }%
12 \csletcs{sideways#1}{#1}%
13 \csletcs{endsideways#1}{end#1}%

```

Remember the float style:

```

14 \csedef{LWR@floatstyle@#1}{\LWR@floatstyle}%
15 \csedef{LWR@floatstyle@sideways#1}{\LWR@floatstyle}%

```

`newfloat` package automatically creates the `\listof` command for new floats, but `float` does not, so remove `\listof` here in case it is manually created later:

```

16 \cslet{listof#1s}\relax%
17 \cslet{listof#1es}\relax%
18 \cslet{listofsideways#1s}\relax%
19 \cslet{listofsideways#1es}\relax%
20 }

```

---

File 269 `lwarp-rviewport.sty`

§ 365 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 270 **lwarp-savetrees.sty**

§ 366 Package **savetrees**

Pkg savetrees Emulated.

**for HTML output:** Discard all options for lwarp-savetrees:

```
1 \LWR@ProvidesPackageDrop{savetrees}
```

---

File 271 **lwarp-scalefnt.sty**

§ 367 Package **scalefnt**

*(Emulates or patches code by D. CARLISLE.)*

Pkg scalefnt scalefnt is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{scalefnt}
2 \DeclareRobustCommand\scalefont[1]{}

```

---

File 272 **lwarp-schemata.sty**

§ 368 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}
2 \LetLtxMacro\LWR@schemata@origschema\schemata
3 \LetLtxMacro\LWR@schemata@origSchema\Schema
4
5 \renewcommand{\schemata}[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 273 **lwarp-scrextend.sty**

§ 369 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}

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@maketitle\maketitle
15 \DeclareDocumentCommand{\maketitle}{o}{\LWR@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{\cleardoubleoddpaper}{-}{-}
35 \DeclareDocumentCommand{\cleardoubleoddpaperusingstyle}{m}{-}
36 \DeclareDocumentCommand{\cleardoubleoddpaperemptypage}{-}{-}
37 \DeclareDocumentCommand{\cleardoubleoddpaperplainpage}{-}{-}
38 \DeclareDocumentCommand{\cleardoubleoddpaperstandardpage}{-}{-}
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}{-}
59 \DeclareDocumentCommand{\deffootnotemark}{m}{-}
60 \DeclareDocumentCommand{\setfootnoterule}{o m}{-}
61 \DeclareDocumentCommand{\raggedfootnote}{-}{-}
62
63 \DeclareDocumentCommand{\dictum}{o m}{
64 \begin{LWR@BlockClassWP}{\LWR@print@mbox{text-align:right}}{dictum}
65 #2
66 \IfValueT{#1}
67 {
68 \ifbool{FormatWP}
69 {\begin{BlockClass}[\LWR@print@mbox{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
103 \NewDocumentEnvironment{addmargin}{s O{} m}
104 {
105 \setlength{\LWR@templengthtwo}{#3}
106 \ifblank{#2}
107 {
108 \begin{BlockClass}[
109 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
110 \LWR@print@mbx{margin-right:\LWR@printlength{\LWR@templengthtwo}}
111]{addmargin}
112 }
113 {
114 \setlength{\LWR@templengthone}{#2}
115 \begin{BlockClass}[
116 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ;
117 \LWR@print@mbx{margin-right:\LWR@printlength{\LWR@templengthtwo}}
118]{addmargin}
119 }
120 }
121 {\end{BlockClass}}

```

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 274 **lwarp-scrhack.sty**

§ 370 Package **scrhack**

Pkg scrhack scrhack is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrhack}

---

File 275 **lwarp-sclayer.sty**

§ 371 Package **sclayer**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg sclayer sclayer is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{sclayer}

```

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 276 **lwarp-sclayer-notecolumn.sty**

§ 372 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}

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 277 **lwarp-sclayer-scrpage.sty**

§ 373 Package **sclayer-scrpage**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg sclayer-scrpage sclayer-scrpage is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{sclayer-scrpage}

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 o m m m m m m}{}
33 \NewDocumentCommand{\newtriplepagestyle}{m o o m m m m m m}{}
34 \NewDocumentCommand{\renewtriplepagestyle}{m o o m m m m m m}{}
35 \NewDocumentCommand{\providetriplepagestyle}{m o o m m m m m m}{}
36 \newcommand*\defpagestyle}[3] {}
37 \newcommand*\newpagestyle}[3] {}
38 \newcommand*\providepagestyle}[3] {}
39 \newcommand*\renewpagestyle}[3] {}

```

---

File 278 **lwarp-scrpage2.sty**

§ 374 Package **scrpage2**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrpage2 scrpage2 is emulated.

 **Not fully tested! Please send bug reports!**

```

for HTML output: 1 \LWR@ProvidesPackageDrop{scrpage2}

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 m}{}
25 \NewDocumentCommand{\defpagestyle}{s m m}{}
26 \NewDocumentCommand{\newpagestyle}{s m m}{}
27 \NewDocumentCommand{\renewpagestyle}{s m m}{}
28 \NewDocumentCommand{\providepagestyle}{s 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 279 **lwarp-section.sty**

§ 375 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\hdsiize{\huge}\else
4 \def\chsize{\huge}\def\hdsiize{\Huge}
5 \fi
6 \let\ttsiize\LARGE
7 \let\ausiize\large
8 \let\dasiize\large
9 \let\secsiize\Large
10 \let\subsiize\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\nmidot{}
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 280 **lwarp-sectionbreak.sty**

§ 376 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}

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 281 **lwarp-sectsty.sty**

§ 377 Package **sectsty**

*(Emulates or patches code by ROWLAND MCDONNELL.)*

Pkg sectsty sectsty is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{sectsty}

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 282 **lwarp-semantic-markup.sty**

§ 378 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\f1\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 283 **lwarp-setspace.sty**

§ 379 Package **setspace**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg **setspace** setspace is not used during HTML conversion.

Discard all options for lwarp-setspace:

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{setspace}
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 284 **lwarp-shadow.sty**

§ 380 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}

2 \newdimen\shboxsep
3 \newdimen\shboxrule
4 \newdimen\shdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8 }

```

---

File 285 **lwarp-showidx.sty**

§ 381 Package **showidx**

Pkg `showidx` `showidx` is ignored.

**for HTML output:** Discard all options for `lwarp-showidx`:

```
1 \LWR@ProvidesPackageDrop{showidx}
```

`\@wrindex` is redefined `\AtBeginDocument` by the `lwarp` core.

---

File 286 **lwarp-showkeys.sty**

§ 382 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}
```

```
2 \NewDocumentCommand{\showkeys}{s}{}

```

---

File 287 **lwarp-sidecap.sty**

§ 383 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}
```

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 288 **lwarp-sidenotes.sty**

§ 384 Package **sidenotes**

*(Emulates or patches code by ANDY THOMAS, OLIVER SCHEBAUM.)*

Pkg sidenotes Patched for lwarp.

**for HTML output:** Load the original package:

```
1 \LWR@ProvidesPackagePass{sidenotes}
```

The following patch sidenotes for use with lwarp:

```

\sidecaption * [⟨entry⟩] [⟨offset⟩] {⟨text⟩}

2 \RenewDocumentCommand \sidecaption {s o o +m}
3 {
4 \LWR@stoppars
5 \begingroup
6 \captionsetup{style=sidecaption}
7 \IfBooleanTF{#1}

```

```

8 { % starred
9 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
10 \caption*{#4}
11 \end{BlockClass}
12 }
13 { % unstarred
14 \IfNoValueOrEmptyTF{#2}
15 {\def\@sidenotes@sidecaption@tof{#4}}
16 {\def\@sidenotes@sidecaption@tof{#2}}
17 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
18 \caption[\@sidenotes@sidecaption@tof]{#4}
19 \end{BlockClass}
20 }
21 \endgroup
22 \LWR@startpars
23 }

```

Borrowed from the lwarp version of keyfloat:

```

24 \NewDocumentEnvironment{KFLT@sidenotes@marginfloat}{0}{-1.2ex} m}
25 {% start
26 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{-}{marginblock}%
27 \captionsetup{type=#2}%
28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33 \RenewDocumentEnvironment{marginfigure}{o}
34 {\begin{KFLT@sidenotes@marginfloat}{figure}}
35 {\end{KFLT@sidenotes@marginfloat}}
36
37 \RenewDocumentEnvironment{margintable}{o}
38 {\begin{KFLT@sidenotes@marginfloat}{table}}
39 {\end{KFLT@sidenotes@marginfloat}}

```

The following were changed by sidenotes, and now are reset back to their lwarp-supported originals:

Restoring the definition from the L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> article.cls source:

```

40 \renewenvironment{figure*}
41 {\@dblfloat{figure}}
42 {\end@dblfloat}
43
44 \renewenvironment{table*}
45 {\@dblfloat{table}}
46 {\end@dblfloat}

```

---

File 289 **lwarp-SIunits.sty**

§ 385 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 to “(`<\mathimagenam>`)”, which defaults to “(math image)”.

for HTML output: `1 \LWR@ProvidesPackagePass{SIunits}`

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 290 **lwarp-siunitx.sty**

§ 386 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.

⚠ **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}

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 @@_ \l__siunitx_print_type_tl _
29 text \l__siunitx_font_family_tl :
30 }
31 \bool_if:NTF \l__siunitx_font_math_mode_bool
32 { __siunitx_print_math: }
33 {
34 \LWR@findcurrenttextcolor% lwarp
35 \ifdefstring{\LWR@tempcolor}{000000}% lwarp
36 {__siunitx_print_text:}% lwarp
37 {% lwarp
38 \LWR@textcurrentcolor{% lwarp
39 __siunitx_print_text:
40 }% lwarp
41 }% lwarp
42 }
43 \color@endgroup
44 }
45 }
46 }
47
48
49 \cs_undefine:N __siunitx_set_math_fam:n
50 \cs_new_protected:Npn __siunitx_set_math_fam:n #1 {
51 \int_new:c { c__siunitx_math #1 _int }
52 \group_begin:% lwarp
53 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
54 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
55 \hbox_set:Nn \l__siunitx_tmp_box
56 {
57 \ensuremath
58 {
59 \use:c { math #1 }
60 {
61 \int_gset:cn { c__siunitx_math #1 _int } { \fam }
62 }
63 }
64 }
65 \group_end:% lwarp
66 }
67
68 \cs_undefine:N __siunitx_combined_output:n
69 \cs_new_protected:Npn __siunitx_combined_output:n #1 {
70 \group_begin:% lwarp
71 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
72 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
73 \bool_if:NTF \l__siunitx_number_parse_bool
74 {
75 \tl_clear:N \l__siunitx_number_out_tl
76 \bool_set_false:N \l__siunitx_number_compound_bool
77 __siunitx_number_output_parse:n {#1}

```

```

78 }
79 {
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}% 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:nmmn {#4} { } {#2} {#3} }
215 {
216 \keys_set:nn { siunitx } {#1}
217 _siunitx_range_unit:nmmn {#4} {#1} {#2} {#3}
218 }
219 \group_end:% lwarp
220 }
221
222 \ExplSyntaxOff

```

---

File 291 **lwarp-soul.sty**

§ 387 Package **soul**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg soul Emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{soul}[2003/11/17]
2 \RequirePackage{xcolor}% for \convertcolorspec

```

Storage for the colors to use:

```

3 \newcommand*\LWR@soululcolor{}
4
5 \newcommand*\LWR@soulstcolor{}
6
7 % \definecolor{LWR@soulhlcolordefault}{HTML}{F8E800}
8 % \newcommand*\LWR@soulhlcolor{LWR@soulhlcolordefault}
9 \newcommand*\LWR@soulhlcolor{}

```

\so {<text>}

Basic markup with css:

```

10 \newcommand{\so}[1]{%
11 \InlineClass(letter-spacing:.2ex){letterspacing}{#1}%
12 }

```

\caps {<text>}

```

13 \newcommand{\caps}[1]{%
14 \InlineClass%
15 (font-variant:small-caps;letter-spacing:.1ex)%
16 {capsspacing}{#1}%
17 }

```

`\LWR@soulcolor`  $\langle text \rangle$   $\langle color \rangle$   $\langle class \rangle$   $\langle colorstyle \rangle$   $\langle FormatWPstyle \rangle$

Add colors if not empty:

```
18 \newcommand{\LWR@soulcolor}[5]{%
19 \ifcsempy{#2}%
20 {%
21 \InlineClass(#5){#3}{#1}%
22 }%
23 {%
24 \convertcolorspec{named}{\@nameuse{#2}}{HTML}\LWR@tempcolor%
25 \LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}%
26 }%
27 }
```

```
28 \newcommand{\ul}[1]{%
29 \LWR@soulcolor{#1}{\LWR@soululcolor}{uline}{text-decoration-color}%
30 {text-decoration:underline; text-decoration-skip: auto;}%
31 }
32
33 \newcommand{\st}[1]{
34 \LWR@soulcolor{#1}{\LWR@soulstcolor}{sout}{text-decoration-color}%
35 {text-decoration:line-through}%
36 }
37
38 \newcommand{\hl}[1]{
39 \LWR@soulcolor{#1}{\LWR@soulhlcolor}{highlight}{background-color}%
40 {background:\LWR@origpound{ }F8E800}
41 }
```

Nullified:

```
42 \newcommand*{\soulaccent}[1]{ }
43 \newcommand*{\soulregister}[2]{ }
44 \newcommand{\sloppyword}[1]{#1}
45 \newcommand*{\sodef}[5]{\DeclareRobustCommand*#1[1]{\so{##1}}}
46 \newcommand*{\resetso}{ }
47 \newcommand*{\capsdef}[5]{ }
48 \newcommand*{\capsreset}{ }
49 \newcommand*{\capssave}[1]{ }
50 \newcommand*{\capsselect}[1]{ }
51 \newcommand*{\setul}[2]{ }
52 \newcommand*{\resetul}{ }
53 \newcommand*{\setuldepth}[1]{ }
54 \newcommand*{\setuloverlap}[1]{ }
```

Set colors:

```
55 \newcommand*{\setulcolor}[1]{\renewcommand{\LWR@soululcolor}{#1}}
```

```
56 \newcommand*\setstcolor}[1]{\renewcommand{\LWR@soulstcolor}{#1}}
57 \newcommand*\sethlcolor}[1]{\renewcommand{\LWR@soulhlcolor}{#1}}
```

Long versions of the user-level macros:

```
58 \let\textso\so
59 \let\textul\ul
60 \let\texthl\hl
61 \let\textcaps\caps
```

---

File 292 **lwarp-soulpos.sty**

§ 388 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}

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 293 **lwarp-soulutf8.sty**

§ 389 Package **soulutf8**

Pkg soulutf8 soulutf8 is emulated.

lwarp's HTML output naturally supports UTF-8 encoding.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{soulutf8}`

---

File 294 **lwarp-splitidx.sty**

§ 390 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 469.17 in the `lwarp-patch-memoir` package for the `\@@wrsindexhyp` macro as an example.

**for HTML output:** `1 \LWR@ProvidesPackagePass{splitidx}`

```
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@verbindex\@onelevel@sanitize\@tempa\fi
16 \@wrindex{\@tempa}%
17 \fi
18 \else
19 \def\@tempa{#2}%
20 \csname index@#1@hook\endcsname
21 % \expandafter\ifx\csname @@wrsindex\endcsname\relax
22 \addtocounter{LWR@autoindex}{1}% lwarp
23 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}% lwarp
24 % \@@@wrsindex{#1}{\@tempa}{\thepage}}%
25 % \@@@wrsindex{#1}{\@tempa}{\arabic{LWR@autoindex}}}%
26 % \else
27 % \def\@tempb{\@wrsindex{#1}}%
28 % \expandafter\@tempb\@tempa||\%
29 % \fi
30 \endgroup
31 \@esphack
32 \fi
33 }

```

lwarp defines sectioning commands with xparse, so the below patches are done as temporary redefinitions instead of being \let.

```

34 \xpatchcmd{\printsubindex}
35 {\let\section\subsection}
36 {\renewcommand*{\section}{\subsection}}
37 {}
38 {\LWR@patcherror{splitidx}{printsubindex-section}}
39
40 \xpatchcmd{\printsubindex}
41 {\let\chapter\section}
42 {\renewcommand*{\chapter}{\section}}
43 {}
44 {\LWR@patcherror{splitidx}{printsubindex-chapter}}
45
46 \xpatchcmd{\printsubindex}
47 {\let\@makechapterhead\section}
48 {\def\@makechapterhead{\section}}
49 {}
50 {\LWR@patcherror{splitidx}{printsubindex-chapter}}

```

---

File 295 **lwarp-srcltx.sty**

§ 391 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 296 **lwarp-srctex.sty**

§ 392 Package **srctex**

Pkg srctex srctex is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{srctex}[2006/11/12]
2 \LWR@origRequirePackage{lwarp-srcltx}

```

---

File 297 **lwarp-stabular.sty**

§ 393 Package **stabular**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg stabular stabular is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{stabular}

```

```

Env stabular [\vpos] {\colspec}

2 \newenvironment{stabular}[2][c]
3 {
4 \begin{tabular}[#1]{#2}
5 \renewcommand{\noalign}[1]{}
6 }
7 {\end{tabular}}

```

```

Env stabular {\width} [\vpos] {\colspec}

8 \NewDocumentEnvironment{stabular*}{m o m}

```

---

```

9 {
10 \begin{tabular}[#2]{#3}
11 \renewcommand{\noalign}[1]{-}
12 }
13 {\end{tabular}}

```

---

File 298 **lwarp-stfloats.sty**

§ 394 Package **stfloats**

Pkg stfloats stfloats is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{stfloats}

stfloats may have been preloaded by a ltj\* class.

The following are provided in case they have not yet been defined:

```

2 \providecommand*\fnbelowfloat{}
3 \providecommand*\fnunderfloat{}
4 \providecommand*\setbaselinefloat{}
5 \providecommand*\setbaselinefixed{}

```

Nullified for HTML:

```

6 \renewcommand*\fnbelowfloat{}
7 \renewcommand*\fnunderfloat{}
8 \renewcommand*\setbaselinefloat{}
9 \renewcommand*\setbaselinefixed{}

```

---

File 299 **lwarp-subfig.sty**

§ 395 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}
```

```
\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 widthOpt heightOpt depthOpt
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 widthOpt heightOpt depthOpt
80 \sf@subcaption{#1}{#2}{#3}%
81 \fi
82 }%
83% \vskip\sf@bottom
84 \egroup
85 \@ifundefined{FBsc@max}{}%
86 {\addtocounter{FRobj}{-1}%

```

```

87 \ifnum\c@FRobj=0\else
88 \subfloatrowsep
89 \fi}%
90 \ifmaincaptiontop\else
91 \global\advance\@nameuse{c@\@capttype}\m@ne
92 \fi
93 \end{minipage}% lwarp
94 \LWR@startpars% lwarp
95 \endgroup\ignorespaces%
96 }%

```

`\sf@subcaption` *{⟨1 type⟩ {⟨2 LOF entry⟩ {⟨3 caption⟩}}*

```

97 \long\def\sf@subcaption#1#2#3{%
98 \LWR@stoppars% lwarp
99 \ifx \relax#2\relax \else
100 \bgroup
101 \let\label=\@gobble
102 \let\protect=\string
103 \def\@subcaplabel{%
104 \caption\lstfmt{\@nameuse{p@#1}}{\@nameuse{the#1}}}%
105 \sf@updatecaptionlist{#1}{#2}{\the\value{\@capttype}}{\the\value{#1}}%
106 \egroup
107 \fi
108 \bgroup
109 \ifx \relax#3\relax
110 \let\captionlabelsep=\relax
111 \fi
112 % \setbox0\vbox{%
113 % \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.

```
\@newsfloat [<keys/values>] {<float name>}
```

```

186 \LetLtxMacro\LWR@orig@newsfloat\@newsfloat
187
188 \def\@newsfloat[#1]#2{%
189 \LWR@orig@newsfloat[#1]{#2}%
190 \renewcommand{\l@sub#2}[2]{\hypertocfloat{2}{sub#2}{\ext@sub#2}{##1}{##2}}%
191 }

```

Pre-defined for figures and tables:

```
\l@subfigure {<text>} {<pagenum>}
```

```
192 \renewcommand{\l@subfigure}[2]{\hypertocfloat{2}{subfigure}{lof}{#1}{#2}}
```

```
\l@subtable {<text>} {<pagenum>}
```

```
193 \renewcommand{\l@subtable}[2]{\hypertocfloat{2}{subtable}{lot}{#1}{#2}}
```

---

File 300 **lwarp-subfigure.sty**

§ 396 Package **subfigure**

Pkg subfigure subfigure is emulated by subfig.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{subfigure}
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 301 **lwarp-supertabular.sty**

§ 397 Package **supertabular**

(Emulates or patches code by JOHANNES BRAAMS, THEO JURRIENS.)

Pkg supertabular supertabular is emulated.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{supertabular}
```

⚠ Misplaced alignment tab character &

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

```

\StartDefiningTabulars
\tablefirsthead
...
\StopDefiningTabulars

```

See section 9.9.

