

Lwarp

L^AT_EX HTML⁵

The lwarp package

L^AT_EX to HTML

v0.85 — 2020/05/01

© 2016–2020 Brian Dunn
bd@BDTechConcepts.com

Abstract

The `lwarp` package converts L^AT_EX to HTML by using L^AT_EX to process the user's document and directly generate HTML tags. External utility programs are only used for the final conversion of text and images. Math may be represented by SVG images or MATHJAX. Hundreds of L^AT_EX packages are supported, including dozens with MATHJAX emulation.

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

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

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

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

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

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

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

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

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

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

Lwarp is still in development. Changes are likely.

License:

This work may be distributed and/or modified under the conditions of the LaTeX Project Public License, either version 1.3 of this license or (at your option) any later version. The latest version of this license is in <http://www.latex-project.org/lppl.txt> and version 1.3 or later is part of all distributions of LaTeX version 2005/12/01 or later.

Support T_EX development

T_EX and related projects:

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

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

Donations may be directed towards individual projects:

TUG Bursary Fund: Assistance for attending annual TUG meetings.

CTAN: The Comprehensive T_EX Archive Network — Central storage for T_EX.

TeX Development Fund: Support for specific projects.

EduTeX: Teaching and using T_EX in schools and universities.

GUST e-foundry fonts: Enhanced for math and additional language groups.

LaTeX Project: Modernizing the L^AT_EX core.

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

LuaTeX: Combining the pdfT_EX engine and the Lua language.

MetaPost: Postscript graphics.

MacTeX: T_EX for Mac.

PDF Accessibility: Modern PDF standards.

Other: Additional projects may be specified.

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

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

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

Contents

Support T_EX development	2
List of Figures	41
List of Tables	41
1 Updates	42
2 Introduction	58
2.1 Typesetting conventions	60
2.2 Supported packages and features	61
3 Alternatives	67
3.1 internet class	67
3.2 T _E X4HT	67
3.3 Translators	67
3.4 ASCIIDOC and ASCIIDOCTOR	68
3.4.1 ASCIIDOCTOR- \LaTeX	68
3.5 PANDOC	68
3.6 Word processors	68
3.7 Commercial systems	68
3.8 Comparisons	68
4 Installation	70
4.1 Installing the lwarp package	72
4.2 Installing the <i>lwarpmk</i> utility	73
4.2.1 Using a local copy of <i>lwarpmk</i>	75
4.3 Installing additional utilities	75
5 Tutorial	77
5.1 Starting a new project	77
5.2 Compiling the print version with <i>lwarpmk</i>	81
5.3 Compiling the HTML version with <i>lwarpmk</i>	82
5.4 Generating the SVG images	83

5.5	Using <code>MATHJAX</code> for math	84
5.6	Changing the <code>CSS</code> style	85
5.7	Customizing the <code>HTML</code> output	85
5.8	Using <code>latexmk</code>	86
5.9	Using <code>X_YL^AT_EX</code> or <code>Lua^AT_EX</code>	87
5.10	Using <code>DVI L^AT_EX</code>	87
5.11	Using a glossary	88
5.11.1	<code>gloss</code> package	88
5.11.2	<code>glossaries</code> package	88
5.12	Cleaning auxiliary files	89
5.13	Cleaning auxiliary and output files	89
5.14	Cleaning the images from the <code><project>-images</code> directory	89
5.15	Converting <code>PDF</code> or <code>EPS</code> images to <code>SVG</code>	89
5.16	Creating <code>HTML</code> from an incomplete compile	89
5.17	Processing multiple projects in the same directory	89
5.18	Using the <code>make</code> utility	90
5.19	What next?	91
6	Converting an existing document	92
7	Additional details	93
7.1	Localization	93
7.2	Accessibility	93
7.3	Shell escape	95
7.4	Font and <code>UTF-8</code> support	95
7.4.1	Indexes, glossaries, and encoding	97
7.5	<code>lwarp</code> package loading and options	98
7.6	Customizing the <code>HTML</code> output	103
7.6.1	Example <code>HTML</code> file naming	109
7.7	Customizing the <code>CSS</code>	110
7.8	Assigning <code>CSS</code> classes and styles	111

7.9	Selecting the operating system	112
7.10	Selecting actions for print, HTML, or MATHJAX output	112
7.11	Commands to be placed into the warpprint environment	113
7.12	Title page	114
7.13	HTML page meta descriptions	115
7.14	HTML homepage meta title	115
7.15	HTML page meta author	115
8	Special cases and limitations	116
8.1	Things to avoid	116
8.1.1	Invalid HTML	117
8.2	Formatting	117
8.2.1	Text formatting	117
8.2.2	Horizontal space	117
8.2.3	Text alignment	117
8.2.4	Accents.	118
8.2.5	textcomp package	118
8.2.6	Superscripts and other non-math uses of math mode	118
8.2.7	Empty \i tem followed by a new line of text or a nested list:	118
8.2.8	Filenames and URLs in lists or footnotes	118
8.2.9	resize package	118
8.3	Boxes and minipages	119
8.3.1	Marginpars	119
8.3.2	Save Boxes	119
8.3.3	Minipages.	119
8.3.4	Side-by-side minipages	120
8.3.5	Framed minipages and other environments	120
8.3.6	fancybox package	121
8.3.7	mdframed package	122
8.4	Section names	123

8.5	Cross-references	124
8.5.1	Page references	124
8.5.2	cleveref and varioref packages	124
8.5.3	Hyperlinks, hyperref, and url	125
8.5.4	Footnotes, endnotes, and page notes	125
8.5.5	xr, xr-hyper, and xcite packages	127
8.6	Front and back matter	127
8.6.1	Custom classes with multiple authors and affiliations	127
8.6.2	Starred chapters and sections	127
8.6.3	abstract package	128
8.6.4	titling and authblk	128
8.6.5	tocloft package	128
8.6.6	appendix package	128
8.6.7	pagenote package	129
8.6.8	endnotes package	129
8.6.9	<i>BibTeX</i>	129
8.6.10	xcite package.	129
8.6.11	gloss package	129
8.6.12	glossaries package	130
8.6.13	nomencl package	131
8.6.14	Indexing overview	131
8.6.15	Indexing with basic L ^A T _E X and makeidx.	131
8.6.16	Indexing with index	132
8.6.17	Indexing with splitidx	133
8.6.18	Indexing with imakeidx	134
8.6.19	Indexes with memoir	137
8.6.20	Using a custom <i>makeindex</i> style file	140
8.6.21	Using a custom <i>xindy</i> style file.	141
8.6.22	Additional indexing limitations	141

8.6.23	Index positions, toc, tocbibind	142
8.7	Math	143
8.7.1	Math in section names	143
8.7.2	Rendering tradeoffs	143
8.7.3	svg option	144
8.7.4	MATHJAX option	144
8.7.5	Customizing MATHJAX	145
8.7.6	MATHJAX limitations	146
8.7.7	Catcode changes	146
8.7.8	Complicated inline math objects	147
8.7.9	Complicated display math objects	147
8.7.10	ntheorem package	147
8.7.11	mathtools package	148
8.7.12	siunitx package	148
8.7.13	units and nicefrac packages	149
8.7.14	physics package	149
8.7.15	newtxmath package	150
8.8	Graphics	150
8.8.1	tikz package	152
8.8.2	grffile package	152
8.8.3	color package	152
8.8.4	xcolor package	152
8.8.5	epstopdf package	153
8.8.6	pstricks package	153
8.8.7	pdftricks package	153
8.8.8	psfrag package	153
8.8.9	pstool package	153
8.8.10	asymptote package	154
8.8.11	overpic package	154

8.8.12	Multimedia packages	154
8.9	Tabbing	155
8.10	Tabular	155
8.10.1	tabular environment.	155
8.10.2	multirow package	157
8.10.3	longtable package	158
8.10.4	threparttablex package	159
8.10.5	supertabular and xtab packages	159
8.10.6	colortbl package	159
8.10.7	ctable package	159
8.10.8	bigdelim package	160
8.11	Floats	160
8.11.1	Float contents alignment	160
8.11.2	float, trivfloat, and/or algorithmicx together	160
8.11.3	caption and subcaption packages.	160
8.11.4	subfig package	161
8.11.5	floatrow package	161
8.11.6	keyfloat package	162
8.12	KOMA-SCRIPT classes.	162
8.13	MEMOIR class	162
8.14	International languages.	164
8.15	Miscellaneous packages	164
8.15.1	verse and memoir	164
8.15.2	newclude package	165
8.15.3	babel package	165
8.15.4	polyglossia package	165
8.15.5	todonotes and luatodonotes packages	166
8.15.6	fixme	166
8.15.7	acro package	166

8.15.8	chemfig package	166
8.15.9	chemformula package	166
8.15.10	mhchem package	166
8.15.11	xparse package	167
8.15.12	kotex package	167
9	Compiling using custom shell commands	168
9.1	Command options	168
9.2	Literal character macros	168
9.3	<i>latexmk</i>	169
9.4	perltex package	170
9.5	pythontex package	170
9.6	Other packages	170
9.7	<i>make</i> program	171
9.8	UTF-8 locale	171
10	EPUB conversion	172
11	Word-processor conversion	174
11.1	Activating word-processor conversion	174
11.2	Additional modifications	175
11.3	Recommendations	177
11.4	Limitations	178
12	Modifying lwarp	179
12.1	Creating a development system	179
12.2	Modifying a package for lwarp	180
12.2.1	Adding a package to the <i>lwarp.dtx</i> file	181
12.3	Modifying a class for lwarp	181
12.4	Testing lwarp	182
12.5	Modifying <i>lwarpmk</i>	182

13	Troubleshooting	184
13.1	lwarp package error conditions and warnings	184
13.1.1	Configuration file <code>lwarpmk.conf</code>	184
13.1.2	Image generation with <code>lwarpmk limages</code>	184
13.1.3	Default bitmapped font	185
13.1.4	Packages	185
13.1.5	Compiling	185
13.2	Using the lwarp package	186
13.2.1	Debug tracing output	190
13.3	Compiling the <code>lwarp.dtx</code> file	190
14	Trademarks	191
1	lwarp.sty	192
15	Implementation	192
16	Section depths and HTML headings	193
17	Source code	194
18	Detecting the T_EX engine — <i>pdf_latex, lualatex, xelatex</i>	195
19	Early package requirements	195
20	Package load order	195
20.1	Tests of package load order	196
20.2	Error for disallowed packages and classes loaded before <code>lwarp</code>	198
20.3	Enforcing package loading after <code>lwarp</code>	199
21	MD5 hashing	208
22	pdf_lAT_EX T₁ and UTF-8 encoding	209
23	Unicode input characters	210
24	Avoid a bitmapped font	210
25	Upright quotes	211
26	Miscellaneous tools	211
26.1	Variables	211
26.2	Lengths and units	211

26.3	Counters	212
26.4	Patching	212
26.5	Chinese text isolation	212
26.6	Inserting vertical space	213
26.7	Argument selection	213
26.8	Global boxes	213
26.9	Converting a macro name to a cs name	214
27	Operating-System portability	214
27.1	Literal characters	215
27.2	Common portability code	216
27.3	UNIX, LINUX, and MAC OS	216
27.4	MS-WINDOWS	216
28	Package options	217
28.1	Additional options support	221
28.2	Conditional compilation	222
29	Required packages	224
30	Loading packages	230
31	File handles	236
32	Include a file	236
33	Copying a file	237
34	Debugging messages	238
35	Defining print and HTML versions of macros and environments	239
36	HTML-conversion output modifications	243
36.1	User-level controls	244
36.2	Heading adjustments	245
37	Remembering original formatting macros	247
38	Accents	248
39	Configuration files	250
39.1	Decide whether to generate configuration files	250

39.2	<code><project>_html.tex</code>	251
39.3	<i>lwarpmk</i> configuration files	251
39.3.1	Helper macros	251
39.3.2	<code>lwarpmk.conf</code>	257
39.3.3	<code><project>.lwarpmkconf.</code>	257
39.4	<code>lwarp.css</code>	257
39.5	<code>lwarp_sagebrush.css</code>	288
39.6	<code>lwarp_formal.css</code>	293
39.7	<code>sample_project.css</code>	297
39.8	<code>lwarp.ist</code>	297
39.9	<code>lwarp.xdy</code>	298
39.10	<code>lwarp_one_limage.cmd.</code>	298
39.11	<code>lwarp_mathjax.txt</code>	299
39.12	<code>lwarpmk.lua</code> — <i>lwarpmk</i> option.	301
40	Stacks	319
40.1	Assigning depths	320
40.2	Closing actions.	320
40.3	Closing depths.	320
40.4	Pushing and popping the stack	321
41	Data arrays	322
42	Localizing catcodes	323
43	Localizing dynamic math	324
44	HTML entities.	325
45	HTML filename generation	326
46	Homepage link	329
47	Previous/next navigation links	330
48	<code>\LWRPrintStack</code> diagnostic tool	331
49	Closing stack levels	332
50	PDF pages and styles	333

51	HTML tags, spans, divs, elements.	334
51.1	Mapping L ^A T _E X sections to HTML sections	334
51.2	Babel-French tag modifications	334
51.3	HTML output formatting	336
51.4	HTML tags	336
51.5	Block tags and comments	339
51.6	Div class and element class	340
51.7	Single-line elements	341
51.8	HTML5 semantic elements	341
51.9	High-level block and inline classes	341
51.10	Closing HTML tags	343
52	Paragraph handling	344
53	Paragraph start/stop handling	348
54	Indentfirst.	350
55	Page headers and footers	351
56	css	351
57	MathJax script	352
58	Title, HTML meta author, HTML meta description.	352
59	Footnotes	354
59.1	Regular page footnotes	355
59.2	Minipage footnotes	355
59.3	Titlepage thanks	355
59.4	Regular page footnote implementation	355
59.5	Minipage footnote implementation	358
59.6	Printing pending footnotes	359
60	Marginpars	360
61	Splitting HTML files	361
61.1	Sanitizing expressions for HTML	367
61.2	Customizing MATHJAX	369

62	Sectioning	376
62.1	User-level starred section commands	376
62.2	Book class commands	377
62.3	Sectioning support macros	377
62.4	Pre- and post- sectioning names	385
62.5	<code>\section</code> and friends	385
63	Starting a new file	387
64	Starting HTML output	391
65	Ending HTML output	393
66	Title page	395
66.1	Setting the title, etc.	396
66.2	<code>\if@titlepage</code>	397
66.3	Changes for <code>\affiliation</code>	397
66.4	Printing the thanks	398
66.5	Printing the title, etc. in HTML	398
66.6	Printing the title, etc. in print form	400
66.7	<code>\maketitle</code> for HTML output	400
66.8	<code>\published</code> and <code>\subtitle</code>	403
67	Abstract	404
68	Quote and verse	405
68.1	Attributions	405
68.2	Quotes, quotations	406
68.3	Verse	406
68.3.1	<code>L^AT_EX</code> core verse environment	407
68.3.2	verse and memoir	407
69	Verbatim and tabbing	408
70	Theorems	411
71	Lists	411
71.1	List environment	412

71.2	Itemize	415
71.3	Enumerate	416
71.4	Description	416
71.5	Patching the lists	417
72	Tabular	418
72.1	Limitations	418
72.2	Temporary package-related macros	420
72.2.1	arydshln	420
72.3	Token lookahead	421
72.4	Tabular variables	421
72.4.1	Multicolumn variables	425
72.4.2	Longtable variables	425
72.4.3	Midrule variables	425
72.5	Handling &, @, !, and bar	425
72.5.1	Handling &	427
72.5.2	Filling an unfinished row	428
72.6	Handling \\	430
72.7	Looking ahead in the column specifications	431
72.8	Parsing @, >, <, !, bar columns	431
72.9	Parsing 'l', 'c', or 'r' columns	435
72.10	Parsing 'p', 'm', or 'b' columns	435
72.11	Parsing 'w' columns	436
72.12	Parsing '*' columns	436
72.13	Parsing 'D' columns	436
72.14	Expanding the star column specifications	437
72.15	Parsing the column specifications	438
72.16	colortbl and xcolor tabular color support.	443
72.17	Starting a new row	444
72.18	Printing vertical bar tags	445

72.19	Printing @ or ! tags	445
72.20	Data opening tag	446
72.21	Midrules	448
72.22	Cell colors	454
72.23	Multicolumns	457
72.23.1	Parsing multicolumns	457
72.23.2	Multicolumn factored code.	461
72.23.3	Multicolumn.	464
72.23.4	Longtable captions	464
72.23.5	Counting HTML tabular columns	467
72.24	Multitrow if not loaded	468
72.25	Multicolumnrow	468
72.26	Utility macros inside a table	470
72.27	Special-case tabular markers	470
72.28	Checking for a new table cell.	471
72.29	\mrowcell	474
72.30	\mcolrowcell	474
72.31	HTML tabular environment	474
73	Cross-references	481
73.1	Setup	483
73.2	New lwarp labels.	483
73.3	Labels	485
73.4	References	486
73.5	Hyper-references	489
74	Floats	493
74.1	Float environment	493
74.2	Float tracking	496
74.3	Caption inside a float environment	497
74.4	Caption and LOF linking and tracking.	498

75	Table of Contents, LOE, LOT	501
75.1	Reading and printing the toc	502
75.2	High-level toc commands.	505
75.3	Side toc	505
75.4	Low-level toc line formatting	506
76	Index and glossary.	510
77	Bibliography presentation	513
78	Restoring original formatting.	514
79	Nullifying filename formatting	516
80	Math.	519
80.1	Limitations	519
80.2	HTML alt tag names.	519
80.3	Inline and display math	520
80.4	MATHJAX support.	533
80.5	Equation environment	536
80.6	<code>\displaymathnormal</code> and <code>\displaymathother</code> .	539
80.7	AMS Math environments	540
80.7.1	Support macros.	540
80.7.2	Environment patches.	542
81	Lateximages	544
81.1	Description	544
81.2	Support counters and macros	546
81.3	Font size	546
81.4	Equation numbers	546
81.5	HTML alt tags	548
81.6	lateximage environment	548
82	center, flushleft, flushright	555
83	Preloaded packages	556
84	siunitx	558

85	Graphics print-mode modifications	559
85.1	General limitations	559
85.2	Print-mode modifications	561
86	xcolor boxes	561
87	chemmacros environments	564
88	cleveref	565
89	picture environment	568
90	Minipages and Boxes	568
90.1	Computed lengths	569
90.2	Virtual page size	570
90.3	Footnote handling	570
90.4	Minipage handling	570
90.5	\parbox, \mbox, \makebox, \framebox, \fbox, \raisebox	574
91	Direct formatting	580
92	Skips, spaces, font sizes	589
93	\phantomsection	597
94	\LaTeX and other logos	598
95	\AtBeginDocument, \AtEndDocument	601
96	Loading textcomp patches	601
97	Loading KOMA-SCRIPT class patches	602
98	Loading MEMOIR class patches	602
99	ut* class patches	602
100	CTEX patches	604
101	kotexutf patches	604
102	babel and polyglossia warnings	605
103	MATHJAX warnings	606
2	lwarp-2in1.sty	608
3	lwarp-2up.sty	608
4	lwarp-a4.sty	608

5	lwarp-a4wide.sty	609
6	lwarp-a5comb.sty	609
7	lwarp-abstract.sty	609
8	lwarp-academicons.sty	611
9	lwarp-afterpage.sty	612
10	lwarp-accessibility.sty	612
11	lwarp-accsupp.sty	613
12	lwarp-acro.sty	613
13	lwarp-acronym.sty	616
14	lwarp-adjmulticol.sty	617
15	lwarp-addlines.sty	618
16	lwarp-afterpage.sty	618
17	lwarp-algorithm2e.sty	618
18	lwarp-algorithmicx.sty	622
19	lwarp-alltt.sty	623
20	lwarp-amsmath.sty	623
21	lwarp-amsthm.sty	627
22	lwarp-anonchap.sty	631
23	lwarp-anysize.sty	632
24	lwarp-appendix.sty	632
25	lwarp-ar.sty	632
26	lwarp-arabicfront.sty	634
27	lwarp-array.sty	634
28	lwarp-arydshln.sty	635
29	lwarp-asymptote.sty	637
30	lwarp-atbegshi.sty	638
31	lwarp-attachfile.sty	638

32	lwarp-attachfile2.sty	639
33	lwarp-authblk.sty	641
34	lwarp-autobreak.sty	642
35	lwarp-autonum.sty	643
36	lwarp-awesomebox.sty	644
37	lwarp-axessibility.sty	645
38	lwarp-axodraw2.sty	646
39	lwarp-backnaur.sty	646
40	lwarp-backref.sty	646
41	lwarp-balance.sty	647
42	lwarp-bbding.sty	647
43	lwarp-biblatex.sty	652
44	lwarp-bibunits.sty	653
45	lwarp-bigdelim.sty	654
46	lwarp-bigfoot.sty	655
47	lwarp-bigstrut.sty	656
48	lwarp-bitpattern.sty	656
49	lwarp-blowup.sty	657
50	lwarp-bm.sty	657
51	lwarp-booklet.sty	657
52	lwarp-bookmark.sty	658
53	lwarp-booktabs.sty	658
54	lwarp-bophook.sty	660
55	lwarp-bounddvi.sty	661
56	lwarp-boxedminipage.sty	661
57	lwarp-boxedminipage2e.sty	661
58	lwarp-braket.sty	662

59	lwarp-breakurl.sty	662
60	lwarp-breqn.sty	663
61	lwarp-bsheaders.sty	664
62	lwarp-bxpapersize.sty	664
63	lwarp-bytefield.sty	665
64	lwarp-cancel.sty	665
65	lwarp-canoniclayout.sty	666
66	lwarp-caption.sty	666
67	lwarp-cases.sty	669
68	lwarp-centernot.sty	670
69	lwarp-changebar.sty	670
70	lwarp-changelayout.sty	671
71	lwarp-changepage.sty	671
72	lwarp-changes.sty	672
73	lwarp-chappg.sty	674
74	lwarp-chapterbib.sty	675
75	lwarp-chemfig.sty	675
76	lwarp-chemformula.sty	677
77	lwarp-chemgreek.sty	682
78	lwarp-chemmacros.sty	683
180	chemmacros	683
180.1	Changes to the user's document.	683
180.2	Code	683
180.3	Loading modules	683
180.4	New environments	684
180.5	Acid-base	684
180.6	Charges	686

180.7	Nomenclature	686
180.8	Particles	688
180.9	Phases.	689
180.10	Mechanisms	690
180.11	Newman	692
180.12	Orbital	692
180.13	Reactions	693
180.14	Redox	694
180.15	Scheme	694
180.16	Spectroscopy	695
180.17	Thermodynamics	699
79	lwarp-chemnum.sty	701
80	lwarp-chkfloat.sty	702
81	lwarp-chngpage.sty	702
82	lwarp-cite.sty	702
83	lwarp-CJK.sty	703
84	lwarp-CJKutf8.sty	703
85	lwarp-clrdblpg.sty	703
86	lwarp-cmdtrack.sty	703
87	lwarp-colonequals.sty	704
88	lwarp-color.sty	704
89	lwarp-colortbl.sty	705
90	lwarp-continue.sty	706
91	lwarp-copyrightbox.sty	707
92	lwarp-crop.sty	707
93	lwarp-ctable.sty	708
94	lwarp-cuted.sty	710

95	lwarp-cutwin.sty	711
96	lwarp-dblfloatfix.sty	711
97	lwarp-dblfnote.sty	712
98	lwarp-dcolumn.sty	712
99	lwarp-decimal.sty	712
100	lwarp-diagbox.sty	713
101	lwarp-dingbat.sty	714
102	lwarp-DotArrow.sty	715
103	lwarp-dotlessi.sty	716
104	lwarp-dprogress.sty	716
105	lwarp-draftcopy.sty	716
106	lwarp-draftfigure.sty	717
107	lwarp-draftwatermark.sty	717
108	lwarp-easy-todo.sty	718
109	lwarp-ebook.sty	719
110	lwarp-econometrics.sty	719
111	lwarp-ed.sty	723
112	lwarp-ellipsis.sty	724
113	lwarp-embrac.sty	724
114	lwarp-emptypage.sty	725
115	lwarp-endfloat.sty	725
116	lwarp-endheads.sty	726
117	lwarp-endnotes.sty	726
118	lwarp-engtlc.sty	727
119	lwarp-enumerate.sty	732
120	lwarp-enumitem.sty	732
121	lwarp-epigraph.sty	733

122	lwarp-epsfig.sty	734
123	lwarp-epstopdf.sty	734
124	lwarp-epstopdf-base.sty	735
125	lwarp-eqlist.sty	736
126	lwarp-eqparbox.sty	736
127	lwarp-errata.sty	737
128	lwarp-eso-pic.sty	738
129	lwarp-etoc.sty	739
130	lwarp-eurosym.sty	741
131	lwarp-everypage.sty	742
132	lwarp-everyshi.sty	742
133	lwarp-extarrows.sty	742
134	lwarp-extramarks.sty	743
135	lwarp-fancybox.sty	743
136	lwarp-fancyhdr.sty	748
137	lwarp-fancyref.sty	749
138	lwarp-fancytabs.sty	750
139	lwarp-fancyvrb.sty	751
140	lwarp-fewerfloatpages.sty	757
141	lwarp-figcaps.sty	757
142	lwarp-figsize.sty	758
143	lwarp-fitbox.sty	758
144	lwarp-fix2col.sty	759
145	lwarp-fixme.sty	759
146	lwarp-fixmetodonotes.sty	760
147	lwarp-flafter.sty	761
148	lwarp-flippdf.sty	761

149	lwarp-float.sty	761
150	lwarp-floatflt.sty	763
151	lwarp-floatpag.sty	764
152	lwarp-floatrow.sty	764
153	lwarp-fltrace.sty	769
154	lwarp-flushend.sty	769
155	lwarp-fnbreak.sty	770
156	lwarp-fncychap.sty	770
157	lwarp-fnlineno.sty	771
158	lwarp-fnpara.sty	771
159	lwarp-fnpos.sty	771
160	lwarp-fontawesome.sty	772
161	lwarp-fontawesome5.sty	773
162	lwarp-fontaxes.sty	774
163	lwarp-fontenc.sty	774
164	lwarp-footmisc.sty	774
165	lwarp-footnote.sty	775
166	lwarp-footnotebackref.sty	776
167	lwarp-footnotehyper.sty	777
168	lwarp-footnoterange.sty	777
169	lwarp-footnpag.sty	777
170	lwarp-foreign.sty	777
171	lwarp-forest.sty	778
172	lwarp-fouridx.sty	778
173	lwarp-framed.sty	779
174	lwarp-ftcap.sty	781
175	lwarp-ftnright.sty	781

176	lwarp-fullminipage.sty	781
177	lwarp-fullpage.sty	782
178	lwarp-fullwidth.sty	782
179	lwarp-fwlw.sty	782
180	lwarp-gensymb.sty	783
181	lwarp-gentombow.sty	783
182	lwarp-geometry.sty	783
183	lwarp-ghsystem.sty	784
184	lwarp-gloss.sty	785
185	lwarp-glossaries.sty	785
186	lwarp-gmeometric.sty	787
187	lwarp-graphics.sty	788
289	graphics	788
289.1	Graphics extensions	788
289.2	Length conversions and graphics options	789
289.3	Printing HTML styles	791
289.4	\includegraphics	792
289.5	Boxes	797
188	lwarp-graphicx.sty	800
189	lwarp-grffile.sty	800
190	lwarp-grid.sty	801
191	lwarp-grid-system.sty	801
192	lwarp-gridset.sty	801
193	lwarp-hang.sty	802
194	lwarp-hanging.sty	803
195	lwarp-hhline.sty	804
196	lwarp-hypbmsec.sty	805

197	lwarp-hypcap.sty	805
198	lwarp-hypdestopt.sty	805
199	lwarp-hypernat.sty	805
200	lwarp-hyperref.sty	806
201	lwarp-hyperxmp.sty	811
202	lwarp-hyphenat.sty	811
203	lwarp-idxlayout.sty	812
204	lwarp-ifoddpag.sty	812
205	lwarp-imateidx.sty	813
206	lwarp-index.sty	817
207	lwarp-inputtrc.sty	818
208	lwarp-intopdf.sty	819
209	lwarp-karnaugh-map.sty	819
210	lwarp-keyfloat.sty	822
211	lwarp-layaureo.sty	828
212	lwarp-layout.sty	828
213	lwarp-layouts.sty	828
214	lwarp-leading.sty	831
215	lwarp-leftidx.sty	831
216	lwarp-letterspace.sty	831
217	lwarp-lettrine.sty	832
218	lwarp-lineno.sty	833
219	lwarp-lips.sty	835
220	lwarp-listings.sty	836
221	lwarp-listliketab.sty	840
222	lwarp-lltjext.sty	840
223	lwarp-longtable.sty	841

224	lwarp-lscape.sty	844
225	lwarp-ltablex.sty	844
226	lwarp-ltcaption.sty	845
227	lwarp-ltxgrid.sty	845
228	lwarp-ltxtable.sty	845
229	lwarp-lua-check-hyphen.sty	846
230	lwarp-lua-visual-debug.sty	846
231	lwarp-luacolor.sty	846
232	lwarp-luamplib.sty	846
233	lwarp-luatexko.sty	847
234	lwarp-luatodonotes.sty	849
235	lwarp-lyluatex.sty	851
236	lwarp-magaz.sty	853
237	lwarp-makeidx.sty	853
238	lwarp-manyfoot.sty	854
239	lwarp-marginal.sty	856
240	lwarp-marginfit.sty	856
241	lwarp-marginfix.sty	856
242	lwarp-marginnote.sty	857
243	lwarp-marvosym.sty	857
244	lwarp-mathcomp.sty	858
245	lwarp-mathdots.sty	858
246	lwarp-mathfixs.sty	859
247	lwarp-mathtools.sty	859
248	lwarp-mcaption.sty	864

249	lwarp-mdframed.sty	864
351	mdframed	864
351.1	Limitations	864
351.2	Package loading	865
351.3	Patches	865
351.4	Initial setup	866
351.5	Color and length HTML conversion	866
351.6	Environment encapsulation	866
351.7	Mdframed environment	868
351.8	Titles and subtitles	869
351.9	New environments	871
250	lwarp-media9.sty	873
251	lwarp-memhfixc.sty	876
252	lwarp-metalogo.sty	876
253	lwarp-metalogox.sty	876
254	lwarp-mhchem.sty	877
255	lwarp-microtype.sty	880
256	lwarp-midfloat.sty	880
257	lwarp-midpage.sty	881
258	lwarp-minibox.sty	881
259	lwarp-minitoc.sty	882
260	lwarp-mismath.sty	882
261	lwarp-morefloats.sty	886
262	lwarp-moreverb.sty	886
263	lwarp-movie15.sty	887
264	lwarp-mparhack.sty	889
265	lwarp-multicap.sty	889

266	lwarp-multicol.sty	889
267	lwarp-multicolrule.sty	890
268	lwarp-multimedia.sty	891
269	lwarp-multiobjective.sty	892
270	lwarp-multirow.sty	893
271	lwarp-multitoc.sty	896
272	lwarp-musicography.sty	896
273	lwarp-nameauth.sty	900
274	lwarp-nameref.sty	901
275	lwarp-natbib.sty	901
276	lwarp-nccfancyhdr.sty	902
277	lwarp-nccfoots.sty	903
278	lwarp-nccmath.sty	903
279	lwarp-needspace.sty	905
280	lwarp-nextpage.sty	905
281	lwarp-nfssect-cfr.sty	905
282	lwarp-nicefrac.sty	912
283	lwarp-niceframe.sty	913
284	lwarp-noitcrul.sty	913
285	lwarp-nolbreaks.sty	913
286	lwarp-nomencl.sty	914
287	lwarp-nonfloat.sty	914
288	lwarp-nonumonpart.sty	914
289	lwarp-nopageno.sty	915
290	lwarp-notes.sty	915
291	lwarp-notespages.sty	915
292	lwarp-nowidow.sty	916

293	lwarp-ntheorem.sty	916
395	ntheorem	916
395.1	Limitations	917
395.2	Options	917
395.3	Remembering the theorem style	918
395.4	HTML cross-referencing	921
395.5	\newtheoremstyle	921
395.6	Standard styles	922
395.7	Additional objects	923
395.8	Renewed standard configuration	924
395.9	amsthm option	925
395.10	Ending a theorem	927
395.11	\NoEndMark	927
395.12	List-of	927
395.13	Symbols	928
395.14	Cross-referencing	928
294	lwarp-octave.sty	928
295	lwarp-overpic.sty	930
296	lwarp-pagegrid.sty	930
297	lwarp-pagenote.sty	931
298	lwarp-pagesel.sty	931
299	lwarp-paralist.sty	931
300	lwarp-parallel.sty	932
301	lwarp-parcolumns.sty	934
302	lwarp-parnotes.sty	936
303	lwarp-parskip.sty	937
304	lwarp-pbox.sty	937
305	lwarp-pdfcol.sty	938

306	lwarp-pdfcolfoot.sty	938
307	lwarp-pdfcolmk.sty	938
308	lwarp-pdfcolparallel.sty	939
309	lwarp-pdfcolparcolumns.sty	939
310	lwarp-pdfcomment.sty	940
311	lwarp-pdfcrypt.sty	940
312	lwarp-pdflscope.sty	941
313	lwarp-pdfmarginpar.sty	941
314	lwarp-pdfpages.sty	941
315	lwarp-pdfprivacy.sty	944
316	lwarp-pdfrender.sty	944
317	lwarp-pdfsync.sty	944
318	lwarp-pdftricks.sty	944
319	lwarp-pdfx.sty	945
320	lwarp-perpage.sty	945
321	lwarp-pfnote.sty	947
322	lwarp-phfqit.sty	947
323	lwarp-physics.sty	947
324	lwarp-physunits.sty	953
325	lwarp-pifont.sty	955
326	lwarp-placeins.sty	956
327	lwarp-plarydshln.sty	956
328	lwarp-plext.sty	956
329	lwarp-plextarydshln.sty	957
330	lwarp-plextcolortbl.sty	957
331	lwarp-prelim2e.sty	958
332	lwarp-prettyref.sty	958

333	lwarp-preview.sty	958
334	lwarp-psfrag.sty	959
335	lwarp-psfragx.sty	959
336	lwarp-pst-eps.sty	960
337	lwarp-pstool.sty	960
338	lwarp-pstricks.sty	961
339	lwarp-pxatbegshi.sty	961
340	lwarp-pxeveryshi.sty	961
341	lwarp-pxftnright.sty	962
342	lwarp-pxjahyper.sty	962
343	lwarp-quotchap.sty	962
344	lwarp-quoting.sty	963
345	lwarp-ragged2e.sty	964
346	lwarp-realscripts.sty	964
347	lwarp-refcheck.sty	968
348	lwarp-register.sty	968
349	lwarp-reysize.sty	969
350	lwarp-repeatindex.sty	970
351	lwarp-resizegather.sty	971
352	lwarp-returntogrid.sty	971
353	lwarp-rmathbr.sty	972
354	lwarp-rmpage.sty	972
355	lwarp-romanbar.sty	972
356	lwarp-romanbarpagenumber.sty	973
357	lwarp-rotating.sty	973
358	lwarp-rotfloat.sty	973
359	lwarp-rviewport.sty	974

360	lwarp-savetrees.sty	974
361	lwarp-scalefnt.sty	975
362	lwarp-schemata.sty	975
363	lwarp-scrextend.sty	975
364	lwarp-scrhack.sty	979
365	lwarp-scrlayer.sty	980
366	lwarp-scrlayer-notecolumn.sty	981
367	lwarp-scrlayer-scrpage.sty	982
368	lwarp-scrpage2.sty	983
369	lwarp-section.sty	984
370	lwarp-sectionbreak.sty	985
371	lwarp-sectsty.sty	985
372	lwarp-semantic-markup.sty	986
373	lwarp-setspace.sty	987
374	lwarp-shadow.sty	988
375	lwarp-shapepar.sty	988
376	lwarp-showidx.sty	988
377	lwarp-showkeys.sty	989
378	lwarp-showtags.sty	989
379	lwarp-sidecap.sty	989
380	lwarp-sidenotes.sty	990
381	lwarp-SIunits.sty	992
382	lwarp-siunitx.sty	999
383	lwarp-slantsc.sty	1010
384	lwarp-slashed.sty	1010
385	lwarp-soul.sty	1010
386	lwarp-soulpos.sty	1012

387	lwarp-soulutf8.sty	1013
388	lwarp-splitidx.sty	1013
389	lwarp-srcltx.sty	1015
390	lwarp-srctex.sty	1015
391	lwarp-stabular.sty	1015
392	lwarp-stackengine.sty	1016
393	lwarp-stackrel.sty	1018
394	lwarp-statex2.sty	1018
395	lwarp-statmath.sty	1022
396	lwarp-steinmetz.sty	1024
397	lwarp-stfloats.sty	1025
398	lwarp-struktex.sty	1025
399	lwarp-subcaption.sty	1026
400	lwarp-subfig.sty	1026
401	lwarp-subfigure.sty	1031
402	lwarp-subsubscripts.sty	1032
403	lwarp-supertabular.sty	1033
404	lwarp-svg.sty	1034
405	lwarp-syntonly.sty	1035
406	lwarp-tabfigures.sty	1035
407	lwarp-tablefootnote.sty	1036
408	lwarp-tables.sty	1036
409	lwarp-tabularx.sty	1036
410	lwarp-tabulary.sty	1037
411	lwarp-tagpdf.sty	1037
412	lwarp-tascmac.sty	1039
413	lwarp-textarea.sty	1041

414	lwarp-textcomp.sty	1041
415	lwarp-textfit.sty	1045
416	lwarp-textpos.sty	1045
417	lwarp-theorem.sty	1046
418	lwarp-thinsp.sty	1050
419	lwarp-threadcol.sty	1050
420	lwarp-threeparttable.sty	1050
421	lwarp-threeparttablex.sty	1051
422	lwarp-thumb.sty	1052
423	lwarp-thumbs.sty	1053
424	lwarp-tikz.sty	1053
425	lwarp-titleps.sty	1054
426	lwarp-titleref.sty	1057
427	lwarp-titlesec.sty	1058
428	lwarp-titletoc.sty	1060
429	lwarp-titling.sty	1061
430	lwarp-tocbasic.sty	1066
431	lwarp-tocbibind.sty	1066
432	lwarp-tocdata.sty	1068
433	lwarp-tocenter.sty	1070
434	lwarp-tocloft.sty	1070
435	lwarp-tocstyle.sty	1076
436	lwarp-todo.sty	1076
437	lwarp-todonotes.sty	1077
438	lwarp-topcapt.sty	1079
439	lwarp-tram.sty	1079
440	lwarp-transparent.sty	1080

441	lwarp-trimclip.sty	1080
442	lwarp-trivfloat.sty	1081
443	lwarp-truncate.sty	1082
444	lwarp-turnthepage.sty	1082
445	lwarp-twoup.sty	1082
446	lwarp-typearea.sty	1082
447	lwarp-typicons.sty	1083
448	lwarp-ulem.sty	1084
449	lwarp-umoline.sty	1085
450	lwarp-underscore.sty	1086
451	lwarp-unicode-math.sty	1086
452	lwarp-units.sty	1088
453	lwarp-unitsdef.sty	1089
454	lwarp-upref.sty	1089
455	lwarp-url.sty	1090
456	lwarp-ospace.sty	1090
457	lwarp-verse.sty	1090
458	lwarp-ersonotes.sty	1092
459	lwarp-vertbars.sty	1092
460	lwarp-vmargin.sty	1093
461	lwarp-vowel.sty	1093
462	lwarp-vpe.sty	1094
463	lwarp-vwcol.sty	1094
464	lwarp-wallpaper.sty	1096
465	lwarp-watermark.sty	1097
466	lwarp-widetable.sty	1097
467	lwarp-widows-and-orphans.sty	1097

468	lwarp-witharrows.sty	1098
469	lwarp-wrapfig.sty	1099
470	lwarp-xbmks.sty	1100
471	lwarp-xcolor.sty	1101
573	xcolor	1101
573.1	Limitations	1101
573.2	xcolor definitions: location and timing	1101
573.3	Package loading	1103
573.4	Remembering and restoring original definitions	1103
573.5	\normalcolor	1104
573.6	HTML color style	1104
573.7	HTML border	1105
573.8	High-level macros	1105
573.9	Row colors	1110
472	lwarp-xexchangebar.sty	1111
473	lwarp-xellipsis.sty	1111
474	lwarp-xetexko-vertical.sty	1112
475	lwarp-xfakebold.sty	1112
476	lwarp-xfrac.sty	1113
477	lwarp-xltabular.sty	1115
478	lwarp-xltextra.sty	1116
479	lwarp-xmpincl.sty	1116
480	lwarp-xpiano.sty	1117
481	lwarp-xpinyin.sty	1117
482	lwarp-xr.sty	1119
483	lwarp-xr-hyper.sty	1119
484	lwarp-xtab.sty	1120

485	lwarp-xunicode.sty	1121
486	lwarp-xurl.sty	1122
487	lwarp-xy.sty	1123
488	lwarp-zhlineskip.sty	1124
489	lwarp-zwpagelayout.sty	1124
490	lwarp-patch-komascript.sty	1125
491	lwarp-patch-memoir.sty	1127
593	patch-memoir	1127
593.1	Packages	1129
593.2	Label handling	1130
593.3	Page layout	1130
593.4	Text and fonts	1133
593.5	Titles	1134
593.6	Abstracts	1134
593.7	Docment divisions	1134
593.8	Pagination and headers	1137
593.9	Paragraphs and lists	1138
593.10	Contents lists	1139
593.11	Floats and captions	1143
593.12	Footnotes and page notes	1146
593.13	Decorative text	1148
593.14	Poetry	1149
593.15	Boxes, verbatims and files	1149
593.16	Cross referencing	1150
593.17	Back matter	1150
593.18	Miscellaneous	1152
593.19	ccaption emulation	1153
593.20	Final patchwork	1156

492	lwarp-common-multimedia.sty	1156
	Change History	1162
595	Chg Hist	1162
	Index of Objects	1196
	General Index	1218
	Troubleshooting Index.	1222
	Index of Indexes	1228

List of Figures

1	tutorial.tex listing	78
---	--------------------------------	----

List of Tables

1	Typesetting conventions	60
2	L ^A T _E X lwarp package — Supported features	61
3	Required software programs	71
4	Configuration files created by print version	80
5	Localization settings	93
6	Accessibilitiy settings	94
7	Lwarp package options	99
8	HTML settings	104
9	Literal character macros	169
10	Section HTML headings for word-processor conversion	177
11	Section depths and HTML headings	193
12	Tabular baseline	438
13	Tabular HTML column conversions	439
14	Cross-referencing data structures	482
15	Float data structures	493
16	amsthm package — css styling of theorems and proofs	627
17	Ntheorem package — css styling of theorems and proofs	917
18	Theorem package — css styling of theorems and proofs	1046

1 Updates

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

For a detailed list of the most recent changes, see the end of the Change History on page 1195.

v0.85: fontspec

packages

⚠ acro formats

- `fontspec`: Fixed core font change macros for world languages.
- `acro`: Due to v3 changes, when defining acronym formats, use `\textbf` instead of `\bfseries`, etc.
- Fixed `idxlayout`, `mathtools`, `titlesec`, `url`.

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

docs

⚠ home page footer changed

core

⚠

- Added documentation of `BlockClass` and `\InlineClass` for `css <div>s` and `s`. See section 7.8.
- Added `\LinkPrevious`, `\LinkNext` page links. See section 7.6.
- Added `\FirstPageBottom`. Home page no longer shares `\PageBottom`. See section 7.6.
- Improved coexistence with `comment`, support for nested environments.
- No longer requires but still supports the `caption` package.
- Improved filenames and HTML titles when using special characters.
- Change: Append `-0` to section named `Index` previously `_index` to distinguish from `index.html`
- Fixed style tags for `\multicolumn`, `\multirow`.
- Fixed spacing in `tabbing`.
- Fixed `lateximage` for: `quote`, `quotation`, `verse`, `center`, `flushleft`, `flushright`, `<par>` tags, packages `verbatim`, `alltt`, `epigraph`.
- Fixed `textcomp` due to integration into \LaTeX kernel.
- Fixed `\itshape`, etc. Adapted to \LaTeX fontaxes integration.
- Fixed `\@fnsymbol`.
- Warns about section names with dollar-delimited math.
- Warns about a `` containing a float, caption, section, `mdframed`, or other `<div>` object.
- Only warn about $X\TeX$ logo and `graphics` if actually used `\Xe`.
- `lwarpmk clean` also removes `comment_*.cut`.
- `scrextend`, `scrartcl`, `scrbook`: Added `\titlehead`, `\subject`, `\subtitle`, `\publishers`.
- `titling`: Fixed `\printthanks`.
- `memoir`, `abstract`: Fixed for updated `memoir`.

lwarpmk

packages

- memoir: Fixed `\newcomment`, `pagenotes`, `crossreferences`. Fixed setting a recursive name.
- Fixed or improved: `amsthm`, `backref`, `biblatex`, `fixme`, `nfssect-cfr`, `ntheorem`, `parcolumns`, `realscripts`, `rotfloat`, `titling`.
- Added `boxedminipage`, renamed from `boxedminipage2e` per author.
- Verified to work as-is with `mcite`.

v0.83: memoir fixes.

- packages
- memoir: Various fixes and updates.
 - physunits: Updated to v1.0.4.

v0.82: MATHJAX notes, xpinyin improvements, various updates.

- MATHJAX
- Improved footnotes with MATHJAX.
 - Added MATHJAX emulation for `endnotes`, `marginnote`, `nccfoots`, `pagenote`, `parnotes`, `sidenotes`.
- packages
- xpinyin: Added pinyin with modern HTML.
 - luatexko: Added `\dotemph`, `\ruby`, `\uline`, etc.
 - soul: Fixed `\<`.
 - chemfig: Updated to v1.5.
 - draftwatermark: Updated to v2.0.
 - ulem: Fixed: `\dashuline`.
 - amsmath: Fixed: `\intertext` with MATHJAX.
 - endnotes: Fixed: Marks in print mode.
 - tocvsec2, tableof: Verified to work as-is.
 - Added `etoc` (nullified).

v0.81: MATHJAX speedup and additional emulations.

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

v0.80: MATHJAX, biblatex.

- MATHJAX
 - Added docs and warning/info messages re: avoiding slow MATHJAX compilation. See section 8.7.5, [Customizing MATHJAX](#).
 - Added MATHJAX emulation for accessibility, autobreak, centernot, extarrows, fouridx, gensymb, leftidx, mathcomp, mathdots, mathfixs, mismath, nccmath, noitcrul, pdfcomment, relsize, rmathbr, subsupscripts, xfrac.
 - Improved MATHJAX emulation for unicode-math.
- packages
 - biblatex, url: Now create hyperlinks.
 - amsmath: Fix to center starred environments.
 - xcolor, graphics: Made more macros robust.
 - colortbl: Fix: Rule color in a lateximage.
 - chemmacros: Updated to v5.10.
 - Added fewerfloatpages, ghsystem, hline, mismath, nccmath.

v0.79: MATHJAX, nested tabular.

- MATHJAX
 - Added or improved MATHJAX emulation for amsmath, ar, arydshln, bm, bigdelim, bigstrut, booktabs, braket, mathtools, multirow, physics, siunitx, slashed, unicode-math, xfakebold.
 - Warn if using certain packages not supported by MATHJAX.
- core
 - tabular: Now may be nested.
 - minipage, \parbox, fminipage, \makebox, \framebox: Fix: Adjust for virtual page size.
 - Uses new iftex.
- packages
 - graphicx: Fix: Negative angles.
 - caption: Fix: \captionlistentry with longtable.
 - multirow: Fix: Centered vertical alignment.
 - siunitx: Fix: \square, \cubed.
 - booktabs: Fix: memoir with lateximage.
 - babel and polyglossia: Added troubleshooting warnings.
 - fontawesome, fontawesome5: Supports text color and size.
 - transparent: Fix: lateximages.
 - epigraph: Updated to v1.5e.
 - xurl: Updated to v0.08.
 - subcaption: Fixed with memoir.
 - floatrow: Fix: \linewidth. No longer require float, graphics.
 - floatflt, wrapfig, niceframe: Fix: Adjust for virtual page size.
 - Added widetable, witharrows, steinmetz.
 - Added awesomebox, catoptions.
 - Added svg, supports svg-extract.
 - Added parcolumns, pdfcolparcolumns,
 - Added parallel, pdfcolparallel.
 - Added pdfcol, pdfcolfoot, pdfcolmk.

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

- docs
 - Docs: Improved documentation regarding package options. See section 8.1.
 - Fix to overwrite existing support files using new filecontents environment.
- packages
 - breqn: Previously broken by the 2019/10 L^AT_EX update, but now working again.
 - graphics: Fix for \includegraphics alt tags.
 - babel-french: Fix for hyperlinks.
 - media9, movie15, multimedia: Fix for the 2019/10 L^AT_EX update.
 - accessibility: Added.

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

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

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

- docs
 - Docs: Expanded documentation regarding the use of multiple projects in the same directory. See section 5.17.
- MATHJAX
 - MATHJAX: Updated to v2.7.6.
- packages
 - xr: Updated to v5.05.
 - xr-hyper: Updated to v6.1.
 - Verified works as-is with xcite.
 - acro: Updated to v2.10.
- ⚠ broken
 - Currently broken in print mode by the 2019/10 L^AT_EX update, and waiting for fixes: breqn, grffile, multimedia, movie15.

v0.75: keyfloat, wrapfig

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

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

- docs
 - Added to the tutorial the section **What next?**. See section 5.19.
 - Added documentation about localization options. See section 7.1.
 - Added documentation about accessibility options. See section 7.2.
 - Renamed and updated HTML alt text macros:

⚠ HTML alt text
changed names

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

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

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

- Due to internal changes, images for inline svg math and `lateximages` will have new hash values, and will have to be regenerated using

Enter ⇒ **lwarpmk cleanimages**

and

Enter ⇒ **lwarpmk images**

packages

- Docs: Color-codes package names in the table of supported packages and features, table 2, according to each package's level of support by `lwarp`.
- `\multicolumn`: Fix for paragraph columns.
- `xr`, `xr-hyper`: Fixes for references, `\externaldocument`.
- `soulutf8`: Fix: Loads `soul` for emulation.
- `boxedminipage2e`: Added support for `lateximages`.
- `zhlineskip`: Updated to v1.0e.
- Added `fontaxes`, `slantsc`, `tabfigures`.
- Added `nfssect-cfr`, thus supporting `cfr-lm` and several other font packages.
- Added `backnaur`, `hypbmsec`, `minibox`, `pdfcrypt`, `shapepar`.

v0.71: Error handling, `multimedia`, `tabular`.**packages**

- `tabular`: Added support for '*' columns. Fix for paragraph tags.
- `quotation`: Fix for HTML tag.
- Docs: Added a section about error conditions tested by `lwarp`. See section 13.1.
- `lwarpmk`: If file `lwarpmk.conf` is an older version, or the incorrect operating system, displays the print command to use to recompile.
- `chemfig`: Updated for v1.4.
- `endfloat`: Updated for v2.7.
- `textpos`: Updated for v1.9.1.

multimedia

- Added `media9`, `movie15`, `multimedia`.

v0.70: Error handling, `MATHJAX`, `mathtools`.**packages**

- Error handling for "Label(s) changed." Refuses to `lwarpmk images` until recompile first.
- Fix: If Computer Modern font is used, ensures `cm-super` or `lmodern` is used.
- Fixes for `\makebox`.
- Fixes for `\parbox` inside a ``.
- `MATHJAX`: Updated to v2.7.5. Loads the `autoload-all.js` extension. Added `\MathJaxFilename` to select custom scripts.
- `textcomp`, `xunicode`: Fix for `\textinterrobang`.
- `mhchem`: Works with `MATHJAX`. See section 356.
- `changes`: Updated to v3.1.2.
- Added `autonum`, `changelayout`, `inputtrc`, `mathtools`, `metalogo`.

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

packages

- Fix for HTML corruption of lateximage displays.
- \makebox, \framebox: Fix for ($\langle width,height \rangle$) arguments.
- fminipage: Honors \minipagefullwidth.
- array, longtable: Fix for \tabularnewline.
- tabularx, tabulary: Fix to require the array package.
- supertabular, xtab: Fix to clear caption after use.
- graphics: Added a warning if used the \includegraphics scale option.
- multirow: Added an error if didn't use \mrowcell or \mcolrowcell when using \multirow or \multicolumnrow.
- keyfloat: Updated for v2.00, additional improvements.
- Added ctable, eqlist, eqparbox, ftcap, listliketab, minitoc, tocdata, topcapt.

v0.68: Error handling, tabulars, footnotes.

lwarpmk

packages

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

v0.67: Filename generation, symbol fonts.

docs

filenames

packages

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

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

⚠ Reset the configuration

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

lateximage

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

⚠ existing projects

- To reuse existing `lateximage` directories, add `lwarp` options

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

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

filenames

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

⚠ Possible filename changes

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

WINDOWS

- Fix for `lwarpmk cleanimages` with WINDOWS.

floats

- Fixes for floats in the home page.

lists, table notes

- Improved css for definition lists, table notes.

tabular

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

indexing

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

minipage

- `\minipagefullwidth`: Fix for global changes.
- Added `\UseMinipageWidths` and `\IgnoreMinipageWidths`. See section 8.3.3.

colors

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

HTML

- Improved HTML output formatting.

docs

- Added discussion regarding invalid HTML. See section 8.1.1.
- Added discussion regarding math in section names, `\imagegraphics` scale option. See section 6.
- Added discussion regarding international languages in section names. See section 8.14.

packages

- `caption`: Fix for options clash.
- `xr`, `xr-hyper`: Now compatible.
- `subcaption`: Improved horizontal spacing.
- `multicol`: Fix for `minipage` inside `multicols`.
- `multicolrule`: Updated for v1.2.
- `tocbasic`: Minor update.
- `acronym`: Fix for acronym in float caption.
- `kotexutf`: Patch with *pdflatex* and new `lwarp` labels.
- `extramarks`, `fancyhdr`: Updated for v3.10.
- `memoir`: Added docs regarding version numbers. See section 8.13.

- `zref`: No longer required.
- Added `ar`, `ed`, `indentfirst`, `nameauth`, `truncate`.
- Verified to work as-is with `changelog`.
- Prevented `colortab`, `epsf`, `hyper`, `picinpar`, `picins`, `sistyle`, `ucs`.

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

- page layout**
 - Moved the `sideroc` to the left side, allowing improved css for margin notes.
 - Improved page layout css.
- image alt tags**
 - `graphicx \includegraphics`: Added the `alt` key to assign an alt tag to an image. Default is “image”, assigned to pass validation.
- duplicate HTML files**
 - Detects and causes an error if duplicate HTML file names are generated, caused by identical or similar sectioning names.
- fixes**
 - Fix for `tabular*`.
 - Fix for `tabular` border colors.
 - Fixes `\quad`, `\enskip`, and figure captions to pass validation.
- Japanese**
 - Added `ltj*` classes, `bounddvi`, `gentombow`, `ltxtext`, `plarydshln`, `plext`, `plextarydshln`, `plextcolortbl`, `pxatbegshi`, `pxeveryshi`, `pxftnright`, `pxjahyper`, `tascmac`.
 - Verified to work with `plarray`, `plautopatch`, `plextarray`, `plextdelarray`, `pxgentombow`, `plsiunitx`, `pxpdfpages`, `pxpgfrcs`, `pxpgfmark`.
- packages**
 - Added support for `fontspec \textsi` and `\sishape`.
 - Added `multicol's \docolaction`.
 - Added `embrac`, `footnoterange`, `multicolrule`, `versonotes`.

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 `ckpunct`, `upzhkinsoku`, `zhspacing`.
 - Verified to work with `zxjatype`, `luatexja`, `luatexja-fontspec`.
 - Added `bxjsarticle` and related classes.
 - Added `ltsarticle` and related classes.
 - Added `pLATEX`, `upLATEX`, `ujarticle` and related classes.
 - Prevented `utarticle` and related classes.
 - Prevented `bcjkatype`.
 - Verified to work with `kotex`, `xetexko`, `luatexko`.
- v0.62:** MiKTeX docs, HTML title, CTeX, xeCJK, bitpattern.
- docs**
 - Docs: Setting a UTF-8 locale. See section 9.8.
 - MiKTeX**
 - MiKTeX: Docs for *MiKTeX Console* and `miktex-poppler-bin`.
 - HTML <title>**
 - HTML subpage titles: Added `\HTMLTitleBeforeSection` and `\HTMLTitleAfterSection` to select whether the HTML <title> displays the website name before or after the section name. See section 7.6.
 - fixes**
 - Fix for package options handling.
 - Fixes for horizontal white space between `fminipage`, `fcolorminipage`, `colorboxBlock`, `fcolorboxBlock`.
 - Logos: Fix for X_YL^AT_EX logo, improved css, made robust, improved search-engine optimization.
 - `\[$1]`: Additional HTML
 if \$1 > 0 pt.
 - Fixes for `\includgraphics` filename, and with `FormatWP`.
 - Fix: css for `\textup`.
 - Fix: Added `\slshape`.
 - Chinese**
 - Added `ctex` package and related classes, `xeCJK`.
 - Prevented `CJK`, `CJKutf8` unless `xeCJK`, `ctex` are used.
 - packages**
 - `chemfig`: Docs for new macro `\polymerdelim`.
 - `asymptote`: Docs for compilation.
 - `chngepage`: Fix to load `lwarp-changeage`.
 - `algorithm2e`: Fix with non-book classes.
 - `register`: Updated to v1.8.
 - `nicefrac`: Improved font control and css, honors `nice` and `ugly`.
 - `units`: Improved font control and css, honors `tight` and `loose`.
 - `xfrac`: Improved css.
 - `textcomp` and `xunicode`: Fix conflicts with `\textcircled`.
 - `ulem`: Improved compatibility with `CJKulem`, `lateximage`.
 - `MathJax` and `siunitx`: Removed inoperable extension.
 - Added `bitpattern`, `pdfcomment`, `pdfmarginpar`, `tram`, `unitsdef`, `xexchangebar`.
 - Added `musicography`, `octave`, `semantic-markup`.
 - Added `2in1`, `flippdf`, `notespages`, `rviewport`, `twoup`.

v0.61: Custom compilation, EPS-related packages, documentation, indexes.

docs

- Split index into multiple indexes.
- Improved documentation regarding font selection. See section 7.4.
- Added documentation regarding debugging options. See section 34.
- Added documentation regarding HTML entities inside program listings. See section 8.2.1.

custom compiling

- Added options to specify the shell commands to execute for `lwarpmk print` and `lwarpmk html`, allowing the use of `lwarp` with `pertex`, `pythontex`, etc. If not specified, these are set automatically depending on the L^AT_EX engine, `--shell-escape`, and `lwarp` options. See section 9.

⚠ changed names

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

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

fixes

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

packages

- Added epsfig, psfrag, psfragx, pstool.
- Added copyrightbox, pdfprivacy, thinsp, threadcol, uspace.
- Added chkfloat, cmdtrack, dprogress, lua-visual-debug, refcheck, srcltx, srctex, vpe, xbmks.

v0.60: Fixes for longtable, listings.

fixes

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

packages

- Added 2up, booklet.
- Added bophook, 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 8.8.
- DVI latex*
 - Added support for DVI *latex*. See section 7.5.
- 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`, `fncbreak`, `nccfancyhdr`.
 - Added `accsupp`, `axessibility`.
 - Added `xunicode`.
 - Improved and now supports `epstopdf`.
 - Tested to work as-is: `eepic`, `sepfootnotes`.
- docs*
 - Added information about setting up a development version of *lwarp*.

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

- ⚠ *Reset the configuration*
 - Due to changes in *lwarpmk*, **recompile any existing project a single time** using `pdflatex filename.tex` or similar, after which *lwarpmk* may then be used with the new configuration files.
- lwarpmk*
 - *lwarpmk*: Added the `-p` option to specify the project name.
- glossaries*
 - *lwarpmk*: Now uses `makeglossaries` for glossary generation, allowing the processing of multiple glossaries at once.
 - Added *lwarp* option `GlossaryCmd` to specify the shell command used by `lwarpmk printglossary` and `lwarpmk htmlglossary`. Defaults to `makeglossaries`.
- index and glossary*
 - Docs: Extra indexing options. See section 8.6.14.
 - Added support for `makeindex`. (Previously supported only `xindy`.) Also added indexing packages listed below.
 - Added *lwarp* options `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to specify shell commands used by `lwarpmk printindex`, `lwarpmk htmlindex`, and *latexmk*. May be preset with the `makeindex` or `xindy` *lwarp* options. See section 7.5.
 - Added *lwarp* options `makeindex` and `xindy` to set `PrintIndexCmd`, `HTMLIndexCmd`, and `LatexmkIndexCmd` to sensible values for a typical single index. See section 7.5.

- Added `lwarp` option `makeindexStyle` to tell *lwarpmk* to use a custom style instead of `lwarp.ist`. See section 8.6.20.
- 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`.

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

- Added support for MathJax equations with `\footnote`, `\footnotemark`.
- Added `\StartDefiningMath` and `\StopDefiningMath` for use when defining macros in the preamble which contain `$`. See section 8.7.7.
- Added `\inlinemathother` and `\inlinemathnormal` to delimit math expressions which depend on a variable condition such as a counter. Such expressions will not be hashed for reuse, and will be converted to `svg` math images even when MathJax is enabled. See section 8.7.8.
- Renamed `\EndDefiningTabulars` to `\StopDefiningTabulars`.
- Improved localization for `lateximage` `HTML alt` tags. For `svg` math images, the `alt` tag under some conditions will be set to `\MathImageAltText`, which defaults to `math image`. For packages, the `alt` tag is set using the package name followed by `\PackageDiagramAltText`, which defaults to `diagram`.
Ex:

`(-xy- diagram)`

See section 7.6.

- 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*

- Added
`lwarpmk pdftosvg <list-of-PDF-files>`
to quickly convert a document's PDF images to SVG, for use with HTML. See section 8.8.

- Added support for `--shell-escape`. See section 7.3.

tabular

- 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`.
- Added `bibunits`.
- Tested to work as-is with `babelbib`, `bodegraph`, `fast-diagram`, `nicematrix`, `structmech`.

v0.55: Various fixes.*misc fixes*

- Fix: Extraneous space in file links, which also prevented *Calibre* EPUB conversions.
- Fix: Float optional argument regression.
- Fix: `\ForceHTMLTOC` with `\phantomsection`.
- Fix: Overfull boxes in `lateximages`.
- Fix: QED symbols in `lateximage`.

packages

- `koma-script`: Fix: Figure with `\centering`, etc.
- Added `clrdblpg`.

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

⚠ Reset the configuration

- Due to changes in *lwarpmk*, **recompile any existing project a single time** using `pdf \LaTeX 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.

Bib \TeX

- Added documentation for avoiding error with Bib \TeX and `\etalchar`. See section 8.6.9.

polyglossia

- Added documentation regarding *polyglossia*. See section 8.15.4.

macros in section names

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

document encoding

⚠ New and revised encoding options

- Renamed and added package options:

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

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

floats with `\centering`, etc.

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

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

misc. fixes

- `tikz`: `\pgfpicture`, `fit`, `align`, `font`.
- `ragged2e`: `\centering` etc.
- `hyperref`: `\hypertarget` was creating duplicate of `\label`.
- `hyperref`: Active chars inside `\hyperref`, `\hyperlink`.
- `hyperref`: `\ref` inside `\hyperlink` caused a nested HTML link.
- `glossaries`: Fix when not using `babel` or `polyglossia`.
- `textcomp`: `\textperthousand`.
- L^AT_EX core verse environment: line spacing.
- Removed `\citetitle`, adjusted `\attribution`.
- `memoir`: Minor update for v3.7g.
- Added `inputenx`, `bibunits`, `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 8.5.4.
- Added documentation regarding font selection when using X_EL^AT_EX or Lua^AT_EX with `fontspec` and traditional font packages. See section 7.4.

SVG math

- Fix: Limit the number of background tasks when generating `lateximages`.
- Added user-adjustable SVG math font scaling. See section 81.3.
- 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 8.7.
 - footnotes**
 - Fix: Footnote numbering when using HTMLDebugComments.
 - Fix: Footnote paragraph tags.
 - Fix: FootnoteDepth defaults to \subsubsection.
 - misc. fixes**
 - Fix: \kill in a lateximage.
 - Fix: \FileDepth, misc. others, when input encoding is not utf8.
 - Fix: \texorpdfstring in a section name.
 - packages**
 - hyperref emulation: Fix for #, %, &, ~, _ characters in URLs.
 - fancybox, fancyvrb: Initial support for \VerbatimFootnotes.
 - nicefrac: Added with fix for \ensuremath.
 - graphicx: Fix for option defaults. Added v1.1a/b options.
 - endfloat: Updated for v2.6.
 - url: Fixes for active characters.
- v0.51:** Improved svg math, added numerous chemistry packages.
- documentation**
 - Docs: Added **Things to avoid**.
 - Docs: Added to **Converting an existing document**.
 - Docs: Multiple authors and affiliations with custom classes. See section 8.6.1.
 - Docs: tikz with matrices. See section 8.8.1.
 - SVG math**
 - Improved svg math baseline.
 - Improved svg math font and color.
 - Faster svg math rendering.
 - Improved support for display math containing complicated math objects, such as tikz-cd. See section 8.7.9.
 - Fix: \addcontentsline inside svg math.
 - Fix: SVG math containing an embedded lateximage.
 - MathJax**
 - 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.
 - packages**
 - Added mhchem, chemfig, chemformula, chemmacros, chemnum, chemgreek, epstopdf-base, grid, ltxgrid.

2 Introduction

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

2.1 Typesetting conventions

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

Table 1: Typesetting conventions

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

2.2 Supported packages and features

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

Package names are colored according to their support level:

name: Supported as-is.

name: Modified to work with HTML output, and also as print output in svg math or lateximage environments.

name: Emulated for HTML output.

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

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

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

MJ: Ignored by MATHJAX, but may be used in the document source.

Table 2: L^AT_EX lwarp package — Supported features

Category	Status and supported features.
Engines:	DVI L ^A T _E X, pdfL ^A T _E X, X _Y L ^A T _E X, LuaL ^A T _E X, upL ^A T _E X
Compiling:	<i>latexmk</i> , <i>perltex</i> , <i>pythontex</i> , <i>make</i> , etc.
Classes:	article, book, report, scrartcl, scrbook, screprt, memoir, CJK-related as listed below.
Koma-script:	scxextend , scrhack , scrlayer . Others as listed below.
Memoir:	memhfixc
Languages:	babel , polyglossia . cjkpunct , xeCJK .
Chinese:	CTEX, ctex , upzhkinsoku , xpinyin , zhlineskip , zhspacing .
Japanese:	upL ^A T _E X, LuaT _E X-ja, gentombow , lltjext , plarray , plarydshln , plautopatch , plext , plextarray , plextarydshln , plextcolortbl , plextdelarray , pxatbegshi , pxeveryshi , pxftnright , pxgentombow , pxjahyper , pxpdfpages , pxpgfrcs , pxpgfmark , tascmac , zxjatype . bxjsarticle and related, ltjsarticle and related, luatexja , luatexja-fontspec , ujarticle and related, utarticle and related.
Korean:	kotex , luatexko , xetexko .

lwarp Supported Functions — continued

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

lwarp Supported Functions — continued

Category	Status
Footnotes:	Adds FootnoteDepth to print footnotes at section breaks. MATHJAX emulation for <code>\footnote</code> , and also as marked in the following: <code>bigfoot</code> , <code>dblfnote</code> , <code>endheads</code> , <code>endnotes</code> ^{MJ} , <code>fixfoot</code> , <code>fnbreak</code> , <code>fnpara</code> , <code>fnpos</code> , <code>footmisc</code> , <code>footnote</code> , <code>footnotebackref</code> , <code>footnoterange</code> , <code>footnpag</code> , <code>manyfoot</code> , <code>marginnote</code> ^{MJ} , <code>nccfoots</code> ^{MJ} , <code>pagenote</code> ^{MJ} , <code>parnotes</code> ^{MJ} , <code>pdfcolfoot</code> , <code>pfnote</code> , <code>sepfootnotes</code> , <code>sidenotes</code> ^{MJ} , <code>tablefootnote</code> .
Math:	Converted to SVG images with HTML <code><alt></code> tags containing the L ^A T _E X source for the math expression. MATHJAX supported as an alternative. <code>amsmath</code> ^{MJ} : $\mathcal{A}\mathcal{M}\mathcal{S}$ environments are supported. User-defined macros are available during conversion, due to native L ^A T _E X processing.
Theorems:	Native L ^A T _E X theorems, <code>amsthm</code> , <code>ntheorem</code> , <code>theorem</code> .
Additional math:	Math fonts via SVG images, <code>amscd</code> , <code>autobreak</code> ^{MJ} , <code>autonum</code> , <code>backnaur</code> , <code>bm</code> ^{MJ} , <code>braket</code> ^{MJ} , <code>breqn</code> , <code>cases</code> , <code>centernot</code> ^{MJ} , <code>colonequals</code> ^{MJ} , <code>decimal</code> ^{MJ} , <code>delarray</code> , <code>DotArrow</code> ^{MJ} , <code>dotlessi</code> ^{MJ} , <code>dotlessj</code> ^{MJ} , <code>extarrows</code> ^{MJ} , <code>fouridx</code> ^{MJ} , <code>guass</code> , <code>icomma</code> ^{MJ} , <code>jkmath</code> , <code>leftidx</code> ^{MJ} , <code>mathcomp</code> ^{MJ} , <code>mathdots</code> ^{MJ} , <code>mathfixs</code> ^{MJ} , <code>mathpunctspace</code> ^{MJ} , <code>mathspec</code> , <code>mathtools</code> ^{MJ} , <code>mismath</code> ^{MJ} , <code>multiobjective</code> ^{MJ} , <code>nccmath</code> ^{MJ} , <code>nicematrix</code> , <code>noitcru</code> ^{MJ} , <code>pb-diagram</code> , <code>resizegather</code> , <code>rmathbr</code> ^{MJ} , <code>stackrel</code> ^{MJ} , <code>statex2</code> ^{MJ} , <code>statmath</code> ^{MJ} , <code>subsubscripts</code> ^{MJ} , <code>textualcomma</code> ^{MJ} , <code>unicode-math</code> ^{MJ} , <code>witharrows</code> ^{MJ} , <code>xfakebold</code> ^{MJ} , <code>xy</code> . Many others work as-is.
Display math with <code>\displaymath</code> or <code>\displaymathother</code> :	Complicated math objects in display math, such as <code>tikz-cd</code> , etc.
Units and fractions:	<code>nicefrac</code> ^{MJ} , <code>Slunits</code> ^{MJ} , <code>siunitx</code> ^{MJ} , <code>units</code> ^{MJ} , <code>unitsdef</code> , <code>xfrac</code> ^{MJ} .
Floats:	Appear where declared. <code>capt-of</code> , <code>caption</code> , <code>cutwin</code> , <code>dblfloatfix</code> , <code>endfloat</code> , <code>fewerfloatpages</code> , <code>fix2col</code> , <code>flafter</code> , <code>float</code> , <code>floatflt</code> , <code>floatrow</code> , <code>fltrace</code> , <code>ftcap</code> , <code>hypcap</code> , <code>keyfloat</code> , <code>morefloats</code> , <code>multicap</code> , <code>newfloat</code> , <code>nonfloat</code> , <code>placeins</code> , <code>rofloat</code> , <code>stfloats</code> , <code>subcaption</code> , <code>subfig</code> , <code>subfigure</code> , <code>subfloat</code> , <code>topcapt</code> , <code>trivfloat</code> , <code>wrapfig</code> .

lwarp Supported Functions — continued

Category	Status
Tabular:	tabular environment, <code>array</code> ^{MJ} , <code>arydshln</code> ^{MJ} , <code>bigdelim</code> ^{MJ} , <code>bigstrut</code> ^{MJ} , <code>booktabs</code> ^{MJ} , <code>colortbl</code> , <code>ctable</code> , <code>diagbox</code> , <code>hhline</code> ^{MJ} , <code>longtable</code> , <code>ltablex</code> , <code>ltxtable</code> , <code>multirow</code> ^{MJ} , <code>supertabular</code> , <code>tabularx</code> , <code>tabulary</code> , <code>threeparttable</code> , <code>threeparttablex</code> , <code>widetable</code> , <code>xltabular</code> , <code>xtab</code> .
Graphics:	<code>graphics</code> and <code>graphicx</code> . <code>\includegraphics</code> supports width, height, origin, angle, and scale tags, and adds <code>class</code> . References to PDF files are changed to SVG, other image types are accepted as well. <code>\rotatebox</code> and <code>\scalebox</code> are supported as well as HTML can handle. <code>rotating</code> is emulated but all objects are unrotated. <code>picture</code> , <code>tikz</code> , and <code>xy</code> are converted to an SVG image. <code>asymptote</code> , <code>curves</code> , <code>datatool</code> , <code>eepic</code> , <code>epsfig</code> , <code>epstopdf</code> , <code>figsize</code> , <code>fitbox</code> , <code>grffile</code> , <code>luamplib</code> , <code>media9</code> , <code>movie15</code> , <code>multimedia</code> , <code>overpic</code> , <code>psfrag</code> , <code>psfragx</code> , <code>pst-eps</code> , <code>pstool</code> , <code>pstricks</code> , <code>rviewport</code> , <code>svg</code> , <code>svg-extract</code> , <code>tikz-3dplot</code> .
xcolor:	Full package color names, any color models, and mixing. <code>\textcolor</code> , <code>\colorbox</code> , <code>\fcolorbox</code> . Enhanced for HTML compatibility.
Lists:	Standard L ^A T _E X environments, <code>enumerate</code> , <code>enumitem</code> , <code>eqlist</code> , <code>hang</code> , <code>listliketab</code> , <code>paralist</code> .
Environments:	Standard L ^A T _E X environments.
<code>minipage</code> , <code>\parbox</code> :	Some HTML5-imposed limitations. Nested minipages are supported. <code>eqparbox</code> , <code>minibox</code> , <code>pbox</code> , <code>shapepar</code> .
Quotations:	<code>copyrightbox</code> , <code>csquotes</code> , <code>epigraph</code> , <code>quoting</code> , <code>verse</code> .
Verbatim:	<code>fancyvrb</code> , <code>moreverb</code> , <code>shortvrb</code> , <code>verbatim</code> .
Frames:	<code>boxedminipage</code> , <code>boxedminipage2e</code> , <code>fancybox</code> , <code>framed</code> , <code>mdframed</code> , <code>niceframe</code> , <code>shadow</code> , <code>vertbars</code> .
Multi-columns:	<code>adjmulticol</code> , <code>multicol</code> , <code>multicolrule</code> , <code>vwcol</code> .
Margins:	<code>fullwidth</code> , <code>hanging</code> , <code>midpage</code> .
Line numbering:	<code>fnlineno</code> , <code>lineno</code> .

lwarp Supported Functions — continued

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

lwarp Supported Functions — continued

Category	Status
Science and engineering:	algorithm2e , algorithmicx , ar^{MJ} , askmaps , axodraw2 , bitpattern , blochsphere , bodegraph , bohr , bytefield , chemfig , chemformula , chemgreek , chemmacros , chemnum , circuitkz , econometrics^{MJ} , elements , engtlc^{MJ} , fast-diagram , ghsystem , hepnicenames , heppennames , karnaughmap , karnaugh-map , listings , linop , mhchem^{MJ} , pgfgantt , phfqit , physics^{MJ} , physunits^{MJ} , qcircuit , register , simpler-wick , slashed^{MJ} , steinmetz^{MJ} , structmech , struktex , tikz-karnaugh , tikzcodeblocks
Arts and humanities:	foreign , forest , lyluatex , musicography , nameauth , octave , phonrule , piano , schemata , semantic-markup , tikz-dependency , vowel , xpiano
Admonitions:	awesomebox , notes .
Editorial:	changebar , changelog , changes , easy-todo , easyReview , ed , errata , fixme , fixmetodonotes , pdfcomment^{MJ} , pdfmarginpar , todo , todonotes , tram , xchangebar .
Accessibility:	accessibility^{MJ} , accsupp^{MJ} , axessibility^{MJ} , pdfcomment^{MJ} , tagpdf .
Package handling:	catoptions .
Debug:	chkfloat , cmdtrack , dprogress , lua-visual-debug , refcheck , srcltx , srctex , vpe , xbmks .
Working as-is:	Various utility, calculation, file, and text-only packages, such as calc , fileerr , somedefs , trace , xspace . Also, most math-only packages, including specialized typesetting for various fields of science and engineering.

3 Alternatives

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

3.1 internet class

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

3.2 TeX4HT

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

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

3.3 Translators

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

Prog Hevea **H^Ev^Ea**: <http://hevea.inria.fr/> (not on CTAN)
 Prog TtH **T_TH**: <http://hutchinson.belmont.ma.us/tth/>
 Prog GELLMU **GELLMU**: <http://www.albany.edu/~hammond/gellmu/>
 Prog LaTeXML **\LaTeX 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 be used to directly insert \LaTeX math into HTML:

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

3.4 ASCII DOC and ASCIIDOCTOR

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

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

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

3.4.1 ASCIIDOCTOR-L^AT_EX

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

Asciidoctor-Latex:

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

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

3.5 PANDOC

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

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

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

3.6 Word processors

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

3.7 Commercial systems

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

Prog Flare

Prog Madcap

3.8 Comparisons

AsciiDoc, Pandoc, and various other markup languages typically have a syntax which tries to be natural and human-readable, but the use of advanced features tends to

require many combinations of special characters, resulting in a complicated mess of syntax. By contrast, \LaTeX spells things out in readable words but takes longer to type, although integrated editors exist which can provide faster entry and a graphic user interface. For those functions which are covered by the typical markup language it is arguable that \LaTeX is comparably easy to learn, while \LaTeX provides many more advanced features where needed, along with a large number of pre-existing packages which provide solutions to numerous common tasks.

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

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

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

4 Installation

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

Detailed installation instructions follow.

Table 3: Required software programs

Provided by your L^AT_EX distribution:

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

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

The lwarp package: This package.

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

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

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

***latexmk*:** Optionally used by *lwarpmk* to compile L^AT_EX code. On a MiK_TE_X system, *Perl* may need to be installed first.

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

POPPLER PDF utilities:

***pdftotext*:** Used to convert PDF to text.

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

***pdftocairo*:** Used to convert images to SVG.

These might be provided by your operating-system package manager, and MiK_TE_X provides *miktex-poppler-bin-** packages.

From POPPLER: poppler.freedesktop.org.

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

```
Enter ⇒ brew install poppler
```

For WINDOWS, see MiK_TE_X *miktex-poppler-bin-**, or:

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

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

Perl:

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

strawberryperl.com (recommended), perl.org

Automatically downloaded from the internet as required:

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

4.1 Installing the lwarp package

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

Pre-installed: Try entering into a command line:

```
Enter ⇒ kpsewhich lwarp.sty
```

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

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

```
Enter ⇒ tlmgr install lwarp
```

MiKTeX:

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

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

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

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

TEX Live:

```
Enter ⇒ kpsewhich -var-value TEXMFLOCAL
```

MiKTeX:

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

This should be something like:

```
/usr/local/texlive/texmf-local/
```

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

```
Enter ⇒ mktexlsr
```

— or —

```
Enter ⇒ texhash
```

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

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

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

```
Enter ⇒ pdflatex lwarp.ins
```

6. Create the documentation:

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

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

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

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

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

10. Renew the cache:

```
Enter ⇒ mktxlsr
```

— or —

```
Enter ⇒ texhash
```

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

11. See section 4.2.1 to generate your local copy of *lwarpmk*.
12. Once the local version of `lwarpmk.lua` is installed, it may be made available system-wide as per section 4.2.

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

Just testing!

4.2 Installing the *lwarpmk* utility

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

After the lwarp package is installed, you may need to setup the *lwarpmk* utility:

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

Otherwise, continue with the following:

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

```
Enter ⇒ kpsewhich lwarpmk.lua
```

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

4. Create *lwarpmk*:

Unix: Create a symbolic link and make it executable:

- (a) Locate the T_EX Live binaries:

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

This will be something like:

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

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

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

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

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

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

- (c) Make the link executable:

```
Enter ⇒ chmod 0755 lwarpmk
```

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

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

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

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

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

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

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

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

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

4.2.1 Using a local copy of *lwarpmk*

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

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

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

2. When the tutorial is compiled with *pdflatex*, the file `lwarpmk.lua` will be generated along with the other configuration files.
3. `lwarpmk.lua` may be used for this project:

Unix:

- (a) Make `lwarpmk.lua` executable:

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

- (b) Compile documents with

```
Enter ⇒ ./lwarpmk.lua html
```

```
Enter ⇒ ./lwarpmk.lua print
```

etc.

- (c) It may be useful to rename or link to a version without the `.lua` suffix.

WINDOWS:

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

```
Enter ⇒ texlua lwarpmk.lua html
```

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

etc.

Or:

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print
```

etc.

4.3 Installing additional utilities

To test for the existence of the additional utilities:

Enter the following in a command line. If each program's version is displayed, then that utility is already installed. See table 3 on page 71.

```
Enter ⇒ luatex --version
```

```
Enter ⇒ xindy --version
```

```
Enter ⇒ latexmk --version
```

```
Enter ⇒ perl --version
```

```
Enter ⇒ pdftocrop --version
```

```
Enter ⇒ pdftotext -v
```

```
Enter ⇒ pdfseparate --version
```

```
Enter ⇒ pdftocairo -v
```

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

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

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

To install the POPPLER utilities to a UNIX/LINUX system:

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

To install the POPPLER utilities to a MACOS machine:

1. Install *Homebrew* from <https://brew.sh/>:

```
/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

2. Install the POPPLER utilities:

```
Enter ⇒ brew install poppler
```

To install the POPPLER utilities to a WINDOWS machine:

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

1. See table 3 on page 71.
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\\Desktop\Poppler\poppler-0.5_x86\poppler-0.5\bin
```

Be sure to include \bin.

9. Click **Ok** when done.

To install PERL to a WINDOWS machine:

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

```
C:\Strawberry\perl\bin
```

Be sure to include \bin.

4. Click **Ok** when done.

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

5 Tutorial

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

Need help?

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

5.1 Starting a new project

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

File `tutorial.tex`

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

Copy from the documentation PDF:

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

Copy from the lwarp documentation directory:

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

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

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

File `lwarp_tutorial.txt`

 **Note: .txt suffix!**

 **Bad formatting!**

When using WINDOWS, use an editor other than NOTEPAD, since NOTEPAD does not accept the end-of-line from a UNIX text file.

3. Compile the project:

```
Enter ⇒ pdflatex tutorial.tex
```

(several times)

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

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

A number of new files are created when `tutorial.tex` is compiled, as shown in [table 4](#). These files are created by the lwarp package.

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

Figure 1: tutorial.tex listing

Note: There are two pages!

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

\documentclass{book}

\usepackage{iftex}

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

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

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

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

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

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

```

\begin{document}

\maketitle           % Or titlepage/titlingpage environment.

% An article abstract would go here.

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

\chapter{First chapter}

\section{A section}

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

\subsection{A subsection}

See \cref{fig:withtext}.

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

\section{Some math}

Inline math:  $r = r_0 + vt - \frac{1}{2}at^2$ 
followed by display math:
\begin{equation}
a^2 + b^2 = c^2
\end{equation}

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

\end{document}

```

Table 4: Configuration files created by print version

- tutorial.pdf:** The PDF output from L^AT_EX. The print version of the document.
- tutorial_html.tex:** A small .tex file used to create a parallel HTML version of the document, which co-exists with usual the PDF version, and which will have its own auxiliary files. In this way, both PDF and HTML documents may co-exist side-by-side.
- Auxiliary files:** The usual L^AT_EX files .aux, .log, .out, .toc, .lof, .idx. When an HTML version of the document is created, _html versions of the auxiliary files will also be generated.
- lwarpmk.conf:** A configuration file for *lwarpmk*, which is used to automate the compilation of PDF or HTML versions of the document.
- tutorial.lwarpmkconf:** Another configuration file used by *lwarpmk*, which is only useful if you wish to have several projects residing in the same directory.
- .css files:** *lwarp.css*, *lwarp_formal.css*, *lwarp_sagebrush.css* These files are standard for *lwarp*, and are not meant to be modified by the user.
- sample_project.css:** An example of a user-customized css file, which may be used for project-specific changes to the *lwarp* defaults.
- lwarp.ist:** Used by *lwarp* while creating an index using *makeindex*. This file should not be modified by the user. A custom file may be used instead, if necessary.
- lwarp.xdy:** Used by *lwarp* while creating an index using *xindy*. This file should not be modified by the user. A custom file may be used instead, if necessary.
- lwarp_one_limage.txt:** For WINDOWS only. Used to process svg images in the background. Copied to *lwarp_one_limage.cmd* when images are generated.
- lwarp_mathjax.txt:** Inserted into the HTML files when MATHJAX is used to display math. This file should not be modified by the user.
- comment_*.cut:** Temporary files used by *lwarp* to conditionally process blocks of text. These files may be ignored.

When the *lwarpmk* option is given to the *lwarp* package:

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

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

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

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

5.2 Compiling the print version with *lwarpmk*

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

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

1. Re-compile the print version:

Enter ⇒ **lwarpmk print**

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

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

3. Recompile again.

Enter ⇒ **lwarpmk print**

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

4. Force a recompile to occur.

Enter ⇒ **lwarpmk again**

Enter ⇒ **lwarpmk print**

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

5. Process the index.^{6 7}

Enter ⇒ **lwarpmk printindex**

6. Recompile again to include the index.

Enter ⇒ **lwarpmk print**

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

Enter ⇒ **lwarpmk print1**

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

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

⁶The command `lwarpmk printglossary` is also available to process a glossary produced with the `glossaries` package. See section 8.6.12.

⁷Also see section 8.6.15 for index options.

5.3 Compiling the HTML version with *lwarpmk*

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

1. Compile the HTML version:

```
Enter ⇒ lwarpmk html
```

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

2. View the HTML page in a web browser.

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

math

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

3. Force a recompile:

```
Enter ⇒ lwarpmk again
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print
```

4. Process the HTML index and recompile:¹⁰¹¹

```
Enter ⇒ lwarpmk htmlindex
```

```
Enter ⇒ lwarpmk html
```

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

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

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

```
Enter ⇒ lwarpmk html1
```

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

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

¹⁰The command `lwarpmk htmlglossary` is also available to process a glossary produced with the `glossaries` package. See section 8.6.12.

¹¹Also see section 8.6.15 for index options.

5.4 Generating the svg images

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

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

1. Create the svg images:

```
Enter ⇒ lwarpmk limages
```

```
Enter ⇒ lwarpmk html
```

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

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

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

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

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

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

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

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

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

5.5 Using MATHJAX for math

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

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

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

2. Recompile

```
Enter ⇒ lwarpmk html
```

3. Reload the math page.

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

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

5.6 Changing the css style

For a formal css style, add to the preamble:

```
\usepackage{lwarp}  
...  
\CSSFilename{lwarp_formal.css}  
...  
\begin{document}
```

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

```
\CSSFilename{lwarp_sagebrush.css}
```

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

5.7 Customizing the HTML output

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

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

5.8 Using *latexmk*

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

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

```
latexmk, % Use latexmk to compile.
```

2. Recompile the printed version of the document.

```
Enter ⇒ lwarpmk print
```

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

3. Recompile the document.

```
Enter ⇒ lwarpmk print
```

and/or

```
Enter ⇒ lwarpmk html
```

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

```
Enter ⇒ lwarpmk print1
```

and/or

```
Enter ⇒ lwarpmk html1
```

forced single-pass recompile

5.9 Using Xe_{La}TeX or Lua_{La}TeX

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

1. Remove the auxiliary files for the project:

```
Enter ⇒ lwarpmk cleanall
```

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

```
Enter ⇒ xelatex tutorial.tex
```

— *or* —

```
Enter ⇒ lualatex tutorial.tex
```

When the compile occurs, the configuration files for *lwarpmk* are modified to remember which TeX engine was used. Xe_{La}TeX or Lua_{La}TeX will be used for future runs of *lwarpmk*.

3. To recompile the document:

```
Enter ⇒ lwarpmk print
```

-and-

```
Enter ⇒ lwarpmk html
```

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

```
Enter ⇒ lwarpmk htmlindex
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk print
```

5.10 Using DVI \LaTeX

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

To convert EPS files to PDF:

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

To convert PDF files to SVG:

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

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

5.11 Using a glossary

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

5.11.1 `gloss` package

See section [8.6.11](#).

5.11.2 `glossaries` package

To process the glossary for the print version:

```
Enter ⇒ lwarpmk printglossary
```



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

To process the glossary for the HTML version:

```
Enter ⇒ lwarpmk htmlglossary
```

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

```
Enter ⇒ lwarpmk html1
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print1
```

```
Enter ⇒ lwarpmk print
```

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

5.12 Cleaning auxiliary files

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

```
Enter ⇒ lwarpmk clean
```

5.13 Cleaning auxiliary and output files

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

```
Enter ⇒ lwarpmk cleanall
```

5.14 Cleaning the images from the `<project>-images` directory

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

```
Enter ⇒ lwarpmk cleanimages
```

5.15 Converting PDF or EPS images to SVG

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

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

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

Be sure to always provide SVG files for HTML output.

5.16 Creating HTML from an incomplete compile

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

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

5.17 Processing multiple projects in the same directory

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

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

To create each project:

```
Enter ⇒ pdflatex project_a
```

```
Enter ⇒ pdflatex project_b
```

Each project is given its own configuration file:

```
project_a.lwarpmkconf, project_b.lwarpmkconf
```

To compile each project with `lwarkmk`:

```
Enter ⇒ lwarpmk print -p project_a
```

```
Enter ⇒ lwarpmk print -p project_b
```

```
Enter ⇒ lwarpmk html -p project_a
```

```
Enter ⇒ lwarpmk html -p project_b
```

To generate each project's images:

```
Enter ⇒ lwarpmk limages -p project_a
```

```
Enter ⇒ lwarpmk limages -p project_b
```

To clean each project's images:

```
Enter ⇒ lwarpmk cleanlimages -p project_a
```

```
Enter ⇒ lwarpmk cleanlimages -p project_b
```

To clean each project's auxiliary files:

```
Enter ⇒ lwarpmk cleanall -p project_a
```

```
Enter ⇒ lwarpmk cleanall -p project_b
```

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

```
Enter ⇒ bibtex project_a_html
```

5.18 Using the *make* utility

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

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

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

5.19 What next?

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

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

Package options: See section 28, [Package options](#).

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

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

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

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

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

MATHJAX customization: See section 8.7.5, [Customizing MATHJAX](#).

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

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

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

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

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

6 Converting an existing document

To convert an existing document for use with lwarp:

1. Arrange the document in the following order:

- (a) Declare the `\documentclass`.
- (b) Load text fonts.
- (c) Load `inputenc` or `inputenx`, `fontenc`, or `fontspec`.
- (d) Load `lwarp`.
- (e) Load remaining packages.

2. Modify the document:

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

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

- (b) Avoid using the `\includegraphics` `scale` option. Change:

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

to:

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

- (c) Possible changes to `tabular` environments include: `* columns`, `multirow`, `longtable`, `supertabular`, `xtable`, `bigdelim`. See section 8.10.1.

- (d) If using braces in package options, such as with `caption`, see section 8.1.

- (e) Possible option clashes with `memoir`. See section 8.13.

- (f) If using `indexes`, see section 8.6.15.

- (g) If using many `indexes`, `glossaries`, `.aux` files, etc., see section 8.6.15 regarding `morewrites`. If `morewrites` is already used, be sure to add the setup with `allocate=10`.

- (h) Other changes as per [Special cases and limitations](#), section 8.

3. Convert any PDF images to SVG. See section 8.8.

4. Manually compile the print version with `latex`, `pdflatex`, `lualatex`, or `xelatex`.

5. `lwarpmk print` to finish the print version.

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

7. `lwarpmk limages` to create the SVG images of any SVG math, `lateximage`, `Tikz`, etc.

[Need help?](#)

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

 [math in section names](#)

 [scale](#)

 [tabular](#)

 [package options](#)

 [indexes](#)

Table 5: Localization settings

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

`\abstractname`: This macro is honored by lwarp.

`\linkhomename`: Displayed by the link to the homepage.

`\linkpreviousname`: Displayed by the link to the previous page

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

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

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

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

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

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

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

Package options:

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

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

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

7 Additional details

7.1 Localization

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

7.2 Accessibility

lwarp provides several methods for improving access to the document using tools such as text-only browsers, copy/paste, text-to-speech readers, or Braille readers. HTML provides the `alt` text attribute for images, which is used by lwarp as describe below. HTML also provides the `title` attribute, which usually generates a pop-up text. lwarp can add this to a reference or hyperlink. MATHJAX also has provisions for improved accessibility as well. See table 6.

Table 6: Accessibility settings

\ImageAltText: The default HTML alt text for `\includegraphics` and `lateximages`. Set with `\renewcommand`.

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

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

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

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

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

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

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

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

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

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

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

See section 7.6.

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

7.3 Shell escape

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

7.4 Font and UTF-8 support

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

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

 `pdflatex`

 `DVI latex`

Pkg `cm-super`

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

Pkg `lmodern` To use Latin Modern instead, add

```
usepackage{lmodern}
```

to the preamble.

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

```
\usepackage{dejavu}
```

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

 **xelatex, luatex, fontspec** X_ƎL^AT_EX and Lua^AT_EX users must use the `fontspec` package. Do NOT use `fontenc`!

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

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

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

Pkg fontspec

ligatures

– fontspec and font choices

lwarp sets the following to turn off T_EX ligatures during the generation of HTML tags, and turn off common ligatures in regular text, since older browsers may not display them correctly and newer browsers can automatically re-create them.

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

• For *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 packageiii. `\pdfgentounicode=1`(f) Another option to assist with the PDF-HTML conversion, such as the `dotless j` (`\j`):– `\usepackage{cmap}` — *or* —– `\usepackage{mmap}` — *or* —– `\usepackage[noTeX]{mmap}`(g) `\usepackage{textcomp}`

⚠ dotless j

Pkg cmap

Pkg mmap

Pkg textcomp

3. `\usepackage{lwarp}` (section 7.5) is placed after any of the above, followed by:4. `\usepackage{newtxmath}` or other math-related font packages. Many of these load `amsmath`, which must be loaded after `lwarp`, so they must also be loaded after `lwarp`.5. `\setmonofont{TeX Gyre Cursor}` or similar may be required if using X_EL_AT_EX or LuaL_AT_EX and `fontspec` along with traditional font packages such as `txfonts`, `newtxtext`, etc. This is required to turn off the monospaced font’s ligatures with `fontspec` after loading the traditional font packages. Monospaced output ligatures must be turned off to produce the correct HTML characters.

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

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

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

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

⚠ fontspec with monospaced fonts

⚠ JETBRAIN MONO

⚠ HTML corrupted

⚠ UTF-8 locale In some cases, an external program may require a UTF-8 “locale”. See section 9.8.

7.4.1 Indexes, glossaries, and encoding

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

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

7.5 lwarp package loading and options

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

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

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

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

Pkg lwarp lwarp package options are as follows:

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

Table 7: Lwarp package options

Option	Description
mathsvg	Show math using SVG images.
mathjax	Show math using MATHJAX.
latexmk	Use <i>latexmk</i> for compiling documents.
dvips	Use <i>dvips</i> and <i>ps2pdf</i> to convert DVI documents.
dvipdfm	Use <i>dvipdfm</i> to convert DVI documents.
dvipdfmx	Use <i>dvipdfmx</i> to convert DVI documents.
HomeHTMLFilename	The filename of the home page.
HTMLFilename	A prefix for the filenames of the remaining web pages.
ImagesName	A prefix for the filenames of generated images.
ImagesDirectory	The directory used to hold generated images.
PrintLatexCmd	The shell commands for lwarpmk print .
HTMLLatexCmd	The shell commands for lwarpmk html .
For indexing (section 8.6.15) and glossaries (section 8.6.12):	
makeindex	Use <i>makeindex</i> to generate indices.
xindy	Use <i>xindy</i> to generate indices.
makeindexStyle	Set a custom style for <i>makeindex</i> .
xindyStyle	Set a custom style for <i>xindy</i> .
xindyLanguage	The <i>xindy</i> language option used for index generation.
xindyCodepage	The <i>xindy</i> codepage option used for index generation.
PrintIndexCmd	Shell commands executed by lwarpmk printindex .
HTMLIndexCmd	Shell commands executed by lwarpmk htmlindex .
LatexmkIndexCmd	Shell commands executed by <i>latexmk</i> .
GlossaryCmd	Shell command executed by lwarpmk printglossary and lwarpmk htmlglossary .
Seldom necessary:	
OSWindows	Force compatibility with MS-WINDOWS.
pdftotextEnc	Set the encoding for <i>pdftotext</i> .
lwarpmk	Generate a local copy of <code>lwarpmk.lua</code> .
Used internally by lwarp:	
warpprint	Generate print output, and also generate configuration files.
warpHTML	Generate HTML output.
BaseJobname	The <code>\jobname</code> to use. Set to the <code>\jobname</code> of the printed version even while generating HTML.

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

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

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

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

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

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

Opt `PrintIndexCmd` **PrintIndexCmd:** Sets the shell commands executed by `lwarpmk printindex`. If not specified, will be set by the selection of `makeindex` or `xindy`. May be used to specify the creation of multiple indexes. See section 8.6.15.
 Default: `<automatic>`

Examples:

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

automatic setting

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

⚠ **xindy**

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

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

Opt `HTMLIndexCmd` **HTMLIndexCmd:** Sets the shell commands executed by `lwarpmk htmlindex`. If not specified, will be set by the selection of `makeindex` or `xindy`. May be used to specify the creation of multiple indexes. See section 8.6.15.
 Default: `<automatic>`

⚠ **filenames**

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

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

automatic setting

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

⚠ **xindy**

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

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

Opt LatexmkIndexCmd
Default: <automatic>

LatexmkIndexCmd: Sets the shell commands executed by *latexmk*. Unlike PrintIndexCmd and HTMLIndexCmd, LatexmkIndexCmd does not include any filenames, which will be provided instead by *latexmk*. See section 8.6.15.

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

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

automatic setting

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

⚠ **xindy**

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

Opt GlossaryCmd
Default: makeglossaries

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

Opt OSWindows

OSWindows: `lwarp` attempts to automatically sense WINDOWS, but it may be forced with this option. See section 7.9.

Opt pdftotextEnc
Default: UTF-8

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

Opt lwarpmk

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

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

Opt warpprint
Opt warpHTML

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

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

7.6 Customizing the HTML output

⚠ Placement!

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

⚠ Changes!

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

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

Enter ⇒ **lwarpmk clearall**

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

Enter ⇒ **lwarpmk print**

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

Enter ⇒ **lwarpmk html**

Options for the lwarp package:

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

Opt HomeHTMLFilename
Default: \BaseJobname

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

`HomeHTMLFilename=index`

filename underscores

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

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

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

Opt HTMLFilename
Default: <empty>

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

Opt latexmk
Default: false

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

Opt mathsvg
Default: true

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

Opt mathjax
Default: false

mathjax: Selects MATHJAX for math output.

Opt makeindex
Default: makeindex

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

Opt xindy

Default: makeindex

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

Table 8: HTML settings

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

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

<code>\linkhomename</code> Default: Home	\linkhomename: Name of the link to the home page. Paragraphs are allowed. Redefine with <code>\renewcommand</code> .
<code>\linkpreviousname</code> Default: Previous	\linkpreviousname: Name of the link to the previous page. Paragraphs are allowed. Redefine with <code>\renewcommand</code> .
<code>\linknextname</code> Default: Next	\linknextname: Name of the link to the next page. Paragraphs are allowed. Redefine with <code>\renewcommand</code> .
Ctr <code>tocdepth</code>	tocdepth: Sectioning depth of the table of contents. See section 16 for a list of L ^A T _E X stack depths.
Ctr <code>SideTOCDepth</code> Default: 1 <code>sideroc</code>	<p>SideTOCDepth: Sectioning depth of the sideroc. Defaults to 1, causing the sideroc to show sections but not subsections.</p> <p>Each subpage of the website has its own small table of contents on the side (the “sideroc”). Its depth is set by <code>SideTOCDepth</code>. This sideroc is only shown if the browser display is wide enough. When using a narrow web browser window, “responsive web design” is used to show the sideroc at the top of the page, as well as a link back to Home at the top and bottom.</p> <p>It is recommended to set:</p> <pre style="margin-left: 40px;">SideTOCDepth=FileDepth</pre> <p style="margin-left: 40px;">or</p> <pre style="margin-left: 40px;">SideTOCDepth=FileDepth+1</pre>
 inaccessible pages	If <code>SideTOCDepth < FileDepth</code> , web pages will be inaccessible via the sideroc.
<code>\sidoctocname</code> Default: Contents	\sidoctocname: Name of the sideroc. Paragraphs are allowed. Redefine with <code>\renewcommand</code> .
Ctr <code>FileDepth</code> Default: -5	<p>FileDepth: Sectioning depth of file splits. Defaults to -5, causing the entire HTML website to be one single file.</p> <ul style="list-style-type: none"> • To place the entire file into one HTML page, use: <code>\setcounter{FileDepth}{-5}</code> • To split the HTML file at <code>\section</code> depth, use: <code>\setcounter{FileDepth}{1}</code> • To ensure that the HTML pages/files are accessible: Place a <code>\tableofcontents</code> somewhere before the first section break (therefore in the “home page”), and set <code>tocdepth >= FileDepth</code>
Bool <code>CombineHigherDepths</code> Default: true	<p>CombineHigherDepths: Combine a higher section with its first lower subsections, down to the <code>FileDepth</code>. Defaults to true. Set to false to simulate the concept of a chapter opening on its own page, for example.</p> <p>The file splits are controlled by the counter <code>FileDepth</code> and the boolean <code>CombineHigherDepths</code>. Setting <code>FileDepth</code> to 0 splits the file at chapters, 1 at sections, etc. <code>CombineHigherDepths</code> controls whether to combine pages at</p>

⚠ Inaccessible pages!

levels higher than the chosen `FileDepth`, such as in this tutorial where the page which opens the chapter also contains the first section. Be careful to set `tocdepth` and `SideTOCDepth` to allow access to each page of the website. Set `tocdepth` and `SideTOCDepth` to be greater than or equal to `FileDepth`.

⚠ Lost in an old page!

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

Bool `FileSectionNames`
Default: `true`

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

⚠ Unique filename!

`\FilenameLimit`
Default: `80`

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

Ctrl `FootnoteDepth`
Default: `3`

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

Bool `HTMLDebugComments`
Default: `false`

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

`\abstractname`
Default: `Abstract`

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

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

`\CSSFilename`
Default: `lwarp.css`

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

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

`\MathJaxFilename`
Default: `lwarp_mathjax.txt`

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

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

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

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

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

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

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

```
\def\theHTMLTitleSection{%
  \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
}
```

`\HTMLAuthor`
Default: `\theauthor`
\HTMLAuthor: `{\langle author \rangle}` The HTML header's meta author. Defaults to `\theauthor`, which is set by `\author` if using the titling package, but is empty otherwise. There are several ways to represent the author and affiliations, especially if using the `authblk` package, most of which do not result in a sensible `\theauthor`, so `\HTMLAuthor` is useful to create a list of authors without their affiliations.

`\HTMLDescription`
Default: `<empty>`
\HTMLDescription: `{\langle description \rangle}` Sets the HTML description tag for the following files. May be changed before each each sectioning command which would cause a file split.

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

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

`\HTMLPageTop`
Default: `<empty>`
\HTMLPageTop: `{\langle contents \rangle}` A user-definable custom action applied to the top of pages other than the home page. Useful for logos, etc. Defaults empty. `\LinkHome` may be used to place a link back to the homepage, as well as `\LinkPrevious` and `\LinkNext`. Ignored in print output.

`\HTMLPageBottom`
Default: `<empty>`
\HTMLPageBottom: `{\langle contents \rangle}` A user-definable custom action applied to the bottom of pages other than the home page. Useful for authors, copyright notices, contact information, etc. Defaults empty. `\LinkHome` may be used to place a link back to the homepage, as well as `\LinkPrevious` and `\LinkNext`. Ignored in print output.

<code>\LinkHome</code>	\LinkHome: Creates a link to the home page. Usually used in <code>\HTMLPageTop</code> and related.
<code>\LinkPrevious</code>	\LinkPrevious: Creates a link to the previous HTML page, unless already at the home page. Usually used in <code>\HTMLPageTop</code> and related.
<code>\LinkNext</code>	\LinkNext: Creates a link to the next HTML page, unless already at the end. Usually used in <code>\HTMLPageTop</code> and related.

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

 `\tableofcontents`
TOC on the homepage!

\tableofcontents: Used to place a table of contents on the home page. This command must be used before the first file split, so that a way is available to navigate to other files from the homepage.

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

Placed in the document wherever necessary:

<code>\ImageAltText</code> Default: <code>image</code>	\ImageAltText: Redefine with <code>\renewcommand</code> . <code>\includegraphics</code> and other images are assigned an HTML alt tag according to <code>\ImageAltText</code> along with <code>\AltTextOpen</code> and <code>\AltTextClose</code> . This text is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “image”, and it may be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following <code>\includegraphics</code> and other images.
---	---

<code>\ThisAltText</code>	\ThisAltText: <code>{<text>}</code> <code>\ThisAltText</code> can be used to assign an HTML alt text attribute to the next image generated by a <code>lateximage</code> , <code>picture</code> , <code>tikzpicture</code> , or any other similar environment which generates an image, or the next SVG math expression. This tag is cleared after use. The tag is also cleared after each MATHJAX expression, in case the user changes between SVG math and MATHJAX.
---------------------------	---

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

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

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

<code>\PackageDiagramAltText</code> Default: <code>diagram</code>	<p>\PackageDiagramAltText: Redefine with <code>\renewcommand</code>. For many packages, the output is placed inside a <code>lateximage</code> with an <code>HTML alt</code> tag set to the package name followed by <code>\PackageDiagramAltText</code>. For example:</p> <pre style="margin-left: 40px;">(-xy- diagram)</pre> <p>This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “diagram”, and may it be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following package diagrams.</p>
<code>\AltTextOpen</code> Default: <code>(</code>	<p>\AltTextOpen: Redefine with <code>\renewcommand</code>.</p>
<code>\AltTextClose</code> Default: <code>)</code>	<p>\AltTextClose: Redefine with <code>\renewcommand</code>. <code>HTML alt</code> text is enclosed by the macros <code>\AltTextOpen</code> and <code>\AltTextClose</code>, which default to an opening and closing parenthesis.</p>
Env <code>warpprint</code>	<p>warpprint: An environment which is only used while generating print output. Place inside anything which does not apply to <code>HTML</code> and which may cause problems with <code>lwarp</code>. If <code>lwarp</code> knows about and emulates or supports a package then its related macros, lengths, counters, etc. probably won’t have to be placed inside a <code>warpprint</code> environment, but unknown packages may cause problems which may be isolated from <code>lwarp</code> using this environment.</p> <p style="text-align: center;"></p> <p style="text-align: center;"><i>Do not place anything else on the same line as <code>\end{warpprint}</code>. Also do not nest <code>warpprint</code> inside itself.</i></p>
Env <code>warpHTML</code>	<p>warpHTML: An environment which is only included while generating <code>HTML</code> output. This is useful for website logos and other items which have no purpose in printed output.</p> <p style="text-align: center;"></p> <p style="text-align: center;"><i>Do not place anything else on the same line as <code>\end{warpHTML}</code>. Also do not nest <code>warpHTML</code> inside itself.</i></p>
<code>\warpprintonly</code>	<p>\warpprintonly: <code>{<contents>}</code> A macro version of the <code>warpprint</code> environment.</p>
<code>\warpHTMLonly</code>	<p>\warpHTMLonly: <code>{<contents>}</code> A macro version of the <code>warpHTML</code> environment.</p>

7.6.1 Example HTML file naming

Examples of ways to name or number `HTML` files:

Numbered HTML nodes:

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

```
\usepackage[
  HomeHTMLFilename=index,
  HTMLFilename={node-}
```

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

```
]{lwarp}
\boolfalse{FileSectionNames}
```

Named HTML sections, no prefix:

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

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

Named HTML sections, with prefix:

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

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

7.7 Customizing the css

`\CSSFilename` $\{ \langle filename \rangle \}$
 Default: `lwarp.css`

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

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

The styles provided by `lwarp` include:

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

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

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

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

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

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

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

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

File `project.css`

File `sample_project.css`

```

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

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

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

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

```

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

7.8 Assigning css classes and styles

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

Env `BlockClass` [`<style>`] [`{<class>}`]

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

`\InlineClass` (`<web css style>`) [`<web css style>`] [`{<css class>}`] [`{<text>}`]

A section of text without paragraphs may be assigned a css class and optional css style using the `\InlineClass` macro. The result is placed inside a ``. `\InlineClass` may be nested, but per the HTML standard it must not contain `BlockClass`, nor may it

contain a paragraph, nor several other objects such as HTML figures. `\InlineClass` also accepts a second optional parameter, enclosed inside parentheses, which assigns the style while generating output for a word processor, while ignoring the web style.

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

7.9 Selecting the operating system

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

7.10 Selecting actions for print, HTML, or MATHJAX output

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

For most of built-in 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. Do not nest `warpHTML` inside itself.

 `nesting`

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}`. Do not nest `warpprint` inside itself.

⚠ **nesting**

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}
```

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

⚠ **nesting**

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

`\warpprintonly` $\{ \langle actions \rangle \}$

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

`\warpHTMLonly` $\{ \langle actions \rangle \}$

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

Env `warpMathJax` Anything which is to be done only while using HTML output with MATHJAX is surrounded by a `warpMathJax` environment. Usually, this is `\CustomizeMathJax`, used to add emulation macros. `\end{warpMathJax}` must appear on its own line. Do not nest `warpMathJax` inside itself.

⚠ `\end{warpMathJax}`

⚠ **nesting**

7.11 Commands to be placed into the warpprint environment

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

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

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

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

7.12 Title page

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

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

The title is used in the meta tags in the HTML files, unless overridden by `\HTMLTitle`, and the rest are used in `\maketitle`. To use a `\subtitle` or `\published` field, see section 66.8.

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

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

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

`\title` `{<title>}`

 **HTML corrupted** Avoid newlines in the `\title`; these will interfere with the file break and CSS detection.
 **newlines** Use a `\subtitle` command instead (section 66.8). The title will appear in the document `\maketitle` as a heading `<h1>`. The HTML meta title tag will also have this title, unless `\HTMLTitle` is used to set the meta title to something else instead.

`\author` `{<author>}`

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

`\date` `{<date>}`

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

`\thanks` `{<text>}`

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

7.13 HTML page meta descriptions

`\HTMLDescription` $\{\langle A \text{ description of the web page.} \rangle\}$

Default: (none)

limitations

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

placement

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

disabling

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

```
\HTMLDescription{}
```

7.14 HTML homepage meta title

`\HTMLTitle` $\{\langle title \rangle\}$

Default: `\HTMLtitle{\thetitle}`

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

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

7.15 HTML page meta author

`\HTMLAuthor` $\{\langle author \rangle\}$

Default: `\HTMLAuthor{\theauthor}`

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

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

8 Special cases and limitations

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

Need help?

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

8.1 Things to avoid

In the document, avoid the following:

 **options with braces** **Package options:** Package options may cause problems with `lwarp`, especially if they include curly braces.

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

```
\usepackage[font={it,small}]{caption}% does not work
```

... try instead selecting the package options before loading `lwarp`:

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

```
...
```

```
\usepackage{lwarp}
```

```
...
```

```
\usepackage{caption}
```

... or try setting package options after the package has been loaded:

```
\usepackage{caption}
```

```
\captionsetup{font={it,small}}
```

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

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

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

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

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

8.1.1 Invalid HTML

Additionally, some objects are valid \LaTeX , but invalid HTML. An example is a tabular inside `\textbf`, since HTML does not allow a table inside a span. `lwarp` will create the table, and the browser may support it, but the result is technically invalid.

8.2 Formatting

8.2.1 Text formatting

- △ `\bfseries`, etc. `\textbf`, etc. are supported, but `\bfseries`, etc. work only in some situations.
- △ **HTML special chars** `&`, `<`, and `>` have special meanings in HTML. If `\&`, `\textless`, and `\textgreater` are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.
 - program listings For program listings, the `listings` package is supported, and its `literate` option is used to convert `&`, `<`, and `>` to proper HTML entities.
 - verbatim The various verbatim-related environments do not convert `&`, `<`, and `>`, so care must be taken to avoid accidentally including valid HTML code inside these environments. Adding a space on either side may be sufficient.

8.2.2 Horizontal space

- `\hspace` `\hspace` is converted to an inline HTML span of the given width, except that `0` width is ignored, a width of `.16667em` is converted to an HTML thin breakable space (`U+2009`), and a `\fill` is converted to a `\qqquad`.
- `\,` `\~` and `\,` are converted to HTML entities.
- `\kern` `\kern` and `\hskip` are entered into the HTML PDF output as-is, then interpreted by `pdftotext`, and thus usually appear as a single space.
- `\hskip`

8.2.3 Text alignment

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

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


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

8.2.4 Accents

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

8.2.5 textcomp package

Pkg textcomp Some textcomp symbols do not have Unicode equivalents, and thus are not supported.

 missing symbols Many textcomp symbols are not supported by many system/browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

8.2.6 Superscripts and other non-math uses of math mode

Use `x` instead of x

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

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

8.2.8 Filenames and URLs in lists or footnotes

filename underscore Escape underscores in the filenames:

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

8.2.9 relsize package

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

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

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

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

8.3 Boxes and minipages

8.3.1 Marginpars

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

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

8.3.2 Save Boxes

⚠ HTML corrupted

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

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

8.3.3 Minipages

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

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

side-by-side Side-by-side `minipages` may be separated by `\quad`, `\qquad`, `\enskip`, `\hspace`, `\hfill`, or a `\rule`. When inside a `center` environment, the result is similar in print and `HTML`. Paragraph tags are suppressed between side-by-side `minipages` and these spacing commands, but not at the start or end of the paragraph.

⚠ minipage in a span There is limited support for `minipages` inside an `HTML `. An `HTML <div>` cannot appear inside a ``. While in a ``, `minipages`, and `\parboxes`, and any enclosed lists have limited `HTML` tags, resulting in an “inline” format, without markup except for `HTML` breaks. Use `\newline` or `\par` for an `HTML` break.

⚠ minipage size When using `minipage`, `\parbox`, and `fminipage`, a virtual 6 × 9 inch text area is used for `\linewidth`, `\textwidth`, and `\textheight`, both for sizing the `minipage`, and also for its contents.

if width is `\linewidth` If a `minipage` or `\parbox` is assigned a width of exactly `\linewidth`, in `HTML` it is automatically given no `HTML` width, thus allowed to fill the line as needed, similar to how it appears in print output.

full-width if `HTML` A new macro `\minipagefullwidth` requests that, during `HTML` output, the next single `minipage` or `\parbox` be generated without an `HTML` width attribute, allowing it to be

the full width of the display rather than the declared print-output width. This may be useful where the printed version's width makes no sense in HTML.

- △ **tabular, multicol** Inside a `tabular` or `multicol` environment, where the width depends on the browser window, `\minipagefullwidth` is effectively used by default for every `minipage` or `\parbox` inside the environment. `\UseMinipageWidths` may be used to tell `lwarp` to honor the specified widths of all following `minipages` and `\parboxes` until the end of the local scope, and `\IgnoreMinipageWidths` may be used to tell `lwarp` to ignore the specified widths.
 - △ **multicol** Inside a `multicol`s, `\linewidth` is divided by the specified number of columns.
 - △ **text alignment** Nested `minipages` adopt their parent's text alignment in HTML, whereas in regular L^AT_EX PDF output they do not. Use a `flushleft` or similar environment in the child `minipage` to force a text alignment.

8.3.4 Side-by-side minipages

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

8.3.5 Framed minipages and other environments

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

`\fbox`
`\fboxBlock`
 Env `fminipage`

For a framed object, options include:

To remove the frame in HTML output: Place the `\fbox` command and its closing brace inside `warpprint` environments. This will nullify the frame for HTML output.

For inline text:

To frame the contents inline with some formatting losses in HTML: This is the default action of `\fbox` when enclosing a `minipage`. During HTML output, `\fbox` nullifies the HTML tags for `minipage`, `\parbox`, and lists. The contents are included as inline text inside the `\fbox`'s `` of class `framebox`. For lists, line breaks are converted to HTML breaks. The result is a plain-text inline version of the contents, framed inline with the surrounding text, but lacking any extra HTML markup.

For inline minipage and lists:

To frame the contents on their own line with improved formatting in HTML: A new command `\fboxBlock` is included, intended to be a direct replacement for `\fbox` for cases where the `\fbox` surrounds a `minipage`, table, or list. For print output, this behaves as `\fbox`. For HTML output, the contents are placed inside an HTML `<div>` with the class `framed`, resulting in the contents being placed on their own line with a frame surrounding them. The contents preserve their HTML formatting, so lists and `minipages` look nicer, and valid HTML is created for a

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

For display `tabular`,
minipages, and lists:

To create a framed minipage in both print and HTML: A new environment `fminipage` is included. For print output, this is identical to `minipage`, except that it is also framed. For HTML output, this forms a `<div>` of class `framed`, the contents preserve their HTML formatting, and valid HTML is created for a `tabular`. Also see section 86 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 573 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 237 for the `fancybox` package.

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

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

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

8.3.6 fancybox package

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 of a 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 does lose some HTML formatting. A better method is to enclose the table's contents inside a `fminipage` environment. The caption may be placed either inside or outside the `fminipage`:

```

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

```

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

```

\newenvironment{FramedVerb}[1] % width
{
\VerbatimEnvironment
\fminipage{#1}
\beginVerbatim
}{
\endVerbatim
\endfminipage
}

```

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

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

8.3.7 mdframed package

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

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

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

font For title font, use

```
frametitlefont=\textbf,
```

instead of

```
frametitlefont=\bfseries,
```

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

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

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

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

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

8.4 Section names

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

```
\FilenameSimplify {<text>}
```

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

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

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

```
\FilenameNullify {<macros>}
```

 **macros in section names** Macro names may appear in the automatically-generated file names. To remove these, create *non-robust* nullified versions of the macros, ensuring that each line ends with a

percent character % as shown below. These are placed inside `\FilenameNullify`, which adds them to the list of macros which are nullfied during filename generation. Low-level macros such as `\begingroup` will cause problems when nullfied. Many macros such as `\textbf` are already nullfied. `lwarp` also already nullifies built-in symbol and `textcomp` macros, including if defined by `xunicode`, but not all `xunicode` macros. See the definition of `\LWR@nullfonts` for a complete list.

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

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

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

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

8.5 Cross-references

labels

⚠ **label characters** Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French).

\nameref

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

8.5.1 Page references

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

Ex:

```
\ref{sec:name} on page \pageref{sec:name}
```

in HTML becomes:

```
“Sec. 1.23 on page (see sec. 1.23)”.
```

`\pagerefPageFor` may be redefined to “page for”, empty, etc. See page 488.

8.5.2 cleveref and varioref packages

Pkg cleveref

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

Pkg varioref

⚠ **cleveref page numbers**

so a section name or a text phrase are used for `\cpageref` and `\cpagerefrange`. This phrase includes `\cpagerefFor`, which defaults to “for”.

Ex:

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

See `\cpagerefFor` at page 567 to redefine the message which is printed for page number references.

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

8.5.3 Hyperlinks, hyperref, and url

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

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

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

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

8.5.4 Footnotes, endnotes, and page notes

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

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

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

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

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

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

 **MathJax, \footnotemark** If using MATHJAX, after each math expression with a `\footnotemark`, adjust the footnote counter by the number of `\footnotemarks`:

```
\[ (math expression with two instances of \footnotemark) \]
\warpHTMLonly{\addtocounter{footnote}{2}}
```

Similarly for endnotes, but *not* sidenotes.

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

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

Similar for sidenotes. For endnotes:

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

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

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

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

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

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

 **memoir**

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

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

 **fancybox, fancyvrb \VerbatimFootnotes** 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 While emulating `pfnote`, `lwarp` is not able to reset HTML footnote numbers per page

 **pfnote numbers**

number to match the printed version, as HTML has no concept of page numbers. `lwarp` therefore uses continuous footnote numbering even for `pfnote`.

`bigfoot`, `manyfoot` Verbatim footnotes are not yet supported.

 `verbatim`

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

As a possible solution, try creating several new counters before defining `bigfoot` or `manyfoot` footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use `XELATEX` or `LuaLATEX` instead of `pdfLATEX`.

8.5.5 `xr`, `xr-hyper`, and `xcite` packages

See section 5.17.

8.6 Front and back matter

8.6.1 Custom classes with multiple authors and affiliations

Some classes allow multiple authors and affiliations. Often it is possible to emulate these using a standard class along with `authblk`:

```
%\documentclass{customclass} % for print document
\documentclass{article} % for html document

\usepackage{lwarp}
\begin{warpHTML}
\usepackage{authblk}
\let\affiliation\affil % maybe required
\end{warpHTML}
```

8.6.2 Starred chapters and sections

[HTML page and TOC](#)

The following describes `\ForceHTMLPage` and `\ForceHTMLTOC`, which may be used for endnotes, glossaries, `tocbibind`, bibliographies, and the index. See the following sections where applicable. Continue here if interested in the reason for adding these commands to `lwarp`.

Some packages use `\chapter*` or `\section*` to introduce reference material such as notes or lists, often to be placed in the back matter of a book. These starred sections are placed inline instead of on their own HTML pages, and they are not given TOC entries.

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.

8.6.3 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

8.6.4 titling and authblk

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

`Pkg authblk`

package support

If using the `titling` package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 66.8.

⚠ load order

`\published` and `\subtitle`

8.6.5 tocloft package

`Opt [tocloft] titles` If using `tocloft` with `tocbibind`, `anonchp`, `fncychap`, or other packages which change chapter title formatting, load `tocloft` with its `titles` option, which tells `tocloft` to use standard L^AT_EX commands to create the titles, allowing other packages to work with it.

`Pkg tocloft`

`Pkg tocloft`

⚠ tocloft & other packages

8.6.6 appendix package

`Pkg appendix` 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.

⚠ incorrect TOC link

8.6.7 pagenote package

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

 **labels** Note that labels in page notes do not appear as expected, even in the print version.

8.6.8 endnotes package

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
```

 [\endnotemark numbering](#) If using MATHJAX, see section [8.5.4](#) regarding the use of \endnotemark and \endnotetext.

8.6.9 BibTeX

\etalchar Displays a superscript “+” to indicate “and others”.

 **Modify *.bib** When enough authors are cited for a source, BibTeX may use the \etalchar command to display a math superscript with a + character to indicate “and others”. Without modification, this will result in an “Improper \prevdepth” error. At present, lwarp requires that \etalchar be replaced by a text superscript. To do so, add to the start of the .bib file the following:

```
@PREAMBLE{"\let\etalchar\relax \newcommand{\etalchar}[1]{\textsuperscript{#1}}"}

```

8.6.10 xcite package

See section [5.17](#).

8.6.11 gloss package

Pkg gloss To process the HTML glossary:

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

8.6.12 glossaries package

Pkg `glossaries`
[processing glossaries](#)

Opt `GlossaryCmd`

Default: `makeglossaries`

Opt `[lwarpmk] printglossary`

Opt `[lwarpmk] htmlglossary`

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

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

⚠ [makeglossaries not found](#)

In some situations it may be required to modify the default command, such as to add the `perl` command in front:

```
\usepackage[
  GlossaryCmd={perl makeglossaries},
] {lwarp}
```

[xindy language](#)

To set the language to use for processing glossaries with `xindy`:

```
\usepackage[
  GlossaryCmd={makeglossaries -L english},
] {lwarp}
```

Other options for `makeglossaries` may be set as well.

[placement and toc options](#)

The glossaries may be placed in a numbered or unnumbered section, given a TOC entry, and placed inline or on their own HTML page:

Numbered section, on its own HTML page:

```
\usepackage[xindy,toc,numberedsection=nolabel]{glossaries}
...
\printglossaries
```

Unnumbered section, inline with the current HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\printglossaries
```

Unnumbered section, on its own HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\ForceHTMLPage
\printglossaries
```

⚠ [glossary style](#)

The default `style=item` option for `glossaries` conflicts with `lwarp`, so the style is forced to `index` instead.

⚠ [number list](#)

The page number list in the printed form would become `\namerefs` in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

[print/HTML versions](#)

The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

8.6.13 nomencl package

Pkg nomencl To process the HTML nomenclature:

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

8.6.14 Indexing overview

There are many ways to process indexes for a \LaTeX document, including native \LaTeX capabilities, a number of packages and classes, the possible availability of shell escape and *latexmk*, and the need to process print and HTML versions. *lwarp* attempts to provide easy recompilation of indexes along with the rest of the document, but the various indexing options must be set correctly. Numerous examples are given below. Some differ in minor details, so the important parts are highlighted in red, and options are in green.

Once set up properly, the entire document may be recompiled with **lwarpmk print** and **lwarpmk html**. In some cases, it will also be necessary to compile the indexes with **lwarpmk printindex** and **lwarpmk htmlindex**. A recompile may then be forced with **lwarpmk print1** and **lwarpmk html1**.

[manual processing](#) The user may continue to process indexes manually or by shell script without the use of *lwarpmk*, but adjustments will be required to process HTML indexes as well. In general, *.idx and *.ind files will be accompanied by *_html.idx and *_html.ind files.

[custom index style](#) If using a custom indexing style file, see sections [8.6.20](#) and [8.6.21](#).

[source code](#) See section [76](#) for *lwarp*'s core index and glossary code, section [308](#) for index, section [490](#) for *splitidx*, section [307](#) for *imakeidx*, section [533](#) for *toctibind*, and section [593.17](#) for *memoir*'s indexing patches.

8.6.15 Indexing with basic \LaTeX and makeidx

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

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

For a single index using *makeindex*:

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

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

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

For a single index using *xindy*:

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

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

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

8.6.16 Indexing with index

lwarp is told how to use *makeindex* using the `PrintIndexCmd` and `HTMLIndexCmd` options. The file `lwarp.ist` is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

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

(Assuming that the second index has file extensions `.sist` and `.sind`)

```
\usepackage[
  makeindex, latexmk,
  PrintIndexCmd={
    makeindex -s lwarp.ist <projectname>.idx ;
    makeindex -s lwarp.ist
      -o <projectname>.sind <projectname>.sidx
  },
  HTMLIndexCmd={
    makeindex -s lwarp.ist <projectname>_html.idx ;
    makeindex -s lwarp.ist
      -o <projectname>_html.sind <projectname>_html.sidx
  }
]{lwarp}
\usepackage{index}
...
\makeindex
\newindex{secondname}{sidx}{sind}{Second Index}
```

⚠ WINDOWS

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

When creating the HTML index, “_html” is automatically appended to the index filenames.

Use

Enter ⇒ `lwarpmk printindex`

Enter ⇒ `lwarpmk htmlindex`

to compile the indexes.

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

8.6.17 Indexing with `splitidx`

`lwarp` is told how to use `splitindex` using the `PrintIndexCmd` and `HTMLIndexCmd` options. The file `lwarp.ist` is specified, which generates index letter heads for print output and also allows special HTML formatting for HTML output.

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

⚠ `\thepage` When using `\AtWriteToIndex` or `\AtNextWriteToIndex`, the user must not refer to `\thepage` during HTML output, as the concept of a page number is meaningless. Instead, do

```
\addtocounter{LWR@autoindex}{1}
\LWR@new@label{LWRindex-\arabic{LWR@autoindex}}
```

where the `\index`-like action occurs, and then refer to `\arabic{LWR@autoindex}` instead of `\thepage` where the reference should occur.

See section 593.17 in the `lwarp-patch-memoir` package for the `\@@wrspindexhyp` macro as an example.

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

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

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

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

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

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

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

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

8.6.18 Indexing with *imakeidx*

Due to the number of methods which may be used to process multiple indexes, the options for style file and *xindy* language and codepage must be specified in one of several different ways. These are described in detail later in this section, but are summarized here.

If shell escape is used, *imakeidx* will automatically compile the indexes by itself. Options specifying a custom style file and *xindy* language and codepage must be specified for each `\makeindex` command using its `options=` option, which must include *lwarp*’s special `lwarp.ist` or `lwarp.xdy` file, or a file based on them. If using a custom indexing style file, see sections 8.6.20 and 8.6.21. The `splitindex` option is also available if shell escape is used, in which case the `splitidx` package and *splitindex* program will also be used.

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

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

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

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

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

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

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

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

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

⚠ enable shell escape

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

```
Enter ⇒ pdflatex --shell-escape projectname.tex
Enter ⇒ pdflatex --enable-write18 projectname.tex (MiKTeX)
```

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

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

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

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

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

```

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

```

 enable shell escape

For the first compile, use

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

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

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

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

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

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

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

```

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

```

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

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

lwarpmk must be told how to create the indexes:

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

⚠ WINDOWS

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

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

Use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

8.6.19 Indexes with memoir

For a single index with memoir and makeindex:

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

The usual .idx and .ind files will be used, along with the lwarp.ist style file.

lwarpmk will use *latexmk* if specified, in which case *latexmk* will create the index automatically. Otherwise, use

Enter ⇒ **lwarpmk printindex**

Enter ⇒ **lwarpmk htmlindex**

to compile the indexes.

For multiple indexes with memoir and makeindex, using *latexmk*:

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

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

lwarpmk will use *latexmk* to create the indexes automatically when the user executes `lwarpmk print` and `lwarpmk html`.

For multiple indexes with memoir and makeindex, *without latexmk*:

lwarpmk must be told how to create the indexes:

```
\documentclass{memoir}
\usepackage[
  makeindex,
  PrintIndexCmd={
    makeindex -s lwarp.ist <projectname>.idx ;
    makeindex -s lwarp.ist secondname.idx
  },
  HTMLIndexCmd={
    makeindex -s lwarp.ist <projectname>_html.idx ;
    makeindex -s lwarp.ist secondname_html.idx
  }
]{lwarp}
...
\makeindex
\makeindex[secondname]
```

⚠ WINDOWS

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

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

Use

```
Enter ⇒ lwarpmk printindex
```

```
Enter ⇒ lwarpmk htmlindex
```

to compile the indexes.

For a single index with memoir and xindy:

```

\documentclass{memoir}
\usepackage[
  xindy,
  xindyLanguage=english,
  xindyCodepage=utf8,
  latexmk
]{lwarp}
...
\xindyindex
\makeindex

```

<optional>
<optional>
<optional>

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.

8.6.20 Using a custom *makeindex* style file

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

To use a custom *makeindex* style file:

1. Copy `lwarp.ist` to a new filename such as `projectname.ist`
2. Make changes to `projectname.ist`. Keep the lines which refer to `\hyperindexref`. These lines creates the hyperlinks for the HTML index. During print output `\hyperindexref` becomes a null function.

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

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

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

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

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

8.6.21 Using a custom *xindy* style file

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

To use a custom *xindy* style file:

1. Copy `lwarp.xdy` to a new filename such as `projectname.xdy`
2. Make changes to `projectname.xdy`.

Keep the lines which refer to `\hyperindexref`:

```
(define-attributes (("hyperindexref"))
(markup-locref :open "\hyperindexref{" :close "}")
...
(markup-locref :open "\textit{\hyperindexref{" :close "}" :attr "textit")
```

These lines create the hyperlinks for the HTML index. During print output `\hyperindexref` becomes a null function.

To create custom styles, refer to the lines for `\textbf` and `\textit`.

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

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

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

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

8.6.22 Additional indexing limitations

 **xindy with hyperref** *xindy* and `hyperref` may not work well together for print output with “see”, “see also”, reference ranges, or stylized index references. It may be necessary to turn off hyper-referencing for indexes:

```
\usepackage[hyperindex=false]{hyperref}
```

 **empty index** If an HTML index is empty, it may be necessary to add the following before `lwarp` is

loaded:

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

makeindex custom display styles

When using *makeindex*, custom display styles are possible:

```
\begin{warpprint}
\newcommand{\notesstyle}[1]{#1nn}
\end{warpprint}

\begin{warpHTML}
\makeatletter
\newcommand{\notesstyle}[1]{\LWR@doindexentry{#1} notes }
\makeatother
\end{warpHTML}
. . .
A sentence.\index{key|notesstyle}
```

xindy custom display styles

For custom styles with *xindy*, see `lwarp.xdy` for `\textbf` and `\textit` as examples.

8.6.23 Index positions, `roc`, `tocbibind`

placement and `roc` options

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

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

A commonly-used method to introduce an index in a \LaTeX document:

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

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

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

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

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

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

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

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

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

[numbered index section](#)

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

Pkg `tocloft`

 [tocloft & other packages](#)

If using `tocloft` with `tocbibind`, `anonchp`, `fncychap`, or other packages which change chapter title formatting, load `tocloft` with its `titles` option, which tells `tocloft` to use standard \LaTeX commands to create the titles, allowing other packages to work with it.

8.7 Math

8.7.1 Math in section names

 [math in section names](#)

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

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

8.7.2 Rendering tradeoffs

[Math rendering](#) Math may be rendered as SVG graphics or using the `MATHJAX` JavaScript display engine.

[SVG files](#) Rendering math as images creates a new SVG file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to SVG only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.

[SVG inline](#) The SVG images are currently stored separately, but they could be encoded in-line directly into the HTML document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.

[PNG files](#) Others \LaTeX -to-HTML converters have used PNG files, sometimes pre-scaled for print resolution but displayed on-screen at a scaled down size. This allows high-quality print output at the expense of larger files, but SVG files are the preferred approach for scalable graphics.

MathML Conversion to MathML might be a better approach, among other things allowing a more compact representation of math than SVG drawings. Problems with MathML include limited browser support and some issues with the fine control of the appearance of the result. Also see section 10 regarding EPUB output with MATHJAX.

8.7.3 SVG option

SVG math option For SVG math, math is rendered as usual by L^AT_EX into the initial PDF file using the current font¹⁴, then is captured from the PDF and converted to SVG graphics via a number of utility programs. The SVG format is a scalable-vector web format, so math may be typeset by L^AT_EX with its fine control and precision, then displayed or printed at any size, depending on (sometimes broken) browser support. An HTML alt attribute carries the L^AT_EX code which generated the math, allowing copy/paste of the L^AT_EX math expression into other documents.

SVG image font size For the lateximage environment, the size of the math and text used in the SVG image may be adjusted by setting \LateximageFontSizeName to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{normalsize}
```

For inline SVG math, font size is instead controlled by \LateximageFontScale, which defaults to:

```
\newcommand*{\LateximageFontScale}{.75}
```

SVG math copy/paste For SVG math, text copy/paste from the HTML <alt> tags lists the equation number or tag for single equations, along with the L^AT_EX code for the math expression. For $\mathcal{A}\mathcal{M}\mathcal{S}$ 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^AT_EX math expression.

 **SVG math size, baseline** SVG math sizing and baselines are improved if the graphics or graphicx package is loaded. An almost-invisible marker is placed at either end of the image to assist in cropping and computing the baseline. A warning is issued at the end of the compile if graphics or graphicx are not used.

 **SVG math in T_EX boxes** SVG math does not work inside T_EX boxes, since a \newpage is required before and after each image.

8.7.4 MATHJAX option

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

Prog MathJax

When MATHJAX is enabled, math is rendered twice:

1. As regular L^AT_EX PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of L^AT_EX, and

¹⁴See section 578 regarding fonts and fractions.

2. As detokenized printed L^AT_EX commands placed directly into the HTML output for interpretation by the MATHJAX display scripts. An additional script is used to pre-set the equation number format and value according to the current L^AT_EX values, and the MATHJAX cross-referencing system is ignored in favor of the L^AT_EX internal system, seamlessly integrating with the rest of the L^AT_EX code.

8.7.5 Customizing MATHJAX

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

Examples:

```
\begin{warpMathJax}
\CustomizeMathJax{
  \newcommand{\expval}[1]{\langle#1\rangle}
  \newcommand{\abs}[1]{\lvert#1\rvert}
}
\CustomizeMathJax{\newcommand{\arcsinh}{\text{arcsinh}}}
\CustomizeMathJax{\newcommand{\arccosh}{\text{arccosh}}}
\CustomizeMathJax{\newcommand{\NN}{\mathbb{N}}}
\end{warpMathJax}
```

 **slow compilation** To avoid a slowdown in compile speed, use the warpMathJax environment to prevent its contents from being processed in print or svg math output. Also, place each new definition inside its own \CustomizeMathJax. A warning to this effect is issued if an overly-long definition is attempted.

lwarp already provides MATHJAX customizations for some packages.

siunitx When using siunitx, a similar process may be used to add custom units:

```
\begin{warpMathJax}
\CustomizeMathJax{\newcommand{\myunit}{\mathrm{WXYZ}}}
\CustomizeMathJax{\newcommand{\myunit}{\mathrm{\micro\myunit}}}
\end{warpMathJax}
```

advanced control For more advanced control over dynamically creating custom definitions, see as an example the lwarp definition for \DeclarePairedDelimiterX, in section 349, **mathtools**.

local customizations For customizations local to the current HTML page only, macros may be defined as follows:

```
\begin{warpMathJax}
\(\ \newcommand{\macroname}{. . . } \)
\(\ \newcommand{\anothername}{. . . } \)
\end{warpMathJax}
```

To maintain compile speed, use the warpMathJax environment, and use a separate math environment for each definition.

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

8.7.6 MATHJAX limitations

MATHJAX limitations

Prog MathJax

Limitations when using MATHJAX include:

- ⚠ \multicolumn, multirow
 - MATHJAX does not support `\multicolumn` or `multirow`. These may be used in text tabulars or SVG math, but in MATHJAX math arrays they are emulated. `\multicolumn` only fills a single cell, resulting in a short row. `\multirow` simply prints its text on the first line.
- ⚠ subequations
 - MATHJAX does not support subequations. This may be improved by parsing the L^AT_EX math expression to manually insert tags, but this has not yet been done.
- ⚠ footnotes
 - Footnotes are emulated when used inside a MATHJAX expression. For an equation with a single footnote, the correct footnote number is used. For non-equations, `\footnotename` is used instead, since the actual number cannot be tracked. See section 8.5.4 regarding the use of footnotes with MATHJAX.
- ⚠ references
 - Inside a MATHJAX expression, references to equations work within the same HTML web page, but do not work when referring to an equation in a different HTML web page. Outside of a MATHJAX expression, in the text body, references work as expected.
- lateximage
 - Math appearing inside a `lateximage`, and therefore also inside a `Tikz` or `picture` environment, is rendered as SVG math even if MATHJAX is used in the rest of the document.
- siunitx
 - For `siunitx`, see [siunitx package](#), section 8.7.12.
- physics
 - For `physics`, see [physics package](#), section 8.7.14.
- tabbing
 - A `tabbing` environment is emulated using an HTML `<pre>`. While MATHJAX is enabled inside `tabbing`, the browser may not correctly render the horizontal alignment of the math and text following after on the same line.
- ⚠ other macros and packages
 - Other math-related macros and packages are not directly supported by MATHJAX, including `\ensuremath` and `bigdelim`, and occasionally-used macros such as `\relax`. While using MATHJAX, `lwarp` provides emulation for `footnotes`, `bm`, `mathtools`, `nicefrac`, `siunitx`, and `units`.
- ⚠ starred macros
 - Starred macros are generally not supported by MathJax or the `lwarp` emulations.

8.7.7 Catcode changes

preamble macros with math

The math shift character `$` is not set for HTML output until after the preamble. Macros defined in the preamble which contain `$` must be enclosed between `\StartDefiningMath` and `\StopDefiningMath` to temporarily change to the HTML meaning of `$`:

```
\StartDefiningMath
\newcommand{. . .}
\StopDefiningMath
```

As an alternative, use `\(` and `\)` instead of `$`, in which case `\StartDefiningMath` and `\StopDefiningMath` are not necessary.

If a package defines macros using $\$, it may be necessary to use $\backslash\text{StartDefiningMath}$ and $\backslash\text{StopDefiningMath}$ before and after loading the package.$

8.7.8 Complicated inline math objects

$\backslash\text{inlinemathnormal}$ An inline math expression is usually converted to a reusable hashed SVG math image, or a MathJax expression. The hash or expression depends on the contents of the math expression. In most cases this math expression is static, such as $\$x+1\$, so the image can be reused for multiple instances of the same expression. In some cases, the math expression includes a counter or other object which may change between uses.$

[changing contents](#)

[complicated alt tag](#) Another problem is complicated contents which do not expand well in an alt tag. The macro $\backslash\text{inlinemathother}$ may be used before a dynamic math expression, and $\backslash\text{inlinemathnormal}$ after. Doing so tells lwarp to use an unhashed SVG math image, even if MathJax is in use. See section 43.

8.7.9 Complicated display math objects

$\backslash\text{displaymathnormal}$ By default, or when selecting $\backslash\text{displaymathnormal}$, 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.

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

[MathJax unsupported](#)

[complicated alt tag](#)

8.7.10 ntheorem package

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

 **Font control**

 **cref reference format undefined** If the print version does not use cleveref, place all $\backslash\text{theoremstyle}$ and $\backslash\text{newtheorem}$ declarations in the preamble inside $\backslash\text{AtBeginDocument}$.¹⁵ For some theorems, it may also be required to add inside $\backslash\text{AtBeginDocument}$ something such as:

¹⁵lwarp uses cleveref for the HTML conversion, and loads cleveref $\backslash\text{AtEndPreamble}$, just before $\backslash\text{AtBeginDocument}$.

```

\AtBeginDocument{ % if not using cleveref package
  \theoremstyle{definition}
  \newtheorem{dtheorem}{Definition}
  . . .
  \usepackage{etoolbox} % for \ifdef
  \ifdef{\cref}{
    \crefname{Proof}{Proof}{Proofs}
  }{}
}

```

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

8.7.11 `mathtools` package

- ⚠ **equation numbering** Pkg `mathtools` `showonlyrefs` is disabled, as it conflicts with `cleveref`, which is used by `lwarp`. Equation numbers may not match the print version.
- ⚠ **italic correction** `mathic` is not emulated for HTML.
- ⚠ **MATHJAX** If using `MATHJAX`:

- Starred macros are not available. Starred environments do work.
- `mathtools disallowspace` does not work for `MATHJAX`. Protect brackets which are not optional arguments, such as:


```

\begin{gathered}{}
[p]=1 . . .
\end{gathered}

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

8.7.12 `siunitx` package

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

and `quotient-mode`.

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

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

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

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

Document modifications required for `MATHJAX`:

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

 **unit spacing** • Units work better using `~` between units instead of using periods.

 **\square, \cubic** • To square or cube compound units, enclose the following compound units in braces:

```
\cubic{\centi\meter}
```

Single units do not require braces.

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

8.7.13 units and nicefrac packages

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

`Pkg` `nicefrac`

8.7.14 physics package

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

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

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

8.7.15 newtxmath package

⚠ Pkg `newtxmath` loading sequence The proper load order is:

```

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

```

8.8 Graphics

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

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

⚠ `scale`

to:

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

`\includegraphics file formats`

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

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, `lwarp` will automatically choose the `.pdf` or `.eps` format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a `.pdf` or `.eps` image is referred to with its file extension, the extension will be changed to `.svg` for HTML:

```
\includegraphics{filename.pdf} % uses .svg in html
\includegraphics{filename.eps} % uses .svg in html
```

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

PDF to SVG

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

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

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

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

Prog `epstopdf`

`epstopdf` package

Enter ⇒ **`lwarpmk pdftosvg *.PDF`**

to convert to SVG images.

DVI latex When using DVI *latex*, it is necessary to convert EPS to PDF and then to SVG:

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

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

PNG and JPG For PNG or JPG while using *pdflatex*, *lualatex*, or *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 `newclass` and `alt` keys.

HTML class With HTML output, `\includegraphics` accepts an optional `class=xyz` keyval combi-

nation, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.

HTML alt tags Likewise, the `\includegraphics alt` key adds an HTML alt tag to an image, and is ignored for print output. If not assigned, each image is given an alt tag according to `\ImageAltText`.

`\rotatebox` `\rotatebox` accepts the optional origin key.

 **browser support** `\rotatebox`, `\scalebox`, and `\reflectbox` depend on modern browser support. The CSS3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike L^AT_EX, so expect some ugly results for scaling and rotating.

8.8.1 tikz package

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

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

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

8.8.2 grffile package

 **matching PDF and SVG** Pkg grffile `grffile` is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

8.8.3 color package

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

8.8.4 xcolor package

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

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

background: none `\colorbox` and `\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.

8.8.5 epstopdf package

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

 **convert to .svg**

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

to generate `.svg` versions.

8.8.6 pstricks package

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

 **use pspicture**

8.8.7 pdftricks package

Pkg pdftricks The `pdftricks` image files `<jobname>-fig*.pdf` must be converted to `.svg`, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

 **convert image files**

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

8.8.8 psfrag package

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

 **use psfrags**

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

8.8.9 pstool package

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

 **path and filename** The filename must not have a file extension.

Use

Enter ⇒ `lwarpmk html`

followed by

Enter ⇒ `lwarpmk limages`

8.8.10 asymptote package

Pkg asymptote To compile:

```
pdflatex project.tex
asy project-*.asy
pdflatex project.tex

lwarpmk print
asy project-*.asy
lwarpmk print1
lwarpmk print1

lwarpmk html
asy project_html-*.asy
lwarpmk html1
lwarpmk html1
lwarpmk limages
```

8.8.11 overpic package

Pkg overpic The macros `\overpicfontsize` and `\overpicfontskip` are used during HTML generation. These are sent to `\fontsize` to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the `overpic` and `Overpic` environments.

 scaling

8.8.12 Multimedia packages

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

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

Pkg media9 HTML5 `<embed>` objects are created for `http` and `ftp` links.

`\href` links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For `media9`, a multimedia object is inserted for each `addressource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each HTML multimedia object includes the poster text, except for `<embed>` objects. For `movie15`, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

`media9 \addmediapath` is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each `<audio>` and `<video>` object.

`media9` slideshows are not supported.

`\hyperlinkmovie`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a YOUTUBE™ video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

8.9 Tabbing

The tabbing environment works, except that `svg` `math` and `lateximages` do not yet work inside the environment.

 **math in tabbing** If `math` is used inside `tabbing`, place `tabbing` inside a `lateximage` environment, which will render the entire environment as a single `svg` image.

8.10 Tabular

8.10.1 tabular environment

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

Defining macros and environments:

 **Misplaced alignment tab character &**

- When defining environments or macros which include `tabular` and instances of the `&` character, it may be necessary to make `&` active before the environment or macro is defined, then restore `&` to its default catcode after, using the following commands. These are ignored in print mode.

⚠ floatrow

⚠ tabular inside another environment

```
\StartDefiningTabulars
```

```
<define macros or environments using tabular and & here>
```

```
\StopDefiningTabulars
```

This includes before and after defining any macro which used `\ttabbox` from `floatrow`.

- When creating a new environment which contains a tabular environment, `lwarp`'s emulation of the tabular does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

```
\StartDefiningTabulars % because & is used in a definition
```

```
\newenvironment{outerenvironment}
```

```
{
```

```
\tabular{cc}
```

```
left & right \\
```

```
}
```

```
{
```

```
\TabularMacro\ResumeTabular
```

```
left & right \\
```

```
\endtabular
```

```
}
```

```
\StopDefiningTabulars
```

Cell contents:

⚠ macro in a table

- Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use `\TabularMacro` just before the macro. This is ignored in print mode.

```
\TabularMacro\somemacro & more row contents \\
```

Column specifiers:

@ and !

- Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

- In `\multirow` cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the `\multirow` which do not appear in the HTML version.

⚠ \newcolumntype

- `\newcolumntype` is ignored; unknown column types are set to l.

Rules:

vertical rules

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

width and trim

- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

combined rules

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

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

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

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

```
This & That \endhead
```

to

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

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

Other:

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

longtable headings

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

△ S columns

- For `S` columns (from the `siunitx` package), while producing print output, anything non-numeric must be placed inside `{}` braces, including commands such as `\multirow`. While producing HTML output, though, anything placed inside braces is not seen by `lwarp`'s tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

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

- In \LaTeX , a `tabular` may be placed inside a `minipage`, but in HTML a `<table>` may not be inside a ``. If this situation is detected, a warning is printed instructing the user to isolate the `` using `\warpprintonly` or the `warpprint` environment.

8.10.2 multirow package

vposn

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

multirow cells

- For `multirow`, insert `\mrowcell` into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

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

colored cells

- The `multirow` documentation regarding colored cells recommends using a negative number of rows. This will not work with `lwarp`, so `\warpprintonly` and `\warppHTMLonly` must be used to make versions for print and HTML.

△ \warpprintonly
△ Misplaced \noalign

△ tabular inside a

with `\multicolumn`

⚠ `\multicolumn & \multirow`

- See section 372.2 for `\multicolumnrow`.

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

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for `\multicolumn` come first, followed by the five arguments for `\multirow`, many of which are optional, followed by the contents.

⚠ skipped cells

As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

⚠ empty cells

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

⚠ MathJax

- MATHJAX does not support `\multirow`, so it is emulated to only print its text on the first row. `\multirow` works as expected in text tabulars or SVG math.

8.10.3 longtable package

Pkg `longtable` Use one of either `\endhead` or `\endfirsthead` for both print and HTML, and use a `\warpprintonly` macro to disable the other head phrase, and also the `\endfoot` and `\endfirstfoot` phrases. (See section 8.10.4 if using `threeparttablex`.)

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

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

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

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

or place it inside `\warpprintonly`.

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

8.10.4 threeparttablex package

Pkg threeparttablex threeparttablex is used with longtable and booktabs as follows:

```

\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[ . . . ] \endhead % or \endfirsthead
[ . . . ] \endfoot
\bottomrule \insertTableNotes \endlastfoot
}
. . . table contents . . .
\warpHTMLonly{ % HTML last footer
\bottomrule
\UseMinipageWidths % optional
\insertTableNotes
\endlastfoot
}
\end{longtable}

```

table width The table notes are created using a `\multicolumn`. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, `lwarp` guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use `\UseMinipageWidths` before `\insertTableNotes`. The width is then specified, and in many cases the result is an improvement in overall table layout.

8.10.5 supertabular and xtab packages

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

Pkg xtab `\StartDefiningTabulars`
 **Misplaced alignment tab character &** `\tablefirsthead`
`. . .`
`\StopDefiningTabulars`

See section 8.10.1.

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

8.10.6 colortbl package

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

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

8.10.7 ctable package

 **Misplaced alignment tab character &** Use `\StartDefiningTabulars` before one or more `\ctables`, and `\StopDefiningTabulars`

after. These change the meaning of the ampersand & character.

8.10.8 bigdelim package

⚠ Pkg bigdelim use `\mrowcell` `\ldelim` and `\rdelim` use `\multirow`, so `\mrowcell` must be used in the proper number of empty cells in the same column below `\ldelim` or `\rdelim`, but not in cells which are above or below the delimiter:

```

\begin{tabular}{lll}
<empty> & a & b \\
\ldelim{\}{3}{.25in}[left ] & c & d \\
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}

```

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

For MATHJAX, limited emulation is provided which merely prints the delimiter and optional text in the first row.

8.11 Floats

8.11.1 Float contents alignment

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

```

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

```

8.11.2 float, trivfloat, and/or algorithmicx together

Pkg float If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section 544.1.

Pkg trivfloat

Pkg algorithmicx

⚠ package conflicts

8.11.3 caption and subcaption packages

Pkg caption Package options may cause problems with `lwarp`, especially if they include curly braces.
Pkg subcaption

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

```
\usepackage[font={it,small}]{caption}% does not work
```

... try instead selecting the package options before loading `lwarp`:

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

... or try setting package options after the package has been loaded:

```
\usepackage{caption}
\captionsetup{font={it,small}}
```

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

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

Similarly for `longtable`. These positions depend on where the user places the `\caption` command inside each float.

8.11.4 subfig package

Pkg `subfig`

 **lof/lotdepth** At present, the package options for `lofdepth` and `lotdepth` are not working. These counters must be set separately after the package has been loaded.

In the document source, use `\hfill` and `\hspace* subfig>inline` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

8.11.5 floatrow package

Pkg `floatrow`

 **Misplaced alignment tab character & subfig package**

Use `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros using `\ttabbox` with a tabular inside. See section 8.10.1.

 When combined with the `subfig` package, while inside a `subfloatrow` `\ffigbox` and `\ttabbox` must have the caption in the first of the two of the mandatory arguments.

 **\FBwidth, \FBheight**

The emulation of `floatrow` does not support `\FBwidth` or `\FBheight`. These values are pre-set to `.3\linewidth` and `2in`. Possible solutions include:

- Use fixed lengths. `lwarp` will scale the HTML lengths appropriately.

- Use warpprint and warpHTML environments to select appropriate values for each case.
- Inside a warpHTML environment, manually change `\FBwidth` or `\FBheight` before the `\ffigbox` or `\ttabbox`. Use `\FBwidth` or `\FBheight` normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

8.11.6 keyfloat package

Pkg keyfloat If placing a `\keyfig[H]` inside a `keywrap`, use an absolute width for `\keyfig`, instead of `lw`-proportional widths. (The `[H]` option forces the use of a `minipage`, which internally adjusts for a virtual 6-inch wide `minipage`, which then corrupts the `lw` option.)

⚠ keywrap

8.12 KOMA-SCRIPT classes

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

`\captionformat`, `\figureformat`, and `\tableformat` are not yet emulated.

⚠ Not fully tested! [Please send bug reports!](#)

Some features have not yet been tested. Please contact the author with any bug reports.

8.13 MEMOIR class

Cls memoir `lwarp` uses `caption`, which causes a warning from `memoir`. This is normal. Adjust captions via `caption`, instead of `memoir`.

⚠ captions

⚠ options clash While emulating `memoir`, `lwarp` pre-loads a number of packages (section 593.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading `lwarp`:

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

⚠ version numbers `memoir` emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since `lwarp` is intended to support the freestanding packages, which are often newer than the date declared by `memoir`, it is hoped that `memoir` will update and change its emulated version numbers to match.

`\label(bookmark){tag}` `\label` accepts an optional (bookmark) argument, but this is ignored in HTML.

⚠ **comment** The `comment` environment is from the `comment` package, and thus requires that the `\begin` and `\end` each be on its own line:

```
\begin{comment}
This is a comment.
\end{comment}
```

`\newcomment` Comments defined with `\newcomment` use `memoir`'s definitions, and behave as expected, where the `\begin` and `\end` do have to each be on its own line.

⚠ **verbatim footnotes** `\verbfootnote` is not supported.

⚠ **\newfootnoteseries** `\newfootnoteseries`, etc. are not supported.

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

page notes with cleveref To add support for `pagenotes` with `cleveref`, add:

```
\crefname{pagenote}{page note}{page notes}
\Crefname{pagenote}{Page note}{Page notes}
```

page note \nameref Note that for print mode, `\nameref` print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

⚠ **poems** Poem numbering is not supported.

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

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

⚠ **framewithtitle, titledframe** The custom frame commands in the `memoir` manual may be emulated by placing the original definitions in the preamble inside `warpprint` environments, and then providing an HTML equivalent:

```
\begin{warpHTML}
\newcommand{\FrameTitle}[2]{%
  \textbf{#2}
}

\newenvironment{framewithtitle}[2][\FrameFirst@Lab\ (cont.)]{%
  \begin{fminipage}{\linewidth}
  \textbf{#2}
  \begin{minipage}{\linewidth}
  }
{\end{minipage}\end{fminipage}}

\newcommand{\TitleFrame}[2]{%
  \par
  \textbf{#1}\par}
```

```

        \fboxBlock{#2}
    }

    \newenvironment{titledframe}[2][\FrameFirst@Lab\ (cont.)]{%
        \par
        \textbf{#2}
        \begin{fminipage}{\linewidth}
    }
    {\end{fminipage}}
\end{warpHTML}

```

8.14 International languages

 **section and file names** If using *pdflatex* with the setting `\booltrue{FileSectionNames}`, non-ASCII text in section names can result in corrupted HTML file names. *pdflatex* may be used if setting `\boolfalse{FileSectionNames}`, in which case HTML file numbers will be generated.

For correct HTML file names, use *xelatex*, *lualatex*, or dedicated document classes / engines.

(As of this writing, this warning is only relevant to the *kotex* package.)

8.15 Miscellaneous packages

8.15.1 verse and memoir

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

 **verse margin** label may be shifted by one space. During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused *pdftotext* to shift everything over.

8.15.2 newclude package

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

 **loading**

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

8.15.3 babel package

Pkg babel When French is used, the caption separator is changed to a dash. To restore it to a colon, the following may be placed before **lwarp** is loaded:

 **\CaptionSeparator**

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

punctuation spaces Also when French is used, **lwarp** creates fixed-width space around punctuation by patching `\FBcolonspace`, `\FBthinspace`, `\FBguillspace`, `\FBmedkern`, `\FBthickkern`, `\FBtextellipsis`, and the tilde. If the user's document also changes these parameters,

 **customized spacing**

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

8.15.4 polyglossia package

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

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

To test compatibility, add

```
\usepackage{cleveref}
```

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

```
\setdefaultlanguage{english}
```

or some other language supported by `cleveref`, then select other languages using `\setotherlanguages`.

Once the print version works with `cleveref` and **polyglossia**, the HTML version should work as well using **lwarp**.

8.15.5 todonotes and luatodonotes packages

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

8.15.6 fixme

Pkg fixme External layouts (`\fxloadlayouts`) are not supported.
 external layouts User control is provided for setting the HTML styling of the “faces”. The defaults are as
 follows, and may be changed in the preamble after `fixme` is loaded:

```
\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}
```

8.15.7 acro package

formats Define acronymn formats using `\textbf` instead of `\bfseries` etc.

8.15.8 chemfig package

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

```
\begin{lateximage}[-chemfig~\PackageDiagramAltText]
\chemfig{...}
\polymerdelim[...]{...}
\end{lateximage}
```

8.15.9 chemformula package

chemformula with MATHJAX chemformula works best without MATHJAX. If MATHJAX is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The `chemformula` package adapts to `array`, but does not know about MATHJAX, and MATHJAX does not know about `chemformula`.)

While using MATHJAX, `\displaymathother` may also be used for other forms of display and inline math which contain `chemformula` expressions.

8.15.10 mhchem package

See section 356.

8.15.11 xparse package

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

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

8.15.12 kotex package

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

 Korean section names

9 Compiling using custom shell commands

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

9.1 Command options

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

PrintLatexCmd should be set to shell commands which take `project.tex` and generate `project.pdf`.

HTMLLatexCmd should be set to take `project_html.tex` and generate `project_html.pdf`. `lwarpmk` will then take `project_html.pdf` and automatically convert it and generate `project.html`.

9.2 Literal character macros

The `lwarp` package options are parsed by T_EX, and so some characters require the use of a special macro to represent them. See table 9. `\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 9: Literal character macros

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

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

```

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

```

9.3 *latexmk*

Prog `latexmk` If *latexmk* is used for a project, it may be easiest to continue using it.

`latexmk project.tex` would create `project.pdf` as normal.

`latexmk project_html.tex` would create `project_html.pdf`, then

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

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

9.4 `perltex` package

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

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

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

9.5 `pythontex` package

Pkg `pythontex` An example using `pythontex`:

```
\usepackage[
  . . .
  PrintLatexCmd={
    pdflatex project.tex \LWRopseq
    pythontex project \LWRopseq
    pdflatex project.tex
  } ,
  HTMLLatexCmd={
    pdflatex project_html.tex \LWRopseq
    pythontex project_html \LWRopseq
    pdflatex project_html.tex
  } ,
  . . .
]{lwarp}
```

Another possibility is to use *latexmk*, placing the `latexmk . . .` commands in the `PrintLatexCmd` and `HTMLLatexCmd` options. While using these options, the `lwarp` option `latexmk` would not be used.

⚠ “impure” math No attempt has yet been made to make `pythontex` robust with HTML output. Some math objects must be surrounded by `\displaymathother ... \displaymathnormal`, or `\inlinemathother ... \inlinemathnormal`. Displays of code may have to be enclosed

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

9.6 Other packages

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

Pkg `rterface`

and the same warnings would apply.

9.7 *make* program

Prog `make` To use `lwarp` with the *make* program, have the makefile take `project.tex` and generate the print version `project.pdf`, as normal. `\usepackage{lwarp}` must be used, and it generates `lwarpmk.conf` when the print version is created.

To generate HTML, first have `project_html.tex` be compiled to generate `project_html.pdf`. This must be in PDF format. Finally, have `project_html.pdf` be converted to HTML using `lwarpmk pdftohtml project_html.pdf`, and convert SVG math with `lwarpmk limages`.

9.8 UTF-8 locale

⚠ **UTF-8 locale** *lwarpmk* uses the *texlua* program, which sets the “locale” to “C”, including for external operating-system calls such as when executing `lwarpmk html`. In some cases, an external program called from the user’s document may require the use of a UTF-8 “locale”. For UNIX-related operating systems, it may be required to use `lwarp`’s custom compilation options to add a locale change:

```
\usepackage{lwarp}[
  PrintLatexCmd={
    env LC_CTYPE=en_US.UTF-8
    xelatex -shell-escape project.tex
  }
  HTMLLatexCmd={
    env LC_CTYPE=en_US.UTF-8
    xelatex -shell-escape project_html.tex
  }
]
```

Pkg `ditaa` The only example seen so far where this is required is the `ditaa` package, where the locale change allows the use of UTF-8 with Xe^LA^TE^X and `ditaa`. To use Lua^AT^EX instead, the locale change would have to be made inside the `ditaa` package where it calls the *ditaa* program.

10 EPUB conversion

lwarp does not produce EPUB documents, but it may be told to modify its HTML output to greatly assist in the conversion. An external program may then be used to finish the conversion to EPUB.

<meta> author To assign the author's name for regular lwarp HTML files, and also for the EPUB, use `\HTMLAuthor {<name>}`. This assigns the name to the `<meta>` author element. It may be set empty, and it defaults to `\theauthor`.

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

	FormatEPUB
Bool	FormatEPUB
Default: false	FormatEPUB changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section.

To help convert lwarp HTML output to EPUB, add

```
\booltrue{FormatEPUB}
```

to the project's source preamble after `\usepackage{lwarp}`. The EPUB version of the document cannot co-exist with the regular HTML version, so

```
Enter ⇒ lwarpmk cleanall
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk limages
```

to recompile with the FormatEPUB boolean turned on. Several changes are then made to the HTML output:

- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.

The resulting files will be ready to be loaded into an EPUB conversion program, such as the open-source program *Calibre* (<https://calibre-ebook.com/>).

search order

The EPUB conversion program must know what order the files are included. For lwarp projects, set the EPUB conversion software to do a breadth-first search of the files. For *Calibre*, this option is found in

Preferences → Plugins → File type plugins → HTML to Zip

encoding

Check the box **Add linked files in breadth first order**. Set the document encoding as `utf-8`, which is what lwarp generates for HTML, even if the original printed document uses some other encoding.

 **section breaks**

The EPUB-conversion program must also know where the section breaks are located. For a list of `lwarp`'s section headings, see table 11. For example, an `article` class document would break at `\section`, which is mapped to HTML heading level `<h4>`, whereas a `book` class document would break at `\chapter`, which is HTML heading level `<h3>`. For *Calibre*, this option is found in

Preferences → Conversion (Common Options) → Structure Detection → Detect chapters at (XPath expression)

Select the “magic wand” to the right of this entry box, and set the first entry

Match HTML tags with tag name:

to “h4”. (Or “h3” for document classes with `\chapters`.) The Detect chapters at field should then show

`//h:h4` — or — `//h:h3`

This option is also available on the main tool bar at the Convert books button.

Once these settings have been made, the `lwarp`-generated HTML files may be loaded by *Calibre*, and then converted to an EPUB.

MATHJAX support

MATHJAX may be used in EPUB documents. Some e-readers include MATHJAX, but any given reader may or may not have a recent version, and may or may not include extensions such as support for `siunitx`.

`lwarp` adds some modifications to MathML to support equations numbered by chapter. These modifications may not be compatible with the e-reader's version of MATHJAX, so `lwarp` requests that a known version be loaded instead. In some cases chapter numbering of equations still doesn't work.

Until math support in EPUB documents is improved, it is recommended to use SVG images instead of MATHJAX, especially for equations numbered by chapter, or where `siunitx` support is important.

11 Word-processor conversion

lwarp may be told to modify its HTML output to make it easier to import the HTML document into a word processor. At the time of this writing, it seems that LIBREOFFICE works best at preserving table layout, but it still has some limitations, such as an inability to automatically assign figure and table frames and captions according to user-selected HTML classes. lwarp provides some assistance in locating these frame boundaries, as shown below.

11.1 Activating word-processor conversion

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

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

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

```
\booltrue{FormatWP}
```

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

[formatting adjustments](#)

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

- Tabular rule borders are made explicit for *LibreOffice Writer*. `LIBREOFFICE` displays a light border around each cell while editing, even those which have no border when printed, and `lwarp` also uses a light border for thin rules, so it will be best to judge the results using the print preview instead of while editing in `LIBREOFFICE`.
- `\includegraphics` and `svg` math width and height are made explicit for `LIBREOFFICE`.
- `\hspace` is approximated by a number of `\quads`, and rules are approximated by a number of underscores.
- Explicit `HTML` styles are given to:
 - `\textsc`, etc.
 - `\underline`, `soul` and `ulem` markup.
 - `center`, `flushleft`, `flushright`.
 - `\marginpar`, `keyfloat`, `sidenotes`, `floatflt`, and `wrapfig`.
 - `fancybox` `\shadowbox`, etc.
 - The `LATEX` and `TEX` logos.
- Honors several booleans:

WPMarkFloats: Marks the begin and end of floats.

WPMarkMinipages: Marks the begin and end of minipages.

WPMarkTOC: Marks the location of the Table of Contents.

WPMarkLOFT: Marks the locations of the List of Figures/Tables.

WPMarkMath: Prints `LATEX` math instead of using images.

WPTitleHeading: Adjusts title and section headings.

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

11.2 Additional modifications

WPMarkFloats

Bool WPMarkFloats
Default: false

Adds

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

or

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

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

WPMarkMinipages

Bool WPMarkMinipages
 Default: false

Adds

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

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

WPMarkTOC

Bool WPMarkTOC
 Default: true

While formatting for word processors, adds

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

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

If set false, the actual TOC is printed instead.

WPMarkLOFT

Bool WPMarkLOFT
 Default: false

While formatting for word processors, adds

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

where each of these lists would have been. This helps identify where to insert the actual lists.

If set false, the actual lists are printed instead.

WPMarkMath

[siunitx](#)
 Bool WPMarkMath
 Default: false
 Prog TeXMaths

While formatting for word processors, prints math as \LaTeX code instead of creating SVG images or MATHJAX. This is useful for cut/paste into the *LibreOffice Writer TeXMaths* extension.

When using the siunitx package, enter

```
\usepackage{siunitx}
```

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

Table 10: Section HTML headings for word-processor conversion

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

* For default depths when not FormatWP, see table 11 on page 193.

WPTitleHeading

Bool WPTitleHeading
Default: false
section headings

While formatting for word processors, true sets the document title to <h1>, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOFFICE. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

See table 10 on page 177.

11.3 Recommendations

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

1. Set `\booltrue{FormatWP}`
2. Set `\booltrue{WPMarkTOC}` and `\boolfalse{WPMarkLOFT}`
3. Use `lwarp` to generate the HTML document.
4. Copy/paste from the HTML document into an empty *LibreOffice Writer* document.
5. Manually insert a LIBREOFFICE TOC in the LIBREOFFICE document.
6. Manually add frames around each float, adding a caption which is cut/pasted from each float's simulated caption.
7. Manually create cross references.

This process yields a document with an actual LIBREOFFICE Table of Contents, but a simulated List of Figures and List of Tables.

siunitx For siunitx, remember to adjust the preamble as mentioned above.

LO view border options LIBREOFFICE has options in the **View** menu to turn on/off the display of thin borders around table cells and text objects.

11.4 Limitations

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

Cross references are not actual LIBREOFFICE linked cross references.

The List of Figures and List of Tables are not linked. The pasted pseudo LOF and LOT match the numbering of the 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{AMS} environments, which may have multiple numbered equations per object.

As of when last checked, LIBREOFFICE ignores the following:

- Minipage alignment.
- Tabular cell vertical alignment.
- Image rotation and scaling.
- Rounded border corners, which are also used by:
 - `\textcircled`
 - `booktabs trim`
- `\hspace` and `rules`, also used by `algorithmic`.
- Coloring of text decorations, used by `soul` and `ulem`.
- Overline text decoration, used by `romanbar`.

LIBREOFFICE also has limitations with frames and backgrounds:

- Multiple lines in an object are framed individually instead of as a whole.
- Nested frames are not handled correctly.
- Images inside boxes are not framed correctly.
- Spans with background colors and frames are not displayed correctly.

12 Modifying lwarp

- locating something** To quickly find the source for a package in `lwarp.dtx`, search for `*packagename`, such as `*siunitx`.
- Likewise, to quickly find the source for a file in `lwarp.dtx`, search for `*filename`, such as `*lwarp.css`.
- Purely text-based packages probably will work as-is when generating HTML.
- Look to existing code for ideas on how to expand into new code.
- image of TeX output** An environment may be converted to a `lateximage` then displayed with an image of the resulting L^AT_EX output. See section 89 for an example of the `picture` environment.
- css classes** To create a custom HTML block or inline CSS class, see section 51.9.
- print/HTML macros** To create print and HTML versions of the same macro or environment, see section 35.
- △ TeX boxes** Any TeX boxes must be undone, as `svg math` or `lateximages` require `\newpage`, which will not work in a TeX box.
- index recreation** To recreate the index for the lwarp documentation:

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

12.1 Creating a development system

The following creates a local development system for `lwarp` on a TeXLive system in a UNIX-like environment. Doing so allows anything requesting `lwarp` to use the development version instead of whichever version is installed in TeXLive.

Create a development directory:

Place into this directory `lwarp.dtx` and `lwarp.ins`.

To create `lwarp.sty`, execute

```
Enter ⇒ pdflatex lwarp.ins
```

which creates `lwarp.sty` and several hundred additional `lwarp-*.sty` files for the various packages which are supported.

To create the documentation `lwarp.pdf`, execute

```
Enter ⇒ pdflatex lwarp.dtx
```

To make the development files visible to other projects:

Create the directory

```
/usr/local/texlive/texmf-local/tex/latex/local/lwarp
```

Inside this directory, create the file update, containing:

```
ln -s /path_to_dev_directory/lwarp*.sty .
ln -s /path_to_dev_directory/lwarp_baseline_marker.png .
ln -s /path_to_dev_directory/lwarp_baseline_marker.eps .
mktexlsr
```

Run `./update` now, and whenever a new `lwarp-*` package is added.

To make the development version of *lwarpmk* visible to other projects:

```
cd /opt
ln -s /usr/local/texlive/texmf-local/bin/x86_64-linux texbin_local
cd texbin_local
ln -s ../../scripts/lwarp/lwarpmk.lua lwarpmk
cd /usr/local/texlive/texmf-local/scripts/
mkdir lwarp
cd lwarp
ln -s /path_to_dev_directory/lwarpmk.lua lwarpmk
```

Verify that the correct version is found with

Enter \Rightarrow `which lwarpmk`

To make the local versions visible to the shell:

Paths must be set by the shell startup, such as in `.bashrc` and `.cshrc`:

In `.bashrc`:

```
PATH=/opt/texbin_local:/opt/texbin:$PATH
```

In `.cshrc`:

```
setenv PATH ${HOME}/bin:/opt/texbin_local:/opt/texbin:${PATH}
```

12.2 Modifying a package for lwarp

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

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

When creating `HTML`, `lwarp` redefines the `\usepackage` and `\RequirePackage` macros such that it first looks to see if a `lwarp-<packagename>.sty` version exists. If so, the `lwarp` version is used instead. This modular system allows users to create their own versions of packages for `lwarp` to use for `HTML`, simply by creating a new package with a `lwarp-` prefix. If placed in the local directory along with the source code, it will be

seen by that project alone. If placed alongside the other `lwarp-` packages where `TEX` can see it, then the user's new package will be seen by any documents using `lwarp`. (Remember `mktexlsr` or `texhash`.)

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

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

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

```
\LWR@ProvidesPackageDrop
— or —
\LWR@ProvidesPackagePass
```

If “Drop”ped, the original print-version package is ignored, and only the `lwarp-` version is used. Use this where the original print version is useless for `HTML`. If “Pass”ed, the original package is loaded first, with the user-supplied options, then the `lwarp-` version continues loading as well. See section 395 (ntheorem) for an example of selectively disabling user options for a package. Use this when `HTML` output only requires some modifications of the original package. For a case where the original package is usable without changes, there is no need to create a `lwarp-` version.

12.2.1 Adding a package to the `lwarp.dtx` file

When adding a package to `lwarp.dtx` for permanent including in `lwarp`, provide the `lwarp-<packagename>` code in `lwarp.dtx`, add its entry into `lwarp.ins`, and also remember to add

```
\LWR@loadafter{<packagename>}
```

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

12.3 Modifying a class for `lwarp`

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

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

12.4 Testing `lwarp`

When changes have been made, test the print output before testing the `HTML`. The print output compiles faster, and any errors in the printed version will be easier to figure out than the `HTML` version.

Remember that the configuration files are only rewritten when compiling the printed version of the document.

When changing the source to `lwarpmk` or a `css` file in `lwarp.dtx`:

1. Change the source in `lwarp.dtx`.
2. `pdflatex lwarp.ins`
3. `pdflatex lwarp.dtx`
4. If modifying `lwarpmk` the new version should now be active.
5. If modifying `css` files:
 - (a) For the document, `lwarpmk print` to update the `css` files in the project.
 - (b) Reload the `HTML` document to see the effect of the new `css` files.

Sometimes it is worth checking the `<project>_html.pdf` file, which is the `PDF` containing `HTML` tags. Also, `<project>_html.html` has the text conversion of these tags, before the file is split into individual `HTML` files.

It is also worth checking the browser's tools for verifying the correctness of `HTML` and `css` code.

12.5 Modifying `lwarpmk`

Prog `lwarpmk`
File `lwarpmk.lua`

In most installations, `lwarpmk.lua` is an executable file located somewhere the operating system knows about, and it is called by typing `lwarpmk` into a terminal.

A project-local copy of `lwarpmk.lua` may be generated, modified, and then used to compile documents:

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

4. Copy and rename `lwarpmk.lua` to a new file such as `mymake.lua`.
5. Modify `mymake.lua` as desired.
6. If necessary, make `mymake.lua` executable.
7. Use `mymake.lua` instead of `lwarpmk.lua`.

13 Troubleshooting

13.1 lwarp package error conditions and warnings

lwarp tests for a number of error conditions and prints appropriate warnings. The following is a summary of these conditions.

13.1.1 Configuration file `lwarpmk.conf`

File does not exist: The configuration file must exist for `lwarpmk`.

Incorrect Unix /Windows selection: The operating system which was detected by `lwarp`. So far only Unix and Windows are supported.

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

Source name is set to lwarp: `lwarp` has recently been recompiled in this directory, which overwrote the project's configuration files. This also occurs if `lwarpmk` is executed in `lwarp`'s source directory.

Incorrect operating system: The configuration file was set for a different operating system, perhaps due to sharing in a collaborative project.

Outdated configuration files: `lwarp` has been updated since this project was last compiled. If there appears to be a valid print command in the file, `lwarpmk` displays this to instruct the user how to recompile the print version, which then updates the configuration files.

The designated source file does not exist: For whatever reason...

Unknown engine: `lwarp` cannot determine which engine is being used. Supported are DVI \LaTeX , PDF \LaTeX , X \LaTeX , Lua \LaTeX , and up \LaTeX .

13.1.2 Image generation with `lwarpmk limages`

“Wait a moment for the images to complete before reloading page.”:

Images are generated by background tasks. If the document is reloaded before these tasks are complete, some images may not yet be generated. `lwarpmk` tries to wait for background tasks to complete before exiting.

HTML version does not exist: Images are extracted from the HTML version, which must be compiled before images are generated.

***-images.txt does not exist:** This file tells which images to extract from the HTML file. If the file does not exist, it may be that no `svg math` or `lateximages` were used. If so, `lwarpmk limages` is not necessary.

Cross references are not correct: The document must have up-to-date cross references to locate the images to extract. A number of conditions may cause incorrect cross references.

“WARNING: Images will be incorrect.”: An image reference was not found. Recompile.

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

13.1.3 Default bitmapped font

lwarp requires the use of a vector font. If lwarp detects that the document uses the default COMPUTER MODERN font, and the cm-super package is not installed, it is assumed that the font is bitmapped. An error is generated, along with the recommendation to install cm-super or use lmodern.

13.1.4 Packages

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

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

Loaded never: Some packages do not work with lwarp. An error is generated, along with a list of alternatives to consider.

Specific packages: Some packages enforce a specific load order vs. certain other packages.

Patching error: lwarp tries to patch some packages using xpatch. If the original package has been updated more recently than lwarp, a patch may not work. It may be necessary to use an older version of the package until lwarp is updated.

longtable: lwarp's longtable package issues detailed error messages regarding the use of the table headers and footers.

polyglossia: If used, an informative message is printed to instruct the user to be sure to set a language, without which an error will occur.

babel or polyglossia: An informative message is printed to note that not all languages are supported by cleveref.

13.1.5 Compiling

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

Filenames: lwarp may generate file names from section names. While doing so, the filenames are simplified, and special characters and math are removed. If this process generates a duplicate filename, an error is generated, describing the filename and which section name generated it. A warning is issued if dollar-delimited math is used. Parenthesis-delimited math is recommended instead.

- △ **HTML corrupted** **Multirow:** When `\multirow` or `\multicolrow` are used, `\mrowcell` or `\mcolrowcell` must be placed in the appropriate cells to avoid corrupted HTML output.
- (width,height) missing a comma:** `\makebox` and `\framebox` can accept a parenthesis-delimited width and height, which must be separated by a comma.
- “Load graphicx or graphics for improved SVG math baselines.”:** SVG math sizing and baselines are improved if either of these packages are used.
- “Load graphicx or graphics for improved XeTeX logo.”:** If these packages are loaded, the Xe_{La}TeX logo can use the reversed “E”.
- “It is recommended to use [width=xx\linewidth] instead of [scale=yy]”:** Browser support of `scale` does not have the same effect as in L^AT_EX.

13.2 Using the lwarp package

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

Also see:

Section 7.11: [Commands to be placed into the warpprint environment](#)

Section 8: [Special cases and limitations](#)

- △ **HTML corrupted** **Text is not converting correctly / corrupted HTML tags:**
- Font-related UTF-8 information must be embedded in the PDF file. See section 7.4 regarding bitmapped vs. vector fonts.
 - See section 8.2.1 regarding HTML entities and the characters `&`, `<`, and `>`.

- △ **dotlessj** **Dotless j (`\j`):** See section 7.4 regarding `cmap`, `mmap`.

Undefined HTML settings:

- See the warning regarding the placement of the HTML settings at section 7.6.

Tabular problems: See section 8.10.1.

Obscure error messages:

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

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

“Runaway argument? File ended while scanning use of `\next`:
Don’t use `warpHTML`, `warpprint`, `warpall`, or `warpMathJax` inside itself.

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

“Missing `\begin{document}`.”: Some packages require that their options be specified before `lwarp` is loaded, or via the package’s setup macro, especially if these options include the use of braces. See section 8.1.

△ `warpHTML`, `warpprint`,
`warpMathJax`, `warpall`

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

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

”! **TeX capacity exceeded, sorry [text input levels=15].**”: Packages were nested too many levels deep. Locate the file `texmf.cnf` for your distribution, and add the line

```
max_in_open = 30
```

“**Missing \$ inserted.**”: If using a filename or URL in a footnote or `\item`, escape underscores with `_.`

“**Label(s) may have changed. Rerun to get cross-references right.**”:

This warning may repeat endlessly if a math expression is used in a caption. Simple math expressions such as $X=1$ may be replaced with

```
\textit{X}\,=\,1
```

“**Leaders not followed by proper glue**”:

This can be caused by a missing `l@<floatype>` or `l@<sectiontype>` definition. See `lwarp`’s definitions for examples.

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

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

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

inside a group first.

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

If using BibTeX, see section 8.6.9.

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

See section 8.15.4 if using `polyglossia`.

“**\begin{equation} ended by \end{document}**”:

Do not use custom macros such as `\beq` and `\eeq` to replace

```
\begin{equation}
. . .
\end{equation}
```

“**Misplaced \omit**”: If using `\LWR@formatted` to define new macros for print and HTML modes, see section 35 regarding `\LWR@expandableformatted`.

“**Token not allowed in a PDF string**”: This `hyperref` warning appears while creating the print-mode document, not HTML. A low-level macro is being used in a section name which appears in the PDF bookmarks. `hyperref` removes this macro from the bookmark, and warns of doing so. To avoid this warning, use `\pdfstringdefDisableCommands` in the preamble to define simplified replacement macros for each, or use `\texorpdfstring` in the `\section` or related macro to declare what to use for the `TeX` text, v.s. the PDF bookmark. See the `hyperref` manual.

⚠ macros in section, table, figure names

⚠ BibTeX

⚠ polyglossia

⚠ custom macros for environments

⚠ \LWR@formatted

△ “impure” math objects

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

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

before the math, and then

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

when displaying “normal” math. See section 8.7.9.

Slow compilation of math objects: Complicated math objects can also cause problems with `alt` tags, resulting in very slow compilation, large `alt` tags, and possible crashes. Use `\inlinemathother ... \inlinemathnormal` or `\displaymathother ... \displaymathnormal` around the math expression.

△ MATHJAX

Incorrect MATHJAX: Some objects do not convert to `MATHJAX`. Use `\displaymathother` before these objects, then `\displaymathnormal` to return to “normal” display math. See section 8.7.9.

Missing sections: See section 7.6 regarding the `FileDepth` and `SideTOCDepth` counters, and the use of `\tableofcontents` in the home page.

Misnumbered footnotes from section headings: See section 8.5.4.

Missing HTML files:

- See the warning regarding changes to the `HTML` settings at section 7.6.
- Ensure that the filenames are unique after math and short words are removed. See `FileSectionNames` at section 7.6.

Missing / incorrect cross-references:

- Use `lwarpmk` again followed by `lwarpmk html` or `lwarpmk print` to compile the document one more time.
- Labels with special characters may be a problem. It is best to stick with alpha-numeric, hyphen, underscore, and perhaps the colon (if not French). `\nameref` refers to the most recently-used section where the `\label` was defined. If no section has been defined before the `\label`, the link will be empty. Index entries also use `\nameref` and have the same limitation.
- `cleveref` and `varioref` are supported, but printed page numbers do not map to `HTML`, so a section name or a text phrase are used for `\cpageref` and `\cpagerefrange`. This phrase includes `\cpagerefFor`, which defaults to “for”.

Ex:

```
\cpageref{tab:first,tab:second}
```

in `html` becomes:

“pages **for** table 4.1 and **for** table 4.2”

See `\cpagerefFor` at page 567 to redefine the message which is printed for page number references.

BibTeX errors with `\etalchar`: See section 8.6.9.

Malformed URLs: Do not use the `%` character between arguments of `\hyperref`, etc., as this character is among those which is neutralized for inclusion in `HTML` URLs.

labels

△ label characters

`\nameref`

△ empty link

△ cleveref page numbers

Em-dashes or En-dashes in listing captions and titles:

Use \XeTeX or \LuaTeX .

Floats out of sequence:

Mixed “Here” and floating: Floats [H]ere and regular floats may become out of order. \clearpage if necessary.

Caption setup: With \captionsetup set the positions for the captions above or below to match their use in the source code.

Images are appearing in strange places:

- Enter **lwarpmk limages** to refresh the `lateximage` images.

SVG images:

⚠ adding/removing

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

recompile first

Before attempting to create the SVG image files, *lwarpmk* verifies that the HTML version of the document exists and has correct internal image references.¹⁶ If it is necessary to recompile the document’s HTML version one more time, *lwarpmk* usually will inform the user with an error message, but there are some conditions which cannot be detected, so the user should watch for the \LaTeX recompile warnings.

⚠ HTML instead of images

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

⚠ page counter

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

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

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

⚠ Lots of files!

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

Plain-looking document:

- The document’s CSS stylesheet may not be available, or may be linked incorrectly. Verify any \CSSFile name statements point to a valid CSS file.

⚠ HTML corrupted

Broken fragments of HTML:

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

¹⁶This becomes important when dealing with a document containing thousands of images.

Changes do not seem to be taking effect:

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

Un-matched conditional compiles:

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

13.2.1 Debug tracing output

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

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

13.3 Compiling the `lwarp.dtx` file

`lwarp_tutorial.tex`: Copy or link `lwarp_tutorial.txt` from the TDS doc directory to the source directory, or wherever you wish to compile the documentation. This file is included verbatim in the documentation, but is in the doc directory so that it may be found by *texdoc* and copied by the user.

Illogical error messages caused by an out-of-sync `lwarp.sty` file:

1. Delete the `lwarp.sty` file.
2. Enter `pdflatex lwarp.ins` to generate a new `lwarp.sty` file.
3. Enter `pdflatex lwarp.dtx` to recompile the `lwarp.pdf` documentation.

Un-nested environments:

Be sure to properly nest:

- `\begin{macrocode}` and `\end{macrocode}`
- `\begin{macro}` and `\end{macro}`
- `\begin{environment}` and `\end{environment}`

14 Trademarks

- TEX is a trademark of American Mathematical Society.
- ADOBE® and ADOBE *Framemaker*® are either registered trademarks or trademarks of ADOBE SYSTEMS INCORPORATED in the United States and/or other countries.
- LINUX® is the registered trademark of Linus Torvalds in the U.S. and other countries.
- MAC OS® is a trademark of APPLE INC.
- MADCAP FLARE™ is the property of MADCAP SOFTWARE, INC.
- MATHJAX is copyright 2009 and later. The MATHJAX CONSORTIUM is a joint venture of the AMERICAN MATHEMATICAL SOCIETY (AMS) and the SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS (SIAM) to advance mathematical and scientific content on the web.
- MICROSOFT®, ENCARTA, MSN, and WINDOWS® are either registered trademarks or trademarks of MICROSOFT CORPORATION in the United States and/or other countries.
- UNIX® is a registered trademark of THE OPEN GROUP.
- YOUTUBE™ is trademark of GOOGLE LLC.

File 1 **lwarp.sty**

15 Implementation

This package is perhaps best described as a large collection of smaller individual technical challenges, in many cases solved through a number of ~~erude-hacks~~ clever tricks. Reference sources are given for many of the solutions, and a quick internet search will provide additional possibilities.

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

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

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

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

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

Table 11: Section depths and HTML headings

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

* If `FormatWP` is true, section headings may be adjusted, depending on `WPTitleHeading`. See table 10 on page 177.

16 Section depths and HTML headings

Stacks are created to track depth inside the \LaTeX document structure. This depth is translated to HTML headings as shown in table 11. “Depth” here is not depth in the traditional computer-science stack-usage sense, but rather a representation of the nesting depth inside the \LaTeX document structure.

When starting a new section, the program first must close out any existing sections and lists of a deeper level to keep the HTML tags nested correctly.

Support for the memoir package will require the addition of a book level, which may push the HTML headings down a step, and also cause subsubsection to become a `<div>` due to a limit of six HTML headings.

It is possible to use HTML5 `<section>` and `<h1>` for all levels, but this may not be well-recognized by older browsers.

Fixed levels for parts and chapters allow the CSS to remain fixed as well.

17 Source code

This is where the documented source code for `lwarp` begins, continuing through the following sections all the way to the change log and index at the end of this document.

The following sections document the actual implementation of the `lwarp` package.

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

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

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

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

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

for HTML output: Green-colored tags in the left margin show which sections of source code apply to the generation of HTML, print, or both forms of output.
for PRINT output:
for HTML & PRINT:

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

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

Detects X_YT_EX and LuaL_AT_EX:

```

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

```

19 Early package requirements

Pkg etoolbox Provides \ifbool and other functions.

Pkg xpatch Patches macros with optional arguments.