⚠ lateximage supertabular and xtab are not supported inside a lateximage.

```

2 \newcommand{\LWRST@firsthead}{-}
3
4 \newcommand{\tablefirsthead}[1]{%

```

```

5 \long\gdef\LWRST@firsthead{#1}%
6 }
7
8 \newcommand{\tablehead}[1]{%
9 \newcommand{\tabletail}[1]{%
10
11 \newcommand{\LWRST@lasttail}{%
12
13 \newcommand{\tablelasttail}[1]{%
14 \long\gdef\LWRST@lasttail{#1}%
15 }

16 \newcommand{\tablecaption}[2][]{%
17 \long\gdef\LWRST@caption{%
18 \ifblank{#1}%
19 {\caption{#2}}%
20 {\caption[#1]{#2}}%
21 }%
22 }
23
24 \let\topcaption\tablecaption
25 \let\bottomcaption\tablecaption

26 \newcommand*{\LWRST@caption}{%
27
28 \newcommand*{\shrinkheight}[1]{%
29
30 \NewDocumentEnvironment{supertabular}{s o m}
31 {%
32 \LWR@traceinfo{supertabular}%
33 \begin{table}%
34 \LWRST@caption%
35 \begin{tabular}{#3}%
36 \TabularMacro\ifdefvoid{\LWRST@firsthead}%
37 {\LWR@getmynexttoken}%
38 {\expandafter\LWR@getmynexttoken\LWRST@firsthead}%
39 }%
40 {%
41 \ifdefvoid{\LWRST@lasttail}%
42 {}%
43 {%
44 \TabularMacro\ResumeTabular%
45 \LWRST@lasttail%
46 }%
47 \end{tabular}%
48 \end{table}%
49 \LWR@traceinfo{supertabular done}%
50 }
51

```

---

```
52 \NewDocumentEnvironment{mpsupertabular}{s o m}
53 {\minipage{\linewidth}\supertabular{#3}}
54 {\endsupertabular\endminipage}
```

---

File 302 **lwarp-syntonly.sty**

§ 398 Package **syntonly**

*(Emulates or patches code by FRANK MITTELBACH, RAINER SCHÖPF.)*

Pkg syntonly Emulated.

**for HTML output:** Discard all options for lwarp-syntonly:

```
1 \LWR@ProvidesPackageDrop{syntonly}

2 \newif\ifsyntax@
3 \syntax@false
4
5 \newcommand*{\syntaxonly}{}
6
7 \@onlypreamble\syntaxonly
```

---

File 303 **lwarp-tables.sty**

§ 399 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 304 **lwarp-tabularx.sty**

§ 400 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}

2 \DeclareDocumentEnvironment{tabularx}{m o m}
3 {\tabular{#3}}
4 {\endtabular}
5
6 \DeclareDocumentEnvironment{tabularx*}{m o m}
7 {\tabular{#3}}
8 {\endtabular}

```

---

File 305 **lwarp-tabulary.sty**

§ 401 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}

2 \NewDocumentEnvironment{tabulary}{m o m}
3 {\tabular{#3}}
4 {\endtabular}
5
6 \NewDocumentEnvironment{tabulary*}{m o m}
7 {\tabular{#3}}
8 {\endtabular}
9
10 \newdimen\tymin

```

---

```
11 \newdimen\tymax
12 \def\tyformat{}
```

---

File 306 **lwarp-tascmac.sty**

§ 402 Package **tascmac**

Pkg tascmac tascmac is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{tascmac}

2 \newenvironment*{boxnote}
3 {
4 \BlockClass[
5 padding: .5ex ;
6 border: 1px solid black ;
7 border-top: 1px dashed black ;
8]{boxnote}
9 }
10 {\endBlockClass}
11
12 \newenvironment*{screen}[1] []
13 {
14 \BlockClass[
15 padding: .5ex ;
16 border: 1px solid gray ;
17 border-radius: 8pt
18]{boxnote}
19 }
20 {\endBlockClass}
21
22 \newenvironment*{itembox}[2] []
23 {
24 \BlockClass[
25 padding: .5ex ;
26 border: 1px solid gray ;
27 border-radius: 8pt
28]{boxnote}
29 \InlineClass{itemboxtitle}{#2}\par
30 }
31 {\endBlockClass}
32
33 \newenvironment*{shadebox}
34 {
35 \BlockClass[
36 padding: .5ex ;
37 border: 1px solid black ;
```

---

```

38 box-shadow: 3px 3px 3px \#808080 ;
39]{boxnote}
40 }
41 {\endBlockClass}
42
43 \newcommand*{\mask}[2]{%
44 \InlineClass[background: lightgray]{mask}{#1}%
45 }
46
47 \newcommand*{\maskbox}[5]{%
48 \InlineClass[background: lightgray]{mask}{#5}%
49 }
50
51 \newcommand*{\Maskbox}[6]{%
52 \InlineClass[
53 background: lightgray ;
54 border: #5 solid black
55]{mask}{#6}%
56 }
57
58 \newcommand*{\keytop}[2][]{%
59 \InlineClass[%
60 padding: .2ex ;
61 border: 1px solid black ;
62 border-radius: .7ex ;
63]{keytop}{#2}%
64 }
65
66 \def\yen{\HTMLUnicode{00A5}}
67
68 \def\return{\HTMLUnicode{23CE}}
69
70 \def\Return{\HTMLUnicode{23CE}}
71
72 \def\ascii{ASCII Corporation}
73
74 \def\Ascii{ASCII Corporation}
75
76 \def\ASCII{ASCII Corporation}

```

---

File 307 **lwarp-textarea.sty**

§ 403 Package **textarea**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg **textarea** **textarea** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{textarea}

2 \newcommand\StartFromTextArea{}
3 \newcommand\StartFromHeaderArea{}
4 \newcommand*\RestoreTextArea{}
5 \newcommand*\ExpandTextArea[1][*]{}
6 \let\NCC@restorettextarea\@empty

```

---

File 308 **lwarp-textcomp.sty**

§ 404 Package **textcomp**

*(Emulates or patches code by FRANK MITTELBACH, ROBIN FAIRBAIRNS, WERNER LEMBERG.)*

Pkg textcomp textcomp is patched for use by lwarp.

§ 404.1 **Limitations**

Some textcomp symbols do not have Unicode equivalents, and thus are not supported.

 **missing symbols** Many textcomp symbols are not supported by many fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

§ 404.2 **Package loading**

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{textcomp}

```

§ 404.3 **HTML symbols**

For HTML, use HTML entities or direct Unicode, depending on the engine.

`\AtBeginDocument` improves support for Lua<sup>A</sup>TEX and Xe<sup>L</sup>TEX.

§ 404.3.1 **pdf<sup>L</sup>TEX 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@textinterrobangdown}{\HTMLUnicode{2E18}}
18 \newcommand*\LWR@HTML@textperthousand}{\HTMLUnicode{2030}}
19 \newcommand*\LWR@HTML@textpertenthousand}{\HTMLUnicode{2031}}
20 \newcommand*\LWR@HTML@textbaht}{\HTMLUnicode{0E3F}}
21 \newcommand*\LWR@HTML@textdiscount}{\%}
22 \newcommand*\LWR@HTML@textservicemark}{\HTMLUnicode{2120}}
23 \else

```

### § 404.3.2 X<sub>Y</sub>LaTeX and LuaLaTeX symbols

NOTE: Some of the following do not print well in the listing. Consult the .dtx or .sty file for the actual characters.

```

24 \newcommand*\LWR@HTML@textdegree}{°}
25 \newcommand*\LWR@HTML@textcelsius}{°C}
26 \newcommand*\LWR@HTML@textohm}{Ω}
27 \newcommand*\LWR@HTML@textmu}{μ}
28 \newcommand*\LWR@HTML@textlquill}{⌘}
29 \newcommand*\LWR@HTML@textrquill}{⌘}
30 \newcommand*\LWR@HTML@textcircledP}{Ⓟ}
31 \newcommand*\LWR@HTML@texttwelveudash}{--}% emdash
32 \newcommand*\LWR@HTML@textthreequartersemdash}{--}% emdash
33 \newcommand*\LWR@HTML@textmho}{℧}
34 \newcommand*\LWR@HTML@textnaira}{₦}
35 \newcommand*\LWR@HTML@textpeso}{₱}
36 \newcommand*\LWR@HTML@textrecipe}{℞}
37 \newcommand*\LWR@HTML@textinterrobangdown}{‽}
38 \newcommand*\LWR@HTML@textperthousand}{‰}
39 \newcommand*\LWR@HTML@textpertenthousand}{‰.}
40 \newcommand*\LWR@HTML@textbaht}{฿}
41 \newcommand*\LWR@HTML@textdiscount}{\%}
42 \newcommand*\LWR@HTML@textservicemark}{℠}
43 \fi
44
45 \LWR@formatted{textdegree}
46 \LWR@formatted{textcelsius}
47 \LWR@formatted{textohm}
48 \LWR@formatted{textmu}
49 \LWR@formatted{textlquill}
50 \LWR@formatted{textrquill}
51 \LWR@formatted{textcircledP}
52 \LWR@formatted{texttwelveudash}

```

```

53 \LWR@formatted{textthreequartersemdash}
54 \LWR@formatted{textmho}
55 \LWR@formatted{textnaira}
56 \LWR@formatted{textpeso}
57 \LWR@formatted{textrecipe}
58 \LWR@formatted{textinterrobangdown}
59 \LWR@formatted{textperthousand}
60 \LWR@formatted{textpertenthousand}
61 \LWR@formatted{textbaht}
62 \LWR@formatted{textdiscount}
63 \LWR@formatted{textservicemark}

```

#### § 404.4 HTML diacritics

For HTML, Unicode diacritical marks are used:

```

64 \newcommand*\LWR@HTML@capitalcedilla}[1]{#1\HTMLUnicode{0327}}
65 \newcommand*\LWR@HTML@capitalogonek}[1]{#1\HTMLUnicode{0328}}
66 \newcommand*\LWR@HTML@capitalgrave}[1]{#1\HTMLUnicode{0300}}
67 \newcommand*\LWR@HTML@capitalacute}[1]{#1\HTMLUnicode{0301}}
68 \newcommand*\LWR@HTML@capitalcircumflex}[1]{#1\HTMLUnicode{0302}}
69 \newcommand*\LWR@HTML@capitaltilde}[1]{#1\HTMLUnicode{0303}}
70 \newcommand*\LWR@HTML@capitaldieresis}[1]{#1\HTMLUnicode{0308}}
71 \newcommand*\LWR@HTML@capitalhungarumlaut}[1]{#1\HTMLUnicode{30B}}
72 \newcommand*\LWR@HTML@capitalring}[1]{#1\HTMLUnicode{30A}}
73 \newcommand*\LWR@HTML@capitalcaron}[1]{#1\HTMLUnicode{30C}}
74 \newcommand*\LWR@HTML@capitalbreve}[1]{#1\HTMLUnicode{306}}
75 \newcommand*\LWR@HTML@capitalmacron}[1]{#1\HTMLUnicode{304}}
76 \newcommand*\LWR@HTML@capitaldotaccent}[1]{#1\HTMLUnicode{307}}

```

`\textcircled` becomes a span with a rounded border. `\providecommand` is used to avoid conflict with xunicode.

```

77 \providecommand*\LWR@HTML@textcircled}[1]{%
78 \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
79 }
80
81 \LWR@formatted{capitalcedilla}
82 \LWR@formatted{capitalogonek}
83 \LWR@formatted{capitalgrave}
84 \LWR@formatted{capitalacute}
85 \LWR@formatted{capitalcircumflex}
86 \LWR@formatted{capitaltilde}
87 \LWR@formatted{capitaldieresis}
88 \LWR@formatted{capitalhungarumlaut}
89 \LWR@formatted{capitalring}
90 \LWR@formatted{capitalcaron}
91 \LWR@formatted{capitalbreve}
92 \LWR@formatted{capitalmacron}

```

---

```

93 \LWR@formatted{capitaldotaccent}
94 \LWR@formatted{textcircled}
95
96 }% AtBeginDocument

```

---

File 309 **lwarp-textfit.sty**

§ 405 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}

2 \newsavebox{\LWR@textfitbox}
3
4 \newcommand*\LWR@textfitscale}[2]{%
5 \setlength{\LWR@templengthone}{#1}%
6 \setlength{\LWR@templengthone}{%
7 1em*\ratio{\LWR@templengthone}{\LWR@templengthtwo}}%
8 }%
9 \InlineClass[font-size:\LWR@printlength{\LWR@templengthone}]{textfit}{#2}%
10 }
11
12 \newcommand*\scaletowidth}[2]{%
13 \sbox{\LWR@textfitbox}{#2}%
14 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
15 \LWR@textfitscale{#1}{#2}%
16 }
17
18 \newcommand*\scaletohight}[2]{%
19 \sbox{\LWR@textfitbox}{#2}%
20 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
21 \LWR@textfitscale{#1}{#2}%
22 }

```

---

File 310 **lwarp-textpos.sty**

§ 406 Package **textpos**

*(Emulates or patches code by NORMAN GRAY.)*

Pkg `textpos` `textpos` is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{textpos}

2 \NewDocumentEnvironment{textblock}{m 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]{}

```

---

File 311 `lwarp-theorem.sty`

§ 407 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}

```

## § 407.1 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@thisthmstyle{\@nameuse{\LWR@thmstyle#1}}}% lwarp
31 }}
32
33 \gdef\ynthm#1#2{%
34 \expandafter\@ifdefinable\csname #1\endcsname
35 {
36 \csedef{\LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
37 \@definecounter{#1}%
38 \expandafter\xdef\csname the#1\endcsname{\@thmcounter{#1}}%
39 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
```

```

40 \expandafter{\csname th@the \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@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
44 }}
45
46 \gdef\@othm#1[#2]#3{%
47 \expandafter\ifx\csname c@#2\endcsname\relax
48 \@nocounterr{#2}%
49 \else
50 \expandafter\@ifdefinable\csname #1\endcsname
51 {
52 \csedef{LWR@thmstyle#1}{LWR@newtheoremstyle}% lwarp
53 \expandafter \xdef \csname the#1\endcsname
54 {\expandafter \noexpand \csname the#2\endcsname}%
55 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
56 \expandafter{\csname th@the \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@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
60 }%
61 \fi}

```

## § 407.2 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 312 **lwarp-thinsp.sty**

§ 408 Package **thinsp**

Pkg thinsp thinsp is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{thinsp}

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 313 **lwarp-threadcol.sty**

§ 409 Package **threadcol**

Pkg **threadcol** threadcol is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{threadcol}

```
2 \newcommand{\setthreadname}[1]{}

```

---

File 314 **lwarp-threeparttable.sty**

§ 410 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}

\LWR@printtablenote {<text>}

Prints the table note item header inside a CSS class of tnoteitemheader.

```
2 \newcommand{\LWR@printtablenote}[1]{\InlineClass{tnoteitemheader}{#1}}

```

Env **threeparttable** [*<alignment>*] To emulate threeparttable:

```
3 \newenvironment*{threeparttable}[1][b]{}{}

```

Env **tablenotes** [*<options>*]

```
4 \newenvironment*{tablenotes}[1][
5 {%
6 \LWR@forcenewpage
7 \BlockClass{tnotes}%
8 \ltx@ifpackageloaded{enumitem}{%
```

```

9 \setlist[description]{format=\LWR@printtablenote}%
10 }{}%
11 \description%
12 }
13 {%
14 \enddescription%
15 \endBlockClass%
16 }

```

`\tnote` `{\text}`

```
17 \newcommand{\tnote}[1]{\LWR@htmlspan{sup}{#1}}
```

---

File 315 **lwarp-thumb.sty**

§ 411 Package **thumb**

Pkg thumb thumb is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{thumb}

2 \newcommand*\Overviewpage{}
3 \newlength{\thumbheight}
4 \newlength{\thumbwidth}

```

---

File 316 **lwarp-thumbs.sty**

§ 412 Package **thumbs**

Pkg thumbs thumbs is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{thumbs}

2 \newcommand{\addthumb}[4]{}
3 \newcommand{\addtitlethumb}[5]{}
4 \newcommand{\stophthumb}{}
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 317 **lwarp-tikz.sty**

§ 413 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}%
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 318 **lwarp-titles.sty**

§ 414 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}

\pagestyle and \thispagestyle are already disabled in the lwarp code.

\newpagestyle {\langle name \rangle} [\langle style \rangle] {\langle commands \rangle}

2 \NewDocumentCommand{\newpagestyle}{m o m}{}

---

|                              |                                                                                                                                              |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <code>\renewpagestyle</code> | <code>{&lt;name&gt;} [&lt;style&gt;] {&lt;commands&gt;}</code><br>3 \NewDocumentCommand{\renewpagestyle}{m o m}{}                            |
| <code>\sethead</code>        | <code>[&lt;el&gt;] [&lt;ec&gt;] [&lt;er&gt;] {&lt;ol&gt;} {&lt;oc&gt;} {&lt;or&gt;}</code><br>4 \NewDocumentCommand{\sethead}{o o o m m m}{} |
| <code>\setfoot</code>        | <code>[&lt;el&gt;] [&lt;ec&gt;] [&lt;er&gt;] {&lt;ol&gt;} {&lt;oc&gt;} {&lt;or&gt;}</code><br>5 \NewDocumentCommand{\setfoot}{o o o m m m}{} |
| <code>\settitlemarks</code>  | <code>*{&lt;names&gt;}</code><br>6 \NewDocumentCommand{\settitlemarks}{s m}{}                                                                |
| <code>\headrule</code>       | 7 \newcommand*{\headrule}{}                                                                                                                  |
| <code>\footrule</code>       | 8 \newcommand*{\footrule}{}                                                                                                                  |
| <code>\setheadrule</code>    | <code>{&lt;length&gt;}</code><br>9 \newcommand*{\setheadrule}[1]{}                                                                           |
| <code>\setfootrule</code>    | <code>{&lt;length&gt;}</code><br>10 \newcommand*{\setfootrule}[1]{}                                                                          |
| <code>\makeheadrule</code>   | 11 \newcommand*{\makeheadrule}{}                                                                                                             |
| <code>\makefootrule</code>   | 12 \newcommand*{\makefootrule}{}                                                                                                             |
| <code>\setmarkboth</code>    | <code>{&lt;code&gt;}</code><br>13 \newcommand{\setmarkboth}[1]{}                                                                             |
| <code>\widenhead</code>      | 14 \NewDocumentCommand{\widenhead}{s o o m m}{}                                                                                              |

---

```

\bottommarks
15 \newcommand*\bottommarks{}

\topmarks
16 \newcommand*\topmarks{}

\firstmarks
17 \newcommand*\firstmarks{}

\nextmarks
18 \newcommand*\nexttopmarks{}

\outertmarks
19 \newcommand*\outertmarks{}

\innertmarks
20 \newcommand*\innertmarks{}

\newtitlemark * {<name>}
21 \NewDocumentCommand{\newtitlemark}{s m}{}

\pretitmark * {<section>} {<text>}
22 \NewDocumentCommand{\pretitmark}{s m m}{}

\ifsamemark {<group>} {<command>} {<true>} {<false>}
23 \newcommand\ifsamemark[4]{}

\setfloathead * [.] [.] [.] {<.>} {<.>} {<.>} {<extra>} [which]
24 \NewDocumentCommand{\setfloathead}{s o o o m m m m}{}

\setfloatfoot * [.] [.] [.] {<.>} {<.>} {<.>} {<extra>} [which]
25 \NewDocumentCommand{\setfloatfoot}{s o o o m m m m}{}

\nextfloathead * [.] [.] [.] {<.>} {<.>} {<.>} {<extra>} [which]

```

---

```

26 \NewDocumentCommand{\nextfloathead}{s o o o m m m m m}{-}

\nextfloatfoot * [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]
27 \NewDocumentCommand{\nextfloatfoot}{s o o o m m m m m}{-}

\nemarkset {⟨markset⟩}
28 \newcommand{\newmarkset}[1]{-}

\nextramark * {⟨markset⟩} {⟨macro-name⟩}
29 \NewDocumentCommand{\newextramarkset}{s m m}{-}