```

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

```

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

```

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

```

Pkg letltxmacro

```

17 \RequirePackage{letltxmacro}

```

20 Package load order

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

Packages which must be loaded after `lwarp` are enforced by a large number of `\LWR@loadafter` statements, below. Some packages are emulated by `memoir`, and

so these are tested by `\LWR@notmemoirloadafter`, which does not cause an error if memoir is used.

`\LWR@checkloadfilename` is used to check each filename to see if it must never be loaded, or must always be loaded before `lwarp`.

20.1 Tests of package load order

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

```

18 \newcommand*\LWR@loadafter}[1]{%
19 \@ifpackageloaded{#1}
20 {
21   \PackageError{lwarp}
22     {%
23       Package #1,\MessageBreak
24       or one which uses #1,\MessageBreak
25       must be loaded after Lwarp.\MessageBreak
26       Enter 'H' for possible solutions%
27     }
28     {Move ‘‘\protect\usepackage{#1}’’ after
29     ‘‘\protect\usepackage{lwarp}’’.\MessageBreak
30     Package #1 may also be loaded by something else,\MessageBreak
31     which must also be moved after Lwarp.}
32 }
33 {}
34 }

```

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

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

```

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

```

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

```

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

```

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

```

51 \newcommand*\LWR@loadbefore[1]{%
52 \@ifpackageloaded{#1}
53 {}
54 {
55   \PackageError{lwarp}
56   {%
57     Package #1 must be loaded before lwarp.\MessageBreak
58     Enter 'H' for possible solutions%
59   }
60   {Move “\protect\usepackage{#1}” before “\protect\usepackage{lwarp}”’.}
61 }
62 }
```

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

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

```

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

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

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

```

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

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

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

```

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

87 }

`\LWR@earlyloadnever` {*<badpackagename>*} {*<replacementpkgname>*}

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.

```
88 \newcommand*{\LWR@earlyloadnever}[2]{%
89   \ifpackageloaded{#1}{%
90     \LWR@loadnever{#1}{#2}%
91   }{}%
92 }
```

`\LWR@earlyclassloadnever` {*<badclassname>*} {*<replacementclassname>*}

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.

```
93 \newcommand*{\LWR@earlyclassloadnever}[2]{%
94 \@ifclassloaded{#1}{%
95 \PackageError{lwarp}
96 {%
97   Class #1 is not supported\MessageBreak
98   by lwarp's HTML conversion.\MessageBreak
99   Class(es) #2 may be useful instead
100 }
101 {%
102   Class #1 might conflict with lwarp in some way,\MessageBreak
103   or is superceded by another class.\MessageBreak
104   For a possible alternative, see class(es) #2.
105 }
106 }{}%
107 }
```

20.2 Error for disallowed packages and classes loaded before lwarp

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

```

124 \LWR@earlyloadnever{epsf}{graphicx}
125 \LWR@earlyloadnever{fancyheadings}{fancyhdr}
126 \LWR@earlyloadnever{fncylab}{cleveref}
127 \LWR@earlyloadnever{formula}{siunitx}
128 \LWR@earlyloadnever{glossary}{glossaries}
129 \LWR@earlyloadnever{hyper}{hyperref}
130 \LWR@earlyloadnever{newthm}{ntheorem}
131 \LWR@earlyloadnever{pdfcpot}{microtype}
132 \LWR@earlyloadnever{picinpar}{floatflt, wrapfig}
133 \LWR@earlyloadnever{picins}{floatflt, wrapfig}
134 \LWR@earlyloadnever{rplain}{fancyhdr}
135 \LWR@earlyloadnever{shadethm}{mdframed}
136 \LWR@earlyloadnever{si}{siunitx}
137 \LWR@earlyloadnever{sistyle}{siunitx}
138 \LWR@earlyloadnever{slashbox}{diagbox}
139 \LWR@earlyloadnever{statex}{statex2}
140 \LWR@earlyloadnever{t1enc}{fontenc, inputenc, inputenx}
141 \LWR@earlyloadnever{ucs}{inputenc, inputencx}
142 \LWR@earlyloadnever{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}

```

The older CJK and CJKutf8 only work with xeCJK:

```

143 \@ifpackageloaded{xeCJK}{
144   \LWR@earlyloadnever{CJK}{ctex, xeCJK}
145   \LWR@earlyloadnever{CJKutf8}{ctex, xeCJK}
146 }

```

bxckatype is based on CJK:

```

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

```

hangul is not in TeXLive, and is not tested:

```

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

```

20.3 Enforcing package loading after lwarp

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

The following packages must be loaded after lwarp:

```

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

```

```
161 \LWR@loadafter{addlines}
162 \LWR@loadafter{afterpage}
163 \LWR@loadafter{algorithm2e}
164 \LWR@loadafter{algorithmicx}
165 \LWR@loadafter{alltt}
166 \LWR@loadafter{amsmath}
167 \LWR@loadafter{amsthm}
168 \LWR@loadafter{anonchp}
169 \LWR@loadafter{anysize}
170 \LWR@notmemoirloadafter{appendix}
171 \LWR@loadafter{ar}
172 \LWR@loadafter{arabicfront}
173 \LWR@notmemoirloadafter{array}
174 \LWR@loadafter{arydshln}
175 \LWR@loadafter{asymptote}
176 % \LWR@loadafter{atbegshi}% used by morewrites
177 \LWR@loadafter{attachfile}
178 \LWR@loadafter{attachfile2}
179 \LWR@loadafter{authblk}
180 \LWR@loadafter{autobreak}
181 \LWR@loadafter{autonum}
182 \LWR@loadafter{awesomebox}
183 \LWR@loadafter{axessibility}
184 \LWR@loadafter{axodraw2}
185 \LWR@loadafter{backnaur}
186 \LWR@loadafter{backref}
187 \LWR@loadafter{balance}
188 \LWR@loadafter{bbding}
189 \LWR@loadafter{bigdelim}
190 \LWR@loadafter{bigfoot}
191 \LWR@loadafter{bigstrut}
192 \LWR@loadafter{bitpattern}
193 \LWR@loadafter{blowup}
194 \LWR@loadafter{bm}
195 \LWR@loadafter{booklet}
196 \LWR@loadafter{bookmark}
197 \LWR@notmemoirloadafter{booktabs}
198 \LWR@loadafter{bophook}
199 \LWR@loadafter{bounddvi}
200 \LWR@loadafter{boxedminipage}
201 \LWR@loadafter{boxedminipage2e}
202 \LWR@loadafter{braket}
203 \LWR@loadafter{breakurl}
204 \LWR@loadafter{breqn}
205 \LWR@loadafter{bsheaders}
206 \LWR@loadafter{bypapersize}
207 \LWR@loadafter{bytefield}
208 \LWR@loadafter{cancel}
209 \LWR@loadafter{canoniclayout}
210 \LWR@loadafter{caption}
211 \LWR@loadafter{caption2}
212 \LWR@loadafter{cases}
213 % catoptions is supported by the lwarp core
214 % \LWR@loadafter{ccaption}% may be preloaded by memoir
215 \LWR@loadafter{centernot}
```

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

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

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

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

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

491 \LWR@loadafter{pxftnright}
492 \LWR@loadafter{pxjahyper}
493 \LWR@loadafter{quotchap}
494 \LWR@loadafter{quoting}
495 \LWR@loadafter{ragged2e}
496 \LWR@loadafter{realscripts}
497 \LWR@loadafter{refcheck}
498 \LWR@loadafter{register}
499 \LWR@loadafter{resize}
500 \LWR@loadafter{repeatindex}
501 \LWR@loadafter{resizegather}
502 \LWR@loadafter{returntogrid}
503 \LWR@loadafter{rmathbr}
504 \LWR@loadafter{rmpage}
505 \LWR@loadafter{romanbar}
506 \LWR@loadafter{romanbarpagenumber}
507 \LWR@loadafter{rotating}
508 \LWR@loadafter{rotfloat}
509 \LWR@loadafter{rviewport}
510 \LWR@loadafter{savetrees}
511 % scalefnt is loaded by babel-french
512 \LWR@loadafter{schemata}
513 \LWR@loadafter{scrextend}
514 \LWR@loadafter{scrhack}
515 \LWR@loadafter{scrlayer}
516 \LWR@loadafter{scrlayer-notecolumn}
517 \LWR@loadafter{scrlayer-scrpage}
518 \LWR@loadafter{scrpage2}
519 \LWR@loadafter{section}
520 \LWR@loadafter{sectionbreak}
521 \LWR@loadafter{sectsty}
522 \LWR@loadafter{semantic-markup}
523 \LWR@notmemoirloadafter{setspace}
524 \LWR@loadafter{shadow}
525 \LWR@loadafter{shapepar}
526 \LWR@notmemoirloadafter{showidx}
527 \LWR@loadafter{showkeys}
528 \LWR@loadafter{showtags}
529 \LWR@loadafter{sidecap}
530 \LWR@loadafter{sidenotes}
531 \LWR@loadafter{SIunits}
532 \LWR@loadafter{siunitx}
533 \LWR@loadafter{slantsc}
534 \LWR@loadafter{slashed}
535 \LWR@loadafter{soul}
536 \LWR@loadafter{soulpos}
537 \LWR@loadafter{soulutf8}
538 \LWR@loadafter{splitidx}
539 \LWR@loadafter{srcltx}
540 \LWR@loadafter{srctex}
541 \LWR@loadafter{stabular}
542 \LWR@loadafter{stackengine}
543 \LWR@loadafter{stackrel}
544 \LWR@loadafter{statex2}
545 \LWR@loadafter{statmath}

```
546 \LWR@loadafter{steinmetz}
547 \LWR@notltjloadafter{stfloats}
548 \LWR@loadafter{struktex}
549 \LWR@loadafter{subcaption}
550 \LWR@loadafter{subfig}
551 \LWR@loadafter{subfigure}
552 \LWR@loadafter{subsupscripts}
553 \LWR@loadafter{supertabular}
554 \LWR@loadafter{svg}
555 \LWR@loadafter{syntonly}
556 \LWR@loadafter{t1inc}
557 \LWR@loadafter{tabfigures}
558 \LWR@loadafter{tabls}
559 \LWR@loadafter{tablefootnote}
560 \LWR@notmemoirloadafter{tabularx}
561 \LWR@loadafter{tabulary}
562 \LWR@loadafter{tascmac}
563 \LWR@loadafter{tagpdf}
564 \LWR@loadafter{textarea}
565 % \LWR@loadafter{textcomp}% maybe before lwarp with font packages
566 \LWR@loadafter{textfit}
567 \LWR@loadafter{textpos}
568 \LWR@loadafter{theorem}
569 \LWR@loadafter{thinsp}
570 \LWR@loadafter{threadcol}
571 \LWR@loadafter{threeparttable}
572 \LWR@loadafter{threeparttablex}
573 \LWR@loadafter{thumb}
574 \LWR@loadafter{thumbs}
575 \LWR@loadafter{tikz}
576 \LWR@loadafter{titleps}
577 \LWR@loadafter{titlesec}
578 \LWR@loadafter{titletoc}
579 \LWR@notmemoirloadafter{titling}
580 % \LWR@loadafter{tocbasic}% preloaded by koma-script classes
581 \LWR@notmemoirloadafter{tocbibind}
582 \LWR@loadafter{tocdata}
583 \LWR@loadafter{tocenter}
584 \LWR@notmemoirloadafter{tocloft}
585 \LWR@loadafter{tocstyle}
586 \LWR@loadafter{todo}
587 \LWR@loadafter{todonotes}
588 \LWR@loadafter{topcapt}
589 \LWR@loadafter{tram}
590 \LWR@loadafter{transparent}
591 \LWR@loadafter{trimclip}
592 \LWR@loadafter{trivfloat}
593 \LWR@loadafter{truncate}
594 \LWR@loadafter{turnthepage}
595 \LWR@loadafter{twoup}

596 % \LWR@loadafter{typearea}% preloaded by koma-script classes
597 \LWR@loadafter{typicons}
598 % \LWR@loadafter{ulem}% preloaded by ctexart and related classes
599 \LWR@loadafter{umoline}
```

```

600 \LWR@loadafter{underscore}
601 \LWR@loadafter{unicode-math}
602 \LWR@loadafter{units}
603 \LWR@loadafter{unitsdef}
604 \LWR@loadafter{upref}
605 \LWR@loadafter{url}
606 \LWR@loadafter{uspace}
607 \LWR@loadafter{varioref}% no lwarp package provided
608 \LWR@notmemoirloadafter{verse}
609 \LWR@loadafter{versonotes}
610 \LWR@loadafter{vertbars}
611 \LWR@loadafter{vmargin}
612 \LWR@loadafter{vowel}
613 \LWR@loadafter{vpe}
614 \LWR@loadafter{vwcol}
615 \LWR@loadafter{wallpaper}
616 \LWR@loadafter{watermark}
617 \LWR@loadafter{widetable}
618 \LWR@loadafter{widows-and-orphans}
619 \LWR@loadafter{witharrows}
620 \LWR@loadafter{wrapfig}
621 \LWR@loadafter{xbmks}
622 \LWR@loadafter{xcolor}
623 \LWR@loadafter{xexchangebar}
624 \LWR@loadafter{xellipsis}
625 % xetexko-vertical must be loaded before lwarp
626 \LWR@loadafter{xfakebold}
627 \LWR@loadafter{xfrac}
628 \LWR@loadafter{xltabular}
629 \LWR@loadafter{xltextra}
630 \LWR@loadafter{xmpincl}
631 \LWR@loadafter{xpiano}
632 \LWR@loadafter{xpinyin}
633 \LWR@loadafter{xr}
634 \LWR@loadafter{xr-hyper}
635 \LWR@loadafter{xtab}
636 % xunicode must be loaded before lwarp
637 \LWR@loadafter{xurl}
638 \LWR@loadafter{xy}
639 \LWR@loadafter{zwpageLayout}

```

21 MD5 hashing

The MD5 hash is used for lateximage filenames for svg math.

```

640 \newcommand{\LWR@mdfive}[1]{%
641   \PackageError{lwarp}
642     {No MD5 macro was found}
643     {%
644       Lwarp must find the macros \protect\pdfmdfivesum\space
645       or \protect\mdfivesum.%
646     }
647 }

```

The default for pdf \LaTeX , dvi \LaTeX , up \LaTeX , etc:

```
648 \let\LWR@mdfive\pdfmdfivesum
```

For Lua \LaTeX :

```
649 \ifLuaTeX
650 \RequirePackage{pdftexcmds}
651 \let\LWR@mdfive\pdf@mdfivesum
652 \fi
```

For X \LaTeX :

```
653 \ifXeTeX
654 \@ifundefined{pdf@fivesum}{}
655   {\let\LWR@mdfive\pdfmdfivesum}
656 \@ifundefined{mdf@fivesum}{}
657   {\let\LWR@mdfive\mdfivesum}
658 \fi
```

22 pdf \LaTeX T1 and UTF-8 encoding

When using pdf \LaTeX , lwarp requires T1 font encoding, and recommends UTF-8 input encoding.

If some other input encoding is already defined, lwarp will try to use it instead, and hope for the best.

X \LaTeX and Lua \LaTeX are both UTF-8 by nature.

`\LWR@pdfencoding` Sets T1, and also utf8 if not already set.

```
659 \newcommand*{\LWR@pdfencoding}{%
660   \RequirePackage[T1]{fontenc}
661
662   \@ifpackageloaded{inputenc}{%
663     \@ifpackageloaded{inputenx}{%
664       \RequirePackage[utf8]{inputenc}
665     }
666   }
667 }

668 \ifPDFTeX% pdflatex or dvi latex
669   \LWR@pdfencoding
670 \fi
671
672 \ifpTeX
673   \LWR@pdfencoding
674 \fi
```

23 Unicode input characters

for HTML & PRINT: If using *pdflatex*, convert a minimal set of Unicode characters. Additional characters may be defined by the user, as needed.

A commonly-used multiply symbol is declared to be `\texttimes`.

The first arguments of `\newunicodechar` below are text ligatures in the source code, even though they are not printed in the following listing.

```

675 \ifpTeX
676 \else
677 \RequirePackage{newunicodechar}
678
679 \newunicodechar{x}{\texttimes}
680
681 \ifPDFTeX% pdflatex or dvi latex
682 \newunicodechar{ff}{ff}% Here, the first arguments are ligatures.
683 \newunicodechar{fi}{fi}
684 \newunicodechar{fl}{fl}
685 \newunicodechar{ffi}{ffi}
686 \newunicodechar{ffl}{ffl}
687 \newunicodechar{-}{---}
688 \newunicodechar{-}{--}
689 \fi
690
691 \fi

```

24 Avoid a bitmapped font

If DVI or PDF L^AT_EX, and if the default Computer Modern is the selected font family, ensure that `cm-super` or `lmodern` is used to provide a vector font.

```

692 \ifxetexorluatex
693 \else
694   \ifdefstring{\f@family}{cmr}{
695     \IfFileExists{type1ec.sty}% found in cm-super
696     {}
697     {% cm-super not installed
698       \IfFileExists{lmodern.sty}{
699         \PackageInfo{lwarp}{cm-super not installed, loading lmodern}
700         \RequirePackage{lmodern}
701       }{
702         \PackageError{lwarp}
703         {%
704           Lwarp requires a vector font.\MessageBreak
705           Install and load cm-super, lmodern, or another\MessageBreak
706           Type-1 vector font before loading lwarp.\MessageBreak
707           Enter 'H' for possible solutions%
708         }
709       }

```

```

710             Install cm-super or lmodern.\MessageBreak
711             If lmodern, load it before lwarp:\MessageBreak
712             \space\space\protect\usepackage{lmodern}\MessageBreak
713             \space\space\protect\usepackage{lwarp}%
714         }
715     }
716 }% cm-super not installed
717 }{}% f@family
718 \fi

```

25 Upright quotes

In PDFTEX, preserve upright quotes in verbatim text. upquote also loads textcomp.

```

719 \ifPDFTeX
720 \RequirePackage{upquote}
721 \fi
722
723 \ifpTeX
724 \RequirePackage{upquote}
725 \fi

```

26 Miscellaneous tools

26.1 Variables

```

726 \newlength{\LWR@templengthone}
727 \newlength{\LWR@templengthtwo}
728 \newlength{\LWR@templengththree}
729 \newcounter{LWR@tempcountone}

```

26.2 Lengths and units

`\LWR@providelength` `{\lengthname}` Provides the length if it isn't defined yet.

Used to provide source compatibility for lengths which will be ignored, but might or might not be already provided by other packages.

```

730 \newcommand*\LWR@providelength[1]{%
731     \ifdeflength{#1}{\newlength{#1}}%
732 }

```

`\LWR@convertto` `{\dest unit}` `{\length}`

Prints a length in the given units, without printing the unit itself.

```

733 \newcommand*\LWR@convertto[2]{\strip@pt\dimexpr #2*65536/\number\dimexpr 1#1}

```

`\LWR@printpercentlength` $\{\langle smaller \rangle\} \{\langle larger \rangle\}$

Prints a percent ratio of the two lengths.

```
734 \newcommand*\LWR@printpercentlength[2]{%
735   \setcounter{LWR@tempcountone}{100*\ratio{#1}{#2}}%
736   \arabic{LWR@tempcountone}%
737 }
```

26.3 Counters

`\defaddtcounter` $\{\langle name \rangle\} \{\langle value \rangle\}$

Locally add to a counter.

```
738 \providecommand*\defaddtcounter[2]{%
739   \defcounter{#1}{\value{#1}+#2}%
740 }
```

26.4 Patching

`\LWR@patcherror` $\{\langle packagename \rangle\} \{\langle macroname \rangle\}$

Prints an error if could not patch a macro.

```
741 \newcommand*\LWR@patcherror[2]{%
742   \PackageError{lwarp}%
743     {%
744       Unable to patch package #1, macro #2.\MessageBreak
745       Lwarp may need to be updated%
746     }%
747   {Please contact the maintainer of the Lwarp package.}%
748 }
```

26.5 Chinese text isolation

`\LWR@isolate` $\{\langle text \rangle\}$ Isolates Chinese characters from the surrounding text. This is required to avoid extra spaces on either side of the Chinese characters, especially when written to a file.

```
749 \newcommand{\LWR@isolate}[1]{#1}%
750
751 \ifpackageloaded{ctexpatch}{
752   \renewcommand{\LWR@isolate}[1]{\null#1\null}%
753 }{}
754
755 \ifpackageloaded{xeCJK}{
756   \renewcommand{\LWR@isolate}[1]{\null#1\null}%
757 }{}
```

`\LWR@disablepinyin` Disable xpinyin during file, sideroc, and footnote generation. Set by xpinyin.

```
758 \newcommand*\LWR@disablepinyin{}
```

26.6 Inserting vertical space

`\LWR@forceemptyline` Extra vertical space in the HTML output. Use after `\LWR@stoppars`.

```
759 \newcommand*\LWR@forceemptyline{%
760   \LWR@origrule{0pt}{1\baselineskip}%
761   \LWR@orignewline%
762 }
```

26.7 Argument selection

`\LWR@firstoffour` $\{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\}$

`\LWR@secondoffour` $\{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\}$

`\LWR@thirdoffour` $\{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\}$

`\LWR@fourthoffour` $\{\langle first \rangle\} \{\langle second \rangle\} \{\langle third \rangle\} \{\langle fourth \rangle\}$

Expands to the *n*th of the four arguments. Used for extra cross referencing.

```
763 \long\def\LWR@firstoffour#1#2#3#4{#1}
764 \long\def\LWR@secondoffour#1#2#3#4{#2}
765 \long\def\LWR@thirdoffour#1#2#3#4{#3}
766 \long\def\LWR@fourthoffour#1#2#3#4{#4}
```

26.8 Global boxes

`\LWR@gsavebox` $\{\langle macroname \rangle\} \{\langle contents \rangle\}$

From <https://tex.stackexchange.com/questions/288702/savebox-forgets-its-content-across-columns-inside-align>

```
767 \DeclareRobustCommand\LWR@gsavebox[1]{%
768   \@ifnextchar(%
769     {\LWR@@gsavepicbox#1}\@ifnextchar[{\LWR@@gsavebox#1}\LWR@gsbox#1}}%
770 \long\def\LWR@gsbox#1#2{\global\setbox#1\hbox{%
771   \color@setgroup#2\color@endgroup}}
772 \def\LWR@gsavebox#1[#2]{%
773   \@ifnextchar [{\LWR@@igsavebox#1[#2]}\LWR@@igsavebox#1[#2][c]}
774 \long\def\LWR@@igsavebox#1[#2][#3]#4{%
775   \LWR@gsbox#1{\@imakebox[#2][#3]{#4}}
776 \def\LWR@@gsavepicbox#1(#2,#3){%
```

```

777 \@ifnextchar[%]
778   {\LWR@igsavepicbox#1(#2,#3)}{\LWR@igsavepicbox#1(#2,#3)[]}
779 \long\def\LWR@igsavepicbox#1(#2,#3)[#4]#5{%
780   \LWR@gsbox#1{\@imakepicbox(#2,#3)[#4]{#5}}

```

Env LWR@glrbox {(*macroname*)}

```

781 \def\LWR@glrbox#1{%
782   \edef\reserved@a{%
783     \endgroup
784     \global\setbox#1\hbox{%
785       \begingroup\aftergroup}%
786       \def\noexpand\@currentenv{\@currentenv}%
787       \def\noexpand\@currentline{\on@line}}%
788   \reserved@a
789   \@endpfalse
790   \color@setgroup
791   \ignorespaces}
792 \let\LWR@endglrbox\LWR@endlrbox

```

26.9 Converting a macro name to a cs name

\macroto csname {(*macro name with backslash*)}

Results in the macro name without the leading backslash.

Ref: <https://tex.stackexchange.com/questions/42318/removing-a-backslash-from-a-character-sequence>

```

793 \newcommand*{\macroto csname}[1]{%
794   \ifcat\relax\noexpand#1%
795     \expandafter\expandafter\expandafter\@gobble\expandafter\string
796   \fi
797   #1%
798 }

```

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 <code>OSWindows</code> .
Prog Windows	
Opt OSWindows	When detected or specified, the operating-system path separator used by lwarp is modified, and the boolean <code>usingOSWindows</code> is set true. This boolean may be tested by the user for later use.

27.1 Literal characters

Literal characters to be used in `PrintLatexCmd` and `HTMLLatexCmd`. These are defined without `@` to easily allow their inclusion in the user's document.

The literal `%` character:

```
799 \let\LWRpercent\@percentchar
```

The literal `$` character:

```
800 \catcode'\$=12
801 \def\LWRdollar{\$}
802 \catcode'\$=3
```

The literal `&` character:

```
803 \catcode'\&=12
804 \def\LWRamp{&}
805 \catcode'\&=4
```

The literal `\` character. The ampersand is temporarily set to the escape character during the definition of the backslash macro.

```
806 \catcode'\&=0
807 \catcode'\=12
808 \def\LWRbackslash{\}
809 \catcode'\=0
810 \catcode'\&=4
```

The literal `{` character. The ampersand is temporarily set to the begin group character during the definition of the leftbrace macro.

```
811 \catcode'\&=1
812 \catcode'\{=12
813 \def\LWRleftbrace&{\}
814 \catcode'\{=1
815 \catcode'\&=4
```

The literal `}` character. The ampersand is temporarily set to the end group character during the definition of the leftbrace macro.

```
816 \catcode'\&=2
817 \catcode'\}=12
818 \def\LWRrightbrace{&}
819 \catcode'\}=2
820 \catcode'\&=4
```

The literal `#` character:

```
821 \catcode'\#=12
822 \def\LWRhash{#}
823 \catcode'\#=6
```

`\LWRopquote` The operating system's quote mark, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```
824 \def\LWRopquote{' }
```

`\LWRopseq` The operating system's sequential execution command, UNIX default. For WINDOWS, see `\LWR@setOSWindows`, below.

```
825 \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.

```
826 \newbool{usingOSWindows}
827 \boolfalse{usingOSWindows}
```

27.3 UNIX, LINUX, and MAC OS

`\OSPathSymbol` Symbol used to separate directories in a path.

```
828 \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.

```
829 \newcommand*{\LWR@setOSWindows}
830 {
831 \booltrue{usingOSWindows}
832 \renewcommand*{\OSPathSymbol}{\@backslashchar}
833 \def\LWRopquote{" }
834 \def\LWRopseq{\space\LWRamp\space\space}
835 }
```

Test for windows during compile. The user may also specify `OSWindows` package option in case this test fails.

```
836 \ifwindows
837 \LWR@setOSWindows
838 \fi
```

28 Package options

Pkg kvoptions Allows key/value package options.

```
839 \RequirePackage{kvoptions}
840 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

\lwarpssetup A user interface to set the keys:

```
841 \newcommand{\lwarpssetup}[1]{\setkeys{LWR}{#1}}
```

Bool warpingprint

Bool warpingHTML

Bool mathjax

Bool LWR@origmathjax

Set to true/false depending on the package option selections for print/HTML/EPUB output and mathsvg/mathjax.

LWR@origmathjax remembers the original setting to be restored by `\displaymathnormal`.

```
842 \newbool{warpingprint}
843 \newbool{warpingHTML}
844 \newbool{mathjax}
845 \newbool{LWR@origmathjax}
```

defaults The default is print output, and svg math if the user chose HTML output.

```
846 \booltrue{warpingprint}%
847 \boolfalse{warpingHTML}%
848 \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.

```
849 \DeclareVoidOption{warpprint}{%
850 \PackageInfo{lwarp}{Using option 'warpprint'}
851 \booltrue{warpingprint}%
852 \boolfalse{warpingHTML}%
853 }
```

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.

```
854 \DeclareVoidOption{warpHTML}{%
855 \PackageInfo{lwarp}{Using option 'warpHTML'}%
856 \booltrue{warpingHTML}%
857 \boolfalse{warpingprint}%
858 }
```

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.

```
859 \DeclareVoidOption{mathsvg}{%
860 \PackageInfo{lwarp}{Using option 'mathsvg'}
861 \boolfalse{mathjax}%
862 \boolfalse{LWR@origmathjax}%

863 }
```

Opt `mathjax` Option `mathjax` selects MATHJAX math display: If the `mathjax` option is given, boolean `mathjax` is true, may be used for `\ifbool` tests.

```
864 \DeclareVoidOption{mathjax}{%
865 \PackageInfo{lwarp}{Using option 'mathjax'}
866 \booltrue{mathjax}%
867 \booltrue{LWR@origmathjax}%

868 }
```

Opt `BaseJobname` Option `BaseJobname` sets the `\BaseJobname` for this document.

Default: `\jobname`

This is the `\jobname` of the printed version, even if currently compiling the HTML version. I.e. this is the `\jobname` without `_html` appended. This is used to set `\HomeHTMLFilename` if the user did not provide one.

```
869 \DeclareStringOption[\jobname]{BaseJobname}
```

Opt `ImagesDirectory` Option `ImagesDirectory` sets the name of the directory to use for the `lateximage` images.
Default: `\jobname-images`

```
870 \DeclareStringOption[\BaseJobname-images]{ImagesDirectory}
```

Opt `ImagesName` Option `ImagesName` sets the prefix to use for the `lateximage` images.

Default: `image-`

```
871 \DeclareStringOption[image-]{ImagesName}
```

Opt `makeindexStyle` Selects a custom `.ist` file. A customized file should be based on `lwarp.ist`, and must retain the lines related to `\hyperindexref`.
Default: `lwarp.ist`

```
872 \DeclareStringOption[lwarp.ist]{makeindexStyle}
```

Opt `xindyStyle` Selects a custom `.xdy` file. A customized file should be based on `lwarp.xdy`, and must retain the line
Default: `lwarp.xdy`

```
(markup-locref :open "\hyperindexref{" :close "}")
```

```
873 \DeclareStringOption[lwarp.xdy]{xindyStyle}
```

Opt `xindyLanguage` Sets the `xindy` language to be assigned in `lwarpmk`'s configuration files. This is then
Default: `english`

used by *lwarpmk* while processing the index and glossary.

```
874 \DeclareStringOption[english]{xindyLanguage}
```

- Opt xindyCodepage Sets the xindy codepage to be assigned in *lwarpmk*'s configuration files. This is then used by *lwarpmk* while processing the index.
Default: utf8

```
875 \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

```
876 \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`:

```
877 \newbool{LWR@creatinglwarpmk}
878 \boolfalse{LWR@creatinglwarpmk}
879
880 \DeclareVoidOption{lwarpmk}{
881 \PackageInfo{lwarp}{Using option 'lwarpmk'}}
882 \booltrue{LWR@creatinglwarpmk}
883 }
```

- 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.

```
884 \DeclareVoidOption{OSWindows}{
885 \PackageInfo{lwarp}{Using option 'OSWindows'}}
886 \LWR@setOSWindows
887 }
```

- Opt HomeHTMLFilename The filename of the homepage. The default is the jobname. This option is stored into `\LWR@HomeHTMLFilename`, and later transferred into `\HomeHTMLFilename` for internal use.
Default: \BaseJobname

```
888 \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>

```
889 \DeclareStringOption[]{HTMLFilename}
```

- Opt PrintLatexCmd The shell commands to use to compile the print document.
Default: <automatic>

```
890 \DeclareStringOption[]{\PrintLatexCmd}
```

Opt HTMLLatexCmd The shell commands to use to compile the HTML document.
Default: <automatic>

```
891 \DeclareStringOption[]{\HTMLLatexCmd}
```

Opt PrintIndexCmd The shell commands to use to compile the print indexes.
Default: <empty>

```
892 \DeclareStringOption[]{\PrintIndexCmd}
```

Opt HTMLIndexCmd The shell commands to use to compile the HTML indexes.
Default: <empty>

```
893 \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*.

```
894 \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.

```
895 \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.

```
896 \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*

```
897 \DeclareStringOption[makeglossaries]{GlossaryCmd}
```

Opt latexmk Option *latexmk* tells *lwarpmk* to use *latexmk* when compiling documents.

```
898 \DeclareBoolOption[false]{latexmk}
```

Opt dvips Option *dvips* tells *lwarpmk* to use *dvips* when compiling DVI *latex* documents.

```
899 \DeclareBoolOption[false]{dvips}
```

Opt dvipdfm Option *dvipdfm* tells *lwarpmk* to use *dvipdfm* when compiling DVI *latex* documents.

```
900 \DeclareBoolOption[false]{dvipdfm}
```

Opt dvipdfmx Option dvipdfmx tells *lwarpmk* to use *dvipdfmx* when compiling DVI *latex* documents.

```
901 \DeclareBoolOption[false]{dvipdfmx}
```

Execute options Execute the package options, with the defaults which have been set just above:

```
902 \ProcessKeyvalOptions*\relax
```

28.1 Additional options support

Assign the `\BaseJobname` if the user hasn't provided one:

```
903 \providecommand*\BaseJobname{\LWR@BaseJobname}
```

Defaults unless already over-ridden by the user:

```
904 \ifcseempty{LWR@HomeHTMLFilename}{
905   \newcommand*\HomeHTMLFilename{\BaseJobname}
906 }{
907   \csedef{HomeHTMLFilename}{\LWR@HomeHTMLFilename}
908 }
909
910 \csedef{HTMLFilename}{\LWR@HTMLFilename}
```

Special handling for underscores in labels and filenames.

`\LWR@sanitized` The sanitized version of what was given to `\LWR@sanitize`. Characters are set to their detokenized versions. Required for underscores in labels and filenames.

```
911 \newcommand*\LWR@sanitized{}
```

`\LWR@sanitize` $\langle text \rangle$

Sanitizes the text and returns the result in `\LWR@sanitized`.

```
912 \newcommand*\LWR@sanitize[1]{%
913 \edef\LWR@sanitized{#1}%
914 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
915 }
```

Sanitize some string options to neutralize underscores.

```
916 \LWR@sanitize{\LWR@BaseJobname}
917 \edef\LWR@BaseJobname{\LWR@sanitized}
918
919 \LWR@sanitize{\LWR@ImagesDirectory}
920 \edef\LWR@ImagesDirectory{\LWR@sanitized}
921
922 \LWR@sanitize{\LWR@ImagesName}
923 \edef\LWR@ImagesName{\LWR@sanitized}
```

`\LWR@PrintIndexCmd` and `\LWR@HTMLIndexCmd` are tested to see if they are empty. If so, they are set to a reasonable defaults for a single index using *makeindex*, then possibly set to defaults for *xindy* if the `lwarp xindy` option was selected.

```

924 \ifdefempty{\LWR@PrintIndexCmd}{
925   \renewcommand{\LWR@PrintIndexCmd}{%
926     makeindex -s \LWR@makeindexStyle \space \jobname.idx%
927   }
928   \ifbool{LWR@xindy}{
929     \renewcommand{\LWR@PrintIndexCmd}{%
930       xindy
931       -M \LWR@xindyStyle \space
932       -L \LWR@xindyLanguage \space
933       -C \LWR@xindyCodepage \space
934       \jobname.idx%
935     }
936   }{}
937 }{}
938
939 \ifdefempty{\LWR@HTMLIndexCmd}{
940   \renewcommand{\LWR@HTMLIndexCmd}{%
941     makeindex -s \LWR@makeindexStyle \space \jobname_html.idx%
942   }
943   \ifbool{LWR@xindy}{
944     \renewcommand{\LWR@HTMLIndexCmd}{%
945       xindy
946       -M \LWR@xindyStyle \space
947       -L \LWR@xindyLanguage \space
948       -C \LWR@xindyCodepage \space
949       \jobname_html.idx%
950     }
951   }{}
952 }{}
953
954 \ifdefempty{\LWR@LatexmkIndexCmd}{
955   \renewcommand{\LWR@LatexmkIndexCmd}{%
956     makeindex -s \LWR@makeindexStyle%
957   }
958   \ifbool{LWR@xindy}{
959     \renewcommand{\LWR@LatexmkIndexCmd}{%
960       xindy
961       -M \LWR@xindyStyle \space
962       -L \LWR@xindyLanguage \space
963       -C \LWR@xindyCodepage%
964     }
965   }{}
966 }{}

```

28.2 Conditional compilation

`\warpprintonly` `{\langle contents \rangle}`

Only process the contents if producing printed output.

```
967 \newcommand{\warpprintonly}[1]{\ifbool{warpingprint}{#1}{}}
```

`\warpHTMLonly` {<contents>}

Only process the contents if producing HTML output.

```
968 \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.

```
969 \RequirePackage{comment}
```

`\LWR@includecomment` {<env name>} {<partial filename>}

`\LWR@excludecomment` {<env name>} {<partial filename>}

Use many comment cut files to avoid collision in case the user uses the comment package. Each filename is “comment_#2.cut”. Based on the comment package.

```
970 \def\LWR@includecomment
971 #1#2{\message{Lwarp: Including comment '#1'}%
972   \csarg\def{After#1Comment}{\CloseAndInputCutFile}
973   \csarg\def{#1}{\endgroup \message{Including '#1' comment.}}%
974   \def\CommentCutFile{comment_#2.cut} \SetUpCutFile \ProcessComment{#1}}%
975   \CommentEndDef{#1}}
976
977 \def\LWR@excludecomment
978 #1#2{\message{Lwarp: Excluding comment '#1'}%
979   \csarg\def{#1}{\endgroup \message{Excluding '#1' comment.}}%
980   \begingroup
981   \def\CommentCutFile{comment_#2.cut} \def\ProcessCutFile{}%
982   \def\ThisComment###1{\ProcessComment{#1}}%
983   \csarg\def{After#1Comment}{\CloseAndInputCutFile \endgroup}
984   \CommentEndDef{#1}}
```

`\Env warpall` Anything in the `warpall` environment will be generated for print or HTML outputs.

```
985 \LWR@includecomment{warpall}{all}
```

`\Env warpHTML` For HTML output:

```
986 \ifbool{warpingHTML}
987   {\LWR@includecomment{warpHTML}{html}}
988   {\LWR@excludecomment{warpHTML}{html}}
```

Env warpprint Anything in the warpprint environment will be generated for print output only.

```
989 \ifbool{warpingprint}
990   {\LWR@includefcomment{warpprint}{print}}
991   {\LWR@excludefcomment{warpprint}{print}}
```

Env warpMathJax Only if MATHJAX is being used along with HTML.

```
992 \begin{warpprint}
993 \LWR@excludefcomment{warpMathJax}{mathjax}
994 \end{warpprint}
995
996 \begin{warpHTML}
997 \ifbool{mathjax}
998   {\LWR@includefcomment{warpMathJax}{mathjax}}
999   {\LWR@excludefcomment{warpMathJax}{mathjax}}
1000 \end{warpHTML}
```

Env LWRcreatelwarpmk Optionally generate a local copy of *lwarpmk*. Default to no.

```
1001 \ifbool{LWR@creatinglwarpmk}
1002   {\LWR@includefcomment{LWRcreatelwarpmk}{lwarpmk}}
1003   {\LWR@excludefcomment{LWRcreatelwarpmk}{lwarpmk}}
```

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: 1004 \begin{warpHTML}

Pkg fontspec Load fontspec if necessary:

```
1005 \ifxetexorluatex
1006 \@ifpackageloaded{fontspec}{\{
1007   \usepackage[no-math]{fontspec}
1008 }
```

The monospaced font is used for HTML tags, so turn off its TeX ligatures and common ligatures:

```
1009 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
1010 \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
1011 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
1012 \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.

```

1013 \RequirePackage {microtype}
1014
1015 \microtypesetup{
1016     protrusion=false,
1017     expansion=false,
1018     tracking=false,
1019     kerning=false,
1020     spacing=false}
1021
1022 \DisableLigatures[f,q,t,T,Q]{encoding = *,family = *}

1023 \fi

1024 \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: 1025 \begin{warpHTML}

If `geometry` has not yet been loaded, use the preexisting page and text sizes to be preserved for later reuse. These will be replaced by `lwarp \AtBeginDocument` with a very large page size to reduce HTML tag overflow off the page.

```

1026 \@ifpackageloaded{geometry}
1027 {}{
1028     \RequirePackage[
1029         reset,
1030         paperwidth=\paperwidth,
1031         paperheight=\paperheight,
1032         textwidth=\textwidth,
1033         textheight=\textheight,
1034         left=\oddsidemargin,
1035         top=\topmargin,
1036         marginparsep=\marginparsep,
1037         marginparwidth=\marginparwidth,
1038     ]{geometry}
1039 }

```

Remember the original definitions for later reuse. If the `geometry` package is loaded by the user, `lwarp-geometry` will nullify the user-level originals.

```
1040 \LetLtxMacro\LWR@origgeometry\geometry
1041 \LetLtxMacro\LWR@orignewgeometry\newgeometry
1042 \LetLtxMacro\LWR@origrestoregeometry\restoregeometry
1043 \LetLtxMacro\LWR@origsavegeometry\savegeometry
1044 \LetLtxMacro\LWR@origloadgeometry\loadgeometry
```

`Bool LWR@allowanothergeometry` `geometry` may be loaded by the user before `lwarp`, after `lwarp`, or not at all. If before `lwarp`, it will have already been loaded by now and its page layout has already been saved. If `geometry` is loaded after `lwarp`, its layout will be set at that time and the user macros nullified. `\AtEndPreamble` this layout will be saved. If the user never loads `geometry`, `lwarp-geometry` will be loaded `\AtBeginDocument`, but it should not change the page layout set here. This is controlled by the boolean `LWR@allowanothergeometry`. Geometry may be adjusted throughout the preamble until `\AtEndPreamble`, when this boolean is set `false`.

```
1045 \newbool{LWR@allowanothergeometry}
1046 \booltrue{LWR@allowanothergeometry}
```

Use `\AtEndPreamble` to avoid class and option conflict by changing settings after other packages load, instead of using `geometry` package options:

```
1047 \AtEndPreamble{
```

Whatever `geometry` choices the user has made in the preamble, either before or after `lwarp` was loaded, are now saved for possible temporary reuse, such as by `lyluatex`.

See the `lwarp-geometry` section for what happens if `geometry` is loaded after `lwarp`.

```
1048 \LWR@origsavegeometry{LWR@usergeometry}
```

The user's paper size is saved for later reuse, such as by the `pdfpages` or `parallel` packages.

```
1049 \newlength{\LWR@userspaperwidth}
1050 \setlength{\LWR@userspaperwidth}{\paperwidth}
1051
1052 \newlength{\LWR@userspaperheight}
1053 \setlength{\LWR@userspaperheight}{\paperheight}
1054
1055 \newlength{\LWR@usersmarginparwidth}
1056 \setlength{\LWR@usersmarginparwidth}{\marginparwidth}
1057
1058 \newlength{\LWR@userstextwidth}
1059 \setlength{\LWR@userstextwidth}{\textwidth}
1060
1061 \newlength{\LWR@userstextheight}
1062 \setlength{\LWR@userstextwidth}{\textheight}
```

For `lwarp`, use a very large page and margins to help avoid letting HTML tags run off the edge:

```

1063 \LWR@origgeometry{
1064     reset,
1065     paperheight=190in,
1066     paperwidth=20in,
1067     left=2in,
1068     right=6in,
1069     top=1in,
1070     bottom=1in,
1071     heightrounded,%
1072 }

```

The `lwarp` page geometry is saved for future restore:

```
1073 \LWR@origsavegeometry{\LWR@lwarpgeometry}
```

No longer adjust the page layout when `lwarp-geometry` is loaded `\AtBeginDocument`:

```
1074 \boolfalse{\LWR@allowanothergeometry}%
```

`ltjsbook` and other classes can print vertically, and require these to be reset by `lwarp`:

```

1075 \setlength{\textheight}{0.8\paperheight}
1076 \setlength{\textwidth}{0.7\paperwidth}
1077
1078 \@twosidefalse
1079 \@mparswitchfalse
1080 }% \AtEndPreamble
1081
1082 \end{warpHTML}

```

for HTML & PRINT: 1083 \begin{warpall}

Pkg xparse

\LaTeX 3 command argument parsing

```
1084 \RequirePackage{xparse}
```

Pkg calc

```
1085 \RequirePackage{calc}
```

```
1086 \end{warpall}
```

for HTML output: 1087 \begin{warpHTML}

Pkg expl3

\LaTeX 3 programming

```
1088 \RequirePackage{expl3}
```

Pkg gettitlestring

Used to emulate `\nameref`.

```
1089 \RequirePackage{getttitlestring}
```

Pkg everyhook

everyhook is used to patch paragraph handling.

```
1090 \@ifundefined{bxjs@everypar}{}{\let\everypar\bxjs@everypar}
1091
1092 \RequirePackage{everyhook}
1093 \end{warpHTML}
```

for HTML & PRINT: 1094 `\begin{warpall}`

Pkg filecontents

Used to write helper files while creating the print version.

Recent versions of L^AT_EX (as of Fall 2019) now include the functionality of the `filecontents` package, but with a new optional argument used to specify whether to force the overwriting of an existing file. If an older L^AT_EX kernel is used, the original `filecontents` package is used, but it is patched to throw away the new optional argument.

```
1095 \@ifundefined{filec@ntents@opt}{% older kernel, discard optional args
1096
1097   \RequirePackage{filecontents}
1098
1099   \LetLtxMacro\LWR@orig@filec@ntents\filec@ntents
1100
1101   \@ifpackagelater{filecontents}{2011/10/08}
1102   {
```

For a newer version of the `filecontents` package, simply discard the optional argument.

```
1103     \renewcommand*{\filec@ntents}[1][\LWR@orig@filec@ntents]
1104   }
1105   {% patch older package for morewrites
```

For an older version of `filecontents`, discard the optional argument, and also patch to work with `morewrites`, per <https://tex.stackexchange.com/questions/312830/does-morewrites-not-support-filecontents-and-can-i-write-body-of-environment-us/312910>

```
1106     \newwrite\fcwrite
1107     \renewcommand*{\filec@ntents}[1][\LWR@orig@filec@ntents]{%
1108       \def\chardef##1\write{\let\reservedc\fcwrite}%
1109       \LWR@orig@filec@ntents%
1110     }
1111   }
1112
1113 }% older kernel
1114 {% newer kernel
```

For a newer kernel with a filecontents environment which accepts the optional overwrite argument, use the environment as-is.

```
1115 }% newer kernel, filecontents env accepts optional args, do not load package
```

```
1116 \end{warpall}
```

for HTML output: 1117 \begin{warpHTML}

Pkg xifthen

```
1118 \RequirePackage{xifthen}
```

Pkg verbatim

```
1119 \RequirePackage{verbatim}
```

Pkg refcount

Provides \setcounterref, \setcounterpageref, etc.

```
1120 \RequirePackage{refcount}
```

Pkg newfloat

```
1121 \RequirePackage{newfloat}
```

```
1122 \end{warpHTML}
```

for HTML & PRINT: 1123 \begin{warpall}

Pkg xstring There was a short-term bug in xstring regarding \IfInteger which affected lwarp's
 index index generation. The updated version is requested here.

```
1124 \RequirePackage{xstring}[2019/02/01]
```

Pkg environ Used to encapsulate math environments for re-use in HTML <alt> text.

```
1125 \RequirePackage{environ}
```

```
1126 \end{warpall}
```

for HTML output: 1127 \begin{warpHTML}

Pkg printlen Used to convert lengths for image width/height options.

```
1128 \RequirePackage{printlen}
```

\LWR@printlength {<length>}

Prints a length using a locally-controlled unit and space. Rounding is used unless the length is small.

```

1129 \newrobustcmd*{\LWR@printlength}[1]{%
1130   \begingroup%
1131   \uselengthunit{PT}%
1132   \renewcommand*{\unitspace}{}%
1133   \ifdimless{#1}{10pt}{%
1134     \printlength{#1}%
1135   }{%
1136     \rndprintlength{#1}%
1137   }%
1138   \endgroup%
1139 }
```

```
1140 \end{warpHTML}
```

for PRINT output: 1141 \begin{warpprint}

Pkg varwidth Used for print-mode lateximage.

```
1142 \RequirePackage{varwidth}
```

```
1143 \end{warpprint}
```

30 Loading packages

for HTML & PRINT: 1144 \begin{warppall}

Remember the original \RequirePackage:

```
1145 \LetLtxMacro\LWR@origRequirePackage\RequirePackage
```

```
1146 \LetLtxMacro\LWR@origRequirePackageWithOptions\RequirePackageWithOptions
```

\LWR@requirepackagenames Stores the list of required package names.

```
1147 \newcommand*{\LWR@requirepackagenames}{}
```

\LWR@parsedrequirepackagenames Stores the parsed list of required package names after spaces are removed and lwarp- is prepended.

```
1148 \newcommand*{\LWR@parsedrequirepackagenames}{}
```

\LWR@nullifycomment Remove the preexisting comment environment. Certain packages define it for their own use.

```
1149 \newcommand*{\LWR@nullifycomment}{%
```

```
1150   \PackageInfo{lwarp}%
```

```

1151     {Nullifying the comment environment before loading \LWR@strresulttwo,}%
1152     \let\comment\relax%
1153     \let\endcomment\relax%
1154 }

```

`\LWR@findword` [*1: separator*] [*2: list*] [*3: index*] [*4: destination*]

Note that argument 4 is passed directly to `\StrBetween`.

```

1155 \newcommand*\LWR@findword[3][,]{%
1156     \StrBetween[#3,\numexpr#3+1]{#1#2#1}{#1}{#1}%
1157 }

```

`\LWR@checkloadfilename` *{(filename)}* Checks if this filename should be loaded after `lwarp`, or never at all.

The following should never be loaded:

```

1158 \newcommand*\LWR@checkloadfilename[1]{%
1159 \LWR@checkloadnever{#1}{ae}{cm-super, lmodern}
1160 \LWR@checkloadnever{#1}{aecc}{cm-super, lmodern}
1161 \LWR@checkloadnever{#1}{aeccpl}{cm-super, lmodern}
1162 \LWR@checkloadnever{#1}{alg}{algorithm2e, algorithmicx}
1163 \LWR@checkloadnever{#1}{algorithmic}{algorithm2e, algorithmicx}
1164 \LWR@checkloadnever{#1}{bitfield}{bytefield}
1165 \LWR@checkloadnever{#1}{caption2}{caption}
1166 \LWR@checkloadnever{#1}{ccaption}{caption}% might be preloaded by memoir
1167 \LWR@checkloadnever{#1}{colortab}{colortbl}
1168 \LWR@checkloadnever{#1}{doublespace}{setspace}
1169 \LWR@checkloadnever{#1}{epsf}{graphicx}
1170 \LWR@checkloadnever{#1}{fancyheadings}{fancyhdr}
1171 \LWR@checkloadnever{#1}{fncylab}{cleveref}
1172 \LWR@checkloadnever{#1}{formula}{siunitx}
1173 \LWR@checkloadnever{#1}{glossary}{glossaries}
1174 \LWR@checkloadnever{#1}{hyper}{hyperref}
1175 \LWR@checkloadnever{#1}{newthm}{ntheorem}
1176 \LWR@checkloadnever{#1}{pdfcpot}{microtype}
1177 \LWR@checkloadnever{#1}{picinpar}{floatflt, wrapfig}
1178 \LWR@checkloadnever{#1}{picins}{floatflt, wrapfig}
1179 \LWR@checkloadnever{#1}{rplain}{fancyhdr}
1180 \LWR@checkloadnever{#1}{shadethm}{mdframed}
1181 \LWR@checkloadnever{#1}{si}{siunitx}
1182 \LWR@checkloadnever{#1}{sistyle}{siunitx}
1183 \LWR@checkloadnever{#1}{slashbox}{diagbox}
1184 \LWR@checkloadnever{#1}{statex}{statex2}
1185 \LWR@checkloadnever{#1}{t1enc}{fontenc, inputenc, inputenx}
1186 \LWR@checkloadnever{#1}{ucs}{inputenc, inputencx}
1187 \LWR@checkloadnever{#1}{wasysym}{textcomp, amssymb, amsfonts, mnsymbol, fdsymbol}
1188 \LWR@checkloadnever{#1}{bxcjkjatypex}{upLaTeX, bxjsarticle, ujournal, utarticle}
1189 \LWR@checkloadnever{#1}{hangul}{kotex, xetexko, luatexko}

```

The following should only be loaded before `lwarp`:

```

1190 \LWR@checkloadbefore{#1}{ctex}
1191 \LWR@checkloadbefore{#1}{fontspec}

```

```

1192 \LWR@checkloadbefore{#1}{inputenc}
1193 \LWR@checkloadbefore{#1}{inputenx}
1194 \LWR@checkloadbefore{#1}{nfssect-cfr}
1195 \LWR@checkloadbefore{#1}{fontaxes}
1196 \LWR@checkloadbefore{#1}{kotex}
1197 \LWR@checkloadbefore{#1}{luatexja}
1198 \LWR@checkloadbefore{#1}{luatexja-fontspec}
1199 \LWR@checkloadbefore{#1}{luatexko}
1200 \LWR@checkloadbefore{#1}{morewrites}
1201 \LWR@checkloadbefore{#1}{newcllude}
1202 \LWR@checkloadbefore{#1}{newunicodechar}
1203 \LWR@checkloadbefore{#1}{plext}
1204 \LWR@checkloadbefore{#1}{xeCJK}
1205 \LWR@checkloadbefore{#1}{xetexko}
1206 \LWR@checkloadbefore{#1}{zxjatype}
1207 }

```

`\LWR@lookforpackagename` {<*index*>}

If HTML, and if this is an `lwarp`-supported package name, re-direct it to the `lwarp` version by renaming it `lwarp-` followed by the original name.

Looks `index` deep into the list of package names, `\LWR@requirepackagename`s, and builds `\LWR@parsedrequirepackagename`s which is the modified list of names.

```
1208 \newcommand*{\LWR@lookforpackagename}[1]{%
```

Find the `index`'th package name from the list:

```
1209 \LWR@findword{\LWR@requirepackagename}{#1}[\LWR@strresult]%
```

Remove blanks. The original name with blanks is in `LWR@strresult` and the final name with no blanks goes into `LWR@strresulttwo`.

```
1210 \StrSubstitute[100]{\LWR@strresult}{ }{ }[\LWR@strresulttwo]%
```

See if the package name was found:

```
1211 \IfStrEq{\LWR@strresulttwo}{}%
```

```
1212 {}% no filename
```

```
1213 {% yes filename was found
```

Possible adjustments before loading the package. Maybe nullify the comment environment if the new package will be redefining it for a new purpose.

```
1214 \ifdefstring{\LWR@strresulttwo}{easyReview}{\LWR@nullifycomment}{}%
```

```
1215 \ifdefstring{\LWR@strresulttwo}{changes}{\LWR@nullifycomment}{}%
```

If HTML, check if the package should be loaded before `lwarp`, or never at all:

```
1216 \ifbool{warpingHTML}{\LWR@checkloadfilename{\LWR@strresulttwo}}{%
```

If HTML, and if found, and if an `lwarp`-equivalent name exists, use `lwarp-*` instead.

```

1217 \ifboolexpr{
1218     bool{warpingHTML} and
1219     test{\IfFileExists{lwarp-\LWR@strresulttwo.sty}}
1220 }%
1221 {% lwarp-* file found
1222     \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1223         \edef\LWR@parsedrequirepackagenames{lwarp-\LWR@strresulttwo}%
1224     }{%
1225         \edef\LWR@parsedrequirepackagenames{%
1226             \LWR@parsedrequirepackagenames,lwarp-\LWR@strresulttwo%
1227         }%
1228     }%
1229 }%
1230 {%

```

Otherwise, use the current package name.

```

1231     \ifdefvoid{\LWR@parsedrequirepackagenames}{%
1232         \edef\LWR@parsedrequirepackagenames{\LWR@strresulttwo}%
1233     }{%
1234         \edef\LWR@parsedrequirepackagenames{%
1235             \LWR@parsedrequirepackagenames,\LWR@strresulttwo%
1236         }%
1237     }%
1238 }% no lwarp-* file
1239 }% yes filename
1240 }

```

`\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.

```
1241 \RenewDocumentCommand{\RequirePackage}{o m o}{%
```

Redirect up to twenty names:¹⁷

```

1242 \renewcommand*{\LWR@requirepackagenames}{#2}%
1243 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
1244 \LWR@lookforpackagename{1}%
1245 \LWR@lookforpackagename{2}%
1246 \LWR@lookforpackagename{3}%
1247 \LWR@lookforpackagename{4}%
1248 \LWR@lookforpackagename{5}%
1249 \LWR@lookforpackagename{6}%
1250 \LWR@lookforpackagename{7}%
1251 \LWR@lookforpackagename{8}%
1252 \LWR@lookforpackagename{9}%
1253 \LWR@lookforpackagename{10}%
1254 \LWR@lookforpackagename{11}%
1255 \LWR@lookforpackagename{12}%
1256 \LWR@lookforpackagename{13}%

```

¹⁷This was originally nine names, but then I came across a package which used twelve...

```

1257 \LWR@Lookforpackagename{14}%
1258 \LWR@Lookforpackagename{15}%
1259 \LWR@Lookforpackagename{16}%
1260 \LWR@Lookforpackagename{17}%
1261 \LWR@Lookforpackagename{18}%
1262 \LWR@Lookforpackagename{19}%
1263 \LWR@Lookforpackagename{20}%

```

\RequirePackage depending on the options and version:

```

1264 \IfValueTF{#1}%
1265 {% options given
1266     \IfValueTF{#3}% version given?
1267     {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}[#3]}%
1268     {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}}%
1269 }%
1270 {% no options given
1271     \IfValueTF{#3}% version given?
1272     {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}[#3]}%
1273     {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}}%
1274 }%
1275 }
1276 \LetLtxMacro\usepackage\RequirePackage

1277 \end{warpall}

```

for HTML output: 1278 \begin{warpHTML}

\LWR@ProvidesPackagePass {<pkgnam>} [<version>]

Uses the original package, including options.

```

1279 \NewDocumentCommand{\LWR@ProvidesPackagePass}{m o}{
1280     \PackageInfo{lwarp}{%
1281         Using package ‘#1’,\MessageBreak
1282         and adding lwarp modifications, including options,\MessageBreak%
1283     }%
1284     \IfValueTF{#2}%
1285     {\ProvidesPackage{lwarp-#1}[#2]}%
1286     {\ProvidesPackage{lwarp-#1}}%
1287     \DeclareOption*{%
1288         \PassOptionsToPackage{\CurrentOption}{#1}%
1289     }%
1290     \ProcessOptions\relax%

```

If using `catoptions`, an error occurs if a package is loaded with an option then loaded again with no options. `lwarp` does this if a package is preloaded then later patched. To avoid an error while using `catoptions`, if a package has already been loaded, it is loaded again with its original options.

```

1291     \@ifpackageloaded{#1}{%
1292         \edef\LWR@tempone{\csuse{opt@#1.sty}}%
1293         \IfValueTF{#2}%
1294         {%

```

```

1295         \expandafter\LWR@origRequirePackage%
1296         \expandafter[\LWR@tempone]{#1}[#2]%
1297     ]%
1298     {%
1299         \expandafter\LWR@origRequirePackage%
1300         \expandafter[\LWR@tempone]{#1}%
1301     ]%
1302 }{%
1303     \IfValueTF{#2}%
1304     {\LWR@origRequirePackage{#1}[#2]}%
1305     {\LWR@origRequirePackage{#1}}%
1306 }%

```

In some cases, the following seems to be required to avoid an “unknown option” error, such as when loading xcolor with options.

```

1307     \DeclareOption*{%
1308     \ProcessOptions\relax%
1309 }

```

`\LWR@ProvidesPackageDropA` `{<name>} {<date or -NoValue->}`

Declares the package. Factored for reuse.

```

1310 \newcommand*\LWR@ProvidesPackageDropA[2]{%
1311     \PackageInfo{lwarp}{%
1312         Replacing package ‘#1’ with the lwarp version,\MessageBreak
1313         and discarding options,%
1314     ]%
1315     \IfValueTF{#2}
1316     {\ProvidesPackage{lwarp-#1}[#2]}
1317     {\ProvidesPackage{lwarp-#1}}
1318 }

```

`\LWR@ProvidesPackageDropB` Nullifies then processes the options.

Seems to be required when options contain curly braces, which were causing “Missing `\begin{document}`”.

```

1319 \newcommand*\LWR@ProvidesPackageDropB{%
1320 % \ProcessOptions\relax% original LaTeX code
1321 \let\ds@\empty%         from the original \ProcessOptions
1322 \edef\@curroptions{%    lwarp modification to \ProcessOptions
1323 \@processoptions\relax% from the original \ProcessOptions
1324 }

```

`\LWR@ProvidesPackageDrop` `{<pkgnam>} [<version>]`

Ignores the original package and uses lwarp’s version instead. Drops/discards all options.

```

1325 \NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{

```

Declare the package:

```
1326 \LWR@ProvidesPackageDropA{#1}{#2}
```

Ignore all options:

```
1327 \DeclareOption*{}
```

Process the options:

```
1328 \LWR@ProvidesPackageDropB
1329 }
```

```
1330 \end{warpHTML}
```

31 File handles

Defines file handles for writes.

for HTML & PRINT: 1331 \begin{warpall}

\LWR@quickfile For quick temporary use only. This is reused in several places.

```
1332 \newwrite\LWR@quickfile%
```

```
1333 \end{warpall}
```

for HTML output: 1334 \begin{warpHTML}

\LWR@lateximagesfile For <project>-images.txt:

```
1335 \newwrite\LWR@lateximagesfile
```

```
1336 \end{warpHTML}
```

32 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 \LaTeX .

for HTML output: 1337 \begin{warpHTML}

\@include {*{filename}*} Modified to load _html_inc files.

(Below, \clearpage caused missing text, and was changed to \newpage.)

```

1338 \def\@include#1 {%
1339 \immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp
1340 \immediate\write\LWR@quickfile{\string\input{#1.tex}}% lwarp
1341 \immediate\closeout\LWR@quickfile% lwarp
1342 \LWR@orignewpage% changed from clearpage
1343 \if@filesw
1344   \immediate\write\@mainaux{\string\@input{#1_html_inc.aux}}% changed
1345 \fi
1346 \@tempswatru
1347 \if@partsw
1348   \@tempswafalse
1349   \edef\reserved@a{\@partlist}
1350   \for\reserved@a:=\@partlist\do
1351     {\ifx\reserved@a\reserved@b\@tempswatru\fi}%
1352 \fi
1353 \if@tempswa
1354   \let\@auxout\@partaux
1355   \if@filesw
1356     \immediate\openout\@partaux #1_html_inc.aux % changed
1357     \immediate\write\@partaux{\relax}%
1358   \fi
1359   \input{#1_html_inc.tex}% changed
1360   \LWR@orignewpage% changed from clearpage
1361   \writeckpt{#1}%
1362   \if@filesw
1363     \immediate\closeout\@partaux
1364   \fi
1365 \else
1366   \deadcycles\z@
1367   \@nameuse{cp@#1}%
1368 \fi
1369 \let\@auxout\@mainaux%
1370 }

1371 \end{warpHTML}

```

33 Copying a file

for HTML output: 1372 \begin{warpHTML}

\LWR@copyfile {*{source filename}*} {*{destination filename}*}

Used to copy the .toc file to .sidedtoc to re-print the toc in the sideroc navigation pane.

```

1373 \newwrite\LWR@copyoutfile % open the file to write to
1374 \newread\LWR@copyinfile % open the file to read from
1375
1376 \newcommand*\LWR@copyfile}[2]{%
1377 \LWR@traceinfo{LWR@copyfile: copying #1 to #2}
1378
1379 \immediate\openout\LWR@copyoutfile=#2
1380 \openin\LWR@copyinfile=#1
1381 \begingroup\endlinechar=-1
1382 \makeatletter
1383
1384 \LWR@traceinfo{LWR@copyfile: about to loop}
1385
1386 \loop\unless\ifeof\LWR@copyinfile
1387 \LWR@traceinfo{LWR@copyfile: one line}
1388 \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline
1389 % \LWR@fileline\par % print the content into the pdf
1390 % print the content:
1391 \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
1392 \repeat
1393 \immediate\closeout\LWR@copyoutfile
1394 \LWR@traceinfo{LWR@copyfile: done}
1395 \endgroup
1396 }

1397 \end{warpHTML}

```

34 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: 1398 \begin{warpall}

Bool LWR@tracinglwarp True if tracing is turned on.

```
1399 \newbool{LWR@tracinglwarp}
```

`\tracinglwarp` Turns on the debug tracing messages.

```
1400 \newcommand{\tracinglwarp}{\booltrue{LWR@tracinglwarp}}
```

`\LWR@traceinfo` `{\text}` If tracing is turned on, writes the text to the `.log` file.

```
1401 \newcommand{\LWR@traceinfo}[1]{%
```

```

1402 \ifbool{LWR@tracinglwarp}%
1403 {%
1404   \typeout{*** lwarp: #1}%
1405 }%
1406 {}%
1407 }

```

Bool HTMLDebugComments Add comments in HTML about closing <div>s, sections, etc.
 Default: false

```

1408 \newbool{HTMLDebugComments}
1409 \boolfalse{HTMLDebugComments}

```

If `\tracinglwarp`, show where preamble hooks occur:

```

1410 \AfterEndPreamble{
1411 \LWR@traceinfo{AfterEndPreamble}
1412 }
1413
1414 \AtBeginDocument{
1415 \LWR@traceinfo{AtBeginDocument}
1416 }

1417 \end{warpall}

```

35 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 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`. `expl3` syntax may be used as well.

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. `expl3` syntax may be used for the print and HTML versions.

For a new macro or environment, using xparse: It is possible to use xparse for an entirely new macro or environment by defining the `\LWR@print@<name>` version with xparse, along with `\name` defined without xparse to refer directly to the `\LWR@print` version:

```

\begin{warpall}
\NewDocumentCommand{\LWR@print@name}{...} {...}% -or-
\NewDocumentEnvironment{\LWR@print@name}{...} {...} {...}

% Simply a call to \LWR@print@name:
\newcommand{\name}{\LWR@print@name}% -or-
\newenvironment{name}{\LWR@print@name}{\endLWR@print@name}
\end{warpall}

\begin{warpHTML}
\NewDocumentCommand{\LWR@HTML@name}{...} {...}% -or-
\NewDocumentEnvironment{\LWR@HTML@name}{...} {...} {...}

\LWR@formatted{name}% -or-
\LWR@formattedenv{name}
\end{warpHTML}

```

In general, `\LWR@formatted` or `\LWR@formattedenv` are placed inside a `warpHTML` environment, and while producing an HTML document they do the following:

- Macros are modified:
 1. The pre-existing print version `\name` is saved as `\LWR@print@<name>`, unless `\LWR@print@<name>` is already defined.
 2. The original `\name` is redefined to call either the print or HTML version depending on which format is in use at the moment, as set by `\LWR@formatting`, which is defined as either “print” or “HTML”.
- When `lwarp` is producing a print document, the original definitions are used, as well as any new definitions defined in `warpall` above.
- When `lwarp` is generating HTML output, `\LWR@formatting` is set to “HTML”, and `\name` is directed to `\LWR@HTML@<name>`.
- When `lwarp` is generating HTML output but enters a `lateximage` environment, or for some other reason needs to draw images using the original print definitions, `\LWR@formatting` is changed to “print” and `\name` is then redirected to `\LWR@print@<name>`, which was the original `\name`.

Since arguments are not handled by the new `\name`, any star and other arguments are processed by the print or HTML version.

Expandable versions are also provided as well. These usually are necessary for anything which could appear inside a `tabular`, without which a “Misplaced `\omit`” error may occur.

```

\LWR@expandableformatted
\LWR@expandableformattedenv

```



Misplaced `\omit` error

(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: 1418 `\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”.

1419 `\newcommand*{\LWR@formatting}{HTML}`

`\LWR@formatted` `{\langle macroname \rangle}` No backslash in the macro name.

If not yet defined, defines `\LWR@print@<name>` as the original print-mode `\<name>`. Also redefines `\<name>` to use `\LWR@<format>@<name>`, where `<format>` is set by `\LWR@formatting`, and is print or HTML.

```
1420 \newcommand*{\LWR@formatted}[1]{%
1421   \ifcsundef\LWR@print@#1}{%
1422     \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1423     \csname#1\endcsname%
1424   }{}%
1425   \ifcsundef{#1}{%
1426     \expandafter\newrobustcmd\csname #1\endcsname{%
1427       \@nameuse{\LWR@\LWR@formatting @#1}%
1428     }%
1429   }{}%
1430   \expandafter\renewrobustcmd\csname #1\endcsname{%
1431     \@nameuse{\LWR@\LWR@formatting @#1}%
1432   }%
1433 }%
1434 }
```

`\LWR@expandableformatted` `{\langle macroname \rangle}` No backslash in the macro name.

An expandable version of `\LWR@formatted`.

```
1435 \newcommand*{\LWR@expandableformatted}[1]{%
1436   \ifcsundef\LWR@print@#1}{%
1437     \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1438     \csname#1\endcsname%
1439   }{}%
1440   \ifcsundef{#1}{%
1441     \expandafter\newcommand\csname #1\endcsname{%
1442       \@nameuse{\LWR@\LWR@formatting @#1}%
1443     }%
1444   }{}%
1445   \expandafter\renewcommand\csname #1\endcsname{%
1446     \@nameuse{\LWR@\LWR@formatting @#1}%
1447   }%
1448 }%
1449 }
```

`\LWR@formattedenv` {*(environmentname)*}

If not yet defined, defines the environment `LWR@print@<name>` as the original print-mode `<name>`. Also redefines the environment `<name>` to use environment `LWR@<format>@<name>`, where `<format>` is set by `\LWR@formatting`, and is `print` or `HTML`.

```

1450 \newcommand*{\LWR@formattedenv}[1]{%
1451     \ifcsundef{LWR@print@#1}{%
1452         \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1453         \csname#1\endcsname%
1454         \csletcs{endLWR@print@#1}{end#1}%
1455     }{}%
1456     \DeclareDocumentEnvironment{#1}{}%
1457     {%
1458         \@nameuse{LWR@\LWR@formatting @#1}%
1459     }%
1460     {%
1461         \@nameuse{endLWR@\LWR@formatting @#1}%
1462     }%
1463 }
```

`\LWR@expandableformattedenv` {*(environmentname)*}

An expandable version of `LWR@formattedenv`.

```

1464 \newcommand*{\LWR@expandableformattedenv}[1]{%
1465     \ifcsundef{LWR@print@#1}{%
1466         \expandafter\LetLtxMacro\csname LWR@print@#1\expandafter\endcsname%
1467         \csname#1\endcsname%
1468         \csletcs{endLWR@print@#1}{end#1}%
1469     }{}%
1470     \DeclareExpandableDocumentEnvironment{#1}{}%
1471     {%
1472         \@nameuse{LWR@\LWR@formatting @#1}%
1473     }%
1474     {%
1475         \@nameuse{endLWR@\LWR@formatting @#1}%
1476     }%
1477 }

1478 \end{warpHTML}
```

36 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: `1479 \begin{warpall}`

36.1 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`

```
1480 \newbool{FormatEPUB}
1481 \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`

```
1482 \newbool{FormatWP}
1483 \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.¹⁸

```
1484 \newbool{WPMarkFloats}
1485 \boolfalse{WPMarkFloats}
```

Bool `WPMarkMinipages` Adds
 Default: `false`

```
=== begin minipage ===
. . .
=== end minipage ===
```

around minipages while formatting for word processors. This helps identify boundaries of minipages to be manually converted to word-processor frames.

```
1486 \newbool{WPMarkMinipages}
1487 \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.

¹⁸Perhaps some day word processors will have HTML import options for identifying `<figure>` and caption tags for figures and tables.

If set false, the actual TOC is printed instead.

```
1488 \newbool{WPMarkTOC}
1489 \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.

```
1490 \newbool{WPMarkLOFT}
1491 \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.

Default: false

```
1492 \newbool{WPMarkMath}
1493 \boolfalse{WPMarkMath}
```

Bool WPTitleHeading While formatting for word processors, true sets the document title to $\langle h1 \rangle$, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOFFICE. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

Default: false

See table 10 on page 177.

```
1494 \newbool{WPTitleHeading}
1495 \boolfalse{WPTitleHeading}
```

```
1496 \end{warpall}
```

36.2 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 $\langle h1 \rangle$ for the title, and set part to **Heading 2**.

for HTML output: 1497 \begin{warpHTML}

```
1498 \AtBeginDocument{
1499 \ifbool{FormatWP}{
1500 \@ifundefined{chapter}{
1501 \ifbool{WPTitleHeading}{% part and section starting at h2
1502 \renewcommand*{\LWR@tagtitle}{h1}
```

```
1503 \renewcommand*{\LWR@tagtitleend}{/h1}
1504 \renewcommand*{\LWR@tagpart}{h2}
1505 \renewcommand*{\LWR@tagpartend}{/h2}
1506 \renewcommand*{\LWR@tagsection}{h3}
1507 \renewcommand*{\LWR@tagsectionend}{/h3}
1508 \renewcommand*{\LWR@tagsubsection}{h4}
1509 \renewcommand*{\LWR@tagsubsectionend}{/h4}
1510 \renewcommand*{\LWR@tagsubsubsection}{h5}
1511 \renewcommand*{\LWR@tagsubsubsectionend}{/h5}
1512 \renewcommand*{\LWR@tagparagraph}{h6}
1513 \renewcommand*{\LWR@tagparagraphend}{/h6}
1514 \renewcommand*{\LWR@tagsubparagraph}{span class="subparagraph"}
1515 \renewcommand*{\LWR@tagsubparagraphend}{/span}
1516 }% WPTitleHeading
1517 {% not WPTitleHeading, part and section starting at h1
1518 \renewcommand*{\LWR@tagtitle}{div class="title"}
1519 \renewcommand*{\LWR@tagtitleend}{/div}
1520 \renewcommand*{\LWR@tagpart}{h1}
1521 \renewcommand*{\LWR@tagpartend}{/h1}
1522 \renewcommand*{\LWR@tagsection}{h2}
1523 \renewcommand*{\LWR@tagsectionend}{/h2}
1524 \renewcommand*{\LWR@tagsubsection}{h3}
1525 \renewcommand*{\LWR@tagsubsectionend}{/h3}
1526 \renewcommand*{\LWR@tagsubsubsection}{h4}
1527 \renewcommand*{\LWR@tagsubsubsectionend}{/h4}
1528 \renewcommand*{\LWR@tagparagraph}{h5}
1529 \renewcommand*{\LWR@tagparagraphend}{/h5}
1530 \renewcommand*{\LWR@tagsubparagraph}{h6}
1531 \renewcommand*{\LWR@tagsubparagraphend}{/h6}
1532 }% not WPTitleHeading
1533 }% chapter undefined
1534 {% chapter defined
1535 \ifbool{WPTitleHeading}{
1536 {% not WPTitleHeading, part and chapter starting at h1
1537 \renewcommand*{\LWR@tagtitle}{div class="title"}
1538 \renewcommand*{\LWR@tagtitleend}{/div}
1539 \renewcommand*{\LWR@tagpart}{h1}
1540 \renewcommand*{\LWR@tagpartend}{/h1}
1541 \renewcommand*{\LWR@tagchapter}{h2}
1542 \renewcommand*{\LWR@tagchapterend}{/h2}
1543 \renewcommand*{\LWR@tagsection}{h3}
1544 \renewcommand*{\LWR@tagsectionend}{/h3}
1545 \renewcommand*{\LWR@tagsubsection}{h4}
1546 \renewcommand*{\LWR@tagsubsectionend}{/h4}
1547 \renewcommand*{\LWR@tagsubsubsection}{h5}
1548 \renewcommand*{\LWR@tagsubsubsectionend}{/h5}
1549 \renewcommand*{\LWR@tagparagraph}{h6}
1550 \renewcommand*{\LWR@tagparagraphend}{/h6}
1551 \renewcommand*{\LWR@tagsubparagraph}{span class="subparagraph"}
1552 \renewcommand*{\LWR@tagsubparagraphend}{/span}
1553 }% not WPTitleHeading
1554 }% chapter defined
1555 }{}% FormatWP
1556 }% AtBeginDocument
```

```
1557 \end{warpHTML}
```

37 Remembering original formatting macros

for HTML output: 1558 \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.

```
1559 \chardef\LWR@origpound='\#

1560 \let\LWR@origcomma\,
1561 \let\LWR@origthinspace\thinspace
1562 \let\LWR@orignegthinspace\negthinspace
1563 \let\LWR@origtilde~
1564 \let\LWR@origenskip\enskip
1565 \let\LWR@origquad\quad
1566 \let\LWR@origqqquad\qqquad
1567 \let\LWR@orighfil\hfil
1568 \let\LWR@orighss\hss
1569 \let\LWR@origllap\llap
1570 \let\LWR@origrlap\rlap
1571 \let\LWR@origfilneg\hfilneg
1572 \let\LWR@orighspace\hspace
1573
1574 \let\LWR@origrule\rule
1575
1576 \let\LWR@origmedskip\medskip
1577 \let\LWR@origbigskip\bigskip
1578
1579 \let\LWR@origtextellipsis\textellipsis
1580 \let\LWR@orig@textquotedbl\textquotedbl
1581
1582 \LetLtxMacro\LWR@origttfamily\ttfamily
1583
1584 \LetLtxMacro\LWR@origem\em
1585
1586 \LetLtxMacro\LWR@orignormalfont\normalfont
1587
1588 \let\LWR@origonecolumn\onecolumn
1589
1590 \let\LWR@origsp\sp
1591 \let\LWR@origsb\sbs
1592
1593 \LetLtxMacro\LWR@origunderline\underline

1594 \let\LWR@orignewpage\newpage
1595
```

```

1596 \let\LWR@origpagestyle\pagestyle
1597 \let\LWR@origthispagestyle\thispagestyle
1598 \LetLtxMacro\LWR@origpagenumbering\pagenumbering
1599
1600 \let\LWR@orignewline\newline
1601
1602
1603 \AtBeginDocument{% in case packages change definition
1604 \let\LWR@orig@trivlist\@trivlist
1605 \let\LWR@origtrivlist\trivlist
1606 \let\LWR@origendtrivlist\endtrivlist
1607 \LetLtxMacro\LWR@origitem\item
1608 \LetLtxMacro\LWR@origitemize\itemize
1609 \LetLtxMacro\LWR@endorigitemize\enditemize
1610 \LetLtxMacro\LWR@origenumerate\enumerate
1611 \LetLtxMacro\LWR@endorigenumerate\endenumerate
1612 \LetLtxMacro\LWR@origdescription\description
1613 \LetLtxMacro\LWR@endorigdescription\enddescription
1614 \let\LWR@orig@mklab@mklab
1615 \let\LWR@origmakelabel\makelabel
1616 \let\LWR@orig@donoparitem\donoparitem
1617 \LetLtxMacro\LWR@orig@item\@item
1618 \let\LWR@orig@nbitem\@nbitem
1619 }
1620
1621 \let\LWR@origpar\par
1622
1623 \LetLtxMacro\LWR@origfootnote\footnote
1624 \let\LWR@orig@mpfootnotetext\@mpfootnotetext
1625
1626
1627 \AtBeginDocument{% in case packages change definition
1628 \LetLtxMacro\LWR@orighline\hline%
1629 \LetLtxMacro\LWR@origcline\cline%
1630 }

1631 \end{warpHTML}

```

38 Accents

Native \LaTeX accents such as `\` will work, but many more kinds of accents are available when using Unicode-aware \XeLaTeX and \LuaLaTeX . If using accents in section names which will become file names, it is recommended to use the \LaTeX accents such as `\` and `\v` instead of Unicode accents. The \LaTeX accents will have the accents stripped when creating the filenames, whereas the Unicode accents will appear in the file names, which may cause issues with some operating systems.

for HTML output: 1632 `\begin{warpHTML}`

Without `\AtBeginDocument`, `\t` was being re-defined somewhere.

```
1633 \AtBeginDocument{
```

The following are restored for print when inside a lateximage.

For Unicode engines, only \t needs to be redefined:

```
1634 \LetLtxMacro\LWR@origtie\t
```

For pdf^LTeX, additional work is required:

```
1635 \ifPDFTeX% pdflatex or dvi latex
1636 \LetLtxMacro\LWR@origgraveaccent\'
1637 \LetLtxMacro\LWR@origacuteaccent\'
1638 \LetLtxMacro\LWR@origcircumflexaccent\^
1639 \LetLtxMacro\LWR@origtildeaccent\~
1640 \LetLtxMacro\LWR@origmacronaccent\=
1641 \LetLtxMacro\LWR@origbreve\u
1642 \LetLtxMacro\LWR@origdotaccent\.
1643 \LetLtxMacro\LWR@origdiaeresisaccent\"
1644 \LetLtxMacro\LWR@origdoubleacuteaccent\H
1645 \LetLtxMacro\LWR@origcaronaccent\v
1646 \LetLtxMacro\LWR@origdotbelowaccent\d
1647 \LetLtxMacro\LWR@origcedillaaccent\c
1648 \LetLtxMacro\LWR@origmacronbelowaccent\b
```

The HTML redefinitions follow.

For pdf^LTeX, Unicode diacritical marks are used:

```
1649 \renewcommand*{\'}[1]{#1\HTMLUnicode{0300}}
1650 \renewcommand*{\'}[1]{#1\HTMLUnicode{0301}}
1651 \renewcommand*{\^}[1]{#1\HTMLUnicode{0302}}
1652 \renewcommand*{\~}[1]{#1\HTMLUnicode{0303}}
1653 \renewcommand*{\=}[1]{#1\HTMLUnicode{0304}}
1654 \renewcommand*{\u}[1]{#1\HTMLUnicode{0306}}
1655 \renewcommand*{\.}[1]{#1\HTMLUnicode{0307}}
1656 \renewcommand*{\"}[1]{#1\HTMLUnicode{0308}}
1657 \renewcommand*{\H}[1]{#1\HTMLUnicode{030B}}
1658 \renewcommand*{\v}[1]{#1\HTMLUnicode{030C}}
1659 \renewcommand*{\d}[1]{#1\HTMLUnicode{0323}}
1660 \renewcommand*{\c}[1]{#1\HTMLUnicode{0327}}
1661 \renewcommand*{\b}[1]{#1\HTMLUnicode{0331}}
1662 \fi
```

For all engines, a Unicode diacritical tie is used:

```
1663 \def\LWR@t#1#2{#1\HTMLUnicode{0361}#2}
1664 \renewcommand*{\t}[1]{\LWR@t#1}
```

`\LWR@restoreorigaccents` Called from `\restoreoriginalformatting` when a lateximage is begun.

```
1665 \ifPDFTeX% pdflatex or dvi latex
1666 \newcommand*{\LWR@restoreorigaccents}{%
1667   \LetLtxMacro\'\LWR@origgraveaccent%
1668   \LetLtxMacro\'\LWR@origacuteaccent%
1669   \LetLtxMacro\^\LWR@origcircumflexaccent%
```

```

1670 \LetLtxMacro~\LWR@origtildeaccent%
1671 \LetLtxMacro=\LWR@origmacronaccent%
1672 \LetLtxMacro\u\LWR@origbreve%
1673 \LetLtxMacro\.\LWR@origdotaccent%
1674 \LetLtxMacro\"LWR@origdiaeresisaccent%
1675 \LetLtxMacro\H\LWR@origdoubleacuteaccent%
1676 \LetLtxMacro\v\LWR@origcaronaccent%
1677 \LetLtxMacro\t\LWR@origtie%
1678 \LetLtxMacro\d\LWR@origdotbelowaccent%
1679 \LetLtxMacro\c\LWR@origcedillaaccent%
1680 \LetLtxMacro\b\LWR@origmacronbelowaccent%
1681 }%
1682 \else% XeLaTeX, LuaLaTeX:
1683 \newcommand*{\LWR@restoreorigaccents}{%
1684 \LetLtxMacro\t\LWR@origtie%
1685 }%
1686 \fi%
1687 }% AtBeginDocument

1688 \end{warpHTML}

```

39 Configuration files

39.1 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:

```
1689 \LWR@excludecomment{\LWRwriteconf}{writeconf}
```

Generate configuration files if print mode and not -pstool:

```

for PRINT output: 1690 \begin{warpprint}
1691 \fullexpandarg%
1692 \IfSubStr*{\jobname}{-pstool}
1693 {
1694 \PackageInfo{lwarp}{%
1695 Jobname with -pstool is found.\MessageBreak
1696 Not generating lwarp configuration files,%
1697 }
1698 }
1699 {
1700 \PackageInfo{lwarp}{Generating lwarp configuration files,}%
1701 \LWR@includecomment{\LWRwriteconf}{writeconf}
1702 }
1703 \end{warpprint}

```

39.2 <project>_html.tex

File *_html.tex Used to allow an HTML version of the document to exist alongside the print version.

Config file:

```

1704 \begin{LWRwriteconf}
1705 \immediate\openout\LWR@quickfile=\jobname_html.tex
1706 \immediate\write\LWR@quickfile{%
1707 \detokenize{\PassOptionsToPackage}%
1708 {warpHTML,BaseJobname=\jobname}{Lwarp}%
1709 }
1710 \immediate\write\LWR@quickfile{%
1711 \detokenize{\input}\string{\jobname.tex}\string }%
1712 }
1713 \immediate\closeout\LWR@quickfile
1714 \end{LWRwriteconf}

```

39.3 lwarpmk configuration files

Config file: 1715 \begin{LWRwriteconf}

\LWR@lwarpcnfversion The version number of the configuration file, allowing *lwarpmk* to detect an obsolete configuration file format. Incremented by one each time the configuration file format changes. (This is NOT the same as the lwarp version number.)

```
1716 \newcommand*{\LWR@lwarpcnfversion}{2}% also in lwarpmk.lua
```

39.3.1 Helper macros

\LWR@shellescapecmd The LaTeX compile option for shell escape, if used.

```

1717 \ifshellescape
1718   \def\LWR@shellescapecmd{--shell-escape }
1719 \else
1720   \def\LWR@shellescapecmd{}
1721 \fi

```

\LWR@compilecmd {<engine>} {<suffix>}

Used to form the basic compilation command for a document, adding the optional shell escape.

Engine is *pdflatex*, etc. Suffix is empty or *_html*

```

1722 \newcommand*{\LWR@compilecmd}[2]{%
1723   #1 \LWR@shellescapecmd \jobname#2%
1724 }

```

\LWR@addcompilecmd {<cmd>} {<suffix>}

Adds to the compilation command.

Cmd is *dvipdfm*, etc. Suffix is empty or *_html*

```
1725 \newcommand*{\LWR@addcompilecmd}[2]{%
1726     \LWRopseq
1727     #1 \jobname#2%
1728 }
```

`\LWR@unknownengine` Error message if not sure which L^AT_EX engine is being used.

```
1729 \newcommand*{\LWR@unknownengine}{%
1730     \PackageError{lwarp}%
1731         {Unknown LaTeX engine}%
1732     {%
1733         Lwarp only knows about pdflatex, dvi latex,
1734         xelatex, luatex, and upLATEX.%
1735     }%
1736 }
```

`\LWR@latexmkvar` `{\langle varname \rangle}{\langle value \rangle}`

Adds a *latexmk* variable assignment.

```
1737 \newcommand*{\LWR@latexmkvar}[2]{%
1738     -e
1739     \LWRopquote%
1740     \LWRdollar #1=q/#2/%
1741     \LWRopquote
1742 }
```

`\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.

```
1743 \newcommand*{\LWR@latexmkcmd}[1]{%
1744     latexmk \space \LWR@shellescapecmd \space #1 \space
1745     -recorder \space
1746     \LWR@latexmkvar{makeindex}{\LWR@LatexmkIndexCmd}
1747 }
```

`\LWR@latexmkdvipdfm` `{\langle dvipdfm or dvipdfmx \rangle}`

Adds the options settings for *dvipdfm* or *dvipdfmx*.

```
1748 \newcommand*{\LWR@latexmkdvipdfm}[1]{%
1749     -pdfdvi \space
1750     \LWR@latexmkvar{dvipdf}{%
1751         #1
1752         \@percentchar 0
1753         -o \@percentchar D
1754         \@percentchar S%
```

```
1755   }
1756 }
```

`\LWR@compileuplatex` Sets compile options for upL^AT_EX with `ujarticle` or related classes.

```
1757 \newcommand*\LWR@compileuplatex){
1758   \def\LWR@tempprintlatexcmd{%
1759     \LWR@compilecmd{uplatex}{}
1760     \LWR@addcompilecmd{dvipdfmx}{}
1761   }
1762   \def\LWR@tempHTMLlatexcmd{%
1763     \LWR@compilecmd{uplatex}{_html}
1764     \LWR@addcompilecmd{dvipdfmx}{_html}
1765   }
1766 }
```

`\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 '$dvi-pdf=q/dvipdfmx %0 -o %D %S/'
  -recorder
  -e '$makeindex=q/makeindex -s lwarp.ist/' <jobname>_html]]
```

For the following, temporary values are computed, but the permanent values are only set if the originals were not assigned by the user.

```
1767 \ifbool{LWR@latexmk}{
```

For *latexmk* with *pdflatex* or *lualatex*:

```
1768   \ifpdf
```

For *latexmk* with *pdflatex*:

```
1769     \ifPDFTeX
1770     \def\LWR@latexcmd{\LWR@latexmkcmd{-pdf -dvi- -ps-}}
1771   \else
```

For *latexmk* with *lualatex*:

```

1772         \ifLuaTeX
1773             \def\LWR@latexcmd{\LWR@latexmkcmd{-lualatex}}
1774         \else
1775             \LWR@unknownengine
1776         \fi
1777     \fi
1778 \else% \ifpdf

```

For *latexmk* with *xelatex* or DVI *latex*:

```

1779     \ifXeTeX

```

For *latexmk* with *xelatex*:

```

1780         \def\LWR@latexcmd{\LWR@latexmkcmd{-xelatex}}
1781     \else% \ifXeTeX

```

For *latexmk* with DVI *latex*:

```

1782     \ifbool{LWR@dvipdfm}{
1783         \def\LWR@latexcmd{%
1784             \LWR@latexmkcmd{%
1785                 \LWR@latexmkdvipdfm{dvipdfm}%
1786             }
1787         }
1788     }{
1789         \ifbool{LWR@dvipdfmx}{
1790             \def\LWR@latexcmd{%
1791                 \LWR@latexmkcmd{%
1792                     \LWR@latexmkdvipdfm{dvipdfmx}%
1793                 }
1794             }
1795         }{
1796             \def\LWR@latexcmd{\LWR@latexmkcmd{-pdfps}}
1797         }
1798     }
1799     \fi
1800 \fi% \ifpdf

```

The final assignment if *latexmk*:

```

1801     \def\LWR@tempprintlatexcmd{\LWR@latexcmd \space \jobname}
1802     \def\LWR@tempHTMLlatexcmd{\LWR@latexcmd \space \jobname_html}
1803 }% latexmk

```

Without *latexmk*, the compiling command is simply the compiler name and the optional shell escape:

```

1804 {% not latexmk
1805     \ifpdf

```

For *pdf_latex* or *lua_latex*:

```
1806         \ifPDFTeX
```

For *pdf_latex*:

```
1807         \def\LWR@tempprintlatexcmd{\LWR@compilecmd{pdflatex}{}}
1808         \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{pdflatex}{_html}}
1809         \else
1810         \ifLuaTeX
```

For *lua_latex*:

```
1811         \def\LWR@tempprintlatexcmd{\LWR@compilecmd{lualatex}{}}
1812         \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{lualatex}{_html}}
1813         \else
1814         \LWR@unknownengine
1815         \fi
1816         \fi
1817         \else% \ifpdf
```

For DVI *l_atex* or *x_el_atex*:

```
1818         \ifXeTeX
```

For *x_el_atex*:

```
1819         \def\LWR@tempprintlatexcmd{\LWR@compilecmd{xelatex}{}}
1820         \def\LWR@tempHTMLlatexcmd{\LWR@compilecmd{xelatex}{_html}}
1821         \else
```

For DVI *l_atex*. Default to *dvips*, unless told to use *dvipdfm* or *dvipdfmx*:

```
1822         \ifbool{LWR@dvipdfm}{
```

For DVI *l_atex* with *dvipdfm*:

```
1823         \def\LWR@tempprintlatexcmd{%
1824         \LWR@compilecmd{latex}{}}
1825         \LWR@addcompilecmd{dvipdfm}{}}
1826         }
1827         \def\LWR@tempHTMLlatexcmd{%
1828         \LWR@compilecmd{latex}{_html}
1829         \LWR@addcompilecmd{dvipdfm}{_html}
1830         }
1831         }{
1832         \ifbool{LWR@dvipdfmx}{
```

For DVI *l_atex* with *dvipdfmx*:

```
1833         \def\LWR@tempprintlatexcmd{%
1834         \LWR@compilecmd{latex}{}}
1835         \LWR@addcompilecmd{dvipdfmx}{}}
1836         }
```

```

1837             \def\LWR@tempHTMLlatexcmd{%
1838                 \LWR@compilecmd{latex}{_html}
1839                 \LWR@addcompilecmd{dvipdfmx}{_html}
1840             }
1841         }{% dvips

```

For DVI *latex* with *dvips* and *ps2pdf*:

```

1842             \def\LWR@tempprintlatexcmd{%
1843                 \LWR@compilecmd{latex}{}
1844                 \LWR@addcompilecmd{dvips}{}
1845                 \LWR@addcompilecmd{ps2pdf}{}.ps
1846             }
1847             \def\LWR@tempHTMLlatexcmd{%
1848                 \LWR@compilecmd{latex}{_html}
1849                 \LWR@addcompilecmd{dvips}{_html}
1850                 \LWR@addcompilecmd{ps2pdf}{_html}.ps
1851             }
1852         }
1853     }
1854     \fi% \ifXeTeX
1855     \fi% \ifpdf
1856 }% latexmk

```

For *ujarticle*, *utarticle*, and related, using up^LA^TE^X and *dvipdfmx*:

```

1857 \@ifclassloaded{ujarticle}{\LWR@compileuplatex}{}
1858 \@ifclassloaded{ujbook}{\LWR@compileuplatex}{}
1859 \@ifclassloaded{ujreport}{\LWR@compileuplatex}{}
1860 \@ifclassloaded{utarticle}{\LWR@compileuplatex}{}
1861 \@ifclassloaded{utbook}{\LWR@compileuplatex}{}
1862 \@ifclassloaded{utreport}{\LWR@compileuplatex}{}

```

Only make the setting permanent if the original was empty:

```

1863 \ifdefempty{\LWR@PrintLatexCmd}{
1864     \def\LWR@PrintLatexCmd{\LWR@tempprintlatexcmd}
1865 }{}
1866 \ifdefempty{\LWR@HTMLLatexCmd}{
1867     \def\LWR@HTMLLatexCmd{\LWR@tempHTMLlatexcmd}
1868 }{}

```

`\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.

```

1869 \newcommand{\LWR@writeconf}[1]{
1870     \ifcsdef{LWR@quickfile}{}{\newwrite{\LWR@quickfile}}
1871     \immediate\openout\LWR@quickfile=#1
1872     \immediate\write\LWR@quickfile{confversion = [[\LWR@lwarpconfversion]]}
1873     \ifbool{usingOSWindows}{
1874         \immediate\write\LWR@quickfile{opsystem = [[Windows]]}

```

```

1875 }{
1876   \immediate\write\LWR@quickfile{opsystem = [[Unix]]}
1877 }
1878 \immediate\write\LWR@quickfile{sourcename = [[\jobname]]}
1879 \immediate\write\LWR@quickfile{homehtmlfilename = [[\HomeHTMLFilename]]}
1880 \immediate\write\LWR@quickfile{htmlfilename = [[HTMLFilename]]}
1881 \immediate\write\LWR@quickfile{imagesdirectory = [[\LWR@ImagesDirectory]]}
1882 \immediate\write\LWR@quickfile{imagesname = [[\LWR@ImagesName]]}
1883 \immediate\write\LWR@quickfile{latexmk = [[\ifbool{LWR@latexmk}{true}{false}]]}
1884 \immediate\write\LWR@quickfile{printlatexcmd = [[\LWR@PrintLatexCmd]]}
1885 \immediate\write\LWR@quickfile{HTMLlatexcmd = [[\LWR@HTMLLatexCmd]]}
1886 \immediate\write\LWR@quickfile{printindexcmd = [[\LWR@PrintIndexCmd]]}
1887 \immediate\write\LWR@quickfile{HTMLindexcmd = [[\LWR@HTMLIndexCmd]]}
1888 \immediate\write\LWR@quickfile{latexmkindexcmd = [[\LWR@LatexmkIndexCmd]]}
1889 \immediate\write\LWR@quickfile{glossarycmd = [[\LWR@GlossaryCmd]]}
1890 \immediate\write\LWR@quickfile{pdftotextenc = [[\LWR@pdftotextEnc]]}
1891 \immediate\closeout\LWR@quickfile
1892 }
1893

1894 \end{LWRwriteconf}

```

39.3.2 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:

```

1895 \begin{LWRwriteconf}
1896
1897 \AtBeginDocument{\LWR@writeconf{lwarpmk.conf}}
1898
1899 \end{LWRwriteconf}

```

39.3.3 <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:

```

1900 \begin{LWRwriteconf}
1901
1902 \AtBeginDocument{\LWR@writeconf{\jobname.lwarpmkconf}}
1903
1904 \end{LWRwriteconf}

```

39.4 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: 1905 \begin{LWRwriteconf}
1906 \begin{filecontents*}[overwrite]{lwarp.css}
1907 /*
1908 CSS stylesheet for the LaTeX Lwarp package
1909 Copyright 2016-2020 Brian Dunn – BD Tech Concepts LLC
1910 */
1911
1912
1913 /* a fix for older browsers: */
1914 header, section, footer, aside, nav, main,
1915     article, figure { display: block; }
1916
1917
1918 A:link {color:#000080 ; text-decoration: none ; }
1919 A:visited {color:#800000 ; }
1920 A:hover {color:#000080 ; text-decoration: underline ;}
1921 A:active {color:#800000 ; }
1922
1923 a.tocbook {display: inline-block ; margin-left: 0em ;
1924     font-weight: bold ; margin-top: 1ex ; margin-bottom: 1ex ; }
1925 a.tocpart {display: inline-block ; margin-left: 0em ;
1926     font-weight: bold ;}
1927 a.tocchapter {display: inline-block ; margin-left: 0em ;
1928     font-weight: bold ;}
1929 a.tocsection {display: inline-block ; margin-left: 1em ;
1930     text-indent: -.5em ; font-weight: bold ; }
1931 a.tocsubsection {display: inline-block ; margin-left: 2em ;
1932     text-indent: -.5em ; }
1933 a.tocsubsubsection {display: inline-block ; margin-left: 3em ;
1934     text-indent: -.5em ; }
1935 a.tocparagraph {display: inline-block ; margin-left: 4em ;
1936     text-indent: -.5em ; }
1937 a.tocsubparagraph {display: inline-block ; margin-left: 5em ;
1938     text-indent: -.5em ; }
1939 a.tocfigure {margin-left: 0em}
1940 a.tocsubfigure {margin-left: 2em}
1941 a.tocfigure {margin-left: 0em}
1942 a.tocsubtable {margin-left: 2em}
1943 a.toctheorem {margin-left: 0em}
1944 a.toclstlisting {margin-left: 0em}
1945
1946 body {
1947     font-family: "DejaVu Serif", "Bitstream Vera Serif",
1948         "Lucida Bright", Georgia, serif;
1949     background: #FAF7F4 ;
1950     color: black ;
1951     margin:0em ;
1952     padding:0em ;
1953     font-size: 100% ;
1954     line-height: 1.2 ;
1955 }
1956
1957 p {margin: 1.5ex 0em 1.5ex 0em ;}
```

```
1958 table p {margin: .5ex 0em .5ex 0em ;}
1959
1960 /* Holds a section number */
1961 span.sectionnumber { margin-right: 0em }
1962
1963 /* Inserted in front of index lines */
1964 span.indexitem {margin-left: 0em}
1965 span.indexsubitem {margin-left: 2em}
1966 span.indexsubsubitem {margin-left: 4em}
1967
1968 div.hidden, span.hidden { display: none ; }
1969
1970 kbd, span.texttt {
1971     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1972         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1973         "Courier New", monospace;
1974     font-size: 100% ;
1975 }
1976
1977 pre { padding: 3pt ; }
1978
1979 span.strong, span.textbf, div.strong, div.textbf { font-weight: bold; }
1980
1981 span.textit, div.textit { font-style: italic; }
1982
1983 span.textmd, div.textmd { font-weight: normal; }
1984
1985 span.textup, div.textup {
1986     font-style: normal;
1987     font-variant: normal;
1988     font-variant-numeric: normal ;
1989 }
1990
1991 span.textsc, div.textsc {
1992     font-variant: small-caps;
1993     font-variant-numeric: oldstyle-nums ;
1994 }
1995
1996 span.textulc, div.textulc {
1997     font-variant: normal ;
1998     font-variant-numeric: normal ;
1999 }
2000
2001 span.textsl, div.textsl { font-style: oblique; }
2002
2003 span.textrm, div.textrm {
2004     font-family: "DejaVu Serif", "Bitstream Vera Serif",
2005         "Lucida Bright", Georgia, serif;
2006 }
2007
2008 span.textsf, div.textsf {
2009     font-family: "DejaVu Sans", "Bitstream Vera Sans",
2010         Geneva, Verdana, sans-serif ;
2011 }
2012
```

```
2013 /* nfssect-cfr lining figures */
2014 span.textln, div.textln {
2015     font-variant-numeric: lining-nums ;
2016 }
2017
2018 /* nfssect-cfr proportional figures */
2019 span.textp, div.textp {
2020     font-variant-numeric: proportional-nums ;
2021 }
2022
2023 /* nfssect-cfr tabular figures */
2024 span.textt, div.textt {
2025     font-variant-numeric: tabular-nums ;
2026 }
2027
2028 /* nfssect-cfr font weights */
2029 span.textdb, div.textdb {
2030     font-weight: 500 ;
2031 }
2032
2033 span.textsb, div.textsb {
2034     font-weight: 600 ;
2035 }
2036
2037 span.texteb, div.texteb {
2038     font-weight: 800 ;
2039 }
2040
2041 span.textub, div.textub {
2042     font-weight: 900 ;
2043 }
2044
2045 span.textlg, div.textlg {
2046     font-weight: 300 ;
2047 }
2048
2049 span.textel, div.textel {
2050     font-weight: 200 ;
2051 }
2052
2053 span.textul, div.textul {
2054     font-weight: 100 ;
2055 }
2056
2057
2058
2059 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
2060
2061 span.underline {
2062     text-decoration: underline ;
2063     text-decoration-skip: auto ;
2064 }
2065
2066 span.overline {
2067     text-decoration: overline ;
```

```
2068     text-decoration-skip: auto ;
2069 }
2070
2071
2072 /* for vertical text: */
2073 div.verticalrl { writing-mode: vertical-rl }
2074 div.horizontalrb { writing-mode: horizontal-tb }
2075
2076
2077 /* for diagbox */
2078 div.diagboxtitleN { border-bottom: 1px solid gray }
2079 div.diagboxtitleS { border-top: 1px solid gray }
2080
2081 div.diagboxE {
2082     padding-left: 2em ;
2083     text-align: right ;
2084 }
2085
2086 div.diagboxW {
2087     padding-right: 2em ;
2088     text-align: left ;
2089 }
2090
2091
2092
2093 /* For realscripts */
2094 .supsubscript {
2095     display: inline-block;
2096     text-align:left ;
2097 }
2098
2099 .supsubscript sup,
2100 .supsubscript sub {
2101     position: relative;
2102     display: block;
2103     font-size: .7em;
2104     line-height: 1;
2105 }
2106
2107 .supsubscript sup {
2108     top: .3em;
2109 }
2110
2111 .supsubscript sub {
2112     top: .3em;
2113 }
2114
2115 div.attribution p {
2116     text-align: right ;
2117     font-size: 80%
2118 }
2119
2120 span.poemtitle {
2121     font-size: 120% ; font-weight: bold;
2122 }
```

```
2123
2124 pre.tabbing {
2125     font-family: "Linux Libertine Mono O", "Lucida Console",
2126         "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2127         "Liberation Mono", "FreeMono", "Andale Mono",
2128         "Nimbus Mono L", "Courier New", monospace;
2129 }
2130
2131 blockquote {
2132     display: block ;
2133     margin-left: 2em ;
2134     margin-right: 2em ;
2135 }
2136
2137 /* quotchap is for the quotchap package */
2138 div.quotchap {
2139     display: block ;
2140     font-style: oblique ;
2141     overflow-x: auto ;
2142     margin-left: 2em ;
2143     margin-right: 2em ;
2144 }
2145
2146 blockquote p, div.quotchap p {
2147     line-height: 1.5;
2148     text-align: left ;
2149     font-size: .85em ;
2150 }
2151
2152 /* qauthor is for the quotchap package */
2153 div.qauthor {
2154     display: block ;
2155     text-align: right ;
2156     margin-left: auto ;
2157     margin-right: 2em ;
2158     font-size: 80% ;
2159     font-variant: small-caps;
2160 }
2161
2162 div.qauthor p {
2163     text-align: right ;
2164 }
2165
2166 div.epigraph, div.dictum {
2167     line-height: 1.2;
2168     text-align: left ;
2169     padding: 3ex 1em 0ex 1em ;
2170 /*     margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
2171     margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
2172 /*     margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
2173     font-size: .85em ;
2174     max-width: 27em ;
2175 }
2176
2177 div.epigraphsource, div.dictumauthor {
```

```
2178     text-align:right ;
2179     margin-left:auto ;
2180 /*     max-width: 50% ; */
2181     border-top: 1px solid #A0A0A0 ;
2182     padding-bottom: 3ex ;
2183     line-height: 1.2;
2184 }
2185
2186 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ;}
2187 div.epigraphsource p, div.dictumauthor p { padding: .5ex 0ex 0ex 0ex ; margin: 0ex ;}
2188 div.dictumauthor { font-style:italic }
2189
2190
2191 /* copyrightbox package */
2192 div.copyrightbox { margin: .5ex .5em }
2193 div.copyrightbox p {margin: 0px .5em ; padding: 0px}
2194 div.copyrightboxnote {text-align: left ; font-size: 60%}
2195
2196
2197 /* lettrine package: */
2198 span.lettrine { font-size: 4ex ; float: left ; }
2199 span.lettrinetext { font-variant: small-caps ; }
2200
2201 /* ulem, soul, umoline packages: */
2202 span.uline {
2203     text-decoration: underline ;
2204     text-decoration-skip: auto ;
2205 }
2206
2207 span.uuline {
2208     text-decoration: underline ;
2209     text-decoration-skip: auto ;
2210     text-decoration-style: double ;
2211 }
2212
2213 span.uwave {
2214     text-decoration: underline ;
2215     text-decoration-skip: auto ;
2216     text-decoration-style: wavy ;
2217 }
2218
2219 span.sout {
2220     text-decoration: line-through ;
2221 }
2222
2223 span.oline {
2224     text-decoration: overline ;
2225     text-decoration-skip: auto ;
2226 }
2227
2228 span.xout {
2229     text-decoration: line-through ;
2230 }
2231
2232 span.dashuline {
```

```
2233     text-decoration: underline ;
2234     text-decoration-skip: auto ;
2235     text-decoration-style: dashed ;
2236 }
2237
2238 span.dotuline {
2239     text-decoration: underline ;
2240     text-decoration-skip: auto ;
2241     text-decoration-style: dotted ;
2242 }
2243
2244 span.letterspacing { letter-spacing: .2ex ; }
2245
2246 span.capsspacing {
2247     font-variant: small-caps ;
2248     letter-spacing: .1ex ;
2249 }
2250
2251 span.highlight { background: #F8E800 ; }
2252
2253
2254
2255
2256 html body {
2257     margin: 0 ;
2258     line-height: 1.2;
2259 }
2260
2261
2262 body div {
2263     margin: 0ex;
2264 }
2265
2266
2267 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2268 {
2269     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2270     "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2271     "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2272     "Times New Roman", serif;
2273     font-style: normal ;
2274     font-weight: bold ;
2275     text-align: left ;
2276 }
2277
2278 h1 { /* title of the entire website, used on each page */
2279     text-align: center ;
2280     font-size: 2.5em ;
2281     padding: .4ex 0em 0ex 0em ;
2282 }
2283
2284 div.book {
2285     text-align: center ;
2286     font-size: 2.325em ;
2287     padding: .4ex 0em 0ex 0em ;
```

```
2288 }
2289
2290 h2 { font-size: 2.25em }
2291 h3 { font-size: 2em }
2292 h4 { font-size: 1.75em }
2293 h5 { font-size: 1.5em }
2294 h6 { font-size: 1.25em }
2295 span.paragraph {font-size: 1em ; font-variant: normal ;
2296     margin-right: 1em ; }
2297 span.subparagraph {font-size: 1em ; font-variant: normal ;
2298     margin-right: 1em ; }
2299
2300 div.minisec {
2301     font-family: "DejaVu Sans", "Bitstream Vera Sans",
2302         Geneva, Verdana, sans-serif ;
2303     font-style: normal ;
2304     font-weight: bold ;
2305     text-align: left ;
2306 }
2307
2308 h1 {
2309     margin: 0ex 0em 0ex 0em ;
2310     line-height: 1.3;
2311     text-align: center ;
2312 }
2313
2314 h2 {
2315     margin: 1ex 0em 1ex 0em ;
2316     line-height: 1.3;
2317     text-align: center ;
2318 }
2319
2320 h3 {
2321     margin: 3ex 0em 1ex 0em ;
2322     line-height: 1.3;
2323 }
2324
2325 h4 {
2326     margin: 3ex 0em 1ex 0em ;
2327     line-height: 1.3;
2328 }
2329
2330 h5 {
2331     margin: 3ex 0em 1ex 0em ;
2332     line-height: 1.3;
2333 }
2334
2335 h6 {
2336     margin: 3ex 0em 1ex 0em ;
2337     line-height: 1.3;
2338 }
2339
2340
2341 div.titlepage {
2342     text-align: center ;
```

```
2343 }
2344
2345 .footnotes {
2346     text-align: left ;
2347     font-size: .85em ;
2348     margin: 3ex 2em 0ex 2em ;
2349     border-top: 1px solid silver ;
2350 }
2351
2352 .marginpar, .marginparblock {
2353     max-width: 50%;
2354     float: right ;
2355     clear: both ;
2356     text-align: left ;
2357     margin: 1ex 0.5em 1ex 1em ;
2358     padding: 1ex 0.5em 1ex 0.5em ;
2359     font-size: 85% ;
2360     border-top: 1px solid silver ;
2361     border-bottom: 1px solid silver ;
2362     overflow-x: auto ;
2363 }
2364
2365 .marginpar br { margin-bottom: 2ex ; }
2366
2367 div.marginblock, div.marginparblock {
2368     max-width:50%;
2369     min-width: 10em; /* room for caption */
2370     float:right;
2371     text-align:left;
2372     margin: 1ex 0.5em 1ex 1em ;
2373     padding: 1ex 0.5em 1ex 0.5em ;
2374     overflow-x: auto;
2375 }
2376
2377 div.marginblock div.minipage,
2378 div.marginparblock div.minipage {
2379     display: inline-block ;
2380     margin: 0pt auto 0pt auto ;
2381 }
2382
2383 div.marginblock div.minipage p ,
2384 div.marginparblock div.minipage p
2385     { font-size: 85%}
2386
2387 div.marginblock br ,
2388 div.marginparblock br
2389     { margin-bottom: 2ex ; }
2390
2391 div.bodycontainer {
2392     float: left ;
2393     width: 80% ;
2394 }
2395
2396 div.bodywithoutsidetoc div.bodycontainer {
2397     float: none ;
```

```
2398     width: 100% ;
2399 }
2400
2401 section.textbody div.footnotes{
2402     margin: 3ex 2em 0ex 2em ;
2403     border-bottom: 2px solid silver ;
2404 }
2405
2406 .footnoteheader {
2407     border-top: 2px solid silver ;
2408     margin-top: 3ex ;
2409     padding-top: 1ex ;
2410     font-weight: bold ;
2411 }
2412
2413 .mpfootnotes {
2414     text-align: left ;
2415     font-size: .85em ;
2416     margin-left: 1em ;
2417     border-top: 1px solid silver ;
2418 }
2419
2420 /* Remove footnote top border in the title page. */
2421 div.titlepage div.mpfootnotes {
2422     border-top: none ;
2423 }
2424
2425
2426
2427 ul, ol {
2428     margin: 1ex 1em 1ex 0em;
2429     line-height: 1.2;
2430 }
2431
2432 body dir, body menu {
2433     margin: 3ex 1em 3ex 0em;
2434     line-height: 1.2;
2435 }
2436
2437 li { margin: 0ex 0em 1ex 0em; }
2438
2439 html {
2440     margin: 0;
2441     padding: 0;
2442 }
2443
2444 .programlisting {
2445     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2446         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2447         "Courier New", monospace;
2448     margin: 1ex 0ex 1ex 0ex ;
2449     padding: .5ex 0pt .5ex 0pt ;
2450     overflow-x: auto;
2451 }
2452
```

```
2453 section.textbody>pre.programlisting {
2454 border-top: 1px solid silver ;
2455 border-bottom: 1px solid silver ;
2456 }
2457
2458
2459 div.displaymath {
2460     text-align: center ;
2461 }
2462
2463 div.displaymathnumbered {
2464     text-align: right ;
2465     margin-left: 5% ;
2466     margin-right: 5% ;
2467     min-width: 2.5in ;
2468 }
2469
2470 @media all and (min-width: 400px) {
2471     div.displaymathnumbered {
2472         margin-left: 10% ;
2473         margin-right: 10% ;
2474     }
2475 }
2476
2477 @media all and (min-width: 800px) {
2478     div.displaymathnumbered {
2479         margin-right: 20% ;
2480     }
2481 }
2482
2483 @media all and (min-width: 1200px) {
2484     div.displaymathnumbered {
2485         margin-right: 30% ;
2486     }
2487 }
2488
2489
2490 .inlineprogramlisting {
2491     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2492         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2493         "Courier New", monospace;
2494     overflow-x: auto;
2495 }
2496
2497 span.listinglabel {
2498     display: inline-block ;
2499     font-size: 70% ;
2500     width: 4em ;
2501     text-align: right ;
2502     margin-right: 2em ;
2503 }
2504
2505 div.abstract {
2506     margin: 2em 5% 2em 5% ;
2507     padding: 1ex 1em 1ex 1em ;
```

```
2508 /* font-weight: bold ; */
2509 font-size: 90% ;
2510 text-align: left ;
2511 }
2512
2513 div.abstract dl {line-height:1.5;}
2514 div.abstract dt {color:#304070;}
2515
2516 div.abstracttitle{
2517 font-family: "URW Classico", Optima, "Linux Biolinum O",
2518 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2519 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2520 font-weight:bold;
2521 font-size:1.25em;
2522 text-align: center ;
2523 }
2524
2525 span.abstracruntintitle{
2526 font-family: "URW Classico", Optima, "Linux Biolinum O",
2527 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2528 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2529 font-weight:bold;
2530 }
2531
2532
2533 .verbatim {
2534 overflow-x: auto ;
2535 }
2536
2537 .alltt {
2538 overflow-x: auto ;
2539 }
2540
2541
2542 .bverbatim {
2543 margin: 1ex 0pt 1ex 0pt ;
2544 padding: .5ex 0pt .5ex 0pt ;
2545 overflow-x: auto ;
2546 }
2547
2548 .lverbatim {
2549 margin: 1ex 0pt 1ex 0pt ;
2550 padding: .5ex 0pt .5ex 0pt ;
2551 overflow-x: auto ;
2552 }
2553
2554 .fancyvrb {
2555 font-size:.85em ;
2556 margin: 3ex 0pt 3ex 0pt
2557 }
2558
2559 .fancyvrblabel {
2560 font-size: .85em ;
2561 text-align: center ;
2562 font-weight: bold ;
```

```
2563     margin-top: 1ex ;
2564     margin-bottom: 1ex ;
2565 }
2566
2567
2568 .verse {
2569     font-family: "Linux Libertine Mono O", "Lucida Console",
2570                 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
2571                 "Liberation Mono", "FreeMono", "Andale Mono",
2572                 "Nimbus Mono L", "Courier New", monospace;
2573     margin-left: 1em ;
2574 }
2575
2576
2577 div.singlespace { line-height: 1.2 ; }
2578 div.onehalfspace { line-height: 1.5 ; }
2579 div.doublespace { line-height: 2 ; }
2580
2581
2582 /* Word processor format output: */
2583 div.wpfigure { border: 1px solid red ; margin: .5ex ; padding: .5ex ; }
2584 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
2585 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ; }
2586
2587
2588
2589
2590 /* Minipage environments, vertically aligned to top, center, bottom: */
2591 .minipage, .fminipage, .fcolorminipage {
2592     /* display: inline-block ; */
2593     /* Mini pages which follow each other will be tiled. */
2594     text-align:left;
2595     margin: .25em .25em .25em .25em;
2596     padding: .25em .25em .25em .25em;
2597     display: inline-flex;
2598     flex-direction: column ;
2599     overflow: auto;
2600 }
2601
2602 .inlineminipage {
2603     display: inline-block ;
2604     text-align: left
2605 }
2606
2607 /* Paragraphs in the flexbox did not collapse their margins. */
2608 /* Have not yet researched this. */
2609 .minipage p {margin: .75ex 0em .75ex 0em ;}
2610
2611 .fboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
2612 .fcolorbox .minipage, .fcolorboxBlock .minipage
2613     {border: none ; background: none;}
2614
2615 .fbox, .fboxBlock { border: 1px solid black ; }
2616
2617 .fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
```

```
2618 .fminipage, .fcolorminipage
2619     {display: inline-block}
2620
2621 .shadowbox, .shabox {
2622     border: 1px solid black;
2623     box-shadow: 3px 3px 3px #808080 ;
2624     border-radius: 0px ;
2625     padding: .4ex .3em .4ex .3em ;
2626     margin: 0pt .3ex 0pt .3ex ;
2627     display: inline-block ;
2628 }
2629
2630 .doublebox {
2631     border: 3px double black;
2632     border-radius: 0px ;
2633     padding: .4ex .3em .4ex .3em ;
2634     margin: 0pt .3ex 0pt .3ex ;
2635     display: inline-block ;
2636 }
2637
2638 .ovalbox, .Ovalbox {
2639     border: 1px solid black;
2640     border-radius: 1ex ;
2641     padding: .4ex .3em .4ex .3em ;
2642     margin: 0pt .3ex 0pt .3ex ;
2643     display: inline-block ;
2644 }
2645
2646 .Ovalbox { border-width: 2px ; }
2647
2648 .framebox {
2649     border: 1px solid black;
2650     border-radius: 0px ;
2651     padding: .3ex .2em 0ex .2em ;
2652     margin: 0pt .1ex 0pt .1ex ;
2653     display: inline-block ;
2654 }
2655
2656
2657 .mdframed {
2658     padding: 0ex ;
2659     margin: 2ex 0em 2ex 0em ;
2660 }
2661
2662 .mdframed p { padding: 0ex .5em 0ex .5em ; }
2663
2664 .mdframed dl { padding: 1ex .5em 0ex .5em ; }
2665
2666 .mdframedtitle {
2667     padding: .5ex 0pt 0pt 0pt ;
2668     border-radius: 10pt 10pt 0pt 0pt ;
2669     display: block ;
2670     margin-bottom: 1ex ;
2671 }
2672
```

```
2673 .mdframedsubtitle {
2674     display: block ;
2675 }
2676
2677 .mdframedsubsubtitle {
2678     display: block ;
2679 }
2680
2681 .mdtheorem {
2682     padding: 0ex .5em 0ex .5em ;
2683     margin: 3ex 5% 3ex 5% ;
2684 }
2685
2686
2687 /* framed package */
2688 .framed, pre.boxedverbatim, fcolorbox {
2689     margin: 3ex 0em 3ex 0em ;
2690     border: 1px solid black;
2691     border-radius: 0px ;
2692     padding: .3ex 1em 0ex 1em ;
2693     display: block ;
2694 }
2695
2696 .shaded {
2697     margin: 3ex 0em 3ex 0em ;
2698     padding: .3ex 1em .3ex 1em ;
2699     display: block ;
2700 }
2701
2702 .snugframed {
2703     margin: 3ex 0em 3ex 0em ;
2704     border: 1px solid black;
2705     border-radius: 0px ;
2706     display: block ;
2707 }
2708
2709 .framedleftbar {
2710     margin: 3ex 0em 3ex 0em ;
2711     border-left: 3pt solid black;
2712     border-radius: 0px ;
2713     padding: .3ex .2em .3ex 1em ;
2714     display: block ;
2715 }
2716
2717 .framedtitle {
2718     margin: 0em ;
2719     padding: 0em ;
2720     font-size: 130%
2721 }
2722
2723 .framedtitle p { padding: .3em }
2724
2725
2726 /* For the niceframe package: */
2727
```

```
2728 div.niceframe, div.curlyframe, div.artdecoframe, div.generalframe {
2729     padding: 1ex ;
2730     margin: 2ex auto ;
2731     border-radius: 2ex ;
2732 }
2733
2734 div.niceframe {
2735     border: 6px groove black ;
2736 }
2737
2738 div.curlyframe {
2739     border-left: 3px dotted black ;
2740     border-right: 3px dotted black ;
2741     border-radius: 6ex ;
2742 }
2743
2744 div.artdecoframe {
2745     border-left: 10px double black ;
2746     border-right: 10px double black ;
2747     border-radius: 6ex ;
2748 }
2749
2750 div.generalframe {
2751     border: 6px groove black ;
2752 }
2753
2754
2755
2756 dl {
2757     margin: 1ex 2em 1ex 0em;
2758     line-height: 1.3;
2759 }
2760
2761 dl dt {
2762     display: block ;
2763     float:left ;
2764     font-weight: bold;
2765     padding-right: 1em ;
2766 }
2767
2768 dl dd { display: block ; }
2769
2770 dl dd:after { content: "" ; display: block ; clear: both }
2771
2772 dl dd p { margin-top: 0em; }
2773
2774 dd ul, dd ol, dd dl { clear: both ; padding-top: 1ex }
2775
2776
2777 nav {
2778     font-family: "URW Classico", Optima, "Linux Biolinum O",
2779         "DejaVu Sans", "Bitstream Vera Sans",
2780         Geneva, Verdana, sans-serif ;
2781     margin-bottom: 4ex ;
2782 }
```

```
2783
2784 nav p {
2785     line-height: 1.2 ;
2786     margin-top:.5ex ;
2787     margin-bottom:.5ex;
2788     font-size: .9em ;
2789 }
2790
2791
2792
2793 img, img.hyperimage, img.borderimage {
2794     max-width: 600px;
2795     border: 1px solid silver;
2796     box-shadow: 3px 3px 3px #808080 ;
2797     padding: .5% ;
2798     margin: .5% ;
2799     background: none ;
2800 }
2801
2802 img.inlineimage{
2803     padding: 0px ;
2804     box-shadow: none ;
2805     border: none ;
2806     background: none ;
2807     margin: 0px ;
2808     display: inline-block ;
2809     border-radius: 0px ;
2810 }
2811
2812 img.logoimage{
2813     max-width: 300px ;
2814     box-shadow: 3px 3px 3px #808080 ;
2815     border: 1px solid black ;
2816     background:none ;
2817     padding:0 ;
2818     margin:.5ex ;
2819     border-radius: 10px ;
2820 }
2821
2822
2823 .section {
2824 /*
2825     To have each section float relative to each other:
2826 */
2827 /*
2828     display: block ;
2829     float: left ;
2830     position: relative ;
2831     background: white ;
2832     border: 1px solid silver ;
2833     padding: .5em ;
2834 */
2835     margin: 0ex .5em 0ex .5em ;
2836     padding: 0 ;
2837 }
```

```
2838
2839
2840 figure {
2841     margin: 5ex auto 5ex auto ;
2842     padding: 1ex 1em 1ex 1em ;
2843     overflow-x: auto ;
2844 }
2845
2846
2847 /* To automatically center images in figures: */
2848 /*
2849 figure img.inlineimage {
2850     margin: 0ex auto 0ex auto ;
2851     display: block ;
2852 }
2853 */
2854
2855 /* To automatically center minipages in figures: */
2856 /*
2857 figure div.minipage, figure div.minipage div.minipage {
2858     margin: 1ex auto 1ex auto ;
2859     display: block ;
2860 }
2861 */
2862
2863 figure figure { margin: 0pt }
2864
2865 figure div.minipage p { font-size: 85% ; }
2866
2867 figure.subfigure, figure.subtable {
2868     display: inline-block ; margin: 3ex 1em 3ex 1em ;
2869 }
2870
2871 div.figurecaption .minipage { margin:0 ; padding: 0 }
2872
2873 div.minipage figure { border: none ; box-shadow: none ; }
2874 div.minipage figure.table { margin: 0ex }
2875 div.minipage div.footnotes { margin: 1ex 2em 0ex 2em }
2876
2877 div.floatrow { text-align: center; }
2878
2879 div.floatrow figure { display: inline-block ; margin: 1ex 2% ; }
2880
2881 div.floatfoot { font-size: .85em ;
2882     border-top: 1px solid silver ; line-height: 1.2 ; }
2883
2884 div.figurecaption , .lstlistingtitle {
2885     font-size: .85em ;
2886     text-align: center ;
2887     font-weight: bold ;
2888     margin-top: 1ex ;
2889     margin-bottom: 1ex ;
2890 }
2891
2892 figure.subfigure div.figurecaption, figure.subtable div.figurecaption {
```

```
2893     border-bottom: none ; background: none ;
2894 }
2895
2896 div.nonfloatcaption {
2897     margin: 1ex auto 1ex auto ;
2898     font-size: .85em ;
2899     text-align: center ;
2900     font-weight: bold ;
2901 }
2902
2903 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
2904 figure div.floatrow div.minipage div.figurecaption {
2905     border: none ;
2906     background: none ;
2907 }
2908
2909
2910 /* For packages such as float, rotfloat, and algorithm2e: */
2911
2912 figure.boxed, figure.boxruled {
2913     border: 1px solid black ;
2914 }
2915
2916 figure.ruled {
2917     border-top: 1px solid black ;
2918     border-bottom: 1px solid black ;
2919     border-left: 0px ;
2920     border-right: 0px ;
2921     border-radius: 0px ;
2922     background: none ;
2923     box-shadow: none ;
2924 }
2925
2926 figure.ruled div.figurecaption, figure.boxruled div.figurecaption {
2927     border-top: 1px solid silver ;
2928     border-bottom: 1px solid silver ;
2929 }
2930
2931
2932 table {
2933     margin: 1ex auto 1ex auto ;
2934     border-collapse: separate ;
2935     border-spacing: 0px ;
2936     line-height: 1.3 ;
2937 }
2938
2939 table > tbody > tr.hline > td {border-top: 1px solid #808080 ; margin-top: 0ex ;
2940     margin-bottom: 0ex ; } /* for \hline */
2941
2942 tr.tbrule td {border-top: 1px solid black ; margin-top: 0ex ;
2943     margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
2944
2945 td {padding: .5ex .5em .5ex .5em ;}
2946
2947 table td.tdl { text-align: left ; vertical-align: middle ; }
```

```
2948 table td.tdc { text-align: center ; vertical-align: middle ; }
2949 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
2950 table td.tdbang { text-align: center ; vertical-align: middle ; }
2951 table td.tdr { text-align: right ; vertical-align: middle ; }
2952 table td.tdp { text-align: left ; vertical-align: bottom ; }
2953 table td.tdm { text-align: left ; vertical-align: middle ; }
2954 table td.tdb { text-align: left ; vertical-align: top ; }
2955 table td.tdP { text-align: center ; vertical-align: bottom ; }
2956 table td.tdM { text-align: center ; vertical-align: middle ; }
2957 table td.tdB { text-align: center ; vertical-align: top ; }
2958
2959 table td.tvertbarl { border-left: 1px solid black }
2960 table td.tvertbarldouble { border-left: 4px double black }
2961 table td.tvertbarr { border-right: 1px solid black }
2962 table td.tvertbarrdouble { border-right: 4px double black }
2963
2964 table td.tvertbarldash { border-left: 1px dashed black }
2965 table td.tvertbarldoubledash { border-left: 2px dashed black }
2966 table td.tvertbarrdash { border-right: 1px dashed black }
2967 table td.tvertbarrdoubledash { border-right: 2px dashed black }
2968
2969
2970 /* for cmidrules: */
2971 table td.tdrule {
2972     border-top: 1px solid #A0A0A0 ;
2973 }
2974
2975 table td.tdrulel {
2976     border-top-left-radius:.5em ;
2977     border-top: 1px solid #A0A0A0 ;
2978 }
2979
2980 table td.tdruler {
2981     border-top-right-radius:.5em ;
2982     border-top: 1px solid #A0A0A0 ;
2983 }
2984
2985 table td.tdrulelr {
2986     border-top-left-radius:.5em ;
2987     border-top-right-radius:.5em ;
2988     border-top: 1px solid #A0A0A0 ;
2989 }
2990
2991
2992 /* Margins of paragraphs inside table cells: */
2993 td.tdp p , td.tdprule p , td.tdP p , td.tdPrule p { padding-top: 1ex ;
2994     padding-bottom: 1ex ; margin: 0ex ; }
2995 td.tdm p , td.tdmrule p , td.tdM p , td.tdMrule p { padding-top: 1ex ;
2996     padding-bottom: 1ex ; margin: 0ex ; }
2997 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
2998     padding-bottom: 1ex ; margin: 0ex ; }
2999
3000 td.tdp , td.tdprule , td.tdP , td.tdPrule
3001     { padding: 0ex .5em 0ex .5em ; }
3002 td.tdm , td.tdmrule , td.tdM , td.tdMrule
```

```
3003     { padding: 0ex .5em 0ex .5em ; }
3004 td.tdb , td.tdbrule , td.tdB , td.tdBrule
3005     { padding: 0ex .5em 0ex .5em ; }
3006
3007
3008 /* table notes: */
3009 .tnotes {
3010     margin: 0ex 5% 1ex 5% ;
3011     padding: 0.5ex 1em 0.5ex 1em;
3012     font-size:.80em;
3013     text-align: left ;
3014 }
3015
3016 .minipage .tnotes {
3017     margin: 0pt ;
3018     padding: 0pt ;
3019 }
3020
3021 .tnotes dl dt p {margin-bottom:0px;}
3022
3023 .tnoteitemheader {margin-right: 1em;}
3024
3025
3026 /* for colortbl and cell color */
3027 div.cellcolor {
3028     width: 100% ;
3029     padding: .5ex .5em .5ex .5em ;
3030     margin: -.5ex -.5em -.5ex -.5em ;
3031 }
3032
3033
3034 /* for lyluatex */
3035 span.lyluatex {
3036     display: inline-block ;
3037 }
3038
3039 div.lyluatex p span.lateximagesource img {
3040     display: block ;
3041     margin-top: 3ex ;
3042     margin-bottom: 3ex ;
3043 }
3044
3045
3046 /* for bigdelim */
3047 .ldelim, .rdelim { font-size: 200% }
3048
3049
3050 /* center, flushleft, flushright environments */
3051 div.center{text-align:center;}
3052 div.center table {margin-left:auto;margin-right:auto;}
3053 div.flushleft{text-align:left;}
3054 div.flushleft table {margin-left:0em ; margin-right:auto;}
3055 div.flushright{text-align:right;}
3056 div.flushright table {margin-left:auto ; margin-right: 0em ;}
3057
```

```
3058
3059 /* Fancybox */
3060 div.Btrivlist table tr td {
3061     padding: .2ex 0em ;
3062 }
3063
3064
3065 /* program listing callouts: */
3066 span.callout {
3067     font-family: "DejaVu Sans", "Bitstream Vera Sans",
3068         Geneva, Verdana, sans-serif ;
3069     border-radius: .5em;
3070     background-color:black;
3071     color:white;
3072     padding:0px .25em 0px .25em;
3073     margin: 0 ;
3074     font-weight: bold;
3075     font-size:.72em ;
3076 }
3077
3078 div.programlisting pre.verbatim span.callout{
3079     font-size: .85em ;
3080 }
3081
3082 span.verbatim {
3083     font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
3084         "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
3085         "Courier New", monospace;
3086 }
3087
3088
3089
3090 div.titlehead
3091 {
3092     text-align: left ;
3093     font-style: normal ;
3094     font-weight: normal ;
3095     font-style: normal ;
3096     font-size: .8em ;
3097     margin: 1ex 0em 1ex 0em ;
3098 }
3099
3100 div.subject
3101 {
3102     text-align: center ;
3103     font-style: normal ;
3104     font-weight: bold ;
3105     font-style: normal ;
3106     font-size: .8em ;
3107     margin: 1ex 0em 1ex 0em ;
3108 }
3109
3110 div.published
3111 {
3112     text-align: center ;
```

```
3113     font-variant: normal ;
3114     font-style: italic ;
3115     font-size: 1em ;
3116     margin: 1ex 0em 1ex 0em ;
3117 }
3118
3119 div.subtitle
3120 {
3121     text-align: center ;
3122     font-variant: normal ;
3123     font-style: italic ;
3124     font-size: 1.25em ;
3125     margin: 1ex 0em 1ex 0em ;
3126 }
3127
3128 div.subtitle p { margin: 1ex ; }
3129
3130 div.author
3131 {
3132     font-variant: normal ;
3133     font-style: normal ;
3134     font-size: 1em ;
3135     margin: 1ex 0em 1ex 0em ;
3136 }
3137
3138 div.oneauthor {
3139     display: inline-block ;
3140     margin: 0ex 1em 0ex 1em ;
3141 }
3142
3143 /*
3144 div.author table {
3145     margin: 1ex auto 0ex auto ;
3146     background: none ;
3147 }
3148
3149 div.author table tbody tr td { padding: .25ex ; }
3150 */
3151
3152 span.affiliation {font-size: .85em ; font-variant: small-caps; }
3153
3154 div.titledate {
3155     text-align: center ;
3156     font-size: .85em ;
3157     font-style: italic;
3158     margin: 1ex 0em 1ex 0em ;
3159 }
3160
3161
3162 nav.topnavigation{
3163     text-align: left ;
3164     padding: 0.5ex 1em 0.5ex 1em ;
3165 /*     margin: 2ex 0em 3ex 0em ; */
3166     margin: 0 ;
3167     border-bottom: 1px solid silver ;
```

```
3168 border-top: 1px solid silver ;
3169 clear:both ;
3170 }
3171
3172 nav.botnavigation{
3173 text-align: left ;
3174 padding: 0.5ex 1em 0.5ex 1em ;
3175 /* margin: 3ex 0em 2ex 0em ; */
3176 margin: 0 ;
3177 border-top: 1px solid silver ;
3178 border-bottom: 1px solid silver ;
3179 clear:both ;
3180 }
3181
3182
3183 header {
3184 line-height: 1.2 ;
3185 font-size: 1em ;
3186 border-bottom: 1px solid silver ;
3187 margin: 0px ;
3188 padding: 2ex 1em 2ex 1em ;
3189 text-align:left ;
3190 }
3191
3192
3193 footer {
3194 font-size: .85em ;
3195 line-height: 1.2 ;
3196 margin-top: 1ex ;
3197 border-top: 1px solid silver ;
3198 padding: 2ex 1em 2ex 1em ;
3199 clear:both ;
3200 text-align:left ;
3201 }
3202
3203
3204 /* for \LinkHome, \LinkPrevious, and \LinkNext: */
3205 a.linkhome { font-weight:bold ; font-size: 1em ;}
3206
3207
3208 div.lateximagesource { padding: 0px ; margin: 0px ; display: none; }
3209
3210 img.lateximage{
3211 padding: 0pt ;
3212 margin: 0pt ;
3213 box-shadow: none ;
3214 border: none ;
3215 background: none ;
3216 max-width: 100% ;
3217 border-radius: 0ex ;
3218 border: none ;
3219 }
3220
3221
3222 /* The -1px right margin compensates for the 1px right border. */
```

```
3223 /* Without this -1px margin, the body container appears below instead */
3224 /* of floating to the side. */
3225 div.sidetoccontainer {
3226     font-family: "DejaVu Serif", "Bitstream Vera Serif",
3227         "Lucida Bright", Georgia, serif;
3228     float: left ;
3229     width: 20%;
3230     margin: 0pt -1px 3ex 0pt ;
3231     border-right: 1px solid silver;
3232     border-bottom: 1px solid silver;
3233     background: #FAF7F4 ;
3234     font-size:.9em ;
3235     border-radius: 0px 0px 20px 0px ;
3236 }
3237
3238 div.sidetoccontents {
3239     overflow-y: auto ;
3240     width: 100% ;
3241     text-align: left ;
3242 }
3243
3244
3245 nav.sidetoc p {line-height:1.2 ; margin: 1ex .5em 1ex .5em ;
3246     text-indent: 0 ; }
3247
3248 nav.sidetoc p a {color:black ; font-size: .7em ;}
3249
3250 div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
3251     border-bottom: 1px solid silver ; }
3252
3253 nav.sidetoc a:hover {text-decoration: underline ; }
3254
3255
3256
3257 section.textbody { margin: 0ex 1em 0ex 1em ;}
3258
3259
3260 div.multicolshheading { -webkit-column-span: all;
3261     -moz-column-span: all; column-span: all; }
3262 div.multicols { -webkit-columns: 3 380px ;
3263     -moz-columns: 3 380px ; columns: 3 380px ; }
3264 div.multicols p {margin-top: 0ex}
3265
3266
3267 /* Used for xfrac and nicefrac: */
3268 span.numerator {
3269     font-size: 60% ;
3270     vertical-align: .4em ;
3271 }
3272
3273 span.denominator {
3274     font-size: 60%
3275 }
3276
3277
```

```
3278 /* Used for algorithm2e: */
3279 div.alg2evline{
3280     margin-left: 1em ;
3281     padding-left: 1em ;
3282     border-left: 1px solid black ;
3283     border-radius: 0px 0px 0px 1ex ;
3284 }
3285
3286 div.alg2evsline{
3287     margin-left: 1em ;
3288     padding-left: 1em ;
3289     border-left: 1px solid black ;
3290 }
3291
3292 div.alg2enoline{
3293     margin-left: 1em ;
3294     padding-left: 1em ;
3295 }
3296
3297 span.alg2elinenumber{
3298     margin-right: .5em ;
3299     font-size: 50% ;
3300     color: red ;
3301 }
3302
3303
3304 /* Used for algorithmicx: */
3305 span.floatright { float: right ; }
3306
3307
3308 /* keyfloat and tocdata: */
3309 .floatnotes {
3310     margin: 0ex 5% 0ex 5% ;
3311     padding: 0ex 1em 0ex 1em ;
3312     font-size:.80em ;
3313     text-align: left ;
3314 }
3315
3316 .authorartist{
3317     display:block ;
3318     font-size:.70em ;
3319     font-style: italic;
3320 }
3321
3322 nav .authorartist{ display:inline; }
3323
3324
3325
3326 /* Native LaTeX theorems: */
3327
3328 .theoremcontents { font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ; }
3329 .theoremlabel { font-style: normal; font-weight: bold ; margin-right: .5em ; }
3330
3331
3332 /* theorem, amsthm, and ntheorem packages */
```

```
3333
3334 span.theoremheader,
3335 span.theoremheaderplain,
3336 span.theoremheaderdefinition,
3337 span.theoremheaderbreak,
3338 span.theoremheadermarginbreak,
3339 span.theoremheaderchangebreak,
3340 span.theoremheaderchange,
3341 span.theoremheadermargin
3342 {
3343     font-style:normal ; font-weight: bold ; margin-right: 1em ;
3344 }
3345
3346 span.amsthmnameplain,
3347 span.amsthmnamedefinition,
3348 span.amsthmnumberplain,
3349 span.amsthmnumberdefinition
3350 {
3351     font-style:normal ; font-weight: bold ;
3352 }
3353
3354
3355 span.amsthmnameremark,
3356 span.amsthmnumberremark
3357 {font-style:italic ; font-weight: normal ; }
3358
3359
3360 span.amsthmnoteplain,
3361 span.amsthmnotedefinition
3362 {font-style:normal ;}
3363
3364
3365 span.theoremheaderremark,
3366 span.theoremheaderproof,
3367 span.amsthmproofname
3368 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
3369
3370 span.theoremheadersc
3371 {
3372     font-style:normal ;
3373     font-variant: small-caps ;
3374     font-weight: normal ;
3375     margin-right: 1em ;
3376 }
3377
3378 .theoremdemark {float:right}
3379
3380 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
3381 div.theorembodybreak, div.theorembodynonumberbreak,
3382 div.theorembodymarginbreak,
3383 div.theorembodychangebreak,
3384 div.theorembodychange,
3385 div.theorembodymargin
3386 {
3387     font-style:italic;
```

```
3388     margin-top: 3ex ; margin-bottom: 3ex ;
3389 }
3390
3391 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
3392 div.theorembodyplainupright, nonumberplainuprightsc,
3393 div.amsthmbodydefinition, div.amsthmbodyremark,
3394 div.amsthmproof
3395 {
3396     font-style: normal ;
3397     margin-top: 3ex ; margin-bottom: 3ex ;
3398 }
3399
3400 span.amsthmnoteremark {}
3401
3402
3403 /* For the backnaur package: */
3404 div.backnaur {
3405     display: block ;
3406     margin: 2ex 2em 2ex 2em ;
3407 }
3408
3409 div.backnaur p {
3410     margin: .25ex 0ex .25ex 0ex ;
3411 }
3412
3413 div.backnaurprod {
3414     display: inline-block ;
3415     min-width: 8em ;
3416     text-align:right ;
3417 }
3418
3419 div.backnaurdesc {
3420     display: inline-block ;
3421 }
3422
3423
3424 /* For the notes package: */
3425 div.notesimportantnote, div.noteswarningnote, div.notesinformationnote {
3426     clear: both ;
3427     margin: 2ex 2em 2ex 2em ;
3428     border: 1px solid silver ;
3429 }
3430
3431 div.notesicon {
3432     float:left ;
3433     display: inline-block ;
3434     background: gold ;
3435     padding: 0ex 1em 0ex 1em ;
3436     margin-right: 1em ;
3437     font-weight: bold ;
3438 }
3439
3440 div.notescontents { font-style: italic }
3441
3442
```

```
3443 /* nolbreaks package: */
3444 span.nolbreaks { white-space: nowrap ; }
3445
3446
3447 /*
3448 For CSS LaTeX and related logos:
3449 Based on spacing demonstrated by the metafont package.
3450 */
3451
3452 .latexlogofont {
3453     font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3454         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3455     font-variant: normal ;
3456 }
3457
3458 .latexlogo {
3459     font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3460         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3461     font-size: 1.1em;
3462 }
3463
3464 .latexlogosup {
3465     text-transform: uppercase;
3466     letter-spacing: .03em ;
3467     font-size: 0.7em;
3468     vertical-align: 0.25em;
3469     margin-left: -0.4em;
3470     margin-right: -0.15em;
3471 }
3472
3473 .latexlogosub {
3474     text-transform: uppercase;
3475     vertical-align: -0.27ex;
3476     margin-left: -0.08em;
3477     margin-right: -0.07em;
3478     font-size: 1em;
3479 }
3480
3481 .latexlogotwoe {
3482     text-transform: none ;
3483     font-variant-numeric: oldstyle-nums ;
3484 }
3485
3486 .latexlogotwoesub {
3487     font-style: italic ;
3488     vertical-align: -0.27ex;
3489     margin-left: -0.11em;
3490     margin-right: -0.1em;
3491     font-size: 1em;
3492 }
3493
3494 .xelatexlogo {
3495     font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
3496         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3497     letter-spacing: .03em ;
```

```
3498     font-size: 1.1em;
3499 }
3500
3501 .xelatexlogosub {
3502     vertical-align: -0.27ex;
3503     margin-left: -0.0667em;
3504     margin-right: -.05em;
3505     font-size: 1em;
3506     letter-spacing: .03em ;
3507 }
3508
3509 .amslogo {
3510     font-family: "TeXGyreChorus","URW Chancery L",
3511         "Apple Chancery","ITC Zapf Chancery","Monotype Corsiva",
3512         "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
3513         "Hoefler Text", Times, "Times New Roman", serif ;
3514     font-style: italic ;
3515 }
3516
3517 .lyxlogo {
3518     font-family: "URW Classico", Optima, "Linux Biolinum O",
3519         "DejaVu Sans", "Bitstream Vera Sans", Geneva,
3520         Verdana, sans-serif ;
3521 }
3522
3523
3524 /* Only display top and bottom navigation if a small screen: */
3525 /* Hide the sidetoc if a small screen: */
3526 nav.topnavigation { display:none; }
3527 nav.botnavigation { display:none; }
3528
3529 /* Only display the sidetoc's webpage title if a small screen */
3530 span.sidetocthetitle { display: none }
3531
3532 @media screen and (max-width: 50em) {
3533     div.sidetoccontainer {
3534         float: none ;
3535         width: 100% ;
3536         padding: 0 ;
3537         border-radius: 0 ;
3538         border-bottom: 1px solid black ;
3539         border-top: 1px solid black ;
3540         box-shadow: none ;
3541     }
3542     span.sidetocthetitle { display: inline }
3543     nav.topnavigation { display:block }
3544     nav.botnavigation { display:block }
3545     div.bodycontainer { width: 100% }
3546     .marginpar {
3547         max-width: 100%;
3548         float: none;
3549         display:block ;
3550         margin: 1ex 1em 1ex 1em ;
3551     }
3552 }
```

```

3553
3554 @media print {
3555     body {
3556         font-family: "Linux Libertine O",
3557             "DejaVu Serif", "Bitstream Vera Serif",
3558             "Liberation Serif", "Nimbus Roman No 9 L",
3559             "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3560     }
3561     div.sidetoccontainer { display:none; }
3562     nav.topnavigation { display: none; }
3563     nav.botnavigation { display: none; }
3564     div.bodycontainer { width: 100% }
3565 }
3566
3567 @media handheld {
3568     div.sidetoccontainer { display:none; }
3569     nav.topnavigation { display:block }
3570     nav.botnavigation { display:block }
3571     div.bodycontainer { width: 100% }
3572 }
3573
3574 @media projection {
3575     div.sidetoccontainer { display:none; }
3576     nav.topnavigation { display:block }
3577     nav.botnavigation { display:block }
3578     div.bodycontainer { width: 100% }
3579 }
3580 \end{filecontents*}
3581 % \end{Verbatim}% for syntax highlighting
3582 \end{LWRwriteconf}

```

39.5 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:

```

3583 \begin{LWRwriteconf}
3584 \begin{filecontents*}[overwrite]{lwarp_sagebrush.css}
3585 @import url("lwarp.css") ;
3586
3587
3588 A:link {color:#105030 ; text-decoration: none ; }
3589 A:visited {color:#705030 ; text-shadow:1px 1px 2px #a0a0a0;}
3590 A:hover {color:#006000 ; text-decoration: underline ; text-shadow:0px 0px 2px #a0a0a0;}
3591 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
3592
3593
3594
3595 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3596 {
3597     font-family: "URW Classico", Optima, "Linux Biolinum O",
3598         "Linux Libertine O", "Liberation Serif",

```

```
3599     "Nimbus Roman No 9 L", "FreeSerif",
3600     "Hoefler Text", Times, "Times New Roman", serif;
3601 font-variant: small-caps ;
3602 font-weight: normal ;
3603 color: #304070 ;
3604 text-shadow: 2px 2px 3px #808080;
3605 }
3606
3607 h1 { /* title of the entire website, used on each page */
3608     font-variant: small-caps ;
3609     color: #304070 ;
3610     text-shadow: 2px 2px 3px #808080;
3611     background-color: #F7F7F0 ;
3612     background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
3613 }
3614
3615 h1 {
3616 border-bottom: 1px solid #304070;
3617 /* border-top: 2px solid #304070; */
3618 }
3619
3620 h2 {
3621 border-bottom: 1px solid #304070;
3622 /* border-top: 2px solid #304070; */
3623     background-color: #F7F7F0 ;
3624     background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
3625 }
3626
3627
3628
3629 div.abstract {
3630     background: #f5f5eb ;
3631     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3632
3633 border: 1px solid silver;
3634     border-radius: 1em ;
3635 }
3636
3637 div.abstract dl {line-height:1.5;}
3638 div.abstract dt {color:#304070;}
3639
3640 div.abstracttitle{
3641     font-family: "URW Classico", Optima, "Linux Biolinum O",
3642         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3643         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3644     font-weight:bold;
3645     font-variant: small-caps ;
3646     font-size:1.5em;
3647     border-bottom: 1px solid silver ;
3648     color: #304070 ;
3649     text-align: center ;
3650     text-shadow: 1px 1px 2px #808080;
3651 }
3652
3653 span.abstracrunintitle{
```

```
3654     font-family: "URW Classico", Optima, "Linux Biolinum O",
3655           "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3656           "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3657     font-weight:bold;
3658 }
3659
3660
3661 div.epigraph, div.dictum {
3662     background: #f5f5eb ;
3663     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3664
3665     border: 1px solid silver ;
3666     border-radius: 1ex ;
3667     box-shadow: 3px 3px 3px #808080 ;
3668 }
3669
3670
3671 .example {
3672     background-color: #f5f5eb ;
3673     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3674
3675 }
3676
3677 div.exampletitle{
3678     font-family: "URW Classico", Optima, "Linux Biolinum O",
3679           "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3680           "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3681     font-weight:bold;
3682     font-variant: small-caps ;
3683     border-bottom: 1px solid silver ;
3684     color: #304070 ;
3685     text-align: center ;
3686     text-shadow: 1px 1px 2px #808080;
3687 }
3688
3689
3690 .sidebar {
3691     background-color: #f5f5eb ;
3692     background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
3693
3694 }
3695
3696 div.sidebartitle{
3697     font-family: "URW Classico", Optima, "Linux Biolinum O",
3698           "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3699           "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3700     font-weight:bold;
3701     font-variant: small-caps ;
3702     border-bottom: 1px solid silver ;
3703     color: #304070 ;
3704     text-align: center ;
3705     text-shadow: 1px 1px 2px #808080;
3706 }
3707
3708
```

```
3709 .fancyvrblabel {
3710     font-family: "URW Classico", Optima, "Linux Biolinum O",
3711         "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
3712         "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
3713     font-weight:bold;
3714     font-variant: small-caps ;
3715     font-size: 1.5em ;
3716     color: #304070 ;
3717     text-align: center ;
3718     text-shadow: 1px 1px 2px #808080;
3719 }
3720
3721 div.minipage {
3722     background-color: #eeeeee7 ;
3723     border: 1px solid silver ;
3724     border-radius: 1ex ;
3725 }
3726
3727 table div.minipage { background: none ; border: none ; }
3728
3729 div.framebox div.minipage {border:none ; background:none}
3730
3731 section.textbody > div.minipage {
3732     box-shadow: 3px 3px 3px #808080 ;
3733 }
3734
3735 div.fboxBlock div.minipage { box-shadow: none ; }
3736
3737 .framed .minipage , .framedleftbar .minipage {
3738     border: none ;
3739     background: none ;
3740     padding: 0ex ;
3741     margin: 0ex ;
3742 }
3743
3744 figure.figure .minipage, div.figurecaption .minipage { border: none; }
3745
3746 div.marginblock div.minipage ,
3747 div.marginparblock div.minipage
3748     { border: none; }
3749
3750 figure , div.marginblock {
3751     background-color: #eeeeee7 ;
3752     border: 1px solid silver ;
3753     border-radius: 1ex ;
3754     box-shadow: 3px 3px 3px #808080 ;
3755 }
3756
3757 figure figure {
3758     border: 1px solid silver ;
3759     margin: 0em ;
3760     box-shadow: none ;
3761 }
3762
3763 /*
```

```
3764 div.figurecaption {
3765     border-top: 1px solid silver ;
3766     border-bottom: 1px solid silver ;
3767     background-color: #e8e8e8 ;
3768 }
3769 */
3770
3771
3772 div.table {
3773     box-shadow: 3px 3px 3px #808080 ;
3774 }
3775
3776 /*
3777 .tnotes {
3778     background: #e8e8e8;
3779     border: 1px solid silver;
3780 }
3781 */
3782
3783
3784 nav.topnavigation{
3785     background-color: #b0b8b0 ;
3786     background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0) ;
3787 }
3788
3789 nav.botnavigation{
3790     background-color: #b0b8b0 ;
3791     background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
3792 }
3793
3794
3795
3796 header{
3797     background-color: #F7F7F0 ;
3798     background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
3799 }
3800
3801 footer{
3802     background-color: #F7F7F0 ;
3803     background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
3804 }
3805
3806
3807
3808 div.sidetoccontainer {
3809     background-color: #F7F7F0 ;
3810     background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
3811     box-shadow: 3px 3px 3px #808080 ;
3812 }
3813
3814 div.sidetocitle {color: #304070 ; }
3815
3816 nav.sidetoc a:hover {
3817     color:#006000 ;
3818     text-decoration: none ;
```

```

3819     text-shadow:0px 0px 2px #a0a0a0;
3820 }
3821
3822
3823 @media screen and (max-width: 45em) {
3824     div.sidetoccontainer { border-radius: 0 ; }
3825 }
3826
3827
3828 \end{filecontents*}
3829 % \end{Verbatim}% for syntax highlighting
3830 \end{LWRwriteconf}

```

39.6 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: 3831 \begin{LWRwriteconf}
3832 \begin{filecontents*}[overwrite]{lwarp_formal.css}
3833 @import url("lwarp.css") ;
3834
3835
3836
3837 A:link {color:#802020 ; text-decoration:none; }
3838 A:visited {color:#802020 ; text-shadow:none ;}
3839 A:hover {color:#400000 ; text-shadow:none ;}
3840 A:active {color:#C00000 ; text-shadow:none ;}
3841
3842
3843 body {
3844     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3845         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3846         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3847         "Times New Roman", serif;
3848     background: #fffcf5;
3849 }
3850
3851 span.textrm {
3852     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3853         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3854         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3855         "Times New Roman", serif;
3856 }
3857
3858 span.textsf {
3859     font-family: "DejaVu Sans", "Bitstream Vera Sans",
3860         Geneva, Verdana, sans-serif ;
3861 }
3862
3863
3864

```

```
3865 div.book, h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
3866 {
3867     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3868         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3869         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3870         "Times New Roman", serif;
3871     color: #800000 ;
3872     text-shadow: none ;
3873 }
3874
3875 h1, h2 {
3876     background-color: #fffcf5 ;
3877     background-image: none ;
3878     border-bottom: 1px solid #808080;
3879 /*     border-top: 2px solid #808080; */
3880 }
3881
3882 div.abstracttitle {
3883     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3884         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3885         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3886         "Times New Roman", serif;
3887     color: black ;
3888     text-shadow: none ;
3889 }
3890
3891 span.abstractrunintitle {
3892     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3893         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3894         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3895         "Times New Roman", serif;
3896     color: black ;
3897     text-shadow: none ;
3898 }
3899
3900 div.abstract { font-size: 100% }
3901
3902 .sidebar {
3903     background: #fffcf5;
3904     background-image: none ;
3905     margin: 2em 5% 2em 5%;
3906     padding: 0.5em 1em;
3907     border: none ;
3908     border-top : 1px solid silver;
3909     border-bottom : 1px solid silver;
3910     font-size: 90% ;
3911 }
3912
3913 div.sidebartitle{
3914     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3915         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3916         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3917         "Times New Roman", serif;
3918     color: #800000 ;
3919     text-shadow: none ;
```

```
3920     border: none ;
3921 }
3922
3923 .example {
3924     background: #ffffcf5;
3925     background-image: none ;
3926     margin: 2em 5% 2em 5%;
3927     padding: 0.5em 1em;
3928     border: none ;
3929     border-top : 1px solid silver;
3930     border-bottom : 1px solid silver;
3931 }
3932
3933 div.exampletitle{
3934     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3935         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3936         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3937         "Times New Roman", serif;
3938     color: #800000 ;
3939     text-shadow: none ;
3940     border: none ;
3941 }
3942
3943 div.fancyvrblabel{
3944     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3945         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3946         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3947         "Times New Roman", serif;
3948     color: #800000 ;
3949     text-shadow: none ;
3950     border: none ;
3951 }
3952
3953
3954
3955 figure {
3956     margin: 5ex 5% 5ex 5% ;
3957     padding: 1ex 1em 1ex 1em ;
3958     background-color: #ffffcf5 ;
3959     overflow-x: auto ;
3960     border: none ;
3961 /*     border-top: 1px solid silver; */
3962 /*     border-bottom: 1px solid silver; */
3963 }
3964
3965
3966 div.figurecaption , .lstlisting {
3967     border: none ;
3968 /*     border-top: 1px solid silver ; */
3969 /*     border-bottom: 1px solid silver ; */
3970     background-color: #ffffcf5 ;
3971 }
3972
3973 .tnotes {
3974     background: #ffffcf5 ;
```

```
3975 border-top: 1px solid silver ;
3976 border-bottom: 1px solid silver ;
3977 }
3978
3979 .theorem {
3980     background: none ;
3981 }
3982
3983 .minipage {
3984     background-color: #fffcf5 ;
3985     border: none ;
3986 }
3987
3988 div.floatrow figure { border: none ; }
3989
3990 figure figure { border: none ; }
3991
3992
3993 nav.toc, nav.lof, nav.lot, nav.lol {
3994     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
3995         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
3996         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
3997         "Times New Roman", serif;
3998 }
3999
4000 div.sidetoccontainer {
4001     font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
4002         "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
4003         "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
4004         "Times New Roman", serif;
4005     background-image: linear-gradient(to bottom, #fffcf5, #C0C0C0);
4006 }
4007
4008 div.sidetoc{
4009     color: #800000 ;
4010 }
4011
4012 header{
4013     background-color: #e0e0e0 ;
4014     background-image: linear-gradient(to top, #fffcf5, #b0b0b0);
4015     text-align:center ;
4016 }
4017
4018 footer{
4019     background-color: #e0e0e0 ;
4020     background-image: linear-gradient(to bottom, #fffcf5, #b0b0b0);
4021     padding: 2ex 1em 2ex 1em ;
4022     text-align:left ;
4023 }
4024
4025 nav.botnavigation {
4026     background: #dedcd5 ;
4027     border-top: 1px solid black ;
4028 }
4029 \end{filecontents*}
```

```
4030 % \end{Verbatim}% for syntax highlighting
4031 \end{LWRwriteconf}
```

39.7 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:

```
4032 \begin{LWRwriteconf}
4033 \begin{filecontents*}[overwrite]{sample_project.css}
4034 /* ( --- Start of project.css --- ) */
4035 /* ( --- A sample project-specific CSS file for lwarp --- ) */
4036
4037 /* Uncomment one of the following: */
4038 @import url("lwarp.css") ;
4039 /* @import url("lwarp_formal.css") ; */
4040 /* @import url("lwarp_sagebrush.css") ; */
4041
4042 /* Project-specific CSS setting follow here. */
4043 /* . . . */
4044
4045 /* ( --- End of project.css --- ) */
4046 \end{filecontents*}
4047 % \end{Verbatim}% for syntax highlighting
4048 \end{LWRwriteconf}
```

39.8 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:

```
4049 \begin{LWRwriteconf}
4050 \begin{filecontents*}[overwrite]{lwarp.ist}
4051 preamble
4052 "\begin{theindex}
4053   \providecommand*\lettergroupDefault[1]{}
4054   \providecommand*\lettergroup[1]{%
4055     \par\textbf{#1}\par
4056     \nopagebreak
4057   }
4058 "
4059 headings_flag 1
4060 heading_prefix "
4061 \lettergroup{"
4062 heading_suffix "}"
4063 delim_0 " , \hyperindexref{"
```

```

4064 delim_1 ", \hyperindexref{"
4065 delim_2 ", \hyperindexref{"
4066 delim_n "}, \hyperindexref{"
4067 delim_r "} -- \hyperindexref{"
4068 delim_t "]"
4069 page_compositor "."
4070 \end{filecontents*}
4071 % \end{Verbatim}% for syntax highlighting
4072 \end{LWRwriteconf}

```

39.9 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:

```

4073 \begin{LWRwriteconf}
4074 \begin{filecontents*}[overwrite]{lwarp.xdy}
4075 (require "tex/inputenc/latin.xdy")
4076 (merge-rule "\\PS *" "Postscript")
4077 (require "texindy.xdy")
4078 (require "page-ranges.xdy")
4079 (require "book-order.xdy")
4080 (define-location-class "arabic-page-numbers"
4081   ("arabic-numbers") :min-range-length 1)
4082 (require "makeindex.xdy")
4083 (define-attributes (("hyperindexref")))
4084 (markup-locref :open "\hyperindexref{" :close "}")
4085 (markup-locref :open "\hyperindexref{" :close "}" :attr "hyperpage")
4086 (markup-locref :open "\textbf{\hyperindexref{" :close "}" :attr "textbf")
4087 (markup-locref :open "\textit{\hyperindexref{" :close "}" :attr "textit")
4088 (define-location-class-order ("roman-page-numbers"
4089   "arabic-page-numbers"
4090   "alpha-page-numbers"
4091   "Roman-page-numbers"
4092   "Alpha-page-numbers"
4093   "see"
4094   "seealso"))
4095 \end{filecontents*}
4096 % \end{Verbatim}% for syntax highlighting
4097 \end{LWRwriteconf}

```

39.10 lwarp_one_limage.cmd

File lwarp_one_limage.cmd Used by lwarp to help make lateximages when using WINDOWS.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The arguments are each of the three fields from `<project>-images.txt`, and also the base name of the source file.

MiKTeX does not allow file `lwarp_one_limage.cmd` to be created directly by *lwarpmk*, so `lwarp_one_limage.txt` is created instead, then copied to `lwarp_one_limage.cmd` by *lwarpmk*. This occurs each time *lwarpmk* used to create lateximages.

Config file:

```

4098 \begin{LWRwriteconf}
4099 \immediate\openout\LWR@quickfile=lwarp_one_limage.txt
4100 \immediate\write\LWR@quickfile{%
4101   pdfseparate -f \LWRpercent 1 -l \LWRpercent 1 \LWRpercent 4_html.pdf %
4102   \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent\LWRpercent d.pdf%
4103 }
4104 \immediate\write\LWR@quickfile{%
4105   pdfcrop --hires \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf %
4106   \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
4107 }
4108 \immediate\write\LWR@quickfile{%
4109   pdftocairo -svg -noshrink \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf %
4110   \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.svg%
4111 }
4112 \immediate\write\LWR@quickfile{%
4113   del \LWR@ImagesDirectory\OSPathSymbol\LWRpercent 3.pdf%
4114 }
4115 \immediate\write\LWR@quickfile{%
4116   del \LWR@ImagesDirectory\OSPathSymbol lateximagetemp-\LWRpercent 1.pdf%
4117 }
4118 \immediate\write\LWR@quickfile{exit}
4119 \immediate\closeout\LWR@quickfile
4120 \end{LWRwriteconf}

```

39.11 lwarp_mathjax.txt

File `lwarp_mathjax.txt` The default MathJax script used by *lwarp* when using `MATHJAX`. A recent version of MathJax is used, as served by the recommended repository. Adjustments are made to allow \LaTeX to control the equation tags.

`\MathJaxFilename` determines which script file is copied into the HTML pages, and defaults to `lwarp_mathjax.txt`. The script files must be present when compiling the project, but do not need to be present when distributing the resulting HTML files.

custom script To generate a custom script, such as to use a local repository, copy `lwarp_mathjax.txt` to a new file, make changes while keeping *lwarp*'s adjustments for equation numbering, and use `\MathJaxFilename` to select new filename.

Config file:

```

4121 \begin{LWRwriteconf}
4122 \begin{filecontents*}[overwrite]{lwarp_mathjax.txt}
4123 <!-- https://groups.google.com/forum/#!topic/
4124   mathjax-users/jUtewUcE2bY -->
4125 <script type="text/x-mathjax-config">

```

```

4126 MathJax.Hub.Register.StartupHook("TeX AMSmath Ready",function () {
4127     var seteqsectionDefault = {name: "", num: 0};
4128     var seteqsections = {}, seteqsection = seteqsectionDefault;
4129     var TEX = MathJax.InputJax.TeX, PARSE = TEX.Parse;
4130     var AMS = MathJax.Extension["TeX/AMSmath"];
4131     TEX.Definitions.Add({
4132     macros: {
4133         seteqsection: "mySection",
4134         seteqnumber: "mySetEqNumber"
4135     }
4136 });
4137
4138     PARSE.Augment({
4139     mySection: function (name) {
4140         seteqsection.num = AMS.number;
4141         var n = this.GetArgument(name);
4142         if (n === "") {
4143             seteqsection = seteqsectionDefault;
4144         } else {
4145             if (!seteqsections["_"+n])
4146                 seteqsections["_"+n] = {name:n, num:0};
4147             seteqsection = seteqsections["_"+n];
4148         }
4149         AMS.number = seteqsection.num;
4150     },
4151     mySetEqNumber: function (name) {
4152         var n = this.GetArgument(name);
4153         if (!n || !n.match(/^ *[0-9]+ *$/))
4154             n = "";
4155         else
4156             n = parseInt(n)-1;
4157         <!-- $ syntax highlighting -->
4158         if (n === "" || n < 1)
4159             TEX.Error
4160                 ("Argument to "+name+" should be a positive integer");
4161         AMS.number = n;
4162     }
4163 });
4164     MathJax.Hub.Config({
4165     TeX: {
4166         equationNumbers: {
4167             formatTag: function (n) {
4168                 <!-- if not numeric, don't include the chapter -->
4169                 if (!n.match(/^ *[0-9]+ *$/ ))
4170                     <!-- $ syntax highlighting -->
4171                     return "("+(n).replace(/\^\./, "")+")" ;
4172                 else
4173                     return "("+(seteqsection.name+"."+n).replace(/\^\./, "")+")" ;
4174             },
4175             formatID: function (n) {
4176                 n = (seteqsection.name+'.'+n).replace
4177                     (/[:"'<>&]/g, "").replace(/\^\./, "");
4178                 return 'mjax-eqn-' + n;
4179             }
4180         }

```

```

4181     }
4182   });
4183 });
4184 </script>
4185
4186 <!-- http://docs.mathjax.org/en/latest/options/ThirdParty.html -->
4187 <script type="text/x-mathjax-config">
4188   MathJax.Ajax.config.path["Contrib"] =
4189     "https://cdn.mathjax.org/mathjax/contrib";
4190 </script>
4191
4192 <script type="text/x-mathjax-config">
4193 MathJax.Hub.Config({
4194   TeX: {
4195     extensions: ["autoload-all.js"] ,
4196     equationNumbers: {
4197       autoNumber: "AMS"
4198     }
4199   }
4200 });
4201 </script>
4202
4203 <!-- Alternative CDN provider: -->
4204 <script type="text/javascript" async
4205 src="https://cdnjs.cloudflare.com/ajax/libs/mathjax/2.7.6/MathJax.js?config=TeX-AMS_HTML-full">
4206 </script>
4207
4208 <!-- No longer supported after April 30, 2017: -->
4209 <!--
4210 <script
4211   src="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=TeX-AMS_HTML-full">
4212 </script>
4213 -->
4214
4215 \end{filecontents*}
4216 % \end{Verbatim}% for syntax highlighting
4217 \end{LWRwriteconf}

```

39.12 `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`.

```

4218 \begin{LWRcreate{lwarpmk}

4219 \begin{filecontents*}[overwrite]{lwarpmk.lua}
4220 #!/usr/bin/env texlua
4221
4222 -- Copyright 2016-2020 Brian Dunn
4223
4224
4225 printversion = "v0.85"
4226 requiredconfversion = "2" -- also at *lwarpmk.conf
4227
4228 function printhelp ()
4229 print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.") ;
4230 end
4231
4232
4233 function printusage ()
4234 --
4235 -- Print the usage of the lwarpmk command:
4236 --
4237 print ( [[
4238
4239 lwarpmk print [-p project]: Compile the print version if necessary.
4240 lwarpmk print1 [-p project]: Forced single compile of the print version.
4241 lwarpmk printindex [-p project]: Process print indexes.
4242 lwarpmk printglossary [-p project]: Process the glossary for the print version.
4243 lwarpmk html [-p project]: Compile the HTML version if necessary.
4244 lwarpmk html1 [-p project]: Forced single compile of the HTML version.
4245 lwarpmk htmlindex [-p project]: Process HTML indexes.
4246 lwarpmk htmlglossary [-p project]: Process the glossary for the html version.
4247 lwarpmk again [-p project]: Touch the source code to trigger recompiles.
4248 lwarpmk limages [-p project]: Process the "lateximages" created by lwarp.sty.
4249 lwarpmk pdftohtml [-p project]:
4250     For use with latexmk or a Makefile:
4251     Converts project_html.pdf to project_html.html and individual HTML files.
4252     Finishes the HTML conversion even if there was a compile error.
4253 lwarpmk pdftosvg <list of file names>: Converts each PDF file to SVG.
4254 lwarpmk epstopdf <list of file names>: Converts each EPS file to PDF.
4255 lwarpmk clean [-p project]: Remove *.aux, *.toc, *.lof/t,
4256     *.idx, *.ind, *.log, *_html_inc.*, .gl*,
4257     *_html.pdf, *_html.html, *_html.sidetoc
4258 lwarpmk cleanall [-p project]: Remove auxiliary files, project.pdf, *.html
4259 lwarpmk cleanlimages: Removes all images from the "lateximages" directory.
4260 lwarpmk -h: Print this help message.
4261 lwarpmk --help: Print this help message.
4262
4263 ]] )
4264 -- printconf ()
4265 end

```

```

4266
4267
4268 function splitfilename ( pathandfilename )
4269 --
4270 -- Separates out the path and extension from a filename.
4271 -- Returns path, filename with extension, and extension.
4272 -- Ex: thispath, thisfilename, thisextension = splitfilename ("path/to/filename.ext")
4273 --
4274 -- https://www.fhug.org.uk/wiki/wiki/doku.php?id=plugins:code_snippets:
4275 --     split_filename_in_to_path_filename_and_extension
4276 --
4277     if lfs.attributes(pathandfilename,"mode") == "directory" then
4278         local strPath = pathandfilename:gsub("[\\/]$", "") -- $ (syntax highlighting)
4279         return strPath.."\\", "", ""
4280     end
4281     pathandfilename = pathandfilename.."."
4282     return pathandfilename:match("^(-)([\\/]%)%.(^[\\/%.]-)?.$")
4283 end
4284
4285
4286 function splitfile (destfile,sourcefile)
4287 --
4288 -- Split one large sourcefile into a number of files,
4289 -- starting with destfile.
4290 -- The file is split at each occurrence of <!--|Start file|newfilename|*
4291 --
4292 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
4293 local sfile = io.open(sourcefile)
4294 io.output(destfile)
4295 for line in sfile:lines() do
4296     i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*|)" ) ;
4297     if ( (i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
4298         -- split the file
4299         io.output(newfilename) ;
4300     else
4301         -- not a splitpoint
4302         io.write (line .. "\n") ;
4303     end
4304 end -- do
4305 io.close(sfile)
4306 end -- function
4307
4308
4309 function cvalueerror ( line, linenum , cvalue )
4310 --
4311 -- Incorrect value, so print an error and exit.
4312 --
4313     print ("lwarpmk: ===")
4314     print ("lwarpmk: " .. linenum .. " : " .. line ) ;
4315     print (
4316         "lwarpmk: incorrect variable value \"" .. cvalue ..
4317         "\" in lwarpmk.conf.\n"
4318     ) ;
4319     print ("lwarpmk: ===")
4320 --     printconf () ;

```

```
4321 os.exit(1) ;
4322 end
4323
4324
4325 function printhowtorecompile ()
4326 -- Tells the user how to recompile to regenerate the configuration files.
4327 print ("lwarpmk: The configuration files lwarpmk.conf and "..sourcename..".lwarpmkconf" )
4328 print ("lwarpmk: must be updated. To do so, recompile" )
4329 print ("lwarpmk: " , sourcename..".tex" )
4330 if ( printlatexcmd == "" ) then
4331     print ("lwarpmk: using xe/luatex/pdflatex," )
4332 else
4333     print ("lwarpmk: using the command:" )
4334     print ("lwarpmk: " , printlatexcmd )
4335 end
4336 print ("lwarpmk: then use lwarpmk again.")
4337 end -- printhowtorecompile
4338
4339
4340 function ignoreconf ()
4341 -- Global argument index
4342 argindex = 2
4343 end
4344
4345 function loadconf ()
4346 --
4347 -- Load settings from the project's "lwarpmk.conf" file:
4348 --
4349 -- Default configuration filename:
4350 local conffile = "lwarpmk.conf"
4351 local confroot = "lwarpmk"
4352 -- Global argument index
4353 argindex = 2
4354 -- Optional configuration filename:
4355 if ( arg[argindex] == "-p" ) then
4356     argindex = argindex + 1
4357     confroot = arg[argindex]
4358     conffile = confroot..".lwarpmkconf"
4359     argindex = argindex + 1
4360 end
4361 -- Additional defaults:
4362 confversion = "0"
4363 opsystem = "Unix"
4364 imagesdirectory = "lateximages"
4365 imagesname = "image-"
4366 latexmk = "false"
4367 printlatexcmd = ""
4368 HTMLlatexcmd = ""
4369 printindexcmd = ""
4370 HTMLindexcmd = ""
4371 latexmkindexcmd = ""
4372 -- to be removed:
4373 -- indexprog = "makeindex"
4374 -- makeindexstyle = "lwarp.ist"
4375 -- xindylanguage = "english"
```

```
4376 -- xindycodepage = "utf8"
4377 -- xindystyle = "lwarp.xdy"
4378 -- pdftotextenc = "UTF-8"
4379 glossarycmd = "makeglossaries"
4380 -- Verify the file exists:
4381 if (lfs.attributes(conffile,"mode")==nil) then
4382     -- file not exists
4383     print ("lwarpmk: ===")
4384     print ("lwarpmk: File \"\" .. conffile ..\"\" does not exist.")
4385     print ("lwarpmk: Move to the project's source directory,")
4386     print ("lwarpmk: recompile using pdflatex, xelatex, or luatex,")
4387     print ("lwarpmk: then try using lwarpmk again.")
4388     if ( arg[argindex] ~= nil ) then
4389         print (
4390             "lwarpmk: (\"\" .. confroot ..
4391             "\"" does not appear to be a project name.)"
4392         )
4393     end
4394     print ("lwarpmk: ===")
4395     printhelp () ;
4396     os.exit(1) -- exit the entire lwarpmk script
4397 else -- file exists
4398 -- Read the file:
4399 print ("lwarpmk: Reading " .. conffile ..".")
4400 local cfile = io.open(conffile)
4401 -- Scan each line, parsing each line as: name = [[string]]
4402 local linenum = 0
4403 for line in cfile:lines() do -- scan lines
4404 linenum = linenum + 1
4405 i,j,cvarname,cvalue = string.find (line,"([%w-_]*)%s*=%s*%[[^%]]*%]");
4406 -- Error if incorrect enclosing characters:
4407 if ( i == nil ) then
4408     print ("lwarpmk: ===")
4409     print ("lwarpmk: " .. linenum .. " : " .. line ) ;
4410     print ("lwarpmk: Incorrect entry in " .. conffile ..".\n" ) ;
4411     print ("lwarpmk: ===")
4412 --     printconf () ;
4413     os.exit(1) ;
4414 end -- nil
4415 if ( cvarname == "confversion" ) then
4416     confversion = cvalue
4417 elseif ( cvarname == "opssystem" ) then
4418     -- Verify choice of opssystem:
4419     if ( (cvalue == "Unix") or (cvalue == "Windows") ) then
4420         opssystem = cvalue
4421     else
4422         cvalueerror ( line, linenum , cvalue )
4423     end
4424 elseif ( cvarname == "sourcename" ) then sourcename = cvalue
4425 elseif ( cvarname == "homehtmlfilename" ) then homehtmlfilename = cvalue
4426 elseif ( cvarname == "htmlfilename" ) then htmlfilename = cvalue
4427 elseif ( cvarname == "imagesdirectory" ) then imagesdirectory = cvalue
4428 elseif ( cvarname == "imagesname" ) then imagesname = cvalue
4429 elseif ( cvarname == "latexmk" ) then latexmk = cvalue
4430 elseif ( cvarname == "printlatexcmd" ) then printlatexcmd = cvalue
```

```
4431 elseif ( cvarname == "HTMLlatexcmd" ) then HTMLlatexcmd = cvalue
4432 elseif ( cvarname == "printindexcmd" ) then printindexcmd = cvalue
4433 elseif ( cvarname == "HTMLindexcmd" ) then HTMLindexcmd = cvalue
4434 elseif ( cvarname == "latexmkindexcmd" ) then latexmkindexcmd = cvalue
4435 elseif ( cvarname == "glossarycmd" ) then glossarycmd = cvalue
4436 elseif ( cvarname == "pdftotextenc" ) then pdftotextenc = cvalue
4437 else
4438     print ("lwarpmk: ===")
4439     print ("lwarpmk: " .. linenum .. " : " .. line );
4440     print (
4441         "lwarpmk: Incorrect variable name \"\" .. cvarname .. "\" in " ..
4442         conffile .. ".\n"
4443     );
4444     print ("lwarpmk: ===")
4445 --     printconf ();
4446 os.exit(1);
4447 end -- cvarname
4448 end -- do scan lines
4449 io.close(cfile)
4450 end -- file exists
4451 -- Error if sourcename is "lwarp".
4452 -- This could happen if a local copy of lwarp has recently been recompiled.
4453 if sourcename=="lwarp" then
4454     print ("lwarpmk: ===")
4455     print ("lwarpmk: lwarp.sty has recently been recompiled in this directory,")
4456     print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
4457     print ("lwarpmk: (Perhaps you are not in your project's directory?)")
4458     print ("lwarpmk: In your project directory, recompile your project")
4459     print ("lwarpmk: using pdf/lua/xelatex <projectname>.")
4460     print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
4461     print ("lwarpmk: and you may again use lwarpmk.")
4462     print ("lwarpmk: ===")
4463     os.exit(1)
4464 end -- sourcename of "lwarp"
4465 -- Select some operating-system commands:
4466 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:
4467     rmname = "rm"
4468     mvname = "mv"
4469     cpname = "cp"
4470     touchnamepre = "touch"
4471     touchnamepost = ""
4472     newtouchname = "touch"
4473     dirslash = "/"
4474     opquote= "\""
4475     cmdgroupopenname = " ( "
4476     cmdgroupclosename = " ) "
4477     seqname = " && "
4478     bgname = " &"
4479 elseif opsystem=="Windows" then -- For Windows
4480     rmname = "DEL"
4481     mvname = "MOVE"
4482     cpname = "COPY"
4483     touchnamepre = "COPY /b"
4484     touchnamepost = "+,,"
4485     newtouchname = "echo empty >"
```

```
4486     dirslash = "\\\"
4487     opquote= "\"\"
4488     cmdgroupopenname = \"\"
4489     cmdgroupclosename = \"\"
4490     seqname = \" & \"
4491     bgname = \"\"
4492 else
4493     print ("lwarpmk: ===")
4494     print ("lwarpmk: Select Unix or Windows for opsystem." )
4495     print ("lwarpmk: ===")
4496     os.exit(1)
4497 end --- for Windows
4498 -- Warning if the operating system does not appear to be correct,
4499 -- in case files were transferred to another system.
4500 if ( (package.config:sub(1,1)) ~= dirslash ) then
4501     print ("lwarpmk: ===")
4502     print ("lwarpmk: It appears that lwarpmk.conf is for a different operating system." )
4503     printhowtorecompile ()
4504     print ("lwarpmk: ===")
4505     os.exit(1)
4506 end
4507 -- Error if the configuration file's version is not current:
4508 if ( confversion ~= requiredconfversion ) then
4509     print ("lwarpmk: ===")
4510     printhowtorecompile ()
4511     print ("lwarpmk: ===")
4512     os.exit(1)
4513 end
4514 end -- loadconf
4515
4516
4517 function executecheckerror ( executecommands , errormessage )
4518 --
4519 -- Execute an operating system call,
4520 -- and maybe exit with an error message.
4521 --
4522 local err
4523 err = os.execute ( executecommands )
4524 if ( err ~= 0 ) then
4525     print ("lwarpmk: ===")
4526     print ("lwarpmk: \" .. errormessage )
4527     print ("lwarpmk: ===")
4528     os.exit(1)
4529 end
4530 end -- executecheckerror
4531
4532
4533 function refreshdate ()
4534 os.execute(touchnamepre .. \" \" .. sourcename .. \".tex \" .. touchnamepost)
4535 end
4536
4537
4538
4539 function reruntoget (filesource)
4540 --
```

```
4541 -- Scan the LaTeX log file for the phrase "Rerun to get",
4542 -- indicating that the file should be compiled again.
4543 -- Return true if found.
4544 --
4545 local fsource = io.open(filesource)
4546 for line in fsource:lines() do
4547 if ( string.find(line,"Rerun to get") ~= nil ) then
4548     io.close(fsource)
4549     return true
4550 end -- if
4551 end -- do
4552 io.close(fsource)
4553 return false
4554 end
4555
4556
4557
4558 function onetime (latexcmd, fsuffix)
4559 --
4560 -- Compile one time, return true if should compile again.
4561 -- fsuffix is "" for print, "_html" for HTML output.
4562 --
4563 print("lwarpmk: Compiling with: " .. latexcmd)
4564 executetecheckerror (
4565     latexcmd ,
4566     "Compile error."
4567 )
4568 return (reruntoget(sourcename .. fsuffix .. ".log") ) ;
4569 end
4570
4571
4572 function manytimes (latexcmd, fsuffix)
4573 --
4574 -- Compile up to five times.
4575 -- fsuffix is "" for print, "_html" for HTML output
4576 --
4577 if onetime(latexcmd, fsuffix) == true then
4578 if onetime(latexcmd, fsuffix) == true then
4579 if onetime(latexcmd, fsuffix) == true then
4580 if onetime(latexcmd, fsuffix) == true then
4581 if onetime(latexcmd, fsuffix) == true then
4582 end end end end end
4583 end
4584
4585
4586 function verifyfileexists (filename)
4587 --
4588 -- Exit if the given file does not exist.
4589 --
4590 if (lfs.attributes ( filename , "modification" ) == nil ) then
4591     print ("lwarpmk: ===")
4592     print ("lwarpmk: " .. filename .. " not found." ) ;
4593     print ("lwarpmk: ===")
4594     os.exit (1) ;
4595 end
```

```
4596 end
4597
4598
4599
4600 function pdftohtml ()
4601 --
4602 -- Convert <project>_html.pdf into HTML files:
4603 --
4604 -- Convert to text:
4605 print ("lwarpmk: Converting " .. sourcename
4606       .. "_html.pdf to " .. sourcename .. "_html.html")
4607 os.execute("pdftotext -enc " .. pdftotextenc .. " -nopgbrk -layout "
4608       .. sourcename .. "_html.pdf " .. sourcename .. "_html.html")
4609 -- Split the result into individual HTML files:
4610 splitfile (homehtmlfilename .. ".html" , sourcename .. "_html.html")
4611 end
4612
4613
4614 function removeaux ()
4615 --
4616 -- Remove auxiliary files:
4617 -- All .aux files are removed since there may be many bbl*.aux files.
4618 -- Also removes sourcename_html.pdf, sourcename_html.html,
4619 -- and sourcename_html.sidetoc, plus comment_*.cut.
4620 --
4621 os.execute ( rmname .. " *.aux " ..
4622       sourcename .. ".toc " .. sourcename .. "_html.toc " ..
4623       sourcename .. ".lof " .. sourcename .. "_html.lof " ..
4624       sourcename .. ".lot " .. sourcename .. "_html.lot " ..
4625       " *.idx " ..
4626       " *.ind " ..
4627       sourcename .. ".ps " .. sourcename .. "_html.ps " ..
4628       sourcename .. ".log " .. sourcename .. "_html.log " ..
4629       sourcename .. ".gl*" .. sourcename .. "_html.gl*" ..
4630       sourcename .. "_html.pdf " ..
4631       sourcename .. "_html.html " ..
4632       sourcename .. "_html.sidetoc " ..
4633       " *_html_inc.* " ..
4634       " comment_*.cut"
4635 )
4636 end
4637
4638 function checkhtmlpdfexists ()
4639 --
4640 -- Error if the HTML document does not exist.
4641 -- The lateximages are drawn from the HTML PDF version of the document,
4642 -- so "lwarpmk html" must be done before "lwarpmk limages".
4643 --
4644 local htmlpdffile = io.open(sourcename .. "_html.pdf", "r")
4645 if ( htmlpdffile == nil ) then
4646     print ("")
4647     print ("lwarpmk: ===")
4648     print ("lwarpmk: The HTML version of the document does not exist.")
4649     print ("lwarpmk: Enter \"lwarpmk html\" to compile the HTML version.")
4650     print ("lwarpmk: ===")

```