\botextramarks {⟨markset⟩}
30 \newcommand{\botextramarks}[1]{-}

\topextramarks {⟨markset⟩}
31 \newcommand{\topextramarks}[1]{-}

\firstextramarks {⟨markset⟩}
32 \newcommand{\firstextramarks}[1]{-}

\nextextramarks {⟨markset⟩}
33 \newcommand{\nexttopextramarks}[1]{-}

\outerextramarks {⟨markset⟩}
34 \newcommand{\outerextramarks}[1]{-}

\innerextramarks {⟨markset⟩}
35 \newcommand{\innerextramarks}[1]{-}

```

---

File 319 **lwarp-titleref.sty**

§ 415 Package **titleref**

Pkg titleref titleref is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{titleref}

---

```

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 320 **lwarp-titlesec.sty**

§ 416 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}

```

\titlelabel {\langle label-format \rangle}
2 \newcommand*{\titlelabel}[1]{}
```

```

\titleformat* {\langle command \rangle} {\langle format \rangle}
```

```

\titleformat {\langle command \rangle} [\langle shape \rangle] {\langle format \rangle} {\langle label \rangle} {\langle sep \rangle} {\langle before \rangle} [\langle after \rangle]
3 \newcommand\titleformat{%
4 \ifstar{\ttl@format@s}%
5 {\ttl@format@i}
6 \newcommand{\ttl@format@s}[1]{}
7 \NewDocumentCommand{\ttl@format@i}{m o m m m o}{}
```

\chaptertitlename

```

8 \ifundefined{@chapapp}{\let\@chapapp\chaptername}{}
9 \newcommand\chaptertitlename{\@chapapp}
```

```

\titlespacing * {\langle command \rangle} {\langle left \rangle} {\langle before \rangle} {\langle after \rangle} [\langle right \rangle]
```

---

```
10 \NewDocumentCommand{\titlespacing}{s m m m o}{}

```

```
\filright

```

```
11 \newcommand*{\filright}{}

```

```
\filcenter

```

```
12 \newcommand*{\filcenter}{}

```

```
\filleft

```

```
13 \newcommand*{\filleft}{}

```

```
\fillast

```

```
14 \newcommand*{\fillast}{}

```

```
\filinner

```

```
15 \newcommand*{\filinner}{}

```

```
\filouter

```

```
16 \newcommand*{\filouter}{}

```

```
\wordsep

```

```
17 \newcommand\wordsep{\fontdimen\tw@\font \@plus
18 \fontdimen\thr@\font \@minus \fontdimen4\font}

```

```
\titleline * [align] {material}

```

```
19 \NewDocumentCommand{\titleline}{s o m}{}

```

```
\titlerule [height]

```

```
20 \providecommand*\titlerule{\@ifstar{\ttl@row}{\ttl@rule}}

```

```
21 \newcommand*{\ttl@rule}[1] [] {}

```

```
22 \newcommand*{\ttl@row}[2] [] {}

```

```
\iftitlemeasuring {true} {false}

```

```
23 \newcommand{\iftitlemeasuring}[2] {#2}

```

```
\assignpagestyle {command} {pagestyle}

```

---

```
24 \newcommand{\assignpagestyle}[2]{#2}
```

```
\titleclass {<name>} [<startlevel>] {<class>} [<cmd>]
```

```
25 \NewDocumentCommand{\titleclass}{m o m o}
```

---

File 321 **lwarp-titletoc.sty**

§ 417 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}

```
\dottedcontents {<section>} [<left>] {<above>} {<label>} {<leader>}
```

```
2 \NewDocumentCommand{\dottedcontents}{m o m m m}{}
```

```
\titlecontents * {<section>} [<left>] {<above>} {<numbered>} {<numberless>} {<filler>} [<below
or begin>] [<separator>] [<end>]
```

```
3 \newcommand{\titlecontents}{\ifstar{\ttl@tcstar}{\ttl@tcnostar}}
```

```
4 \NewDocumentCommand{\ttl@tcstar}{m o m m m o o}{}{}
```

```
5 \NewDocumentCommand{\ttl@tcnostar}{m o m m m m o}{}{}
```

```
\contentsmargin [<correction>] {<right>}
```

```
6 \newcommand{\contentsmargin}[2] [] {}
```

```
\thecontentslabel
```

```
7 \newcommand*{\thecontentslabel}{thecontentslabel}
```

```
\thecontentspage
```

```
8 \newcommand*{\thecontentspage}{thecontentspage}
```

```
\contentslabel [<format>] {<space>}
```

```
9 \newcommand{\contentslabel}[2] [] {\thecontentslabel}
```

---

|                              |                                                        |
|------------------------------|--------------------------------------------------------|
| <code>\contentspage</code>   | <code>[\format]</code>                                 |
|                              | 10 \newcommand{\contentspage}[1] [] {\thecontentspage} |
| <code>\contentspush</code>   | <code>{\text}</code>                                   |
|                              | 11 \newcommand{\contentspush}[1] {}                    |
| <code>\contentsuse</code>    | <code>{\name} {\text}</code>                           |
|                              | 12 \newcommand{\contentsuse}[2] {}                     |
| <code>\startcontents</code>  | <code>[\name]</code>                                   |
|                              | 13 \newcommand*\startcontents[1] [] {}                 |
| <code>\stopcontents</code>   | <code>[\name]</code>                                   |
|                              | 14 \newcommand*\stopcontents[1] [] {}                  |
| <code>\resumecontents</code> | <code>[\name]</code>                                   |
|                              | 15 \newcommand*\resumecontents[1] [] {}                |
| <code>\printcontents</code>  | <code>[\name] {\prefix} {\start} {\code}</code>        |
|                              | 16 \newcommand{\printcontents}[4] [] {}                |
| <code>\startlist</code>      | <code>[\name] {\list}</code>                           |
|                              | 17 \newcommand{\startlist}[2] [] {}                    |
| <code>\stoplist</code>       | <code>[\name] {\list}</code>                           |
|                              | 18 \newcommand{\stoplist}[2] [] {}                     |
| <code>\resumelist</code>     | <code>[\name] {\list}</code>                           |
|                              | 19 \newcommand{\resumelist}[2] [] {}                   |
| <code>\printlist</code>      | <code>[\name] {\list} {\prefix} {\code}</code>         |
|                              | 20 \newcommand{\printlist}[4] [] {}                    |

---

File 322 **lwarp-titling.sty**

§ 418 Package **titling**

*(Emulates or patches code by PETER WILSON.)*

Pkg **titling**

**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 65.8.

The various titling footnote restyling commands have no effect.

Pass all options to **lwarp-titling**:

**for HTML output:** `1 \LWR@ProvidesPackagePass{titling}`

**\@bsmtitleempty** Patch **\@bsmtitleempty**:

```
2 \let\LWR@orig@bsmtitleempty\@bsmtitleempty
3 \renewcommand*\@bsmtitleempty}{%
4 \LWR@orig@bsmtitleempty%
5 }
```

**\keepthetitle** Patch **\keepthetitle**:

```
6 \let\LWR@orig@keepthetitle\keepthetitle
7 \renewcommand*\keepthetitle}{%
8 \LWR@orig@keepthetitle%
9 }
```

**\killtitle** Patch **\killtitle**:

```
10 \let\LWR@orig@killtitle\killtitle
11 \renewcommand*\killtitle}{%
12 \LWR@orig@killtitle%
13 }
```

Env **titlingpage**

```
14 \renewenvironment*{titlingpage}
15 {%
```

Start an HTML titlepage div:

```
16 \LWR@printpendingfootnotes
17 \begin{titlepage}
```

Prepare for a custom version of `\maketitle` inside the `titlingpage`:

```
18 \LWR@maketitlesetup
19 \let\maketitle\LWR@titlingmaketitle
20 }
21 {
```

At the end of the environment, end the HTML titlepage div:

```
22 \end{titlepage}
23 }
```

Patch the pre/post title/author/date to add HTML tags, then initialize:

```
24
25 \pretitle{}
26 \posttitle{}
27
28 \preauthor{}
29 \postauthor{}
30
31 \predate{}
32 \postdate{}
```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```
33 \renewcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```
34 \def\@makefnmark{\@thefnmark}
```

```
\thefootnote ⇒ \nameuse{arabic}{footnote}, or
\thefootnote ⇒ \nameuse{fnsymbol}{footnote}
```

Redefine the footnote text:

```
35 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
36 \makethanksmark~%
```

```
\makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
\@thefnmark ⇒ \itshape a (or similar)
```

Print the text:

```
37 ##1%
38 }% \@makefnmark
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 \@thanks
```

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 \@bspostfix%
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 \@bsprefixauthor \@author \@bspostauthor%
72 \end{BlockClass}%
73 \end{BlockClass}%
74 }
75 \maketitlehookc
76 {
77 \begin{BlockClass}{titledate}%
78 \@bsprefixdate \@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 \@thanks
```

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 \@thanks
```

Reset the footnote counter:

```
89 \@bscontmark
90 }
```

```
\thanksmarkseries {<series>}
```

Sets the type of footnote marks used by \@thanks, where type is ‘arabic’, ‘roman’, ‘fnsymbol’, etc.

```
91 \renewcommand{\thanksmarkseries}[1]{%
92 \def\@bsmarkseries{\renewcommand{\thefootnote}{\@nameuse{#1}{footnote}}}%
93 }
```

Set default titlepage thanks footnote marks. See section [65.7](#).

```
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 323 **lwarp-tocbasic.sty**

§ 419 Package **tocbasic**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg tocbasic tocbasic is patched for use by 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}`

```

2 \DeclareDocumentCommand{\usetocbasicnumberline}{o}{}
3 \DeclareDocumentCommand{\DeclareTOCStyleEntry}{o m m}{}
4 \DeclareDocumentCommand{\DeclareTOCEntryStyle}{m o m}{}
5 \DeclareDocumentCommand{\DefineTOCEntryOption}{m o m}{}
6 \DeclareDocumentCommand{\DefineTOCEntryBooleanOption}{m o m m}{}
7 \DeclareDocumentCommand{\DefineTOCEntryCommandOption}{m o m m}{}
8 \DeclareDocumentCommand{\DefineTOCEntryIfOption}{m o m m}{}
9 \DeclareDocumentCommand{\DefineTOCEntryLengthOption}{m o m m}{}
10 \DeclareDocumentCommand{\DefineTOCEntryNumberOption}{m o m m}{}
11 \DeclareDocumentCommand{\CloneTOCEntryStyle}{m m}{}
12 \DeclareDocumentCommand{\TOCEntryStyleInitCode}{m m}{}
13 \DeclareDocumentCommand{\TOCEntryStyleStartInitCode}{m m}{}

```

---

File 324 **lwarp-tocbibind.sty**

§ 420 Package **tocbibind**

*(Emulates or patches code by PETER WILSON.)*

Pkg tocbibind tocbibind is patched for use by lwarp.

[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 TOC entry:**

```

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

```

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

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

```

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

```

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

```

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

```

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

[numbered index section](#)

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

**for HTML output:**

```

1 \let\simplechapterdelim\relax
2
3 \LWR@ProvidesPackagePass{tocbibind}

4 \renewenvironment{theindex}%
5 {%
6 \if@bibchapter
7 \if@donumindex
8 \chapter{\indexname}
9 \else

```

```

10 \if@dotocind
11 \chapter*{\indexname}
12 \addcontentsline{toc}{chapter}{\LWR@isolate{\indexname}}
13 \else
14 \chapter*{\indexname}
15 \fi
16 \fi
17 \else
18 \if@donumindex
19 \section{\indexname}
20 \else
21 \if@dotocind
22 \section*{\indexname}
23 \addcontentsline{toc}{\@tocextra}{\LWR@isolate{\indexname}}
24 \else
25 \section*{\indexname}
26 \fi
27 \fi
28 \fi
29 \let\item\LWR@indexitem%
30 \let\subitem\LWR@indexsubitem%
31 \let\subsubitem\LWR@indexsubsubitem%
32 }{}

```

The following code is shared by anonchap.

```

33 \DeclareDocumentCommand{\simplechapter}{0{\@empty}}{0}{%
34 \def\@chapcntformat##1{%
35 #1~\csname the##1\endcsname\simplechapterterdelim\quad%
36 }%
37 }
38
39 \DeclareDocumentCommand{\restorechapter}{0}{%
40 \let\@chapcntformat\@seccntformat%
41 }

```

---

File 325 **lwarp-tocenter.sty**

§ 421 Package **tocenter**

Pkg tocenter tocenter is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{tocenter}

2 \NewDocumentCommand{\ToCenter}{s o m m}{-}
3 \NewDocumentCommand{\FromMargins}{s o m m m}{-}

```

---

File 326 **lwarp-tocloft.sty**

§ 422 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.

Discard all options for lwarp-tocloft:

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{tocloft}`

`\tocloftpagestyle` `{\style}`  
2 `\newcommand{\tocloftpagestyle}[1]{}{}`

`\cftmarktoc`  
3 `\newcommand*{\cftmarktoc}{}{}`

`\cfttoctitlefont`  
4 `\newcommand*{\cfttoctitlefont}{}{}`

`\cftaftertocitle`  
5 `\newcommand*{\cftaftertocitle}{}{}`

6 `\newlength{\cftbeforetoctitleskip}`  
7 `\newlength{\cftaftertocitleskip}`

`\cftmarklof`  
8 `\newcommand*{\cftmarklof}{}{}`

`\cftloftitlefont`

 **tocloft & other packages**

---

```
9 \newcommand*\cftlofttitlefont{}

\cftafterlofttitle
10 \newcommand*\cftafterlofttitle{}

11 \newlength{\cftbeforelofttitleskip}
12 \newlength{\cftafterlofttitleskip}

\cftmarklot
13 \newcommand*\cftmarklot{}

\cftlottitlefont
14 \newcommand*\cftlottitlefont{}

\cftafterlottitle
15 \newcommand*\cftafterlottitle{}

16 \newlength{\cftbeforelottitleskip}
17 \newlength{\cftafterlottitleskip}

\cftdot
18 \providecommand*\cftdot}{.}

\cftdotsep
19 \providecommand*\cftdotsep}{1}

\cftnodots
20 \providecommand*\cftnodots}{5000}

\cftdotfill {<sep>}
21 \providecommand{\cftdotfill}[1]{

\cftsetpnumwidth {<length>}
22 \DeclareDocumentCommand{\cftsetpnumwidth}{m}{}

\cftsetrmarg {<length>}
```

```
23 \DeclareDocumentCommand{\cftsetrmarg}{m}{}
```

`\cftpnumalign`     $\langle alignment \rangle$

```
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*\cftsubsecftersnum{}
65 \newcommand*\cftsubsecftersnumb{}
66 \newcommand*\cftsubsecleader{}
67 \newcommand*\cftsubsecdotsep{1}
68 \newcommand*\cftsubsecpagefont{}
69 \newcommand*\cftsubsecfterpnum{}

70 \LWR@providelength{\cftbeforesubsubsecskip}
71 \LWR@providelength{\cftsubsubsecindent}
72 \LWR@providelength{\cftsubsubsecnumwidth}
73 \newcommand*\cftsubsubsecfont{}
74 \newcommand*\cftsubsubsecpresnum{}
75 \newcommand*\cftsubsubsecftersnum{}
76 \newcommand*\cftsubsubsecftersnumb{}
77 \newcommand*\cftsubsubsecleader{}
78 \newcommand*\cftsubsubsecdotsep{1}
79 \newcommand*\cftsubsubsecpagefont{}
80 \newcommand*\cftsubsubsecfterpnum{}

81 \LWR@providelength{\cftbeforeparaskip}
82 \LWR@providelength{\cftparaindent}
83 \LWR@providelength{\cftparanumwidth}
84 \newcommand*\cftparafont{}
85 \newcommand*\cftparapresnum{}
86 \newcommand*\cftparaftersnum{}
87 \newcommand*\cftparaftersnumb{}
88 \newcommand*\cftparaleader{}
89 \newcommand*\cftparadotsep{1}
90 \newcommand*\cftparapagefont{}
91 \newcommand*\cftparafterpnum{}

92 \LWR@providelength{\cftbeforesubparaskip}
93 \LWR@providelength{\cftsubparaindent}
94 \LWR@providelength{\cftsubparanumwidth}
95 \newcommand*\cftsubparafont{}
96 \newcommand*\cftsubparapresnum{}
97 \newcommand*\cftsubparaftersnum{}
98 \newcommand*\cftsubparaftersnumb{}
99 \newcommand*\cftsubparaleader{}
100 \newcommand*\cftsubparadotsep{1}
101 \newcommand*\cftsubparapagefont{}
102 \newcommand*\cftsubparafterpnum{}

103 \LWR@providelength{\cftbeforefigskip}
```

```
104 \LWR@providelength{\cftfigindent}
105 \LWR@providelength{\cftfignumwidth}
106 \newcommand*\cftfigfont{}
107 \newcommand*\cftfigpresnum{}
108 \newcommand*\cftfigaftersnum{}
109 \newcommand*\cftfigaftersnumb{}
110 \newcommand*\cftfigleader{}
111 \newcommand*\cftfigdotsep{1}
112 \newcommand*\cftfigpagefont{}
113 \newcommand*\cftfigafterpnum{}

114 \LWR@providelength{\cftbeforesubfigskip}
115 \LWR@providelength{\cftsubfigindent}
116 \LWR@providelength{\cftsubfignumwidth}
117 \newcommand*\cftsubfigfont{}
118 \newcommand*\cftsubfigpresnum{}
119 \newcommand*\cftsubfigaftersnum{}
120 \newcommand*\cftsubfigaftersnumb{}
121 \newcommand*\cftsubfigleader{}
122 \newcommand*\cftsubfigdotsep{1}
123 \newcommand*\cftsubfigpagefont{}
124 \newcommand*\cftsubfigafterpnum{}

125 \LWR@providelength{\cftbeforetabskip}
126 \LWR@providelength{\cfttabindent}
127 \LWR@providelength{\cfttabnumwidth}
128 \newcommand*\cfttabfont{}
129 \newcommand*\cfttabpresnum{}
130 \newcommand*\cfttabaftersnum{}
131 \newcommand*\cfttabaftersnumb{}
132 \newcommand*\cfttableader{}
133 \newcommand*\cfttabdotsep{1}
134 \newcommand*\cfttabpagefont{}
135 \newcommand*\cfttabafterpnum{}

136 \LWR@providelength{\cftbeforesubtabskip}
137 \LWR@providelength{\cftsubtabindent}
138 \LWR@providelength{\cftsubtabnumwidth}
139 \newcommand*\cftsubtabfont{}
140 \newcommand*\cftsubtabpresnum{}
141 \newcommand*\cftsubtabaftersnum{}
142 \newcommand*\cftsubtabaftersnumb{}
143 \newcommand*\cftsubtableader{}
144 \newcommand*\cftsubtabdotsep{1}
145 \newcommand*\cftsubtabpagefont{}
146 \newcommand*\cftsubtabafterpnum{}

147 \DeclareDocumentCommand{\cftsetindents}{m m m}{}

```

```
148 \newcommand{\pagenumbersoff}[1]{%
149 \newcommand{\pagenumberson}[1]{%
```

`\newlistentry` [*within*] {*counter*} {*ext*} {*level-1*}

```
150 \DeclareDocumentCommand{\newlistentry}{o m m m}
151 {%
152 \LWR@traceinfo{newlistentry #2 #3 #4}%
153 \IfValueTF{#1}%
154 {%
155 \@ifundefined{c@#2}{%
156 \newcounter{#2}[#1]%
157 \expandafter\edef\csname the#2\endcsname{%
158 \expandafter\noexpand\csname the#1\endcsname.\noexpand\arabic{#2}%
159 }%
160 }{}%
161 }%
162 {%
163 \@ifundefined{c@#2}{%
164 \newcounter{#2}%
165 }{}%
166 }%
167 \@namedef{l@#2}##1##2{%
168 \hypertocfloat{1}{#2}{#3}{##1}{##2}%
169 \def\cftwhatismyname{#2}% from memoir
170 }%
171 \expandafter\newlength\csname cftbefore#2skip\endcsname%
172 \expandafter\newlength\csname cft#2indent\endcsname%
173 \expandafter\newlength\csname cft#2numwidth\endcsname%
174 \@namedef{cft#2font}{}%
175 \@namedef{cft#2presnum}{}%
176 \@namedef{cft#2aftersnum}{}%
177 \@namedef{cft#2aftersnumb}{}%
178 \@namedef{cft#2leader}{}%
179 \@namedef{cft#2dotsep}{1}%
180 \@namedef{cft#2pagefont}{}%
181 \@namedef{cft#2afterpnum}{}%
182 \@namedef{toclevel@#2}{#4}%
183 \@namedef{cft#2fillnum}##1{}%
184 \LWR@traceinfo{newlistentry done}%
185 }
```

`\newlistof` [*within*] {*type*} {*ext*} {*listofname*}

Emulated through the `\newfloat` mechanism.

```
186 \DeclareDocumentCommand{\newlistof}{o m m m}
187 {%
188 \IfValueTF{#1}
```

```

189 {\newlistentry[#1]{#2}{#3}{0}}
190 {\newlistentry{#2}{#3}{0}}
191 \@namedef{ext@#2}{#3}
192 \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}
193 \setcounter{#3depth}{1}
194 \@namedef{cftmark#3}{}
195 \@namedef{listof#2}{\listof{#2}{#4}}
196 \@namedef{@cftmake#3title}{}
197 \expandafter\newlength\csname cftbefore#3titleskip\endcsname
198 \expandafter\newlength\csname cftafter#3titleskip\endcsname
199 \@namedef{cft#3titlefont}{}
200 \@namedef{cftafter#3title}{}
201 \@namedef{cft#3prehook}{}
202 \@namedef{cft#3posthook}{}
203 }

```

`\cftchapterprecis`  $\langle text \rangle$

```

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 327 `lwarp-tocstyle.sty`

§ 423 Package **tocstyle**

Pkg `tocstyle` `tocstyle` is ignored.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tocstyle}

```

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 328 **lwarp-todo.sty**

§ 424 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}

2 \renewcommand\todoitem[2]{%
3 \refstepcounter{todo}%
4 \item[%
5 \HTMLUnicode{2610} \quad
6 \ref{todopage:\thetodo}
7] : {\todoformat\ifx#1\todotmark\else\textbf{#1} \fi}#2%
8 \label{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\todotmark\else\textbf{#1} \fi}#2%
18 }
19
20 \xpatchcmd{\@displaytodo}
21 {\todoformat #1}{\todoformat \textbf{#1}}{}
22 {\PackageWarning{lwarp-todo}{Unable to patch @displaytodo.}}
23
24 \xpatchcmd{\@displayfulltodo}
25 {\todoformat #1}{\todoformat \textbf{#1}}{}
26 {\PackageWarning{lwarp-todo}{Unable to patch @displayfulltodo.}}
27
28 \patchcmd{\todoenv}{\itshape see text.}{\textit{see text.}}{}
29 {\PackageWarning{lwarp-todo}{Unable to patch todoenv.}}
30
31 \patchcmd{\astodos}{\todoformat #1}{\todoformat \textbf{#1}}{}
32 {\PackageWarning{lwarp-todo}{Unable to patch astodos.}}
33
34 \AtBeginDocument{
35 \crefname{todo}{todo}{todos}

```

---

```
36 \Crefname{todo}{Todo}{Todos}
37 }
```

---

File 329 **lwarp-todonotes.sty**

§ 425 Package **todonotes**

*(Emulates or patches code by HENRIK SKOV MIDTIBY.)*

Pkg todonotes todonotes is emulated.

The documentation for todonotes and luatodonotes have an example with a todo inside a caption. If this example does not work it will be necessary to move the todo outside of the caption.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{todonotes}

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@todototoc\todototoc
9
10 \renewcommand*{\todototoc}{%
11 \phantomsection%
12 \LWRTODONOTES@orig@todototoc%
13 }
14
15 \renewcommand{\@todonotes@drawMarginNoteWithLine}{
16 \fcolorbox
17 {\@todonotes@currentbordercolor}
18 {\@todonotes@currentbackgroundcolor}
19 {\arabic{\@todonotes@numberoftodonotes}}
20 \marginpar{\@todonotes@drawMarginNote}
21 }
22
23 \renewcommand{\@todonotes@drawInlineNote}{%
24 \fcolorboxBlock%
25 {\@todonotes@currentbordercolor}%
26 {\@todonotes@currentbackgroundcolor}%
27 {%
28 \if@todonotes@authorgiven%
29 {\@todonotes@author:\,}%
```

```

30 \fi%
31 \@todonotes@text%
32 }%
33 }
34
35 \renewcommand{\@todonotes@drawMarginNote}{%
36 \if@todonotes@authorgiven%
37 \@todonotes@author\par%
38 \fi%
39 \arabic{\@todonotes@numberoftodonotes}: %
40 \fcolorbox%
41 {\@todonotes@currentbordercolor}%
42 {\@todonotes@currentbackgroundcolor}%
43 {%
44 \@todonotes@sizecommand%
45 \@todonotes@text %
46 }%
47 }%
48
49 \renewcommand{\@todonotes@drawLineToRightMargin}{}
50
51 \renewcommand{\@todonotes@drawLineToLeftMargin}{}
52
53 \renewcommand{\missingfigure}[2] []{%
54 \setkeys{todonotes}{#1}%
55 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
56 \fcolorboxBlock%
57 {\@todonotes@currentbordercolor}%
58 {\@todonotes@currentfigcolor}%
59 {%
60 \setlength{\fboxrule}{4pt}%
61 \fcolorbox{red}{white}{Missing figure} \quad #2%
62 }
63 }
64
65 \LetLtxMacro\LWRTODONOTES@orig@todo\@todo
66
67 \RenewDocumentCommand{\@todo}{o m}{%
68 \begingroup%
69 \renewcommand*\phantomsection{}%
70 \IfValueTF{#1}{%
71 \LWRTODONOTES@orig@todo[#1]{#2}%
72 }{%
73 \LWRTODONOTES@orig@todo{#2}%
74 }
75 \endgroup%
76 }
77
78 \fi% \if@todonotes@disabled

```

---

File 330 **lwarp-tram.sty**

§ 426 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}

2 \newenvironment{tram}[1] []%
3 {\BlockClass[background:lightgray]{tram}}
4 {\endBlockClass}
```

---

File 331 **lwarp-transparent.sty**

§ 427 Package **transparent**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg `transparent` 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}

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 332 **lwarp-trimclip.sty**

§ 428 Package **trimclip**

Pkg trimclip trimclip is nullified.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{trimclip}

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 333 **lwarp-trivfloat.sty**

§ 429 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}
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}
```

#### § 429.1 **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 334 **lwarp-turnthepage.sty**

§ 430 Package **turnthepage**

Pkg `turnthepage` `turnthepage` is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{turnthepage}
2 \newcommand{\turnthepage}{}

```

File 335 **lwarp-twoup.sty**

§ 431 Package **twoup**

Pkg `twoup` `twoup` is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{twoup}[2007/02/26]
2 \newcommand{\cleartolastpage}{}

```

File 336 **lwarp-typearea.sty**

§ 432 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}
2 \DeclareDocumentCommand{\typearea}{o m}{}
3 \DeclareDocumentCommand{\recalctypearea}{}{}
4 \@ifundefined{footheight}{\newlength\footheight}{}
5 \DeclareDocumentCommand{\areaset}{o m m}{}
6 \DeclareDocumentCommand{\activateareas}{}{}

```

---

```

7 \DeclareDocumentCommand{\storeareas}{m}{}
8 \DeclareDocumentCommand{\BeforeRestoreareas}{s m}{}
9 \DeclareDocumentCommand{\AfterRestoreareas}{s m}{}
10 \DeclareDocumentCommand{\AfterCalculatingTypearea}{s m}{}
11 \DeclareDocumentCommand{\AfterSettingArea}{s m}{}

```

---

File 337 **lwarp-ulem.sty**

§ 433 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 338 **lwarp-underscore.sty**

§ 434 Package **underscore**

Pkg **underscore** underscore is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{underscore}

---

File 339 **lwarp-units.sty**

§ 435 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 340 **lwarp-unitsdef.sty**

§ 436 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}

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 341 **lwarp-upref.sty**

§ 437 Package **upref**

Pkg upref Ignored.

**for HTML output:** Discard all options for lwarp-upref:

```
1 \LWR@ProvidesPackageDrop{upref}
```

File 342 **lwarp-url.sty**

§ 438 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}

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 343 **lwarp-ospace.sty**

§ 439 Package **ospace**

Pkg ospace ospace is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ospace}

---

File 344 **lwarp-verse.sty**

§ 440 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}
```

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 `\HTMLvleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

Env `verse` The `verse` environment will be placed inside a HTML `<pre>`.

```

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching verse.}

```

At the beginning of the verse environment:

```

4 \AtBeginEnvironment{verse}
5 {%

```

Use the original list environment inside a <pre> to attempt to preserve formatting.

```

6 \LWR@restoreoriglists%

```

Pkg verse    The verse or memoir packages can place stanza numbers to the left with their  
Cls memoir    \flagverse command. Do not allow them to go into the left margin, which would  
\flagverse    cause *pdfcrop* to crop the entire page further to the left:

```

Len \leftskip 7 \ifdef{\vleftskip}{%
8 \setlength{\vleftskip}{\HTMLvleftskip}
9 \setlength{\leftmargini}{\HTMLleftmargini}
10 }{}
11 \LWR@forcenewpage
12 \LWR@atbeginverbatim{3}{verse}%
13 }

```

After the end of the verse environment, which places the <pre> tag at the regular left margin:

```

14 \AtEndEnvironment{verse}{%
15 \leavevmode%
16 \LWR@afterendverbatim{1}%
17 }

```

Patch to place poemtitle inside an HTML <span> of class poemtitle:

```

18 \ifdef{\poemtitle}{
19 \DeclareDocumentCommand{@vstypeptitle}{m}{%
20 \vspace{\beforepoemtitleskip}%
21 {\InlineClass{poemtitle}{\poemtitlefont #1}\par}%
22 \vspace{\afterpoemtitleskip}%
23 }
24 }{}
25
26 \LWR@traceinfo{Finished patching verse.}
27 }% AfterEndPreamble

```

---

File 345 **lwarp-versednotes.sty**

§ 441 Package **versednotes**

*(Emulates or patches code by NORMAN GRAY.)*

Pkg versednotes versednotes is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{versednotes}

2 \newcommand{\versednote}[1]{\marginpar{#1}}
3 \newdimen\versedtextwidth
4 \newdimen\versedleftmargin
5 \newcommand*{\versedlayout}{}
```

---

File 346 **lwarp-vertbars.sty**

§ 442 Package **vertbars**

*(Emulates or patches code by PETER WILSON.)*

Pkg vertbars vertbars is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{vertbars}

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 347 **lwarp-vmargin.sty**

§ 443 Package **vmargin**

Pkg vmargin vmargin is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{vmargin}

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 348 **lwarp-vowel.sty**

§ 444 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}

2 \renewenvironment{vowel}[1][
3 {%

```

---

```

4 \begin{lateximage}[(-vowel--\packagediagramname)]%
5 \@vowel[#1]%
6 }
7 {%
8 \@@vowel%
9 \end{lateximage}%
10 }
```

---

File 349 **lwarp-vpe.sty**

§ 445 Package **vpe**

Pkg vpe vpe is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18]

---

File 350 **lwarp-vwcol.sty**

§ 446 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}

Factored from \vwcol. Each is given a style tag to append to the final style.

```

\LWR@vwcol@addrule {\langle style tag \rangle}
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 {\langle style tag \rangle}
```

```

8 \newcommand*\LWR@vwcol@addgap}[1]{%
9 \appto{\LWR@vwcolstyle}{%
10 #1: %
11 \LWR@printlength{\vwcol@sep} ; %
12 }%
13 }

```

Env vwcol {<key/values>}

Redefine the environment to add a HTML style. The style is built depending on the required options.

```
14 \renewenvironment*{vwcol}[1][]{%
```

New paragraph, and process the options:

```
15 \par\noindent%
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}{Opt}{
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}{Opt}{
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}{Opt}{
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 }

```

---

File 351 **lwarp-wallpaper.sty**

§ 447 Package **wallpaper**

*(Emulates or patches code by MICHAEL H.F. WILKINSON.)*

Pkg wallpaper wallpaper is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{wallpaper}

---

```

2 \newcommand*\CenterWallPaper}[2]{}
3 \newcommand*\ThisCenterWallPaper}[2]{}
4 \newcommand*\TileWallPaper}[3]{}
5 \newcommand*\ThisTileWallPaper}[3]{}
6 \newcommand*\TileSquareWallPaper}[2]{}
7 \newcommand*\ThisTileSquareWallPaper}[2]{}
8 \newcommand*\ULCornerWallPaper}[2]{}
9 \newcommand*\ThisULCornerWallPaper}[2]{}
10 \newcommand*\LLCornerWallPaper}[2]{}
11 \newcommand*\ThisLLCornerWallPaper}[2]{}
12 \newcommand*\URCornerWallPaper}[2]{}
13 \newcommand*\ThisURCornerWallPaper}[2]{}
14 \newcommand*\LRCornerWallPaper}[2]{}
15 \newcommand*\ThisLRCornerWallPaper}[2]{}
16 \newcommand*\ClearWallPaper}{}
17 \newlength{\wpXoffset}
18 \newlength{\wpYoffset}

```

---

File 352 **lwarp-watermark.sty**

§ 448 Package **watermark**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg watermark watermark is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{watermark}

```

2 \newcommand\watermark}[1]{}
3 \newcommand\leftwatermark}[1]{}
4 \newcommand\rightwatermark}[1]{}
5 \newcommand\thiswatermark}[1]{}
6 \newcommand\thispageheading}[1]{}

```

---

File 353 **lwarp-widows-and-orphans.sty**

§ 449 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\WaOsetup{m}{}

```

```
3 \NewDocumentCommand\WaOparameters{}{}
4 \NewDocumentCommand\WaOignorenext{}{}
```

File 354 **lwarp-wrapfig.sty**

§ 450 Package **wrapfig**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg wrapfig wrapfig is emulated.

```
for HTML output: 1 \LWR@ProvidesPackageDrop{wrapfig}

2 \newcommand*{\LWR@wrapposition}{}
3
4 \newcommand*{\LWR@subwrapfigure}[2]{%
5 \renewcommand*{\LWR@wrapposition}{}%
6 \ifthenelse{%
7 \equal{#1}{r}\OR\equal{#1}{R}\OR%
8 \equal{#1}{o}\OR\equal{#1}{O}%
9 }%
10 {\renewcommand*{\LWR@wrapposition}{float:right}}%
11 {\renewcommand*{\LWR@wrapposition}{float:left}}%
12 \setlength{\LWR@templengthone}{#2}%
13 \LWR@BlockClassWP{%
14 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
15 margin:10pt%
16 }%
17 {%
18 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition%
19 }%
20 {marginblock}%
21 }
22
23
24 \NewDocumentEnvironment{wrapfigure}{o m o m}
25 {%
26 \LWR@subwrapfigure{#2}{#4}%
27 \captionsetup{type=figure}%
28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33
34 \NewDocumentEnvironment{wraptable}{o m o m}
35 {%
```

---

```

36 \LWR@subwrapfigure{#2}{#4}%
37 \captionsetup{type=table}%
38 }
39 {%
40 \endLWR@BlockClassWP%
41 }
42
43
44 \NewDocumentEnvironment{wrapfloat}{m o m o m}
45 {%
46 \LWR@subwrapfigure{#3}{#5}%
47 \captionsetup{type=#1}%
48 }
49 {%
50 \endLWR@BlockClassWP%
51 }
52
53 \newlength{\wrapoverhang}

```

---

File 355 **lwarp-xbmks.sty**

§ 451 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 356 **lwarp-xcolor.sty**

§ 452 Package **xcolor**

*(Emulates or patches code by DR. UWE KERN.)*

Pkg xcolor xcolor is supported by lwarp.

### § 452.1 **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 <code>display: 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 lwarp's core if <code>xcolor</code> is loaded.                                                                                                                                                                                                                                                                                                                                                                       |
| <code>background: none</code>                                | <code>\fcolorbox</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.                                                                                                                                                                                                                                                                                                                                                                                                |

### § 452.2 **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 84. 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 523.

`\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 84

**HTML:** Redefined by lwarp-xcolor, page 996.

**HTML lateximage:** Remembers and reuses the print version.

**\fcolorboxBlock:**

**Print:** Becomes \fcolorbox. Section 84

**HTML:** Newly defined by lwarp-xcolor to use a <div>, page 997.

**HTML lateximage:** Remembers and reuses the print version \fcolorbox.

**fcolorminipage:**

**Print:** Newly defined in the lwarp core.

LWR@print@fcolorminipage at section 84

**HTML:** Newly defined by lwarp-xcolor, page 998.

**HTML lateximage:** Uses the print version.

**\boxframe:**

**Print:** Used as-is.

**HTML:** Redefined by lwarp-xcolor, page 999.

**HTML lateximage:** Remembers and reuses the print version.

### § 452.3 Package loading

**for HTML output:** 1 \LWR@ProvidesPackagePass{xcolor}

2 \begin{warpHTML}

### § 452.4 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 }

§ 452.5 **HTML color style**

Sets \LWR@tempcolor to the current color.

```
\LWR@findcurrenttextcolor
 9 \renewcommand*{\LWR@findcurrenttextcolor}{%
10 \protect\colorlet{\LWR@current@color}{.}%
11 \protect\convertcolorspec{named}{\LWR@current@color}{HTML}\LWR@tempcolor%
12 }
```

Prints a color style for the current color.

```
\LWR@currenttextcolorstyle
13 \newcommand*{\LWR@currenttextcolorstyle}{%
14 \LWR@findcurrenttextcolor%
15 \ifdefstring{\LWR@tempcolor}{000000}%
16 {}%
17 {color: \LWR@origpound\LWR@tempcolor ; }%
18 }
```

\LWR@textcurrentcolor *{<text>}* Like \textcolor but uses the current \color instead.

```
19 \DeclareDocumentCommand{\LWR@textcurrentcolor}{m}{%
20 \begingroup%
21 \LWR@FBcancel%
22 \LWR@findcurrenttextcolor%
23 \InlineClass[color:\LWR@origpound\LWR@tempcolor]{textcolor}{%
24 \renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
25 #1%
26 }%
27 \endgroup%
28 }
```

\LWR@colorstyle *{<2: model>}{<3: color>}*

For a color style, prints the color converted to HTML colors.

```
29 \NewDocumentCommand{\LWR@colorstyle}{m m}{%
30 \begingroup%
31 \LWR@FBcancel%
```

Use the xcolor package to convert to an HTML color space:

```
32 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
```

Print the converted color:

```
33 \LWR@origpound\LWR@tempcolor%
34 \endgroup%
35 }
```

\LWR@backgroundcolor [*<model>*] *{<color>}{<text>}*

Similar to `\textcolor`, but prints black text against a color background.

Converted into an HTML hex color span.

```
36 \NewDocumentCommand{\LWR@backgroundcolor}{0{named} m m}{%
37 \begingroup%
38 \LWR@FBcancel%
39 \InlineClass[background:\LWR@colorstyle{#1}{#2}]{backgroundcolor}{%
40 #3%
41 }%
42 \endgroup%
43 }
```

### § 452.6 HTML border

`\LWR@borderpadding` `{\colorstyle}` `{\color}` Prints the HTML attributes for a black border and padding. `\LWR@forceminwidth` must be used first in order to set the border width.

```
44 \newcommand*{\LWR@borderpadding}[2]{%
45 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@colorstyle{#1}{#2} ; %
46 padding:\LWR@printlength{\fboxsep}%
47 }
```

### § 452.7 High-level macros

`\textcolor` `[\langle model \rangle]` `{\langle color \rangle}` `{\langle text \rangle}`

Converted into an HTML hex color span.

```
48 \NewDocumentCommand{\LWR@HTML@textcolor}{o m m}{%
49 \begingroup%
```

Set the PDF color, to be picked up by SVG math if possible.