```
4651     os.exit(1)
4652 end
4653 io.close (htmlpdffile)
4654 end -- checkhtmlpdfexists
4655
4656
4657 function warnlimages ()
4658 --
4659 -- Warning of a missing <sourcename>-images.txt file:
4660     print ("lwarpmk: ===")
4661     print ("lwarpmk: \"" .. sourcename .. "-images.txt\" does not exist.")
4662     print ("lwarpmk: Your project does not use SVG math or other lateximages,")
4663     print ("lwarpmk: or the file has been deleted somehow.")
4664     print ("lwarpmk: Use \"lwarpmk html1\" to recompile your project")
4665     print ("lwarpmk: and recreate \"" .. sourcename .. "-images.txt\".")
4666     print ("lwarpmk: If your project does not use SVG math or other lateximages,")
4667     print ("lwarpmk: then \"" .. sourcename .. "-images.txt\" will never exist, and")
4668     print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
4669     print ("lwarpmk: ===")
4670 end -- warnlimages
4671
4672
4673 function warnlimagesrecompile ()
4674 -- Warning if must recompile before creating limages:
4675     print ("")
4676     print ("lwarpmk: ===")
4677     print ("lwarpmk: Cross-references are not yet correct.")
4678     print ("lwarpmk: The document must be recompiled before creating the lateximages.")
4679     print ("lwarpmk: Enter \"lwarpmk html1\" again, then try \"lwarpmk limages\" again.")
4680     print ("lwarpmk: ===")
4681 end --warnlimagesrecompile
4682
4683
4684 function checklimages ()
4685 --
4686 -- Check <sourcename>.txt to see if need to recompile first.
4687 -- If any entry has a page number of zero, then there were incorrect images.
4688 --
4689 print ("lwarpmk: Checking for a valid " .. sourcename .. "-images.txt file.")
4690 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4691 if ( limagesfile == nil ) then
4692     warnlimages ()
4693     os.exit(1)
4694 end
4695 -- Track warning to recompile if find a page 0
4696 local pagezerowarning = false
4697 -- Scan <sourcename>.txt
4698 for line in limagesfile:lines() do
4699     -- lwimgpage is the page number in the PDF which has the image
4700     -- lwimghash is true if this filename is a hash
4701     -- lwimgname is the lateximage filename root to assign for the image
4702     i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4703     -- For each entry:
4704     if ( (i~=nil) ) then
4705         -- If the page number is 0, image references are incorrect
```

```
4706     -- and must recompile the source document:
4707     if ( lwimpage == "0" ) then
4708         pagezerowarning = true
4709     end
4710 end -- if i~=nil
4711 end -- do
4712 -- The last line should be |end|end|end|.
4713 -- If not, the compile must have aborted, and the images are incomplete.
4714 if ( lwimpage ~= "end" ) then
4715     warnimagesrecompile()
4716     os.exit(1) ;
4717 end
4718 if ( pagezerowarning ) then
4719     warnimagesrecompile()
4720     os.exit(1) ;
4721 end -- pagezerowarning
4722 end -- checklimages
4723
4724
4725 function createuniximage ( lwimgfullname )
4726 --
4727 -- Create one lateximage for Unix / Linux / Mac OS.
4728 --
4729 executecheckerror (
4730     cmdgroupopenname ..
4731     "pdfseparate -f " .. lwimpage .. " -l " .. lwimpage .. " " ..
4732     sourcename .. "_html.pdf " ..
4733     imagesdirectory .. dirslash .. "lateximagetemp-%d" .. ".pdf" ..
4734     seqname ..
4735     -- Crop the image:
4736     "pdfcrop --hires " .. imagesdirectory .. dirslash .. "lateximagetemp-" ..
4737     lwimpage .. ".pdf " ..
4738     imagesdirectory .. dirslash .. lwimgname .. ".pdf" ..
4739     seqname ..
4740     -- Convert the image to svg:
4741     "pdftocairo -svg -noshrink " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf " ..
4742     imagesdirectory .. dirslash .. lwimgname .. ".svg" ..
4743     seqname ..
4744     -- Remove the temporary files:
4745     rmname .. " " .. imagesdirectory .. dirslash .. lwimgname .. ".pdf" .. seqname ..
4746     rmname .. " " .. imagesdirectory .. dirslash .. "lateximagetemp-" .. lwimpage .. ".pdf" ..
4747     cmdgroupclosename .. " >/dev/null " .. bgnam
4748     ,
4749     "File error trying to convert " .. lwimgfullname
4750 )
4751 -- Every 32 images, wait for completion at below normal priority,
4752 -- allowing other image tasks to catch up.
4753 numimageprocesses = numimageprocesses + 1
4754 if ( numimageprocesses > 32 ) then
4755     numimageprocesses = 0
4756     print ( "lwarpmk: waiting" )
4757     executecheckerror ( "wait" , "File error trying to wait.")
4758 end
4759 end -- createuniximage
4760
```

```
4761
4762 function createwindowsimage ( lwimgfullname )
4763 --
4764 -- Create one lateximage for Windows.
4765 --
4766 -- Every 32 images, wait for completion at below normal priority,
4767 -- allowing other image tasks to catch up.
4768 numimageprocesses = numimageprocesses + 1
4769 if ( numimageprocesses > 32 ) then
4770   numimageprocesses = 0
4771   thiswaitcommand = "/WAIT /BELOWNORMAL"
4772   print ( "lwarpmk: waiting" )
4773 else
4774   thiswaitcommand = ""
4775 end
4776 -- Execute the image generation command
4777 executecheckerror (
4778   "start /B " .. thiswaitcommand .. " \\" lwarp_one_limage " ..
4779   lwimgpage .. " " ..
4780   lwimghash .. " " ..
4781   lwimgname .. " " ..
4782   sourcename .. " <nul >nul"
4783   ,
4784   "File error trying to create image."
4785 )
4786 end -- createwindowsimage
4787
4788
4789 function createonelateximage ( line )
4790 --
4791 -- Given the next line of <sourcename>.txt, convert a single image.
4792 --
4793 -- lwimgpage is the page number in the PDF which has the image
4794 -- lwimghash is true if this filename is a hash
4795 -- lwimgname is the lateximage filename root to assign for the image
4796 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*)|")
4797 -- For each entry:
4798 if ( i~=nil ) then
4799   -- Skip if the page number is 0:
4800   if ( lwimgpage == "0" ) then
4801     pagezerowarning = true
4802   -- Skip if the page number is "end":
4803   else if ( lwimgpage == "end" ) then
4804     else
4805     -- Skip is this image is hashed and already exists:
4806     local lwimgfullname = imagesdirectory .. dirslash .. lwimgname .. ".svg"
4807     if (
4808       (lwimghash ~= "true") or
4809       (lfs.attributes(lwimgfullname,"mode")==nil) -- file not exists
4810     )
4811     then -- not hashed or not exists:
4812       -- Print the name of the file being generated:
4813       print ( "lwarpmk: " .. lwimgname )
4814       -- Touch/create the dest so that only once instance tries to build it:
4815       executecheckerror (
```

```
4816         newtouchname .. " " .. lwimgfullname ,
4817         "File error trying to touch " .. lwimgfullname
4818     )
4819     -- Separate out the image into its own single-page pdf:
4820     if opsystem=="Unix" then
4821         createuniximage (lwimgfullname)
4822     elseif opsystem=="Windows" then
4823         createwindowsimage (lwimgfullname)
4824     end
4825     end -- not hashed or not exists
4826 end -- not page "end"
4827 end -- not page 0
4828 end -- not nil
4829 end -- createonelateximage
4830
4831
4832 function createlateximages ()
4833 --
4834 -- Create lateximages based on <sourcename>-images.txt:
4835 --
4836 -- See if the document must be recompiled first:
4837 checklimages ()
4838 -- See if the HTML version exists:
4839 checkhtmlpdfexists ()
4840 -- Attempt to create the lateximages:
4841 print ("lwarpmk: Creating lateximages.")
4842 local limagesfile = io.open(sourcename .. "-images.txt", "r")
4843 if ( limagesfile == nil ) then
4844     warnlimages ()
4845     os.exit(1)
4846 end
4847 -- Create the lateximages directory, ignore error if already exists
4848 err = os.execute("mkdir " .. imagesdirectory)
4849 -- For Windows, create lwarp_one_limage.cmd from lwarp_one_limage.txt:
4850 if opsystem=="Windows" then
4851     executecheckerror (
4852         cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd" ,
4853         "File error trying to copy lwarp_one_limage.txt to lwarp_one_limage.cmd"
4854     )
4855 end -- create lwarp_one_limage.cmd
4856 -- Track the number of parallel processes
4857 numimageprocesses = 0
4858 -- Track warning to recompile if find a page 0
4859 pagezerowarning = false
4860 -- Scan <sourcename>.txt
4861 for line in limagesfile:lines() do
4862     createonelateximage ( line )
4863 end -- do
4864 io.close(limagesfile)
4865 print ( "lwarpmk limages: ===")
4866 print ( "lwarpmk limages: Wait a moment for the images to complete" )
4867 print ( "lwarpmk limages: before reloading the page." )
4868 print ( "lwarpmk limages: ===")
4869 print ( "lwarpmk limages: Done." )
4870 if ( pagezerowarning == true ) then
```

```
4871 print ( "lwarpmk limages: WARNING: Images will be incorrect." )
4872 print ( "lwarpmk limages: Enter \"lwarpmk cleanlimages\", then" )
4873 print ( "lwarpmk limages: recompile the document one more time, then" )
4874 print ( "lwarpmk limages: repeat \"lwarpmk images\" again." )
4875 end -- pagezerowarning
4876 end -- function
4877
4878
4879 function convertepstopdf ()
4880 --
4881 -- Converts EPS files to PDF files.
4882 -- The filenames are arg[argindex] and up.
4883 -- arg[1] is the command "epstopdf".
4884 --
4885 ignoreconf ()
4886 for i = argindex , #arg do
4887   if (lfs.attributes(arg[i],"mode")==nil) then
4888     print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4889   else
4890     print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4891     thispath, thisfilename, thisextension = splitfilename(arg[i])
4892     if ( thispath == nil ) then
4893       os.execute ( "epstopdf " .. arg[i] )
4894     else
4895       os.execute (
4896         "epstopdf " ..
4897         thispath .. thisfilename .. "." .. thisextension .. " " ..
4898         thispath .. thisfilename .. ".pdf"
4899       )
4900     end
4901   end -- if
4902 end -- do
4903 end --function
4904
4905
4906 function convertpdfptosvg ()
4907 --
4908 -- Converts PDF files to SVG files.
4909 -- The filenames are arg[argindex] and up.
4910 -- arg[1] is the command "pdftosvg".
4911 --
4912 ignoreconf ()
4913 for i = argindex , #arg do
4914   if (lfs.attributes(arg[i],"mode")==nil) then
4915     print ("lwarpmk: File \"" .. arg[i] .. "\" does not exist.")
4916   else
4917     print ("lwarpmk: Converting \"" .. arg[i] .. "\"")
4918     thispath, thisfilename, thisextension = splitfilename(arg[i])
4919     if ( thispath == nil ) then
4920       os.execute ( "pdftocairo -svg " .. arg[i] )
4921     else
4922       os.execute (
4923         "pdftocairo -svg " ..
4924         thispath .. thisfilename .. "." .. thisextension .. " " ..
4925         thispath .. thisfilename .. ".svg"
```

```
4926     )
4927     end
4928 end -- if
4929 end -- do
4930 end --function
4931
4932
4933 -- Force an update and conclude processing:
4934 function updateanddone ()
4935 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
4936 refreshdate ()
4937 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
4938 print ("lwarpmk: Done.")
4939 end -- function
4940
4941
4942 -- Start of the main code: --
4943
4944
4945 -- lwarpmk --version :
4946
4947 if (arg[1] == "--version") then
4948 print ( "lwarpmk: " .. printversion )
4949
4950 else -- not --version
4951
4952
4953 -- print intro:
4954
4955 print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX Lwarp package.")
4956
4957
4958 -- lwarpmk print:
4959
4960 if arg[1] == "print" then
4961 loadconf ()
4962 if ( latexmk == "true" ) then
4963     print ("lwarpmk: Compiling with: " .. printlatexcmd)
4964     executecheckerror (
4965         printlatexcmd ,
4966         "Compile error."
4967     )
4968     print ("lwarpmk: Done.")
4969 else -- not latexmk
4970     verifyfileexists (sourcename .. ".tex") ;
4971     -- See if up to date:
4972     if (
4973         ( lfs.attributes ( sourcename .. ".pdf" , "modification" ) == nil ) or
4974         (
4975             lfs.attributes ( sourcename .. ".tex" , "modification" ) >
4976             lfs.attributes ( sourcename .. ".pdf" , "modification" )
4977         )
4978     ) then
4979         -- Recompile if not yet up to date:
4980         manytimes(printlatexcmd, "")
```

```
4981     print ("lwarpmk: Done.");
4982   else
4983     print ("lwarpmk: " .. sourcename .. ".pdf is up to date.");
4984   end
4985 end -- not latexmk
4986
4987
4988 -- lwarpmk print1:
4989
4990 elseif arg[1] == "print1" then
4991   loadconf ()
4992   verifyfileexists (sourcename .. ".tex");
4993   onetime(printlatexcmd, "")
4994   print ("lwarpmk: Done.");
4995
4996
4997 -- lwarpmk printindex:
4998 -- Compile the index then touch the source
4999 -- to trigger a recompile of the document:
5000
5001 elseif arg[1] == "printindex" then
5002 loadconf ()
5003 os.execute ( printindexcmd )
5004 print ("lwarpmk: -----")
5005 updateanddone ()
5006
5007
5008 -- lwarpmk printglossary:
5009 -- Compile the glossary then touch the source
5010 -- to trigger a recompile of the document:
5011
5012 elseif arg[1] == "printglossary" then
5013 loadconf ()
5014 print ("lwarpmk: Processing the glossary.")
5015
5016 os.execute(glossarycmd .. " " .. sourcename)
5017 updateanddone ()
5018
5019
5020 -- lwarpmk html:
5021
5022 elseif arg[1] == "html" then
5023 loadconf ()
5024 if ( latexmk == "true" ) then
5025   print ("lwarpmk: Compiling with: " .. HTMLlatexcmd)
5026   executecheckerror (
5027     HTMLlatexcmd ,
5028     "Compile error."
5029   )
5030   pdftohtml ()
5031   print ("lwarpmk: Done.")
5032 else -- not latexmk
5033   verifyfileexists ( sourcename .. ".tex" );
5034   -- See if exists and is up to date:
5035   if (
```

```
5036     ( lfs.attributes ( homehtmlfilename .. ".html" , "modification" ) == nil ) or
5037     (
5038         lfs.attributes ( sourcename .. ".tex" , "modification" ) >
5039         lfs.attributes ( homehtmlfilename .. ".html" , "modification" )
5040     )
5041 ) then
5042     -- Recompile if not yet up to date:
5043     manytimes(HTMLlatexcmd, "_html")
5044     pdftohtml ()
5045     print ("lwarpmk: Done.")
5046 else
5047     print ("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
5048 end
5049 end -- not latexmk
5050
5051
5052 -- lwarpmk html1:
5053
5054 elseif arg[1] == "html1" then
5055     loadconf ()
5056     verifyfileexists ( sourcename .. ".tex" ) ;
5057     onetime(HTMLlatexcmd, "_html")
5058     pdftohtml ()
5059     print ("lwarpmk: Done.")
5060
5061
5062 -- lwarpmk pdftohtml:
5063 elseif arg[1] == "pdftohtml" then
5064     loadconf ()
5065     pdftohtml ()
5066
5067
5068 -- lwarpmk htmlindex:
5069 -- Compile the index then touch the source
5070 -- to trigger a recompile of the document:
5071
5072 elseif arg[1] == "htmlindex" then
5073 loadconf ()
5074 os.execute ( HTMLindexcmd )
5075 print ("lwarpmk: -----")
5076 updateanddone ()
5077
5078
5079 -- lwarpmk htmlglossary:
5080 -- Compile the glossary then touch the source
5081 -- to trigger a recompile of the document.
5082 -- The <sourcename>.xdy file is created by the glossaries package.
5083
5084 elseif arg[1] == "htmlglossary" then
5085 loadconf ()
5086 print ("lwarpmk: Processing the glossary.")
5087 os.execute(glossarycmd .. " " .. sourcename .. "_html")
5088 updateanddone ()
5089
5090
```

```
5091 -- lwarpmk limages:
5092 -- Scan the <sourcename>.txt file to create lateximages.
5093
5094 elseif arg[1] == "limages" then
5095 loadconf ()
5096 print ("lwarpmk: Processing images.")
5097 createlateximages ()
5098 print ("lwarpmk: Done.")
5099
5100
5101 -- lwarpmk again:
5102 -- Touch the source to trigger a recompile.
5103
5104 elseif arg[1] == "again" then
5105 loadconf ()
5106 updateanddone ()
5107
5108
5109 -- lwarpmk clean:
5110 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
5111
5112 elseif arg[1] == "clean" then
5113 loadconf ()
5114 removeaux ()
5115 print ("lwarpmk: Done.")
5116
5117
5118 -- lwarpmk cleanall
5119 -- Remove project.aux, .toc, .lof, .lot, .log, *.idx, *.ind, *_html_inc.*, .gl*
5120 -- and also project.pdf, project.dvi, *.html
5121
5122 elseif arg[1] == "cleanall" then
5123 loadconf ()
5124 removeaux ()
5125 os.execute ( rmname .. " " ..
5126     sourcename .. ".pdf " .. sourcename .. "_html.pdf " ..
5127     sourcename .. ".dvi " .. sourcename .. "_html.dvi " ..
5128     "*.html"
5129 )
5130 print ("lwarpmk: Done.")
5131
5132
5133 -- lwarpmk cleanlimages
5134 -- Remove images from the imagesdirectory.
5135
5136 elseif arg[1] == "cleanlimages" then
5137 loadconf ()
5138 os.execute ( rmname .. " " .. imagesdirectory .. dirslash .. "*" )
5139 print ("lwarpmk: Done.")
5140
5141 -- lwarpmk epstopdf <list of file names>
5142 -- Convert EPS files to PDF using epstopdf
5143 elseif arg[1] == "epstopdf" then
5144 convertepstopdf ()
5145 print ("lwarpmk: Done.")
```

```

5146
5147
5148 -- lwarpmk pdftosvg <list of file names>
5149 -- Convert PDF files to SVG using pdftocairo
5150 elseif arg[1] == "pdftosvg" then
5151 convertpdftosvg ()
5152 print ("lwarpmk: Done.")
5153
5154
5155 -- lwarpmk with no argument :
5156
5157 elseif (arg[1] == nil) then
5158 printhelp ()
5159
5160
5161 -- lwarpmk -h or lwarpmk --help :
5162
5163 elseif (arg[1] == "-h" ) or (arg[1] == "--help") then
5164 printusage ()
5165
5166
5167 -- Unknown command:
5168
5169 else
5170 printhelp ()
5171 print ("\nlwarpmk: ***** Unknown command \"\"..arg[1]..\"\". *****\n")
5172 end
5173
5174 end -- not --version
5175 \end{filecontents*}
5176 % \end{Verbatim}% for syntax highlighting

5177 \end{LWRcreatelwarpmk}

```

40 Stacks

for HTML output: 5178 \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.

40.1 Assigning depths

initial depths for empty stack entries:

```
5179 \newcommand*\LWR@depthnone}{-5}
```

All sectioning depths are deeper than LWR@depthfinished:

```
5180 \newcommand*\LWR@depthfinished}{-4}
5181 \newcommand*\LWR@depthbook}{-2}
5182 \newcommand*\LWR@depthpart}{-1}
5183 \newcommand*\LWR@depthchapter}{0}
5184 \newcommand*\LWR@depthsection}{1}
5185 \newcommand*\LWR@depthsubsection}{2}
5186 \newcommand*\LWR@depthsubsubsection}{3}
5187 \newcommand*\LWR@depthparagraph}{4}
5188 \newcommand*\LWR@depthsubparagraph}{5}
```

Used by \itemize, \enumerate, \description:

```
5189 \newcommand*\LWR@depthlist}{6}
```

Used by \item:

```
5190 \newcommand*\LWR@depthlistitem}{7}
5191 \let\LWR@depthdescitem\LWR@depthlistitem
```

40.2 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.

```
5192 \newcommand*\LWR@closeone}{% top of the stack
5193 \newcommand*\LWR@closetwo}{
5194 \newcommand*\LWR@closethree}{
5195 \newcommand*\LWR@closefour}{
5196 \newcommand*\LWR@closefive}{
5197 \newcommand*\LWR@closesix}{
5198 \newcommand*\LWR@closeseven}{
5199 \newcommand*\LWR@closeeight}{
5200 \newcommand*\LWR@closenine}{
5201 \newcommand*\LWR@closeten}{
5202 \newcommand*\LWR@closeeleven}{
5203 \newcommand*\LWR@closetwelve}{
```

40.3 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}

```

```

5204 \newcommand*\LWR@closedepthone{\LWR@depthnone}% top of the stack
5205 \newcommand*\LWR@closedepthtwo{\LWR@depthnone}
5206 \newcommand*\LWR@closedepththree{\LWR@depthnone}
5207 \newcommand*\LWR@closedepthfour{\LWR@depthnone}
5208 \newcommand*\LWR@closedepthfive{\LWR@depthnone}
5209 \newcommand*\LWR@closedepthsix{\LWR@depthnone}
5210 \newcommand*\LWR@closedepthseven{\LWR@depthnone}
5211 \newcommand*\LWR@closedeptheight{\LWR@depthnone}
5212 \newcommand*\LWR@closedepthnine{\LWR@depthnone}
5213 \newcommand*\LWR@closedephten{\LWR@depthnone}
5214 \newcommand*\LWR@closedeptheleven{\LWR@depthnone}
5215 \newcommand*\LWR@closedephtwelve{\LWR@depthnone}

```

40.4 Pushing and popping the stack

`\LWR@pushclose` {<sectiontype>}

Pushes one return action and its L^AT_EX depth onto the stacks.

```

5216 \NewDocumentCommand{\LWR@pushclose}{m}
5217 {%
5218 \global\let\LWR@closetwelve\LWR@closeeeleven%
5219 \global\let\LWR@closeeeleven\LWR@closeeten%
5220 \global\let\LWR@closeeten\LWR@closeenine%
5221 \global\let\LWR@closeenine\LWR@closeeeight%
5222 \global\let\LWR@closeeeight\LWR@closeeseven%
5223 \global\let\LWR@closeeseven\LWR@closeesix%
5224 \global\let\LWR@closeesix\LWR@closeefive%
5225 \global\let\LWR@closeefive\LWR@closeefour%
5226 \global\let\LWR@closeefour\LWR@closeethree%
5227 \global\let\LWR@closeethree\LWR@closetwo%
5228 \global\let\LWR@closetwo\LWR@closeone%
5229 \global\csletcs{LWR@closeone}{LWR@printclose#1}%
5230 \global\let\LWR@closedepthtwelve\LWR@closedeptheleven%
5231 \global\let\LWR@closedeptheleven\LWR@closedephten%
5232 \global\let\LWR@closedephten\LWR@closedepthnine%
5233 \global\let\LWR@closedepthnine\LWR@closedeptheight%
5234 \global\let\LWR@closedeptheight\LWR@closedepthseven%
5235 \global\let\LWR@closedepthseven\LWR@closedepthsix%
5236 \global\let\LWR@closedepthsix\LWR@closedepthfive%
5237 \global\let\LWR@closedepthfive\LWR@closedepthfour%
5238 \global\let\LWR@closedepthfour\LWR@closedepththree%

```

```

5239 \global\let\LWR@closedepththree\LWR@closedepthtwo%
5240 \global\let\LWR@closedepthtwo\LWR@closedepthone%
5241 \global\csletcs{LWR@closedepthone}{LWR@depth#1}%
5242 }

```

`\LWR@popclose` Pops one action and its depth off the stacks.

```

5243 \newcommand*{\LWR@popclose}
5244 {%
5245 \global\let\LWR@closeone\LWR@closetwo%
5246 \global\let\LWR@closetwo\LWR@closethree%
5247 \global\let\LWR@closethree\LWR@closefour%
5248 \global\let\LWR@closefour\LWR@closefive%
5249 \global\let\LWR@closefive\LWR@closesix%
5250 \global\let\LWR@closesix\LWR@closeseven%
5251 \global\let\LWR@closeseven\LWR@closeeight%
5252 \global\let\LWR@closeeight\LWR@closenine%
5253 \global\let\LWR@closenine\LWR@closeten%
5254 \global\let\LWR@closeten\LWR@closeeleven%
5255 \global\let\LWR@closeeleven\LWR@closetwelve%
5256 \global\let\LWR@closedepthone\LWR@closedepthtwo%
5257 \global\let\LWR@closedepthtwo\LWR@closedepththree%
5258 \global\let\LWR@closedepththree\LWR@closedepthfour%
5259 \global\let\LWR@closedepthfour\LWR@closedepthfive%
5260 \global\let\LWR@closedepthfive\LWR@closedepthsix%
5261 \global\let\LWR@closedepthsix\LWR@closedepthseven%
5262 \global\let\LWR@closedepthseven\LWR@closedeptheight%
5263 \global\let\LWR@closedeptheight\LWR@closedepthnine%
5264 \global\let\LWR@closedepthnine\LWR@closedephten%
5265 \global\let\LWR@closedephten\LWR@closedeptheleven%
5266 \global\let\LWR@closedeptheleven\LWR@closedephtwelve%
5267 }

5268 \end{warpHTML}

```

41 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: 5269 `\begin{warpHTML}`

```
\LWR@setexparray {<name>} {<index>} {<contents>}
```

```

5270 \NewDocumentCommand{\LWR@setexparray}{m m m}{%
5271   \let\LWR@temp@par\par%
5272   \let\par\relax%
5273   \edef\LWR@thisexparrayname{#1#2}%
5274   \ifstrempy{#3}%
5275     {\csdef{\LWR@thisexparrayname}{}}%
5276     {\csedef{\LWR@thisexparrayname}{#3}}%
5277   \let\par\LWR@temp@par%
5278 }

```

`\LWR@getexparray` $\langle name \rangle$ $\langle index \rangle$

```

5279 \newcommand*{\LWR@getexparray}[2]{%
5280   \@nameuse{#1#2}%
5281 }

5282 \end{warpHTML}

```

42 Localizing catcodes

for HTML & PRINT: 5283 `\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.

```

5284 \newcommand{\StartDefiningTabulars}{%
5285   \LWR@traceinfo{StartDefiningTabulars}%
5286   \warpHTMLonly{\catcode'\&=\active}%
5287 }

```

`\StopDefiningTabulars` Place after defining something with & in it.

```

5288 \newcommand{\StopDefiningTabulars}{%
5289   \LWR@traceinfo{StopDefiningTabulars}%
5290   \warpHTMLonly{\catcode'\&=4}%
5291 }

```

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.

```

5292 \newbool{LWR@mathmacro}
5293 \boolfalse{LWR@mathmacro}

```

`\StartDefiningMath` Place before defining something with $\$$ in it.

```
5294 \newcommand{\StartDefiningMath}{%
5295   \LWR@traceinfo{StartDefiningMath}%
5296   \warpHTMLOnly{\catcode'\$=\active}%
5297 }
```

`\StopDefiningMath` Place after defining something with $\$$ in it.

```
5298 \newcommand{\StopDefiningMath}{%
5299   \LWR@traceinfo{StopDefiningMath}%
5300   \warpHTMLOnly{\catcode'\$=3}% math shift
5301 }
```

```
5302 \end{warpall}
```

43 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: 5303 `\begin{warpall}`

Bool `LWR@dynamicmath` True to mark inline math which is dynamic in nature, thus should not be hashed for reuse.
 Default: `false`

```
5304 \newbool{LWR@dynamicmath}
5305 \boolfalse{LWR@dynamicmath}
```

`\inlinemathother` Place before using $\$ \dots \$$ or $\backslash(\dots\backslash)$ if the contents of the math are not static, depending on counters or dynamic macros.

```

5306 \newcommand{\inlinemathother}{%
5307 \LWR@traceinfo{inlinemathother}%
5308 \booltrue{LWR@dynamicmath}%
5309 }

```

`\inlinemathnormal` Place after using `$... $` or `\(... \)` with dynamic contents.

```

5310 \newcommand{\inlinemathnormal}{%
5311 \LWR@traceinfo{inlinemathnormal}%
5312 \boolfalse{LWR@dynamicmath}%
5313 }

5314 \end{warpall}

```

44 HTML entities

for HTML output: 5315 `\begin{warpHTML}`

HTML Unicode entities:

```
5316 \let\LWR@origampersand\&
```

`\HTMLentity` $\{\langle entitytag \rangle\}$

```

5317 \newcommand*\HTMLentity[1]{%
5318 % \LWR@traceinfo{HTMLentity \detokenize{#1}}%
5319 \begingroup%
5320 \LWR@FBcancel%
5321 \LWR@origampersand#1;%
5322 \endgroup%
5323 % \LWR@traceinfo{HTMLentity done}%
5324 }

```

`\HTMLunicode` $\{\langle hex_unicode \rangle\}$

```
5325 \newcommand*\HTMLunicode[1]{\HTMLentity{\LWR@origpound{#1}}
```

`\&`

```
5326 \renewrobustcmd*\&{\HTMLentity{amp}}
```

`\textless`

```

5327 \let\LWR@origtextless\textless
5328 \renewrobustcmd*\textless{\HTMLentity{lt}}

```

`\textgreater`

```

5329 \let\LWR@origtextgreater\textgreater
5330 \renewrobustcmd*{\textgreater}{\HTMLentity{gt}}

5331 \end{warpHTML}

```

45 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: 5332 `\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.

```
5333 \providecommand*\BaseJobname{\jobname}
```

`\HTMLFilename` The prefix for all generated HTML files other than the home page, defaulting to empty. See section 7.6.1.

```
5334 \providecommand*\HTMLFilename{}
```

`\HomeHTMLFilename` The filename of the home page, defaulting to the `\BaseJobname`. See section 7.6.1.

```
5335 \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.

```

5336 \newcommand*\SetHTMLFileNumber[1]{%
5337   \setcounter{LWR@htmlfilenumber}{#1}%
5338 }

```

`Bool FileSectionNames` Selects how to create HTML file names.

Defaults to use section names in the filenames.

```

5339 \newbool{FileSectionNames}
5340 \booltrue{FileSectionNames}

```

```
5341 \end{warpall}
```

for HTML output: 5342 \begin{warpHTML}

Updated each time a new HTML file is begun. Used to provide HTML previous/next web page links.

```
5343 \newcounter{LWR@HTMLpagenum}
5344 \setcounter{LWR@HTMLpagenum}{0}
```

Ctrl LWR@htmlseqfilenumber A sequential count of the number of each HTML file as it is being created. Number 0 is the home page. Unlike \LWR@htmlfilenumber, this one is known to increment by one for each file. This is used to generate previous /next links for each web page, via labels called \BaseJobname-autofile-*, and the last page is also labelled \BaseJobname-autofile-last.

```
5345 \newcounter{LWR@htmlseqfilenumber}
5346 \setcounter{LWR@htmlseqfilenumber}{0}
```

Bool LWR@setseqfilelabel At each new HTML file, this is false until a sectional unit is used, at which point this is set true and a label is placed. In this way, the previous/next labels will point to a named section.

```
5347 \newbool{LWR@setseqfilelabel}
5348 \setbool{LWR@setseqfilelabel}{false}
```

Ctrl LWR@htmlfilenumber Records the number of each HTML file as it is being created. Number 0 is the home page. This might not be sequential, as the user may use \SetHTMLFileNumber to create groups of numbered nodes.

```
5349 \newcounter{LWR@htmlfilenumber}
5350 \setcounter{LWR@htmlfilenumber}{0}
```

\LWR@htmlsectionfilename *{(htmlfilenumber or name)}*

Prints the filename for a given section: \HTMLFilename{ }filenumber/name.html

```
5351 \newcommand*{\LWR@htmlsectionfilename}[1]{%
5352 \LWR@traceinfo{LWR@htmlsectionfilename A !\detokenize{#1}!}%
5353 \begingroup%
```

Disable CJK xpinyin while generating file names.

```
5354 \LWR@disablepinyin%
```

Section 0 or empty is given the home filename. The filename must be detokenized for underscores.

```
5355 % \LWR@traceinfo{about to assign temp}%
5356 \LWR@sanitize{#1}%
5357 \LWR@traceinfo{about to compare with ??}%
5358 \ifdefstring{\LWR@sanitized}{??}
5359   {\LWR@traceinfo{found ??}}%
5360   {\LWR@traceinfo{not found ??}}%
```

```

5361 \LWR@traceinfo{about to compare with zero or empty}%
5362 \ifboolexpr{
5363     test {\ifdefstring{\LWR@sanitized}{0}} or
5364     test {\ifdefstring{\LWR@sanitized}{}} or
5365     test {\ifdefstring{\LWR@sanitized}{??}}
5366 }
5367 {%
5368     \LWR@traceinfo{LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
5369     \HomeHTMLFilename.html%
5370 }%

```

For a L^AT_EX section named “Index” or “index” without a prefix, create a filename with a trailing `-0` to avoid colliding with the HTML filename `index.html`:

```

5371 {%
5372     \LWR@traceinfo{LWR@htmlsectionfilename C \LWR@sanitized}%
5373     \ifboolexpr{
5374         test{\ifdefvoid{\HTMLFilename}} and
5375         (
5376             test{\ifdefstring{\LWR@sanitized}{Index}} or
5377             test{\ifdefstring{\LWR@sanitized}{index}}
5378         )
5379     }%
5380     {%
5381         \LWR@traceinfo{Adding a zero to the index filename.}%
5382         \LWR@sanitized-0.html%
5383     }%

```

Otherwise, create a filename with the chosen prefix:

```

5384     {%
5385         \HTMLFilename\LWR@isolate{\LWR@sanitized}.html%
5386     }%
5387 }%
5388 \LWR@traceinfo{LWR@htmlsectionfilename Z}%
5389 \endgroup%
5390 }

```

`\LWR@htmlrefsectionfilename` $\{\langle label \rangle\}$

Prints the filename for the given label

```

5391 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
5392     \LWR@traceinfo{LWR@htmlrefsectionfilename: !\detokenize{#1}!}%

```

`\LWR@nullfonts` to allow math in a section name.

```

5393     \begingroup%
5394     \LWR@nullfonts%
5395     \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
5396     \endgroup%
5397     \LWR@traceinfo{LWR@htmlrefsectionfilename: done}%
5398 }

```

```
5399 \end{warpHTML}
```

46 Homepage link

for HTML & PRINT: 5400 \begin{warpall}

`\linkhomename` Holds the default name for the home link.

```
5401 \newcommand{\linkhomename}{Home}
```

```
5402 \end{warpall}
```

for HTML output: 5403 \begin{warpHTML}

`\LinkHome` May be used wherever you wish to place a link back to the homepage. The filename must be detokenized for underscores.

```
5404 \newcommand*\LinkHome{%
5405   \LWR@subhyperrefclass{\HomeHTMLfilename.html}{\linkhomename}{linkhome}%
5406 }
```

```
5407 \end{warpHTML}
```

for PRINT output: 5408 \begin{warpprint}

`\LinkHome` May be used wherever you wish to place a link back to the homepage. For print output, if `hyperref` is available a hyperlink to the first page is used, named by `\linkhomename`. If `hyperref` is not available, a `pageref` is used instead.

`\BaseJobname` is included in the link label in case multiple documents are cross-referenced.

```
5409 \AtBeginDocument{
5410 \ifundefined{hyperref}{
5411   \newcommand*\LinkHome{%
5412     \linkhomename\ --- page \pageref{\BaseJobname-page-LWRfirstpage}%
5413   }
5414 }{
5415   \newcommand*\LinkHome{%
5416     \hyperref[\BaseJobname-page-LWRfirstpage]{\linkhomename}%
5417   }
5418 }
5419 }
5420
5421 \AfterEndPreamble{\label{\BaseJobname-page-LWRfirstpage}}
```

```
5422 \end{warpprint}
```

for HTML output: 5423 \begin{warpHTML}

`\LWR@topnavigation` Creates a link to the homepage at the top of the page for use when the window is too narrow for the sideroc.

```
5424 \newcommand*{\LWR@topnavigation}{%
5425     \LWR@htmlElementclassline{nav}{topnavigation}{\LinkHome}
5426 }
```

`\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.

```
5427 \newcommand*{\LWR@botnavigation}{%
5428     \LWR@htmlElementclassline{nav}{botnavigation}{\LinkHome}
5429 }
```

```
5430 \end{warpHTML}
```

47 Previous/next navigation links

for HTML & PRINT: 5431 `\begin{warpall}`

`\linkpreviousname` What to call the link to the previous web page.

```
5432 \newcommand*{\linkpreviousname}{Previous}
```

`\linknextname` What to call the link to the next web page.

```
5433 \newcommand*{\linknextname}{Next}
```

```
5434 \end{warpall}
```

for PRINT output: 5435 `\begin{warpprint}`

`\LinkPrevious` Creates a link to the previous web page if there is one.

```
5436 \newcommand*{\LinkPrevious}{}
```

`\LinkNext` Creates a link to the next web page if there is one.

```
5437 \newcommand*{\LinkNext}{}
```

```
5438 \end{warpprint}
```

for HTML output: 5439 `\begin{warpHTML}`

`\LinkPrevious` Creates a link to the previous web page if there is one.

The links refer to the L^AT_EX labels `\Basejobname-autofile-*`

```

5440 \newcommand*{\LinkPrevious}{%
5441     \ifnumless{\value{LWR@htmlseqfilenumber}}{1}{}%
5442         \setcounter{LWR@tempcountone}{\value{LWR@htmlseqfilenumber}-1}%
5443         \LWR@subhyperrefclass{%
5444             \LWR@htmlrefsectionfilename{%
5445                 \BaseJobname-autofile-\arabic{LWR@tempcountone}%
5446             }%
5447         }{\linkpreviousname}{linkhome}%
5448     }%
5449 }
```

`\LinkNext` Creates a link to the next web page if there is one.

The links refer to the L^AT_EX labels `\Basejobname-autofile-*` and the last is the label `\Basejobname-autofile-last`

```

5450 \newcommand*{\LinkNext}{%
5451     \ifcsdef{r@\BaseJobname-autofile-last@lwarp}{%
5452         \edef\LWR@tempone{%
5453             \LWR@htmlfileref{\BaseJobname-autofile-\arabic{LWR@htmlseqfilenumber}}%
5454         }%
5455         \edef\LWR@temptwo{%
5456             \LWR@htmlfileref{\BaseJobname-autofile-last}%
5457         }%
5458         \ifdefequal{\LWR@tempone}{\LWR@temptwo}{}%
5459             \setcounter{LWR@tempcountone}{\value{LWR@htmlseqfilenumber}+1}%
5460             \LWR@subhyperrefclass{%
5461                 \LWR@htmlrefsectionfilename{%
5462                     \BaseJobname-autofile-\arabic{LWR@tempcountone}%
5463                 }%
5464             }{\linknextname}{linkhome}%
5465         }%
5466     }{}%
5467 }
```

5468 \end{warpHTML}

48 \LWRPrintStack diagnostic tool



Diagnostics tool: Prints the L^AT_EX nesting depth values for the stack levels. `\LWR@startpars` is used before printing the stack, so that `\LWRPrintStack` may be called from anywhere in the normal text flow.

for HTML output: 5469 \begin{warpHTML}

`\LWRPrintStack` Prints the closedepth stack.

```
5470 \newcommand*{\LWR@subprintstack}{
```

```

5471 \LWR@closedepthone\ \LWR@closedepthtwo\ \LWR@closedepththree\
5472 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\
5473 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\
5474 \LWR@closedephten\ \LWR@closedeptheleven\ \LWR@closedephtwelve\
5475 }
5476
5477 \newcommand*\LWRPrintStack{
5478 \LWR@startpars
5479 \LWR@subprintstack
5480 }

5481 \end{warpHTML}

```

for PRINT output: 5482 \begin{warpprint}

```

5483 \newcommand*\LWRPrintStack{}

5484 \end{warpprint}

```

49 Closing stack levels

for HTML output: 5485 \begin{warpHTML}

Close one nested level:

```

5486 \newcommand*\LWR@closeoneprevious}{%
5487
5488 \LWR@closeone
5489
5490 \LWR@popclose
5491 }

```

\LWR@closeprevious {(*sectintype*)} Close everything up to the given depth:

```

5492 \newcommand*\LWR@closeprevious}[1]{
5493 \LWR@traceinfo{%
5494   \LWR@closeprevious to depth \csuse{LWR@depth#1}, %
5495   depths are \LWR@subprintstack%
5496 }%

```

Close any pending paragraph:

```
5497 \LWR@stoppars%
```

Close anything nested deeper than the desired depth. First close anything deeper, then at most one of the same level.

```

5498 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{>}{\csuse{LWR@depth#1}}}}%
5499 {%
5500   \LWR@traceinfo{LWR@closeprevious: closing out depth \LWR@closedepthone}%

```

```

5501   \LWR@closeoneprevious%
5502 }%
5503 \ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}{\csuse{\LWR@depth#1}}}}%
5504 {%
5505   \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
5506   \LWR@closeoneprevious%
5507 }{}%
5508 \LWR@traceinfo{\LWR@closeprevious: done, depths are \LWR@subprintstack}%
5509 }

5510 \end{warpHTML}

```

50 PDF pages and styles

for HTML output: 5511 \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.

```

5512 \newcommand{\LWR@forcenewpage}{%
5513 \LWR@traceinfo{\LWR@forcenewpage}%
5514 \ifinner\else%
5515 \LWR@stoppars\LWR@orignewpage\LWR@startpars%
5516 \fi%
5517 }

```

\pagestyle, etc. are nullified for HTML output.

\pagestyle {<style>}

```
5518 \renewcommand*{\pagestyle}[1]{}
```

\thispagestyle {<style>}

```
5519 \renewcommand*{\thispagestyle}[1]{}
```

\markboth {<left>} {<right>}

```
5520 \renewcommand*{\markboth}[2]{}
```

\markright {<right>}

```
5521 \renewcommand*{\markright}[1]{}
```

\raggedbottom

```
5522 \renewcommand*{\raggedbottom}{}

```

`\flushbottom`

5523 `\renewcommand*{\flushbottom}{}`

`\sloppy`

5524 `\renewcommand*{\sloppy}{}`

`\fussy`

5525 `\renewcommand*{\fussy}{}`

`\pagenumbering` * `{\langle commands \rangle}`

5526 `\RenewDocumentCommand{\pagenumbering}{s m}{}`

5527 `\end{warpHTML}`

51 HTML tags, spans, divs, elements

for HTML output: 5528 `\begin{warpHTML}`

51.1 Mapping L^AT_EX sections to HTML sections

5529 `\newcommand*\LWR@tagtitle}{h1}`
 5530 `\newcommand*\LWR@tagtitleend}{/h1}`
 5531 `\newcommand*\LWR@tagbook}{div class="book"}`
 5532 `\newcommand*\LWR@tagbookend}{/div}`
 5533 `\newcommand*\LWR@tagpart}{h2}`
 5534 `\newcommand*\LWR@tagpartend}{/h2}`
 5535 `\newcommand*\LWR@tagchapter}{h3}`
 5536 `\newcommand*\LWR@tagchapterend}{/h3}`
 5537 `\newcommand*\LWR@tagsection}{h4}`
 5538 `\newcommand*\LWR@tagsectionend}{/h4}`
 5539 `\newcommand*\LWR@tagsubsection}{h5}`
 5540 `\newcommand*\LWR@tagsubsectionend}{/h5}`
 5541 `\newcommand*\LWR@tagsubsubsection}{h6}`
 5542 `\newcommand*\LWR@tagsubsubsectionend}{/h6}`
 5543 `\newcommand*\LWR@tagparagraph}{span class="paragraph"}`
 5544 `\newcommand*\LWR@tagparagraphend}{/span}`
 5545 `\newcommand*\LWR@tagsubparagraph}{span class="subparagraph"}`
 5546 `\newcommand*\LWR@tagsubparagraphend}{/span}`
 5547
 5548 `\newcommand*\LWR@tagregularparagraph}{p}`

51.2 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.)

```
5549 \providecommand*\LWR@FBcancel{}
5550
5551 \AtBeginDocument{%
```

In some circumstances, `\NoAutoSpacing` may be defined when `\frenchbsetup` is not.

```
5552 \@ifundefined{NoAutoSpacing}%
5553   {}%
5554   {%
5555     \LetLtxMacro\LWR@FBcancel\NoAutoSpacing%
5556   }%
5557
5558 \@ifundefined{frenchbsetup}%
5559 {}%
5560 {%
5561   \frenchbsetup{FrenchFootnotes=false}%

5562 %
5563   \renewrobustcmd*\FBcolonspace{%
5564     \begingroup%
5565     \LWR@FBcancel%
5566     \LWR@origampersand{}nbsp;%
5567     \endgroup%
5568   }%
5569   \renewrobustcmd*\FBthinspace{%
5570     \begingroup%
5571     \LWR@FBcancel%
5572     \LWR@origampersand\LWR@origpound{x202f;% \,
5573     \endgroup%
5574   }%
5575   \renewrobustcmd*\FBguillspace{%
5576     \begingroup%
5577     \LWR@FBcancel%
5578     \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}
5579     \endgroup%
5580   }%
5581   \DeclareDocumentCommand\FBmedkern{}{}{%
5582     \begingroup%
5583     \LWR@FBcancel%
5584     \LWR@origampersand\LWR@origpound{x202f;% \,
5585     \endgroup%
5586   }%
5587   \DeclareDocumentCommand\FBthickkern{}{}{%
5588     \begingroup%
5589     \LWR@FBcancel%
5590     \LWR@origampersand{}nbsp;% ~
5591     \endgroup%
5592   }%
5593   \renewrobustcmd*~{\HTMLentity{nbsp}}% was overwritten by babel-french
5594   \iffBunicode%
5595   \else%
5596     \DeclareTextSymbol\FBtextellipsis{LY1}{133}%
```

```

5597     \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
5598     \fi%
5599 }%
5600 }

```

51.3 HTML output formatting

Helps format the output HTML code for human readability.

`\LWR@indentHTML` Newline and indent the output HTML code.

```

5601 \newcommand*\LWR@indentHTML}{%
5602     \LWR@orignewline\LWR@origrule{2em}{0pt}%
5603 }

```

`\LWR@indentHTMLtwo` Newline and indent the output HTML code.

```

5604 \newcommand*\LWR@indentHTMLtwo}{%
5605     \LWR@orignewline\LWR@origrule{4em}{0pt}%
5606 }

```

51.4 HTML tags

`\LWR@htmltagc` `{<tag>}` Break ligatures and use upright apostrophes in HTML tags.

`\protect` is in case the tag appears in TOC, LOF, LOT.

```

5607 \newcommand*\LWR@htmltagc[1]{%
5608     \LWR@traceinfo{\LWR@htmltagc !\detokenize{#1}!}%
5609     \begingroup%
5610     \LWR@FBcancel%
5611     \ifmode\else\protect\LWR@print@normalfont\protect\LWR@origttfamily\fi%
5612     \protect\LWR@origtextless%
5613     \LWR@isolate{#1}%
5614     \protect\LWR@origtextgreater%
5615     \endgroup%
5616 }

```

`\LWR@spanwarnformat` `{<object>}`

Warns if the given object is used inside a span.

```

5617 \newcommand*\LWR@spanwarnformat[1]{%
5618     \ifnumcomp{\value{\LWR@spandepth}}{>}{0}{%
5619         \PackageWarning{lwarp}{%
5620             A #1 is being used inside a span.\MessageBreak
5621             Formatting may be lost,%
5622         }%
5623     }%
5624 }

```

`\LWR@spanwarninvalid` {<*object*>}

Warns if the given object is used inside a span.

```
5625 \newcommand*\LWR@spanwarninvalid[1]{%
5626   \ifnumcomp{\value{LWR@spandepth}}{>}{0}{%
5627     \PackageWarning{lwarp}{%
5628       A #1 is being used inside a span.\MessageBreak
5629       This generates invalid HTML,%
5630     }%
5631   }{}%
5632 }
```

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.

```
5633 \newcommand*\LWR@nestspanitem{%
5634 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
5635 \LWR@origitem%
5636 }
5637
5638 \newenvironment*LWR@nestspan}
5639 {%
5640 \LWR@traceinfo{LWR@nestspan starting}%
5641 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5642 {%
5643   \LWR@traceinfo{LWR@nestspan: inside a lateximage}%
5644 }%
5645 % not in a lateximage
5646   \LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
5647   \addtocounter{LWR@spandepth}{1}%

```

Nullify several objects inside the span:

```
5648   \RenewDocumentEnvironment{minipage}{0{t} o 0{t} m}%
5649     {\LWR@spanwarnformat{minipage or \protect\parbox}}%
5650     {}%
5651   \RenewDocumentEnvironment{BlockClass}{o m}%
5652     {\LWR@spanwarnformat{multi-paragraph object}}%
5653     {}%
5654   \renewcommand{\BlockClassSingle}[2]{%
5655     {\LWR@spanwarnformat{multi-paragraph object}}%
5656     ##2%
5657   }%
5658   \renewcommand{\LWR@forcenewpage}{}%
5659   \renewcommand{\LWR@liststart}{%
5660     \let\item\LWR@nestspanitem%
5661   }%
5662   \renewcommand{\LWR@listend}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
5663   \renewenvironment{quote}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
```

```

5664 \renewenvironment{quotation}{\LWR@htmltagc{br /}}{\LWR@htmltagc{br /}}%
5665 }% not in a lateximage
5666 \LWR@traceinfo{LWR@nestspan starting: done}%
5667 }% starting env
5668 {% ending env
5669 \LWR@traceinfo{LWR@nestspan ending}%
5670 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
5671 {}%
5672 {\addtocounter{LWR@spandepth}{-1}}%
5673 \LWR@traceinfo{LWR@nestspan ending: done}%
5674 }
5675
5676 \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.

```

5677 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
5678 \LWR@ensuredoingapar%
5679 \LWR@htmltagc{#1}%
5680 \begin{LWR@nestspan}%
5681 #2%
5682 \LWR@htmltagc{/#1}%
5683 \end{LWR@nestspan}%
5684 }

```

`\LWR@htmlspanclass` $[\langle style \rangle] \{ \langle class \rangle \} \{ \langle text \rangle \}$

```

5685 \NewDocumentCommand{\LWR@htmlspanclass}{o m +m}{%
5686 \LWR@traceinfo{LWR@htmlspanclass |#1|#2|}%
5687 \LWR@ensuredoingapar%
5688 \LWR@subhtmlElementclass{span}[#1][#2]%
5689 \begin{LWR@nestspan}%
5690 #3%
5691 \LWR@htmltagc{/span}%
5692 \LWR@traceinfo{LWR@htmlspanclass done}%
5693 \end{LWR@nestspan}%
5694 }

```

`\LWR@htmltag` $\{ \langle tag \rangle \}$

Print an HTML tag: `<tag>`

```

5695 \newcommand*{\LWR@htmltag}[1]{%
5696 % \LWR@traceinfo{LWR@htmltagb !\detokenize{#1}!}%
5697 \LWR@htmltagc{#1}%
5698 % \LWR@traceinfo{LWR@htmltagb: done}%
5699 }

```

51.5 Block tags and comments

In the following, `\origttfamily` breaks ligatures, which may not be used for HTML codes:

`\LWR@htmlopencomment`
`\LWR@htmlclosecomment`

```

5700 \newcommand*{\LWR@htmlopencomment}{%
5701 {%
5702 % \LWR@traceinfo{\LWR@htmlopencomment}%
5703 \begingroup%
5704 \LWR@FBcancel%
5705 \ifmmode\else\protect\LWR@print@normalfont\protect\LWR@origttfamily\fi%
5706 \LWR@print@mbox{\LWR@origtextless{!-\/-}%
5707 \endgroup%
5708 }%
5709 }
5710
5711 \newcommand*{\LWR@htmlclosecomment}{%
5712 {%
5713 % \LWR@traceinfo{\LWR@htmlclosecomment}%
5714 \begingroup%
5715 \LWR@FBcancel%
5716 \ifmmode\else\protect\LWR@print@normalfont\protect\LWR@origttfamily\fi%
5717 \LWR@print@mbox{-\/-\LWR@origtextgreater}%
5718 \endgroup%
5719 }%
5720 }
```

`\LWR@htmlcomment` {*`<comment>`*}

```

5721 \newcommand{\LWR@htmlcomment}[1]{%
5722 \LWR@htmlopencomment{%
5723 {%
5724   \LWR@print@normalfont%
5725   \LWR@origttfamily% break ligatures
5726   #1%
5727 }%
5728 \LWR@htmlclosecomment{}}
```

`\LWR@htmlblockcomment` {*`<comment>`*}

```

5729 \newcommand{\LWR@htmlblockcomment}[1]
5730 {\LWR@stoppars\LWR@htmlcomment{#1}\LWR@startpars}
```

`\LWR@htmlblocktag` {*`<tag>`*} print a stand-alone HTML tag

```

5731 \newcommand*{\LWR@htmlblocktag}[1]{%
5732 \LWR@stoppars%
5733 \LWR@htmltag{#1}%
5734 \LWR@startpars%
5735 }
```

51.6 Div class and element class

`\LWR@subhtmlElementclass` {<element>} [<style>] {<class>}

Factored and reused in several places.

The trailing spaces allow more places for a line break.

The use of `\textquotedbl` instead of " provides improved compatibility with xeCJK.

```

5736 \NewDocumentCommand{\LWR@subhtmlElementclass}{m O{} m}{%
5737 \LWR@traceinfo{\LWR@subhtmlElementclass !#1!#2!#3!}%
5738 \ifblank{#2}%
5739 {% empty option
5740   \LWR@htmltag{%
5741     #1 % space
5742     class=\textquotedbl#3\textquotedbl\ % space
5743   }%
5744 }%
5745 {% non-empty option
5746   \LWR@htmltag{%
5747     #1\LWR@indentHTML%
5748     class=\textquotedbl#3\textquotedbl\LWR@indentHTML%
5749     style=\textquotedbl#2\textquotedbl\LWR@orignewline%
5750   }%
5751 }%
5752 \LWR@traceinfo{\LWR@subhtmlElementclass done}%
5753 }

```

`\LWR@htmlElementclass` {<element>} {<class>} [<style>]

```

5754 \NewDocumentCommand{\LWR@htmlElementclass}{m o m}{%
5755 \LWR@stoppars%
5756 \LWR@forceemptyline%
5757 \LWR@subhtmlElementclass{#1}[#2]{#3}%
5758 \LWR@startpars%
5759 }

```

`\LWR@htmlElementclassend` {<element>} {<class>}

```

5760 \newcommand*{\LWR@htmlElementclassend}[2]{%
5761 \LWR@stoppars%
5762 \LWR@htmltag{/#1}%
5763 \ifbool{HTMLDebugComments}{%
5764   \LWR@htmlcomment{End of #1 ‘#2’}%
5765 }{}%
5766 \LWR@startpars%
5767 }

```

`\LWR@htmlDivclass` [<style>] {<class>}

```

5768 \NewDocumentCommand{\LWR@htmlDivclass}{o m}{%

```

```
5769 \LWR@htmlElementclass{div}[#1][#2]%
5770 }
```

```
\LWR@htmldivclassend {<class>}
```

```
5771 \newcommand*{\LWR@htmldivclassend}[1]{%
5772 \LWR@htmlElementclassend{div}{#1}%
5773 }
```

51.7 Single-line elements

A single-line element, without a paragraph tag for the line of text:

```
\LWR@htmlElementclassline {<element>} [<style>] {<class>} {<text>}
```

```
5774 \NewDocumentCommand{\LWR@htmlElementclassline}{m o m +m}{%
5775 \LWR@stoppars
5776 \LWR@forceemptyline%
5777 \LWR@subhtmlElementclass{#1}[#2][#3]%
5778 #4%
5779 \LWR@htmltag{/#1}
5780 \LWR@startpars
5781 }
```

51.8 HTML5 semantic elements

```
\LWR@htmlElement {<element>}
```

```
5782 \newcommand*{\LWR@htmlElement}[1]{%
5783 \LWR@htmlblocktag{#1}
5784 }
```

```
\LWR@htmlElementend {<element>}
```

```
5785 \newcommand*{\LWR@htmlElementend}[1]{%
5786 \LWR@stoppars
5787 \LWR@htmltag{/#1}
5788 \LWR@startpars
5789 }
5790
5791 \end{warpHTML}
```

51.9 High-level block and inline classes

These are high-level commands which allow the creation of arbitrary block or inline sections which may be formatted with css.

Nullified versions are provided for print mode.

For other direct-formatting commands, see section 91.

Env BlockClass [*<style>*] {*<class>*} High-level interface for <div> classes.

Ex: `\begin{BlockClass}{class} text \end{BlockClass}`

for PRINT output: 5792 `\begin{warpprint}`
5793 `\NewDocumentEnvironment{BlockClass}{o m}{}`
5794 `\end{warpprint}`

for HTML output: 5795 `\begin{warpHTML}`
5796
5797 `\NewDocumentEnvironment{LWR@print@BlockClass}{o m}{}`
5798
5799 `\NewDocumentEnvironment{LWR@HTML@BlockClass}{o m}`
5800 `{\LWR@htmldivclass[#1]{#2}}`
5801 `{\LWR@htmldivclassend[#2]}`
5802
5803 `\LWR@formattedenv{BlockClass}`
5804 `\end{warpHTML}`

`\BlockClassSingle` {*<class>*} {*<text>*} A single-line <div>, without a paragraph tag for the line of text.

for HTML & PRINT: 5805 `\begin{warpall}`
5806 `\newcommand{\BlockClassSingle}[2]{#2}`
5807 `\end{warpall}`

for HTML output: 5808 `\begin{warpHTML}`
5809 `\newcommand{\LWR@HTML@BlockClassSingle}[2]{%`
5810 `\LWR@html@elementclassline{div}{#1}{#2}%`
5811 `}`
5812
5813 `\LWR@formatted{BlockClassSingle}`
5814 `\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: 5815 `\begin{warpprint}`
5816 `\NewDocumentCommand{\InlineClass}{D{()}{}}{o m +m}{#4}%`
5817 `\end{warpprint}`

for HTML output: 5818 `\begin{warpHTML}`
5819 `\NewDocumentCommand{\LWR@print@InlineClass}{D{()}{}}{o m +m}{#4}%`
5820
5821 `\NewDocumentCommand{\LWR@HTML@InlineClass}{D{()}{}}{o m +m}{%`

```

5822 \ifbool{FormatWP}{%
5823   \LWR@htmlspanclass[#1]{#3}{#4}%
5824 }{%
5825   \LWR@htmlspanclass[#2]{#3}{#4}%
5826 }%
5827 }
5828
5829 \LWR@formatted{InlineClass}
5830 \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: 5831 `\begin{warpprint}`
5832 `\NewDocumentEnvironment{LWR@BlockClassWP}{m m m}{\}{\}`
5833 `\end{warpprint}`

for HTML output: 5834 `\begin{warpHTML}`
5835 `\NewDocumentEnvironment{LWR@print@LWR@BlockClassWP}{m m m}{\}{\}`
5836 `\NewDocumentEnvironment{LWR@HTML@LWR@BlockClassWP}{m m m}`
5837 `{%`
5838 `\LWR@stoppars%`
5839 `\ifbool{FormatWP}`
5840 `{%`
5841 `\addtocounter{LWR@thisautoidWP}{1}`

5842 `\LWR@htmltag%`
5843 `div class=\textquotedbl#3\textquotedbl\ % space`
5844 `id=\textquotedbl%`
5845 `\LWR@print@mbox{autoidWP-\arabic{LWR@thisautoidWP}}`
5846 `\textquotedbl%`
5847 `\ifblank{#1}{\ style=\textquotedbl#1\textquotedbl}`
5848 `}%`
5849 `}% FormatWP`
5850 `{% not FormatWP`
5851 `\LWR@htmltag%`
5852 `div class=\textquotedbl#3\textquotedbl%`
5853 `\ifblank{#2}{\ style=\textquotedbl#2\textquotedbl}`
5854 `}%`
5855 `}% not FormatWP`
5856 `\LWR@startpars%`
5857 `}`
5858 `{\LWR@htmldivclassend{#3}}`
5859
5860 `\LWR@formattedenv{LWR@BlockClassWP}`
5861 `\end{warpHTML}`

51.10 Closing HTML tags

for HTML output: 5862 `\begin{warpHTML}`

Sections H1, H2, etc. do not need a closing HTML tag, but we add a comment for readability:

```

5863 \newcommand*\LWR@printclosebook}
5864   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing book}}{}}
5865 \newcommand*\LWR@printclosepart}
5866   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{}}
5867 \newcommand*\LWR@printclosechapter}
5868   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{}}
5869 \newcommand*\LWR@printclosesection}
5870   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
5871 \newcommand*\LWR@printclosesubsection}
5872   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
5873 \newcommand*\LWR@printclosesubsection}
5874   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
5875 \newcommand*\LWR@printcloseparagraph}
5876   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
5877 \newcommand*\LWR@printclose subparagraph}
5878   {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}

```

Lists require closing HTML tags:

```

5879 \newcommand*\LWR@printcloselistitem}
5880   {\LWR@htmltag{/li}}
5881 \newcommand*\LWR@printclosedescitem}
5882   {\LWR@htmltag{/dd}}
5883 \newcommand*\LWR@printcloseitemize}
5884   {\LWR@htmltag{/ul}}
5885 \newcommand*\LWR@printcloseenumerate}
5886   {\LWR@htmltag{/ol}}
5887 \newcommand*\LWR@printclosedescription}
5888   {\LWR@htmltag{/dl}}

5889 \end{warpHTML}

```

52 Paragraph handling

These commands generate the HTML paragraph tags when allowed and required.

Paragraph tags are or are not allowed depending on many conditions. Section 53 has high-level commands which allow paragraph-tag generation to start/stop. Even when allowed (`\LWR@doingstartpars`), tags are not generated until a \LaTeX paragraph is being used (`\LWR@doingapar`). `LWR@lateximagedepth` is used to prevent nesting tags inside a `lateximage`. `LWR@spandepth` is used to prevent nesting paragraph tags inside a paragraph, which became important inside `\fbox` commands and other spans.

for HTML output: 5890 `\begin{warpHTML}`

Ctrl `LWR@spandepth` Do not create paragraph tags inside of an HTML span.

```

5891 \newcounter{LWR@spandepth}
5892 \setcounter{LWR@spandepth}{0}

```

Bool LWR@doingstartpars Tells whether paragraphs may be generated.

```
5893 \newbool{LWR@doingstartpars}
5894 \boolfalse{LWR@doingstartpars}
```

Bool LWR@doingapar Tells whether have actually generated and are currently processing paragraph text.

```
5895 \newbool{LWR@doingapar}
5896 \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:

```
5897 \newcommand*{\LWR@ensuredoingapar}{%
5898 \ifbool{LWR@doingstartpars}%
5899 {\global\booltrue{LWR@doingapar}}%
5900 {}%
5901 }
```

\PN@parnotes@auto Redefined by parnotes to print paragraph notes at the end of each paragraph.

```
5902 \def\P@parnotes@auto{}
```

\LWR@openparagraph

```
5903 \newcommand*{\LWR@openparagraph}
5904 {%
```

See if paragraph handling is enabled:

```
5905 \ifbool{LWR@doingstartpars}%
5906 {% handling pars
```

See if have already started a lateximage or a . If so, do not generate nested paragraph tags.

```
5907 \ifboolexpr{
5908   test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5909   test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5910 }{% 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 .

```
5911 {}% no nested par tags
```

Else: No lateximage or has been started yet, so it's OK to generate paragraph tags.

```
5912 {% yes nest par tags
```

If `parnotes` is used, paragraph notes are inserted before starting the next paragraph:

```
5913      \PN@parnotes@auto%
```

The opening paragraph tag:

```
5914      \LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline%
```

Now have started a paragraph.

```
5915      \global\booltrue{LWR@doingapar}%
```

At the end of each paragraph, generate closing tag and do regular /par stuff. (Attempting to use the `everyhook` or `hook` for `\LWR@closeparagraph` does not work well.)

```
5916      \let\par\LWR@closeparagraph%
5917      }% end of yes nest par tags
5918 }% end of handling pars
5919 {}% not handling pars
5920 }
```

`\LWR@closeparagraph@br` Add an HTML break if in a span, and not in a `lateximage`, and not in tabular metadata. Factored from `\LWR@closeparagraph`.

```
5921 \newcommand*{\LWR@closeparagraph@br}
5922 {%
5923   \ifboolexpr{
5924     test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
5925     test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}} and
5926     not bool {LWR@intabularmetadata}
5927   }%
5928   {\unskip\LWR@htmltagc{br /}}%
5929   }%
5930 }
```

`\LWR@closeparagraph`

```
5931 \newcommand*{\LWR@closeparagraph}
5932 {%
5933 % \LWR@traceinfo{LWR@closeparagraph}%
```

See if paragraph handling is enabled:

```
5934 \ifbool{LWR@doingapar}%
```

If currently in paragraph mode:

```
5935 {% handling pars
```

See if already started a `lateximage` or a ``:

```
5936   \ifboolexpr{
```

```

5937     test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5938     test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5939   ]%

```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```

5940   {% no nested par tags
5941     \LWR@closeparagraph@br%
5942   }% no nested par tags

```

If have not already started a lateximage or a :

```

5943   {% yes nest par tags

```

Print a closing tag and some extra vertical space.

(The fill seems to be required to force the caption package to create flush left caption text in the HTML.)

```

5944     \@hspacer{\fill}% \hspace*{\fill}
5945     \leavevmode\LWR@orignewline%
5946     \LWR@htmltagc{/\LWR@tagregularparagraph}%

```

No longer doing a paragraph:

```

5947     \global\boolfalse{LWR@doingapar}%

```

Disable the special minipage & \hspace interaction until a new minipage is found:

```

5948     \global\boolfalse{LWR@minipagethispar}%

```

If parnotes is used, paragraph notes are inserted after ending the previous paragraph:

```

5949     \PN@parnotes@auto%
5950   }% end of yes nest par tags
5951 }% end of handling pars

```

Add a parbreak if in a span, not in a lateximage, and not in table metadata.

```

5952 {% not handling pars
5953   \LWR@closeparagraph@br%
5954 }% 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:

```

5955 \ifboolexpr{%
5956   not bool {LWR@doingapar} and
5957   test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
5958   test {
5959     \ifnumcomp{\value{LWR@tabulardepth}}{=}{\value{LWR@tabularpardepth}}
5960   } and
5961   bool {LWR@intabularmetadata} and

```

```

5962     not bool {LWR@tableparcell} and
5963     test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{}{0}}
5964 }%
5965 {%
5966     \LWR@getmynexttoken%
5967 }{%
5968     \LWR@origpar%
5969 }%
5970 }

5971 \end{warpHTML}

```

53 Paragraph start/stop handling

These commands allow/disallow the generation of HTML paragraph tags.

Section 52 has the commands which actually generate the tags.

The everyhook package is used to generate the opening paragraph tags. The closing tags are generated by `\par`.

for HTML output: 5972 `\begin{warpHTML}`

`\LWR@startpars` Begin handling HTML paragraphs. This allows an HTML paragraph to start, but one has not yet begun.

```

5973 \newcommand*{\LWR@startpars}%
5974 {%
5975 % \LWR@traceinfo{\LWR@startpars}%

```

Ignore if inside a `lateximage` or ``:

```

5976 \ifboolexpr{
5977     test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{}{0}} or
5978     test {\ifnumcomp{\value{LWR@spandepth}}{>}{}{0}}
5979 }%
5980 {}%
5981 {%

```

See if currently handling HTML paragraphs:

```

5982     \ifbool{LWR@doingstartpars}%

```

If already in paragraph mode, do nothing.

```

5983     {}%

```

If not currently in paragraph mode:

```

5984     {%

```

At the start of each paragraph, generate an opening tag:

```
5985     \PushPreHook{par}{\LWR@openparagraph}%
```

At the end of each paragraph, generate closing tag then do regular /par actions:

```
5986     \let\par\LWR@closeparagraph
5987
5988     }% an intentionally blank line
```

Are now handling paragraphs, but have not yet actually started one:

```
5989     \global\setbool{LWR@doingstartpars}{true}%
```

No <par> tag yet to undo:

```
5990     \global\boolfalse{LWR@doingapar}%
5991 }% nestspan
5992 % \LWR@traceinfo{LWR@startpars: done}%
5993 }
```

`\LWR@stoppars` Stop handling HTML paragraphs. Any currently open HTML paragraph is closed, and no more will be opened.

```
5994 \newcommand*{\LWR@stoppars}%
5995 {%
```

Ignore if inside a `lateximage` or ``:

```
5996 \ifboolexpr{
5997   test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
5998   test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
5999 }%
6000 }%
6001 {%
```

See if currently handling HTML paragraphs:

```
6002     \ifbool{LWR@doingapar}%
```

if currently in an HTML paragraph:

```
6003     {%
```

Print a closing tag:

```
6004     \leavevmode\LWR@orignewline%
6005     \LWR@htmltagc{/\LWR@tagregularparagraph}%
6006     \LWR@orignewline%
```

No longer have an open HTML paragraph:

```
6007     \global\boolfalse{LWR@doingapar}%
```

Disable the special minipage & \hspace interaction until a new minipage is found:

```
6008     \global\boolfalse{LWR@minipagethispar}
6009   }%
```

If was not in an HTML paragraph:

```
6010   {}%
```

See if currently allowing HTML paragraphs:

```
6011   \ifbool{LWR@doingstartpars}%
```

If so: clear the par hook to no longer catch paragraphs:

```
6012     {\ClearPreHook{par}}%
```

Else: Do nothing:

```
6013     {}%
```

No longer in paragraph mode:

```
6014   \global\setbool{LWR@doingstartpars}{false}%
```

No <p> tag to undo:

```
6015   \global\boolfalse{LWR@doingapar}%
6016 }% nestspan
6017 }
```

```
6018 \end{warpHTML}
```

54 Indentfirst

Pkg indentfirst indentfirst redefines \@afterindentfalse to be \@afterindenttrue. This is reversed \AtBeginDocument here.

for HTML output: 6019 \begin{warpHTML}

```
6020 \AtBeginDocument{
6021   \def\@afterindentfalse{\let\if@afterindent\iffalse}
6022   \@afterindentfalse
6023 }
6024 \let\LWR@afterindent@syntaxhighlight\fi% syntax highlighting
6025 \end{warpHTML}
```

55 Page headers and footers

for HTML & PRINT: 6026 \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.

```
6027 \newcommand{\LWR@firstpagetop}{} % for the home page alone
6028 \newcommand{\LWR@firstpagebottom}{} % for the home page alone
6029 \newcommand{\LWR@pagetop}{} % for all other pages
6030 \newcommand{\LWR@pagebottom}{}

```

\HTMLFirstPageTop {*<text and logos>*}

```
6031 \newcommand{\HTMLFirstPageTop}[1]{%
6032   \renewcommand{\LWR@firstpagetop}{#1}%
6033 }

```

\HTMLFirstPageBottom {*<text and logos>*}

```
6034 \newcommand{\HTMLFirstPageBottom}[1]{%
6035   \renewcommand{\LWR@firstpagebottom}{#1}%
6036 }

```

\HTMLPageTop {*<text and logos>*}

```
6037 \newcommand{\HTMLPageTop}[1]{%
6038   \renewcommand{\LWR@pagetop}{#1}%
6039 }

```

\HTMLPageBottom {*<text and logos>*}

```
6040 \newcommand{\HTMLPageBottom}[1]{%
6041   \renewcommand{\LWR@pagebottom}{#1}%
6042 }

```

```
6043 \end{warpall}

```

56 CSS

for HTML output: 6044 \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.

```
6045 \newcommand*{\LWR@currentcss}{lwarp.css}

```

`\CSSFilename` $\{\langle new-css-filename.css \rangle\}$ Assigns the CSS file to be used by the following HTML pages.

```
6046 \newcommand*\CSSFilename}[1]{%
6047 \renewcommand*\LWR@currentcss{#1}%
6048 \@onelevel@sanitize\LWR@currentcss%
6049 }
6050
6051 \end{warpHTML}
```

for PRINT output:

```
6052 \begin{warpprint}
6053 \newcommand*\CSSFilename}[1]{%
6054 \end{warpprint}
```

57 MathJax script

for HTML output: `6055 \begin{warpHTML}`
 Default: `lwarp_mathjax.txt`

`\LWR@mathjaxfilename` The MathJax script filename to use. This file is copied into the head of each HTML page. This may be changed mid-document using `\MathJaxFilename`, allowing the use of a custom MathJax script, such as for a local repository, or different MathJax script files to be used for different sections of the document.

```
6056 \newcommand*\LWR@mathjaxfilename{lwarp_mathjax.txt}
```

`\MathJaxFilename` $\{\langle filename \rangle\}$ Assigns the MathJax script file to be used by the following HTML pages.

```
6057 \newcommand*\MathJaxFilename}[1]{%
6058   \renewcommand*\LWR@mathjaxfilename{#1}%
6059   \@onelevel@sanitize\LWR@mathjaxfilename%
6060 }
6061
6062 \end{warpHTML}
```

for PRINT output:

```
6063 \begin{warpprint}
6064 \newcommand*\MathJaxFilename}[1]{%
6065 \end{warpprint}
```

58 Title, HTML meta author, HTML meta description

for HTML output: `6066 \begin{warpHTML}`

`\title` $\{\langle title \rangle\}$ Modified to remember `\thetitle`, which is used to set the HTML page titles.

```
6067 \let\LWR@origtitle\title
```

```

6068
6069 \renewcommand*{\title}[1]{%
6070   \LWR@origtitle{#1}%
6071   \begingroup%
6072     \renewcommand{\thanks}[1]{}%
6073     \protected@xdef\thetitle{#1}%
6074   \endgroup%
6075 }

6076 \end{warpHTML}

```

for HTML & PRINT: 6077 \begin{warpall}

`\HTMLtitle` $\langle\langle\textit{Titlename}\rangle\rangle$ The Title to place into an HTML meta tag. The default is to use the document `\title`'s setting.

```

6078 \providecommand{\thetitle}{\BaseJobname}
6079
6080 \newcommand{\theHTMLtitle}{\thetitle}
6081
6082 \newcommand{\HTMLtitle}[1]{\renewcommand{\theHTMLtitle}{#1}}

```

`\HTMLAuthor` $\langle\langle\textit{authorname}\rangle\rangle$ 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.

```

6083 \providecommand{\theauthor}{}
6084
6085 \newcommand{\theHTMLAuthor}{\theauthor}
6086
6087 \newcommand{\HTMLAuthor}[1]{\renewcommand{\theHTMLAuthor}{#1}}

```

This is placed inside an HTML meta tag at the start of each file. This may be changed mid-document using `\HTMLDescription`, allowing different HTML descriptions to be used for different sections of the document.

 **HTML author** Do not use double quotes, and do not exceed 150 characters.

`\HTMLDescription` $\langle\langle\textit{New HTML meta description.}\rangle\rangle$ Assigns the HTML file's description meta tag.

```

6088 \newcommand{\LWR@currentHTMLDescription}{}
6089
6090 \newcommand{\HTMLDescription}[1]{%
6091   \renewcommand{\LWR@currentHTMLDescription}{#1}
6092 }
6093
6094 \end{warpall}

```

59 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.

footnote numbering To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For bigfoot, manyfoot, or perpage:

```
\MakePerPage{footnoteX}
— or —
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by HTML page. This is recommended for `\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

 **MathJax, \footnotemark** If using MATHJAX, after each math expression with a `\footnotemark`, adjust the footnote counter by the number of `\footnotemarks`:

```
\[ (math expression with two instances of \footnotemark) \]
\warpHTMLonly{\addtocounter{footnote}{2}}
```

Similarly for endnotes, but *not* sidenotes.

Also for MATHJAX, `\footnotename` is used for a `\footnotemark` if the actual footnote number is not known. To redefine it, provide it before loading lwarp:

```
\providecommand{\footnotename}{something}
\usepackage{lwarp}
```

Similar for sidenotes. For endnotes:

```
\def\endnotename{something}% \def allows name to start with "end"
```

For the `pagenote` package, there is no `\pagenotename` to define, since there is no `\pagenotemark` command.

footmisc The `footmisc stable` option is emulated by lwarp.

 **sectioning commands** When using footnotes in sectioning commands, to generate consistent results between print and HTML, use the `footmisc` package with the `stable` option, provide a short toc entry, and `\protect` the `\footnote`:

```
\usepackage[stable]{footmisc}
...
\subsection[Subsection Name]
{Subsection Name\protect\footnote{A footnote.}}
```

memoir with footmisc If using memoir class, with which lwarp preloads `footmisc`, the `stable` option must be declared before lwarp is loaded:

 **memoir**

```

\PassOptionsToPackage{stable}{footmisc}
\usepackage{lwarp}
. . .

```

Do not use a starred sectioning command. As an alternative, it may be possible to adjust `\secnumdepth` instead.

Several kinds of footnotes are used: in a regular page, in a minipage, or as thanks in the titlepage. Each of these is handle differently.

59.1 Regular page footnotes

In HTML documents, footnotes are placed at the bottom of the web page or the section, depending on `FootnoteDepth`, using the L^AT_EX box `\LWR@footnotebox`. Using this instead of the original `\footins` box avoids having footnotes be printed by the output routine, since footnotes should be printed per HTML page instead of per PDF page.

See section 59.4 for the implementation.

59.2 Minipage footnotes

See section 59.5 for how minipage footnotes are gathered. See section 90.4 for how minipage footnotes are placed into the document.

59.3 Titlepage thanks

See section 66.7 for titlepage footnotes.

59.4 Regular page footnote implementation

for HTML & PRINT: 6095 `\begin{warppall}`

Ctr `FootnoteDepth` Determines how deeply to place footnotes in the HTML files, similar to `tocdepth`. The **Default:** 3 default of 3 places footnotes before each `\subsubsection` or higher. See table 11 for a table of L^AT_EX section headings.

```

6096 \newcounter{FootnoteDepth}
6097 \setcounter{FootnoteDepth}{3}

```

Ctr `footnoteReset` If non-zero, the footnote counter is reset to this value each time the footnotes are printed, as controlled by `FootnoteDepth`. For the `manyfoot` and `bigfoot` packages, additional counters such as `footnote<suffix>Reset` will be defined as well. These counters may be set non-zero by the user, and are also set if the `perpage`'s `\MakePerPage` or `\MakeSortedPerPage` macros are used for the footnote or `footnote<suffix>` counters.

(The name is not capitalized because it is made from the counter's name with "Reset" appended.)

```
6098 \newcounter{footnoteReset}
6099 \setcounter{footnoteReset}{0}

6100 \end{warpall}
```

for HTML output: 6101 \begin{warpHTML}

`\LWR@footnotebox` 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.

```
6102 \newbox\LWR@footnotebox
```

Much of the following has unneeded print-mode formatting removed.

`\@makefn`text {*<text>*}

```
6103 \long\def\@makefn#1{\textsuperscript{\@thefnmark}~#1}
```

`\@makefn`mark

```
6104 \def\@makefnmark{%
6105   \textsuperscript{\@thefnmark}%
6106 }
```

Footnotes may be in regular text, in which case paragraphs are tagged, or in a table data cell or `lateximage`, in which case paragraph tags must be added manually.

In a `lateximage` during HTML output, the `lateximage` is placed inside a print-mode `minipage`, but the footnotes are broken out by:

```
\def\@mpfn{footnote}
\def\@thempfn{\thefootnote}
\let\@footnotetext\LWR@footnotetext
```

`\LWR@@footnotetext` {*<text>*} {*<footnote box name>*}

Factored to allow multiple footnote boxes for `manyfoot`.

```
6107 \long\def\LWR@@footnotetext#1#2{%
6108 \LWR@traceinfo{LWR@footnotetext}%
6109 \global\setbox\csname #2\endcsname=\vbox{%
```

Add to any current footnotes:

```
6110   \unvbox\csname #2\endcsname%
```

Remember the footnote number for `\ref`:

```
6111 \protected@edef\@currentlabel{%
6112     \csname p@footnote\endcsname\@thefnmark%
6113 }% @currentlabel
```

Open a group:

```
6114 \color@begingroup%
```

Disable CJK xpinyin while generating footnotes.

```
6115 \LWR@disablepinyin%
```

Use HTML superscripts in the footnote even when the main text is inside a `lateximage`, because the footnote will be in HTML:

```
6116 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
6117 \ifthenelse{%
6118     \boolean{LWR@doingstartpars} \AND%
6119     \cnttest{\value{LWR@lateximagedepth}}{=} {0}%
6120 }%
6121 {}%
6122 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%
```

Append the footnote to the list:

```
6123 \@makefntext{#1}%
```

Closing paragraph tag:

```
6124 \ifthenelse{%
6125     \boolean{LWR@doingstartpars} \AND%
6126     \cnttest{\value{LWR@lateximagedepth}}{=} {0}%
6127 }%
6128 {\par}%
6129 {%
6130     \LWR@htmltagc{/\LWR@tagregularparagraph}%
6131     \LWR@orignewline%
6132 }%
```

Close the group:

```
6133 \color@endgroup%
6134 }% vbox
```

Paragraph handling:

```
6135 \LWR@ensuredoingapar%
6136 }%
```

```
\LWR@footnotetext {<text>}
```

```
6137 \long\def\LWR@footnotetext#1{\LWR@footnotetext{#1}{LWR@footnotebox}}
```

```
\@footnotetext {<text>}
```

```
6138 \LetLtxMacro\@footnotetext\LWR@footnotetext
```

59.5 Minipage footnote implementation

Patch \LaTeX 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.

```
6139 \newbox\LWR@mpfootnotes
```

```
\@mpfootnotetext {<text>}
```

```
6140 \long\def\@mpfootnotetext#1{%
6141 \LWR@traceinfo{\@mpfootnotetext}%
6142 \global\setbox\LWR@mpfootnotes\vbox{%
6143   \unvbox\LWR@mpfootnotes%
6144   \reset@font\footnotesize%
6145   \hsize\columnwidth%
6146   \@parboxrestore%
6147   \protected@edef\@currentlabel%
6148     {\csname p@mpfootnote\endcsname\@thefnmark}%
6149   \color@begingroup%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
6150   \ifthenelse{%
6151     \boolean{LWR@doingstartpars} \AND%
6152     \cnttst{\value{LWR@lateximagedepth}}{=}{0}}%
6153   }%
6154   {}%
6155   {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

6156   \@makefntext{%
6157     \ignorespaces#1%
6158   }%
```

Don't add the closing paragraph tag if are inside a `lateximage`:

```
6159   \ifthenelse{\cnttst{\value{LWR@lateximagedepth}}{>}{0}}%
6160   {}%
6161   {%
6162     \leavevmode\LWR@orignewline%
6163     \LWR@htmltagc{\LWR@tagregularparagraph}%
6164     \LWR@origpar%
6165   }%
```

```
6166 \color@endgroup%
6167 }% vbox
```

Paragraph handling:

```
6168 \LWR@ensuredoingapar%
6169 \LWR@traceinfo{@mpfootnotetext: done}%
6170 }
```

`\thempfootnote` Redefined to remove the `\itshape`, which caused an obscure compiling error in some situations.

```
6171 \AtBeginDocument{
6172 \def\thempfootnote{\@alph\c@mpfootnote}
6173 }
```

59.6 Printing pending footnotes

`\LWR@printpendingfootnotes` $\langle footnote\ counter\ name \rangle$

```
6174 \newcommand*\LWR@printpendingfootnotes[1]{%
6175 \expandafter\ifvoid\csname LWR@#1box\endcsname\else
6176 \LWR@forcenewpage
6177 \begin{BlockClass}{footnotes}
6178 \null
6179 \unvbox\csuse{LWR@#1box}
6180 \setbox\csuse{LWR@#1box}=\vbox{}
6181 \end{BlockClass}
6182 \ifltxcounter{#1Reset}{%
6183 \ifnumgreater{\value{#1Reset}}{0}{%
6184 \setcounter{#1}{\value{#1Reset}}%
6185 \addtocounter{#1}{-1}%
6186 }{}%
6187 }{}%
6188 \fi
6189 }
```

`\LWR@printpendingfootnotes` Enclose the footnotes in a class, print, then clear. For `manynotes`, new footnotes may be added via `\appto`.

```
6190 \newcommand*\LWR@printpendingfootnotes{%
6191 \LWR@printpendingfootnotes{footnote}%
6192 }
```

`\LWR@maybeprintpendingfootnotes` $\langle depth \rangle$ Used to print footnotes before sections only if formatting for an EPUB or word processor:

```
6193 \newcommand*\LWR@maybeprintpendingfootnotes[1]{%
6194 \ifboolexpr{
6195 not test{\ifnumcomp{#1}{>}{\value{FootnoteDepth}}} or
```

```

6196     bool{FormatEPUB} or
6197     bool{FormatWP}
6198 }%
6199 {\LWR@printpendingfootnotes}%
6200 {}%
6201 }

```

`\LWR@printpendingmpfootnotes` Enclose the minipage footnotes in a class, print, then clear.

```

6202 \newcommand*{\LWR@printpendingmpfootnotes}{%
6203 \ifvoid\LWR@mpfootnotes\else
6204     \LWR@forcenewpage
6205     \begin{BlockClass}{footnotes}
6206     \null
6207     \unvbox\LWR@mpfootnotes
6208     \setbox\LWR@mpfootnotes=\vbox{}
6209     \end{BlockClass}
6210 \fi
6211 }

6212 \end{warpHTML}

```

60 Marginpars

`\marginpar` [*left*] [*right*] `\marginpar` may contains paragraphs, but in order to remain inline with the surrounding text `lwarp` nullifies block-related macros inside the `\marginpar`. Paragraph breaks are converted to `
` 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: 6213 `\begin{warpHTML}`

`\marginpar` [*left*] [*right*]

```

6214 \renewcommand{\marginpar}[2][{}]{%
6215 \ifbool{FormatWP}%
6216 {%
6217 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
6218 #2
6219 \end{LWR@BlockClassWP}
6220 }%
6221 {%
6222     \LWR@htmlspanclass{marginpar}{#2}%
6223 }%
6224 }

```

`\marginparBlock` [*left*] [*right*]

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

HTML version.

```

6225 \newcommand{\marginparBlock}[2][]{%
6226 \LWR@stoppars%
6227 \ifbool{FormatWP}%
6228 {%
6229   \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{{marginblock}
6230     #2
6231   \end{LWR@BlockClassWP}
6232 }{%
6233   \begin{BlockClass}[width:2in; float:right; margin:10pt]{marginparblock}
6234     #2
6235   \end{BlockClass}
6236 }%
6237 \LWR@startpars%
6238 }

```

`\reversemarginpar`

```
6239 \renewcommand*{\reversemarginpar}{}

```

`\normalmarginpar`

```
6240 \renewcommand*{\normalmarginpar}{}

```

```
6241 \end{warpHTML}

```

for PRINT output: `6242 \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.

```
6243 \LetLtxMacro\marginparBlock\marginpar

```

```
6244 \end{warpprint}

```

61 Splitting HTML files

- Files are split according to FileDepth and CombineHigherDepths.
- Filenames are sanitized by `\LWR@filenamenoblanks`.

- `\LWR@newhtmlfile` finishes an HTML page, adds a comment to tell where and how to split the file, then starts a new HTML page.

for HTML & PRINT: 6245 `\begin{warpall}`

`Ctr FileDepth` `{\section depth}` determines how deeply to break into new HTML files, similar to `tocdepth`. The default of `-5` produces one large HTML file.

```
6246 \newcounter{FileDepth}
6247 \setcounter{FileDepth}{-5}
```

`Bool CombineHigherDepths` Combile higher-level sections together into one file?

```
6248 \newbool{CombineHigherDepths}
6249 \booltrue{CombineHigherDepths}
```

`\FilenameLimit` Maximum length of the generated filenames.

```
6250 \newcommand*{\FilenameLimit}{80}

6251 \end{warpall}
```

for HTML output: 6252 `\begin{warphTML}`

`\LWR@thisfilename` The currently-active filename or number. At first, this is the homepage.

```
6253 \AtBeginDocument{
6254   \ifbool{FileSectionNames}%
6255     {\newcommand*{\LWR@thisfilename}{\HomeHTMLFilename}}
6256     {\newcommand*{\LWR@thisfilename}{0}}
6257 }
```

`\LWR@thisnewfilename` The filename being sanitized.

```
6258 \newcommand*{\LWR@thisnewfilename}{}
```

`\LWR@simplifname` * `{\expression}` Simplify `\LWR@thisnewfilename`.

If starred, detokenizes the input expression. If found, changes the expression to a single detokenized dash.

```
6259 \NewDocumentCommand{\LWR@simplifname}{s m}{%
6260   \IfBooleanTF{#1}{%
6261     \StrSubstitute{\LWR@thisnewfilename}%
6262       {\detokenize{#2}}%
6263       {\detokenize{-}}[\LWR@thisnewfilename]%
6264   }{%
6265     \StrSubstitute{\LWR@thisnewfilename}%
6266       {#2}%
6267       {\detokenize{-}}[\LWR@thisnewfilename]%
6268   }
6269 }
```

`\LWR@simplifycustom` User-defined filename simplifications. Redefine with `\newcommand`.

```
6270 \newcommand*\LWR@simplifycustom{}
```

`\FilenameSimplify` * `{<phrase>}` Assign a user-defined filename simplification. Appends to `\LWR@simplifycustom`.

```
6271 \NewDocumentCommand{\FilenameSimplify}{s m}{%
6272 \IfBooleanTF{#1}{%
6273   \appto{\LWR@simplifycustom}{%
6274     \LWR@simplifiname*{#2}%
6275   }%
6276 }{%
6277   \appto{\LWR@simplifycustom}{%
6278     \LWR@simplifiname{#2}%
6279   }%
6280 }%
6281 }
```

`\LWR@avoiiddupfilenames` Instructions for how to avoid duplicate filenames. This is used in a warning in `\LWR@filenamenoblanks`, and in an error in `\LWR@newhtmlfile`.

```
6282 \newcommand*\LWR@avoiiddupfilenames{%
6283   To avoid duplicate filenames, use the optional\MessageBreak
6284   short Table of Contents entry:\MessageBreak
6285   \space\space\protect\section[Unique name, no math]{Name with math}%
6286   \MessageBreak
6287   or use \protect\texorpdfstring, from the hyperref package:\MessageBreak
6288   \space\space%
6289   \protect\section{\MessageBreak
6290     \space\space\space\space\protect\texorpdfstring\MessageBreak
6291     \space\space\space\space\space\space%
6292     {Name with math}{Unique name, no math}\MessageBreak
6293   \space\space}
6294 }
```

`\LWR@filenamenoblanks` `{<filename>}`

Convert blanks into dashes, removes short words, store result in `\LWR@thisfilename`.