The print-mode `\color` command cannot accept the named option with color mixing, but it works with no option at all.

```
50 \IfValueTF{#1}{%
51 \color[#1]{#2}%
52 }{%
53 \color{#2}%
54 }%

55 \LWR@FBcancel%
56 \IfValueTF{#1}{%
57 \InlineClass[color:\LWR@colorstyle{#1}{#2}]{textcolor}{%
58 \renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
59 #3%
```

```

60 }%
61 }{%
62 \InlineClass[color:\LWR@colorstyle{named}{#2}]{textcolor}{%
63 \renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
64 #3%
65 }%
66 }%
67 \endgroup%
68 }
69
70 \LWR@formatted{textcolor}

```

`\pagecolor` [*model*] {*color*}

Ignored. Use css instead.

```
71 \renewcommand*{\pagecolor}[2][named]{}
```

`\nopagecolor` Ignored.

```
72 \renewcommand*{\nopagecolor}{}

```

`\colorbox` [*model*] {*color*} {*text*}

Converted into an HTML hex background color `<span>`.

```

73 \NewDocumentCommand{\LWR@HTML@colorbox}{0{named} m +m}{%
74 \begingroup%
75 \LWR@FBcancel%
76 \InlineClass[%
77 background:\LWR@colorstyle{#1}{#2} ; %
78 padding:\LWR@printlength{\fboxsep}%
79]{colorbox}{#3}%
80 \endgroup%
81 }
82
83 \AtBeginDocument{
84 \LWR@formatted{colorbox}
85 }

```

`\colorboxBlock` [*model*] {*color*} {*text*}

Converted into an HTML hex background color `<div>`.

```
86 \NewDocumentCommand{\LWR@HTML@colorboxBlock}{0{named} m +m}{%
```

```

87 \begingroup%
88 \LWR@FBcancel%

89 \LWR@stoppars%

90 \begin{BlockClass}[%
91 background:\LWR@colorstyle{#1}{#2} ; %
92 padding:\LWR@printlength{\fboxsep}%
93]{colorboxBlock}
94 #3
95 \end{BlockClass}%
96 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

97 \global\booltrue{LWR@minipagethispar}%
98 }
99
100 \AtBeginDocument{
101 \LWR@formatted{colorboxBlock}
102 }

```

`\fcolorbox` [*⟨framemodel⟩*] {*⟨framecolor⟩*} [*⟨boxmodel⟩*] {*⟨boxcolor⟩*} {*⟨text⟩*}

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```

103 \NewDocumentCommand{\LWR@HTML@fcolorbox}{0{named} m 0{named} m +m}{%
104 \LWR@traceinfo{HTML fcolorbox #2 #4}%
105 \begingroup%
106 \LWR@FBcancel%
107 \LWR@forceminwidth{\fboxrule}%
108 \ifthenelse{\equal{#4}{none}}{%
109 {% no background color
110 \InlineClass[%
111 \LWR@borderpadding{#1}{#2}%
112]{fcolorbox}{#5}%
113 }%
114 {% yes background color
115 \InlineClass[%
116 \LWR@borderpadding{#1}{#2} ; %
117 background:\LWR@colorstyle{#3}{#4}%
118]{fcolorbox}{#5}%
119 }%
120 \endgroup%

```

```

121 }
122
123 \AtBeginDocument{
124 \LWR@formatted{fcolorbox}
125 }

```

`\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.

```

126 \NewDocumentCommand{\LWR@HTML@fcolorboxBlock}{0{named} m 0{named} m +m}{%
127 \LWR@traceinfo{HTML fcolorboxBlock #2 #4}%
128 \begingroup%
129 \LWR@FBcancel%
130 \LWR@forceminwidth{\fboxrule}%

131 \LWR@stoppars%

132 \ifthenelse{\equal{#4}{none}}{%
133 {% no background color
134 \begin{BlockClass}[%
135 \LWR@borderpadding{#1}{#2}%
136]{fcolorboxBlock}
137 #5
138 \end{BlockClass}%
139 }%
140 {% yes background color
141 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
142 \begin{BlockClass}[%
143 background:\LWR@origpound\LWR@tempcolortwo\ ; %
144 \LWR@borderpadding{#1}{#2}%
145]{fcolorboxBlock}
146 #5
147 \end{BlockClass}%
148 }%
149 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

150 \global\booltrue{LWR@minipagethispar}%
151 \LWR@traceinfo{HTML fcolorboxBlock done}%
152 }
153
154 \AtBeginDocument{

```

```
155 \LWR@formatted{fcolorboxBlock}
156 }
```

Creates a framed HTML <div> around its contents.

A print-output version is defined in the lwarp core: section 84

```
\LWR@subfcolorminipage {<framemodel>} {<framecolor>} {<background tag>} {<height>}
```

```
157 \NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%
158 \LWR@stoppars%
159 \begin{BlockClass}[%
160 #3%
161 \LWR@borderpadding{#1}{#2} ; %
162 \IfValueT{#4}{height:\LWR@printlength{\LWR@tempheight} ; }%
163 width:\LWR@printlength{\LWR@tempwidth}}%
164]{fcolorminipage}%
165 }
```

```
Env fcolorminipage [(<1:framemodel>)] {<2:framecolor>} [(<3:boxmodel>)] {<4:boxcolor>} [(<5:align>)] [(<6:height>)]
[(<7:inner-align>)] {<8:width>}
```

```
166 \NewDocumentEnvironment{LWR@HTML@fcolorminipage}{0{named} m 0{named} m 0{c} o o m}
167 {%
168 \LWR@FBcancel%
169 \setlength{\LWR@tempwidth}{#8}%
170 \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}}%
171 \LWR@forceminwidth{\fboxrule}%
172 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
173 \ifthenelse{\equal{#4}{none}}%
174 {\LWR@subfcolorminipage{#1}{#2}{#6}}%
175 {%
176 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
177 \LWR@subfcolorminipage{#1}{#2}{background:\LWR@origpound\LWR@tempcolortwo\ ; }{#6}%
178 }%
179 }
180 {%
181 \end{BlockClass}%
```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```
182 \global\booltrue{LWR@minipagethispar}%
183 }
184
185 \AtBeginDocument{
```

```
186 \LWR@formattedenv{fcolorminipage}
187 }
```

`\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.

```
188 \newcommand*\LWR@HTML@boxframe[3]{%
189 {%
190 \setlength{\LWR@tempwidth}{#1}%
191 \setlength{\LWR@tempheight}{#2}%
192 \addtolength{\LWR@tempheight}{#3}%
193 \LWR@forceminwidth{fboxrule}%
194 \LWR@findcurrenttextcolor%
195 \InlineClass[%
196 display:inline-block ; %
197 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@currenttextcolor{} ; %
198 width:\LWR@printlength{\LWR@tempwidth} ; %
199 height:\LWR@printlength{\LWR@tempheight}%
200]{boxframe}{}%
201 }%
202 }
203
204 \LWR@formatted{boxframe}
```

## § 452.8 Row colors

`\rowc@l@rs` [*cmds*]  $\langle startrow \rangle$   $\langle odd color \rangle$   $\langle even color \rangle$

```
205 \newcommand*\LWR@xcolortempcolor{}
206
207 \def\rowc@l@rs[#1]#2#3#4%
208 {
209 \global\rownum=1
210 \global\@rowcolorstrue
211 \@ifxempty{#3}%
212 {\def\@oddrowcolor{\@norowcolor}}%
213 {%
214 \convertcolorspec{named}{#3}{HTML}\LWR@xcolortempcolor%
215 \edef\@oddrowcolor{%
216 \csdef{\LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
217 }%
218 }%
219 \@ifxempty{#4}%
220 {\def\@evenrowcolor{\@norowcolor}}%
221 {%
222 \convertcolorspec{named}{#4}{HTML}\LWR@xcolortempcolor%
```

```

223 \edef\@evenrowcolor{%
224 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
225 }%
226 }%
227 \if@rowcmd
228 \def\@rowcolors
229 {%
230 #1%
231 \if@rowcolors
232 \noalign{%
233 \relax\ifnum\rownum<#2\@norowcolor\else
234 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi\fi%
235 }%
236 \fi%
237 }%
238 \else
239 \def\@rowcolors
240 {%
241 \if@rowcolors
242 \ifnum\rownum<#2%
243 \noalign{%
244 \@norowcolor
245 }
246 \else
247 #1%
248 \noalign{%
249 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi%
250 }%
251 \fi
252 \fi%
253 }%
254 \fi
255 \ignorespaces%
256 }

```

`\@norowcolor` Turns off color for this row.

```

257 \def\@norowcolor{%
258 \renewcommand{LWR@xcolorrowHTMLcolor}{}}%
259 }

```

`\@rowc@lors` Executed at the end of each row.

```

260 \def\@rowc@lors{%
261 \noalign{%
262 \global\advance\rownum\@ne%
263 }%
264 \@rowcolors%
265 }

```

---

266 \end{warpHTML}

---

File 357 **lwarp-xexchangebar.sty**

§ 453 Package **xexchangebar**

Pkg xexchangebar xexchangebar is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{xexchangebar}[2017/08/03]
2 \LWR@origRequirePackage{lwarp-changebar}
```

---

File 358 **lwarp-xellipsis.sty**

§ 454 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}

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{\xelipprebef}%
15 \xelipprechar%
16 \LWR@xellipsespace{\xelippreaft}%
17 \LWR@xellipsespace{\xelipbef}%
18 \xelipchar%
19 \xel@loopi = 1%
20 \loop\ifnum\xelipnum>\xel@loopi%
21 \advance\xel@loopi by1%
22 \LWR@xellipsespace{\xelipgap}%
```

---

```

23 \xeligchar%
24 \repeat%
25 \LWR@xellipsespace{\xeligaf} %
26 \LWR@xellipsespace{\xeligpostbef} %
27 \xeligpostchar%
28 \LWR@xellipsespace{\xeligpostaft} %
29 } %
30 } %

```

---

File 359 **lwarp-xetexko-vertical.sty**

§ 455 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{verticalr1}}{\endBlockClass}
6 \renewenvironment{horizontal}[1]{\BlockClass{horizontaltb}}{\endBlockClass}
7 \renewcommand{\vertlatin}[1]{#1}

```

---

File 360 **lwarp-xfrac.sty**

§ 456 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}

```



**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 361 **lwarp-xltabular.sty**

§ 457 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 mis-numbered 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}
4
5 \DeclareDocumentEnvironment{xltabular}{o m m}
6 {\longtable{#3}}
7 {\endlongtable}
```

---

File 362 **lwarp-xltxtra.sty**

§ 458 Package **xltxtra**

*(Emulates or patches code by WILL ROBERTSON, JONATHAN KEW.)*

Pkg xltxtra xltxtra is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xltxtra}

```
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 363 **lwarp-xmpincl.sty**

§ 459 Package **xmpincl**

*(Emulates or patches code by MAARTEN SNEEP.)*

Pkg xmpincl Emulated.

**for HTML output:** Discard all options for lwarp-xmpincl:

```

1 \LWR@ProvidesPackageDrop{xmpincl}
2 \newcommand*\includexmp}[1]{}

```

---

File 364 **lwarp-xpiano.sty**

§ 460 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}{ 0{}m }
9 {
10 \begin{lateximage}*
11 [(-xpiano--\packagediagramname{}: \detokenize\expandafter{#2})]
12 [\detokenize\expandafter{#1}]
13 \xpiano_keyboard:nn { #1 } { #2 }
14 \end{lateximage}
15 }
16 \ExplSyntaxOff
17
18 \LWR@formatted{keyboard}

```

---

File 365 **lwarp-xpinyin.sty**

§ 461 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}{0{}}{}{}
3
4 \RenewDocumentCommand{\xpinyin}{s 0{} m}{%
5 \IfBooleanTF{#1}{#3}{\@firstoftwo#3}%
6 }
7
8 \RenewDocumentCommand{\enablepinyin}{}{}

```

---

File 366 **lwarp-xtab.sty**

§ 462 Package **xtab**

*(Emulates or patches code by PETER WILSON.)*

Pkg xtab xtab is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xtab}

△ Misplaced alignment tab character &

```

\StartDefiningTabulars
\tablefirsthead
...
\StopDefiningTabulars

```

See section 9.9.

△ 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 \LWR@traceinfo{xtabular done}%
57 }
58
59 \NewDocumentEnvironment{mpxtabular}{s o m}
60 {\minipage{\linewidth}\xtabular{#3}}
61 {\endxtabular\endminipage}

```

---

File 367 **lwarp-xunicode.sty**

§ 463 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}

```

---

File 368 **lwarp-xurl.sty**

§ 464 Package **xurl**

Pkg xurl xurl is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xurl}

---

File 369 **lwarp-xy.sty**

§ 465 Package **xy**

*(Emulates or patches code by KRISTOFFER H. ROSE, ROSS MOORE.)*

Pkg xy xy is patched for use by lwarp.

 **\xypolygon** \xypolygon must be used inside the xy environment, or inside \xy ... \endxy.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xy}

2 \AtBeginDocument{
3
4 \pretol{\xy}{\begin{lateximage}[(-xy--\packagediagramname)]}
5 \apptol{\endxy}{\end{lateximage}}
6
7 \@ifundefined{xymatrix}{}{
8 \LetLtxMacro\LWR@origxymatrix\xymatrix
9
10 \renewcommand{\xymatrix}[1]{%
11 \begin{lateximage}[(-xy- xymatrix \packagediagramname)]
12 \LWR@origxymatrix{#1}
13 \end{lateximage}
14 }
15 }
16
17 \@ifundefined{xygraph}{}{
18 \LetLtxMacro\LWR@origxygraph\xygraph
19
20 \renewcommand{\xygraph}[1]{%
21 \begin{lateximage}[(-xy- xygraph \packagediagramname)]
22 \LWR@origxygraph{#1}
23 \end{lateximage}

```

```

24 }
25 }
26
27 }

```

---

File 370 **lwarp-zhlineskip.sty**

§ 466 Package **zhlineskip**

Pkg zhlineskip zhlineskip is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{zhlineskip}[2018/11/30]

```

2 \newcommand*\SetTextEnvironmentSinglespace[1]{}
3 \newcommand*\RestoreTextEnvironmentLeading{}
4 \newcommand*\SetMathEnvironmentSinglespace[1]{}
5 \newcommand*\RestoreMathEnvironmentLeading{}

```

---

File 371 **lwarp-zwpagelayout.sty**

§ 467 Package **zwpagelayout**

*(Emulates or patches code by ZDENĚK WAGNER.)*

Pkg zwpagelayout zwpagelayout is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{zwpagelayout}

```

2 \def\noBboxes{}
3 \@onlypreamble\noBboxes
4
5 \expandafter\ifx\curname definecolor\endcurname\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 372 `lwarp-patch-komascript.sty`

§ 468 Package **patch-komascript**

Pkg `lwarp-patch-komascript` Patches for komascript classes.

lwarp loads this package when `scrbook`, `scrartcl`, or `scrreprt` classes are detected.

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

`\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 \LetLtxMacro\captionbelow\caption
40 \LetLtxMacro\captionabove\caption
41
42 \LetLtxMacro\captionofbelow\captionof
43 \LetLtxMacro\captionofabove\captionof
44
45 \RenewDocumentEnvironment{captionbeside}{o m o o o s}
46 {}
47 {%
48 \IfValueTF{#1}{%
49 {\caption[#1]{#2}}%
50 {\caption{#2}}%
51 }
52
53 \RenewDocumentEnvironment{captionofbeside}{m o m o o o s}

```

---

```

54 {}
55 {%
56 \IfValueTF{#2}%
57 {\captionof{#1}[#2]{#3}}%
58 {\captionof{#1}{#3}}%
59 }
60
61 \RenewDocumentCommand{\setcapindent}{s m}{}
62 \renewcommand*\setcaphanging{}
63 \renewcommand*\setcapwidth}[2] [] {}
64 \renewcommand*\setcapdynwidth}[2] [] {}
65 \RenewDocumentCommand{\setcapmargin}{s o m}{}

```

---

File 373 **lwarp-patch-memoir.sty**

§ 469 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 469.1). 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}

```

`\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}`

## § 469.1 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}% red'q
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\LWR@memorignewsfloat\nnewsfloat
28 \RenewDocumentCommand{\newsfloat}{0{} m}{%
29 \@ifundefined{c@sub#2}{%
30 \LWR@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

```

### § 469.2 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}{*}

```

### § 469.3 Laying out the page

```

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*\stockmsmallroyalvo{}
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*\pagedmediumvo}{
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*\anyptsizesize}{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*{\setcolsepandrule}[2]{}
137
138 \renewcommand*{\setheadfoot}[2]{}
139 \renewcommand*{\setheaderspaces}[3]{}
140 \renewcommand*{\setmarginnotes}[3]{}
141 \renewcommand*{\setfootins}[2]{}
142 \renewcommand*{\checkandfixthelayout}[1][]{}
143 \renewcommand*{\checkthelayout}[1]{}
144 \renewcommand*{\fixthelayout}{}
145 %
146 % \newlength{\stockheight}
147 % \newlength{\trimtop}
148 % \newlength{\trimedge}
149 % \newlength{\stockwidth}
150 % \newlength{\spinemargin}
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][]{}
162 \renewcommand*{\isopage}[1][]{}
163 \renewcommand*{\semiisopage}[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]{}

```

#### § 469.4 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*\{midsloppy}{}
207 \renewenvironment*{midsloppypar}{}{}
208
209 \renewcommand*\{sloppybottom}{}

```

#### § 469.5 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}

```

## § 469.6 Abstracts

```

221 \renewcommand*{\abstractcol}{}
222 \renewcommand*{\abstractintoc}{}
223 \renewcommand*{\abstractnum}{}
224 \renewcommand*{\abstractrunin}{}

```

## § 469.7 Document divisions

```

225
226 \def\@apppage{%
227 \part*{\appendixpagename}
228 }
229 \renewcommand\mempreaddappagetotochook{}
230 \renewcommand\mempostaddappagetotochook{}
231
232 \def\@sapppage{%
233 \part*{\appendixpagename}
234 }
235
236 \csletcs{frontmatter*}{frontmatter}
237 \csletcs{mainmatter*}{mainmatter}
238 \renewcommand*{\raggedbottomsection}{}
239 \renewcommand*{\normalbottomsection}{}
240 \renewcommand*{\bottomsectionskip}{}
241 \renewcommand*{\bottomsectionpenalty}{}
242 \csletcs{appendixpage*}{appendixpage}
243 \renewcommand*{\namedsubappendices}{}
244 \renewcommand*{\unnamedsubappendices}{}
245 \renewcommand*{\setsecnumdepth}[1]{}% todo tocvsec2
246 \renewcommand*{\maxsecnumdepth}[1]{}% todo tocvsec2
247 \renewcommand*{\beforebookskip}{}
248 \renewcommand*{\afterbookskip}{}
249 \renewcommand*{\beforepartskip}{}
250 \renewcommand*{\afterpartskip}{}
251 \renewcommand*{\midbookskip}{}
252 \renewcommand*{\midpartskip}{}
253 \renewcommand*{\printbookname}{}

```

```
254 \renewcommand*{\booknamefont}{}
255 \renewcommand*{\booknamenum}{}
256 \renewcommand*{\printbooknum}{}
257 \renewcommand*{\booknumfont}{}
258 \renewcommand*{\printpartname}{}
259 \renewcommand*{\partnamefont}{}
260 \renewcommand*{\partnamenum}{}
261 \renewcommand*{\printpartnum}{}
262 \renewcommand*{\partnumfont}{}
263 \renewcommand*{\printbooktitle}[1]{}
264 \renewcommand*{\booktitlefont}{}
265 \renewcommand{\printparttitle}[1]{}
266 \renewcommand*{\parttitlefont}{}
267 \renewcommand*{\bookpageend}{}
268 \renewcommand*{\bookblankpage}{}
269 \renewcommand*{\nobookblankpage}{}
270 \renewcommand*{\partpageend}{}
271 \renewcommand*{\partblankpage}{}
272 \renewcommand*{\nopartblankpage}{}
273 \RenewDocumentCommand{\newleadpage}{s o m m}{}% todo
274 \RenewDocumentCommand{\renewleadpage}{s o m m}{}% todo
275 \renewcommand*{\leadpagetoclevel}{chapter}
276
277 \renewcommand*{\openright}{}
278 \renewcommand*{\openleft}{}
279 \renewcommand*{\openany}{}
280 \renewcommand*{\clearforchapter}{}
281 \renewcommand*{\memendofchapterhook}{}
282 \renewcommand*{\chapterheadstart}{}
283 % \newlength{\beforechapskip}
284 \renewcommand*{\afterchapternum}{}
285 % \newlength{\midchapskip}
286 \renewcommand*{\afterchaptertitle}{}
287 % \newlength{\afterchapskip}
288 \renewcommand*{\printchaptername}{}
289 \renewcommand*{\chapnamefont}{}
290 \renewcommand*{\chapternamenum}{}
291 \renewcommand*{\printchapternum}{}
292 \renewcommand*{\chapnumfont}{}
293 \renewcommand{\printchaptertitle}[1]{}
294 \renewcommand*{\chapttitlefont}{}
295 \renewcommand*{\printchapternonum}{}
296 \renewcommand*{\indentafterchapter}{}
297 \renewcommand*{\noindentafterchapter}{}
298 \renewcommand*{\insertchapterspace}{}
299
300 \renewcommand*{\chapterstyle}[1]{}
301 \renewcommand{\makechapterstyle}[2]{}
302 \renewcommand*{\chapindent}{}
303 \let\chapterprecis\cftchapterprecis
```

```
304 \let\chapterprecishere\cftchapterprecishere
305 \let\chapterprecistoc\cftchapterprecistoc
306 \renewcommand*\precisfont-{}
307 \renewcommand*\prechapterprecis-{}
308 \renewcommand*\postchapterprecis-{}
309 \renewcommand\precistoc[1]{}
310 \renewcommand*\precistocfont-{}
311 \renewcommand*\precistocformat-{}
312 % \newlength\prechapterprecisshift
313
314 \renewcommand*\setbeforesecskip[1]{}
315 \renewcommand*\setaftersecskip[1]{}
316 \renewcommand*\setsecindent[1]{}
317 \renewcommand*\setsecheadstyle[1]{}
318 \renewcommand*\setbeforesubsecskip[1]{}
319 \renewcommand*\setaftersubsecskip[1]{}
320 \renewcommand*\setsubsecindent[1]{}
321 \renewcommand*\setsubsecheadstyle[1]{}
322 \renewcommand*\setbeforesubsubsecskip[1]{}
323 \renewcommand*\setaftersubsubsecskip[1]{}
324 \renewcommand*\setsubsubsecindent[1]{}
325 \renewcommand*\setsubsubsecheadstyle[1]{}
326 \renewcommand*\setbeforeparaskip[1]{}
327 \renewcommand*\setafterparaskip[1]{}
328 \renewcommand*\setparaindent[1]{}
329 \renewcommand*\setparaheadstyle[1]{}
330 \renewcommand*\setbeforesubparaskip[1]{}
331 \renewcommand*\setaftersubparaskip[1]{}
332 \renewcommand*\setsubparaindent[1]{}
333 \renewcommand*\setsubparaheadstyle[1]{}
334 \renewcommand\@hangfrom[1]{#1}
335 \renewcommand\sethangfrom[1]{}
336 \renewcommand\setsecnumformat[1]{}
337
338 \renewcommand*\hangsecnum-{}
339 \renewcommand*\defaultsecnum-{}
340
341 \renewcommand*\sechook-{}
342 \renewcommand\setsechook[1]{}
343 \renewcommand*\subsechook-{}
344 \renewcommand\setsubsechook[1]{}
345 \renewcommand*\subsubsechook-{}
346 \renewcommand\setsubsubsechook[1]{}
347 \renewcommand*\parahook-{}
348 \renewcommand\setparahook[1]{}
349 \renewcommand*\subparahook-{}
350 \renewcommand\setsubparahook[1]{}
351
352 \RenewDocumentCommand\plainbreak{s m}{\begin{center}~\end{center}}
353
```

```

354 \RenewDocumentCommand{\fancybreak}{s +m}{%
355 \begin{center}#2\end{center}%
356 }
357
358 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
359 \begin{center}#4\end{center}%
360 }
361
362 \RenewDocumentCommand{\pfbreak}{s}{%
363 \begin{center}
364 \pfbreakdisplay
365 \end{center}
366 }
367
368 % \newlength{\pfbreakskip}
369 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
370
371 \renewcommand{\makeheadstyles}[2]{}
372 \renewcommand*{\headstyles}[1]{}