Also see `\LWR@nullfonts` for nullified macros.

```
6295 \newcommand*\LWR@filenamenoblanks}[1]{%
6296 \begingroup
```

Locally temporarily disable direct-formatting commands, not used in filenames:

```
6297 \LWR@nullfonts%
6298 \renewcommand*\LWR@htmltagc}[1]{%
6299 \edef\LWR@thisnewfilename{#1}%
```

Replaces common macros with hyphens. (& is done by \LWR@nullfonts.)

```
6300 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%
6301 \LWR@simplifiname{\_}
6302 \LWR@simplifiname{\#}
6303 \LWR@simplifiname{\textbackslash}
6304 \LWR@simplifiname{\protect}
6305 \LWR@simplifiname{\ }
6306 \LWR@simplifiname{\textless}
6307 \LWR@simplifiname{\textgreater}

6308 \edef\LWR@thisnewfilename{\detokenize\expandafter{\LWR@thisnewfilename}}%
```

Warn if there is dollar math in the section name:

```
6309 \ifbool{FileSectionNames}{%
6310   \IfSubStr{\LWR@thisnewfilename}{\LWRdollar}{%
6311     \PackageWarning{lwarp}
6312     {%
6313       This section name:\MessageBreak
6314       \space\space‘‘\detokenize\expandafter{#1}’’\MessageBreak
6315       at the line number listed below,\MessageBreak
6316       is using $dollar-delimited math$,
6317       which generates\MessageBreak
6318       complicated file names. It is better to use\MessageBreak
6319       \space\space%
6320       \protect\section{Name with \protect\(\parenthesis math\protect\)}%
6321       \MessageBreak
6322       The math then will be removed from the file name.\MessageBreak
6323       \MessageBreak
6324       \LWR@avoiddupfilenames%
6325       \MessageBreak
6326       This section is found before or%
6327     }
6328   }{}%
6329 }{}

6330 \LWR@traceinfo{\LWR@filenamoblanks edef: !\LWR@thisnewfilename!}%
6331 \fullexpandarg%
```

Convert spaces into hyphens:

```
6332 \LWR@simplifiname*{ }
```

Convert punctutation into hyphens:

```
6333 \LWR@simplifiname*{!}
6334 \LWR@simplifiname*{,}
6335 \LWR@simplifiname*{' }
6336 \LWR@simplifiname*{+}
6337 \LWR@simplifiname*{,}
6338 \LWR@simplifiname*{/}
6339 \LWR@simplifiname*{:}
6340 \LWR@simplifiname*{;}

```

```

6341 \LWR@simplifiname*{=}
6342 \LWR@simplifiname*{?}
6343 \LWR@simplifiname*{@}
6344 \LWR@simplifiname*{^}
6345 \LWR@simplifiname*{&}
6346 \LWR@simplifiname*{"}
6347 \LWR@simplifiname*{<}
6348 \LWR@simplifiname*{>}

```

```
6349 \LWR@simplifiname{\LWRbackslash}
```

Braces are removed entirely to avoid extra dashes in the result.

```

6350 \StrSubstitute{\LWR@thisnewfilename}%
6351   {\LWRleftbrace}{}\[\LWR@thisnewfilename]%
6352 \StrSubstitute{\LWR@thisnewfilename}%
6353   {\LWRrightbrace}{}\[\LWR@thisnewfilename]%

```

```

6354 \LWR@simplifiname{\LWRpercent}
6355 \LWR@simplifiname{\LWRdollar}

```

```

6356 \LWR@simplifiname*{|}
6357 \LWR@simplifiname*{^}
6358 \LWR@simplifiname*{~}
6359 \LWR@simplifiname*{[}
6360 \LWR@simplifiname*{]}
6361 \LWR@simplifiname*{'}

```

Convert short words:

```

6362 \LWR@simplifiname*{-s-}
6363 \LWR@simplifiname*{-S-}
6364 \LWR@simplifiname*{-a-}
6365 \LWR@simplifiname*{-A-}
6366 \LWR@simplifiname*{-an-}
6367 \LWR@simplifiname*{-AN-}
6368 \LWR@simplifiname*{-to-}
6369 \LWR@simplifiname*{-TO-}
6370 \LWR@simplifiname*{-by-}
6371 \LWR@simplifiname*{-BY-}
6372 \LWR@simplifiname*{-of-}
6373 \LWR@simplifiname*{-OF-}
6374 \LWR@simplifiname*{-and-}
6375 \LWR@simplifiname*{-AND-}
6376 \LWR@simplifiname*{-for-}
6377 \LWR@simplifiname*{-FOR-}
6378 \LWR@simplifiname*{-the-}
6379 \LWR@simplifiname*{-THE-}

```

Convert custom words:

```
6380 \LWR@simplifycustom%
```

If pdfL^AT_EX and not utf8 encoding, don't try to convert emdash, endash:

```
6381 \ifPDFTeX% pdflatex or dvi latex
6382 \ifdefstring{\inputencodingname}{utf8}{%
6383   \LWR@simplifiname*{-}
6384 %   emdash
6385   \LWR@simplifiname*{-}
6386 %   endash
6387 }{}%
6388 \else% not PDFTeX
6389   \LWR@simplifiname*{-}
6390   \LWR@simplifiname*{-}
6391 \fi%
```

Convert multiple hyphens:

```
6392 \LWR@simplifiname*{-----}
6393 \LWR@simplifiname*{----}
6394 \LWR@simplifiname*{---}
6395 \LWR@simplifiname*{--}
```

If starts with a dash, remove the leading dash:

```
6396 \IfBeginWith{\LWR@thisnewfilename}{\detokenize{-}}{%
6397   \StrGobbleLeft{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
6398 }{}%
```

If ends with a dash, remove the trailing dash:

```
6399 \IfEndWith{\LWR@thisnewfilename}{\detokenize{-}}{%
6400   \StrGobbleRight{\LWR@thisnewfilename}{1}[\LWR@thisnewfilename]%
6401 }{}%
```

Limits the length of the filename:

```
6402 \StrLeft{\LWR@thisnewfilename}{\FilenameLimit}[\LWR@thisnewfilename]%
```

Return the global result:

```
6403 \global\let\LWR@thisfilename\LWR@thisnewfilename%
6404 \endgroup%
6405 \LWR@traceinfo{LWR@filenamoblanks: result is \LWR@thisfilename}%
6406 }
```

Ctrl Remembers which autopage label was most recently generated. Used to avoid duplicates.

```
6407 \newcounter{LWR@previousautopagelabel}
6408 \setcounter{LWR@previousautopagelabel}{-1}
```

File *_html.aux A new entry in the *_html.aux file is used to help cross-references:

```
\NewLabel{autopage-<nnn>}{<x>}{<y>}
```

`\LWR@newautopagelabel` {<*pagenumber counter*>}

`\BaseJobname` is added to the label in case `xr` or `xr-hyper` are used.

```
6409 \newcommand*\LWR@newautopagelabel}[1]{%
6410 \ifnumequal{\value{LWR@previousautopagelabel}}{\value{page}}%
6411 {}% no action if this autopage label has already been defined
6412 {%
6413   \label{\BaseJobname-autopage-\arabic{#1}}%
6414   \setcounter{LWR@previousautopagelabel}{\value{page}}
6415 }%
6416 }
```

61.1 Sanitizing expressions for HTML

Math expressions are converted to `lateximages`, and some math environments may contain `&`, `<`, or `>`, which should not be allowed inside an HTML `<alt>` tag, so must convert them to HTML entities.

`\LWR@replacestrings` {<*search*>} {<*replace*>}

Replaces strings inside `\tmpb`.

Modified from the original by PETR OLSAK, from the `opmac` package.

```
6417 \bgroup
6418 \catcode'\!=3 \catcode'\?=3
6419
6420 \long\gdef\LWR@replacestrings@addto#1#2{%
6421   \expandafter\def\expandafter#1\expandafter{#1#2}%
6422 }
6423
6424 \gdef\LWR@replacestrings#1#2{%
6425   \long\def\LWR@replacestringsA##1#1{\def\tmpb{##1}\LWR@replacestringsB}%
6426   \long\def\LWR@replacestringsB##1#1{%
6427     \ifx!##1\relax \else\LWR@replacestrings@addto\tmpb{#2##1}%
6428     \expandafter\LWR@replacestringsB\fi
6429   }%
6430   \expandafter\LWR@replacestringsA\tmpb?#1!#1% from pysyntax.tex by Petr Krajnik
6431   \long\def\LWR@replacestringsA##1?{%
6432     \def\tmpb{##1}%
6433   }\expandafter\LWR@replacestringsA\tmpb%
6434 }
6435 \egroup
```

`\LWR@subHTMLsanitize` `\LWR@strresult` must first be set by `\LWR@HTMLsanitize`, `\LWR@HTMLsanitizeexpand`, or `\CustomizeMathJax`.

```
6436 \catcode'\#=12
6437 \catcode'\&=12
6438 \newcommand{\LWR@subHTMLsanitize}{%
```

The &, <, and > may be interpreted by the browser:

```
6439 \edef\tmpb{\detokenize\expandafter{\LWR@strresult}}%
6440 \LWR@replacestrings{&}{&amp;}%
6441 \LWR@replacestrings{<}{&lt;}%
6442 \LWR@replacestrings{>}{&gt;}%
```

The double quote occasionally causes problems.

```
6443 \LWR@replacestrings{"}{&quot;}%
```

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.

```
6444 \LWR@replacestrings{##}{#}%
6445 \edef\LWR@strresult{\detokenize\expandafter{\tmpb}}%
6446 }
6447 \catcode'\#=6
6448 \catcode'\&=4
```

`\LWR@HTMLsanitize` $\{ \langle text \rangle \}$

```
6449 \newrobustcmd{\LWR@HTMLsanitize}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
6450 \begingroup%
6451 \LWR@FBcancel%
6452 \fullexpandarg%
6453 \protect\StrSubstitute{\detokenize{#1}}%
6454 {\detokenize{\&}}{\detokenize{&}}[\LWR@strresult]%
6455 \LWR@subHTMLsanitize%
6456 \LWR@strresult%
6457 \endgroup%
6458 }
```

`\LWR@HTMLsanitizeexpand` $\{ \langle text \rangle \}$

This version expands the argument before sanitizing it.

```
6459 \newrobustcmd{\LWR@HTMLsanitizeexpand}[1]{%
```

Cancel French babel character handling, and fully expand the strings:

```
6460 \begingroup%
6461 \LWR@FBcancel%
6462 \fullexpandarg%
```

The difference between this and `\LWR@HTMLsanitize` (without “expand”) is the following `\expandafter`:

```

6463 \protect\StrSubstitute{\detokenize\expandafter{#1}}%
6464   {\detokenize{\&}}{\detokenize{&}}[\LWR@strresult]%
6465 \LWR@subHTMLsanitize%
6466 \LWR@strresult%
6467 \endgroup%
6468 }

```

61.2 Customizing MATHJAX

`\LWR@customizedMathJax` Additional MATHJAX definitions to be added to the start of each HTML page.

```
6469 \newcommand*{\LWR@customizedMathJax}{}

```

`Bool` Used to issue only one warning about using a `\CustomizeMathJax` per macro.

`LWR@warnedcustomizemathjax`

```

6470 \newbool{LWR@warnedcustomizemathjax}
6471 \boolfalse{LWR@warnedcustomizemathjax}

```

`\LWR@subcustomizedmathjax` {*macro definition*}

```

6472 \newcommand*{\LWR@subcustomizedmathjax}[1]{%
6473   \begingroup%
6474   \LWR@FBcancel%
6475   \fullexpandarg%
6476   \protect\StrSubstitute{\detokenize{#1}}%
6477     {\detokenize{\&}}{\detokenize{&}}[\LWR@strresult]%
6478   \LWR@subHTMLsanitize%
6479   \xdef\LWR@customizedMathJax{%
6480     \LWR@customizedMathJax%
6481     \LWR@strresult%
6482   }%
6483   \endgroup%
6484 }
6485 \@onlypreamble\LWR@subcustomizedmathjax

```

`\CustomizeMathJax` {*macro definition*}

A warning is issued if a very long argument is given.

```

6486 \newcommand*{\CustomizeMathJax}[1]{%
6487   \ifbool{LWR@warnedcustomizemathjax}{}{%
6488     \StrLen{\detokenize{#1}}[\LWR@tempone]%
6489     \ifnumgreater{\LWR@tempone}{200}{%
6490       \AtEndDocument{%
6491         \PackageWarningNoLine{lwarp}{%
6492           To ensure faster MathJax compilation, place each\MessageBreak
6493           custom macro in its own \protect\CustomizeMathJax.\MessageBreak
6494           See the Lwarp documentation regarding customizing\MessageBreak
6495           MathJax%
6496         }%
6497       }%

```

```

6498         \booltrue{LWR@warnedcustomizemathjax}%
6499     }{}%
6500 }%
6501 \appto\LWR@customizedMathJax{\LWRbackslash{}}%
6502 \LWR@subcustomizedmathjax{#1}%
6503 \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
6504 }
6505 \onlypreamble\CustomizeMathJax

```

`\LWR@infoprocessingmathjax` {(*package name*)}

```

6506 \newcommand*{\LWR@infoprocessingmathjax}[1]{%
6507 \typeout{---}
6508 \typeout{Package lwarp: Processing MathJax customizations for #1.}
6509 \typeout{\space\space This may take a moment.}
6510 \typeout{---}
6511 }

```

defaults Default customizations:

In the MATHJAX code, footnotes are only referenced. For equations, they are also generated in the HTML when the L^AT_EX math is generated inside the HTML comment. For other math environments, the `\footnotemark`/`\footnotetext` method must be used. See section 8.5.4 regarding `\footnotemark`.

 `\footnotemark`

For footnotes, `\footnotename` is used in most cases, however for equation the footnote is picked up from L^AT_EX in `\LWR@doendequation`.

First, `\footnotename` for MATHJAX is copied from L^AT_EX.

```

6512 \providecommand{\footnotename}{footnote}
6513
6514 % due to warpMathJax:
6515 \end{warpHTML}
6516
6517 \begin{warpMathJax}
6518 \xdef\LWR@customizedMathJax{\LWR@customizedMathJax%
6519     \LWRbackslash{}}%
6520 \LWRbackslash{newcommand%
6521     \{\LWRbackslash{}}footnotename\}%
6522     \{\footnotename\}%
6523     \LWRbackslash}\par%
6524 }
6525 \end{warpMathJax}

```

`\LWRfootnote` is set per equation if a footnote is detected in the equation's math expression, otherwise it defaults to `\footnotename`.

```

6526 \begin{warpMathJax}
6527 \CustomizeMathJax{\def\LWRfootnote{1}}
6528 \CustomizeMathJax{\newcommand{\footnote}[2][\LWRfootnote]{\mathrm{#1}}}
6529 \CustomizeMathJax{\newcommand{\footnotemark}[1][\LWRfootnote]{\mathrm{#1}}}
6530 \end{warpMathJax}

```

```

6531 \begin{warpMathJax}
6532 \CustomizeMathJax{\newcommand\ensuremath[1]{#1}}
6533 \CustomizeMathJax{% absorb two optional arguments
6534   \newcommand{\LWRframebox}[2][]{\fbox{#2}}
6535   \newcommand{\framebox}[1][]{\LWRframebox}
6536 }
6537 \CustomizeMathJax{\newcommand{\setlength}[2]{}}
6538 \CustomizeMathJax{\newcommand{\addtolength}[2]{}}
6539 \CustomizeMathJax{\newcommand{\setcounter}[2]{}}
6540 \CustomizeMathJax{\newcommand{\addtocounter}[2]{}}
6541 \CustomizeMathJax{\newcommand{\cline}[1]{}}
6542 \CustomizeMathJax{\newcommand{\directlua}[1]{\text{(directlua)}}}
6543 \CustomizeMathJax{\newcommand{\luaTeXdirectlua}[1]{\text{(directlua)}}}
6544 \end{warpMathJax}
6545
6546 \begin{warpHTML}% due to warpMathJax

```

`\LWR@customizeMathJax` Prints MathJax commands to the HTML output.

```

6547 \newcommand{\LWR@customizeMathJax}{%
6548 \ifbool{mathjax}{

6549 \LWR@stoppars
6550 \LWR@htmlcomment{MathJax customizations:}
6551
6552 \typeout{---}
6553 \typeout{Package lwarp:}
6554 \typeout{Processing MathJax customizations. If this takes too long,}
6555 \typeout{see the Lwarp manual regarding customizing MathJax.}
6556 \begin{BlockClass}{hidden}
6557 \LWR@stoppars
6558 \LWR@customizedMathJax
6559 \LWR@startpars
6560 \end{BlockClass}
6561 \typeout{---}
6562
6563 \LWR@startpars
6564 }{}
6565 }

6566 \end{warpHTML}

```

for PRINT output: `6567 \begin{warpprint}`

`\CustomizeMathJax` The print-mode version:

```
6568 \newcommand*{\CustomizeMathJax}[1]{}
```

`\FilenameSimplify` * $\langle expression \rangle$

```
6569 \NewDocumentCommand{\FilenameSimplify}{s m}{}

```

```
6570 \end{warpprint}

```

for HTML output: 6571 \begin{warpHTML}

\LWR@createfooter If specified, create the first or later web page footer.

```

6572 \newcommand*{\LWR@createfooter}{%
6573     \ifnumless{\value{\LWR@htmlseqfilenumber}}{1}{%
6574         \ifdefempty{\LWR@firstpagebottom}{%
6575             \LWR@htmlElement{footer}
6576
6577             \LWR@firstpagebottom
6578
6579             \LWR@htmlElementend{footer}
6580         }%
6581     }{%
6582         \ifdefempty{\LWR@pagebottom}{%
6583             \LWR@htmlElement{footer}
6584
6585             \LWR@pagebottom
6586
6587             \LWR@htmlElementend{footer}
6588         }%
6589     }%
6590 }

```

\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.

```

6591 \newcommand*{\LWR@newhtmlfile}[1]{
6592 \LWR@traceinfo{\LWR@newhtmlfile}

```

At the bottom of the ending file:

```

6593 \LWR@htmlElementclassend{section}{textbody}
6594 \LWR@htmlElementclassend{div}{bodycontainer}
6595 \LWR@htmlElementclassend{div}{bodyandsidetoc}
6596
6597 \LWR@printpendingfootnotes
6598

```

No footer between files if EPUB:

```

6599 \ifbool{FormatEpub}{\LWR@createfooter}

```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```

6600 \ifthenelse{\boolean{FormatEpub}\OR\boolean{FormatWP}}
6601     {}
6602     {\ifnumcomp{\value{\LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}}

```

End of this HTML file:

```
6603 \LWR@stoppars
6604 \LWR@htmltag{/body}\LWR@orignewline
6605 \LWR@htmltag{/html}\LWR@orignewline
6606 \LWR@traceinfo{LWR@newhtmlfile: about to LWR@orignewpage}
6607 \LWR@orignewpage
```

```
6608 \addtocounter{LWR@htmlfilenumber}{1}%
6609 \addtocounter{LWR@htmlseqfilenumber}{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.

```
6610 \ifbool{FileSectionNames}%
6611 {%
```

Convert the section name to a filename with blanks and common words removed. The resulting filename is in \LWR@thisfilename.

```
6612 \LWR@filenamenoblanks{#1}%
```

Create a macro name from the MD5 hash of the file name, to detect duplicates:

```
6613 \edef\LWR@hashedname{\LWR@mdfive{\LWR@thisfilename}}%
```

If the macro name is not yet defined, this filename is unique.

```
6614 \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.

```
6615 \csdef{LWR@filename\LWR@hashedname}{}%
6616 }{%
```

If the filename is not unique, create an error.

```
6617 \PackageError{lwarp}%
6618 {%
6619 The section name:\MessageBreak
6620 ‘‘#1’’,\MessageBreak
6621 at the line number listed below,\MessageBreak
6622 generates the filename\MessageBreak
6623 ‘‘\LWR@thisfilename’’,\MessageBreak
6624 which appears to be a duplicate. There is a\MessageBreak
6625 previous section with an identical or similar name.\MessageBreak
6626 While generating file names, Lwarp sanitizes math,\MessageBreak
6627 most symbols, and a few common short words,\MessageBreak
6628 and this may cause a conflict.\MessageBreak
```

```

6629             Enter 'H' for possible solutions%
6630         }%
6631     {%
6632         \LWR@avoiddupfilenames%
6633     }%
6634 }%
6635 }%

```

If using file numbers instead of names, the name is set to the next file number.

```
6636 {\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.

```
6637 \LWR@traceinfo{\LWR@newhtmlfile: about to print start file}%
```

\LWR@nullfonts to allow math in a section name.

```

6638 \begingroup%
6639 \LWR@nullfonts%
6640 \LWR@htmlblockcomment{%
6641 |Start file|%
6642 \LWR@htmlsectionfilename{\LWR@thisfilename}|%
6643 }
6644 \endgroup%

```

At the top of the starting file:

```

6645 \LWR@stoppars
6646

```

Start a new file with the given section name:

```

6647 \LWR@filestart[#1]
6648

```

Track the PDF page numbers of the HTML output:

```

6649 \setcounter{\LWR@latestautopage}{\value{page}}%
6650 \LWR@newautopagelabel{\LWR@latestautopage}%

```

No navigation between files if formatting for an EPUB or word processor:

```

6651 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6652     {}
6653     {\LWR@topnavigation}
6654

```

No header if between files if formatting for an EPUB or word processor:

```
6655 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
```

```

6656     {}
6657     {

6658         \ifdefempty{\LWR@pagetop}{}{
6659             \LWR@htmlElement{header}
6660
6661             \LWR@pagetop
6662
6663             \LWR@htmlElementend{header}
6664         }
6665     }
6666

```

The container for the sidetoc and text body:

```
6667 \LWR@htmlElementclass{div}{bodyandsidetoc}
```

No sidetoc if formatting for an EPUB or word processor:

```

6668 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
6669     {}
6670     {\LWR@sidetoc}
6671

```

Start of the <textbody>:

```

6672 \LWR@htmlElementclass{div}{bodycontainer}
6673 \LWR@htmlElementclass{section}{textbody}

```

Not yet found a new section in this file. Once one is found, a label will be placed for previous/next links.

```
6674 \boolfalse{\LWR@setseqfilelabel}
```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```

6675 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}%
6676     {}%
6677     {%
6678         \ifcvoid{thetitle}{}{%
6679             \LWR@printthetitle%
6680         }%
6681     }%

```

Keep paragraph tags disabled for now:

```

6682 \LWR@stoppars
6683

```

If using MATHJAX, print the customizations here.

```
6684 \LWR@customizeMathJax
```

```
6685 \LWR@traceinfo{LWR@newhtmlfile: done}
6686 }

6687 \end{warpHTML}
```

62 Sectioning

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing \LaTeX code and packages. Formatting is handled by css, so the emulated code has much less work to do than the print versions.

Unicode
⚠ accents in filenames

Section names and the resulting filenames with accented characters are partially supported, depending on the ability of *pdf \LaTeX* to generate characters and *pdf totext* to read them. If extra symbols appear in the text, it may be that *pdf \LaTeX* is actually producing a symbol over or under a character, resulting in *pdf totext* picking up the accent symbol separately.

X \LaTeX and Lua \LaTeX directly support accented section and file names, but it may be necessary to use \LaTeX accents instead of native Unicode accents. \LaTeX accents will have the accents stripped when creating file names, whereas using Unicode accents will create filenames which include accents, which may cause issues with some operating systems.

for HTML output: 6688 \begin{warpHTML}

62.1 User-level starred section commands

\ForceHTMLPage For HTML output, forces the next section to be on its own HTML page, if FileDepth allows, even if starred. For use with \printindex and others which generate a starred section which should be on its own HTML page. Also see \ForceHTMLTOC .

For print output, no effect.

```
6689 \newbool{LWR@forcinghtmlpage}
6690 \boolfalse{LWR@forcinghtmlpage}
6691
6692 \newcommand*{\ForceHTMLPage}{%
6693 \global\booltrue{LWR@forcinghtmlpage}%
6694 }
```

\ForceHTMLTOC For HTML output, forces the next section to have a TOC entry, even if starred. For use with \printindex and others which generate a starred section which should be in the TOC so that it may be accessed via HTML. Not necessary if used with *tocbibind*. Also see \ForceHTMLPage .

For print output, no effect.

```
6695 \newbool{LWR@forcinghtmltoc}
```

```

6696 \boolfalse{LWR@forcinghtmltoc}
6697
6698 \newcommand*{\ForceHTMLTOC}{%
6699 \global\booltrue{LWR@forcinghtmltoc}%
6700 }

```

```
6701 \end{warpHTML}
```

for PRINT output:

```

6702 \begin{warpprint}
6703 \newcommand*{\ForceHTMLPage}{}
6704 \newcommand*{\ForceHTMLTOC}{}
6705 \end{warpprint}

```

for HTML output:

```
6706 \begin{warpHTML}
```

62.2 Book class commands

`\mainmatter`  Declare the main matter section of the document. Does not reset the page number, which must be consecutive arabic numbers for the HTML conversion.

```

6707 \newbool{LWR@mainmatter}
6708 \DeclareDocumentCommand{\mainmatter}{}{%
6709 \booltrue{LWR@mainmatter}%
6710 }

```

`\frontmatter` Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```

6711 \DeclareDocumentCommand{\frontmatter}{}{%
6712 \boolfalse{LWR@mainmatter}%
6713 }

```

`\backmatter` Declare the back matter section of the document. Does not reset the page number.

```

6714 \DeclareDocumentCommand{\backmatter}{}{%
6715 \boolfalse{LWR@mainmatter}
6716 }

```

62.3 Sectioning support macros

`\LWR@sectionnumber` $\langle section\ type \rangle$

Typeset a section number and its trailing space with css formatting:

```

6717 \newcommand*{\LWR@sectionnumber}[1]{%
6718 \InlineClass{sectionnumber}{#1}%
6719 }

```

`autosec` A tag used by the toc and index.

`\LWR@createautosec` {*<section type>*}

Create an autosection tag.

The use of `\textquotedbl` instead of `"` provides improved compatibility with `xeCJK`.

```
6720 \newcommand*\LWR@createautosec}[1]{%
6721 \LWR@htmltag{%
6722   #1 % space
6723   id=\textquotedbl\LWR@print@mbx{autosec-\arabic{page}}\textquotedbl%
6724 }%
6725 }
```

`\LWR@pushoneclose` {*<sectiontype>*} Stacks the new sectioning level's closing tag, to be used when this section is closed some time later.

 `\LWR@stoppars` must be executed first.

```
6726 \NewDocumentCommand{\LWR@pushoneclose}{m}{%
6727 \LWR@traceinfo{\LWR@pushoneclose #1}%
6728   \LWR@pushclose{#1}%
6729 }
```

`\LWR@startnewdepth` {*<sectiontype>*}

Closes currently stacked tags of a lesser level, then opens the new nesting level by saving this new sectioning level's closing tag for later use.

 `\LWR@stoppars` must be executed first.

```
6730 \NewDocumentCommand{\LWR@startnewdepth}{m}{%
6731 \LWR@closeprevious{#1}%
6732 \LWR@pushoneclose{#1}%
6733 }
```

Close any stacked sections up to this new one.

```
6731 \LWR@closeprevious{#1}%
```

Push a new section depth:

```
6732 \LWR@pushoneclose{#1}%
6733 }
```

`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.

```
6734 \newcounter{\LWR@prevFileDepth}
6735 \setcounter{\LWR@prevFileDepth}{\LWR@depthsubparagraph}
```

`\@secCNTformat` {*<sectiontype>*}

```
6736 \def\@secCNTformat#1{\csname the#1\endcsname\quad}
```

`\simplechapterdelim` Used by `tocbibind` and `anonchap`.

```
6737 \newcommand*\simplechapterdelim{}
```

`\@chapcntformat` $\langle sectiontype \rangle$

\let to `\@secntformat` by default, but may be redefined by `\simplechapter` and `\restorechapter` from `tocbibind` or `anonchap`.

```
6738 \let\@chapcntformat\@secntformat
```

`\@partcntformat` $\langle sectiontype \rangle$

\let to `\@secntformat` by default, but may be redefined by `ctex`.

```
6739 \let\@partcntformat\@secntformat
```

`\@partnameformat` Prints “Part” for part sections.

Nullified by `ctex`.

```
6740 \newcommand*\@partnameformat{\LWR@isolate{\partname}~}%
```

Ctrl `LWR@currentautosec` Records the page number when the section was created. If a math expression is included in the section name, and SVG math is used, the corresponding `lateximage` will cause the page number to change by the time the following `autosec` label is created.

```
6741 \newcounter{LWR@currentautosec}
```

```
6742 \setcounter{LWR@currentautosec}{1}
```

`\LWR@section` * [$\langle TOC name \rangle$] $\langle name \rangle$ $\langle sectiontype \rangle$

The common actions for the high-level sectioning commands.

```
6743 \DeclareDocumentCommand{\LWR@section}{m m m m}{%
```

```
6744 \IfValueTF{#2}{%
```

```
6745   {\LWR@traceinfo{LWR@section: starting #4 #2}}%
```

```
6746   {\LWR@traceinfo{LWR@section: starting #4 #3}}%
```

Warn if starting a section inside a ``:

```
6747   \LWR@spanwarninvalid{section}%
```

```
6748 \LWR@maybeprintpendingfootnotes{\csuse{LWR@depth#4}}%
```

```
6749 \LWR@stoppars%
```

```
6750 \LWR@startnewdepth{#4}%
```

Cancel special minipage horizontal space interaction:

```
6751 \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:

```

6752 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}%
6753 \IfBooleanT{#1}{\LWR@traceinfo{LWR@section: starred}}%
6754 \ifbool{LWR@forcinghtmlpage}{\LWR@traceinfo{LWR@section: forcinghtmlpage}}{}%
6755 \ifthenelse{%
6756   \(%
6757     \(\NOT\equal{#1}{\BooleanTrue})\OR%
6758     \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart})\OR%
6759     \(\boolean{LWR@forcinghtmlpage})\)%
6760   \)%
6761   \AND%
6762   \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{FileDepth}}%
6763   \AND%
6764   \(%
6765     \NOT\boolean{CombineHigherDepths}\OR%
6766     \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{LWR@prevFileDepth}}%
6767   \)%
6768   \AND%

6769   \(% phantomsection
6770     \NOT\isempty{#3}%
6771     \OR%
6772     \(\NOT\equal{#1}{\BooleanTrue})\)%
6773   \)%
6774 }%
```

If so: start a new HTML file:

```

6775 {% new file
6776   \LWR@traceinfo{LWR@section: new HTML file}%
```

See if there was an optional toc name entry:

```

6777   \IfNoValueTF{#2}%
```

If no optional entry

```

6778     {\LWR@newhtmlfile{#3}}%
```

If yes an optional entry

```

6779     {\LWR@newhtmlfile{#2}}%
6780 }% new file
```

Else: No new HTML file:

```

6781 {% not new file
```

Generate a new L^AT_EX page so that toc and index page number points to the section:

```
6782 \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
6783 \LWR@orignewpage%
6784 }% not new file
6785
```

Remember this section's name for \nameref:

```
6786 \IfValueT{#3}{%
6787 \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
6788 \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
6789 }%
```

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.

```
6790 \ifbool{HTMLDebugComments}{%
6791 \begingroup%
6792 \LWR@nullfonts%
6793 \IfBooleanTF{#1}% starred
6794 {\LWR@htmlcomment{Opening #4*}}%
6795 {%
6796 \IfNoValueTF{#2}% short TOC
6797 {\LWR@htmlcomment{Opening #4 ‘#3’}}%
6798 {\LWR@htmlcomment{Opening #4 ‘#2’}}%
6799 }\LWR@orignewline%
6800 \endgroup%
6801 }{}
```

For inline sections paragraph and subparagraph, start a new paragraph now:

```
6802 \ifthenelse{%
6803 \cnttest{\@nameuse{LWR@depth#4}}{>=}{\LWR@depthparagraph}%
6804 }%
6805 {\LWR@startpars}%
6806 }%
```

Create the opening tag with an autosec:

```
6807 \LWR@traceinfo{LWR@section: about to LWR@createautosec}%
6808 \LWR@createautosec{\@nameuse{LWR>tag#4}}%
```

```
6809 \setcounter{LWR@currentautosec}{\value{page}}%
```

Check if starred:

```
6810 \IfBooleanTF{#1}%
6811 {%
6812 \LWR@traceinfo{LWR@section: starred}}%
```

Starred, but also forcing a toc entry, so add unnumbered toc name or regular name:

```

6813     \ifbool{LWR@forcinghtmltoc}%
6814     {%
6815         \addcontentsline{toc}{#4}{%
6816             \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6817         }%
6818     }%
6819     {}%
6820 }% starred

```

Not starred, so step counter and add to toc:

```
6821 {% not starred
```

Only add a numbered toc entry if section number is not too deep:

```

6822     \ifthenelse{%
6823         \cnttest{\@nameuse{LWR@depth#4}}{<=} {\value{secnumdepth}}%
6824     }%
6825     {% if secnumdepth

```

If in the main matter, step the counter and add the toc entry. For article class, lwarp assumes that all is mainmatter.

```

6826     \LWR@traceinfo{LWR@section: about to test main matter}%
6827     \ifbool{LWR@mainmatter}%
6828     {%
6829         \LWR@traceinfo{LWR@section: yes mainmatter}%
6830         \refstepcounter{#4}%

```

Add main matter numbered toc entry with the toc name or the regular name:

```

6831         \LWR@traceinfo{LWR@section: about to addcontentsline}%
6832         \addcontentsline{toc}{#4}%
6833         {%
6834             \protect\numberline{%
6835                 \@nameuse{pre#4name}%
6836                 \@nameuse{the#4}%
6837                 \@nameuse{post#4name}%
6838             }%
6839             {%
6840                 \ignorespaces%
6841                 \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}\protect\relax%
6842             }%
6843         }%
6844         \LWR@traceinfo{LWR@section: finished addcontentsline}%
6845     }% end of if main matter

```

If not main matter, add unnumbered toc name or regular name:

```

6846     {% not main matter
6847         \LWR@traceinfo{LWR@section: no main matter}%
6848         \addcontentsline{toc}{#4}{%

```

```

6849             \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6850         }%
6851     ]% end of not main matter
6852 ]% end of secnumdepth

```

Deeper than secnumdepth, so add an unnumbered roc entry:

```

6853     {%
6854         \addcontentsline{toc}{#4}{%
6855             \IfValueTF{#2}{\LWR@isolate{#2}}{\LWR@isolate{#3}}%
6856         }%
6857     }%

```

For part, print “Part”:

```

6858     \ifbool{LWR@mainmatter}%
6859     {%
6860         \ifthenelse{%
6861             \(\cnttest{\@nameuse{LWR@depth#4}}{<=}%
6862             {\value{secnumdepth}}\)\ \AND%
6863             \(\cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}\)%
6864         }%
6865         {\@partnameformat}%
6866         {}%

```

Print the section number:

```

6867         \LWR@traceinfo{LWR@section: about to print section number}%
6868     \ifthenelse{%
6869         \cnttest{\@nameuse{LWR@depth#4}}{<=}{\value{secnumdepth}}%
6870     }%
6871     {%
6872         \ifstrequal{#4}{part}%
6873         {\protect\LWR@sectionnumber{\@partcntformat{#4}}}%
6874         {%
6875             \ifstrequal{#4}{chapter}%
6876             {\protect\LWR@sectionnumber{\@chappcntformat{#4}}}%
6877             {\protect\LWR@sectionnumber{\@secntformat{#4}}}%
6878         }%
6879     }%
6880     {}%
6881     \LWR@traceinfo{LWR@section: finished print section number}%
6882 }{}%
6883 ]% not starred

```

Print the section name:

```

6884 \LWR@traceinfo{LWR@section: about to print the section name}%
6885 \LWR@isolate{#3}%

```

Close the heading tag, such as /H2:

```

6886 \LWR@traceinfo{LWR@section: about to close the heading tag}%
6887 \LWR@htmltag{\@nameuse{LWR>tag#4end}}%
6888 \LWR@orignewline%

```

Generate a L^AT_EX label.

Track the PDF page numbers of the HTML output.

```
6889 \LWR@traceinfo{LWR@section: about to create the LaTeX label}%
6890 \setcounter{LWR@latestautopage}{\value{page}}%
6891 \LWR@newautopagelabel{LWR@currentautosec}\LWR@orignewline%
```

If this is the first section found in this file, create a label for prevous/next links:

```
6892 \ifbool{LWR@setseqfilelabel}{}%
6893   \label{\BaseJobname-autofile-\arabic{LWR@htmlseqfilenumber}}%
6894   \booltrue{LWR@setseqfilelabel}%
6895 }%
```

Start paragraph handing unless is an inline paragraph or subparagraph:

```
6896 \ifthenelse{%
6897   \cnttest{\@nameuse{LWR@depth#4}}{<}{\LWR@depthparagraph}%
6898 }%
6899   {\LWR@startpars}%
6900   {}%
```

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.

```
6901 \ifthenelse{%
6902   \NOT\equal{#1}{\BooleanTrue}\OR%
6903   \cnttest{\@nameuse{LWR@depth#4}}{=}{\LWR@depthpart}%
6904 }%
6905   {% not starred
6906     \setcounter{LWR@prevFileDepth}{\@nameuse{LWR@depth#4}}%
6907   }% not starred
6908   {}%
```

Reset to defaults if not a phantomsection:

```
6909 \ifstrempy{#3}%
6910   {}%
6911   {%
6912     \global\boolfalse{LWR@forcinghtmlpage}%
6913     \global\boolfalse{LWR@forcinghtmltoc}%
6914   }%
6915 %
6916 \LWR@traceinfo{LWR@section: done}%
6917 }
```

62.4 Pre- and post- sectioning names

`\prebookname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postbookname`

```
6918 \providecommand*\prebookname{}
```

```
6919 \providecommand*\postbookname{}
```

`\prepartname` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postpartname`

```
6920 \providecommand*\prepartname{}
```

```
6921 \providecommand*\postpartname{}
```

`\prechaptername` Usually null, but is used by `uj*` and `ut*` Japanese classes.

`\postchaptername`

```
6922 \providecommand*\prechaptername{}
```

```
6923 \providecommand*\postchaptername{}
```

`\presectionname` Always null, but provided here for algorithmic simplicity in `\LWR@section`.

`\postsectionname`

```
6924 \providecommand*\presectionname{}
```

```
6925 \let\postsectionname\presectionname
```

```
6926
```

```
6927 \let\presubsectionname\presectionname
```

```
6928 \let\postsubsubsectionname\postsectionname
```

```
6929
```

```
6930 \let\presubsubsectionname\presectionname
```

```
6931 \let\postsubsubsectionname\postsectionname
```

```
6932
```

```
6933 \let\preparagraphname\presectionname
```

```
6934 \let\postparagraphname\postsectionname
```

```
6935
```

```
6936 \let\presubparagraphname\presectionname
```

```
6937 \let\postsubparagraphname\postsectionname
```

62.5 `\section` and friends

For `memoir`, a second optional argument is allowed.

For `hybpbmsec`, a second optional argument or either parenthesis argument is allowed.

Each of these additional arguments are for headers or PDF bookmarks, and are ignored for HTML output.

```
\part * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}
```

```
6938 \newcommand{\part@preamble}{}% for koma-script
```

```
6939
```

```
6940 \DeclareDocumentCommand{\part}{s d() o o d() m}{%
```

```
6941 \LWR@section{#1}{#3}{#6}{part}%
```

```

6942
6943   \part@preamble% for koma-script
6944   \renewcommand{\part@preamble}{}%
6945 }

```

`\chapter` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6946 \let\@printcites\relax% for quotchap package
6947
6948 \newcommand{\chapter@preamble}{}% for koma-script
6949
6950 \@ifundefined{chapter}
6951 {}
6952 {%
6953   \DeclareDocumentCommand{\chapter}{s d() o o d() m}{%
6954     \LWR@section{#1}{#3}{#6}{chapter}%
6955
6956     \@printcites% for quotchap package
6957
6958     \chapter@preamble% for koma-script
6959     \renewcommand{\chapter@preamble}{}%
6960   }
6961 }

```

`\section` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6962 \DeclareDocumentCommand{\section}{s d() o o d() m}{%
6963   \LWR@section{#1}{#3}{#6}{section}%
6964 }

```

`\subsection` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6965 \DeclareDocumentCommand{\subsection}{s d() o o d() m}{%
6966   \LWR@section{#1}{#3}{#6}{subsection}%
6967 }

```

`\subsubsection` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6968 \DeclareDocumentCommand{\subsubsection}{s d() o o d() m}{%
6969   \LWR@section{#1}{#3}{#6}{subsubsection}%
6970 }

```

`\paragraph` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6971 \DeclareDocumentCommand{\paragraph}{s d() o o d() m}{%
6972   \LWR@section{#1}{#3}{#6}{paragraph}%
6973 }

```

`\subparagraph` * (*<2:PDF name>*) [*<3:TOC name>*] [*<4:PDF name>*] (*<5:PDF name>*) {*<6:name>*}

```

6974 \DeclareDocumentCommand{\subparagraph}{s d() o o d() m}{%
6975   \LWR@section{#1}{#3}{#6}{subparagraph}%
6976 }

6977 \end{warpHTML}

```

63 Starting a new file

for HTML & PRINT: 6978 \begin{warpall}

\HTMLLanguage Default language for the HTML lang tag.

```

6979 \newcommand*{\LWR@currentHTMLLanguage}{en-US}
6980
6981 \newcommand*{\HTMLLanguage}[1]{%
6982   \renewcommand*{\LWR@currentHTMLLanguage}{#1}%
6983 }

```

\theHTMLTitleSeparator May be used inside \theHTMLTitleSection to separate the website's overall HTML title and the particular page's section name.

```

6984 \ifPDFTeX% pdflatex or dvi latex
6985   \ifdefstring{\inputencodingname}{utf8}{%
6986     \newcommand*{\theHTMLTitleSeparator}{ -\ }% EMDash
6987   }{%
6988     \newcommand*{\theHTMLTitleSeparator}{ -\ }% hyphen
6989   }%
6990 \else%
6991   \ifpTeX
6992     \newcommand*{\theHTMLTitleSeparator}{ -\ }% hyphen
6993   \else
6994     \newcommand*{\theHTMLTitleSeparator}{ -\ }% EMDash
6995   \fi%
6996 \fi%

```

\HTMLTitleBeforeSection Sets the HTML page's meta title tag to show the website title before the section name.

```

6997 \newcommand*{\HTMLTitleBeforeSection}{%
6998   \def\theHTMLTitleSection{%
6999     \theHTMLTitle\theHTMLTitleSeparator\theHTMLSection%
7000   }%
7001 }

```

\HTMLTitleAfterSection Sets the HTML page's meta title tag to show the section name before the website title.

```

7002 \newcommand*{\HTMLTitleAfterSection}{%
7003   \def\theHTMLTitleSection{%
7004     \theHTMLSection\theHTMLTitleSeparator\theHTMLTitle%
7005   }%
7006 }

```

`\theHTMLTitleSection` Forms the HTML page's meta title tag. The default is to show the website title before the section name.

```
7007 \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.

```
7008 \newcommand*{\theHTMLSection}{}
7009 \end{warpall}
```

for HTML output: `7010 \begin{warpHTML}`

`\LWR@filestart` [*section name*] Creates the opening HTML tags.

```
7011 \newcommand*{\LWR@filestart}[1][{}]{%
7012 \LWR@traceinfo{\LWR@filestart !#1!}%
```

Locally temporarily disable direct-formatting commands:

```
7013 \begingroup%
7014 \LWR@nullfonts%
```

Save the section name for use while creating the HTML meta title tag:

```
7015 \edef\theHTMLSection{#1}%
```

Remove extra material:

```
7016 \StrSubstitute{\theHTMLSection}{\protect}{\detokenize{-}}[\theHTMLSection]
7017 \StrSubstitute{\theHTMLSection}{\detokenize{-----}}{\detokenize{-}}[\theHTMLSection]
7018 \StrSubstitute{\theHTMLSection}{\detokenize{----}}{\detokenize{-}}[\theHTMLSection]
7019 \StrSubstitute{\theHTMLSection}{\detokenize{---}}{\detokenize{-}}[\theHTMLSection]
7020 \StrSubstitute{\theHTMLSection}{\detokenize{--}}{\detokenize{-}}[\theHTMLSection]
```

If starts with a dash, remove the leading dash:

```
7021 \IfBeginWith{\theHTMLSection}{\detokenize{-}}{%
7022   \StrGobbleLeft{\theHTMLSection}{1}[\theHTMLSection]%
7023 }{}%
```

Create the page's HTML header:

```
7024 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline
```

The language is user-adjustable:

```
7025 \LWR@htmltag{%
7026   html lang=\LWR@orig@textquotedbl\LWR@currentHTMLLanguage\LWR@orig@textquotedbl%
7027 }\LWR@orignewline
```

Start of the meta data:

```
7028 \LWR@htmltag{head}\LWR@orignewline
```

Charset is fixed at UTF-8:

```
7029 \LWR@htmltag{%
7030     meta charset=\LWR@orig@textquotedbl{}UTF-8\LWR@orig@textquotedbl \ /%
7031 }\LWR@orignewline
```

Author:

```
7032 \ifthenelse{\equal{\theHTMLAuthor}{}}%
7033     {}%
7034     {%
7035         \LWR@htmltag{%
7036             meta name=\LWR@orig@textquotedbl{}author\LWR@orig@textquotedbl \ % space
7037             content=\LWR@orig@textquotedbl\theHTMLAuthor\LWR@orig@textquotedbl \ /%
7038         }\LWR@orignewline%
7039     }%
```

lwarp is the generator:

```
7040 \LWR@htmltag{%
7041     meta % space
7042     name=\LWR@orig@textquotedbl{}generator\LWR@orig@textquotedbl \ % space
7043     content=\LWR@orig@textquotedbl{}LaTeX Lwarp package\LWR@orig@textquotedbl \ /%
7044 }\LWR@orignewline%
```

If there is a description, add it now:

```
7045 \ifdefempty{\LWR@currentHTMLDescription}{}%
7046     \LWR@htmltag{%
7047         meta name=\LWR@orig@textquotedbl{}description\LWR@orig@textquotedbl \ % space
7048         content=\LWR@orig@textquotedbl\LWR@currentHTMLDescription\LWR@orig@textquotedbl \ /%
7049     }\LWR@orignewline
7050 }%
```

Mobile-friendly viewport:

```
7051 \LWR@htmltag{%
7052     meta % space
7053     name=\LWR@orig@textquotedbl{}viewport\LWR@orig@textquotedbl \ % space
7054     content=\LWR@orig@textquotedbl{}width=device-width, initial-scale=1.0\LWR@orig@textquotedbl \ /%
7055 }\LWR@orignewline
```

IE patch:

```
7056 \LWR@htmltag{!-\/-[if lt IE 9]}\LWR@orignewline
7057 \LWR@htmltag{%
7058     script % space
7059     src=\LWR@orig@textquotedbl{}%
7060     http://html5shiv.googlecode.com/svn/trunk/html5.js%
7061     \LWR@orig@textquotedbl%
```

```

7062 }%
7063 \LWR@htmltag{/script}\LWR@orignewline
7064 \LWR@htmltag{![endif]-\/-}\LWR@orignewline

```

The page's title, if there is one. A section name is also added if given.

```

7065 \ifthenelse{\equal{\theHTMLTitle}{}}%
7066   {}%
7067   {%
7068     \LWR@htmltag{title}%
7069     \ifdefempty{\theHTMLSection}%
7070       {\theHTMLTitle}%
7071       {\theHTMLTitleSection}%
7072     \LWR@htmltag{/title}\LWR@orignewline%
7073   }%

```

The page's stylesheet:

```

7074 \LWR@htmltag{%
7075   link % space
7076   rel=\LWR@orig@textquotedbl{}stylesheet\LWR@orig@textquotedbl\ % space
7077   type=\LWR@orig@textquotedbl{}text/css\LWR@orig@textquotedbl\ % space
7078   href=\LWR@orig@textquotedbl\LWR@currentcss\LWR@orig@textquotedbl\ /%
7079 }%
7080 \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.

```

7081 \ifbool{mathjax}%
7082 {%
7083   \begingroup%
7084   \LWR@restoreoriglists%
7085   \boolfalse{LWR@verbtags}%
7086
7087   \verbatiminput{\LWR@mathjaxfilename}%
7088
7087   \booltrue{LWR@verbtags}%
7088   \endgroup%
7089   \LWR@stoppars%
7090 }% end of mathjax
7091 {}%

```

End of the header:

```

7092 \LWR@htmltag{/head}\LWR@orignewline

```

Start of the body:

```

7093 \LWR@htmltag{body}\LWR@orignewline
7094 \endgroup
7095 \LWR@traceinfo{LWR@filestart: done}
7096 }

```

```
7097 \end{warpHTML}
```

64 Starting HTML output

for HTML output: 7098 \begin{warpHTML}

\LWR@LwarpStart Executed at the beginning of the entire document.

The use of \textquotedbl instead of " improves compatibility with xeCJK.

```
7099 \catcode'\$=\active
7100 \newcommand*\LWR@LwarpStart
7101 {%
7102 \LWR@traceinfo{\LWR@LwarpStart}
```

If formatting for a word processor, force filedepth to single-file only, force HTML debug comments off.

```
7103 \ifbool{FormatWP}{%
7104   \setcounter{FileDepth}{-5}%
7105   \boolfalse{HTMLDebugComments}%
7106 }{}
```

Expand and detokenize \HomeHTMLFilename and \HTMLFilename:

```
7107 \edef\LWR@strresult{\HomeHTMLFilename}
7108 \edef\HomeHTMLFilename{\detokenize\expandafter{\LWR@strresult}}
7109 \edef\LWR@strresult{\HTMLFilename}
7110 \edef\HTMLFilename{\detokenize\expandafter{\LWR@strresult}}
```

Force onecolumn and empty page style:

```
7111 \LWR@origonecolumn%
7112 \LWR@origpagestyle{empty}%
```

No black box for overfull lines:

```
7113 \overfullrule=0pt
```

Reduce chance of line overflow when HTML tags are added:

```
7114 \LWR@print@footnotesize%
```

In PDF output, don't allow line breaks to interfere with HTML tags:

```
7115 \LWR@print@raggedright%
7116 \LetLtxMacro{\}\LWR@endofline%
```

Spread the lines for *pdftotext* to read them well:

```
7117 \linespread{1.3}%
```

For *pdftotext* to reliably identify paragraph splits:

```
7118 \setlength{\parindent}{0pt}
7119 \setlength{\parskip}{2ex}
```

For the lateximage record file:

```
7120 \immediate\openout\LWR@lateximagesfile=\BaseJobname-images.txt
```

Removes space around the caption in the HTML:

```
7121 \setlength{\belowcaptionskip}{0ex}
7122 \setlength{\abovecaptionskip}{0ex}
```

Redefine the plain page style to be empty when used by index pages:

```
7123 \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:

```
7124 \let\LWR@origcaption\caption
```

Labels: `\ltx@label` is used in `amsmath` environments and is also patched by `cleveref`.

Label in HTML

```
7125 \let\LWR@origltx@label\ltx@label
7126 \let\ltx@label\LWR@htmlmathlabel
```

Not yet started any paragraph handling:

```
7127 \global\boolfalse{LWR@doingapar}
7128 \global\boolfalse{LWR@doingstartpars}
```

Document and page settings:

```
7129 \mainmatter
7130 \LWR@origpagenumbering{arabic}
```

Start a new HTML file and a header:

```
7131 \LWR@traceinfo{LWR@lwarpStart: Starting new file.}
7132 \LWR@filestart
7133 \LWR@traceinfo{LWR@lwarpStart: Generating first header.}

7134 \ifdefempty{\LWR@firstpagetop}{}{%
7135   \LWR@htmltag{header}\LWR@orignewline
7136   \LWR@startpars
7137   \LWR@firstpagetop
7138   \LWR@stoppars
7139   \LWR@htmltag{/header}\LWR@orignewline
7140 }%
```

```

7141 \LWR@html@elementclass{div}{bodywithoutsidetoc}
7142 \LWR@html@elementclass{div}{bodycontainer}
7143 \LWR@traceinfo{LWR@lwarpStart: Generating textbody.}
7144 \LWR@html@elementclass{section}{textbody}

```

Create a label for previous/next links, and remember it has been done:

```

7145 \booltrue{LWR@setseqfilelabel}%
7146 \label{\BaseJobname-autofile-\arabic{LWR@htmlseqfilenumber}}

```

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`.

```

7147 \LWR@patchlists

```

Ensure that math mode is active to call lwarp's patches:

```

7148 \catcode'\$=\active

```

Required for `\nameref` to work with SVG math:

```

7149 \immediate\write\@mainaux{\catcode'\string$\active}%
7150 \let\ltxMacro\LWR@syntaxhighlightone balance for editor syntax highlighting

```

Allow HTML paragraphs to begin:

```

7151 \LWR@startpars

```

If using `MATHJAX`, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```

7152 \LWR@customizeMathJax

```

First autopage label in case a figure occurs early.

```

7153 \setcounter{LWR@latestautopage}{\value{page}}%
7154 \LWR@newautopagelabel{LWR@currentautosec}%

```

```

7155 \LWR@traceinfo{LWR@lwarpStart: done}
7156 }
7157 \catcode'\$=3% math shift until lwarp starts

```

```

7158 \end{warpHTML}

```

65 Ending HTML output

for HTML output: `7159 \begin{warpHTML}`

`\LWR@requesttoc` {<*boolean*>} {<*suffix*>} Requests that a TOC, LOF, or LOT be generated.

```
7160 \newcommand*{\LWR@requesttoc}[2]{%
7161 \ifbool{#1}
7162 {
7163   \expandafter\newwrite\@nameuse{tf@#2}
7164   \immediate\openout \@nameuse{tf@#2} \jobname.#2\relax
7165 }{ }
7166 }
```

`\LWR@LwarpEnd` Final stop of all HTML output:

```
7167 \newcommand*{\LWR@LwarpEnd}
7168 {
7169 \LWR@stoppars
7170 \LWR@closeprevious{finished}
```

At the bottom of the ending file:

Close the textbody:

```
7171 \label{\BaseJobname-autofile-last}
7172 \LWR@htmlElementclassend{section}{textbody}
7173 \LWR@htmlElementclassend{div}{bodycontainer}
7174 \LWR@htmlElementclassend{div}{bodyandsidetoc}
```

Print any pending footnotes:

```
7175 \LWR@printpendingfootnotes
```

Create the footer if not EPUB

```
7176 \ifbool{FormatEPUB}{ }\LWR@createfooter}
```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```
7177 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
7178   {}
7179   {
7180     \ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{ }
7181   }
```

```
7182 \LWR@stoppars% final stop of all paragraphs
```

Finish the HTML file:

```
7183 \LWR@htmltag{/body}\LWR@orignewline
7184 \LWR@htmltag{/html}\LWR@orignewline
```

Seems to be required sometimes:

```
7185 \LWR@orignewpage
7186 }
```

`\enddocument` If labels have not changed, mark successful completion of the `lateximages.txt` file. Executed as everything is being shut down.

```
7187 \xpatchcmd{\enddocument}
7188   {%
7189     \if@tempswa
7190       \@latex@warning@no@line{Label(s) may have changed.
7191       Rerun to get cross-references right}%
7192     \fi
7193   }
7194   {%
7195     \if@tempswa
7196       \@latex@warning@no@line{Label(s) may have changed.
7197       Rerun to get cross-references right}%
7198     \else
7199       \immediate\write\LWR@lateximagesfile{%
7200         |end|end|end|%
7201       }%
7202     \fi
7203   }
7204   {}
7205   {
7206     \AtEndDocument{
7207       \PackageWarningNoLine{lwarp}
7208       {%
7209         Could not patch \protect\enddocument.\MessageBreak
7210         If labels have changed, be sure to recompile before\MessageBreak
7211         creating lateximages with\MessageBreak
7212         \space\space lwarpmk limages,\MessageBreak
7213         or the images may be corrupt%
7214       }
7215     }
7216   }

7217 \end{warpHTML}
```

66 Title page

package support `lwarp` supports the native L^AT_EX titling commands, and also supports the packages `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.

 **load order**

`\published` and `\subtitle` If using the `titling` package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 66.8.

affiliation `lwarp` provides for the `\author` macro an additional `\affiliation` macro to provide an affiliation and other additional information for each author in the title page. The

affiliation information is removed when using `titlingpage`'s `\theauthor` in the main text.

reusing titlepage information

The `titling` package maintains the definitions of `\thetitle`, `\theauthor`, etc., after the title has been typeset. These commands are to be used to refer to the document's title and author, etc., in the main text. These definitions have the `\thanks` and `\affiliation` removed, and for `\author` the `\and` is replaced to generate a simple inline list of authors separated by commas. Note: `\theauthor` does not work well with `authblk` unless the traditional L^AT_EX syntax is used.

⚠ `\theauthor`, `authblk`

custom titlepages

`\printtitle`, `\printauthor`, etc., are provided for use inside a custom titlepage or `titlingpage` environment, and these retain the `\thanks` and `\affiliation`.

`\printthanks` `\printthanks` has been added to force the printing of thanks inside a `titlingpage` environment when `\maketitle` is not used.

⚠ `\thanks` Inside a `\titlepage` or `\titlingpage` environment, use `\thanks` instead of `\footnote` for acknowledgements, etc.

66.1 Setting the title, etc.

The following provide setting commands for both HTML and print outputs.

`\author` `\and` `{\author}` While using `\maketitle` and print mode, the author is treated as a single-column `tabular` and the `\and` feature finishes the current `tabular` then starts a new one for the next author. Each author thus is placed into its own `tabular`, and an affiliation may be placed on its own line such as

```
\author{Name \\ Affiliation \and Second Name \\ Second Affiliation}
```

For HTML, the entire author block is placed inside a `<div>` of class `author`, and each individual author is inside a `<div>` of class `oneauthor`.

`\@title` `\@author` `\@date` `\@title`, `\@author`, and `\@date` store the values as originally assigned, including any `\thanks`, `\and`, or `\affiliation`. These are low-level macros intended to be used by other macros only inside a titlepage or `titlingpage`, and are used by `\maketitle`. The author is printed inside a single-column `tabular`, which becomes multiple single-column `tabulars` if multiples authors are included. For HTML, these `tabulars` become side-by-side `<div>s` of class `oneauthor`, all of which are combined into one `<div>` of class `author`.

`\printtitle` `\printauthor` `\printdate` `\printtitle`, etc. are user-level macros intended to be used in custom titlepage or `titlingpage` environments in cases where `\maketitle` is not desired. These commands preserve the `\thanks`, etc., and should not be used in the main text.

`\thetitle` `\theauthor` `\thedata` `\HTMLPageBottom` `\thetitle`, `\theauthor`, and `\thedata` are available if `titling` has been loaded, and are sanitized user-level versions from which have been removed the `\thanks` and `\affiliation`, and `\and` is changed for inline text usage. The author is printed inline without `\affiliation` or `\thanks`, with `\and` placing commas between multiple authors. Thus, these commands are to be used in the main text whenever the user wishes to refer to the document's title and such. One practical use for this is to place the authors at the bottom of each HTML page, such as:

```

\HTMLPageBottom{
  \begin{center}\textcopyright~20xx \theauthor\end{center}
}

```

⚠ **\theauthor, authblk** `\theauthor` does not work well if `authblk` is used. If `\theauthor` is important, it is recommended to use the standard L^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.

66.2 \if@titlepage

for HTML & PRINT: 7218 `\begin{warpall}`

`\if@titlepage` Some classes do not provide `\if@titlepage`. In this case, provide it and force it false.

```

7219 \ifcvoid{@titlepagefalse}{
7220   \newif\if@titlepage
7221   \@titlepagefalse
7222 }{}

```

```

7223 \end{warpall}

```

66.3 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: 7224 `\begin{warpall}`
 7225 `\providerobustcmd{\affiliation}[1]{}`
 7226 `\end{warpall}`

for PRINT output: 7227 `\begin{warpprint}`

```

7228 \AtBeginEnvironment{titlepage}{
7229 \renewrobustcmd{\affiliation}[1]{\ \ \textsc{\small#1}}
7230 }
7231
7232 \AtBeginDocument{

```

```

7233 \@ifpackageloaded{titling}{
7234 \AtBeginEnvironment{titlingpage}{
7235 \renewrobustcmd{\affiliation}[1]{\ \textsc{\small#1}}
7236 }
7237 }{}% titling loaded
7238 }% AtBeginDocument

7239 \end{warpprint}

```

for HTML output: 7240 \begin{warpHTML}

Env titlepage Sets up a <div> of class titlepage. Provided even for memoir class, since it is used by \maketitle.

```

7241 \DeclareDocumentEnvironment{titlepage}{}
7242 {
7243 \renewrobustcmd{\affiliation}[1]{\ \InlineClass{affiliation}{##1}}
7244 \LWR@printpendingfootnotes
7245 \LWR@forcenewpage
7246 \BlockClass{titlepage}
7247 }
7248 {
7249 \endBlockClass
7250 \LWR@printpendingfootnotes
7251 }

7252 \end{warpHTML}

```

66.4 Printing the thanks

\printthanks Forces the \thanks to be printed. This is necessary in a titlingpage environment when \maketitle was not used.

for PRINT output: 7253 \begin{warpprint}
7254 \newcommand*{\printthanks}{\@thanks}
7255 \end{warpprint}

for HTML output: 7256 \begin{warpHTML}
7257 \newcommand*{\printthanks}{\LWR@stoppars\@thanks\LWR@startpars}
7258 \end{warpHTML}

66.5 Printing the title, etc. in HTML

The following are for printing the title, etc. in a titlepage or a titlingpage in HTML:

for HTML output: 7259 \begin{warpHTML}

\printtitle

```

7260 \newcommand*{\printtitle}
7261 {%
7262   \LWR@stoppars%
7263   \LWR@htmltag{\LWR@tagtitle}%
7264   \@title%
7265   \LWR@htmltag{\LWR@tagtitleend}%
7266   \LWR@startpars%
7267 }

```

`\LWR@printthetitle` A private version which prints the title without footnotes, used to title each HTML page.

```

7268 \newcommand*{\LWR@printthetitle}
7269 {%
7270   \LWR@stoppars%
7271   \LWR@htmltag{\LWR@tagtitle}%
7272   \thetitle%
7273   \LWR@htmltag{\LWR@tagtitleend}%
7274   \LWR@startpars%
7275 }

```

`\printauthor` HTML version.

```
7276 \newcommand*{\printauthor}{
```

The entire author block is contained in a <div> named author:

```
7277 \begin{BlockClass}{author}
```

\and finishes one author and starts the next:

```

7278 \renewcommand{\and}{%
7279 \end{BlockClass}
7280 \begin{BlockClass}{oneauthor}
7281 }

```

Individual authors are contained in a <div> named oneauthor:

```

7282 \begin{BlockClass}{oneauthor}
7283 \@author
7284 \end{BlockClass}
7285 \end{BlockClass}
7286 }

```

`\printdate`

```

7287 \newcommand*{\printdate}{%
7288 \begin{BlockClass}{titledate}
7289 \@date
7290 \end{BlockClass}
7291 }

```

```
7292 \end{warpHTML}
```

66.6 Printing the title, etc. in print form

The following are for printing the title, etc. in a titlepage or a titlingpage in print form:

for PRINT output: 7293 \begin{warpprint}

\printtitle

```
7294 \newcommand*\printtitle{{\Huge\@title}}
```

\printauthor Print mode.

```
7295 \newcommand*\printauthor
```

```
7296     {{\large\begin{tabular}[t]{c}\@author\end{tabular}}}
```

\printdate

```
7297 \newcommand*\printdate{{\small\textit{\@date}}}
```

```
7298 \end{warpprint}
```

66.7 \maketitle for HTML output

An HTML <div> of class titlepage is used.

\thanks are a form of footnotes used in the title page. See section 59 for other kinds of footnotes.

See \thanksmarkseries{series}, below, to set the style of the footnote marks.

for HTML output: 7299 \begin{warppHTML}

```
7300 \@ifclassloaded{memoir}
```

```
7301 {
```

```
7302 \newcommand{\LWR@setfootnoteseries}{%
```

```
7303     \renewcommand\thefootnote{\@arabic\c@footnote}%
```

```
7304 }
```

```
7305 }{% not memoir
```

```
7306 \if@titlepage
```

```
7307 \newcommand{\LWR@setfootnoteseries}{%
```

```
7308     \renewcommand\thefootnote{\@arabic\c@footnote}%
```

```
7309 }
```

```
7310 \else
```

```
7311 \newcommand{\LWR@setfootnoteseries}{%
```

```
7312     \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
```

```
7313 }
```

```
7314 \fi
```

```
7315 }% not memoir
```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```
7316 \newcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```
7317 \LWR@setfootnoteseries%
7318 \def\@makefnmark{\textsuperscript{\thefootnote}}
```

```
\thefootnote ⇒ \nameuse{arabic}{footnote}, or
\thefootnote ⇒ \nameuse{fnsymbol}{footnote}
```

Redefine the footnote text:

```
7319 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
7320 \textsuperscript{\@thefnmark}~%
```

```
\makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
\@thefnmark ⇒ \itshape a (or similar)
```

Print the text:

```
7321 ##1%
7322 }%
7323 }
```

`\@fnsymbol` {<*counter*>}

Re-defined to use an HTML entity for the double vertical bar symbol. The original definition used `\|` which was not being seen by *pdftotext*.

```
7324 \def\LWR@HTML@\@fnsymbol#1{%
7325   \ifcase#1\or * \or
7326   \HTMLentity{dagger} \or
7327   \HTMLentity{Dagger} \or
7328   \HTMLentity{sect} \or
7329   \HTMLentity{para} \or
7330   \HTMLUnicode{2016} \or
7331   ** \or
7332   \HTMLentity{dagger} \HTMLentity{dagger} \or
7333   \HTMLentity{Dagger} \HTMLentity{Dagger} \else
7334   \@ctrerr \fi%
7335 }
7336 \LWR@formatted{\@fnsymbol}
```

`\maketitle` HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

```
7337 \renewcommand*\maketitle}{%
```

An HTML titlepage <div> is used for all classes.

```
7338 \begin{titlepage}
```

Set up special patches:

```
7339 \LWR@maketitlesetup
```

Typeset the title, etc:

```
7340 \@maketitle
```

Immediately generate any \thanks footnotes:

```
7341 \LWR@stoppars\@thanks\LWR@startpars
```

Close the HTML titlepage div and cleanup:

```
7342 \end{titlepage}
7343 \setcounter{footnote}{0}%
7344 \global\let\thanks\relax
7345 \global\let\maketitle\relax
7346 \global\let\@maketitle\relax
7347 \global\let\@thanks\@empty
7348 \global\let\@author\@empty
7349 \global\let\@date\@empty
7350 \global\let\@title\@empty
7351 \global\let\title\relax
7352 \global\let\author\relax
7353 \global\let\date\relax
7354 \global\let\and\relax
7355 }
```

`\@maketitle` HTML mode. Typesets the title, etc.:

```
7356 \DeclareDocumentCommand{\@maketitle}{}{%
7357     \LWR@stoppars%
7358     \LWR@htmltag{\LWR@tagtitle}%
7359     \@title%
7360     \LWR@htmltag{\LWR@tagtitleend}%
7361     \LWR@startpars%
7362     \begin{BlockClass}{author}%
```

For IEEEtran class:

```
7363 \renewcommand*\cr}{}%
7364 \renewcommand*\crrc}{}%
7365 \renewcommand*\noalign}{}%
```

```

7366     \renewcommand{\and}{%
7367         \end{BlockClass}%
7368         \begin{BlockClass}{oneauthor}%
7369     }%
7370     \begin{BlockClass}{oneauthor}%
7371         \@author%
7372     \end{BlockClass}%
7373 \end{BlockClass}%
7374 \begin{BlockClass}{titledate}%
7375 \@date%
7376 \end{BlockClass}%
7377 }
```

`\LWR@titlingmaketitle` `\maketitle` for use inside an HTML titlingpage environment.

```
7378 \newcommand*{\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
7379 \LWR@stoppars\@thanks\LWR@startpars
```

Set up special patches:

```
7380 \LWR@maketitlesetup
```

Typeset the title, etc:

```
7381 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
7382 \LWR@stoppars\@thanks\LWR@startpars
7383 }
```

```
7384 \end{warpHTML}
```

66.8 `\published` and `\subtitle`

`\subtitle` and `\published` To add `\subtitle` and `\published` to the titlepage, load the titling package and use `\AddSubtitlePublished` in the preamble.

The default `lwarp.css` has definitions for the `published` and `subtitle` classes.

If `titling` is loaded, `\AddSubtitlePublished` creates a number of additional macros, and also assigns some of the `titling` hooks. If `titling` is not loaded, `\AddSubtitlePublished` creates null macros.

 **titling hooks** Do not use `\AddSubtitlePublished` if the user has patched the `titling` hooks for some other reason. Portions are marked `\warpprintonly` to reduce extra tags in HTML. Similarly, `BlockClass` has no effect in print mode. Thus, the following may be marked `warpall`.

for HTML & PRINT: 7385 \begin{warpall}

\AddSubtitlePublished Adds \published and \subtitle, and related.

```

7386 \newcommand*{\AddSubtitlePublished}{%
7387 \ifpackageloaded{titling}{% yes titling package
7388   \newcommand{\@published}{%
7389     \newcommand{\published}[1]{\gdef\@published{##1}}%
7390     \renewcommand*\maketitlehooka{\printpublished}%
7391     \newcommand*\printpublished{%
7392       \warpprintonly{\begin{center}\unskip}%
7393       \begin{BlockClass}{published}%
7394       \warpprintonly{\Large\itshape}%
7395       \@published%
7396       \end{BlockClass}%
7397       \warpprintonly{\end{center}}%
7398     }%
7399     \newcommand{\@subtitle}{%
7400     \newcommand{\subtitle}[1]{\gdef\@subtitle{##1}}%
7401     \renewcommand*\maketitlehookb{\printsubtitle}%
7402     \newcommand*\printsubtitle{%
7403       \warpprintonly{\begin{center}\unskip}%
7404       \begin{BlockClass}{subtitle}%
7405       \warpprintonly{\Large\itshape}%
7406       \@subtitle%
7407       \end{BlockClass}%
7408       \warpprintonly{\end{center}}%
7409     }%
7410 }% yes titling package
7411 }% no titling package

7412   \def\@published{%
7413   \DeclareDocumentCommand{\published}{m}{\gdef\@published{##1}}%
7414   \DeclareDocumentCommand{\printpublished}{}{}%
7415   \def\@subtitle{%
7416   \DeclareDocumentCommand{\subtitle}{m}{\gdef\@subtitle{##1}}%
7417   \DeclareDocumentCommand{\printsubtitle}{}{}%
7418 }% no titling package
7419 }% \AddSubtitlePublished

7420 \end{warpall}

```

67 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: 7421 \begin{warpHTML}

\abstractname User-redefinable title for the abstract.

Also over-written by the `babel` package.

```
7422 \providecommand*\abstractname}{Abstract}
```

Some classes allow an optional name, so it is allowed here.

Env `abstract`

```
7423 \DeclareDocumentEnvironment{abstract}{0}{\abstractname}
7424 {
7425   \LWR@forcenewpage
7426   \BlockClass{abstract}
7427   \BlockClassSingle{abstracttitle}{#1}
7428 }
7429 {
7430   \endBlockClass
7431 }

7432 \end{warpHTML}
```

68 Quote and verse

68.1 Attributions

`\attribution` $\langle name \rangle$

For use with `quote`, `quotation`, `verse`:

Ex: "A quotation." `\attribution{\textsc{Author Name}}\textsl{Book Title}`

for HTML & PRINT:

```
7433 \begin{warpall}
7434 \newcommand{\attribution}[1]{
7435   \begin{flushright}
7436   \unskip
7437   #1
7438   \end{flushright}%
7439 }
7440 \end{warpall}
```

for HTML output:

```
7441 \begin{warpHTML}
7442 \newcommand{\LWR@HTML@attribution}[1]{%
7443   \LWR@stoppars%
7444   \begin{BlockClass}{attribution}
7445   #1
7446   \end{BlockClass}
7447   \LWR@startpars%
7448 }
7449 \LWR@formatted{attribution}
7450 \end{warpHTML}
```

68.2 Quotes, quotations

for HTML output: 7451 `\begin{warpHTML}`

Env quote

```
7452 \newenvironment*{LWR@HTML@quote}
7453 {
7454     \LWR@forcenewpage
7455     \LWR@htmlblocktag{blockquote}
7456 }
7457 {\LWR@htmlblocktag{/blockquote}}
7458
7459 \LWR@formattedenv{quote}
```

Env quotation

```
7460 \newenvironment*{LWR@HTML@quotation}
7461 {
7462     \LWR@forcenewpage
7463     \LWR@htmlblocktag{blockquote}
7464 }
7465 {\LWR@htmlblocktag{/blockquote}}
7466
7467 \LWR@formattedenv{quotation}

7468 \end{warpHTML}
```

68.3 Verse

When using `verse` or `memoir`, always place a `\\` after each line.

`\attrib` The documentation for the `verse` and `memoir` packages suggest defining an `\attrib` command, which may already exist in current documents, but it will only work for print output. `lwarp` provides `\attribution`, which works for both print and HTML output. To combine the two so that `\attrib` is used for print and `\attribution` is used for HTML:

```
\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}
```

Len `\vleftskip` These lengths are used by `verse` and `memoir` to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLvleftskip` and `\HTMLleftmargini` are provided to control the margins in HTML output. These new lengths may be set by the user before any `verse` environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargini` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargini` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

Len `\leftmargini`

Len `\HTMLvleftskip`

Len `\HTMLleftmargini`

- ⚠ **spacing** Horizontal spacing relies on *pdftotext*'s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargini` or `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space. During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused *pdftotext* to shift everything over.
- ⚠ **verse margin**

68.3.1 L^AT_EX core verse environment

for HTML output: 7469 `\begin{warpHTML}`

Env `verse`

```

7470 \newenvironment{LWR@HTML@verse}
7471     {\let\\newline% lwarp
7472      \list{}{\itemsep \z@
7473       \itemindent -1.5em%
7474       \listparindent\itemindent
7475       \rightmargin \leftmargin
7476       \advance\leftmargin 1.5em}%
7477      \item\relax}
7478     {\endlist}
7479
7480 \LWR@formattedenv{verse}

7481 \end{warpHTML}

```

for HTML & PRINT: 7482 `\begin{warpall}`

68.3.2 verse and memoir

The following lengths are used by `verse` and `memoir`. They may be set in either print or HTML output, but are only used in HTML. This allows the user to set `\vleftskip` and `\leftmargini` for print output, and optionally select different values for HTML.

Len `\HTMLvleftskip` Sets `\vleftskip` inside a `verse` environment in HTML.

```

7483 \newlength{\HTMLvleftskip}
7484 \setlength{\HTMLvleftskip}{1em}

```

Len `\HTMLleftmargini` Sets `\leftmargini` inside a `verse` environment in HTML.

```

7485 \newlength{\HTMLleftmargini}
7486 \setlength{\HTMLleftmargini}{4.5em}

7487 \end{warpall}

```

69 Verbatim and tabbing

for HTML & PRINT: 7488 \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.

```
7489 \newlength{\VerbatimHTMLWidth}
7490 \setlength{\VerbatimHTMLWidth}{4in}
7491 \end{warpall}
```

for HTML output: 7492 \begin{warpHTML}

Bool LWR@verbtags Used to temporarily turn off verbatim tags while doing \verbatiminput in the HTML head.

```
7493 \newbool{LWR@verbtags}
7494 \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.

```
7495 \newcommand*\LWR@atbeginverbatim}[3]{}
7496 {%
```

Avoid excessive space between lines:

```
7497 \setlength{\parskip}{0ex}%
```

Stop generating HTML paragraph tags:

```
7498 \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.

```
7499 \ifbool{LWR@verbtags}{%
7500   \LWR@htmltag{pre class=\textquotedbl#3\textquotedbl%
7501     \ifthenelse{\equal{#1}{}}{ style=\textquotedbl#1\textquotedbl}%
7502   }%
7503   \LWR@orignewline% pre
7504   \leavevmode\unskip\LWR@print@vspace*{-#2\baselineskip}%
7505 }{%}
```

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.

```
7506 \begingroup%
```

```

7507 % \LWR@print@normalsize%
7508 \LWR@print@normalfont%
7509 \LWR@origttfamily%
7510 \LWR@print@small%

```

Since inside a <pre>, restore the original list processing:

```
7511 \LWR@restoreoriglists%
```

Turn off babel-french extra space before punctuation:

```
7512 \LWR@FBcancel%
```

Do not produce HTML tags for \hspace inside a verse par. Restore plain L^AT_EX \hspace functionality:

```

7513 \LWR@select@print@hspace%
7514 }

```

```
\LWR@afterendverbatim {(\negative \baselineskip \vspace)}
```

Finishes enclosing a verbatim environment.

```

7515 \newcommand*\LWR@afterendverbatim}[1]{%
7516 \endgroup%
7517 \par%

```

At the end of the environment, close the pre:

```

7518 \ifbool{LWR@verbtags}{%
7519   \LWR@print@vspace*{-#1\baselineskip}%
7520   \noindent\LWR@htmltag{/pre}\LWR@orignewline% pre
7521 }{)%

```

Resume regular paragraph handling:

```

7522 \LWR@startpars%
7523 }

```

```
\verbatiminput {(\filename)}
```

Patch \verbatiminput to add HTML tags:

```

7524 \newcommand*\LWR@HTML@verbatim@input}[2]{%
7525   \ifbool{LWR@verbtags}{\LWR@forcenewpage}{)%
7526   \LWR@atbeginverbatim{2.5}{Verbatim}%
7527   \LWR@print@verbatim@input{#1}{#2}%
7528   \LWR@afterendverbatim{1.5}%
7529 }
7530
7531 \LWR@formatted{verbatim@input}

```

Env `verbatim`

```

7532 \AfterEndPreamble{
7533 \LWR@traceinfo{Patching verbatim.}
7534 \AtBeginEnvironment{verbatim}{%
7535   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7536     {}%
7537     {%
7538       \LWR@forcenewpage%
7539       \LWR@atbeginverbatim{2.5}{verbatim}%
7540     }%
7541 }
7542 \AfterEndEnvironment{verbatim}{%
7543   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7544     {}%
7545     {%
7546       \LWR@afterendverbatim{1}%
7547     }%
7548 }
7549 }

```

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`.

```

7550 \newcommand*{\LWR@HTML@tabbing}{%
7551   \LWR@forcenewpage%
7552   \LWR@atbeginverbatim{3}{tabbing}%
7553   \let\enskip\LWR@origenskip%
7554   \let\quad\LWR@origquad%
7555   \let\qqquad\LWR@origqqquad%
7556   \let~\LWR@origtilde%
7557   \let\,\LWR@origcomma%
7558   \let\thinspace\LWR@origthinspace%
7559   \let\negthinspace\LWR@orignegthinspace%
7560   \LWR@print@tabbing%
7561 }
7562
7563 \newcommand*{\LWR@HTML@endtabbing}{%
7564   \LWR@print@endtabbing%
7565   \LWR@afterendverbatim{1}%
7566 }
7567
7568 \LWR@formatted{tabbing}
7569 \LWR@formatted@endtabbing}

7570 \end{warpHTML}

```

70 Theorems

`\newtheorem` $\langle\text{text}\rangle$ [$\langle\text{counter}\rangle$] — or — [$\langle\text{oldname}\rangle$] $\langle\text{text}\rangle$

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: 7571 `\begin{warpHTML}`

`\@begintheorem` $\langle\text{name}\rangle$ $\langle\text{number}\rangle$

```
7572 \renewcommand{\@begintheorem}[2]{%
7573 \LWR@forcenewpage
7574 \BlockClass{theoremcontents}
7575 \trivlist
7576 \item[\InlineClass{theoremlabel}{#1\ #2\ }]\itshape
7577 }
```

`\@opargbegintheorem` $\langle\text{name}\rangle$ $\langle\text{number}\rangle$ $\langle\text{oparg}\rangle$

```
7578 \renewcommand{\@opargbegintheorem}[3]{%
7579 \LWR@forcenewpage
7580 \BlockClass{theoremcontents}
7581 \trivlist
7582 \item[\InlineClass{theoremlabel}{#1\ #2\ (#3)\ }]\itshape
7583 }
```

`\@endtheorem`

```
7584 \renewcommand*\@endtheorem{%
7585 \endtrivlist
7586 \endBlockClass% theoremcontents
7587 }
```

```
7588 \end{warpHTML}
```

71 Lists

The environments `itemize`, `enumerate`, and `description` are patched when `lwarp` is started. These patches support the standard L^AT_EX environments, as well as those of `enumerate`, `enumitem`, and `paralist`, and at least the French version of `babel`. Additional patches are done on a package-specific basis.

The L^AT_EX source for `itemize` and `enumerate` are found in `source2e`, but the source for `description` is found in `article.cls`, etc.

empty item To have an empty item, use `\mbox{}` or a trailing backslash. This forces a new line in print output, matching the new line which will appear in HTML output. Ex:

```
begin{itemize}
item \mbox{}
    \begin{itemize}
...
    \end{itemize}
item \
    \begin{itemize}
...
    \end{itemize}

```

`\makeLabel` While inside a list environment, `lwarp` nullifies a number of T_EX horizontal skip and fill commands, allowing the user to define `\makeLabel` for print mode while HTML mode ignores those commands.

 **label font** When defining `\makeLabel` in a list environment, use `\textbf` etc. instead of `\bfseries`.

71.1 List environment

for HTML output: 7589 `\begin{warpHTML}`

`\LWR@printcloseList` May be locally redefined by `enumerate` or `description`.

```
7590 \newcommand*\LWR@printcloseList{\LWR@printcloseitemize}
```

`\LWR@printopenList` May be locally redefined by `enumerate` or `description`.

```
7591 \newcommand*\LWR@printopenList{\ul style="\LWR@print@mbox{list-style-type:none}"}
```

`\@mklab` Removes PDF spacing.

```
7592 \AtBeginDocument{
7593 \def\@mklab#1{%
7594 %     \hfil %
7595     #1}
7596 \let\makeLabel\@mklab
7597 }
```

`\@donoparitem` Modified for HTML output by replacing T_EX boxes with plain text. Also removes PDF spacing.

```

7598 \def\@donoparitem{%
7599   \@noparitemfalse
7600 %   \global\setbox\@labels\hbox{\hskip -\leftmargin
7601 %                               \unhbox\@labels
7602 %                               \hskip \leftmargin}%
7603 %   \if@minipage\else
7604 %     \@tempskipa\lastskip
7605 %     \vskip -\lastskip
7606 %     \advance\@tempskipa\outerparskip
7607 %     \advance\@tempskipa -\parskip
7608 %     \vskip\@tempskipa
7609 %   \fi
7610 }

```

`\@item` Modified for HTML output by replacing T_EX boxes with plain text. Also removes PDF spacing.

```

7611 \def\LWR@HTML@item[#1]{%
7612 \LWR@traceinfo{\@item}
7613   \if@noparitem
7614     \@donoparitem
7615   \else
7616 %     \if@inlabel
7617 %       \indent
7618 %       \par
7619 %     \fi
7620   \ifhmode
7621 %     \unskip\unskip
7622 %     \par
7623   \fi
7624   \if@newlist
7625     \if@nobreak
7626       \@nbitem
7627     \else
7628 %       \addpenalty\@beginparpenalty
7629 %       \addvspace\@topsep
7630 %       \addvspace{-\parskip}%
7631     \fi
7632   \else
7633 %     \addpenalty\@itempenalty
7634 %     \addvspace\@itemsep
7635   \fi
7636   \global\@inlabeltrue
7637 \fi
7638 % \everypar{%
7639 % \@minipagefalse
7640 \global\@newlistfalse

7641 %   \if@inlabel
7642 %     \global\@inlabelfalse

7643 %   {\setbox\z@\lastbox
7644 %     \ifvoid\z@
7645 %       \kern-\@itemindent
7646 %     \fi}%

```

```

7647 %      \box\@labels
7648 %      \penalty\z@
7649 %      \fi

7650 %      \if@nobreak
7651 %      \@nobreakfalse
7652 %      \clubpenalty \@M
7653 %      \else
7654 %      \clubpenalty \@clubpenalty
7655 %      \everypar{}%
7656 %      \fi}%

7657 \if@noitemarg
7658 \@noitemargfalse
7659 \if@nmbulist

7660      \refstepcounter\@listctr
7661      \fi
7662 \fi

7663      \makeLabel{#1} % extra space
7664 %      \sbox\@tempboxa{\makeLabel{#1}}%
7665 %      \global\setbox\@labels\hbox{%
7666 %      \unhbox\@labels
7667 %      \hskip \itemindent
7668 %      \hskip -\labelwidth
7669 %      \hskip -\labelsep
7670 %      \ifdim \wd\@tempboxa >\labelwidth
7671 %      \box\@tempboxa

7672 %      \else
7673 %      \hbox to\labelwidth {\unhbox\@tempboxa}%
7674 %      \fi
7675 %      \hskip \labelsep}%
7676 \ignorespaces%
7677 }

```

\@nbitem

```

7678 \def\@nbitem{%
7679 %   \@tempkipa\@outerparskip
7680 %   \advance\@tempkipa -\parskip
7681 %   \addvspace\@tempkipa
7682 }

```

\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.

```

7683 \newcommand*{\LWR@listitem}{%
7684 \LWR@stoppars%
7685 \LWR@startnewdepth{listitem}%
7686 \LWR@htmltag{li}%
7687 \LWR@startpars%
7688 \LWR@origitem%
7689 }

```

`\LWR@nulllistfills` Nullifies various T_EX fill commands, in case they are used inside `\makeLabel`. Problems are caused when these are nullified all the time.

```

7690 \newcommand*{\LWR@nulllistfills}{%
7691 \renewcommand*{\hss}{}%
7692 \renewcommand*{\llap}[1]{##1}%
7693 \renewcommand*{\rlap}[1]{##1}%
7694 \renewcommand*{\hfil}{}%
7695 \renewcommand*{\hfilneg}{}%
7696 \renewcommand*{\hfill}{}%
7697 }

```

Env `list` `{\langle label \rangle}` `{\langle commands \rangle}`

```

7698 \newcommand*{\LWR@liststart}{%
7699 \LWR@traceinfo{\LWR@liststart}%
7700 \LWR@stoppars%
7701 \LWR@pushoneclose{list}%
7702 \LWR@htmltag{\LWR@printopenlist}\LWR@originewline%
7703 \LWR@startpars%
7704 \setlength{\topsep}{0pt}%
7705 \setlength{\partopsep}{0pt}%
7706 \setlength{\itemsep}{0pt}%
7707 \setlength{\parsep}{0pt}%
7708 \setlength{\leftmargin}{0pt}%
7709 \setlength{\rightmargin}{0pt}%
7710 \setlength{\listparindent}{0pt}%
7711 \setlength{\itemindent}{0pt}%
7712 \setlength{\labelsep}{1em}%
7713 \LWR@nulllistfills%
7714 }

```

```

7715 \newcommand*{\LWR@listend}{%
7716 \LWR@traceinfo{\LWR@listend}%
7717 \LWR@stoppars%
7718 \LWR@closeprevious{list}%
7719 \LWR@startpars%
7720 }

```

71.2 Itemize

`\LWR@itemizeitem` `[\langle label \rangle]`

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.

```
7721 \newcommand*\LWR@itemizeitem}{%
7722 \LWR@stoppars%
7723 \LWR@startnewdepth{listitem}%
7724 \LWR@htmltag{li}%
7725 \LWR@startpars%
7726 \LWR@origitem%
7727 }
```

Env `itemize` [*options*]

```
7728 \newcommand*\LWR@itemizestart}{%
7729 \renewcommand*\LWR@printcloselist}{\LWR@printcloseitemize}
7730 \renewcommand*\LWR@printopenlist}{ul style="\LWR@print@mbbox{list-style-type:none}}
7731 \let\item\LWR@itemizeitem%
7732 \LWR@nulllistfills%
7733 }
```

71.3 Enumerate

An HTML unordered list is used with customized L^AT_EX-generated labels.

Env `enumerate` [*options*]

```
7734 \newcommand*\LWR@enumeratestart}{%
7735 \renewcommand*\LWR@printcloselist}{\LWR@printcloseitemize}
7736 \renewcommand*\LWR@printopenlist}{ul style="\LWR@print@mbbox{list-style-type:none}}
7737 \let\item\LWR@itemizeitem%
7738 \LWR@nulllistfills%
7739 }
```

71.4 Description

`\LWR@descitem` [*label*] Handles an `\item` inside a description.

```
7740 \newcommand*\LWR@descitem}[1][[]%
7741 {%
7742 \LWR@stoppars%
7743 \LWR@setlatestname{#1}%
7744 \LWR@startnewdepth{descitem}%
```

While creating the label, encase it inside tags and disable `\hspace`, which is used by the standard classes to add space to the labels.

```
7745 \begingroup%
7746 \let\LWR@orig@desc@makeLabel\makeLabel
7747 \renewcommand*\makeLabel}[1]{%
```

```

7748 \LWR@htmltag{dt}%
7749 \LWR@orig@desc@makelabel{#1}%
7750 \LWR@htmltag{/dt}%
7751 }
7752 \LWR@select@html@nohspace%
7753 \LWR@origitem[#1]%
7754 \endgroup%
7755 \LWR@orignewline%
7756 \LWR@htmltag{dd}%
7757 \LWR@startpars%
7758 }

```

Env description [*(options)*]

```

7759 \newcommand*\LWR@descriptionstart}{%
7760 \renewcommand*\LWR@printclosedlist}{\LWR@printcloseddescription}
7761 \renewcommand*\LWR@printopenlist}{dl}
7762 \let\item\LWR@descitem%
7763 \LWR@nulllistfills%
7764 }

```

71.5 Patching the lists

`\LWR@patchlists` Patches list environments.

`\LWR@patchlists` remembers `\item` as defined by whatever packages have been loaded, then patches the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native L^AT_EX environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```

7765 \newcommand*\LWR@patchlists}{%
7766 \LetLtxMacro\item\LWR@listitem%
7767 \LetLtxMacro\@item\LWR@HTML@item%
7768 \renewcommand*\@trivlist}{%
7769 \LWR@traceinfo{@trivlist start}%
7770 \LWR@liststart%
7771 \LWR@orig@trivlist%
7772 \LWR@traceinfo{@trivlist done}%
7773 }%
7774 \renewcommand*\@trivlist}{%
7775 \LWR@traceinfo{trivlist}%
7776 \LWR@origtrivlist%
7777 }%
7778 \renewcommand*\endtrivlist}{%
7779 \LWR@traceinfo{endtrivlist start}%
7780 \LWR@origendtrivlist\LWR@listend%
7781 \LWR@traceinfo{endtrivlist done}%
7782 }%
7783 \renewcommand*\@itemize}{%
7784 \LWR@itemizestart\LWR@origitemize%
7785 }%
7786 \renewcommand*\@enumerate}{%

```

```

7787     \LWR@enumeratestart\LWR@origenumerate%
7788 }%
7789 \renewcommand*{\description}{%
7790     \LWR@descriptionstart\LWR@origdescription%
7791 }%
7792 }

```

`\LWR@restoreoriglists` Restores the original `trivlist` environment.

```

7793 \newcommand*{\LWR@restoreoriglists}{%
7794     \LWR@traceinfo{\LWR@restoreoriglists}%
7795     \LetLtxMacro\item\LWR@origitem%
7796     \LetLtxMacro\@item\LWR@orig@item%
7797     \let\@trivlist\LWR@orig@trivlist%
7798     \let\trivlist\LWR@origtrivlist%
7799     \let\endtrivlist\LWR@origendtrivlist%
7800     \LetLtxMacro\itemize\LWR@origitemize%
7801     \LetLtxMacro\enditemize\LWR@endorigitemize%
7802     \LetLtxMacro\enumerate\LWR@origenumerate%
7803     \LetLtxMacro\endenumerate\LWR@endorigenumerate%
7804     \LetLtxMacro\description\LWR@origdescription%
7805     \LetLtxMacro\enddescription\LWR@endorigdescription%
7806     \let\@mklab\LWR@orig@mklab%
7807     \let\makelabel\LWR@origmakelabel%
7808     \let\@donoparitem\LWR@orig@donoparitem%
7809     \let\@nbitem\LWR@orig@nbitem%
7810 }

7811 \end{warpHTML}

```

72 Tabular

This is arguably the most complicated part of the entire package. Numerous tricks are employed to handle the syntax of the \LaTeX core and the various tabular-related packages.

72.1 Limitations

Tabular mostly works as expected, but pay special attention to the following, especially if working with environments, macros inside tabulars, multirows, `siunitx` S columns, or the packages `multirow`, `longtable`, `supertabular`, or `xtab`.

Defining macros and environments:

 **Misplaced alignment tab character &**

- When defining environments or macros which include `tabular` and instances of the `&` character, it may be necessary to make `&` active before the environment or macro is defined, then restore `&` to its default catcode after, using the following commands. These are ignored in print mode.

⚠ floatrow

⚠ tabular inside another environment

```
\StartDefiningTabulars
```

```
<define macros or environments using tabular and & here>
```

```
\StopDefiningTabulars
```

This includes before and after defining any macro which used `\ttabbox` from `floatrow`.

- When creating a new environment which contains a `tabular` environment, `lwarp`'s emulation of the `tabular` does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

```
\StartDefiningTabulars % because & is used in a definition
```

```
\newenvironment{outerenvironment}
```

```
{
```

```
\tabular{cc}
```

```
left & right \\
```

```
}
```

```
{
```

```
\TabularMacro\ResumeTabular
```

```
left & right \\
```

```
\endtabular
```

```
}
```

```
\StopDefiningTabulars
```

Cell contents:

⚠ macro in a table

- Using a custom macro inside a `tabular` data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use `\TabularMacro` just before the macro. This is ignored in print mode.

```
\TabularMacro\somemacro & more row contents \\
```

Column specifiers:

@ and !

- Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

- In `\multirow` cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the `\multirow` which do not appear in the HTML version.

⚠ \newcolumntype

- `\newcolumntype` is ignored; unknown column types are set to l.

Rules:

vertical rules

- Doubled `\hlines`, `\midrules`, and vertical rules are supported.
- Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.

width and trim

- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

combined rules

- If you wish to use `\cmidrule` followed by `\bottomrule`, it may be necessary to use:

```
\cmidrule{2-3} \[-2ex]
\bottomrule
```

The optional `-2ex` is ignored in HTML, but improves the visual formatting in the print output.

- For `\toprule` and `\bottomrule`, when combined with a `warpprint` or `warpHTML` environment, if a “Misplaced `\noalign`” error occurs, change

```
This & That \endhead
```

to

```
\warpprintonly{This & That \endhead}
```

and likewise with the other `\end` headings. Keep the `\endfirsthead` row unchanged, as it is still relevant to HTML output.

Other:

- `tabularx` ignores the width, but `X` columns do produce paragraph columns or multicolumns.

longtable headings

- For `longtable`, place headings and footings which do not apply to HTML inside `\warpprintonly{}`.

S columns

- For `S` columns (from the `siunitx` package), while producing print output, anything non-numeric must be placed inside `{}` braces, including commands such as `\multirow`. While producing HTML output, though, anything placed inside braces is not seen by `lwarp`'s tabular handling algorithm. To resolve this problem, make a copy of the row, with one version for print output, containing the extra braces, and another version for HTML output, without the extra braces, such as:

```
\warpprintonly{1 & 2 & {\multirow{2}{2cm}{Text}} & 3 \\\}
\warpHTMLonly{1 & 2 & \multirow{2}{2cm}{Text} & 3 \\\}
```

- In \LaTeX , a tabular may be placed inside a `minipage`, but in HTML a `<table>` may not be inside a ``. If this situation is detected, a warning is printed instructing the user to isolate the `` using `\warpprintonly` or the `warpprint` environment.

for HTML output: `7812 \begin{warpHTML}`

72.2 Temporary package-related macros

These macros are temporary placeholders for macros defined by various packages. If the relevant package is not loaded, these placeholders are used instead.

72.2.1 `arydshln`

Emulated by the original \LaTeX non-dashed versions.