```

## § 469.8 **Pagination and headers**

```

373 \renewcommand*{\savepagenumber}{}
374 \renewcommand*{\restorepagenumber}{}
375 \renewcommand*{\uppercaseheads}{}
376 \renewcommand*{\nouppercaseheads}{}
377
378 \renewcommand*{\bookpagemark}[1]{}
379 \renewcommand*{\partmark}[1]{}
380 \renewcommand*{\bibmark}{}
381 \renewcommand*{\indexmark}{}
382 \renewcommand*{\glossarymark}{}
383
384 \LWR@origpagestyle{empty}
385 \renewcommand*{\ps@empty}{}
386 \renewcommand*{\makepagestyle}[1]{}
387 \renewcommand*{\emptyshook}{}%
388 % \renewcommand*{\empty@oddhead}{}
389 % \renewcommand*{\empty@oddfoot}{}
390 % \renewcommand*{\empty@evenhead}{}
391 % \renewcommand*{\empty@evenfoot}{}
392 \renewcommand*{@oddhead}{}
393 \renewcommand*{@oddfoot}{}
394 \renewcommand*{@evenhead}{}
395 \renewcommand*{@evenfoot}{}
396 \renewcommand*{\aliaspagestyle}[2]{}
397 \renewcommand*{\copypagestyle}[2]{}
398
399 \renewcommand*{\makeevenhead}[4]{}

```

```

400 \renewcommand*\makeoddhead}[4]{}
401 \renewcommand*\makeevenfoot}[4]{}
402 \renewcommand*\makeoddfoot}[4]{}
403 \renewcommand*\makerunningwidth}[3]{}
404 % \newlength{\headwidth}
405 \renewcommand*\makeheadrule}[3]{}
406 \renewcommand*\makefootrule}[3]{}
407 \renewcommand*\makeheadfootruleprefix}[3]{}
408 % \newlength{\normalrulethickness}
409 % \setlength{\normalrulethickness}{.4pt}
410 % \newlength{\footruleheight}
411 % \newlength{\footruleskip}
412 \renewcommand*\makeheadposition}[5]{}
413 \renewcommand\makepsmarks}[2]{}
414 \renewcommand*\makeheadfootstrut}[3]{}
415
416 \renewcommand\createplainmark}[3]{}
417 \renewcommand\memUChad}[1]{}
418 \renewcommand\createmark}[5]{}
419 \renewcommand*\clearplainmark}[1]{}
420 \renewcommand*\clearmark}[1]{}
421 \renewcommand\addtopsmarks}[3]{}
422 \renewcommand\ifonlyfloats}[2]{#2}
423 \renewcommand*\mergespagefloatstyle}[3]{}
424
425 \renewcommand*\framepichead{}
426 \renewcommand*\framepicfoot{}
427 \renewcommand*\framepichook{}
428 \renewcommand*\showheadfootlocoff{}
429 \renewcommand*\showtextblocklocoff{}

```

## § 469.9 Paragraphs and lists

```

430 \renewcommand\hangfrom}[1]{#1}
431 \let\centerfloat\centering
432 \renewcommand*\raggedyright}[1]{}
433 % \newlength{\ragrparindent}
434 \renewcommand\sourceatright}[2]{}{\attribution{#2}}
435 \let\memorigdbs\LWR@endofline
436 \let\memorigpar\par
437 \let\atcentercr\LWR@endofline
438
439 \renewcommand*\linenottooshort}[1]{}
440 \renewcommand*\russianpar{}
441 \renewcommand*\lastlinerulefill{}
442 \renewcommand*\lastlineparrule{}
443 \renewcommand*\justlastraggedleft{}
444 \renewcommand*\raggedrightthenleft{}
445 \renewcommand*\leftcenterright{}

```

```

446
447 \renewcommand{\leftspringright}[4]{%
448 \begin{minipage}{#1\linewidth}#3\end{minipage}\quad%
449 \begin{minipage}{#2\linewidth}\begin{flushright}#4\end{flushright}\end{minipage}%
450 }
451
452 \renewenvironment*{blockdescription}
453 {\LWR@descriptionstart\LWR@origdescription}
454 {\enddescription}
455 \renewcommand*{\blockdescriptionlabel}[1]{\textbf{#1}}
456 \renewenvironment*{labelled}[1]{\begin{description}}{\end{description}}
457 \renewenvironment*{flexlabelled}[6]{\begin{description}}{\end{description}}
458 \renewcommand*{\tightlists}{}
459 \renewcommand*{\defaultlists}{}
460 \RenewDocumentCommand{\firmlists}{s}{}
461 \renewcommand*{\firmlist}{}
462 \renewcommand*{\tightlist}{}
463 \renewcommand*{\zerotrivseps}{}
464 \renewcommand*{\savetrivseps}{}
465 \renewcommand*{\restoretrivseps}{}

```

## § 469.10 Contents lists

```

466 \csletcs{tableofcontents*}{tableofcontents}
467 \csletcs{listoffigures*}{listoffigures}
468 \csletcs{listoftables*}{listoftables}
469 \renewenvironment{KeepFromToc}{}{}
470 \renewcommand*{\onecoltocetc}{}
471 \renewcommand*{\twocoltocetc}{}
472 \renewcommand*{\ensureonecol}{}
473 \renewcommand*{\restorefromonecol}{}
474 \renewcommand*{\doccoltocetc}{}
475 \renewcommand*{\maxtocdepth}[1]{}% tocvsec2
476 \renewcommand*{\settocdepth}[1]{}% tocvsec2
477
478 \renewcommand{\toheadstart}{}
479 \renewcommand{\printtoctitle}[1]{}
480 \renewcommand{\tocmark}{}
481 \renewcommand{\aftertocitle}{}
482 \renewcommand{\lofheadstart}{}
483 \renewcommand{\printloftitle}[1]{}
484 \renewcommand{\lofmark}{}
485 \renewcommand{\afterloftitle}{}
486 \renewcommand{\lotheadstart}{}
487 \renewcommand{\printlottitle}[1]{}
488 \renewcommand{\lotmark}{}
489 \renewcommand{\afterlottitle}{}
490
491 \renewcommand*{\setpnumwidth}[1]{}

```

```

492 \renewcommand*\setrmarg}[1]{}
493 \renewcommand*\cftbookbreak{}
494 \renewcommand*\cftpartbreak{}
495 \renewcommand*\cftchapterbreak{}

496 % \newlength{\cftbeforebookskip}
497 % \newlength{\cftbookindent}
498 % \newlength{\cftbooknumwidth}
499 \renewcommand*\cftbookfont{}
500 \renewcommand*\cftbookname{}
501 \renewcommand*\cftbookpresnum{}
502 \renewcommand*\cftbookaftersnum{}
503 \renewcommand*\cftbookaftersnumb{}
504 \renewcommand*\cftbookleader{}
505 \renewcommand*\cftbookdotsep}{1}
506 \renewcommand*\cftbookpagefont{}
507 \renewcommand*\cftbookafterpnum{}
508 \renewcommand*\cftbookformatpnum}[1]{}
509 \renewcommand*\cftbookformatpnumhook}[1]{}

```

Part is already defined by tocloft.

```

510 % \newlength{\cftbeforechapterskip}
511 % \newlength{\cftchapterindent}
512 % \newlength{\cftchapternumwidth}
513 \renewcommand*\cftchapterfont{}
514 \renewcommand*\cftchaptername{}
515 \renewcommand*\cftchapterpresnum{}
516 \renewcommand*\cftchapteraftersnum{}
517 \renewcommand*\cftchapteraftersnumb{}
518 \renewcommand*\cftchapterleader{}
519 \renewcommand*\cftchapterdotsep}{1}
520 \renewcommand*\cftchapterpagefont{}
521 \renewcommand*\cftchapterafterpnum{}
522 \renewcommand*\cftchapterformatpnum}[1]{}
523 \renewcommand*\cftchapterformatpnumhook}[1]{}

524 % \newlength{\cftbeforesectionsip}
525 % \newlength{\cftsectionindent}
526 % \newlength{\cftsectionnumwidth}
527 \renewcommand*\cftsectionfont{}
528 \renewcommand*\cftsectionname{}
529 \renewcommand*\cftsectionpresnum{}
530 \renewcommand*\cftsectionaftersnum{}
531 \renewcommand*\cftsectionaftersnumb{}
532 \renewcommand*\cftsectionleader{}
533 \renewcommand*\cftsectiondotsep}{1}
534 \renewcommand*\cftsectionpagefont{}
535 \renewcommand*\cftsectionafterpnum{}
536 \renewcommand*\cftsectionformatpnum}[1]{}

```

```
537 \renewcommand*{\cftsectionformatpnumhook}[1]{}

538 % \newlength{\cftbeforesubsectionskip}
539 % \newlength{\cftsubsectionindent}
540 % \newlength{\cftsubsectionnumwidth}
541 \renewcommand*{\cftsubsectionfont}{}
542 \renewcommand*{\cftsubsectionname}{}
543 \renewcommand*{\cftsubsectionpresnum}{}
544 \renewcommand*{\cftsubsectionaftersnum}{}
545 \renewcommand*{\cftsubsectionaftersnumb}{}
546 \renewcommand*{\cftsubsectionleader}{}
547 \renewcommand*{\cftsubsectiondotsep}{1}
548 \renewcommand*{\cftsubsectionpagefont}{}
549 \renewcommand*{\cftsubsectionafterpnum}{}
550 \renewcommand*{\cftsubsectionformatpnum}[1]{}
551 \renewcommand*{\cftsubsectionformatpnumhook}[1]{}

552 % \newlength{\cftbeforesubsubsectionskip}
553 % \newlength{\cftsubsubsectionindent}
554 % \newlength{\cftsubsubsectionnumwidth}
555 \renewcommand*{\cftsubsubsectionfont}{}
556 \renewcommand*{\cftsubsubsectionname}{}
557 \renewcommand*{\cftsubsubsectionpresnum}{}
558 \renewcommand*{\cftsubsubsectionaftersnum}{}
559 \renewcommand*{\cftsubsubsectionaftersnumb}{}
560 \renewcommand*{\cftsubsubsectionleader}{}
561 \renewcommand*{\cftsubsubsectiondotsep}{1}
562 \renewcommand*{\cftsubsubsectionpagefont}{}
563 \renewcommand*{\cftsubsubsectionafterpnum}{}
564 \renewcommand*{\cftsubsubsectionformatpnum}[1]{}
565 \renewcommand*{\cftsubsubsectionformatpnumhook}[1]{}

566 % \newlength{\cftbeforeparagraphskip}
567 % \newlength{\cftparagraphindent}
568 % \newlength{\cftparagraphnumwidth}
569 \renewcommand*{\cftparagraphfont}{}
570 \renewcommand*{\cftparagraphname}{}
571 \renewcommand*{\cftparagraphpresnum}{}
572 \renewcommand*{\cftparagraphaftersnum}{}
573 \renewcommand*{\cftparagraphaftersnumb}{}
574 \renewcommand*{\cftparagraphleader}{}
575 \renewcommand*{\cftparagraphdotsep}{1}
576 \renewcommand*{\cftparagraphpagefont}{}
577 \renewcommand*{\cftparagraphafterpnum}{}
578 \renewcommand*{\cftparagraphformatpnum}[1]{}
579 \renewcommand*{\cftparagraphformatpnumhook}[1]{}

580 % \newlength{\cftbeforesubparagraphskip}
581 % \newlength{\cftsubparagraphindent}
582 % \newlength{\cftsubparagraphnumwidth}
```

```
583 \renewcommand*{\cftsubparagraphfont}{}
584 \renewcommand*{\cftsubparagraphname}{}
585 \renewcommand*{\cftsubparagraphpresnum}{}
586 \renewcommand*{\cftsubparagraphaftersnum}{}
587 \renewcommand*{\cftsubparagraphaftersnumb}{}
588 \renewcommand*{\cftsubparagraphleader}{}
589 \renewcommand*{\cftsubparagraphdotsep}{1}
590 \renewcommand*{\cftsubparagraphpagefont}{}
591 \renewcommand*{\cftsubparagraphafterpnum}{}
592 \renewcommand*{\cftsubparagraphformatpnum}[1]{}
593 \renewcommand*{\cftsubparagraphformatpnumhook}[1]{}

594 % \newlength{\cftbeforefigureskip}
595 % \newlength{\cftfigureindent}
596 % \newlength{\cftfigurenumwidth}
597 \renewcommand*{\cftfigurefont}{}
598 \renewcommand*{\cftfigurename}{}
599 \renewcommand*{\cftfigurepresnum}{}
600 \renewcommand*{\cftfigureaftersnum}{}
601 \renewcommand*{\cftfigureaftersnumb}{}
602 \renewcommand*{\cftfigureleader}{}
603 \renewcommand*{\cftfiguredotsep}{1}
604 \renewcommand*{\cftfigurepagefont}{}
605 \renewcommand*{\cftfigureafterpnum}{}
606 \renewcommand*{\cftfigureformatpnum}[1]{}
607 \renewcommand*{\cftfigureformatpnumhook}[1]{}

608 % \newlength{\cftbeforesubfigureskip}
609 % \newlength{\cftsubfigureindent}
610 % \newlength{\cftsubfigurenumwidth}
611 \newcommand*{\cftsubfigurefont}{}
612 \newcommand*{\cftsubfigurename}{}
613 \newcommand*{\cftsubfigurepresnum}{}
614 \newcommand*{\cftsubfigureaftersnum}{}
615 \newcommand*{\cftsubfigureaftersnumb}{}
616 \newcommand*{\cftsubfigureleader}{}
617 \newcommand*{\cftsubfiguredotsep}{1}
618 \newcommand*{\cftsubfigurepagefont}{}
619 \newcommand*{\cftsubfigureafterpnum}{}
620 \newcommand*{\cftsubfigureformatpnum}[1]{}
621 \newcommand*{\cftsubfigureformatpnumhook}[1]{}

622 % \newlength{\cftbeforetableskip}
623 % \newlength{\cfttableindent}
624 % \newlength{\cfttablenumwidth}
625 \renewcommand*{\cfttablefont}{}
626 \renewcommand*{\cfttablename}{}
627 \renewcommand*{\cfttablepresnum}{}
628 \renewcommand*{\cfttableaftersnum}{}
629 \renewcommand*{\cfttableaftersnumb}{}

```

```

630 \renewcommand*\cfttableleader}{
631 \renewcommand*\cfttabledotsep}{1}
632 \renewcommand*\cfttablepagefont}{
633 \renewcommand*\cfttableafterpnum}{
634 \renewcommand*\cfttableformatpnum}[1]{
635 \renewcommand*\cfttableformatpnumhook}[1]{

636 % \newlength{\cftbeforesubtables skip}
637 % \newlength{\cftsubtableindent}
638 % \newlength{\cftsubtableenumwidth}
639 \newcommand*\cftsubtablefont}{
640 \newcommand*\cftsubtablename}{
641 \newcommand*\cftsubtablepresnum}{
642 \newcommand*\cftsubtableaftersnum}{
643 \newcommand*\cftsubtableaftersnumb}{
644 \newcommand*\cftsubtableleader}{
645 \newcommand*\cftsubtabledotsep}{1}
646 \newcommand*\cftsubtablepagefont}{
647 \newcommand*\cftsubtableafterpnum}{
648 \newcommand*\cftsubtableformatpnum}[1]{
649 \newcommand*\cftsubtableformatpnumhook}[1]{

650 \renewcommand*\booknumberline}[1]{
651 \renewcommand*\partnumberline}[1]{
652 \renewcommand*\chapternumberline}[1]{
653 \renewcommand*\numberlinehook}[1]{
654 % \renewcommand*\cftwhatismyname}{}%
655 \renewcommand*\booknumberlinehook}[1]{
656 \renewcommand*\partnumberlinehook}[1]{
657 \renewcommand*\chapternumberlinehook}[1]{
658 \renewcommand*\numberlinebox}[2]{
659 \renewcommand*\booknumberlinebox}[2]{
660 \renewcommand*\partnumberlinebox}[2]{
661 \renewcommand*\chapternumberlinebox}[2]{
662 %
663 % \newlength{\cftparfillskip}
664 \renewcommand*\cftpagenumbersoff}[1]{
665 \renewcommand*\cftpagenumberon}[1]{
666 \renewcommand*\cftlocalchange}[3]{
667 \renewcommand*\cftaddtitleline}[4]{
668 \renewcommand*\cftaddnumtitleline}[4]{
669 \renewcommand*\cftinsertcode}[2]{
670 \renewcommand*\cftinserthook}[2]{
671 \renewcommand*\settocpreprocessor}[2]{
672 \DeclareRobustCommand\cftpagenumbersoff}[1]{
673 \DeclareRobustCommand\cftpagenumberon}[1]{

```

### § 469.11 Floats and captions

```
\newfloat [1: within] [2: type] [3: ext] [4: capname]
```

```

674 \RenewDocumentCommand{\newfloat}{o m m m}{%
675 \IfValueTF{#1}%
676 {\DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
677 {\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.

```

678 \cslet{listof#2s}\relax%
679 \cslet{listof#2es}\relax%
680 }

```

`\newlistof` [*within*] {*type*} {*ext*} {*listofname*}

Emulated through the `\newfloat` mechanism. Note that memoir uses a different syntax than `tocloft` for the name.

```

681 \RenewDocumentCommand{\newlistof}{o m m m}
682 {%
683 \IfValueTF{#1}
684 {\newlistentry[#1]{#2}{#3}{0}}
685 {\newlistentry{#2}{#3}{0}}
686 \@namedef{ext@#2}{#3}%
687 \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
688 \setcounter{#3depth}{1}%
689 \@namedef{#3mark}{}%
690 \@namedef{#2}{\listof{#2}{#4}}
691 \@namedef{cftmake#3title}{}
692 \@ifundefined{cftbefore#3titleskip}{
693 \expandafter\newlength\csname cftbefore#3titleskip\endcsname
694 \expandafter\newlength\csname cftafter#3titleskip\endcsname
695 }{}
696 \@namedef{cft#3titlefont}{}
697 \@namedef{cftafter#3title}{}
698 \@namedef{cft#3prehook}{}
699 \@namedef{cft#3posthook}{}
700 }

```

```

701 \renewcommand{\setfloatadjustment}[2]{}

```

Borrowed from the lwarp version of keyfloat:

```

702 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{0{-1.2ex} m}
703 {% start
704 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
705 \captionsetup{type=#2}%
706 }
707 {%
708 \endLWR@BlockClassWP%
709 }

```

```
710
711 \DeclareDocumentEnvironment{marginfigure}{o}
712 {\begin{KFLTmemoir@marginfloat}{figure}}
713 {\end{KFLTmemoir@marginfloat}}
714
715 \DeclareDocumentEnvironment{margintable}{o}
716 {\begin{KFLTmemoir@marginfloat}{table}}
717 {\end{KFLTmemoir@marginfloat}}

718 \renewcommand{\setmarginfloatcaptionadjustment}[2]{}
719 \renewcommand{\setmpjustification}[2]{}
720 \renewcommand*{\mpjustification}{}
721 \renewcommand*{\setfloatlocations}[2]{}
722 \DeclareDocumentCommand{\suppressfloats}{o}{}
723 \renewcommand*{\FloatBlock}{}
724 \renewcommand*{\FloatBlockAllowAbove}{}
725 \renewcommand*{\FloatBlockAllowBelow}{}
726 \renewcommand*{\setFloatBlockFor}{}
727
728 \renewcommand{\captiontitlefinal}[1]{}
729
730 \renewcommand{\flegtable}{\tablename}
731 \renewcommand{\flegfigure}{\figurename}
732 \renewcommand{\flegtocable}{}
733 \renewcommand{\flegtocfigure}{}
734
735
736 \renewcommand{\subcaption}[2][]{%
737 \ifblank{#1}{\subfloat[#2]}{\subfloat[#1][#2]}}%
738 }
739
740 \renewcommand{\contsubcaption}{\ContinuedFloat\subcaption}
741
742 \LetLtxMacro\subcaptionref\subref
743
744 \renewcommand*{\tightsubcaptions}{}
745 \renewcommand*{\loosesubcaptions}{}
746
747 \renewcommand*{\subcaptionsize}[1]{}
748 \renewcommand*{\subcaptionlabelfont}[1]{}
749 \renewcommand*{\subcaptionfont}[1]{}
750 \renewcommand*{\subcaptionstyle}[1]{}
751
752 \renewcommand*{\hangsubcaption}{}
753 \renewcommand*{\shortsubcaption}{}
754 \renewcommand*{\normalsubcaption}{}
755
756 \RenewDocumentEnvironment{sidecaption}{o m o}
757 {}
```

```

758 {
759 \IfValueTF{#1}{\caption[#1]{#2}}{\caption{#2}}%
760 \IfValueT{#3}{\label{#3}}%
761 }
762
763 % \newlength{\sidecapwidth}
764 % \newlength{\sidecapsep}
765 \renewcommand*\setsidecaps}[2]{}
766 \renewcommand*\sidecapmargin}[1]{}
767 % \newif\ifscapmargleft
768 \scapmargleftfalse
769 \renewcommand*\setsidecappos}[1]{}
770
771 \RenewDocumentEnvironment{sidecontcaption}{m o}
772 {}
773 {%
774 \ContinuedFloat%
775 \caption{#1}%

```

Without `\capttype`, the section is referred to instead.

```

776 \IfValueT{#2}{\label[\@capttype]{#2}}%
777 }

```

`\sidenamedlegend` does not appear to use the TOC argument.

```

778 \renewenvironment{sidenamedlegend}[2] [] {
779 \begin{center}
780 \@nameuse{\@capttype name}\CaptionSeparator#2
781 \end{center}
782 }
783 {}
784
785 \renewenvironment{sidelegend}[1]
786 {\begin{center}
787 #1
788
789 }
790 {\end{center}}
791
792 \renewcommand*\sidecapstyle{}
793 \renewcommand*\overridescapmargin}[1]{}
794 % \newlength{\sidecapraise}
795 \renewcommand*\sidecapfloatwidth}{\linewidth}
796
797 \LetLtxMacro\ctabular\tabular
798 \LetLtxMacro\endctabular\endtabular
799
800 \renewcommand{\autorows}[5] [] {%

```

```

801 #5
802 }
803
804 \renewcommand{\autocol} [5] [] {%
805 #5
806 }

```

## § 469.12 Page notes

```

807 \renewcommand*\feetabovelfloat-{}
808 \renewcommand*\feetbelowfloat-{}
809 \renewcommand*\feetatbottom-{}
810
811 \renewcommand*\verbfootnote [2] [] {
812 \PackageError{lwarp, memoir}
813 {Verbatim footnotes are not yet supported by lwarp.}
814 {This may be improved some day.}
815 }
816
817 \renewcommand*\plainfootnotes-{}
818 \renewcommand*\twocolumnfootnotes-{}
819 \renewcommand*\threecolumnfootnotes-{}
820 \renewcommand*\paragraphfootnotes-{}
821 \renewcommand*\footfudgefiddle-{}
822
823 \renewcommand*\newfootnoteseries [1] {
824 \PackageError{lwarp, memoir}
825 {Memoir footnote series are not yet supported by lwarp.}
826 {This may be improved some day.}
827 }
828
829 \renewcommand*\plainfootstyle [1] {}
830 \renewcommand*\twocolumnfootstyle [1] {}
831 \renewcommand*\threecolumnfootstyle [1] {}
832 \renewcommand*\paragraphfootstyle [1] {}
833
834 \renewcommand*\footfootmark-{}
835 \renewcommand*\footmarkstyle [1] {}
836
837 % \newlength{\footmarkwidth}
838 % \newlength{\footmarksep}
839 % \newlength{\footparindent}
840
841 \renewcommand*\foottextfont-{}
842
843 \renewcommand*\marginparmargin [1] {}
844 \renewcommand*\sideparmargin [1] {}
845
846 \LetLtxMacro\sidepar\marginpar

```

```

847 \renewcommand*{\sideparfont}{}
848 \renewcommand*{\sideparform}{}
849 \LWR@providelength{\sideparvshift}
850
851 \renewcommand*{\parnopar}{}
852
853 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
854 \renewcommand*{\sidebarmargin}[1]{}
855 \renewcommand*{\sidebarfont}{}
856 \renewcommand*{\sidebarform}{}
857 % \newlength{\sidebarhsep}
858 % \newlength{\sidebarvsep}
859 % \newlength{\sidebarwidth}
860 % \newlength{\sidebartopsep}
861 \renewcommand{\setsidebarheight}[1]{}
862 \renewcommand*{\setsidebars}[6]{}
863 \renewcommand*{\footnotesatfoot}{}
864 \renewcommand*{\footnotesinmargin}{}
865
866 \LetLtxMacro\sidefootnote\footnote
867 \LetLtxMacro\sidefootnotemark\footnotemark
868 \LetLtxMacro\sidefootnotetext\footnotetext
869
870 \renewcommand*{\sidefootmargin}[1]{}
871 % \newlength{\sidefoothsep}
872 % \newlength{\sidefootvsep}
873 % \newlength{\sidefootwidth}
874 % \newlength{\sidefootadjust}
875 % \newlength{\sidefootheight}
876 \renewcommand*{\setsidefootheight}[1]{}
877 % \renewcommand*{\sidefootfont}{}% in docs but not in the package
878 \renewcommand*{\setsidefeet}[6]{}
879 \renewcommand*{\sidefootmarkstyle}[1]{}
880 \renewcommand*{\sidefoottextfont}{}
881 \renewcommand*{\sidefootform}{}
882
883 \renewcommand*{\continuousnotenums}{\pncontopttrue}% from pagenote
884 \renewcommand*{\notepageref}{}
885 \renewcommand*{\prenotetext}{}
886 \renewcommand*{\postnotetext}{}
887 \renewcommand*{\idtextinnotes}[1]{}
888 \renewcommand*{\printpageinnotes}[1]{}
889 \renewcommand*{\printpageinnoteshyperref}[1]{}
890 \renewcommand*{\foottopagenote}{}
891 \renewcommand*{\pagetofootnote}{}

```

### § 469.13 **Decorative text**

```

892 \renewcommand*{\epigraphposition}[1]{}

```

```

893 \renewcommand*\epigraphtextposition}[1]{}
894 \renewcommand*\epigraphsourceposition}[1]{}
895 \renewcommand*\epigraphfontsize}[1]{}
896 \renewcommand*\epigraphforheader}[2] []{}
897 \renewcommand*\epigraphpicture{}

```

#### § 469.14 Poetry

```

898 \renewcommand*\vinphantom{}
899 \renewcommand*\vleftofline}[1]{#1}
900 % \let\linenumberfrequency\poemlines
901 % \renewcommand*\linenumberfont}[1]{}
902
903 \DeclareDocumentCommand{\PoemTitle}{s o o m}{%
904 \IfValueTF{#2}%
905 {\poemtitle[#2]{#4}}%
906 {\poemtitle{#4}}%
907 }
908
909 \renewcommand*\NumberPoemTitle{}
910 \renewcommand*\PlainPoemTitle{}
911 \renewcommand*\poemtitlepstyle{}
912 \renewcommand*\poemtitlestarmark}[1]{}
913 \renewcommand*\poemtitlestarpstyle{}
914 \renewcommand*\PoemTitleheadstart{}
915 \renewcommand*\printPoemTitlenonum{}
916 \renewcommand*\printPoemTitlenum{}
917 \renewcommand*\afterPoemTitlenum{}
918 \renewcommand*\printPoemTitletitle}[1]{}
919 \renewcommand*\afterPoemTitle{}
920 \newlength{\midpoemtitleskip}
921 \renewcommand*\PoemTitlenumfont{}
922 \renewcommand*\PoemTitlefont{}

```

#### § 469.15 Boxes, verbatims and files

```

923 \renewenvironment{qframe}{\framed}{\endframed}
924 \renewenvironment{qshade}{\shaded}{\endshaded}

```

Use the comment package:

```

925 \renewcommand*\commentsoff}[1]{\includecomment{#1}}
926 \renewcommand*\commentson}[1]{\excludecomment{#1}}
927 \LetLtxMacro\renewcomment\commentson
928
929 \renewcommand*\setverbatimfont}[1]{}
930 \renewcommand*\tabson}[1]{}
931 \renewcommand*\tabsoff{}
932 \renewcommand*\wrappingon{}

```

```

933 \renewcommand*\wrappingoff-{}
934 \renewcommand*\verbatimindent-{}
935 \renewcommand*\verbatimbreakchar}[1]{
936 \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.

```

937 \renewcommand*\bvbox-{}
938 \renewcommand*\bvtopandtail-{}
939 \renewcommand*\bvshades-{}
940 \renewcommand*\nobvbox-{}
941 % \newlength\bvboxsep
942 \renewcommand*\bvtoprulehook-{}
943 \renewcommand*\bvtopmidhook-{}
944 \renewcommand*\bvendrulehook-{}
945 \renewcommand*\bvleftsidehook-{}
946 \renewcommand*\bvrightsidehook-{}
947 \renewcommand*\bvperpagetrue-{}
948 \renewcommand*\bvperpagefalse-{}
949 \renewcommand*\bvtopofpage}[1]{
950 \renewcommand*\bvendofpage}[1]{
951 \renewcommand*\linenumberfrequency}[1]{
952 \renewcommand*\resetbvlinenumber-{}
953 \renewcommand*\setbvlinenums}[2]{
954 \renewcommand*\linenumberfont}[1]{
955 \renewcommand*\bvnumbersinside-{}
956 \renewcommand*\bvnumbersoutside-{}

```

## § 469.16 Cross referencing

```

957 \renewcommand*\fref}[1]{\cref{#1}}
958 \renewcommand*\tref}[1]{\cref{#1}}
959 \renewcommand*\pref}[1]{\cpageref{#1}}
960 \renewcommand*\Aref}[1]{\cref{#1}}
961 \renewcommand*\Bref}[1]{\cref{#1}}
962 \renewcommand*\Pref}[1]{\cref{#1}}
963 \renewcommand*\Sref}[1]{\cref{#1}}
964 \renewcommand*\figurerefname}{Figure}
965 \renewcommand*\tablerefname}{Table}
966 \renewcommand*\pagerefname}{page}
967 \renewcommand*\bookrefname}{Book~}
968 \renewcommand*\partrefname}{Part~}
969 \renewcommand*\chapterrefname}{Chapter~}
970 \renewcommand*\sectionrefname}{\S}
971 \renewcommand*\appendixrefname}{Appendix~}
972 \LetLtxMacro\titleref\nameref
973 \renewcommand*\headnameref-{}

```

```

974 \renewcommand*{\tocnameref}{}
975
976 \providecounter{LWR@currenttitle}
977
978 \renewcommand*{\currenttitle}{%
979 \addtocounter{LWR@currenttitle}{1}%
980 \label{currenttitle\arabic{LWR@currenttitle}}%
981 \nameref{currenttitle\arabic{LWR@currenttitle}}%
982 }
983
984 \renewcommand*{\theTitleReference}[2]{}
985 \renewcommand*{\namerefon}{}
986 \renewcommand*{\namerefoff}{}

```

### § 469.17 **Back matter**

Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.

```

987 \AtBeginDocument{
988
989 \def\@@wrindexhyp#1||\{%
990 \addtocounter{LWR@autoindex}{1}%
991 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
992 % \ifshowindexmark\@showidx{#1}\fi
993 \protected@write\@auxout{}%
994 {\string\@@wrindexm@\@idxfile}{#1}{\arabic{LWR@autoindex}}%
995 \endgroup
996 \@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.

```

997 \def\@@wrspindexhyp#1||\{%
998 \addtocounter{LWR@autoindex}{1}%
999 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
1000 % \ifshowindexmark\@showidx{#1}\fi
1001 \protected@write\@auxout{}%
1002 {%
1003 % \string\@@wrindexm@\@idxfile}{#1}{\@nameuse{the\@sptheid}}%
1004 \string\@@wrindexm@\@idxfile}{#1}{\arabic{LWR@autoindex}}%
1005 }%
1006 \endgroup
1007 \@esphack}%
1008
1009 }% \AtBeginDocument

```

Patched to use `_html` filename and `\BaseJobname`:

```

1010 \catcode'_ =12%
1011 \renewcommand*\makeindex}[1][\BaseJobname]{%
1012 \if@filesw
1013 \def\gindex{\@bsphack%
1014 \@ifnextchar [{\@index}{\@index[\BaseJobname]}}
1015 \def\specialindex{\@bsphack\@spindex}%
1016 \makememindexhook
1017 \expandafter\newwrite\csname #1@idxfile\endcsname
1018 \expandafter\immediate\openout \csname #1@idxfile\endcsname #1_html.idx\relax
1019 \typeout{Writing index file #1_html.idx }%
1020 \fi}
1021 \catcode'_ =8%

```

Patched to use `_html` filename and `\BaseJobname`. This will later be patched by the `lwarp` core.

```

1022 \catcode'_ =12%
1023 \renewcommand*\printindex}[1][\BaseJobname]{\@input@{#1_html.ind}}
1024 \catcode'_ =8%

```

```

1025 \DeclareDocumentCommand{\newblock}{-}{-}
1026 %
1027 \renewcommand*\showindexmarks{}
1028 \renewcommand*\hideindexmarks{}
1029
1030 \renewcommand*\xindyindex{}

```

## § 469.18 Miscellaneous

```

1031 \renewcommand*\changemarks{}
1032 \renewcommand*\nochangemarks{}
1033 \renewcommand*\added}[1]{}
1034 \renewcommand*\deleted}[1]{}
1035 \renewcommand*\changed}[1]{}
1036
1037 \renewcommand*\showtrimsoff{}
1038 \renewcommand*\showtrimson{}
1039 \renewcommand*\trimXmarks{}
1040 \renewcommand*\trimLmarks{}
1041 \renewcommand*\trimFrame{}
1042 \renewcommand*\trimNone{}
1043 \renewcommand*\trimmarkscolor{}
1044 \renewcommand*\trimmarks{}
1045 \renewcommand*\tmarktl{}
1046 \renewcommand*\tmarktr{}
1047 \renewcommand*\tmarkbr{}
1048 \renewcommand*\tmarkbl{}

```

```

1049 \renewcommand*\tmarktm}{ }
1050 \renewcommand*\tmarkmr}{ }
1051 \renewcommand*\tmarkbm}{ }
1052 \renewcommand*\tmarkml}{ }
1053 \renewcommand*\trimmark}{ }
1054 \renewcommand*\quarkmarks}{ }
1055 \renewcommand*\registrationColour}[1]{ }
1056
1057 \renewcommand*\leavespergathering}[1]{ }
1058
1059 \renewcommand*\noprelistbreak}{ }
1060
1061 \renewcommand*\cleartorecto}{ }
1062 \renewcommand*\cleartoverso}{ }
1063
1064 \renewenvironment{vplace}[1][]{ }{ }

```

### § 469.19 ccaption emulation

```

1065 \renewcommand*\captiondelim}[1]{\renewcommand*\CaptionSeparator}{#1}}
1066 \renewcommand*\captionnamefont}[1]{ }
1067 \renewcommand*\captiontitlefont}[1]{ }
1068 \renewcommand*\flushleft}{ }
1069 \renewcommand*\centerlastline}{ }
1070 \renewcommand*\captionstyle}[2][]{ }
1071 \DeclareDocumentCommand{\captionwidth}{m}{ }
1072 \renewcommand*\changecaptionwidth}{ }
1073 \renewcommand*\normalcaptionwidth}{ }
1074 \renewcommand*\hangcaption}{ }
1075 \renewcommand*\indentcaption}[1]{ }
1076 \renewcommand*\normalcaption}{ }
1077 \renewcommand{\precaption}[1]{ }
1078 \renewcommand{\postcaption}[1]{ }
1079 \renewcommand{\midbicapTION}[1]{ }
1080 \renewcommand{\contcaption}[1]{%
1081 % \ContinuedFloat%
1082 % \caption{#1}%
1083 \begin{LWR@figcaption}% later becomes \caption*
1084 \LWR@isolate{\@nameuse{\@capttype name}}~%
1085 \thechapter.\the\value{\@capttype}\CaptionSeparator\LWR@isolate{#1}%
1086 \end{LWR@figcaption}
1087 }

1088 \newlength{\abovelegendskip}
1089 \setlength{\abovelegendskip}{0.5\baselineskip}
1090 \newlength{\belowlegendskip}
1091 \setlength{\belowlegendskip}{\abovelegendskip}

```

The extra \\ here forces a <br> in HTML when \legend is used in a \marginpar.