```
7813 \LetLtxMacro\hdashline\hline
7814 \LetLtxMacro\cdashline\cline
7815 \LetLtxMacro\firsthdashline\hline
7816 \LetLtxMacro\lasthdashline\hline
```

⚠ `\warpprintonly`
⚠ Misplaced `\noalign`

⚠ tabular inside a ``

72.3 Token lookahead

Used by `\LWR@futurenonpacelet` to look at the next token.

`\LWR@mynexttoken`

```
7817 \newcommand\LWR@mynexttoken\relax
```

`\futurelet` copies the next token then executes a function to analyze it.

`\LWR@futurenonpacelet` does the same, but ignores intervening white space

Based on the `booktabs` style:

`\LWR@futurenonpacelet`

```
7818 \def\LWR@futurenonpacelet#1{\def\LWR@cs{#1}%
7819 \afterassignment\LWR@fns lone\let\nexttoken= }
7820
7821 \def\LWR@fns lone{\expandafter\futurelet\LWR@cs\LWR@fns ltwo}
7822
7823 \def\LWR@fns ltwo{%
7824 \expandafter\ifx\LWR@cs\@sptoken\let\next=\LWR@fns lthree%
7825 \else\let\next=\nexttoken\fi\next}
7826
7827 \def\LWR@fns lthree{\afterassignment\LWR@fns lone\let\next= }
```

`\LWR@getmynexttoken` Looks ahead and copies the next token into `\LWR@mynexttoken`.

```
7828 \newcommand*{\LWR@getmynexttoken}{%
7829   \LWR@traceinfo{\LWR@getmynexttoken}%
7830 % nothing must follow this next line
7831   \LWR@futurenonpacelet\LWR@mynexttoken\LWR@tabledatacolumn tag
7832 }
```

72.4 Tabular variables

In order to support nested tabulars, each of these is used locally. For local counters, `etoolbox`'s `\defcounter` and `lwarp`'s new `\defaddtocounter` are used.

Bool `LWR@startedrow` True if should print a row tag before this column.

```
7833 \newbool{LWR@startedrow}
7834 \boolfalse{LWR@startedrow}
```

Bool `LWR@tabularcelladded` True if have added a data cell for this position.

```
7835 \newbool{LWR@tabularcelladded}
7836 \boolfalse{LWR@tabularcelladded}
```

- Ctr LWR@hlines Number of \hlines or \midrules above the next row.
 7837 \newcounter{LWR@hlines}
- Ctr LWR@hdashedlines Number of \arydshln dashed lines above the next row.
 7838 \newcounter{LWR@hdashedlines}
- Bool LWR@doingtbrule True if the next row will have a top/bottom rule above it.
 7839 \newbool{LWR@doingtbrule}
 7840 \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.
 7841 \newbool{LWR@doingcmidrule}
 7842 \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.
 7843 \newbool{LWR@tableparcell}
- Bool LWR@skippingmrowcell True if are doing an empty \multirow cell, and thus there is no data tag to close.
 7844 \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.
 7845 \newbool{LWR@skippingmcolrowcell}
- Bool LWR@usedmultirow Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.
 7846 \newbool{LWR@usedmultirow}
- Bool LWR@foundmrowcell Used to error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.
 7847 \newbool{LWR@foundmrowcell}
- Bool LWR@skipatbang True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.
 7848 \newbool{LWR@skipatbang}
- Bool LWR@emptyatbang True if finishing a row and should print empty @ or ! column table data cells.
 7849 \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.

```
7850 \newbool{LWR@intabularmetadata}
7851 \boolfalse{LWR@intabularmetadata}
```

Bool LWR@exitingtabular When \end is found, turns off the next opening data tag.

```
7852 \newbool{LWR@exitingtabular}
```

Bool LWR@tabularmutemods Mutes HTML output for @, !, < and >.

This is used while printing the final row to generate \bottomrules.

```
7853 \newbool{LWR@tabularmutemods}
```

Bool LWR@validtablecol True if found a valid table column type.

```
7854 \newbool{LWR@validtablecol}
```

Bool LWR@opttablecol True if found a table column optional argument.

```
7855 \newbool{LWR@opttablecol}
```

Used to add a style to a table data cell:

```
7856 \newbool{LWR@tdhavecellstyle}
```

Ctr LWR@tabularDepth Tracks whether & is being used inside a tabular.

```
7857 \newcounter{LWR@tabulardepth}
7858 \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.

```
7859 \newcounter{LWR@tabularpardepth}
7860 \setcounter{LWR@tabularpardepth}{0}
```

```
7861 \newcommand*{\LWR@colsresult}{}%temp storage for column format results
7862 \newcommand*{\LWR@pposition}{}
7863 \newcommand*{\LWR@pleft}{}
7864 \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 lrrccpc, exactly one letter per L^AT_EX table column, without @, !, >, <, or the vertical bar.

`\LWR@strresult` Holds the result of `Str` functions.

```
7865 \providecommand*\LWR@strresult{}
7866 \providecommand*\LWR@strresulttwo{}
```

`\LWR@origcolspec` Holds the original column specs given to `tabular`.

```
7867 \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.)

```
7868 \newcounter{LWR@tablecolspecwidth}
```

Ctr `LWR@tablecolspecindex` While parsing the \LaTeX table column specification, starts at 1 and is incremented per token of the specification.

```
7869 \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.

```
7870 \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`.)

```
7871 \newcounter{LWR@tabletotalLaTeXcols}
```

Ctr `LWR@tabletotalLaTeXcolsnext` Holds the next \LaTeX table column index while parsing, equal to one more than `LWR@tabletotalLaTeXcols`.

```
7872 \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 41.

`LWR@colbangspec` A data array of specifications for `!` columns. The leftmost's index is `leftedge`, the others are counter values. See section 41.

`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.

Ctr `LWR@cellcolordepth` Counts how many cell color `<div>`s were added to the current `tabular` data cell.

```
7873 \newcounter{LWR@cellcolordepth}
```

72.4.1 Multicolumn variables

```
7874 \newcounter{LWR@tablemulticolwidth}
```

Indexes into the multicolumn specification:

```
7875 \newcounter{LWR@tablemulticolspos}
```

Remembers multicolumn vertical rules if found in the column spec.

```
7876 \newcounter{LWR@mccolvertbarsl}
7877 \newcounter{LWR@mccolvertbarsr}
7878 \newcounter{LWR@mccolvertbarsldash}
7879 \newcounter{LWR@mccolvertbarsrdash}
7880 \newbool{LWR@mccolvertbaronleft}
```

72.4.2 Longtable variables

Bool LWR@starredlongtable Per the caption package, step the counter if longtable*.

```
7881 \newbool{LWR@starredlongtable}
7882 \boolfalse{LWR@starredlongtable}
```

72.4.3 Midrule variables

Ctr LWR@midrulecounter Indexes across the LWR@midrules and LWR@trim<l/r>rules data arrays.

```
7883 \newcounter{LWR@midrulecounter}
```

72.5 Handling &, @, !, and bar

For technical discussion regarding problems redefining \&, See:

<http://tex.stackexchange.com/questions/11638/where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860>

\LWR@instertatbangcols

```
7884 \newcommand*{\LWR@insertatbangcols}{%
7885   \ifbool{LWR@skipatbang}%
7886   {}%
7887   {%
7888     \LWR@printatbang{at}{\arabic{LWR@tableLaTeXcolindex}}%
7889     \LWR@printatbang{bang}{\arabic{LWR@tableLaTeXcolindex}}%
7890   }%
7891 }
```

`\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.

```

7892 \newcommand*{\LWR@closetabledatacell}{%
7893   \booltrue{LWR@intabularmetadata}%
7894   \ifbool{LWR@exitingtabular}%
7895     {%

7896       \LWR@stoppars%
7897     }%
7898     {% not exiting tabular
7899       \ifboolexpr{bool{LWR@skippingmrowcell} or bool{LWR@skippingmcolrowcell}}%
7900         {%

7901           \LWR@stoppars%

```

If not skipping a `\multicolumnrow` cell, insert the @ and ! columns after this non-existent column.

```

7902       \ifbool{LWR@skippingmcolrowcell}%
7903         {}%
7904         {\LWR@insertatbangcols}%
7905     }%
7906     {% not skippingmrowcell

```

Insert any < then any @ and ! column contents, unless muted for the `\bottomrule` or a `\multicolumn`:

```

7907       \unskip%
7908       \ifboolexpr{%
7909         bool{LWR@tabularmutemods} or
7910         bool{LWR@skipatbang} or
7911         bool{LWR@emptyatbang}
7912     }%
7913       {}%
7914       {%
7915         \LWR@getexparray{LWR@colafterspec}%
7916         {\arabic{LWR@tableLaTeXcolindex}}%
7917       }%

```

Close paragraphs:

```

7918       \LWR@stoppars%
7919       \boolfalse{LWR@tableparcell}%

```

Close the table data cell.

Close any color `<div>s`.

```

7920       \whileboolexpr{test {\ifnumcomp{\value{LWR@cellcolordepth}}{>}{0}}}{%
7921         \LWR@htmltag{/div}\LWR@originewline%
7922         \defaddtocounter{LWR@cellcolordepth}{-1}%
7923       }%

```

Skip the @ and ! cells if are closing a multicolumn cell.

```

7924         \leavevmode\unskip\LWR@htmltag{/td}\LWR@orignewline%
7925         \global\booltrue{LWR@tabularcellladded}%
7926         \LWR@insertatbangcols%
7927     }% not skipping mrowcell
7928 }% not exiting tabular
7929 \boolfalse{LWR@skippingmrowcell}%
7930 \boolfalse{LWR@skippingmcolrowcell}%
7931 \boolfalse{LWR@skipatbang}%

```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```

7932 \def\LWR@cellHTMLcolor{}%
7933 \def\LWR@columnHTMLcolor{}%
7934 \defcounter{LWR@cellcolordepth}{0}%
7935 }

```

When not used inside a tabular, & performs its original function as recorded here (with catcode 4).

```

7936 \let\LWR@origampmacro&
7937 \end{warpHTML}

```

72.5.1 Handling &

for HTML output: 7938 \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.

```

7939 \newcommand*{\LWR@tabularampersand}{%
7940     \LWR@traceinfo{LWR@tabularampersand}%
7941     \ifnumcomp{\value{LWR@tabulardepth}}{>}{0}%
7942     {%

```

If not skipping a multirow cell, close the current data cell.

```

7943         \unskip%
7944         \LWR@closetabledatacell%

```

Move to the next column.

```

7945         \defaddtocounter{LWR@tableLaTeXcolindex}{1}%

```

Have not yet added data in this column:

```

7946         \global\boolfalse{LWR@tabularcellladded}%

```

Look at the next token to decide multi or single column data tag.

```
7947     \LWR@getmynexttoken%
7948   }%
```

If not inside a tabular, performs the original action:

```
7949   {%
7950     \LWR@origampmacro%
7951   }%
7952 }
```

& is left with its original catcode for now.

tikz package seems to require & be left alone until after tikz has been loaded. Also, cleveref uses the ampersand in one of its options.

& is made active inside a tabular.

& is left alone when in math alignments.

72.5.2 Filling an unfinished row

`\LWR@tabularfinishrow` Adds empty table cells if necessary to finish the row.

At the end of the table, if any bottom rules are requested then an empty row must be generated to form the borders which show the rules.

```
7953 \newcommand*{\LWR@tabularfinishrow}{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```
7954   \ifboolexpr{%
7955     not bool {LWR@exitingtabular} or%
7956     bool{LWR@doingtbrule} or%
7957     bool{LWR@doingcmidrule} or%
7958     test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
7959     test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
7960     bool{LWR@startedrow}%
7961   }{%
```

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:

```
7962   \ifbool{LWR@exitingtabular}{%
7963     \booltrue{LWR@tabularmutemods}%
7964   }{%
7965     \boolfalse{LWR@tabularmutemods}%
7966   }%
```

Locally reenable the table data tags until finished with the final row:

```
7967 \boolfalse{LWR@exitingtabular}%
```

Generate table data tags and ampersands until the right edge:

```
7968 \whileboolexpr{%
7969     test {
7970         \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
7971             {\value{LWR@tabletotalLaTeXcols}}
7972     } or %
7973     (%
7974         bool{LWR@intabularmetadata} and%
7975         not bool{LWR@tabularcellladded} and%
7976         test {
7977             \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}
7978                 {\value{LWR@tabletotalLaTeXcols}}
7979         }%
7980     )%
7981 }%
7982 {%
7983     \LWR@tabledatasinglecolumnntag%
```

The following is essentially `\LWR@tabularampersand` with `LWR@emptyatbang` added to empty the following cells:

```
7984 \LWR@closetabledatacell%
7985 \defaddtocounter{LWR@tableLaTeXcolindex}{1}%
7986 \global\boolfalse{LWR@tabularcellladded}%
7987 \booltrue{LWR@emptyatbang}%
```

Starts the next cell:

```
7988 \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
7989     {\value{LWR@tabletotalLaTeXcols}}%
7990     {\LWR@getmynexttoken}%
7991     {}%
7992 }%
```

Reenable the original `LWR@exitingtabular` to close the entire table:

```
7993 \ifbool{LWR@tabularmutemods}{%
7994     \booltrue{LWR@exitingtabular}%
7995 }{%
7996     \boolfalse{LWR@exitingtabular}%
7997 }%
7998 \boolfalse{LWR@tabularmutemods}%

7999 \boolfalse{LWR@emptyatbang}%
8000 }{}% ifboolexpr
8001 }
```

72.6 Handling \\

Inside tabular, \\ is redefined to \LWR@tabularendofline

Throws away options \\[dim] or *

\LWR@tabularendofline

```
8002 \NewDocumentCommand{\LWR@tabularendofline}{s o}{%
```

Finish the row:

```
8003   \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}
8004     {\value{LWR@tabletotalLaTeXcols}}%
8005     {\LWR@tabularfinishrow}%
8006     {\LWR@closetabledatacell}%
8007   \LWR@htmltag{/tr}\LWR@orignewline%
```

xcolor row color support:

```
8008   \@rowc@lors%
```

No longer inside a data cell:

```
8009   \booltrue{LWR@intabularmetadata}%
```

Not yet started a table row:

```
8010   \boolfalse{LWR@startedrow}%
```

Additional setup:

```
8011   \defcounter{LWR@hlines}{0}%
8012   \defcounter{LWR@hdashedlines}{0}%
8013   \boolfalse{LWR@doingtbrule}%
8014   \boolfalse{LWR@doingcmidrule}%
8015   \LWR@clearmidrules%
```

```
8016   \def\LWR@rowHTMLcolor{}
```

Start at first column:

```
8017   \defcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
8018   \global\boolfalse{LWR@tabularcelladded}%
```

Allow T_EX to flush the pending paragraph. Not doing so causes a slowdown for very large tables.

```
8019   \LWR@stoppars%
8020   \LWR@origpar%
```

Look at the next token to decide between single column data tag or a special case:

```
8021 \LWR@getmynexttoken%
8022 }
```

72.7 Looking ahead in the column specifications

`\LWR@columnspeclookahead` {<*offset*>}

Looks *offset* tokens ahead in the column specification, setting `\LWR@strresulttwo`.

The *w* column alignment will be seen as a single unit such as {*c*}.

```
8023 \newcommand*{\LWR@columnspeclookahead}[1]{%
8024 \setcounter{\LWR@tempcountone}{\value{\LWR@tablecolspecindex}}%
8025 \addtocounter{\LWR@tempcountone}{#1}%
8026 \fullexpandarg%
8027 \StrChar{\LWR@origcolspec}{\arabic{\LWR@tempcountone}}[\LWR@strresulttwo]%
```

Get the contents of the first group in `\LWR@strresulttwo`:

```
8028 \exploregroups%
8029 \StrChar{\LWR@strresulttwo}{1}[\LWR@strresulttwo]%
8030 \noexploregroups%
8031 }
```

72.8 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```
8032 \newcommand*{\LWR@colparameter}{}
```

`\LWR@parseatcolumn` Handles @{*text*} columns.

```
8033 \newcommand*{\LWR@parseatcolumn}{%
```

Move to the next token after the '@':

```
8034 \LWR@traceinfo{at column}%
8035 \defaddtocounter{\LWR@tablecolspecindex}{1}%
```

Read the next token into `\LWR@colparameter`, expanding once:

```
8036 \LWR@traceinfo{about to read the next token:}%
8037 \expandarg%
8038 \StrChar{\LWR@origcolspec}%
8039 {\arabic{\LWR@tablecolspecindex}}[\LWR@colparameter]%
8040 \fullexpandarg%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

8041 \LWR@traceinfo{have now read the next token}%
8042 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
8043 {% left edge of the table:
8044 \LWR@traceinfo{at the left edge}%
8045 \LWR@setexparray{LWR@colatspec}%
8046 {leftedge}%
8047 {\expandafter\@firstofone\LWR@colparameter}%
8048 \LWR@traceinfo{at the left edge: %
8049 \LWR@getexparray{LWR@colatspec}{leftedge}}%
8050 }%
8051 {% not at the left edge:
8052 \LWR@traceinfo{not at the left edge}%
8053 \LWR@setexparray{LWR@colatspec}%
8054 {\arabic{LWR@tabletotalLaTeXcols}}%
8055 {\expandafter\@firstofone\LWR@colparameter}%
8056 \LWR@traceinfo{at \arabic{LWR@tabletotalLaTeXcols}: %
8057 \LWR@getexparray{LWR@colatspec}{\arabic{LWR@tabletotalLaTeXcols}}}%
8058 }%
8059 \let\LWR@colparameter\relax%
8060 \booltrue{LWR@validtablecol}%
8061 }

```

\LWR@parsebangcolumn Handles !{text} columns.

```
8062 \newcommand*{\LWR@parsebangcolumn}{%
```

Move to the next token after the '!':

```

8063 \LWR@traceinfo{bang column}%
8064 \defaddtocounter{LWR@tablecolspecindex}{1}%

```

Read the next token into \LWR@colparameter, expanding once:

```

8065 \LWR@traceinfo{about to read the next token:}%
8066 \expandarg%
8067 \StrChar{\LWR@origcolspec}%
8068 {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
8069 \fullexpandarg%

```

Store the result into a data array, expanding once out of \LWR@colparameter:

```

8070 \LWR@traceinfo{have now read the next token}%
8071 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
8072 {% left edge of the table:
8073 \LWR@traceinfo{at the left edge}%
8074 \LWR@setexparray{LWR@colbangspec}%
8075 {leftedge}%
8076 {\expandafter\@firstofone\LWR@colparameter}%
8077 }%
8078 {% not at the left edge:
8079 \LWR@traceinfo{not at the left edge}%
8080 \LWR@setexparray{LWR@colbangspec}%

```

```

8081         {\arabic{LWR@tabletotalLaTeXcols}}%
8082         {\expandafter\@firstofone\LWR@colparameter}%
8083     \LWR@traceinfo{bang \arabic{LWR@tabletotalLaTeXcols}: \LWR@colparameter!}%
8084     }%
8085     \let\LWR@colparameter\relax%
8086     \booltrue{LWR@validtablecol}%
8087 }

```

`\LWR@parsebeforecolumn` Handles `>{text}` columns.

```
8088 \newcommand*{\LWR@parsebeforecolumn}{%
```

Move to the next token after the '>':

```
8089     \defaddtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into `\LWR@colparameter`:

```

8090     \expandarg%
8091     \StrChar{\LWR@origcolspec}%
8092         {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
8093     \fullexpandarg%

```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```

8094     \LWR@setexparray{LWR@colbeforespec}%
8095         {\arabic{LWR@tabletotalLaTeXcolsnext}}%
8096         {\expandafter\@firstofone\LWR@colparameter}%
8097     \let\LWR@colparameter\relax%
8098     \booltrue{LWR@validtablecol}%
8099 }

```

`\LWR@parseaftercolumn` Handles `<{text}` columns.

```
8100 \newcommand*{\LWR@parseaftercolumn}{%
```

Move to the next token after the '<':

```
8101     \defaddtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into `\LWR@colparameter`:

```

8102     \expandarg%
8103     \StrChar{\LWR@origcolspec}%
8104         {\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
8105     \fullexpandarg%

```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```

8106     \LWR@setexparray{LWR@colafterspec}%
8107         {\arabic{LWR@tabletotalLaTeXcols}}%
8108         {\expandafter\@firstofone\LWR@colparameter}%

```

```

8109 \let\LWR@colparameter\relax%
8110 \booltrue{LWR@validtablecol}%
8111 }

```

`\LWR@parsebarcolumn` Handles vertical rules.

```

8112 \newcommand*{\LWR@parsebarcolumn}{%
8113 \LWR@traceinfo{LWR@parsebarcolumn}%

```

Remember the bar at this position:

```

8114 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
8115 {% left edge of the table:
8116 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
8117 \ifdefstring{\LWR@tempone}{tvertbarl}%
8118 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldouble}}%
8119 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarl}}%
8120 }%
8121 {% not at the left edge:
8122 \edef\LWR@tempone{%
8123 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
8124 }%
8125 \ifdefstring{\LWR@tempone}{tvertbarr}%
8126 {%
8127 \LWR@setexparray{LWR@colbarspec}%
8128 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarrdouble}}%
8129 }%
8130 {%
8131 \LWR@setexparray{LWR@colbarspec}%
8132 {\arabic{LWR@tabletotalLaTeXcols}}{tvertbarr}}%
8133 }%
8134 }%
8135 \booltrue{LWR@validtablecol}%
8136 }

```

`\LWR@parsecoloncolumn` Handles vertical rules.

```

8137 \newcommand*{\LWR@parsecoloncolumn}{%
8138 \LWR@traceinfo{LWR@parsecoloncolumn}%

```

Remember the bar at this position:

```

8139 \ifnumcomp{\value{LWR@tabletotalLaTeXcols}}{=}{0}%
8140 {% left edge of the table:
8141 \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
8142 \ifdefstring{\LWR@tempone}{tvertbarldash}%
8143 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldoubledash}}%
8144 {\LWR@setexparray{LWR@colbarspec}{leftedge}{tvertbarldash}}%
8145 }%
8146 {% not at the left edge:
8147 \edef\LWR@tempone{%
8148 \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tabletotalLaTeXcols}}%
8149 }%

```

```

8150     \ifdefstring{\LWR@tempone}{tvertbarrdash}%
8151     {\LWR@setexparray{\LWR@colbarspec}%
8152       {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdoubledash}}%
8153     {\LWR@setexparray{\LWR@colbarspec}%
8154       {\arabic{\LWR@tabletotalLaTeXcols}}{tvertbarrdash}}%
8155     }%
8156     \booltrue{\LWR@validtablecol}%
8157 }

```

`\LWR@parsesemicoloncolumn` Handles vertical rules.

```
8158 \newcommand*{\LWR@parsesemicoloncolumn}{%
```

Treat ; as a : column:

```
8159     \LWR@parsecoloncolumn%
```

Skip the following width token:

```
8160     \defaddtocounter{\LWR@tablecolspecindex}{1}%
8161 }
```

72.9 Parsing ‘l’, ‘c’, or ‘r’ columns

`\LWR@parsenormalcolumn` `{\langle thiscolumn \rangle}`

Add to the accumulated column specs, advance counters, and pre-clear another column of at, before, and after specs.

```

8162 \newcommand*{\LWR@parsenormalcolumn}[1]{%
8163     \defaddtocounter{\LWR@tabletotalLaTeXcols}{1}%
8164     \defaddtocounter{\LWR@tabletotalLaTeXcolsnext}{1}%

8165     \LWR@setexparray{\LWR@tablecolspec}{\arabic{\LWR@tabletotalLaTeXcols}}{#1}%

8166     \LWR@traceinfo{normal column \arabic{\LWR@tabletotalLaTeXcols}: #1}%
8167     \LWR@setexparray{\LWR@colatspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
8168     \LWR@setexparray{\LWR@colbangspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
8169     \LWR@setexparray{\LWR@colbeforespec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
8170     \LWR@setexparray{\LWR@colafterspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
8171     \LWR@setexparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalLaTeXcolsnext}}{}%
8172     \booltrue{\LWR@validtablecol}%
8173 }

```

72.10 Parsing ‘p’, ‘m’, or ‘b’ columns

`\LWR@parsepcolumn` `{\langle thiscolumn \rangle}` The width will be ignored.

```
8174 \newcommand*{\LWR@parsepcolumn}[1]{%
```

Converts to the given column type:

```
8175 \LWR@parsenormalcolumn{#1}%
```

Skips the following width token:

```
8176 \defaddtocounter{LWR@tablecolspecindex}{1}%
8177 }
```

72.11 Parsing ‘w’ columns

`\LWR@parsewcolumn` The width will be ignored.

```
8178 \newcommand*{\LWR@parsewcolumn}{%
```

```
8179 \LWR@columnspeclookahead{1}%
```

```
8180 \expandafter\LWR@parsenormalcolumn\expandafter{\LWR@strresulttwo}%
```

Skips the following width and alignment tokens:

```
8181 \defaddtocounter{LWR@tablecolspecindex}{2}%
8182 }
```

72.12 Parsing ‘*’ columns

`\LWR@parsestarcolumn` Star columns should already have been expanded, so this should never be used.

```
8183 \newcommand*{\LWR@parsestarcolumn}{%
```

```
8184 \defaddtocounter{LWR@tablecolspecindex}{2}%
```

```
8185 }
```

72.13 Parsing ‘D’ columns

From the `dcolumn` package.

`\LWR@parseDcolumn` `{\langle thiscolumn \rangle}` The three parameters will be ignored.

```
8186 \newcommand*{\LWR@parseDcolumn}[1]{%
```

Converts to the given column type.

```
8187 \LWR@parsenormalcolumn{#1}%
```

Skips the following three parameters.

```
8188 \defaddtocounter{LWR@tablecolspecindex}{3}%
8189 }
```

72.14 Expanding the star column specifications

Ctr LWR@starcount Internal count for duplicating star columns.
 8190 \newcount\LWR@starcount

\LWR@expcolspec Temporary storage used to build the expanded column specifier.
 8191 \newcommand*\LWR@expcolspec{}

Ctr LWR@splitstarindex Indexes into the column specifiers.
 8192 \newcounter{LWR@splitstarindex}

Ctr LWR@splitstarcopies Number of copies.
 8193 \newcounter{LWR@splitstarcopies}

\LWR@splitstarcontents Contents to duplicate.
 8194 \newcommand*\LWR@splitstarcontents{}

\expandcolspec Expands \LWR@origcolspec for star columns.
 8195 \newcommand*\expandcolspec{%

Find the position of any star token.

8196 \StrPosition{\LWR@origcolspec}{*}[\LWR@tempone]%

Expand until no stars are found:

8197 \whileboolexpr{ test {\ifnumgreater{\LWR@tempone}{0}}}%
 8198 {%

Begin with any characters to the left of the star.

8199 \setcounter{LWR@splitstarindex}{\LWR@tempone}%
 8200 \addtocounter{LWR@splitstarindex}{-1}%
 8201 \StrLeft{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@expcolspec]%

Move past the star to remember its number of copies.

8202 \addtocounter{LWR@splitstarindex}{2}%
 8203 \StrChar{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@tempone]%
 8204 \setcounter{LWR@splitstarcopies}{\expandafter\@firstofone\LWR@tempone}%

Move past the number of copies and remember the contents.

8205 \addtocounter{LWR@splitstarindex}{1}%
 8206 \StrChar{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\LWR@splitstarcontents]%

Table 12: Tabular baseline

l	p	m	b	r
			bot	
		mid	bot	
l	par	mid	bot	r
	par	mid		
	par			

For each copy, append the contents.

```
8207     \ifnumgreater{\value{LWR@splitstarcopies}}{0}%
8208     {%
8209         \LWR@starcount=\value{LWR@splitstarcopies}%
8210         \loop
8211             \appto\LWR@expcolspec%
```

(Remove the enclosing braces.)

```
8212             \expandafter\@firstofone\LWR@splitstarcontents%
8213         }%
8214         \advance \LWR@starcount -1
8215         \ifnum \LWR@starcount>0 \repeat
8216     }{%
```

Remove any token to the left, and append the rightmost remaining tokens.

```
8217     \StrGobbleLeft{\LWR@origcolspec}{\value{LWR@splitstarindex}}[\colspecremainder]%
8218     \appto{\LWR@expcolspec}{\colspecremainder}%
```

Remember the final result.

```
8219     \edef\LWR@origcolspec{\LWR@expcolspec}%
```

See if more stars exist.

```
8220     \StrPosition{\LWR@origcolspec}{*}[\LWR@tempone]%
8221     }%
8222 }
```

72.15 Parsing the column specifications

 **tabular baselines** HTML CSS cannot exactly match the \LaTeX concept of a baseline for a table row. Table 12 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 13 for details.

Table 13 describes how each kind of column is converted to HTML.

Table 13: Tabular HTML column conversions

l, r, c:	Converted to table cells without paragraph tags. Uses css <code>vertical-align:middle</code> so that top or bottom-aligned cells may go above or below this cell.
p:	Converted to table cells with paragraph tags. Ref: Table 12, \LaTeX places the top line of a parbox aligned with the rest of the text line, so css <code>vertical-align:bottom</code> is used to have the HTML result appear with the paragraph extending below the L, R, C cells at the middle, if possible. This may be confusing as a P cell may not top-align with an L,R,C cell in the HTML conversion, especially in the presence of a B cell, and two P cells side-by-side will be aligned at the bottom instead of the top. Some adjustment of the css may be desired, changing <code>td.tdp</code> , <code>td.tdP</code> , <code>td.tdprule</code> , and <code>td.tdPrule</code> to <code>vertical-align: middle</code> . Another possibility is to change L,R,C, and P to <code>vertical-align: top</code> and not worry about the alignment of B and M cells or trying to approximate \LaTeX baselines.
m:	With paragraph tags, css <code>vertical-align:middle</code> .
b:	With paragraph tags, css <code>vertical-align:top</code> so that the bottom of the text is closest to the middle of the text line.
P, M, B:	Horizontally-centered versions.
S:	Converted to 'r'. Ignores optional argument. From the <code>siunitx</code> package.
D:	Converted to 'c'. From the <code>dcolumn</code> package.
@, !, >, <:	One each, in that order.
 :	Vertical rule.
Unknown:	Converted to 'l'.
\newcolumn:	Currently treated as unknown.

```
\LWR@parsetablecols {<colspecs>}
```

Scans the column specification left to right.

Builds `\LWR@tablecolspec` with the final specification, one `LATEX` column per entry. The final number of `LATEX` columns in each row is stored in `LWR@tabletotalLaTeXcols`, which is the number of `&` and `\` in each line, but which does not include `@`, `!`, `<`, `>` specifications in the count.

```
8223 \newcommand*\LWR@parsetablecols[1]{%
8224   \LWR@traceinfo{\LWR@parsetablecols}%
```

Remember the original supplied column spec:

```
8225   \renewcommand*\LWR@origcolspec{#1}%
```

Remove spaces:

```
8226   \expandarg%
8227   \StrSubstitute{\LWR@origcolspec}{ }{ }[\LWR@origcolspec]%
```

Expand any star columns:

```
8228   \expandcolspec%
```

The parsed column spec data array, `LWR@tablecolspec`, will be overwritten with new values.

Total number of columns found so far. Also pre-initialize the first several columns of specs:

```
8229   \defcounter{LWR@tabletotalLaTeXcols}{0}%
8230   \defcounter{LWR@tabletotalLaTeXcolsnext}{1}%
8231   \LWR@setexparray{LWR@colatspec}{leftedge}{}%
8232   \LWR@setexparray{LWR@colatspec}{1}{}%
8233   \LWR@setexparray{LWR@colatspec}{2}{}%
8234   \LWR@setexparray{LWR@colatspec}{3}{}%
8235   \LWR@setexparray{LWR@colbangspec}{leftedge}{}%
8236   \LWR@setexparray{LWR@colbangspec}{1}{}%
8237   \LWR@setexparray{LWR@colbangspec}{2}{}%
8238   \LWR@setexparray{LWR@colbangspec}{3}{}%
8239   \LWR@setexparray{LWR@colbeforespec}{1}{}%
8240   \LWR@setexparray{LWR@colbeforespec}{2}{}%
8241   \LWR@setexparray{LWR@colbeforespec}{3}{}%
8242   \LWR@setexparray{LWR@colafterspec}{1}{}%
8243   \LWR@setexparray{LWR@colafterspec}{2}{}%
8244   \LWR@setexparray{LWR@colafterspec}{3}{}%
8245   \LWR@setexparray{LWR@colbarspec}{leftedge}{}%
8246   \LWR@setexparray{LWR@colbarspec}{1}{}%
8247   \LWR@setexparray{LWR@colbarspec}{2}{}%
8248   \LWR@setexparray{LWR@colbarspec}{3}{}%
```

Starting at the first column specification:

```
8249 \defcounter{LWR@tablecolspecindex}{1}%
```

Place the colspecs string length into `\LWR@strresult`, and remember the number of characters in the column specification:

```
8250 \expandarg%
8251 \StrLen{\LWR@origcolspec}[\LWR@strresult]%
8252 \fullexpandarg%
8253 \LWR@traceinfo{original column spec length: \LWR@strresult}%
8254 \defcounter{LWR@tablecolspecwidth}{\LWR@strresult}%
```

Haven't seen any optional arguments so far

```
8255 \boolfalse{LWR@opttablecol}%
```

Scan through the column specifications:

```
8256 \whileboolexpr{%
8257     not test{%
8258         \ifnumcomp{\value{LWR@tablecolspecindex}}{>}%
8259             {\value{LWR@tablecolspecwidth}}%
8260     }%
8261 }%
8262 {%
```

Place the next single-character column type into `\LWR@strresult`:

```
8263 \expandarg%
8264 \StrChar{\LWR@origcolspec}{\arabic{LWR@tablecolspecindex}}[\LWR@strresult]%
8265 \LWR@traceinfo{position \arabic{LWR@tablecolspecindex}: \LWR@strresult}%
8266 \fullexpandarg%
```

Not yet found a valid column type:

```
8267 \boolfalse{LWR@validtablecol}%
```

Skip over any optional arguments, such as siunitx S column:

```
8268 \IfStrEq{\LWR@strresult}{[}{\booltrue{LWR@opttablecol}}}%
```

Throw away anything found inside the optional argument:

```
8269 \ifbool{LWR@opttablecol}%
8270 {}% inside an optional argument
8271 {% not an optional tabular argument
```

Not inside an optional argument, so consider the column type:

```
8272 \IfStrEq{\LWR@strresult}{l}{\LWR@parsenormalcolumn{l}}}%
8273 \IfStrEq{\LWR@strresult}{c}{\LWR@parsenormalcolumn{c}}}%
8274 \IfStrEq{\LWR@strresult}{r}{\LWR@parsenormalcolumn{r}}}%
8275 \IfStrEq{\LWR@strresult}{L}{\LWR@parsenormalcolumn{l}}}%
8276 \IfStrEq{\LWR@strresult}{C}{\LWR@parsenormalcolumn{c}}}%
```

```

8277 \IfStrEq{\LWR@strresult}{R}{\LWR@parsenormalcolumn{r}}{}%
8278 \IfStrEq{\LWR@strresult}{J}{\LWR@parsenormalcolumn{l}}{}%

8279 \IfStrEq{\LWR@strresult}{S}{\LWR@parsenormalcolumn{c}}{}%
8280 \IfStrEq{\LWR@strresult}{s}{\LWR@parsenormalcolumn{c}}{}%

8281 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@parseatcolumn}{}%
8282 \IfStrEq{\LWR@strresult}{!}{\LWR@parsebangcolumn}{}%
8283 \IfStrEq{\LWR@strresult}{>}{\LWR@parsebeforecolumn}{}%
8284 \IfStrEq{\LWR@strresult}{<}{\LWR@parseaftercolumn}{}%
8285 \IfStrEq{\LWR@strresult}{|}{\LWR@parsebarcolumn}{}%
8286 \IfStrEq{\LWR@strresult}{:}{\LWR@parsecoloncolumn}{}%
8287 \IfStrEq{\LWR@strresult}{;}{\LWR@parsesemicoloncolumn}{}%

8288 \IfStrEq{\LWR@strresult}{p}{\LWR@parsepcolumn{p}}{}%
8289 \IfStrEq{\LWR@strresult}{m}{\LWR@parsepcolumn{m}}{}%
8290 \IfStrEq{\LWR@strresult}{b}{\LWR@parsepcolumn{b}}{}%

8291 \IfStrEq{\LWR@strresult}{w}{\LWR@parsewcolumn}{}%
8292 \IfStrEq{\LWR@strresult}{W}{\LWR@parsewcolumn}{}%

```

A star column:

```
8293 \IfStrEq{\LWR@strresult}{*}{\LWR@parsestarcolumn}{}%
```

From the dcolumn package:

```
8294 \IfStrEq{\LWR@strresult}{D}{\LWR@parseDcolumn{c}}{}%
```

From the tabularx package. X column has no parameter, but will be given paragraph tags.

```
8295 \IfStrEq{\LWR@strresult}{X}{\LWR@parsenormalcolumn{X}}{}%
```

Many people define centered versions “P”, “M”, and “B”:

```
\newcolumnntype{P}[1]{>{\centering\arraybackslash}p{#1}}
```

```

8296 \IfStrEq{\LWR@strresult}{P}{\LWR@parsepcolumn{P}}{}%
8297 \IfStrEq{\LWR@strresult}{M}{\LWR@parsepcolumn{M}}{}%
8298 \IfStrEq{\LWR@strresult}{B}{\LWR@parsepcolumn{B}}{}%

```

If this column was an invalid column type, convert it to an l column:

```

8299 \ifbool{LWR@validtablecol}{}{%
8300   \LWR@traceinfo{invalid column type: \LWR@strresult}%
8301   \LWR@parsenormalcolumn{l}%
8302 }%
8303 }% not an optional column argument

```

If read the closing bracket, no longer inside the optional argument:

```
8304 \IfStrEq{\LWR@strresult}{]}\boolfalse{\LWR@opttablecol}}{}%
```

Move to the next character:

```
8305 \defaddtocounter{\LWR@tablecolspecindex}{1}%
8306 }% whiledo
8307 }%
```

72.16 colortbl and xcolor tabular color support

These macros provide a minimal emulation of some colortbl macros which might appear between table cells. If colortbl is loaded, these macros will be replaced with functional versions.

For each of the HTML colors below, the text for the HTML color is set if requested, but the macro is empty if none has been set.

`\rownum` Reserve a counter register.

```
8308 \ifundefined{\rownum}{\newcount\rownum}{}
```

`\@rowcolors` Emulated in case xcolor is not used.

```
8309 \newcommand*\@rowcolors{}
```

`\@rowc@lors` Emulated in case xcolor is not used.

```
8310 \newcommand*\@rowc@lors{}
```

`\LWR@xcolorrowHTMLcolor` Emulated xcolor row color.

```
8311 \newcommand*\LWR@xcolorrowHTMLcolor{}
```

`\LWR@columnHTMLcolor` HTMLstyle code for the column color.

```
8312 \def\LWR@columnHTMLcolor{}
```

`\LWR@rowHTMLcolor` HTMLstyle code for the row color.

```
8313 \def\LWR@rowHTMLcolor{}
```

`\LWR@cellHTMLcolor` HTMLstyle code for the cell color.

```
8314 \def\LWR@cellHTMLcolor{}
```

`\LWR@ruleHTMLcolor` HTMLstyle code for the rule color.

```
8315 \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`.

```
8316 \newcommand*{\rowcolor}{\LWR@getmynexttoken}%

```

`\arrayrulecolor` [*model*] {*color*}

`\arrayrulecolornexttoken` [*model*] {*color*}

Print versions for use outside and inside a tabular:

```
8317 \newcommand{\arrayrulecolor}[2][named]{}
8318 \newcommand{\arrayrulecolornexttoken}[2][named]{\LWR@getmynexttoken}

```

`\doublerulesepcolor` [*model*] {*color*}

`\doublerulesepcolornexttoken` [*model*] {*color*}

Print versions for use inside and outside a tabular:

```
8319 \newcommand{\doublerulesepcolor}[2][named]{}
8320 \newcommand{\doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}

```

72.17 Starting a new row

`\LWR@maybenewtablerow` If have not yet started a new table row, begin one now. Creates a new row tag, adding a class for `hline` or `tbrule` if necessary.

```
8321 \newcommand*{\LWR@maybenewtablerow}
8322 {%
8323   \ifbool{LWR@startedrow}%
8324   {}% started the row
8325   {% not started the row

```

Remember that now have started the row:

```
8326   \booltrue{LWR@startedrow}%

```

Create the row tag, with a class if necessary.

```
8327   \booltrue{LWR@intabularmetadata}%
8328   \ifboolexpr{%
8329     test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
8330     test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}}%
8331   }%

```

```

8332     {%
8333         \LWR@htmltag{tr class="hline" }%
8334         \LWR@orignewline%
8335     }%
8336     {% not doing hline
8337         \ifbool{LWR@doingtbrule}%
8338         {%
8339             \ifdefvoid{\LWR@ruleHTMLcolor}{%
8340                 \LWR@htmltag{tr class="tbrule"}%
8341             }{%
8342                 \LWR@htmltag{%
8343                     tr class="tbrule" % space
8344                     style="border-top: 1px solid % space
8345                     \LWR@origpound\LWR@ruleHTMLcolor "%
8346                 }%
8347             }%
8348             \LWR@orignewline%
8349         }%
8350         {\LWR@htmltag{tr}\LWR@orignewline}%
8351     }% end of not doing hline
8352 }% end of not started the row
8353 }

```

72.18 Printing vertical bar tags

\LWR@printbartag {<*index*>}

Adds to a tabular data cell an HTML class name for a left/right vertical bar.

```

8354 \newcommand*{\LWR@printbartag}[1]{%
8355     \LWR@traceinfo{LWR@printbartag !#1!}%
8356     \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
8357     }{% muting or empty
8358     }% not muting
8359     \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{#1}}%
8360     \ifdefempty{\LWR@tempone}{\LWR@tempone}%
8361     }% not muting
8362     \LWR@traceinfo{LWR@printbartag done}%
8363 }

```

72.19 Printing @ or ! tags

\LWR@printatbang {<*at — or — bang*>}{<*index*>}

```

8364 \newcommand*{\LWR@printatbang}[2]{%

```

Fetch the column at or bang spec:

```

8365     \xdef\LWR@atbangspec{\LWR@getexparray{LWR@col#1spec}{#2}}%
8366     \LWR@traceinfo{atbang: #2 !\LWR@atbangspec!}%

```

Only generate if is not empty;

```

8367 \ifdefempty{\LWR@atbangspec}%
8368 {}%
8369 {% not empty
8370   \LWR@htmltag{%
8371     td class="td#1%
8372     \LWR@subaddcmidruletrim{}}{}%
8373     \LWR@printbartag{#2}%
8374     "%
8375     \LWR@tdstartstyles%
8376     \LWR@addcmidrulewidth%
8377     \LWR@addcdashline%
8378     \LWR@addtabularrulecolors%
8379     \LWR@tdendstyles%
8380   }%

```

Create an empty cell if muting for the \bottomrule:

```

8381 \ifboolexpr{bool{\LWR@tabularmutemods} or bool{\LWR@emptyatbang}}%
8382 {}%
8383 {\LWR@atbangspec}%
8384 %
8385 \LWR@htmltag{/td}\LWR@orignewline%
8386 \global\booltrue{\LWR@tabularcelladded}%
8387 }% not empty
8388 }%

```

\LWR@addleftmostbartag

```

8389 \newcommand*\LWR@addleftmostbartag{%
8390   \ifnumcomp{\value{\LWR@tableLaTeXcolindex}}{=}{1}{%
8391     \LWR@printbartag{leftedge}%
8392   }{}%
8393 }

```

\LWR@tabularleftedge

```

8394 \newcommand*\LWR@tabularleftedge{%
8395   \ifnumcomp{\value{\LWR@tableLaTeXcolindex}}{=}{1}%
8396   {%
8397     \LWR@printatbang{at}{leftedge}%
8398     \LWR@printatbang{bang}{leftedge}%
8399   }% left edge
8400   {}% not left edge
8401 }

```

72.20 Data opening tag

\LWR@thiscolspec Temporary storage.

```

8402 \newcommand*\LWR@thiscolspec{}

```

`\LWR@tabledatasinglecolumn` tag Print a table data opening tag with style for alignment and color.

```
8403 \newcommand*{\LWR@tabledatasinglecolumn}{%
8404 {%
8405   \LWR@traceinfo{\LWR@tabledatasinglecolumn}%
8406   \LWR@maybenewtablerow%
```

Don't start a new paragraph tag if have already started one:

```
8407   \ifbool{\LWR@intabularmetadata}%
8408   {%
```

If have found the end of tabular command, do not create the next data cell:

```
8409     \ifbool{\LWR@exitingtabular}{}%
8410     {% not exiting tabular
```

Print the @ and ! contents before first column:

```
8411         \LWR@tabularleftedge%
```

Fetch the current column's alignment character into `\LWR@strresult`:

```
8412         \xdef\LWR@strresult{%
8413         \LWR@getexparray{\LWR@tablecolspec}{\arabic{\LWR@tableLaTeXcolindex}}%
8414         }%
```

print the start of a new table data cell:

```
8415         \LWR@traceinfo{\LWR@tabledatasinglecolumn: about to print td tag}%
8416         \LWR@htmltag{%
8417             td class="td%
```

append this column's spec:

```
8418             \LWR@strresult%
```

If this column has a `cmidrule`, add "rule" to the end of the HTML class tag. Also add vertical bar tags.

```
8419             \LWR@addcmidruletrim%
8420             \LWR@addleftmostbartag%
8421             \LWR@printbartag{\arabic{\LWR@tableLaTeXcolindex}}%
8422             "%
```

Add styles for rules, alignment:

```
8423             \LWR@tdstartstyles%
8424             \LWR@addcmidrulewidth%
8425             \LWR@addcdashline%
```

```
8426         \xdef\LWR@thiscolspec{%
```

```

8427             \LWR@getexpparray{LWR@tablecolspec}%
8428             {\arabic{LWR@tableLaTeXcolindex}}%
8429         }%
8430         \LWR@addformatwppalignment{\LWR@thiscolspec}%

```

Add styles for cell and rule colors:

```

8431         \LWR@addtabulararrowcolor%
8432         \LWR@addtabularrulecolors%

8433         \LWR@tdendstyles%
8434     }% HTML td
8435     \LWR@traceinfo{LWR@tabledatasinglecolumnntag: done printing td tag}%

```

If this is a p, m, b, or X column, allow paragraphs:

```

8436         \ifboolexpr{%
8437             test{ \ifdefstring{\LWR@strresult}{p} } or
8438             test{ \ifdefstring{\LWR@strresult}{m} } or
8439             test{ \ifdefstring{\LWR@strresult}{b} } or
8440             test{ \ifdefstring{\LWR@strresult}{P} } or
8441             test{ \ifdefstring{\LWR@strresult}{M} } or
8442             test{ \ifdefstring{\LWR@strresult}{B} } or
8443             test{ \ifdefstring{\LWR@strresult}{X} }
8444         }%
8445         {% allow pars
8446         \LWR@traceinfo{LWR@tabledatasinglecolumnntag: about to LWR@startpars}%
8447             \booltrue{LWR@tableparcell}%
8448             \LWR@startpars%
8449         \LWR@traceinfo{LWR@tabledatasinglecolumnntag: done with LWR@startpars}%
8450         }% allow pars
8451         }% no pars

```

Print the > contents unless muted for the \bottomrule:

```

8452         \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
8453         {}%
8454         {%
8455         \LWR@getexpparray{LWR@colbefore-spec}{\arabic{LWR@tableLaTeXcolindex}}%
8456         }%
8457         \boolfalse{LWR@intabularmetadata}%
8458     }% not exiting tabular
8459 }{}% in tabular metadata
8460 \LWR@traceinfo{LWR@tabledatasinglecolumnntag: done}%
8461 }%

```

72.21 Midrules

`LWR@midrules` `LWR@midrules` is a data array (section 41) 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 41) of columns containing l if a midrule

should be left trimmed for each column.

`LWR@trimrrules` `LWR@trimrrules` is a data array (section 41) of columns containing `r` if a midrule should be right trimmed for each column.

`LWR@cdashlines` `LWR@cdashlines` is a data array (section 41) of columns each containing a `Y` if an `arydshln` package "cdashed line" should be created for this column.

`Len \LWR@heavyrulewidth` The default width of the rule.

```
8462 \newlength{\LWR@heavyrulewidth}
8463 \setlength{\LWR@heavyrulewidth}{.08em}
```

`Len \LWR@lightrulewidth` The default width of the rule.

```
8464 \newlength{\LWR@lightrulewidth}
8465 \setlength{\LWR@lightrulewidth}{.05em}
```

`Len \LWR@cmidrulewidth` The default width of the rule.

```
8466 \newlength{\LWR@cmidrulewidth}
8467 \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.

```
8468 \newlength{\LWR@thiscmidrulewidth}
8469 \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.

```
8470 \newcommand*{\LWR@clearmidrules}
8471 {%
8472   \defcounter{LWR@midrulecounter}{1}%
8473   \whileboolexpr{%
8474     not test{%
8475       \ifnumcomp{\value{LWR@midrulecounter}}{>}%
8476         {\value{LWR@tabletotalLaTeXcols}}%
8477     }%
8478   }%
8479   {%
8480     \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{0pt}%
8481     \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
8482     \LWR@setexparray{LWR@trimlrules}{\arabic{LWR@midrulecounter}}{%
8483     \LWR@setexparray{LWR@trimrrules}{\arabic{LWR@midrulecounter}}{%
8484     \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{N}%
8485     \defaddtocounter{LWR@midrulecounter}{1}%
8486   }%
8487 }
```

`\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.

```
8488 \newcommand*{\LWR@subcmidrule}[4]{%
8489   \defcounter{LWR@midrulecounter}{#3}%
8490   \whileboolexpr{%
8491     not test {%
8492       \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
8493     }%
8494   }%
8495   {%
8496     \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{#1}%
8497     \defadddtocounter{LWR@midrulecounter}{1}%
8498   }% whiledo
8499   \IfSubStr{#2}{l}{\LWR@setexparray{LWR@trimlrules}{#3}{l}}{%
8500   \IfSubStr{#2}{r}{\LWR@setexparray{LWR@trimrrules}{#4}{r}}{%
8501   \booltrue{LWR@doingcmidrule}%
8502 }
```

`\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.

```
8503 \NewDocumentCommand{\LWR@docmidrule}
8504   {O{\LWR@cmidrulewidth} D()}{>\SplitArgument{1}{-}}m
8505   {\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.

```
8506 \newcommand*{\LWR@subcdashline}[2]{%
8507   \defcounter{LWR@midrulecounter}{#1}%
8508   \whileboolexpr{%
8509     not test {%
8510       \ifnumcomp{\value{LWR@midrulecounter}}{>}{#2}%
8511     }%
8512   }%
8513   {%
8514     \LWR@setexparray{LWR@cdashlines}{\arabic{LWR@midrulecounter}}{Y}%
8515     \defadddtocounter{LWR@midrulecounter}{1}%
8516   }% whiledo
8517   \booltrue{LWR@doingcmidrule}%
8518 }
```

`\LWR@docdashline` $\{\langle leftcolumn-rightcolumn \rangle\}$

Marks `LWR@cdashlines` data array elements to be Y from left to right columns.

```
8519 \NewDocumentCommand{\LWR@docdashline}
8520   >\SplitArgument{1}{-}m%
8521   {%
8522     \LWR@subcdashline#1%
8523   }
```

`\LWR@tdstartstyles` Begins possibly adding a table data cell style.

```
8524 \newcommand*{\LWR@tdstartstyles}{\boolfalse\LWR@tdhavecellstyle}}
```

`\LWR@tdaddstyle` Starts adding a table data cell style.

```
8525 \newcommand*{\LWR@tdaddstyle}{%
8526   \ifbool{\LWR@tdhavecellstyle}%
8527     {; }%
8528     { style="}%
8529   \booltrue{\LWR@tdhavecellstyle}%
8530 }
```

`\LWR@tdendstyles` Finishes possibly adding a table data cell style. Prints the closing quote.

```
8531 \newcommand*{\LWR@tdendstyles}{%
8532   \ifbool{\LWR@tdhavecellstyle}%
8533     {%
8534       "%
8535       \boolfalse{\LWR@tdhavecellstyle}%
8536     }{%
8537 }
```

`\LWR@subaddcmidruletrim` $\{\langle lefttrim \rangle\} \{\langle righttrim \rangle\}$ Adds a `\cmidrule` with optional trim.

```
8538 \newcommand*{\LWR@subaddcmidruletrim}[2]{%
8539   \setlength{\LWR@templengthone}{%
8540     \LWR@getexparray{\LWR@midrules}{\arabic{\LWR@tableLaTeXcolindex}}%
8541   }%
8542   \ifdimcomp{\LWR@templengthone}{>}{\0pt}%
8543   {%
```

Print the class with left and right trim letters appended:

```
8544     \LWR@origtilde tdrule#1#2%
```

Remember the width of the rule:

```
8545     \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
8546   }%
8547   {%
```

```

8548         \setlength{\LWR@thiscmidrulewidth}{0pt}%
8549     }%
8550 }

```

`\LWR@addcmidruletrim` Adds left or right trim to a `\cmidrule`.

```

8551 \newcommand*\LWR@addcmidruletrim{%
8552     \LWR@subaddcmidruletrim%
8553     {\LWR@getexparray{\LWR@trimlrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8554     {\LWR@getexparray{\LWR@trimrrules}{\arabic{\LWR@tableLaTeXcolindex}}}%
8555 }

```

`\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`.

```

8556 \newcommand{\LWR@addrulewidth}[2]{%

```

Only add a custom width if `thiswidth` is different than the `defaultwidth`, or if a color is being used:

```

8557     \ifboolexpr{%
8558         test{\ifdimcomp{#1}{=}{0pt}} or
8559         (
8560             ( test{\ifdimcomp{#1}{=}{#2}} and not bool{FormatWP} )
8561             and ( test {\ifdefvoid{\LWR@ruleHTMLcolor}} )
8562         )
8563     }%
8564     {}% default width and color
8565     {% custom width and/or color

```

Ensure that the width is wide enough to display in the browser:

```

8566         \LWR@forceminwidth{#1}%

```

Begin adding another style:

```

8567         \LWR@tdaddstyle%

```

The style itself:

```

8568         border-top:\LWR@printlength{\LWR@atleastonept} solid % space

```

If default gray, the darkness of the color depends on the thickness of the rule:

```

8569         \ifdefvoid{\LWR@ruleHTMLcolor}{%
8570             \ifdimcomp{#1}{<}{\LWR@lightrulewidth}%
8571             {\LWR@origpound{A0A0A0}}%
8572             {% lightrule or heavier
8573                 \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}%

```

```

8574             {\LWR@origpound{ }808080}%
8575             {black}%
8576             }% lightrule or heavier
8577             }{%
8578             \LWR@origpound\LWR@ruleHTMLcolor%
8579             }%
8580             }% custom width and/or color
8581             }

```

`\LWR@addcmidrulewidth` Adds a style for the rule width.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8582 \newcommand{\LWR@addcmidrulewidth}{%
8583     \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
8584 }

```

`\LWR@addcdashline` Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8585 \newcommand{\LWR@addcdashline}{%
8586     \edef\LWR@tempone{%
8587         \LWR@getexparray{\LWR@cdashlines}{\arabic{\LWR@tableLaTeXcolindex}}%
8588     }%
8589     \ifdefstring{\LWR@tempone}{Y}{%
8590         \LWR@tdaddstyle%
8591         border-top: 1pt dashed %
8592         \ifdefvoid{\LWR@ruleHTMLcolor}%
8593             {black}%
8594             {\LWR@origpound\LWR@ruleHTMLcolor}%
8595     }{%
8596 }

```

`\LWR@WPcell` `{\langle text-align \rangle}` `{\langle vertical-align \rangle}`

```

8597 \newcommand*{\LWR@WPcell}[2]{%
8598     \LWR@tdaddstyle%
8599     \LWR@print@mbx{text-align:#1}; \LWR@print@mbx{vertical-align:#2}%
8600 }

```

`\LWR@addformatwpalignment` If `FormatWP`, adds a style for the alignment.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

8601 \newcommand*{\LWR@addformatwpalignment}[1]{%
8602     \ifbool{FormatWP}{%
8603         \IfSubStr{#1}{l}{\LWR@WPcell{left}{middle}}{%
8604         \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{%
8605         \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{%
8606         \IfSubStr{#1}{p}{\LWR@WPcell{left}{bottom}}{%
8607         \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{%
8608         \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{%
8609         \IfSubStr{#1}{P}{\LWR@WPcell{center}{bottom}}{%

```

```

8610     \IfSubStr{#1}{M}{\LWR@WPcell{center}{middle}}{%
8611     \IfSubStr{#1}{B}{\LWR@WPcell{center}{top}}{%
8612     }{%
8613     }

```

72.22 Cell colors

`\LWR@addtabularrowcolor` Adds a cell's row color style, if needed.

No color is added for the final row of empty cells which finishes each tabular.

```

8614 \newcommand*{\LWR@addtabularrowcolor}{%
8615     \ifbool{LWR@tabularmutemods}{%
8616         \ifdefvoid{\LWR@rowHTMLcolor}{%
8617             \ifdefvoid{\LWR@xcolorrowHTMLcolor}{%
8618                 {% xcolor row color
8619                     \LWR@tdaddstyle%
8620                     background:\LWR@origpound\LWR@xcolorrowHTMLcolor%
8621                 }%
8622             }%
8623             {% explicit row color
8624                 \LWR@tdaddstyle%
8625                 background:\LWR@origpound\LWR@rowHTMLcolor%
8626             }%
8627         }%
8628     }

```

`\LWR@addtabularhrulecolor` Adds a cell's horizontal rule color style, if needed.

```

8629 \newcommand*{\LWR@addtabularhrulecolor}{%

```

If either form of horizontal rule is requested:

```

8630     \ifboolexpr{%
8631         test{\ifnumcomp{\value{LWR@hlines}}{>}{0}} or%
8632         test{\ifnumcomp{\value{LWR@hdashedlines}}{>}{0}} or%
8633         bool{LWR@doingtbrule}%
8634     }{%

```

If there is a no custom color:

```

8635     \ifdefvoid{\LWR@ruleHTMLcolor}%
8636     {%
8637         \ifnumcomp{\value{LWR@hlines}}{>}{1}%
8638         {%
8639             \LWR@tdaddstyle%
8640             border-top: 4px double%
8641         }% else
8642         \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
8643         {%
8644             \LWR@tdaddstyle%
8645             border-top: 2px dashed%

```

```

8646     }{% else
8647     \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
8648     {%
8649         \LWR@tdaddstyle%
8650         border-top: 1px dashed%
8651     }{}}}%

```

If no color and not doubled or dashed, then add nothing, since a simpler rule is the default.

```
8652     }%
```

If there is a custom color:

```

8653     {%
8654     \ifnumcomp{\value{LWR@hlines}}{>}{1}%
8655     {%
8656         \LWR@tdaddstyle%
8657         border-top: 4px double \LWR@origpound\LWR@ruleHTMLcolor%
8658     }{% else
8659     \ifnumcomp{\value{LWR@hdashedlines}}{>}{1}%
8660     {%
8661         \LWR@tdaddstyle%
8662         border-top: 2px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8663     }{% else
8664     \ifnumcomp{\value{LWR@hdashedlines}}{=}{1}%
8665     {%
8666         \LWR@tdaddstyle%
8667         border-top: 1px dashed \LWR@origpound\LWR@ruleHTMLcolor%
8668     }{% else
8669         \LWR@tdaddstyle%
8670         border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
8671     }{}}%
8672     }%
8673     }{}}%
8674 }

```

`\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.

```
8675 \newcommand*{\LWR@addtabularrulecolors}{%
```

Custom horizontal rule color:

```
8676     \LWR@addtabularhrulecolor%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8677     \ifbool{LWR@tabularmutemods}{}{%
```

If at the leftmost cell, possibly add a leftmost vertical rule:

```
8678         \ifnumequal{\value{LWR@tableLaTeXcolindex}}{1}{%
```

Fetch the left edge's vertical bar specification:

```
8679         \edef\LWR@tempone{\LWR@getexparray{LWR@colbarspec}{leftedge}}%
```

Add a custom style if a vertical bar was requested:

```
8680         \ifdefstring{\LWR@tempone}{tvertbarl}{%
8681             \LWR@tdaddstyle%
8682             border-left: 1px solid % space
8683             \LWR@vertruleHTMLcolor%
8684         }{}%
8685         \ifdefstring{\LWR@tempone}{tvertbarldouble}{%
8686             \LWR@tdaddstyle%
8687             border-left: 4px double % space
8688             \LWR@vertruleHTMLcolor%
8689         }{}%
8690         \ifdefstring{\LWR@tempone}{tvertbarldash}{%
8691             \LWR@tdaddstyle%
8692             border-left: 1px dashed % space
8693             \LWR@vertruleHTMLcolor%
8694         }{}%
8695         \ifdefstring{\LWR@tempone}{tvertbarldoubledash}{%
8696             \LWR@tdaddstyle%
8697             border-left: 2px dashed % space
8698             \LWR@vertruleHTMLcolor%
8699         }{}%
8700     }{}%
```

Possibly add a right vertical rule for this cell:

```
8701     \edef\LWR@tempone{%
8702         \LWR@getexparray{LWR@colbarspec}{\arabic{LWR@tableLaTeXcolindex}}%
8703     }%
8704     \ifdefstring{\LWR@tempone}{tvertbarr}{%
```

Add a custom style if a vertical bar was requested:

```
8705         \LWR@tdaddstyle%
8706         border-right: 1px solid \LWR@vertruleHTMLcolor%
8707     }{}%
8708     \ifdefstring{\LWR@tempone}{tvertbarrdouble}{%
8709         \LWR@tdaddstyle%
8710         border-right: 4px double \LWR@vertruleHTMLcolor%
8711     }{}%
8712     \ifdefstring{\LWR@tempone}{tvertbarrdash}{%
8713         \LWR@tdaddstyle%
8714         border-right: 1px dashed \LWR@vertruleHTMLcolor%
8715     }{}%
8716     \ifdefstring{\LWR@tempone}{tvertbarrdoubledash}{%
8717         \LWR@tdaddstyle%
8718         border-right: 2px dashed \LWR@vertruleHTMLcolor%
8719     }{}%
8720     }%
8721 }
```

`\LWR@subaddtabularcellcolor` {*<HTML color>*}

```
8722 \newcommand*{\LWR@subaddtabularcellcolor}[1]{%
8723   \LWR@htmltag{div class="cellcolor" style="%
8724     background:\LWR@origpound{ }{ }#1 %
8725   " }%
8726   \defaddtocounter{LWR@cellcolordepth}{1}%
8727 }
```

`\LWR@addtabularcellcolor` Adds a cell color style, if needed.

```
8728 \newcommand*{\LWR@addtabularcellcolor}{%
8729   \ifdefvoid{\LWR@cellHTMLcolor}%
8730   {%
8731     \ifdefvoid{\LWR@rowHTMLcolor}%
8732     {%
8733       \ifdefvoid{\LWR@xcolorrowHTMLcolor}%
8734       {%
8735         \ifdefvoid{\LWR@columnHTMLcolor}%
8736         {}%
8737         {\LWR@subaddtabularcellcolor{\LWR@columnHTMLcolor}}%
8738       }%
8739       {\LWR@subaddtabularcellcolor{\LWR@xcolorrowHTMLcolor}}%
8740     }%
8741     {\LWR@subaddtabularcellcolor{\LWR@rowHTMLcolor}}%
8742   }%
8743   {\LWR@subaddtabularcellcolor{\LWR@cellHTMLcolor}}%
8744 }
```

72.23 Multicolumns

72.23.1 Parsing multicolumns

`\LWR@printmccoltype` {*<colspec>*} Print any valid column type found. Does not print @, !, >, or < columns or their associated tokens.

This is printed as part of the table data tag's class.

```
8745 \newcommand*{\LWR@printmccoltype}[1]{%
8746   \LWR@traceinfo{lwr@printmccoltype -#1-}%
```

Get one token of the column spec:

```
8747   \StrChar{#1}{\arabic{LWR@tablemulticolspost}}[\LWR@strresult]%
```

Add to the HTML tag depending on which column type is found:

```
8748   \IfStrEq{\LWR@strresult}{l}{l}{l}%
8749   \IfStrEq{\LWR@strresult}{c}{c}{c}%
8750   \IfStrEq{\LWR@strresult}{r}{r}{r}%
8751   \IfStrEq{\LWR@strresult}{p}{p}{p}%
```

```

8752 \IfStrEq{\LWR@strresult}{m}{m}{}%
8753 \IfStrEq{\LWR@strresult}{b}{b}{}%
8754 \IfStrEq{\LWR@strresult}{P}{P}{}%
8755 \IfStrEq{\LWR@strresult}{M}{M}{}%
8756 \IfStrEq{\LWR@strresult}{B}{B}{}%

8757 \IfStrEq{\LWR@strresult}{w}{w}{}%
8758 \IfStrEq{\LWR@strresult}{W}{W}{}%

8759 \IfStrEq{\LWR@strresult}{S}{c}{}%
8760 \IfStrEq{\LWR@strresult}{s}{c}{}%

8761 \IfStrEq{\LWR@strresult}{X}{p}{}%

8762 \IfStrEq{\LWR@strresult}{|}{%
8763 {%
8764   \ifbool{LWR@mcolvertbaronleft}%
8765     {\defaddtocounter{LWR@mcolvertbarsl}{1}}% left edge
8766     {\defaddtocounter{LWR@mcolvertbarsr}{1}}% not left edge
8767 }%
8768 {%
8769   \IfStrEq{\LWR@strresult}{:}{%
8770   {%
8771     \ifbool{LWR@mcolvertbaronleft}%
8772       {\defaddtocounter{LWR@mcolvertbarsldash}{1}}% left edge
8773       {\defaddtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
8774   }%
8775   {%
8776     \IfStrEq{\LWR@strresult}{;}{%
8777     {%
8778       \ifbool{LWR@mcolvertbaronleft}%
8779         {\defaddtocounter{LWR@mcolvertbarsldash}{1}}% left edge
8780         {\defaddtocounter{LWR@mcolvertbarsrdash}{1}}% not left edge
8781     }%
8782     {\boolfalse{LWR@mcolvertbaronleft}}%
8783   }%
8784 }%
8785 \LWR@traceinfo{lwr@printmccoltype done}%
8786 }

```

`\LWR@multicolpartext` $\langle num\ parameters \rangle$ Print the data with paragraph tags, advance to bypass the given number of parameters.

```

8787 \newcommand*{\LWR@multicolpartext}[1]{%
8788   \LWR@startpars%
8789   \LWR@multicoltext%
8790   \defaddtocounter{LWR@tablemulticolspos}{#1}%
8791   \LWR@stoppars%
8792 }

```

`\LWR@multicolother` $\langle colspec \rangle$ For @, !, >, <, print the next token without paragraph tags:

```

8793 \newcommand*{\LWR@multicolother}[1]{%
8794   \defaddtocounter{LWR@tablemulticolspos}{1}%
8795   \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
8796   \LWR@strresult%

```

A valid column data type was found:

```

8797   \booltrue{LWR@validtablecol}%
8798 }

```

`\LWR@multicolskip` Nothing to print for this column type.

```

8799 \newcommand*{\LWR@multicolskip}{%

```

A valid column data type was found:

```

8800   \booltrue{LWR@validtablecol}%
8801 }

```

`\LWR@printmccoldata` `{\colspec}` Print the data for any valid column type found.

```

8802 \newcommand*{\LWR@printmccoldata}[1]{%
8803   \LWR@traceinfo{lwr@printmccoldata -#1}%

```

Not yet found a valid column type:

```

8804   \boolfalse{LWR@validtablecol}%

```

Get one token of the column spec, into a local copy in case nested.

```

8805   \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
8806   \edef\LWR@printmccoldataatoken{\LWR@strresult}%

```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```

8807   \IfStrEq{\LWR@printmccoldataatoken}{l}{\LWR@multicoltext}{}%
8808   \IfStrEq{\LWR@printmccoldataatoken}{c}{\LWR@multicoltext}{}%
8809   \IfStrEq{\LWR@printmccoldataatoken}{r}{\LWR@multicoltext}{}%
8810   \IfStrEq{\LWR@printmccoldataatoken}{D}{}%
8811     \defaddtocounter{LWR@tablemulticolspos}{3}% skip parameters
8812     \LWR@multicoltext%
8813   }{%

```

```

8814   \IfStrEq{\LWR@printmccoldataatoken}{p}{\LWR@multicolparttext{2}}{%
8815   \IfStrEq{\LWR@printmccoldataatoken}{m}{\LWR@multicolparttext{2}}{%
8816   \IfStrEq{\LWR@printmccoldataatoken}{b}{\LWR@multicolparttext{2}}{%
8817   \IfStrEq{\LWR@printmccoldataatoken}{P}{\LWR@multicolparttext{2}}{%
8818   \IfStrEq{\LWR@printmccoldataatoken}{M}{\LWR@multicolparttext{2}}{%
8819   \IfStrEq{\LWR@printmccoldataatoken}{B}{\LWR@multicolparttext{2}}{%

```

```

8820 \IfStrEq{\LWR@printmccoldata token}{w}{\LWR@multicolpartext{3}}{}%
8821 \IfStrEq{\LWR@printmccoldata token}{W}{\LWR@multicolpartext{3}}{}%

8822 \IfStrEq{\LWR@printmccoldata token}{S}{\LWR@multicoltext}{}%
8823 \IfStrEq{\LWR@printmccoldata token}{s}{\LWR@multicoltext}{}%

8824 \IfStrEq{\LWR@printmccoldata token}{X}{\LWR@multicolpartext{1}}{}%
8825 \IfStrEq{\LWR@printmccoldata token}{|}{\LWR@multicolskip}{}%
8826 \IfStrEq{\LWR@printmccoldata token}{:}{\LWR@multicolskip}{}%
8827 \IfStrEq{\LWR@printmccoldata token}{;}{;}{}%
8828 \LWR@multicolskip%
8829 \defaddtocounter{LWR@tablemulticolspos}{1}% skip parameter
8830 }{}%
8831 \IfStrEq{\LWR@printmccoldata token}{\detokenize{@}}{\LWR@multicolother{#1}}{}%
8832 \IfStrEq{\LWR@printmccoldata token}{\detokenize{!}}{\LWR@multicolother{#1}}{}%
8833 \IfStrEq{\LWR@printmccoldata token}{\detokenize{>}}{\LWR@multicolother{#1}}{}%
8834 \IfStrEq{\LWR@printmccoldata token}{\detokenize{<}}{\LWR@multicolother{#1}}{}%

```

If an invalid column type:

```
8835 \ifbool{LWR@validtablecol}{}{\LWR@multicoltext{}}%
```

Tracing:

```
8836 \LWR@traceinfo{lwr@printmccoldata done}%
8837 }
```

`\parsemulticolumnalignment` $\{\langle 1: colspec \rangle\} \{\langle 2: printresults \rangle\}$

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.

```

8838 \newcommand*{\LWR@parsemulticolumnalignment}[2]{%
8839 \defcounter{LWR@tablemulticolspos}{1}%
8840 \StrLen{#1}[\LWR@strresult]%
8841 \defcounter{LWR@tablemulticolswidth}{\LWR@strresult}%

```

Scan across the tokens in the column spec:

```

8842 \whileboolexpr{%
8843 not test {%
8844 \ifnumcomp{\value{LWR@tablemulticolspos}}{>}%
8845 {\value{LWR@tablemulticolswidth}}%
8846 }%
8847 }%
8848 {%

```

Execute the assigned print function for each token in the column spec:

```
8849 #2{#1}%
```

Move to the next token in the column spec:

```
8850     \defaddtocounter{LWR@tablemulticolspos}{1}%
8851   }%
8852 }
```

72.23.2 Multicolumn factored code

`\LWR@addmulticolvertrulecolor`

```
8853 \newcommand*{\LWR@addmulticolvertrulecolor}{%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
8854   \ifbool{LWR@tabularmutemods}{}{%
```

Left side:

```
8855     \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{%
8856       \LWR@tdaddstyle%
8857       border-left: 1px solid \LWR@vertruleHTMLcolor%
8858     }{}%
8859     \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{%
8860       \LWR@tdaddstyle%
8861       border-left: 4px double \LWR@vertruleHTMLcolor%
8862     }{}%
8863     \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{%
8864       \LWR@tdaddstyle%
8865       border-left: 1px dashed \LWR@vertruleHTMLcolor%
8866     }{}%
8867     \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}{%
8868       \LWR@tdaddstyle%
8869       border-left: 2px dashed \LWR@vertruleHTMLcolor%
8870     }{}%
```

Right side:

```
8871     \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{%
8872       \LWR@tdaddstyle%
8873       border-right: 1px solid \LWR@vertruleHTMLcolor%
8874     }{}%
8875     \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{%
8876       \LWR@tdaddstyle%
8877       border-right: 4px double \LWR@vertruleHTMLcolor%
8878     }{}%
8879     \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{%
8880       \LWR@tdaddstyle%
8881       border-right: 1px dashed \LWR@vertruleHTMLcolor%
8882     }{}%
8883     \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}{%
8884       \LWR@tdaddstyle%
8885       border-right: 2px dashed \LWR@vertruleHTMLcolor%
8886     }{}%
```

```
8887   }%
8888 }
```

```
8889 \newcommand{\LWR@multicoltext}{}
```

To find multicolumn right trim:

```
8890 \newcounter{LWR@lastmulticolumn}
```

```
\LWR@domulticolumn [1: vpos] [2: #rows] {3: numLaTeXcols} {4: numHTMLcols} {5: colspec}
{6: text}
```

```
8891 \NewDocumentCommand{\LWR@domulticolumn}{o o m m m +m}{%
```

```
8892   \LWR@traceinfo{LWR@domulticolumn -#1- -#2- -#4- -#5-}%
```

Remember the text to be inserted, and remember that a valid column type was found:

```
8893   \renewcommand{\LWR@multicoltext}{%
```

```
8894     #6%
```

```
8895     \booltrue{LWR@validtablecol}%
```

```
8896   }%
```

Compute the rightmost column to be included. This is used to create the right trim.

```
8897   \defcounter{LWR@lastmulticolumn}{\value{LWR@tableLaTeXcolindex}}%
```

```
8898   \defaddtocounter{LWR@lastmulticolumn}{#3}%
```

```
8899   \defaddtocounter{LWR@lastmulticolumn}{-1}%
```

Row processing:

```
8900   \LWR@maybenewtablerow%
```

Begin the opening table data tag:

```
8901   \LWR@htmltag{%
```

```
8902     td colspan="#4" %
```

```
8903     \IfValueT{#2}{ % rows?
```

```
8904       rowspan="#2" %
```

```
8905     }%
```

```
8906     class="td%
```

Print the column type and vertical bars:

```
8907   \defcounter{LWR@mcolvertbarsl}{0}%
```

```
8908   \defcounter{LWR@mcolvertbarsr}{0}%
```

```
8909   \defcounter{LWR@mcolvertbarsldash}{0}%
```

```
8910   \defcounter{LWR@mcolvertbarsrdash}{0}%
```

```
8911   \booltrue{LWR@mcolvertbaronleft}%
```

```
8912   \LWR@parsemulticolumnalignment{#5}{\LWR@printmcoltype}%
```

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:

```

8913      \LWR@subaddcmidruletrim%
8914          {%
8915              \LWR@getexparray{LWR@trimlrules}%
8916                  {\arabic{LWR@tableLaTeXcolindex}}%
8917          }%
8918          {%
8919              \LWR@getexparray{LWR@trimrrules}%
8920                  {\arabic{LWR@lastmulticolumn}}%
8921          }%

```

Also add vertical bar class.

```

8922      \ifnumcomp{\value{LWR@mcolvertbarsl}}{=}{1}{ tvertbarl}{}%
8923      \ifnumcomp{\value{LWR@mcolvertbarsl}}{>}{1}{ tvertbarldouble}{}%
8924      \ifnumcomp{\value{LWR@mcolvertbarsr}}{=}{1}{ tvertbarr}{}%
8925      \ifnumcomp{\value{LWR@mcolvertbarsr}}{>}{1}{ tvertbarrdouble}{}%
8926      \ifnumcomp{\value{LWR@mcolvertbarsldash}}{=}{1}{ tvertbarldash}{}%
8927      \ifnumcomp{\value{LWR@mcolvertbarsldash}}{>}{1}%
8928          { tvertbarldoubledash}{}%
8929      \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{=}{1}{ tvertbarrdash}{}%
8930      \ifnumcomp{\value{LWR@mcolvertbarsrdash}}{>}{1}%
8931          { tvertbarrdoubledash}{}%

```

Close the class tag’s opening quote:

```

8932      "%
8933      \LWR@tdstartstyles%

```

Style for vertical position:

```

8934      \IfValueT{#1}{% vpos?
8935          \ifstrequal{#1}{b}%
8936              {%
8937                  \LWR@tdaddstyle%
8938                  \LWR@print@mbbox{vertical-align:bottom}%
8939              }{%
8940          \ifstrequal{#1}{t}%
8941              {%
8942                  \LWR@tdaddstyle%
8943                  \LWR@print@mbbox{vertical-align:top}%
8944              }{%
8945          }% vpos?

```

Style for row colors:

```

8946      \LWR@addtabulararrowcolor%

```

Other styles:

```

8947     \LWR@addcmidrulewidth%
8948     \LWR@addcdashline%
8949     \LWR@addtabularhrulecolor%
8950     \LWR@addmulticolvertrulecolor%
8951     \LWR@addformatwppalignment{#5}%
8952     \LWR@tdendstyles%
8953 }% end of the opening table data tag
8954 \boolfalse{LWR@intabularmetadata}%
8955 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoldata}%
8956 }

```

72.23.3 Multicolumn

```
\LWR@htmlmulticolumn {<numcols>}{<alignment>}{<text>}
```

```

8957 \NewDocumentCommand{\LWR@htmlmulticolumn}{m m +m}%
8958 {%

```

Figure out how many extra HTML columns to add for @ and ! columns:

```
8959     \LWR@tabularhtmlcolumns{\arabic{LWR@tableLaTeXcolindex}}{#1}%
```

Create the multicolumn tag:

```
8960     \LWR@domulticolumn{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#3}%
```

Move to the next L^AT_EX column:

```

8961     \defaddtocounter{LWR@tableLaTeXcolindex}{#1}%
8962     \defaddtocounter{LWR@tableLaTeXcolindex}{-1}%

```

Skip any trailing @ or ! columns for this cell:

```

8963     \booltrue{LWR@skipatbang}%
8964 }

```

72.23.4 Longtable captions

longtable captions use \multicolumn.

Per the caption package. User-redefinable float type.

```
8965 \providecommand*{\LTcaption}{table}
```

```
\LWR@longtabledatacaptiontag * [<toc entry>] {<caption>}
```

```

8966 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m}
8967 {%

```

Remember the latest name for \nameref:

```
8968 \IfValueTF{#2}{% optional given?
8969 \ifblank{#2}% optional empty?
8970 {\LWR@setlatestname{#3}}% empty
8971 {\LWR@setlatestname{#2}}% given and non-empty
8972 }% optional given
8973 {\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:

```
8974 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalLaTeXcols}}%
```

Create the multicolumn tag:

```
8975 \LWR@domulticolumn{\arabic{LWR@tabletotalLaTeXcols}}%
8976 {\arabic{LWR@tabhtmlcoltotal}}%
8977 {P}%
8978 {% \LWR@domulticolumn
8979 \IfBooleanTF{#1}% star?
```

Star version, show a caption but do not make a LOT entry:

```
8980 {% yes star
8981 \LWR@figcaption%
8982 \LWR@isolate{#3}%
8983 \endLWR@figcaption%
8984 }%
8985 {% No star:
```

Not the star version:

Don't step the counter if \caption[] {A caption.}

```
8986 \ifbool{LWR@starredlongtable}%
8987 {%
8988 \ifblank{#2}% TOC entry
8989 {}%
8990 {%
8991 \refstepcounter{\LTcaption}%
8992 \protected@edef\@currentlabel{%
8993 \@nameuse{p@\LTcaption}\@nameuse{the\LTcaption}%
8994 }%
8995 }%
8996 }{}%
```

Create an HTML caption. Afterwards, maybe make a LOT entry.

```
8997 \LWR@figcaption%
8998 \LWR@isolate{\@nameuse{fnum@\LTcaption}}%
8999 \CaptionSeparator%
```

```
9000     \LWR@isolate{#3}%
9001     \endLWR@figcaption%
```

See if an optional caption was given:

```
9002     \ifblank{#2}% TOC entry empty
```

if the optional caption was given, but empty, do not form a TOC entry

```
9003     {}%
```

If the optional caption was given, but might only be []:

```
9004     {% TOC entry not empty
9005         \IfNoValueTF{#2}% No TOC entry?
```

The optional caption is []:

```
9006         {% No TOC entry
9007             \addcontentsline%
9008             {\@nameuse{ext@LTcaption}}%
9009             {\LTcaption}%
9010             {%
9011                 \protect\numberline%
9012                 {\LWR@isolate{\@nameuse{p@LTcaption}}\@nameuse{theLTcaption}}%
9013                 {\ignorespaces \LWR@isolate{#3}\protect\relax}%
9014             }%
9015         }% end of No TOC entry
```

The optional caption has text enclosed:

```
9016         {% yes TOC entry
9017             \addcontentsline%
9018             {\@nameuse{ext@LTcaption}}%
9019             {\LTcaption}%
9020             {%
9021                 \protect\numberline%
9022                 {\LWR@isolate{\@nameuse{p@LTcaption}}\@nameuse{theLTcaption}}%
9023                 {\ignorespaces \LWR@isolate{#2}\protect\relax}%
9024             }%
9025         }% end of yes TOC entry
9026     }% end of TOC entry not empty
9027 }% end of no star
```

Skip any trailing @ or ! columns for this cell:

```
9028     \booltrue{LWR@skipatbang}%
9029     }% end of \LWR@domulticolumn
9030     \defaddtocounter{LWR@tableLaTeXcolindex}{\value{LWR@tabletotalLaTeXcols}}%
9031     \defaddtocounter{LWR@tableLaTeXcolindex}{-1}
9032
9033 }
```

72.23.5 Counting HTML tabular columns

The \LaTeX specification for a table includes a number of columns separated by the `&` character. These columns differ in content from line to line. Additional virtual columns may be specified by the special `@` and `!` columns. These columns are identical from line to line, but may be skipped during a multicolumn cell.

For HTML output, `@` and `!` columns are placed into their own tabular columns. Thus, a \LaTeX `\multicolumn` command may span several additional `@` and `!` columns in HTML output. These additional columns must be added to the total number of columns spanned by an HTML multi-column data cell.

```
9034 \newcounter{LWR@tabhtmlcolindex}
9035 \newcounter{LWR@tabhtmlcolend}
9036 \newcounter{LWR@tabhtmlcoltotal}
```

```
\LWR@subtabularhtmlcolumns {<index>}
```

Factored from `\LWR@tabularhtmlcolumns`, which follows.

```
9037 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%
```

Temporarily define a macro equal to the `@` specification for this column:

```
9038   \edef\LWR@atbangspec{\LWR@getexparray{LWR@colatspec}{#1}}%
```

If the `@` specification is not empty, add to the count:

```
9039   \ifdefempty{\LWR@atbangspec}%
9040     {}%
9041     {\defaddtocounter{LWR@tabhtmlcoltotal}{1}}%
```

Likewise for the `!` columns:

```
9042   \edef\LWR@atbangspec{\LWR@getexparray{LWR@colbangspec}{#1}}%
9043   \ifdefempty{\LWR@atbangspec}%
9044     {}%
9045     {\defaddtocounter{LWR@tabhtmlcoltotal}{1}}%
9046 }
```

```
\LWR@tabularhtmlcolumns {<starting  $\LaTeX$  column>} {<number  $\LaTeX$  columns>}
```

Compute the total number of HTML columns being spanned, considering the starting \LaTeX table column and the number of \LaTeX tabular columns being spanned. Any `@` and `!` columns within this span are included in the total count. The resulting number of HTML columns is returned in the counter `LWR@tabhtmlcoltotal`.

```
9047 \newcommand*{\LWR@tabularhtmlcolumns}[2]{%
```

Count the starting index, compute ending index, and begin with the count being the \LaTeX span, to which additional `@` and `!` columns may be added:

```

9048 \defcounter{LWR@tabhtmlcolindex}{#1}%
9049 \defcounter{LWR@tabhtmlcoltotal}{#2}%
9050 \defcounter{LWR@tabhtmlcolend}{#1}%
9051 \defaddtocounter{LWR@tabhtmlcolend}{#2}%

```

If at the left edge, add the at/bang columns for the left edge:

```

9052 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{=}{1}{%
9053   \LWR@subtabularhtmlcolumns{leftedge}%
9054 }{}%

```

Walk across the L^AT_EX columns looking for @ and ! columns:

```

9055 \whileboolexpr{%
9056   test {%
9057     \ifnumcomp{\value{LWR@tabhtmlcolindex}}{<}{\value{LWR@tabhtmlcolend}}%
9058   }%
9059 }%
9060 {%
9061   \LWR@subtabularhtmlcolumns{\arabic{LWR@tabhtmlcolindex}}%
9062   \defaddtocounter{LWR@tabhtmlcolindex}{1}%
9063 }% whiledo
9064 }

9065 \end{warpHTML}

```

72.24 Multirow if not loaded

A default definition in case multirow is not loaded. This is used during table parsing.

```

9066 \begin{warpHTML}
9067 \newcommand{\multirow}[2][c]{}
9068 \end{warpHTML}

```

72.25 Multicolumnrow

A print-mode version is defined here, and is also used during HTML output while inside a lateximage.

See section 372 for the HTML versions.

for HTML & PRINT: 9069 \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.

```
9070 \AtBeginDocument{
```

`\ifundefined{@xmultirow}` determines if `multirow` was never loaded.

Null action if not loaded:

```
9071 \ifundefined{@xmultirow}
```

```
9072 {
```

```
9073 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
```

```
9074   {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
```

```
9075   {}%
```

```
9076 }% no version of multirow was loaded
```

```
9077 {% \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:

```
9078 \@ifpackageloaded{multirow}{% v2.0 or newer
```

```
9079 \@ifpackagelater{multirow}{2016/09/01}% 2016/09/27 for v2.0
```

```
9080 {% v2.0+:
```

```
9081 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
```

```
9082   {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
```

```
9083   {\multicolumn{#1}{#2}{\xmultirow[#3][#4][#5][#6][#7][#8]}}%
```

```
9084 }
```

```
9085 }% loaded but older, probably not executed:
```

```
9086 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
```

```
9087   {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
```

```
9088   {\multicolumn{#1}{#2}{\xmultirow{#4}[#5][#6][#7][#8]}}%
```

```
9089 }
```

```
9090 }% 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.

```
9091 {% v1.6 or older did not \ProvidePackage
```

```
9092 \DeclareExpandableDocumentCommand{\LWR@print@multicolumnrow}%
```

```
9093   {+m +m +O{c} +m +O{0} +m +O{0pt} +m}%
```

```
9094   {\multicolumn{#1}{#2}{\xmultirow{#4}[#5][#6][#7][#8]}}%
```

```
9095 }
```

```
9096
```

```
9097 }% \ifundefined{@xmultirow}
```

```
9098
```

```
9099 \providecommand*\multicolumnrow{\LWR@print@multicolumnrow}
```

```
9100
```

```
9101 }% AtBeginDocument
```

```
9102 \end{warpall}
```

72.26 Utility macros inside a table

for HTML output: 9103 `\begin{warpHTML}`

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```
9104 \newcommand*\LWR@donothing{}
```

In case `array` is not loaded:

```
9105 \let\firsthline\relax
9106 \let\lasthline\relax
9107 \newcommand*\firsthline{}
9108 \newcommand*\lasthline{}
```

In case `bigdelim` is not loaded:

```
9109 \newcommand*\ldelim{}
9110 \newcommand*\rdelim{}
```

```
9111 \end{warpHTML}
```

72.27 Special-case tabular markers

for HTML & PRINT: 9112 `\begin{warpall}`

`\TabularMacro` Place this just before inserting a custom macro in a table data cell. Doing so tells `lwarp` not to automatically start a new HTML table data cell yet. See section [8.10.1](#).

```
9113 \newcommand*\TabularMacro{}
```

```
9114 \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: 9115 \begin{warpHTML}

```

9116 \newcommand*\ResumeTabular}{%
9117   \boolfalse{LWR@exitingtabular}%
9118   \boolfalse{LWR@tabularmutemods}%
9119   \LWR@getmynexttoken%
9120 }

```

```
9121 \end{warpHTML}
```

for PRINT output: 9122 \begin{warpprint}

```
9123 \newcommand*\ResumeTabular}{}
```

```
9124 \end{warpprint}
```

72.28 Checking for a new table cell

for HTML output: 9125 \begin{warpHTML}

\LWR@tabledatacolumnntag Open a new HTML table cell unless the next token is for a macro which does not create data, such as \hline, \toprule, etc:

```

9126 \newcommand*\LWR@tabledatacolumnntag{%
9127 {%
9128   \LWR@traceinfo{LWR@tabledatacolumnntag}%

```

```

\show\LWR@mynexttoken to see what tokens to look for

```

If not any of the below, start a new table cell:

```
9129 \global\let\LWR@mynextaction\LWR@tabledatasinglecolumnntag%
```

If exiting the tabular:

```

9130 \ifdefequal{\LWR@mynexttoken}{\end}%
9131   {\booltrue{LWR@exitingtabular}}{}%

```

longtable can have a caption in a cell

```
9132 \ifdefequal{\LWR@mynexttoken}{\caption}%
9133     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

Look for other things which would not start a table cell:

```
9134 \ifdefequal{\LWR@mynexttoken}{\multicolumn}%
9135     {\global\let\LWR@mynextaction\LWR@doanything}{}%
9136 \ifdefequal{\LWR@mynexttoken}{\multirow}%
9137     {\global\let\LWR@mynextaction\LWR@doanything}{}%
9138 \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%
9139     {\global\let\LWR@mynextaction\LWR@doanything}{}%
9140 \ifdefequal{\LWR@mynexttoken}{\noalign}%
9141     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

If an `\mrowcell`, this is a cell to be skipped over:

```
9142 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%
9143     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

If an `\mcolrowcell`, this is a cell to be skipped over:

```
9144 \ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
9145     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```
9146 \ifdefequal{\LWR@mynexttoken}{\TabularMacro}%
9147     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```
9148 \ifdefequal{\LWR@mynexttoken}{\hline}%
9149     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```
9150 \ifdefequal{\LWR@mynexttoken}{\firstline}%
9151     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```
9152 \ifdefequal{\LWR@mynexttoken}{\lastline}%
9153     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```
9154 \ifdefequal{\LWR@mynexttoken}{\toprule}%
9155     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```
9156 \ifdefequal{\LWR@mynexttoken}{\midrule}%
9157     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```
9158 \ifdefequal{\LWR@mynexttoken}{\cmidrule}%
9159     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```
9160 \ifdefequal{\LWR@mynexttoken}{\morecmidrules}%
9161     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```
9162 \ifdefequal{\LWR@mynexttoken}{\specialrule}%
9163     {\global\let\LWR@mynextaction\LWR@doanything}{}%
```

```

9164 \ifdefequal{\LWR@mynexttoken}{\cline}%
9165     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9166 \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
9167     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9168 \ifdefequal{\LWR@mynexttoken}{\hhline}%
9169     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9170 \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
9171     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9172 \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
9173     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9174 \ifdefequal{\LWR@mynexttoken}{\doublerulesepcolor}%
9175     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9176 \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
9177     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9178 \ifdefequal{\LWR@mynexttoken}{\warpHTMLonly}%
9179     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9180 \ifdefequal{\LWR@mynexttoken}{\ldelim}%
9181     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9182 \ifdefequal{\LWR@mynexttoken}{\rdelim}%
9183     {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

For arydshln:

```

9184 \ifdefequal{\LWR@mynexttoken}{\hdashline}%
9185     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9186 \ifdefequal{\LWR@mynexttoken}{\cdashline}%
9187     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9188 \ifdefequal{\LWR@mynexttoken}{\firsthdashline}%
9189     {\global\let\LWR@mynextaction\LWR@donothing}{}%

9190 \ifdefequal{\LWR@mynexttoken}{\lasthdashline}%
9191     {\global\let\LWR@mynextaction\LWR@donothing}{}%

```

Ignore an empty line between rows:

```

9192 \ifdefequal{\LWR@mynexttoken}{\par}%
9193     {\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:

```
9194 \LWR@traceinfo{LWR@tabledatacolumnntag: about to do mynext}%
9195 \LWR@mynextaction%
9196 \LWR@traceinfo{LWR@tabledatacolumnntag: done}%
9197 }

9198 \end{warpHTML}
```

72.29 \mrowcell

for HTML & PRINT: 9199 \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.

```
9200 \newcommand*{\mrowcell}{}
9201 \end{warpall}
```

72.30 \mcolrowcell

for HTML & PRINT: 9202 \begin{warpall}

 **multirow cells** \mcolrowcell The user must insert \mcolrowcell into any \multicolumnrow cells which must be skipped. This command has no action during print output.