```

1092 \renewcommand{\legend}[1]{\begin{center}#1\\end{center}}
1093
1094 \renewcommand{\namedlegend}[2][]{
1095 \begin{center}
1096 \@nameuse{fleg\@capttype}\CaptionSeparator#2\\
1097 \end{center}
1098 \@nameuse{flegtoc\@capttype}#{#1}
1099 }
1100
1101 \renewcommand{\newfixedcaption}[3][\caption]{%
1102 \renewcommand{#2}{\def\@capttype{#3}#1}}
1103 \renewcommand{\renewfixedcaption}[3][\caption]{%
1104 \renewcommand{#2}{\def\@capttype{#3}#1}}
1105 \renewcommand{\providefixedcaption}[3][\caption]{%
1106 \providecommand{#2}{\def\@capttype{#3}#1}}
1107
1108 \renewcommand{\bitwonumcaption}[6][]{%
1109 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1110 \addtocounter{\@capttype}{-1}%
1111 \begingroup%
1112 \csdef{\@capttype name}{#4}%
1113 \ifblank{#5}{\caption{#6}}{\caption[#5]{#6}}%
1114 \endgroup%
1115 \ifblank{#1}{ }\{\label{#1}}%
1116 }
1117
1118 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo
1119
1120 \renewcommand{\bicaption}[5][]{%
1121 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1122 \begin{LWR@figcaption}% later becomes \caption*
1123 \LWR@isolate{#4} \thechapter.\the\value{\@capttype}\CaptionSeparator\LWR@isolate{#5}%
1124 \end{LWR@figcaption}
1125 \ifblank{#1}{ }\{\label{#1}}%
1126 }
1127
1128 \renewcommand{\bicontcaption}[3]{%
1129 \contcaption{#1}%
1130 \begingroup%
1131 \csdef{\@capttype name}{#2}%
1132 \contcaption{#3}%
1133 \endgroup%
1134 }

1135 % only in ccaption, not in memoir:
1136 \LetLtxMacro\longbitwonumcaption\bitwonumcaption%
1137 \LetLtxMacro\longbionenumcaption\bitwonumcaption%
1138 \LetLtxMacro\longbicaption\bicaption%
1139
1140 \RenewDocumentCommand{\subtop}{0{} 0{} m}{%

```

```

1141 \subfloat[#1][#2]{#3}%
1142 }
1143
1144 \RenewDocumentCommand{\subbottom}{0{} 0{} m}{%
1145 \subfloat[#1][#2]{#3}%
1146 }
1147
1148 \renewcommand{\contsubtop}{%
1149 \ContinuedFloat\addtocounter{\@capttype}{1}%
1150 \subtop}
1151
1152 \renewcommand{\contsubbottom}{%
1153 \ContinuedFloat\addtocounter{\@capttype}{1}%
1154 \subbottom}
1155
1156 \renewcommand{\subconcluded}{=}
1157
1158 \let\subfigure\subbottom
1159 \let\subtable\subtop
1160
1161 \let\contsubtable\contsubtop
1162 \let\contsubfigure\contsubbottom

1163 \newcommand{\newfloatentry}[4][\@empty]{TODO: newfloatentry}
1164 \newcommand{\newfloatlist}[5][\@empty]{TODO: newfloatlist}
1165 \newcommand{\newfloatenv}[4][\@empty]{TODO: newfloatenv}
1166 \DeclareRobustCommand{\newfloatpagesoff}[1]{=}
1167 \DeclareRobustCommand{\newfloatpageson}[1]{=}
1168 \newcommand{\setnewfloatindents}[3]{=}

```

## § 469.20 Final patchwork

```

1169 \newlistof{tableofcontents}{toc}{\contentsname}
1170 \newlistof{listoffigures}{lof}{\listfigurename}
1171 \newlistof{listoftables}{lot}{\listtablename}

```

# Change History

## § 470 Chg Hist

For the most recent changes, see page [1069](#).

|       |                                                                   |                                                                       |
|-------|-------------------------------------------------------------------|-----------------------------------------------------------------------|
| v0.10 | General: 2016/03/08 Initial version . . . 1                       | Docs: Table: Cross-referencing<br>data structures. . . . . 490        |
| v0.11 | General: 2016/03/11 . . . . . 1                                   | Docs: Table: Float data structures. 502                               |
|       | Added section: Operating-System<br>portability. . . . . 222       | Docs: Trademarks section. . . . . 202                                 |
|       | Added section: Selecting the<br>operating system. . . . . 128     | Docs: Troubleshooting<br>cross-references. . . . . 197                |
|       | Test Suite: MS-WINDOWS in<br>README.txt . . . . . 1               | Test Suite: Assigned cleveref name<br>for Test Float. . . . . 1       |
|       | Test Suite: limages and index in<br>README.txt . . . . . 1        | Test Suite: Floatrow . . . . . 1                                      |
| v0.12 | \LWR@newhtmlfile: Bugfix: toc with<br>numbered files. . . . . 373 | v0.15                                                                 |
|       | General: 2016/03/14 . . . . . 1                                   | General: 2016/04/06 . . . . . 1                                       |
|       | Global: Uses \p@(type) in float<br>captions. . . . . 1            | Added. . . . . 749                                                    |
|       | Test Suite: Sub-figures . . . . . 1                               | Ampersand (&): Fixed handling<br>when passed as an argument. . . 432  |
| v0.13 | \CaptionSeparator: Fix for newer<br>babel package. . . . . 506    | Docs: Added warning icons for<br>items needing special attention. 205 |
|       | \LWR@LwarpStart: \up and \fup . . 394                             | Docs: Clarify print/HTML output. 128                                  |
|       | General: 2016/03/24 . . . . . 1                                   | Docs: Moved the supported<br>features table to the introduction. 79   |
|       | Fix dollar-redefined bug for newer<br>package. . . . . 944        | Files: lwarp_formal.css added. . . . 1                                |
|       | Removed package: subfig . . . . . 1                               | Fix: steps counter . . . . . 748                                      |
|       | Test Suite: Ordinals, Subcaption . . 1                            | Fixed & handling. . . . . 746                                         |
| v0.14 | \LWR@htmlsectionfilename: Fix:<br>Links to home page. . . . . 335 | Test Suite: test_suite_formal.css<br>file added. . . . . 1            |
|       | General: 2016/03/31 . . . . . 1                                   | v0.16                                                                 |
|       | floatrow: Added. . . . . 744                                      | General: 2016/04/11 . . . . . 1                                       |
|       | Docs: Commands for a successful<br>HTML conversion. . . . . 132   | \titlingpage: Improved<br>print-output spacing. . . . . 403           |
|       | Docs: Commands into a warpprint<br>environment. . . . . 129       | xfrac: Adjusted for the use of any<br>font: . . . . . 1003            |
|       | Docs: Newclude limitations. . . . 176                             | Added XeLaTeX, LuaLaTeX<br>support. . . . . 206                       |
|       |                                                                   | Docs: Font and UTF-8 support. . . 113                                 |
|       |                                                                   | Docs: Moved location of<br>\usepackage{lwarp}. . . . . 116            |
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|       |                                                                   | Lwarp no longer selects fonts. 113, 231                               |
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| Test Suite: Improved titlingpage.                                      | 403 | verse: Supports verse, memoir packages.                                  | 980           |
| Test Suite: Lwarp no longer selects fonts.                             | 1   | minipage: Fix: \linewidth, \textwidth, \textheight inside a minipage.    | 580           |
| Test Suite: Supports XeLaTeX, LuaLaTeX.                                | 1   |                                                                          |               |
| v0.17                                                                  |     | v0.19                                                                    |               |
| \LWR@htmlsectionfilename: Fix: Links when entire doc is one HTML page. | 335 | \HTMLFilename: Docs: Escape filename underscores.                        | 334           |
| General: 2016/04/14                                                    | 1   | \HomeHTMLFilename: Docs: Escape filename underscores.                    | 334           |
| mdframed: Added.                                                       | 820 | \LWR@LwarpStart: Enabled \ equal to \newline.                            | 393           |
| Test Suite: Fix: Print-version front-matter page numbers.              | 1   | \LWR@doequation: MATHJAX support.                                        | 544           |
| Test Suite: Mdframed                                                   | 1   | \LWR@doubledollar: MATHJAX support.                                      | 537           |
| v0.18                                                                  |     | \LWR@filestart: lwarp_mathjax.txt loaded.                                | 390           |
| \LWR@includegraphicsb: Add: svgz file extension.                       | 769 | \LWR@minipagestartpars: Suppresses paragraph tags between minipages.     | 600           |
| em, ex, %, px dimensions preserved.                                    | 769 | \LWR@subsingledollar: MATHJAX support.                                   | 531           |
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| Improved HTML output linebreaks.                                       | 769 | \hspace: Fix: \hspace length computations.                               | 602           |
| \LWR@myshorttoc: Reorganize \HomeHTMLFilename logic.                   | 510 | \minipagefullwidth: Added: No width tag for the next minipage in HTML.   | 579           |
| \LWR@newhtmlfile: sideroc after title, improving responsive design.    | 372 | \warpHTMLonly: Added.                                                    | 230           |
| \LWR@requesttoc: Reorganize \HomeHTMLFilename logic.                   | 396 | \warpprintonly: Replaces \rowprintedonly.                                | 230           |
| \LWR@subhyperref: Improved HTML output linebreaks.                     | 498 | \xfracHTMLfontsize: Added.                                               | 1003          |
| \LWR@subhyperrefclass: Improved HTML output linebreaks.                | 499 | General: 2016/06/08                                                      | 1             |
| \LWR@subinlineimage: Suppress extra space.                             | 500 | css for table note item.                                                 | 942           |
| \hspace: \hspace supported.                                            | 602 | MATHJAX support added.                                                   | 541, 548, 549 |
| General: 2016/05/19                                                    | 1   | multirow: Added optional args.                                           | 839           |
| File: lwarp.css: Improved toc outline display.                         | 1   | Adapts to tikz version.                                                  | 944           |
| Files: lwarp.css and lwarp_formal.css: Improved responsive design.     | 1   | Avoids MATHJAX.                                                          | 530           |
| Microtype disabled during HTML generation                              | 231 | cleveref: Loaded \AtEndPreamble.                                         | 575           |
| PDF Unicode input characters.                                          | 220 | Docs: Math options.                                                      | 116           |
| Test Suite: Verse package                                              | 1   | Docs: Table: Cross-referencing data structures, updated.                 | 490           |
| lateximage: pdfcrop: --hires added.                                    | 558 | File: lwarp.css: tnoteitemheader added.                                  | 1             |
| Reorganize \HomeHTMLFilename logic.                                    | 558 | File: lwarp_mathjax.txt added.                                           | 1             |
| Suppress extra space.                                                  | 558 |                                                                          |               |

|                                                                                                          |     |                                                                        |     |
|----------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------|-----|
| Introduction: MATHJAX support mentioned. . . . .                                                         | 76  | \SetHTMLFileNumber: Add: Control file numbers. . . . .                 | 335 |
| Options: mathsvg and mathjax . . . . .                                                                   | 225 | \cpagerefFor: User-redefinable word for page references. . . . .       | 576 |
| Supports colored \rule. . . . .                                                                          | 993 | \dotfill: Inserts an ellipsis. . . . .                                 | 599 |
| titleps: null \pagestyle and \thispagestyle for HTML. . . . .                                            | 945 | \hfill: Inserts a \qqquad. . . . .                                     | 599 |
| v0.20                                                                                                    |     | \hrulefill: Inserts a short rule. . . . .                              | 599 |
| \BlockClassSingle: Renamed from "LWR@htmldivclassline". . . . .                                          | 348 | \hspace: Add: Supports HTML thin breakable space. . . . .              | 602 |
| \HTMLDescription: Added \NewHTMLdescription. (Renamed in v0.30.) . . . . .                               | 360 | \hyperindexref: Print mode provided in case hyperref not used. . . . . | 521 |
| \HTMLFilename: No longer escape underscores. . . . .                                                     | 334 | \pageref: Added. . . . .                                               | 497 |
| \HomeHTMLFilename: No longer escape underscores. . . . .                                                 | 334 | \tracinglwarp: Added. . . . .                                          | 243 |
| \InlineClass: Renamed from "inlineclass". . . . .                                                        | 349 | General: 2017/02/09 . . . . .                                          | 1   |
| \LWR@LwarpStart: Fix: math cross references. . . . .                                                     | 394 | afterpage: Added. . . . .                                              | 623 |
| \LWR@closeparagraph: \unskip extra spaces. . . . .                                                       | 353 | alltt: Added. . . . .                                                  | 629 |
| No break tags in the start/end of a tabular. . . . .                                                     | 353 | bookmark: Added. . . . .                                               | 657 |
| \LWR@endoffline: Fix: \ \ . . . . .                                                                      | 600 | caption and subcaption supported. . . . .                              | 1   |
| \LWR@filestart: Adds meta description. . . . .                                                           | 390 | cleveref and referencing patches: Applied \AfterEndPreamble. . . . .   | 575 |
| \LWR@htmldivclass: Added optional style. . . . .                                                         | 347 | draftwatermark: Added. . . . .                                         | 709 |
| \LWR@htmlclass: Added optional style. . . . .                                                            | 346 | eso-pic: Added. . . . .                                                | 720 |
| \LWR@htmlsectionfilename: HTMLFilename: removed additional trailing '-', and may be empty. . . . .       | 335 | everypage: Added. . . . .                                              | 721 |
| Sections called "Index" or "index" have an underscore prepended to their filenames if no prefix. . . . . | 335 | extramarks: Added. . . . .                                             | 722 |
| \LWR@includegraphicsb: Fix: \linewidth in a floatrow. . . . .                                            | 769 | fancyhdr: Added. . . . .                                               | 728 |
| Fix: Expands filename. . . . .                                                                           | 769 | float: Improved float caption type handling. . . . .                   | 741 |
| \LWR@longtabledatacaptiontag: Fix: Pars in captions. . . . .                                             | 472 | hyperref: Additional user macros. . . . .                              | 782 |
| \LWR@section: Combined higher-level sections together into files. . . . .                                | 380 | keyfloat: Added. . . . .                                               | 797 |
| \LWR@setOSWindows: Auto-detects operating system. . . . .                                                | 223 | letterspace: User-interface emulated. . . . .                          | 800 |
| \LWR@subhtmlclass: Factored code. . . . .                                                                | 346 | listings: Added. . . . .                                               | 805 |
|                                                                                                          |     | ltcaption: Added. . . . .                                              | 813 |
|                                                                                                          |     | lwarp-newproject: Added. . . . .                                       | 256 |
|                                                                                                          |     | microtype: User-interface emulated. . . . .                            | 833 |
|                                                                                                          |     | needspace: Added. . . . .                                              | 846 |
|                                                                                                          |     | nowidow: Added. . . . .                                                | 849 |
|                                                                                                          |     | placeins: Added. . . . .                                               | 875 |
|                                                                                                          |     | ragged2e: Added. . . . .                                               | 883 |
|                                                                                                          |     | setspace: Improved support. . . . .                                    | 904 |
|                                                                                                          |     | textpos: Added. . . . .                                                | 936 |
|                                                                                                          |     | titleps: Added. . . . .                                                | 945 |
|                                                                                                          |     | titlesec: Added. . . . .                                               | 949 |
|                                                                                                          |     | titletoc: Added. . . . .                                               | 951 |
|                                                                                                          |     | titling: Improved compatibility. . . . .                               | 953 |
|                                                                                                          |     | tocloft: Added. . . . .                                                | 961 |
|                                                                                                          |     | wallpaper: Added. . . . .                                              | 986 |

|                                                                                                      |      |       |  |
|------------------------------------------------------------------------------------------------------|------|-------|--|
| wrapfig: Added. . . . .                                                                              | 988  |       |  |
| xetexko-vertical: Added. . . . .                                                                     | 1002 |       |  |
| Added @, <, > columns. . . . .                                                                       | 426  |       |  |
| Added single-expansion data<br>arrays. . . . .                                                       | 330  |       |  |
| Code factored into independent<br>lwrap_html files. . . . .                                          | 614  |       |  |
| Docs: Examples for generating<br>HTML file names. . . . .                                            | 126  |       |  |
| Docs: Improved index. . . . .                                                                        | 1    | v0.22 |  |
| Enhanced titling support. . . . .                                                                    | 401  |       |  |
| File: lwrap.css: Minor fixes for<br>validation. . . . .                                              | 1    |       |  |
| File: lwrapmk used to compile<br>print, HTML, indexes, and<br>lateximages. . . . .                   | 1    |       |  |
| Fix: \linewidth in a floatrow. . .                                                                   | 746  |       |  |
| Moved sidebar and example code<br>to test suite. . . . .                                             | 1    |       |  |
| Page geometry set to 6in wide with<br>large margins. . . . .                                         | 232  |       |  |
| Parallel versions of aux files for<br>print/HTML. . . . .                                            | 1    |       |  |
| Removed reliance on make, grep,<br>gawk. . . . .                                                     | 1    |       |  |
| Tabular: \unskip extra spaces. . .                                                                   | 426  |       |  |
| Test Suite: HTML meta<br>descriptions. . . . .                                                       | 1    |       |  |
| verbatim: Added. . . . .                                                                             | 413  |       |  |
| BlockClass: Added optional style. .                                                                  | 348  |       |  |
| Renamed from "blockclass". . . .                                                                     | 348  |       |  |
| LWR@nestspan: Fix: Minipages inside<br>a span. . . . .                                               | 343  |       |  |
| v0.21                                                                                                |      |       |  |
| \LWR@LwrapStart: Changed<br>lateximages to a .txt file. . . .                                        | 393  |       |  |
| \LWR@filestart: Skip title if not<br>given. . . . .                                                  | 390  |       |  |
| \LWR@newhtmlfile: Skip title if not<br>given. . . . .                                                | 372  |       |  |
| \marginpar: Fixed source listing. . .                                                                | 366  |       |  |
| \marginparBlock: Fixed source<br>listing. . . . .                                                    | 366  |       |  |
| General: 2017/02/23 . . . . .                                                                        | 1    |       |  |
| fontenc: Added. . . . .                                                                              | 752  | v0.24 |  |
| lwrapmk: Fix: <i>lwrapmk again</i> for<br>WINDOWS. . . . .                                           | 308  |       |  |
| lwrapmk: Fix: <i>lwrapmk images</i><br>for WINDOWS. . . . .                                          | 308  |       |  |
| lwrapmk: Fix: <i>lwrapmk</i> uses<br>lateximages text file instead of<br>shell script. . . . .       | 308  |       |  |
| Add: Errors for misplaced<br>packages. . . . .                                                       | 207  |       |  |
| Docs: Added internet class. . . . .                                                                  | 85   |       |  |
| Docs: Added TeX2page, GladTeX. . . .                                                                 | 85   |       |  |
| Docs: Installing on WINDOWS. . . . .                                                                 | 92   |       |  |
| File: lwrap_tutorial.txt added. . . .                                                                | 96   |       |  |
| \LWR@parseDcolumn: Added tabular<br>D column. . . . .                                                | 442  |       |  |
| \LWR@parsebangcolumn: Added<br>tabular ! column. . . . .                                             | 437  |       |  |
| \LWR@parsetablecols: Unknown<br>table column types become l.<br>Added tabular D, !, X columns. . . . | 444  |       |  |
| \LWR@printmccoldata: Added<br>tabular D, !, and X columns. . . .                                     | 466  |       |  |
| General: 2017/03/02 . . . . .                                                                        | 1    |       |  |
| abstract: Added. . . . .                                                                             | 616  |       |  |
| change page: Added. . . . .                                                                          | 669  |       |  |
| dcolumn: Added. . . . .                                                                              | 706  |       |  |
| ftnright: Added. . . . .                                                                             | 758  |       |  |
| geometry: Nullified commands. . . .                                                                  | 760  |       |  |
| indentfirst: Added. . . . .                                                                          | 795  |       |  |
| layout: Added. . . . .                                                                               | 800  |       |  |
| lscap: Added. . . . .                                                                                | 812  |       |  |
| mcaption: Added. . . . .                                                                             | 820  |       |  |
| nameref: Added. . . . .                                                                              | 844  |       |  |
| nextpage: Added. . . . .                                                                             | 846  |       |  |
| parskip: Added. . . . .                                                                              | 867  |       |  |
| showkeys: Added. . . . .                                                                             | 906  |       |  |
| sidecap: Added. . . . .                                                                              | 906  |       |  |
| tabularx: Added. . . . .                                                                             | 930  |       |  |
| varioref: Supported. . . . .                                                                         | 140  |       |  |
| verse: Added. . . . .                                                                                | 980  |       |  |
| v0.23                                                                                                |      |       |  |
| \LWR@parsetablecols: Fix for vert<br>bar column type. . . . .                                        | 444  |       |  |
| \LWR@printmccoldata: Fix for vert<br>bar column type. . . . .                                        | 466  |       |  |
| General: 2017/03/02 . . . . .                                                                        | 1    |       |  |
| \LWR@htmlfileref: Fix: Index links<br>while \tracinglwrap. . . . .                                   | 493  |       |  |
| \hspace: Add: \hspace \fill<br>converts to 2em . . . . .                                             | 602  |       |  |

|                                                                                                                                                           |     |                                                                                                                            |        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------|--------|
| <code>\hypertocfloat</code> : List of floats responds to <code>lofdepth</code> ,<br><code>lotdepth</code> . . . . .                                       | 517 | <code>mparhack</code> : Added. . . . .                                                                                     | 836    |
| General: 2017/03/15 . . . . .                                                                                                                             | 1   | <code>pagenote</code> : Supported as-is. . . . .                                                                           | 864    |
| <code>floatrow</code> : Support for <code>subfig</code> . . . . .                                                                                         | 744 | <code>sidenotes</code> : Added. . . . .                                                                                    | 907    |
| <code>subfig</code> : Added. . . . .                                                                                                                      | 921 | Docs: Improved MiKTeX install instructions. . . . .                                                                        | 90, 92 |
| <code>tikz</code> : For <code>tikz v3.0.0</code> or later, auto-loads <code>tikz babel</code> library if necessary. . . . .                               | 944 | Dollar span avoided in a <code>lateximage</code> . . . . .                                                                 | 530    |
| Docs: Filename underscore. 120, 134                                                                                                                       |     | Footnotes now are L <sup>A</sup> T <sub>E</sub> X boxes instead of <code>pagenotes</code> . . . . .                        | 361    |
| Fix for inline images. . . . .                                                                                                                            | 944 | <code>lateximage</code> : Labels track page numbers of <code>lateximages</code> . . . . .                                  | 558    |
| No longer preloads <code>subcaption</code> ; conflicted with <code>subfig</code> . . . . .                                                                | 234 | Print mode now uses a <code>minipage</code> of <code>\linewidth</code> . . . . .                                           | 558    |
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# General Index

This is an index of instructions and concepts. Look here when wondering how to do something, and check the Troubleshooting Index when something goes wrong.

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# Troubleshooting Index

This index is a sorted reference of problems and solutions. In order to make it easier to locate a solution, the same issue may be addressed by more than one entry.

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