```
9203 \newcommand*{\mcolrowcell}{}
9204 \end{warpall}
```

72.31 HTML tabular environment

for HTML output: 9205 \begin{warpHTML}

These are default definitions in case `booktabs` is not loaded, and are not expected to used, but must exist as placeholders. `memoir` may have already loaded `booktabs`.

```
9206 \providecommand*\toprule[1][\hline]
9207 \providecommand*\midrule[1][\hline]
9208 \providecommand*\cmidrule{\cline}
9209 \providecommand*\bottomrule[1][\hline]
9210 \providecommand*\addlinespace[1][\hline]
9211 \providecommand*\morecmidrules{}
9212 \providecommand*\specialrule[3][\hline]
```

`\noalign` $\langle text \rangle$ Redefined for use inside tabular.

```

9213 \LetLtxMacro\LWR@orignoalign\noalign
9214
9215 \newcommand{\LWR@tabularnoalign}[1]{%
9216   \advance\rownum\m@ne%
9217   \LetLtxMacro\LWR@save@xcolorrowHTMLcolor\LWR@xcolorrowHTMLcolor%
9218   \renewcommand*\LWR@xcolorrowHTMLcolor}{}%
9219   \multicolumn{\value{\LWR@tabletotalLaTeXcols}}{l}{#1} \\\
9220   \LetLtxMacro\LWR@xcolorrowHTMLcolor\LWR@save@xcolorrowHTMLcolor%
9221   % \@rowcolors%
9222   \LWR@getmynexttoken%
9223 }
```

`\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.

```

9224 \AtBeginDocument{
9225
9226 \ifpackageloaded{lwarp-tabls}
9227 {
9228   \newcommand*\LWR@HTMLhline}[1][{}]{%
9229     \ifbool{FormatWP}%
9230       {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
9231       {\defaddtocounter{\LWR@hlines}{1}}%
9232     \LWR@getmynexttoken}%
9233 }
9234 {
9235   \newcommand*\LWR@HTMLhline}{%
9236     \ifbool{FormatWP}%
9237       {\LWR@docmidrule{1-\arabic{\LWR@tabletotalLaTeXcols}}}%
9238       {\defaddtocounter{\LWR@hlines}{1}}%
9239     \LWR@getmynexttoken}%
9240 }
9241
9242 }% AtBeginDocument
```

`\LWR@HTMLcline` $\langle columns \rangle$

```

9243 \NewDocumentCommand{\LWR@HTMLcline}{m}%
9244   {\LWR@docmidrule{#1}\LWR@getmynexttoken}%
```

`\LWR@tabular@warpprintonly` $\langle contents \rangle$

Only process the contents if producing printed output. Modified inside a `tabular` to grab the next token.

```

9245 \newcommand{\LWR@tabular@warpprintonly}[1]{%
9246   \ifbool{warpingprint}{#1}{}%
9247   \LWR@getmynexttoken%
9248 }
```

`\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`.

```

9249 \AtBeginDocument{
9250 \ifundefined{NoAutoSpacing}%
9251 {% no babel-french
9252   \newcommand*\LWR@nullifyNoAutoSpacing{}
9253 }% no babel-french
9254 {% yes babel-french
9255   \newcommand*\LWR@nullifyNoAutoSpacing{%
9256     \NoAutoSpacing%
9257     \renewcommand*\NoAutoSpacing{}
9258     \renewcommand*\LWR@FBcancel{}
9259   }
9260 }% yes babel-french
9261 }% AtBeginDocument

```

Env `tabular` `<direction> [(<verticalposition>)] {(<colspecs>)}`

The `<direction>` is from `plext` for Japanese documents, and is ignored.

```

9262 \StartDefiningTabulars
9263
9264 \NewDocumentCommand{\LWR@HTML@tabular}{d<> o m}
9265 {%
9266   \LWR@traceinfo{\LWR@HTML@tabular started}%

```

 **<table> inside ** In `LATEX`, a `tabular` may be placed inside a `minipage`, but in `HTML` a `<table>` may not be inside a ``. Since there may be several nested ``s, with an unknown number of other objects between, it is hard to undo all these ``s before the `<table>` then redo them after. The browser probably compensates for this situation, but formatting may be lost inside the `<table>` because several things are neutralized inside a ``. Furthermore, in the `HTML` output, the entire `<table>` is placed on a single line of `HTML` code, since the line breaking commands are neutralized inside a ``. Since this is such a sloppy situation, a warning is issued here instructing the user to please isolate the `` to print-only.

```

9267   \LWR@spanwarnformat{tabular}%
9268   \addtocounter{\LWR@tabulardepth}{1}%

```

Not yet started a table row:

```

9269   \boolfalse{\LWR@startedrow}%

```

Not yet doing any rules:

```

9270   \defcounter{\LWR@hlines}{0}%
9271   \defcounter{\LWR@hdashedlines}{0}%
9272   \boolfalse{\LWR@doingtbrule}%
9273   \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.

```
9274 \LWR@nullifyNoAutoSpacing%
```

Have not yet found the end of tabular command. Unmute the @ and ! columns.

```
9275 \boolfalse{LWR@exitingtabular}%
9276 \boolfalse{LWR@tabularmutemods}%
```

Error if failed to use `\mrowcell` or `\mcolrowcell` when needed.

```
9277 \boolfalse{LWR@usedmultirow}%
9278 \boolfalse{LWR@foundmrowcell}%

9279 \renewcommand*{\LWR@multicoltext}{}%
```

Create the table tag:

```
9280 \booltrue{LWR@intabularmetadata}%
9281 \LWR@traceinfo{LWR@tabular: About to LWR@forecnewpage.}%
9282 \LWR@forcenewpage
9283 \LWR@htmlblocktag{table}%
```

Parse the table columns:

```
9284 \LWR@parsetablecols{#3}%
```

Table col spec is: `\LWR@tablecolspec` which is a string of `llccrr`, etc.

Do not place the table inside a paragraph:

```
9285 \LWR@stoppars%
```

Track column #:

```
9286 \defcounter{LWR@tableLaTeXcolindex}{1}%
```

Have not yet added data in this column:

```
9287 \global\boolfalse{LWR@tabularcelladded}%
```

Start looking for midrules:

```
9288 \LWR@clearmidrules%
```

`\\` becomes a macro to end the table row:

```
9289 \LetLtxMacro{\\}{\LWR@tabularendofline}%
```

`\warpprintonly` inside a tabular must grab the next token.

```
9290 \LetLtxMacro\warpprintonly\LWR@tabular@warpprintonly%
```

The following adjust for colortbl.

```

9291 \LetLtxMacro\arrayrulecolor\arrayrulecolornexttoken%
9292 \LetLtxMacro\doublerulesepcolor\doublerulesepcolornexttoken%
9293 \def\LWR@columnHTMLcolor{}%
9294 \def\LWR@rowHTMLcolor{}%
9295 \def\LWR@cellHTMLcolor{}%
9296 \@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.

```

9297 \ifdefvoid{\LWR@ruleHTMLcolor}%
9298   {\edef\LWR@vertruleHTMLcolor{black}}%
9299   {\edef\LWR@vertruleHTMLcolor{\LWR@origpound\LWR@ruleHTMLcolor}}%

```

Tracking the depth of cell color <div>s:

```

9300 \defcounter{LWR@cellcolordepth}{0}%

```

The following may appear before a data cell is created, so after doing their actions, we look ahead with `\LWR@getmynexttoken` to see if the next token might create a new data cell:

The optional parameter for `\hline` supports the `tabs` package.

```

9301 \LWR@traceinfo{LWR@HTML@tabular: redefining macros}%
9302 \LetLtxMacro\noalign\LWR@tabularnoalign%
9303 \LetLtxMacro\hline\LWR@HTMLhline%
9304 \LetLtxMacro\cline\LWR@HTMLcline%

9305 \DeclareDocumentCommand{\hdashline}{o}{%
9306   \ifbool{FormatWP}%
9307     {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9308     {\defaddtocounter{LWR@hdashedlines}{1}}%
9309   \LWR@getmynexttoken%
9310 }%

9311 \DeclareDocumentCommand{\cdashline}{m}{%
9312   \LWR@docdashline{##1}\LWR@getmynexttoken%
9313 }%

9314 \DeclareDocumentCommand{\firsthdashline}{o}{%
9315   \ifbool{FormatWP}%
9316     {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9317     {\defaddtocounter{LWR@hdashedlines}{1}}%
9318   \LWR@getmynexttoken%
9319 }%

9320 \DeclareDocumentCommand{\lasthdashline}{o}{%
9321   \ifbool{FormatWP}%
9322     {\LWR@docdashline{1-\arabic{LWR@tabletotalLaTeXcols}}}%
9323     {\defaddtocounter{LWR@hdashedlines}{1}}%

```

```
9324     \LWR@getmynexttoken%
9325   }%
```

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.

```
9326   \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
9327   \renewcommand*{\mrowcell}{%
9328     \LWR@maybenewtablerow%
9329     \LWR@tabularleftedge%
9330     \booltrue{LWR@skippingmrowcell}%
9331     \booltrue{LWR@foundmrowcell}%
9332   }%
9333   \renewcommand*{\mcolrowcell}{%
9334     \LWR@maybenewtablerow%
9335     \booltrue{LWR@skippingmcolrowcell}%
9336     \booltrue{LWR@foundmrowcell}%
9337   }%
9338   \LetLtxMacro\caption\LWR@longtabledatacaptiontag%
```

Reset for new processing:

```
9339   \boolfalse{LWR@tableparcell}%
9340   \boolfalse{LWR@skippingmrowcell}%
9341   \boolfalse{LWR@skippingmcolrowcell}%
9342   \boolfalse{LWR@skipatbang}%
9343   \boolfalse{LWR@emptyatbang}%
```

Set & for its special meaning inside the tabular:

```
9344   \StartDefiningTabulars%
9345   \protected\gdef&{\LWR@tabularampersand}%
```

Locally force any minipages to be fullwidth, until the end of the tabular:

```
9346   \booltrue{LWR@forceminipagefullwidth}%
```

Nest one level deeper of tabular paragraph handling:

```
9347   \addtocounter{LWR@tabularpardepth}{1}%
```

Look ahead for a possible table data cell:

```
9348   \LWR@traceinfo{LWR@@HTML@tabular: about to LWR@getmynexttoken}%
9349   \LWR@getmynexttoken%
9350 }%
```

Ending the environment:

```
9351 \newcommand*{\LWR@HTML@endtabular}
9352 {%
9353   \LWR@traceinfo{LWR@HTML@endtabular}%
```

Unnest one level of tabular paragraph handling:

```

9354 \addtocounter{LWR@tabularpardepth}{-1}%
9355 \ifboolexpr{%
9356   test {%
9357     \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{<}%
9358       {\value{LWR@tabletotalLaTeXcols}}
9359   } or %
9360   (%
9361     bool{LWR@intabularmetadata} and%
9362     not bool{LWR@tabularcelladded} and%
9363     test {%
9364       \ifnumcomp{\value{LWR@tableLaTeXcolindex}}{=}%
9365         {\value{LWR@tabletotalLaTeXcols}}%
9366     }%
9367   )%
9368 }%
9369 {%
9370   \LWR@tabularfinishrow%
9371 }%
9372 {%
9373   \LWR@closetabledatacell%
9374 }%
9375 \LWR@htmlblocktag{/tr}%

```

xcolor row color support:

```

9376 \@rowc@lors%
9377 \LWR@htmlblocktag{/table}%
9378 \boolfalse{LWR@intabularmetadata}%

```

Unnest one level of tabular:

```

9379 \addtocounter{LWR@tabulardepth}{-1}%

```

Restore & to its usual meaning:

```

9380 \ifnumequal{\value{LWR@tabulardepth}}{0}{%
9381   \protected\gdef&{\LWR@origampmacro}%
9382   \StopDefiningTabulars%
9383 }{%

```

Error if used \multirow or \multicolumnrow without using \mrowcell or \mcolrowcell.

```

9384 \ifbool{LWR@usedmultirow}{%
9385   \ifbool{LWR@foundmrowcell}%
9386     {}%
9387   {%
9388     \PackageError{lwarp}%
9389     {%
9390       When using \protect\multirow, \protect\multicolumnrow, \MessageBreak
9391       or the bigdelim package, \MessageBreak

```

```

9392         place \protect\mrowcell\space or \protect\mcolrowcell\MessageBreak
9393             in empty cells which are to be skipped.\MessageBreak
9394             See the Lwarp package documentation:\MessageBreak
9395             "Special cases and limitations" -> "Tabular"
9396         }%
9397     {%
9398         See the Lwarp package documentation:\MessageBreak
9399         "Special cases and limitations" -> "Tabular".
9400     }%
9401 }%
9402 }{}%

9403 \LWR@traceinfo{LWR@HTML@endtabular finished}%
9404 }
9405
9406 \csletcs{LWR@HTML@endtabular*}{LWR@HTML@endtabular}
9407
9408 \StopDefiningTabulars

```

siunitx may redefine tabular, so set the following later:

```

9409 \AtBeginDocument{
9410     \LetLtxMacro\LWR@origendtabular\endtabular
9411     \csletcs{LWR@origendtabular*}{endtabular*}
9412     \LWR@formatted{@tabular}
9413     \LWR@formatted{endtabular}
9414     \LWR@formatted{endtabular*}
9415 }

9416 \end{warpHTML}

```

73 Cross-references

Sectioning commands have been emulated from scratch, so the cross-referencing commands are custom-written for them. Emulating both avoids several layers of patches.

File *_html.aux A new entry in *_html.aux is used to remember section name, file, and lateximage depth and number for each label:

```

\newlabel{<labelname>@lwarp}{{<section name>}{<filename>}
    {<limgedepth>}{<limagenumber>}}

```

Table 14 shows the data structures related to cross-referencing.

for HTML output: 9417 \begin{warpHTML}

Table 14: Cross-referencing data structures

Original L^AT_EX:	(print and HTML)
<p>\refstepcounter: Steps the counter and sets <code>\@currentlabel</code>.</p> <p>\@currentlabel: <code>\p@<ctr>\the<ctr></code> Updated by <code>\refstepcounter</code>.</p> <p>\label: Writes to the .aux file: <code>\newlabel{<label>}{\@currentlabel}{\thepage}}</code></p> <p>\newlabel: When the .aux file is read, sets <code>\r@<label></code>.</p> <p>\r@<label>: Set to: <code>{\@currentlabel}{\thepage}}</code></p> <p>\ref: Returns the first part of <code>\r@<label></code>.</p> <p>\pageref: Returns the second part of <code>\r@<label></code>.</p>	
Added by lwarp:	(HTML only)
<p>\label: Adds HTML tags (section 73.3), and another .aux entry (section 73.2). If memoir is used, its <code>\@mem@old@label</code> points to lwarp's version, and <code>cleveref</code> patches.</p> <p>\newlabel: Unchanged. When the .aux file is read, sets <code>\r@<label>@lwarp</code>.</p> <p>\r@<label>@lwarp: Set to <code>{{section_name}{file_name}{depth}{number}}</code>:</p> <p>\LWR@nameref: The section name for this label.</p> <p>\LWR@htmlfileref: The filename or name for this label.</p> <p>\LWR@lateximagedepthref: The <code>lateximagedepth</code> for this label.</p> <p>\LWR@lateximagenumberref: The <code>lateximagenumber</code> for this label.</p> <p>\nameref: Emulated from <code>hyperref</code> for lwarp. See section 73.4.</p> <p>\ref and \nameref: Adds HTML tags. See section 73.4.</p>	
Added by amsmath:	(print and HTML)
<p>\label: Execution is delayed until the math environment is completed.</p> <p>\ltx@label: L^AT_EX <code>\label</code>, (HTML: patched by lwarp,) later patched by <code>cleveref</code>.</p>	
Added by cleveref:	(print and HTML)
<p>\refstepcounter: Added: sets <code>\cref@currentlabel</code>.</p> <p>\cref@currentlabel: (<code><type>=<ctr></code> unless an alias is used): <code>[<type>][\arabic{<ctr>}][<parent ctrs>]{\p@<ctr>\the<ctr>}</code> Also see section 59.4 for use with footnotes.</p> <p>\label: Writes to the .aux file: <code>\newlabel{<label>@cref}{\cref@currentlabel}{\thepage}}</code></p> <p>\newlabel: Unchanged. When the .aux file is read, sets <code>\r@<label>@cref</code>.</p> <p>\r@<label>@cref: Set to: <code>{\cref@currentlabel}{\thepage}}</code></p> <p>Utility functions: See <code>\cref@getlabel</code>, <code>\cref@gettype</code>, <code>\cref@getcounter</code>, <code>\cref@getprefix</code>.</p> <p>Cross-referencing names: <code>\crefname</code> and <code>\Crefname</code> assign human-readable names for references to this counter type.</p>	
Additionally patched by lwarp:	(HTML only)
<p>\cref, etc.: Modified for lwarp. See section 88.</p> <p>\label inside math: See section 80.7.1.</p>	
Footnotes: See <code>\noteentry</code> in section 59.4.	

73.1 Setup

`\@currentlabelname` To remember the most recently defined section name, description, or caption, for `\nameref`.

```
9418 \def\@currentlabelname{\linkhomename}%
```

`\LWR@stripperperiod` $\{\langle text \rangle\} [\langle . \rangle]$

Removes a trailing period.

```
9419 \def\LWR@stripperperiod#1.\ltx@empty#2\@nil{#1}%
```

`\LWR@setlatestname` $\{\langle object name \rangle\}$

Removes `\label`, strips any final period, and remembers the result.

```
9420 \newcommand*\LWR@setlatestname[1]{%
```

Remove `\label` and other commands from the name, the strip any final period. See `getttitlestring`.

```
9421   \GetTitleStringExpand{#1}%
9422   \edef\@currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
9423   \edef\@currentlabelname{%
9424     \expandafter\LWR@stripperperiod\@currentlabelname%
9425     \ltx@empty.\ltx@empty\@nil%
9426   }%
9427 }
```

73.2 New lwarp labels.

File `*_html.aux` A new entry in `*_html.aux` is used to remember section name, file, and lateximage depth and number for each label:

```
\newlabel{<labelname>@lwarp}{{<section name>}{<filename>}
                                {<limagedepth>}{<limagenumber>}}
```

See:

<http://tex.stackexchange.com/questions/57194/extract-section-number-from-equation-reference>

`\LWR@setref` $\{\langle args list \rangle\} \{\langle selector \rangle\} \{\langle label \rangle\}$

`\@setref` without the `\null` (`\hbox`), and without the warning messages. Each caused problems with `lwarp` references. The regular reference will cause the warning.

```
9428 \def\LWR@setref#1#2#3{%
9429   \ifx#1\relax%
```

```

9430    ??%
9431    \else%
9432    \expandafter#2#1%
9433    \fi}

```

`\LWR@nameref` $\langle label \rangle$ Returns the section name for this label:

```

9434 \newcommand*\LWR@nameref}[1]{%
9435     \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@firstoffour{#1}%
9436 }

```

`\LWR@htmlfileref` $\langle label \rangle$ Returns the file number or name for this label:

```

9437 \newcommand*\LWR@htmlfileref}[1]{%
9438     \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@secondoffour{#1}%
9439 }

```

`\LWR@lateximagedepthref` $\langle label \rangle$ Returns the lateximagedepth for this label:

```

9440 \newcommand*\LWR@lateximagedepthref}[1]{%
9441     \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@thirdoffour{#1}%
9442 }

```

`\LWR@lateximagenumberref` $\langle label \rangle$ Returns the lateximagenumber for this label:

```

9443 \newcommand*\LWR@lateximagenumberref}[1]{%
9444     \expandafter\LWR@setref\csname r@#1@lwarp\endcsname\LWR@fourthoffour{#1}%
9445 }

```

`\LWR@write@lwarplabel` $\langle label \rangle$ Sanitize the name and then creates the label:

```

9446 \newcommand*\LWR@write@lwarplabel}[1]{%
9447     \LWR@traceinfo{LWR@write@lwarplabel !#1!}%
9448     \LWR@setlatestname{\@currentlabelname}%
9449     \@bsphack%
9450     \protected@write\@auxout{%
9451         {%
9452             \string\newlabel{#1@lwarp}{%
9453                 {\@currentlabelname}%
9454                 {%
9455                     \ifbool{FileSectionNames}%
9456                         {\LWR@thisfilename}%
9457                         {\arabic{LWR@htmlfilenumber}}%
9458                 }%
9459                 {\arabic{LWR@lateximagedepth}}%
9460                 {\arabic{LWR@lateximagenumber}}%
9461             }%
9462         }%
9463     \@esphack%
9464 }

```

73.3 Labels

`\LWR@label@createtag` $\langle label \rangle$ Creates an HTML id tag.

Used by `\LWR@new@label` and `\hyperdef`.

`\detokenize` is used to allow underscores in the labels.

```
9465 \newcommand*\LWR@label@createtag[1]{%
9466   \LWR@traceinfo{\LWR@label@createtag !#1!}%
```

Create an HTML id tag unless are inside a `lateximage`, since it would appear in the image:

```
9467   \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
9468   }{%
9469   {% not lateximage
```

If not doing a `lateximage`, create an HTML ID tag: (To be factored...)

```
9470   \LWR@sanitize{#1}%
9471   \ifbool{\LWR@doingstartpars}%
9472   {% pars allowed
9473     \ifbool{\LWR@doingapar}%
9474     {% par started
9475       \LWR@htmltag{a \LWR@print@mbox{id="\LWR@sanitized"}}%
9476       \LWR@htmltag{/a}%
9477     }% par started
9478     {% par not started
9479       \LWR@stoppars%
9480       \LWR@htmltag{a \LWR@print@mbox{id="\LWR@sanitized"}}%
9481       \LWR@htmltag{/a}%
9482       \LWR@startpars%
9483     }% par not started
9484   }% pars allowed
9485   {% pars not allowed
9486     \LWR@htmltag{a \LWR@print@mbox{id="\LWR@sanitized"}}%
9487     \LWR@htmltag{/a}%
9488   }% pars not allowed
9489 }% not lateximage
9490 }
```

`\LWR@new@label` $\langle label \rangle$

`\label` during HTML output when not in SVG math mode, removing extra spaces around the label, as done by a regular \LaTeX `\label`.

This is also used during a `lateximage`, including SVG math, since the special label handling is required, but `\LWR@label@createtag` does not generate HTML tags inside a `lateximage`.

If `memoir` is used, it's `\@mem@old@label` is pointed here.

`clevereref` later encases this to add its own cross-referencing, and also patches memoir.

```
9491 \NewDocumentCommand{\LWR@new@label}{m}{%
9492   \LWR@traceinfo{\LWR@new@label: starting}%
9493   \LWR@traceinfo{\LWR@new@label: !#1!}%
9494 % \@bsphack%
```

Create a traditional L^AT_EX label, as modified by `cleveref`:

```
9495   \LWR@orig@label{#1}%
```

Create a special label which holds the section number, `LWR@htmlfilenumber`, `LWR@lateximagedepth`, and `LWR@lateximagenumber`:

```
9496   \LWR@traceinfo{%
9497     LWR@new@label: filesectionnames is %
9498     \ifbool{FileSectionNames}{true}{false}%
9499   }%
9500   \LWR@traceinfo{%
9501     LWR@new@label: LWR@thisfilename is !\LWR@thisfilename!%
9502   }%
9503   \LWR@traceinfo{%
9504     LWR@new@label: LWR@htmlfilenumber is \arabic{LWR@htmlfilenumber}%
9505   }%
9506   \LWR@write@lwarplabel{#1}%
9507   \LWR@label@createtag{#1}%
9508   % \@esphack%
9509   \LWR@traceinfo{\LWR@new@label: done}%
9510 }
```

73.4 References

`\LWR@addlinktitle`

```
9511 \newcommand*{\LWR@addlinktitle}{%
9512   \ifdefvoid{\LWR@ThisAltText}{}{ % space
9513     title="\LWR@ThisAltText" % space
9514     \gdef\LWR@ThisAltText{}%
9515   }%
9516 }
```

`\LWR@startref` `{\langle label \rangle}` (Common code for `\ref` and `\nameref`.)

Open an HTML tag reference to a filename, # character, and a label.

```
9517 \newcommand*{\LWR@startref}[1]
9518 {%
9519   \LWR@sanitize{#1}%
9520   \LWR@traceinfo{\LWR@startref A: !#1!}%
```

Create the filename part of the link:

```

9521 \LWR@htmltag{a href="%
9522 \LWR@traceinfo{LWR@startref B}%
9523 \LWR@print@mbox{\LWR@htmlrefsectionfilename{#1}}%
9524 \LWR@traceinfo{LWR@startref C}%
9525 \LWR@origpound%

```

Create the destination id:

See if `LWR@lateximagedepth` is unknown:

```

9526 \LWR@traceinfo{LWR@startref D: !#1!}%
9527 \ifcsundef{r@#1@lwarp}%

```

“??” if `LWR@lateximagedepth` is unknown, so create a link with an unknown destination:

```

9528 {%
9529 \LWR@traceinfo{LWR@startref D0: ??}%
9530 ??%
9531 }%

```

If `LWR@lateximagedepth` is known. Use a `lateximage` if the depth is greater than zero, or a regular link otherwise:

```

9532 {%
9533 \ifthenelse{\cinttest{\LWR@lateximagedepthref{#1}}{>}{0}}%
9534 {%
9535 \LWR@ImagesName\LWR@lateximagenumberref{#1}%
9536 }%
9537 {%
9538 \LWR@traceinfo{LWR@startref D3}%

```

`\detokenize` is used to allow underscores in the labels:

```

9539 \LWR@print@mbox{\LWR@sanitized}%
9540 }%
9541 }%
9542 \LWR@traceinfo{LWR@startref E}%

```

Closing quote:

```

9543 "%

```

Maybe add a title:

```

9544 \LWR@addlinktitle%
9545 }%
9546 \LWR@traceinfo{LWR@startref F}%
9547 }

```

`\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)”.

```
9548 \NewDocumentCommand{\LWR@subnewref}{m m}{%
9549   \LWR@traceinfo{\LWR@subnewref #1 #2}%
9550   \LWR@startref{#1}%
9551   \LWR@print@ref{#2}%
9552   \LWR@htmltag{/a}%
9553 }
```

`\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`.

```
9554 \NewDocumentCommand{\LWR@HTML@ref}{s m}{%
9555   \LWR@traceinfo{\LWR@HTML@ref !#2!}%
9556   \IfBooleanTF{#1}%
9557     {\LWR@print@ref{#2}}%
9558     {\LWR@subnewref{#2}{#2}}%
9559 }
9560
9561 \LWR@formatted{ref}
```

`\LWR@ref@ignorestar * <label>` For use inside `\hyperref`. Ignores the star, then uses the original `\ref`.

```
9562 \NewDocumentCommand{\LWR@ref@ignorestar}{s m}{%
9563   \LWR@print@ref{#2}%
9564 }
```

`\pagerefPageFor` Text for page references.

```
9565 \newcommand*{\pagerefPageFor}{see }
```

`\pageref * <label>` Create an internal document reference, or just the unlinked number if starred, per `hyperref`.

```
9566 \NewDocumentCommand{\LWR@new@pageref}{s m}{%
9567   \IfBooleanTF{#1}%
9568     {\pagerefPageFor\LWR@print@ref{#2}}%
9569     {\cpageref{#2}}%
9570 }
```

`\nameref <label>`

```
9571 \newrobustcmd*{\nameref}[1]{%
9572   \LWR@traceinfo{nameref}%
9573   \LWR@startref{#1}%
```

```

9574 \LWR@traceinfo{nameref B}%
9575 \LWR@nameref{#1}%
9576 \LWR@traceinfo{nameref C}%
9577 \LWR@htmltag{/a}%
9578 \LWR@traceinfo{nameref: done}%
9579 }

```

`\Nameref` $\langle label \rangle$ In print, adds the page number. In HTML, does not.

```
9580 \LetLtxMacro\Nameref\nameref
```

73.5 Hyper-references



Note that the code currently only sanitizes the underscore character. Additional characters should be rendered inert as well. See the `hyperref.sty` definition of `\gdef\hyper@normalise` for an example.

Pkg hyperref



Do not tell other packages that `hyperref` is emulated. Some packages patch various commands if `hyperref` is present, which will probably break something, and the emulation already handles whatever may be emulated anyhow.

```

9581 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it:
9582 % \EmulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.

```

Emulates `hyperref`:

`\@currentHref` Added to support backref.

```

9583 \AtBeginDocument{
9584 \def\@currentHref{\BaseJobname-autopage-\theLWR@currentautosec}
9585 }

```

`\LWR@linkcatcodes` Sets catcodes before processing macros which have hyperlinks as arguments.

```

9586 \newcommand*\LWR@linkcatcodes{%
9587 \catcode'\#=12%
9588 \catcode'\%=12%
9589 \catcode'\&=12%
9590 \catcode'\~=12%
9591 \catcode'\_ =12%

```

For `babel-french`:

```

9592 \LWR@FBcancel%
9593 }

```

`\LWR@linkmediacatcodes` Sets catcodes before processing macros which have hyperlinks as arguments. Modified for multimedia links.

```

9594 \newcommand*{\LWR@linkmediacatcodes}{%
9595   \catcode'\#=12%
9596   \catcode'\%=12%
9597 %   \catcode'\&=12% left alone for splitting flash variables
9598   \catcode'\~=12%
9599   \catcode'\_ =12%

```

For babel-french:

```

9600   \LWR@FBcancel%
9601 }

```

`\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.

```

9602 \NewDocumentCommand{\LWR@subhyperref}{m}{%
9603   \LWR@traceinfo{\LWR@subhyperref !#1!}%
9604   \LWR@sanitize{#1}%
9605   \LWR@htmltag{%
9606     a href="\LWR@sanitized" % space
9607     \LWR@addlinktitle % space
9608     target="\_{}blank" % space
9609   }%
9610 }

```

`\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.

```

9611 \newcommand{\LWR@subhyperreftext}[1]{%
9612   #1%
9613   \LWR@htmltag{/a}%
9614   \LWR@ensuredoingapar%
9615 }

```

`\LWR@subhyperrefclass` $\{\langle URL \rangle\} \{\langle text \rangle\} \{\langle htmlclass \rangle\}$

```

9616 \NewDocumentCommand{\LWR@subhyperrefclass}{m +m m}{%
9617   \LWR@htmltag{%
9618     a % space
9619     href="\beginngroup\@sanitize#1\endgroup" % space
9620     class="#3" % space
9621     \LWR@addlinktitle % space
9622   }\LWR@orignewline%
9623   #2%
9624   \LWR@htmltag{/a}%
9625   \LWR@ensuredoingapar%
9626 }

```

`\href` [*options*] {*URL*}

Create a link with accompanying text:

```

9627 \DeclareDocumentCommand{\LWR@hrefb}{O{} m}{%
9628   \LWR@ensuredoingapar%
9629   \LWR@subhyperref{#2}%
9630   \endgroup% restore catcodes
9631   \LWR@subhyperref{#1}%
9632 }
9633
9634 \newrobustcmd*\href{%
9635   \begingroup%
9636   \LWR@linkcatcodes%
9637   \LWR@hrefb%
9638 }
```

`\nolinkurl` {*URL*}

Print the name of the link without creating the link:

```

9639 \newcommand*\LWR@nolinkurlb[1]{%
9640   \LWR@ensuredoingapar%
9641   \def\LWR@templink{#1}%
9642   \@onelevel@sanitize\LWR@templink%
9643   \LWR@templink%
9644   \endgroup%
9645 }
9646
9647 \newrobustcmd*\nolinkurl{%
9648   \begingroup%
9649   \LWR@linkcatcodes%
9650   \LWR@nolinkurlb%
9651 }
```

`\url` {*URL*}

Create a link whose text name is the address of the link.

The `url` package may redefine `\url`, so it is `\let` to `\LWR@urlahere` and also redefined by `lwarp-url`.

```

9652 \DeclareDocumentCommand{\LWR@urlb}{m}{%
9653   \LWR@ensuredoingapar%
9654   \def\LWR@templink{#1}%
9655   \@onelevel@sanitize\LWR@templink%
9656   \href{\LWR@templink}{\LWR@templink}%
9657   \endgroup%
9658 }
9659
9660 \newrobustcmd*\url{%
9661   \begingroup%
9662   \LWR@linkcatcodes%
9663   \LWR@urlb%
9664 }
```

9664 }

`\LWR@subinlineimage` {<alt> *tag*} {<class>} {<filename>} {<extension>} {<CSS style>}

Factored from lateximage.

```

9665 \newcommand*{\LWR@subinlineimage}[5]{%
9666     \ifblank{#1}%
9667     {%
9668         \LWR@htmltag{img \LWR@indentHTML
9669             src="#3.#4" \LWR@indentHTML
9670             alt="#3" \LWR@indentHTML
9671             style="#5" \LWR@indentHTML
9672             class="#2" \LWR@orignewline
9673         }%
9674     }%
9675     {%
9676         \LWR@htmltag{img \LWR@indentHTML
9677             src="#3.#4" \LWR@indentHTML
9678             alt="#1" \LWR@indentHTML
9679             style="#5" \LWR@indentHTML
9680             class="#2" \LWR@orignewline
9681         }%
9682     }%
9683 }

9684 \end{warpHTML}

```

Table 15: Float data structures

For each <type> of float (figure, table, etc.) there exists the following:

counter <type>: A counter called <type>, such as figure, table.

\<type>name: Name. \figurename prints “Figure”, etc.

\ext@<type>: File extension. \ext@figure prints “lof”, etc.

\fps@<type>: Placement.

\the<type>: Number. \thetable prints the number of the table, etc.

\p@<type>: Parent’s number. Prints the number of the [within] figure, etc.

\fnum@<type>: Prints the figure number for the caption.
 \<type>name \the<type>, “Figure 123”.

\<type>: Starts the float environment. \figure or \begin{figure}

\end<type>: Ends the float environment. \endfigure or \end{figure}

\tf@<ext>: The L^AT_EX file identifier for the output file.

LWR@have<type>: A boolean remembering whether a \listof was requested for a float of this type.

File with extension lo<f, t, a-z>: An output file containing the commands to build the \listof<type> “table-of-contents” structure.

Cross-referencing names: For cleveref’s \cref and related, \crefname and \Crefname assign human-readable names for references to this float type.

74 Floats

Floats are supported, although partially through emulation.

Table 15 shows the data structure associated with each <type> of float.

74.1 Float environment

for HTML output: 9685 \begin{warpHTML}

\LWR@floatbegin {<type>} [<placement>] Begins a \newfloat environment.

9686 \NewDocumentCommand{\LWR@floatbegin}{m o}{%

Warn if starting a float inside a :

9687 \LWR@spanwarninvalid{float}%

```
9688 \ifbool{FormatWP}{\newline}{}%
9689 \LWR@stoppars%
```

There is a new float, so increment the unique float counter:

```
9690 \addtocounter{LWR@thisautoid}{1}%
9691 \booltrue{LWR@freezethisautoid}%

9692 \begingroup%
```

Settings while inside the environment:

```
9693 \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.

```
9694 \LWR@htmltag{%
9695     figure id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}" % space
9696     class="#1 \@nameuse{LWR@floatstyle@#1}"%
9697 }%
9698 \ifbool{FormatWP}{%
9699     \LWR@orignewLine%
9700     \LWR@BlockClassWP{#1}{wp#1}%
9701 }{ }%
```

Update the caption type:

```
9702 \renewcommand*\@capttype{#1}%
```

Mark the float for a word processor conversion:

```
9703 \LWR@startpars%
9704 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
9705
9706     === begin #1 ===
9707
9708 }{ }%
```

After each `\LWR@floatbegin`, look for `\centering`, etc next, using `\LWR@floatalignment`.

```
9709 }
```

For koma-script. The following does not work for tables.

```
9710 \AtBeginDocument{
9711
9712 \@ifpackageloaded{tocbasic}{
9713
9714 \appto\figure@atbegin{%
9715     \LWR@futurenonSPACElet\LWR@mynexttoken\LWR@floatalignment%
```

```

9716 }
9717
9718 }{}% tocbasic
9719
9720 }% AtBeginDocument

```

`\@xfloat` Support packages which create floats directly.
`\@xdblfloat` Look for `\centering`, etc using `\LWR@floatalignment`.

```

9721 \AtBeginDocument{
9722   \def\@xfloat #1[#2]{%
9723     \LWR@floatbegin{#1}[#2]
9724     \LWR@futurenonspacel\@LWR@mynexttoken\LWR@floatalignment%
9725   }
9726   \def\@xdblfloat #1[#2]{%
9727     \LWR@floatbegin{#1}[#2]
9728     \LWR@futurenonspacel\@LWR@mynexttoken\LWR@floatalignment%
9729   }
9730 }

```

`\LWR@floatend` Ends a `\newfloat` environment.

```

9731 \newcommand*{\LWR@floatend}{%

```

If saw a `\centering`, finish the center environment:

```

9732   \LWR@endfloatalignment%

```

Mark the float end for a word processor conversion:

```

9733   \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
9734
9735   === end ===
9736
9737   }{}%
9738   \LWR@stoppars%

```

Close an HTML figure tag:

```

9739   \ifbool{FormatWP}{\endLWR@BlockClassWP}{}%
9740   \LWR@html\elementend{figure}%
9741   \endgroup%
9742   \boolfalse{LWR@freezethisautoid}%
9743   \LWR@startpars%
9744   \ifbool{FormatWP}{\newline}{}%
9745 }

```

`\end@float` Support packages which create floats directly.
`\end@dblfloat`

```

9746 \AtBeginDocument{
9747   \let\end@float\LWR@floatend
9748   \let\end@dblfloat\LWR@floatend
9749 }

```

74.2 Float tracking

Ctr LWR@thisautoid A sequential counter for all floats and theorems. This is used to identify the float or theorem then reference it from the List of Figures and List of Tables.

```
9750 \newcounter{LWR@thisautoid}
```

Ctr 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.

```
9751 \newcounter{LWR@thisautoidWP}
```

Bool LWR@freezethisautoid Prevents multiple increments of \LWR@thisautoid inside a float.

```
9752 \newbool{LWR@freezethisautoid}
9753 \boolfalse{LWR@freezethisautoid}
```

\LWR@forcenewautoidanchor Adds a new <autoid> anchor.

```
9754 \newcommand*{\LWR@forcenewautoidanchor}{%
9755   \addtocounter{LWR@thisautoid}{1}%
9756   \LWR@stoppars%
9757   \LWR@htmltag{a id="\LWR@print@mbx{autoid-\arabic{LWR@thisautoid}}"}%
9758   \LWR@htmltag{/a}%
9759   \LWR@startpars%
9760 }
```

\LWR@newautoidanchor Sometimes adds a new <autoid> anchor.

```
9761 \newcommand*{\LWR@newautoidanchor}{%
9762   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9763   }{%
9764   {\ifbool{LWR@freezethisautoid}}{\LWR@forcenewautoidanchor}}%
9765 }
```

\@capttype Remembers which float type is in use.

```
9766 \newcommand*{\@capttype}{}
```

\LWR@floatalignmentname Set to center, flushleft, or flushright if saw \centering, \raggedright, or \raggedleft.

```
9767 \newcommand*{\LWR@floatalignmentname}{}
```

\LWR@floatalignment If sees a \centering, \raggedleft, or \raggedright, creates a center, flushright, or flushleft environment.

```
9768 \newcommand*{\LWR@floatalignment}{%
9769   \ifdefstrequal{\LWR@mynexttoken}{\centering}{%
9770     \center%
9771     \renewcommand*{\LWR@floatalignmentname}{center}%

```

```

9772   }{}%
9773   \ifdefstrequal{\LWR@mynexttoken}{\raggedright}{%
9774     \flushleft%
9775     \renewcommand*\LWR@floatalignmentname}{flushleft}%
9776   }{}%
9777   \ifdefstrequal{\LWR@mynexttoken}{\raggedleft}{%
9778     \flushright%
9779     \renewcommand*\LWR@floatalignmentname}{flushright}%
9780   }{}%
9781 }

```

`\LWR@endfloatalignment` Closes an environment from `\LWR@floatalignment`.

```

9782 \newcommand*\LWR@endfloatalignment{%
9783   \ifdefvoid{\LWR@floatalignmentname}%
9784     {}%
9785     {\@nameuse{end\LWR@floatalignmentname}}%
9786   \renewcommand*\LWR@floatalignmentname{}%
9787 }

```

74.3 Caption inside a float environment

`\CaptionSeparator` How to separate the float number and the caption text, if not defined by the user. In most cases, `caption`'s settings are used instead.

```

9788 \AtBeginDocument{\providecommand*\CaptionSeparator{:~}}

```

```
\@caption {<posn> [<name>] [<long name>]}
```

```
\@makecaption {<name and num>} [<text>]}
```

Prints the float type and number, the caption separator, and the caption text.

`\@caption` is provided here in case `caption` is not loaded, and is based on the `nameref` package.

```

9789 \AtBeginDocument{
9790   \@ifpackageloaded{caption}{}{
9791     \let\LWR@orig@caption\@caption%
9792     \long\def\@caption#1[#2]{%

```

Warn if using a caption inside a ``:

```

9793       \LWR@spanwarnformat{caption}%
9794       \LWR@setlatestname{#2}%
9795       \LWR@orig@caption{#1}[#2]% also takes third argument
9796     }%
9797   }%
9798   \renewcommand{\@makecaption}[2]{%

```

```

9799         \LWR@traceinfo{@makecaption}%
9800         \caption@begin{\@capttype}%
9801         \LWR@isolate{#1}%
9802         \edef\LWR@tempone{#1}%
9803         \ifdefvoid{\LWR@tempone}{\CaptionSeparator}%
9804         \LWR@isolate{#2}%
9805         \caption@end%
9806         \LWR@traceinfo{@makecaption: done}%
9807     }%
9808 }
9809 }

```

74.4 Caption and LOF linking and tracking

When a new HTML file is marked in the L^AT_EX PDF file, or at the start of a new section, the L^AT_EX page number at that point is stored in `LWR@latestautopage`, (and the associated filename is remembered by the special L^AT_EX labels). This page number is used to generate an `autopage HTML <id>` in the HTML output at the start of the new HTML file or section. Meanwhile, there is a float counter used to generate an `HTML autoid <id>` at the start of the float itself in the HTML file. The `autopage` and `autoid` values to use for each float are written to the `.lof`, etc. files just before each float's entry. These values are used by `\l@figure`, etc. to create the HTML links in the List of Figures, etc.

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.

```

9810 \newcounter{LWR@nextautoid}
9811 \newcounter{LWR@nextautopage}

```

`\LWRsetnextfloat` `{<autopage>} {<float autoid>}`

File `*_html.lof` This is written to the `*_html.lof` or `*_html.lot` file just before each float's usual entry. The `autopage` and the float's `autoid` are remembered for `\l@figure` to use when creating the HTML links.

File `*_html.lot`

```

9812 \newcommand*{\LWRsetnextfloat}[2]{%
9813     \setcounter{LWR@nextautopage}{#1}%
9814     \setcounter{LWR@nextautoid}{#2}%
9815 }

```

Ctrl `LWR@latestautopage` The HTML output's PDF page number at the start of a new HTML file or section.

`\LWRsetnextfloat` is written with this and the `autoid` by the modified `\addcontentsline` just before each float's entry.

```

9816 \newcounter{LWR@latestautopage}
9817 \setcounter{LWR@latestautopage}{1}

```

Env LWR@figcaption An HTML `<figcaption>` is not allowed in places where L^AT_EX does allow a figure caption, such as inside a `longtable` where the `tabular` has already started, or inside a `center` environment. Therefore, a `<div>` of class `figurecaption` is used instead.

```

9818 \newenvironment*{LWR@figcaption}
9819   {%
9820     \ifbool{FormatWP}{%
9821       \BlockClass[font-style:italic]{figurecaption}%
9822     \LWR@print@vspace*{\baselineskip}
9823     }{%
9824       \BlockClass{figurecaption}%
9825     }%
9826   }%
9827   {\endBlockClass}

```

`\LWR@HTML@caption@begin` `{\langle type \rangle}`

Low-level code to create HTML tags for captions.

The print versions are from the `caption` package, if loaded.

```

9828 \newcommand*{\LWR@HTML@caption@begin}[1]
9829 {%
9830   \LWR@traceinfo{LWR@HTML@caption@begin}%

```

Keep `par` and `minipage` changes local:

```

9831   \begingroup%

```

No need for a `minipage` or `\parbox` inside the caption:

```

9832   \RenewDocumentEnvironment{minipage}{O{t} o O{t} m}{}{}%
9833   \RenewDocumentCommand{\parbox}{O{t} O{} O{t} m +m}{##5}%

```

Enclose the original caption code inside an HTML tag:

```

9834   \LWR@figcaption%
9835   \LWR@traceinfo{LWR@HTML@caption@begin: about to LWR@origcaption@begin}%
9836   \LWR@print@caption@begin{#1}%
9837   \LWR@traceinfo{LWR@HTML@caption@begin: done}%
9838 }

```

`\LWR@HTML@caption@end` Low-level patches to create HTML tags for captions.

```

9839 \newcommand*{\LWR@HTML@caption@end}
9840 {%
9841   \LWR@traceinfo{LWR@HTML@caption@end}%
9842   \LWR@print@caption@end%

```

Closing tag:

```

9843   \endLWR@figcaption%

```

```

9844 \endgroup%
9845 % \leavevmode% avoid bad space factor (0) error
9846 \LWR@traceinfo{LWR@HTML@caption@end: done}%
9847 }

```

`\caption@begin` `\caption@end` Low-level patches to create HTML tags for captions. These are assigned `\AtBeginDocument` so that other packages which modify captions will have already been loaded before saving the print-mode version.

Print versions are provided here in case `caption` is not loaded.

```

9848 \AtBeginDocument{
9849   \providecommand{\caption@begin}[1]{}
9850   \LWR@formatted{caption@begin}
9851
9852   \providecommand{\caption@end}{}
9853   \LWR@formatted{caption@end}
9854 }

```

`\captionlistentry` Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```

9855 \AtBeginDocument{%
9856 \@ifpackageloaded{caption}{
9857   \let\LWR@origcaptionlistentry\captionlistentry
9858
9859   \renewcommand*\captionlistentry{%
9860     \LWR@ensuredoingapar%
9861     \LWR@origcaptionlistentry%
9862   }

9863   \def\LWR@LTcaptionlistentry{%
9864     \LWR@ensuredoingapar%
9865     \LWR@forcenewautoanchor%
9866     \bgroup%
9867     \@ifstar{\egroup\LWR@LT@captionlistentry}% gobble *
9868     {\egroup\LWR@LT@captionlistentry}%
9869   }%
9870
9871   \def\LWR@LT@captionlistentry#1{%
9872     \caption@listentry\@firstoftwo[LTcaption]{#1}%
9873   }%
9874 }% caption loaded
9875 }% caption not loaded
9876 \newcommand{\captionlistentry}[2][{}]{%
9877 \newcommand{\LWR@LT@captionlistentry}[2][{}]{%
9878 }
9879 }% AtBeginDocument

```

`\addcontentsline` Patched to write the autopage and autooid before each float's entry. No changes if writing .toc For a theorem, automatically defines `\ext@<type>` as needed, to mimic and reuse the float mechanism.

f

```

9880 \let\LWR@origaddcontentsline\addcontentsline
9881
9882 \renewcommand*\addcontentsline[3]{%
9883   \ifstrequal{#1}{toc}{}% not TOC

9884   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
9885     {}%
9886     {\LWR@newautoidanchor}%

9887   \ifcsvoid{ext@#2}{\csdef{ext@#2}{#1}}{%

9888     \addtocontents{\@nameuse{ext@#2}}{%
9889       \protect\LWRsetnextfloat%
9890       {\arabic{LWR@latestautopage}}%
9891       {\arabic{LWR@thisautoid}}%
9892     }%
9893   }% not TOC
9894   \LWR@origaddcontentsline{#1}{#2}{#3}%
9895 }

```

Pkg `capt-of` Either package provides `\captionof`, which is later patched at the beginning of the document.
Pkg `caption`

`\captionof` Patched to handle paragraph tags.

```

9896 \RequirePackage{capt-of}
9897
9898 \AtBeginDocument{
9899   \let\LWR@origcaptionof\captionof
9900
9901   \renewcommand*\captionof{%
9902     \LWR@stoppars%
9903     \LWR@origcaptionof%
9904   }
9905 }% AtBeginDocument

9906 \end{warpHTML}

```

75 Table of Contents, LOF, LOT

This section controls the generation of the TOC, LOF, and LOT.

The `.toc`, `.lof`, and `.lot` files are named by the source code `\jobname`.

In HTML, the printed tables are placed inside a `<div>` of class `toc`, `lof`, or `lot`.

A “sidetoc” is provided which prints a subset of the TOC on the side of each page other than the homepage.

The regular L^AT_EX infrastructure is used for TOC, along with some patches to generate HTML output.

for HTML output: 9907 \begin{warpHTML}

75.1 Reading and printing the toc

`\LWR@myshorttoc` $\{\langle toc/lof/lot/sidetoc \rangle\}$

Reads in and prints the TOC/LOF/LOT at the current position. While doing so, makes the @ character into a normal letter to allow formatting commands in the section names.

Unlike in regular L^AT_EX, the file is not reset after being read, since the sidetoc may be referred to again in each HTML page.

```
9908 \newcommand*{\LWR@myshorttoc}[[1]]{%
9909     \LWR@traceinfo{\LWR@myshorttoc: #1}%
9910     \LWR@ensuredoingapar%
```

Only if the file exists:

```
9911     \IfFileExists{\jobname.#1}{%
9912         \LWR@traceinfo{\LWR@myshorttoc: loading}%
```



Many of the commands in the file will have @ characters in them, so @ must be made a regular letter.

```
9913         \begingroup%
9914         \makeatletter%
```

Disable CJK xpinyin while generating the sidetoc.

```
9915         \LWR@disablepinyin%
```

Read in the toc file:

```
9916         \@input{\jobname.#1}%
9917         \endgroup%
9918     }%
9919     {}%
9920     \LWR@traceinfo{\LWR@myshorttoc: done}%
9921 }
```

`\LWR@subtableofcontents` $\{\langle toc/lof/lot \rangle\} \{\langle sectionstarname \rangle\}$

Places a TOC/LOF/LOT at the current position.

```
9922 \NewDocumentCommand{\LWR@subtableofcontents}{m m}{%
```

Closes previous levels:

```

9923 \@ifundefined{chapter}%
9924     {\LWR@closeprevious{section}}%
9925     {\LWR@closeprevious{chapter}}%

```

Prints any pending footnotes so that they appear above the potentially large toc:

```
9926 \LWR@printpendingfootnotes%
```

Place the list into its own chapter (if defined) or section:

```
9927 \@ifundefined{chapter}{\section*{#2}}{\chapter*{#2}}%
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
9928 \LWR@htmlElementclass{nav}{#1}%
```

Create the actual list:

```
9929 \LWR@myshorttoc{#1}%
```

Close the nav:

```

9930 \LWR@htmlElementclassend{nav}{#1}%
9931 }

```

```
\@starttoc {(ext)}
```

Patch \@starttoc to encapsulate the toc inside HTML tags:

```

9932 \let\LWR@orig@starttoc\@starttoc
9933
9934 \renewcommand{\@starttoc}[1]{
9935     \LWR@htmlElementclass{nav}{#1}%
9936     \LWR@orig@starttoc{#1}%
9937     \LWR@htmlElementclassend{nav}{#1}%
9938 }

```

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.)

```

9939 \newbool{LWR@copiedsidetoc}
9940 \boolfalse{LWR@copiedsidetoc}

```

\tableofcontents Patch \tableofcontents, etc. to print footnotes first. newfloat uses \listoffigures for all future float types.

```

9941 \AtBeginDocument{
9942
9943 \let\LWR@origtableofcontents\tableofcontents
9944
9945 \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:

```

9946 \ifboolexpr{bool{FormatWP} and bool{WPMarkTOC}}{
9947
9948 === table of contents ===
9949
9950 }
9951 {

```

Copy the .toc file to .sidedoc for printing the sideroc. The original .toc file is renewed when \tableofcontents is finished.

```

9952 \ifbool{LWR@copiedsidedoc}{%
9953 \LWR@copyfile{\jobname.toc}{\jobname.sidedoc}%
9954 \booltrue{LWR@copiedsidedoc}%
9955 }%
9956 \LWR@printpendingfootnotes
9957 \LWR@origtableofcontents
9958 }
9959}% \tableofcontents
9960
9961}% AtBeginDocument

```

\listoffigures

```

9962 \let\LWR@origlistoffigures\listoffigures
9963
9964 \renewcommand*{\listoffigures}{
9965 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9966
9967 === list of figures ===
9968
9969 }
9970 {
9971 \LWR@printpendingfootnotes
9972 \LWR@origlistoffigures
9973 }
9974 }

```

\listoftables

```

9975 \let\LWR@origlistoftables\listoftables
9976
9977 \renewcommand*{\listoftables}{
9978 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
9979
9980 === list of tables ===
9981
9982 }
9983 {
9984 \LWR@printpendingfootnotes
9985 \LWR@origlistoftables
9986 }

```

9987 }

75.2 High-level toc commands

`\listof` $\langle type \rangle$ $\langle title \rangle$

Emulate the `\listof` command from the `float` package (section 251). Used to create lists of custom float types. Also used to redefine the standard L^AT_EX `\listoffigures` and `\listoftables` commands.

```

9988 \NewDocumentCommand{\listof}{m +m}{%
9989   \ifundefined{l@#1}{%
9990     \csdef{l@#1}##1##2{\hypertocfloat{1}{#1}{\nameuse{ext@#1}}{##1}{##2}}%
9991   }{ }%
9992   \LWR@subtableofcontents{\nameuse{ext@#1}}{#2}%
9993   \expandafter\newwrite\csname tf@\csname ext@#1\endcsname\endcsname%
9994   \immediate\openout \csname tf@\csname ext@#1\endcsname\endcsname%
9995     \jobname.\nameuse{ext@#1}\relax%
9996 }
```

75.3 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 sideroc:

CSS related to sideroc:

div.sidetoccontainer: The entire sideroc.

div.sidetoctitle: The title.

div.sidetoccontents: The table of contents.

9997 \end{warpHTML}

for HTML & PRINT: 9998 \begin{warpall}

Ctrl SideTOCDepth Controls how deep the side-TOC gets. Use a standard L^AT_EX section level similar to `tocdepth`. Warn if parts of the website may be inaccessible.

```

9999 \newcounter{SideTOCDepth}
10000 \setcounter{SideTOCDepth}{1}
10001
10002 \AtEndDocument{%
10003   \ifnumcomp{\value{SideTOCDepth}}{<}{\value{FileDepth}}{
10004     \PackageWarningNoLine{lwarp}
10005     {%
```

```

10006         SideTOCDepth is less than FileDepth,\MessageBreak
10007         so some website pages may be inaccessible%
10008     }
10009 }{}
10010 }

```

`\sidedtocname` Holds the default name for the sideroc.

```

10011 \newcommand{\sidedtocname}{Contents}

10012 \end{warpall}

```

for HTML output: 10013 `\begin{warpHTML}`

`\LWR@sidedtoc` Creates the actual side-TOC.

```

10014 \newcommand*{\LWR@sidedtoc}{%
10015     \LWR@forcenewpage
10016     \LWR@stoppars
10017 }

```

The entire sideroc is placed into a `nav` of class `sidedtoc`.

```

10018     \LWR@htmlElementclass{div}{sidedtoccontainer}
10019     \LWR@htmlElementclass{nav}{sidedtoc}
10020
10021     \setcounter{tocdepth}{\value{SideTOCDepth}}
10022 }

```

The title is placed into a `<div>` of class `sidedtoctitle`, and may contain paragraphs.

```

10023     \begin{BlockClass}{sidedtoctitle}
10024     \ifcvoid{thetitle}{}{\InlineClass{sidedtocthetitle}{\thetitle}\par}
10025     \sidedtocname
10026     \end{BlockClass}

```

The table of contents is placed into a `<div>` of class `sidedtoccontents`.

```

10027     \begin{BlockClass}{sidedtoccontents}
10028     \LinkHome
10029
10030     \LWR@myshorttoc{sidedtoc}
10031     \end{BlockClass}
10032     \LWR@htmlElementclassend{nav}{sidedtoc}
10033     \LWR@htmlElementclassend{div}{sidedtoccontainer}
10034 }

```

75.4 Low-level toc line formatting

`\numberline` $\{<number>\}$

(Called from each line in the .aux, .lof files.)

Record this section number for further use:

```
10035 \newcommand*{\LWR@numberline}[1]{%
10036   \LWR@sectionnumber{#1}\quad%
10037 }
10038
10039 \LetLtxMacro\numberline\LWR@numberline
```

`\LWR@maybetocdata` Replaced by `tocdata`. Adds author name.

```
10040 \newcommand*{\LWR@maybetocdata}{}
```

`\hypertoc` $\langle 1: depth \rangle \langle 2: type \rangle \langle 3: name \rangle \langle 4: page \rangle$

Called by `\l@section`, etc. to create a hyperlink to a section.

The autopage label is always created just after the section opens.

#1 is depth

#2 is section, subsection, etc.

#3 the text of the caption

#4 page number

```
10041 \NewDocumentCommand{\hypertoc}{m m +m m}{%
10042   \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
```

Respond to `tocdepth`:

```
10043   \ifnumcomp{#1}{>}{\value{tocdepth}}%
10044     {}%
10045     {%
10046     \LWR@startpars%
```

Create an HTML link to `<filename>#autosec-(page)`, with the name, of the given HTML class.

`\BaseJobname` is added to the label in case `xr` or `xr-hyper` are used.

```
10047   \LWR@subhyperrefclass{%
10048     \LWR@htmlrefsectionfilename{\BaseJobname-autopage-#4}%
10049     \LWR@origpound\LWR@print@embox{autosec-#4}%
10050   }{#3}{toc#2}%

10051   \LWR@maybetocdata%

10052   \LWR@stoppars%
10053 }%
10054 \LWR@traceinfo{hypertoc done}%
10055 }
```

Ctrl lofdepth TOC depth for figures.

```
10056 \@ifclassloaded{memoir}{}{
10057     \newcounter{lofdepth}
10058     \setcounter{lofdepth}{1}
10059 }
```

Ctrl lotdepth TOC depth for tables.

```
10060 \@ifclassloaded{memoir}{}{
10061     \newcounter{lotdepth}
10062     \setcounter{lotdepth}{1}
10063 }
```

`\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

```
10064 \newcommand{\hypertocfloat}[5]{%
```

If some float-creation package has not yet defined the float type's lofdepth counter, etc, define it here:

```
10065     \@ifundefined{c@#3depth}{%
10066         \newcounter{#3depth}%
10067         \setcounter{#3depth}{1}%
10068     }{%
```

Respond to lofdepth, etc.:

```
10069     \LWR@traceinfo{hypertocfloat depth is #1 #3depth is \arabic{#3depth}}%
10070     \ifthenelse{\cnttest{#1}{<=}{\arabic{#3depth}}}{%
10071         {%
10072             \LWR@startpars%
```

Create an HTML link to filename#autoid-(float number), with text of the caption, of the given HTML class.

`\BaseJobname` is added to the label in case `xr` or `xr-hyper` are used.

```
10073         \LWR@subhyperrefclass{%
10074         \LWR@htmlrefsectionfilename{%
10075             \BaseJobname-autopage-\arabic{LWR@nextautopage}%
10076         }%
10077         \LWR@origpound\LWR@print@embox{autoid-\arabic{LWR@nextautoid}}}%
10078         {#4}{toc#2}%
```

```

10079          \LWR@maybetocdata%

10080          \LWR@stoppars%
10081      }%
10082      {}%
10083 }

```

Automatically called by `\contentsline`:

```
\l@book {<name>} {<page>}
```

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\book`.

```
10084 \DeclareDocumentCommand{\l@book}{m m}{\hypertoc{-2}{book}{#1}{#2}}
```

```
\l@part {<name>} {<page>}
```

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\part`.

```
10085 \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`.

```

10086 \@ifundefined{chapter}
10087 {}
10088 {
10089 \DeclareDocumentCommand{\l@chapter}{m m}
10090     {\hypertoc{0}{chapter}{#1}{#2}}
10091 }

```

```
\l@section {<name>} {<page>}
```

```
10092 \renewcommand{\l@section}[2]{\hypertoc{1}{section}{#1}{#2}}
```

```
\l@subsection {<name>} {<page>}
```

```
10093 \renewcommand{\l@subsection}[2]{\hypertoc{2}{subsection}{#1}{#2}}
```

```
\l@subsubsection {<name>} {<page>}
```

```
10094 \renewcommand{\l@subsubsection}[2]{\hypertoc{3}{subsubsection}{#1}{#2}}
```

```
\l@paragraph {<name>} {<page>}
```

```
10095 \renewcommand{\l@paragraph}[2]{\hypertoc{4}{paragraph}{#1}{#2}}
```

```

\l@subparagraph {<name>} {<page>}

10096 \renewcommand{\l@subparagraph}[2]{\hypertoc{5}{subparagraph}{#1}{#2}}

\l@figure {<name>} {<page>}

10097 \renewcommand{\l@figure}[2]{\hypertocfloat{1}{figure}{lof}{#1}{#2}}

\l@table {<name>} {<page>}

10098 \renewcommand{\l@table}[2]{\hypertocfloat{1}{table}{lot}{#1}{#2}}

10099 \end{warpHTML}

```

76 Index and glossary

See:

<http://tex.stackexchange.com/questions/187038/how-to-mention-section-number-in-index-created-by-imakeidx>

Index links are tracked by the counter `LWR@autoindex`. This counter is used to create a label for each index entry, and a reference to this label for each entry in the index listing. This method allows each index entry to link directly to its exact position in the document.

```

for HTML output: 10100 \begin{warpHTML}

10101 \newcounter{LWR@autoindex}
10102 \setcounter{LWR@autoindex}{0}
10103
10104 \newcounter{LWR@autoglossary}
10105 \setcounter{LWR@autoglossary}{0}

Env theindex

10106 \@ifundefined{chapter}
10107   {\newcommand*\LWR@indexsection[1]{\section*{#1}}}
10108   {\newcommand*\LWR@indexsection[1]{\chapter*{#1}}}
10109
10110
10111 \AtBeginDocument{
10112
10113 \renewenvironment*{theindex}{%
10114   \LWR@indexsection{\indexname}%
10115   \let\item\LWR@indexitem%
10116   \let\subitem\LWR@indexsubitem%
10117   \let\subsubitem\LWR@indexsubsubitem%
10118 }{}
10119
10120 }% AtBeginDocument

```

`\LWR@indexitem` [*<index key>*] The optional argument is added to support `repeatindex`.

```
10121 \newcommand{\LWR@indexitem}[1][\@empty]{
10122
10123   \InlineClass{indexitem}{\LWR@htmlcomment{}}#1%
10124 }
```

`\LWR@indexsubitem`

```
10125 \newcommand{\LWR@indexsubitem}{
10126
10127   \InlineClass{indexsubitem}{\LWR@htmlcomment{}}%
10128 }
```

`\LWR@indexsubsubitem`

```
10129 \newcommand{\LWR@indexsubsubitem}{
10130
10131   \InlineClass{indexsubsubitem}{\LWR@htmlcomment{}}%
10132 }
```

`\@wrindex` {*<term>*} Redefined to write the `LWR@autoindex` counter instead of page.

```
10133 \def\LWR@wrindex#1{%
10134   \addtocounter{LWR@autoindex}{1}%
10135   \LWR@new@Label{LWRindex-\arabic{LWR@autoindex}}%
10136   \protected@write\@indexfile{%
10137     {\string\indexentry{#1}{\arabic{LWR@autoindex}}}%
10138     \endgroup%
10139     \@esphack%
10140 }
10141
10142 \AtBeginDocument{
10143 \let\@wrindex\LWR@wrindex
10144 }
```

`\@wrglossary` {*<term>*} Redefined to write the `LWR@latestautopage` counter instead of page.

```
10145 \def\@wrglossary#1{%
10146   \addtocounter{LWR@autoglossary}{1}%
10147   \LWR@new@Label{LWRglossary-\theLWR@autoglossary}%
10148   \protected@write\@glossaryfile{%
10149     {\string\glossaryentry{#1}{\theLWR@autoglossary}}%
10150     \endgroup%
10151     \@esphack%
10152 }
```

`\LWR@indexnameref` {*<LWR@autoindex>*}

Creates a hyperlink based on the given entry's autoindex.

```
10153 \newcommand*\LWR@indexnameref[1][\nameref{LWRindex-#1}]
```

`\LWR@doindexentry` { *\langle LWR@autoindex, or macros. \rangle* }

Creates a hyperlink, or handles `\see`, `\textbf`, etc.

```
10154 \newrobustcmd{\LWR@doindexentry}[1]{%
10155     \IfInteger{#1}%
10156     {\LWR@indexnameref{#1}}%
10157     {#1}%
10158 }
```

`\LWR@hyperindexrefnullified` Handles macros commonly seen inside an `\index` entry. Each macro is redefined to create and format a link to its entry.

 **index formatting** To handle additional macros:

```
\appto\LWR@hyperindexrefnullified{. . . }
```

```
10159 \newcommand{\LWR@hyperindexrefnullified}{%
10160     \renewrobustcmd{\emph}[1]{\LWR@HTML@emph{\LWR@doindexentry{##1}}}%
10161     \renewrobustcmd{\textbf}[1]{\LWR@HTML@textbf{\LWR@doindexentry{##1}}}%
10162     \renewrobustcmd{\texteb}[1]{\LWR@HTML@texteb{\LWR@doindexentry{##1}}}%
10163     \renewrobustcmd{\textlg}[1]{\LWR@HTML@textlg{\LWR@doindexentry{##1}}}%
10164     \renewrobustcmd{\textrm}[1]{\LWR@HTML@textrm{\LWR@doindexentry{##1}}}%
10165     \renewrobustcmd{\textsf}[1]{\LWR@HTML@textsf{\LWR@doindexentry{##1}}}%
10166     \renewrobustcmd{\texttt}[1]{\LWR@HTML@texttt{\LWR@doindexentry{##1}}}%
10167     \renewrobustcmd{\textup}[1]{\LWR@HTML@textup{\LWR@doindexentry{##1}}}%
10168     \renewrobustcmd{\textsc}[1]{\LWR@HTML@textsc{\LWR@doindexentry{##1}}}%
10169     \renewrobustcmd{\textulc}[1]{\LWR@HTML@textulc{\LWR@doindexentry{##1}}}%
10170     \renewrobustcmd{\textsi}[1]{\LWR@HTML@textsi{\LWR@doindexentry{##1}}}%
10171     \renewrobustcmd{\textit}[1]{\LWR@HTML@textit{\LWR@doindexentry{##1}}}%
10172     \renewrobustcmd{\textsl}[1]{\LWR@HTML@textsl{\LWR@doindexentry{##1}}}%
10173 }
```

`\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`.

```
10174 \newcommand{\hyperindexref}[1]{%
```

In long index lines with numerous entries, *makeindex* can insert a newline before the page number, resulting in an extra space before the first digit. If the first character is a space, remove it first.

```
10175     \def\LWR@tempone{#1}%
10176     \IfBeginWith{\LWR@tempone}{ }{%
10177         \StrGobbleLeft{\LWR@tempone}{1}[\LWR@tempone]%
10178     }{%}
```

If a numeric entry, create a link. If not numeric, such as `\see`, use the entry as-is. `\emph`, `\textit`, etc. have been redefined above to create and format the entry.

```

10179 \IfInteger{\LWR@tempone}%
10180   {\LWR@indexnameref{\LWR@tempone}}%
10181   {%
10182     \begingroup%
10183     \LWR@hyperindexrefnullified%
10184     #1%
10185     \endgroup%
10186   }%
10187 }

10188 \end{warpHTML}

```

for PRINT output: A null command for print mode, in case hyperref was not used:

```

10189 \begin{warpprint}
10190 \newcommand{\hyperindexref}[1]{#1}
10191 \end{warpprint}

```

for HTML & PRINT: For the glossaries package, try to prevent an error where \glo@name was not found:

```

10192 \begin{warpall}
10193 \providecommand{\glo@name}{}
10194 \end{warpall}

```

77 Bibliography presentation

for HTML output: 10195 \begin{warpHTML}

\bibliography {<filenames>}

Modified to use the base jobname instead of the _html jobname.

```

10196 \def\bibliography#1{%
10197   \if@filesw
10198     \immediate\write\@auxout{\string\bibdata{#1}}%
10199     \fi
10200 %   \@input@{\jobname.bbl}% original
10201   \begingroup%
10202   \@input@{\BaseJobname.bbl}% lwarp
10203   \endgroup%
10204 }

```

\@biblabel {<text-refnumber>}

```

10205 \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>

```

10206 \AtBeginDocument{
10207
10208 \AtBeginEnvironment{thebibliography}{
10209
10210 \providecommand*\LWR@newem}[1]{\textit{#1}}
10211
10212 \renewrobustcmd{\em}{%
10213   \begingroup
10214     \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
10215     \afterassignment\LWR@em@after
10216     \toks@\bgroup
10217 }
10218
10219 \def\LWR@em@finish#1{%
10220   \xdef\LWR@em@after{\noexpand#1{\the\toks@}}%
10221   \endgroup
10222   \LWR@em@after\egroup
10223 }
10224
10225 }% \AtBeginEnvironment{thebibliography}
10226
10227 }% \AtBeginDocument

10228 \end{warpHTML}

```

78 Restoring original formatting

`\LWR@restoreorigformatting` Used to temporarily restore the print-mode meaning of a number of formatting, graphics, and symbols-related macros while generating SVG math or a `lateximage`.

Must be used inside a group.

Sets `\LWR@formatting` to print until the end of the group.

A number of packages will `\appto` additional actions to this macro.

Various packages add to this macro using `\appto`.

for HTML output: `10229 \begin{warpHTML}`

```

10230 \newcommand*\LWR@restoreorigformatting}{%
10231   \LWR@traceinfo{\LWR@restoreorigformatting}%

```

Numerous macros change their print/HTML meaning depending on `\LWR@formatting`:

```

10232   \renewcommand*\LWR@formatting}{print}%
10233   \linespread{1}%

10234   \let\par\LWR@origpar%

```

```

10235 \LWR@select@print@hspace%

10236 \LetLtxMacro\hfil\LWR@origfil%
10237 \let\hss\LWR@orighss%
10238 \let\llap\LWR@origllap%
10239 \let\rlap\LWR@origrlap%
10240 \let\hfilneg\LWR@origfilneg%

10241 \let\,\LWR@origcomma% disable HTML short unbreakable space
10242 \let\thinspace\LWR@origthinspace% disable HTML short unbreakable space
10243 \let\negthinspace\LWR@orignegthinspace% disable HTML negative short unbreakable space
10244 \let\textellipsis\LWR@origtextellipsis%
10245 \let\textless\LWR@origtextless%
10246 \let\textgreater\LWR@origtextgreater%

10247 \let\&\LWR@origampersand%

10248 \LetLtxMacro\em\LWR@origem%
10249 \LetLtxMacro\normalfont\LWR@orignormalfont%
10250 \let\sp\LWR@origsp%
10251 \let\sb\LWR@origsb%
10252 \LetLtxMacro\underline\LWR@origunderline%
10253 \let~\LWR@origtilde%
10254 \let\enskip\LWR@origenskip%
10255 \let\quad\LWR@origquad%
10256 \let\qqquad\LWR@origqqquad%

```

\endtabular must be restored to its original, instead of relying on lwarp's \LWR@formatted mechanism:

```

10257 \LetLtxMacro\endtabular\LWR@origendtabular%
10258 \csletcs{endtabular*}{LWR@origendtabular*}%

10259 \LetLtxMacro\noalign\LWR@orignoalign%
10260 \LetLtxMacro\hline\LWR@orighline%

10261 \let\newline\LWR@orignewline%
10262 \LetLtxMacro\includegraphics\LWR@origincludegraphics%

10263 \LetLtxMacro\@ensuredmath\LWR@origensuredmath%

10264 \let\math\LWR@orig@math%
10265 \let\endmath\LWR@orig@endmath%
10266 \let\displaymath\LWR@orig@displaymath%
10267 \let\enddisplaymath\LWR@orig@enddisplaymath%
10268 %
10269 \LWR@restoreorigaccents%
10270 \LWR@restoreoriglists%
10271 %
10272 \LWR@FBcancel%
10273 }

10274 \end{warpHTML}

```

79 Nullifying filename formatting

The following are used to nullify certain macros and environments while converting section names to file names.

for HTML output: 10275 `\begin{warpHTML}`

Also commonly used are `\@empty`, `\@gobble`, and `\@firstofone`.

10276 `\newcommand*\LWR@dash}{-}`

`\LWR@nullfonts` Removes formatting during filename operations, file references, and HTML comments.

 **Use only inside a group.**

The following are *not* made robust, since they must be expanded to their nullified versions.

10277 `\catcode'\$=\active%` redefining \$ below
 10278 `\catcode'_ =12%` redefining _ below
 10279 `\newcommand*\LWR@nullfonts}{%`

Various built-in symbols.

10280 `\renewcommand*\$}{-}%`
 10281 `\renewcommand*\%}{-}%`
 10282 `\renewcommand*_}{-}%`
 10283 `\renewcommand*\}{-}%`
 10284 `\renewcommand*\{ }{-}%`
 10285 `\renewcommand*\&}{-}%` used to be 'and'
 10286 `\renewcommand*\#}{-}%`
 10287 `\renewcommand*\,}{-}%`
 10288 `\renewcommand*\~}{-}%`
 10289 %
 10290 % accents:
 10291 `\renewcommand*\`}[1]{##1}%`
 10292 `\renewcommand*\´}[1]{##1}%`
 10293 `\renewcommand*\^}[1]{##1}%`
 10294 `\renewcommand*\~}[1]{##1}%`
 10295 `\renewcommand*\=}[1]{##1}%`
 10296 `\renewcommand*\u}[1]{##1}%`
 10297 `\renewcommand*\.[1]{##1}%`
 10298 `\renewcommand*\`}[1]{##1}%`
 10299 `\renewcommand*\H}[1]{##1}%`
 10300 `\renewcommand*\v}[1]{##1}%`
 10301 `\renewcommand*\d}[1]{##1}%`
 10302 `\renewcommand*\c}[1]{##1}%`
 10303 `\renewcommand*\b}[1]{##1}%`
 10304 `\renewcommand*\t}[1]{##1}%`
 10305 %
 10306 `\let\newline\LWR@dash%`
 10307 `\let\textasciicircum\LWR@dash%`
 10308 `\let\textasciitilde\LWR@dash%`

```

10309 \let\textasteriskcentered\LWR@dash%
10310 \let\textbackslash\LWR@dash%
10311 \let\textbar\LWR@dash%
10312 \let\textbardbl\LWR@dash%
10313 \let\textbigcircle\LWR@dash%
10314 \let\textbraceleft\LWR@dash%
10315 \let\textbraceright\LWR@dash%
10316 \let\textbullet\LWR@dash%
10317 \let\textcopyright\LWR@dash%
10318 \let\textdagger\LWR@dash%
10319 \let\textdaggerdbl\LWR@dash%
10320 \let\textdollar\LWR@dash%
10321 \let\textellipsis\LWR@dash%
10322 \let\textemdash\LWR@dash%
10323 \let\textendash\LWR@dash%
10324 \let\textexclamdown\LWR@dash%
10325 \let\textgreater\LWR@dash%
10326 \let\textless\LWR@dash%
10327 \let\textordfeminine\LWR@dash%
10328 \let\textordmasculine\LWR@dash%
10329 \let\textparagraph\LWR@dash%
10330 \let\textperiodcentered\LWR@dash%
10331 \let\textpertenthousand\LWR@dash%
10332 \let\textperthousand\LWR@dash%
10333 \let\textquestiondown\LWR@dash%
10334 \let\textquotedblleft\LWR@dash%
10335 \let\textquotedblright\LWR@dash%
10336 \let\textquoteleft\LWR@dash%
10337 \let\textquoteright\LWR@dash%
10338 \let\textregistered\LWR@dash%
10339 \let\textsection\LWR@dash%
10340 \let\textsterling\LWR@dash%
10341 \let\texttrademark\LWR@dash%
10342 \let\textunderscore\LWR@dash%
10343 \let\textvisiblespace\LWR@dash%
10344 \let\copyright\LWR@dash%
10345 \let\dag\LWR@dash%
10346 \let\ddag\LWR@dash%
10347 \let\dots\LWR@dash%
10348 \let\P\LWR@dash%
10349 \let\pounds\LWR@dash%
10350 \let\S\LWR@dash%
10351 %
10352 \renewcommand*{\aa}{a}%
10353 \renewcommand*{\AA}{A}%
10354 \renewcommand*{\AE}{AE}%
10355 \renewcommand*{\ae}{ae}%
10356 \renewcommand*{\dh}{d}%
10357 \renewcommand*{\DH}{D}%
10358 \renewcommand*{\DJ}{D}%
10359 \renewcommand*{\dj}{d}%
10360 \renewcommand*{\IJ}{IJ}%
10361 \renewcommand*{\ij}{ij}%
10362 \renewcommand*{\L}{L}%
10363 \renewcommand*{\l}{l}%

```

```

10364 \renewcommand*\NG}{NG}%
10365 \renewcommand*\ng}{ng}%
10366 \renewcommand*\O}{O}%
10367 \renewcommand*\o}{o}%
10368 \renewcommand*\oe}{oe}%
10369 \renewcommand*\OE}{OE}%
10370 \renewcommand*\ss}{ss}%
10371 \renewcommand*\SS}{SS}%
10372 \renewcommand*\th}{th}%
10373 \renewcommand*\TH}{TH}%
10374 %
10375 \let\guillemotleft\@empty%
10376 \let\guilsinglleft\@empty%
10377 \let\quotedblbase\@empty%
10378 \let\textquotedbl\@empty%
10379 \let\guillemotright\@empty%
10380 \let\guilsinglright\@empty%
10381 \let\quotesinglbase\@empty%

10382 \renewcommand*\HTMLunicode}[1]{}%
10383 \renewcommand*\HTMLentity}[1]{}%

10384 \renewcommand{\textsuperscript}[1]{##1}%
10385 \renewcommand{\textsubscript}[1]{##1}%

10386 \renewcommand{\underline}[1]{##1}%

10387 \RenewDocumentCommand{\hspace}{s m}{}%

10388 \RenewDocumentCommand{\LWR@htmlspanclass}{o m +m}{##3}%
10389 \DeclareExpandableDocumentCommand{\InlineClass}{D{()}{ } o m +m}{##4}%

```

Nullify math macros.

```

10390 \def\##1\){}%
10391 \def\[##1\]{}%
10392 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}%

```

Nullify logos:

```

10393 \renewcommand*\TeX}{TeX}%
10394 \renewcommand*\LaTeX}{LaTeX}%
10395 \renewcommand*\LaTeXe}{LaTeX2e}%
10396 \renewcommand*\LuaTeX}{LuaTeX}%
10397 \renewcommand*\LuaLaTeX}{LuaLaTeX}%
10398 \renewcommand*\XeTeX}{XeTeX}%
10399 \renewcommand*\XeLaTeX}{XeLaTeX}%
10400 \renewcommand*\ConTeXt}{ConTeXt}%
10401 \renewcommand*\BibTeX}{BibTeX}%
10402 \renewcommand*\MakeIndex}{MakeIndex}%
10403 \renewcommand*\AmS}{AmS}%
10404 \renewcommand*\MiKTeX}{MiKTeX}%
10405 \renewcommand*\LyX}{LyX}%

```

Use the simpler form with `\texorpdfstring`:

```
10406 \def\texorpdfstring{\expandafter\@secondoftwo}%
10407 }
10408 \catcode'\$=3%
10409 \catcode'\_ =8%
```

`\FilenameNullify` *{<redefinitions>}*

Adds more nullifying definitions for filename generation.

```
10410 \newcommand*\FilenameNullify}[1]{%
10411 \appto{\LWR@nullfonts}{#1}%
10412 }

10413 \end{warpHTML}
```

80 Math

80.1 Limitations

See [Math](#), section 8.7.

80.2 HTML alt tag names

Redefinable names for the HTML alt tags, for translation according to the reader's native language.

for HTML & PRINT: 10414 `\begin{warpall}`

`\AltTextOpen` The opening part of HTML alt tag for an image. The default is a left parenthesis.

Default: `(`

```
10415 \newcommand*\AltTextOpen}{(}
```

`\AltTextClose` The closing part of HTML alt tag for an image. The default is a right parenthesis.

Default: `)`

```
10416 \newcommand*\AltTextClose}{)}
```

`\ImageAltText` The HTML alt tag for an image.

Default: `image`

```
10417 \newcommand*\ImageAltText}{image}
```

`\MathImageAltText` The HTML alt tag for an SVG math image.
 Default: “math image”

```
10418 \newcommand*\MathImageAltText}{math image}
```

`\LWR@ThisAltText` The HTML alt tag for the next image. Cleared after use, and also after each `lateximage`, `\LWR@subsingledollar`, and each use of `MATHJAX`.

```
10419 \newcommand*\LWR@ThisAltText}{}
```

`\ThisAltText` $\langle text \rangle$

Assigns the HTML alt tag for the next image generated by `lwarp`, such as a `lateximage`, `picture`, or `svg math`.

```
10420 \newcommand*\ThisAltText}[1]{%
10421   \renewcommand{\LWR@ThisAltText}{#1}%
10422 }
```

`\PackageDiagramAltText` Appended to the `lateximage` HTML alt tag for the images generated by many packages.
 Default: “diagram”

```
10423 \newcommand*\PackageDiagramAltText}{diagram}
```

```
10424 \end{warpall}
```

80.3 Inline and display math

for HTML output: `10425 \begin{warpHTML}`

`ctr LWR@externalfilecnt` Counter for the external files which are generated and then referenced from the HTML:

```
10426 \newcounter{LWR@externalfilecnt}
```

`bool LWR@indisplaymathimage` True if processing display math for SVG output. Inside a `lateximage`, display math is only set to print-mode output if `LWR@indisplaymathimage` is false. Used to avoid nullifying display math before it has been completed.

```
10427 \newbool{LWR@indisplaymathimage}
```

`bool LWR@xfakebold` True if `xfakebold \setBold` is in use.

```
10428 \newbool{LWR@xfakebold}
10429 \boolfalse{LWR@xfakebold}
```

`\LWR@orig@setBold` Redefined by `lwarp-xfakebold`.

```
10430 \newcommand*\LWR@orig@setBold}{}
```

`\LWR@orig@unsetBold` Redefined by `lwarp-xfakebold`.

```
10431 \newcommand*{\LWR@orig@unsetBold}{}

```

`\LWR@applyxfakebold` Redefined by `lwarp-xfakebold`.

```
10432 \newcommand*{\LWR@applyxfakebold}{}

```

`\LWR@setcurrentfont` Sets the actual L^AT_EX font to that which was selected for HTML output. Ex: In HTML mode, `\bfseries` sets `\LWR@f@series` to “bf”. This sets the PDF output here for use inside a `lateximage`.

```
10433 \newcommand*{\LWR@setcurrentfont}{%
10434   \LWR@traceinfo{Using font family \LWR@f@family}%
10435   \@nameuse{\LWR@print@\LWR@f@family family}%
10436   \LWR@traceinfo{Using font series \LWR@f@series}%
10437   \@nameuse{\LWR@print@\LWR@f@series series}%
10438   \LWR@traceinfo{Using font shape \LWR@f@shape}%
10439   \@nameuse{\LWR@print@\LWR@f@shape shape}%
10440   \LWR@traceinfo{Using font caps shape \LWR@f@shapecaps}%
10441   \@nameuse{\LWR@print@\LWR@f@shapecaps shape}%
10442 }

```

`\$` 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.

```
10443 \let\LWR@origtextdollar\$
10444
10445 \renewcommand*{\$}{%
10446   \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
10447   {\LWR@origtextdollar}%
10448   {\HTMLUnicode{00024}}%
10449 }

```

File `lwarp_baseline_marker.png` A marker to be used to help *pdfcrop* identify the inline math baseline and width. If either `graphicx` or `graphics` is loaded, this marker is placed at the lower left and lower right corners of the inline math. *pdfcrop* is then able to identify the width of the image, and also the height of an image such as a horizontal dash which does not otherwise touch the baseline.

File `lwarp_baseline_marker.eps`

A marker with alpha or opacity of 0% is not registered by *pdfcrop*, so the marker is a small square block of 1% alpha, which seems to work while still being effectively invisible in the final SVG image.

If `graphicx` is loaded, this marker is sized as a tiny 1 sp square. If `graphics` is loaded, this marker is used at its default size of around .25 pt. If neither `graphics` package is loaded, the marker is replaced by a 10 sp horizontal space, and there is no assistance for determining baseline or width of the inline math image. The best results are obtained when using `graphicx`.

`\LWR@addbaselinemarker` Places a small marker in an svg inline image. If `graphics` or `graphicx` are loaded, the marker is a mostly transparent image. If neither is loaded, no marker is used.

```

10450 \AtBeginDocument{
10451
10452 \ifpdf
10453   \newcommand*\LWR@baselinename}{lwarp_baseline_marker.png}
10454 \else
10455   \ifXeTeX
10456     \newcommand*\LWR@baselinename}{lwarp_baseline_marker.png}
10457   \else
10458     \newcommand*\LWR@baselinename}{lwarp_baseline_marker.eps}
10459   \fi
10460 \fi
10461
10462 \IfFileExists{\LWR@baselinename}%
10463 {
10464   \@ifpackageloaded{graphicx}{
10465     \newcommand*\LWR@addbaselinemarker}{%
10466       \LWR@originincludegraphics{\LWR@baselinename}%
10467     }
10468   }{
10469     \@ifpackageloaded{graphics}{
10470       \newcommand*\LWR@addbaselinemarker}{%
10471         \LWR@originincludegraphics{\LWR@baselinename}%
10472       }
10473     }{
10474       \newcommand*\LWR@addbaselinemarker}{%
10475         \global\booltrue{LWR@warnbaselinemarker}%
10476       }
10477     \AtEndDocument{
10478       \ifbool{LWR@warnbaselinemarker}{
10479         \PackageWarningNoLine{lwarp}{%
10480           Load graphicx or graphics for improved\MessageBreak
10481           SVG math sizing and baselines%
10482         }
10483       }{}
10484     }
10485   }
10486 }
10487 }{% lwarp_baseline_marker.png or .eps is not present
10488   \newcommand*\LWR@addbaselinemarker}{%
10489     \global\booltrue{LWR@warnbaselinemarker}%
10490   }
10491   \AtEndDocument{
10492     \ifbool{LWR@warnbaselinemarker}{
10493       \PackageWarningNoLine{lwarp}{%
10494         File \LWR@baselinename\space is not installed\MessageBreak
10495         alongside the lwarp-*.sty files, so\MessageBreak
10496         SVG math sizing and baselines may not be accurate}
10497     }{}
10498   }
10499 }
10500
10501 }% AtBeginDocument

```

Bool LWR@warnbaselinemarker True if the math baseline marker was ever called for, but `graphics` or `graphicx` were not loaded.

```
10502 \newbool{LWR@warnbaselinemarker}
10503 \boolfalse{LWR@warnbaselinemarker}
```

Bool LWR@unknownmathsize If `Tikz` or other objects are used inside math mode, the resulting image may exceed the TeX box, resulting in an incorrect measurement of the size of the resulting image. If this is so, the HTML styles for image size and depth will be neutralized.

```
10504 \newbool{LWR@unknownmathsize}
```

`\LWR@singledollarmeasure` $\langle \textit{math expression} \rangle$

Measures the size of the image of the math expression.

(In some circumstances SVG math is used even if MATHJAX is preferred.)

SVG math: `\LWR@origensuredmath` is part of argument #4.

SVG math \ensuremath: `\LWR@origensuredmath` is part of argument #4.

SVG dynamic math: `\LWR@origensuredmath` is part of argument #4.

Mathjax: Argument #4 is the contents of the math expression without `\LWR@origensuredmath`. This case is handled above.

Mathjax \ensuremath: `\LWR@origensuredmath` is part of argument #4.

Mathjax dynamic math: Argument #4 is the contents of the math expression without `\LWR@origensuredmath`, so `\LWR@origensuredmath` is added below.

\ifmmode: Included “just in case”.

Factored from `\LWR@subsingledollarsvg`.

```
10505 \newcommand*{\LWR@singledollarmeasure}[1]{%
10506   \begingroup%
```

Temporarily disable formatting while measuring the image parameters:

```
10507   \LWR@restoreorigformatting%
10508   \RenewDocumentEnvironment{lateximage}{s o s o}{}{}% inside group
10509   \LWR@print@normalsize%
```

Temporarily set font for the HTML PDF output:

```
10510   \LWR@setcurrentfont%
```

`lateximagedepth` must be nested to avoid generating paragraph tags. \mathcal{AMS} math modifies the `\text` macro such that `\addtocounter` does not always occur as expected. Lower-level code is used instead.

```
10511   \global\advance\c@LWR@lateximagedepth 1\relax%
```

Typeset the math in a box. While doing so, some macros or environments may set `LWR@unknownmathsize`, in which case this will be used to cancel the HTML styles being generated here.

```

10512   \boolfalse{LWR@unknownmathsize}%
10513   \ifmmode%
10514     \global\abox{\LWR@singledollarbox}{#1}%
10515   \else%
10516     \ifbool{LWR@dynamicmath}{%
10517       \ifbool{mathjax}{%
10518         \global\abox{\LWR@singledollarbox}%
10519           {\LWR@origensuredmath{#1}}%
10520       }{%
10521         \global\abox{\LWR@singledollarbox}{#1}%
10522       }%
10523     }{%
10524       \global\abox{\LWR@singledollarbox}{#1}%
10525     }%
10526   \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.

```

10527   \global\abox{\LWR@singledollarbox}{%
10528     \usebox{\LWR@singledollarbox}%
10529     \raisebox{-\dp\LWR@singledollarbox}{%
10530       \LWR@addbaselinemarker%
10531     }%
10532   }%
```

More low-level code to undo the counter change.

```

10533   \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.
```

Measure the depth:

```

10534   \setlength{\LWR@singledollardepth}{%
10535     \LateximageFontScale\dp\LWR@singledollarbox%
10536   }%
```

Make the length a global change:

```

10537   \global\LWR@singledollardepth=\LWR@singledollardepth%
```

Likewise for width:

```

10538   \setlength{\LWR@singledollarwidth}{%
10539     \LateximageFontScale\wd\LWR@singledollarbox%
10540   }%
10541   \global\LWR@singledollarwidth=\LWR@singledollarwidth%
```

Likewise for total height:

```

10542 \setlength{\LWR@singledollarheight}{%
10543     \LateximageFontScale\ht\LWR@singledollarbox%
10544 }%
10545 \addtolength{\LWR@singledollarheight}{%
10546     \LateximageFontScale\dp\LWR@singledollarbox%
10547 }%
10548 \global\LWR@singledollarheight=\LWR@singledollarheight%

10549 \endgroup%
10550 }

```

`\LWR@subsingledollarsvg` * $\langle 2: \textit{alt text} \rangle$ $\langle 3: \textit{add'l hashing} \rangle$ $\langle 4: \textit{math expression} \rangle$

For inline math. Uses SVG math. The image is measured and adjusted to the baseline of the HTML output, and placed inside a `lateximage`.

(In some circumstances SVG math is used even if MATHJAX is preferred.)

Factored from `\LWR@subsingledollar`.

```

10551 \newcommand*\LWR@subsingledollarsvg[4]{%

```

Measure the depth, width, and height of the math image:

```

10552     \LWR@singledollarmeasure{#4}%

```

Set a style for the the height or width. The em unit is used so that the math scales according to the user's selected font size.

Start with the greater of the width or the height, biased towards the width:

```

10553     \ifdimgreater{\LWR@singledollarwidth}{.7\LWR@singledollarheight}{%
10554         \def\LWR@singledollarstyle{%
10555             width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
10556         }%
10557     }{%
10558         \def\LWR@singledollarstyle{%
10559             height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
10560         }%
10561     }%

```

If a very narrow width, use the height.

```

10562     \ifdimless{\LWR@singledollarwidth}{.2em}%
10563     {%
10564         \def\LWR@singledollarstyle{%
10565             height:\LWR@convertto{em}{\the\LWR@singledollarheight} em%
10566         }%
10567     }%
10568     }%

```

If very wide and short, use the width:

```

10569 \ifdimless{\LWR@singledollarheight}{.2em}%
10570 {%
10571     \def\LWR@singledollarstyle{%
10572         width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
10573     }%
10574 }%
10575 {}%
```

If there is significant text depth, add the depth to the style.

```

10576 \ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
10577     \def\LWR@singledollardepthstyle{%
10578         \ ; % extra space
10579         \LWR@print@mbbox{%
10580             vertical-align:-\LWR@convertto{em}{\the\LWR@singledollardepth} em%
10581         } % extra space
10582     }%
10583 }{%
10584     \def\LWR@singledollardepthstyle{}%
10585 }%
```

If using certain Tikz actions inside math, the resulting image may exceed the TeX boundaries, so the HTML size styles may be incorrect, and must be neutralized.

```

10586 \ifbool{\LWR@unknownmathsize}{%
10587     \def\LWR@singledollarstyle{}%
10588     \def\LWR@singledollardepthstyle{}%
10589 }{}%
```

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.

```

10590 \ifbool{\LWR@dynamicmath}{%
10591     \LWR@traceinfo{subsingledollar: dynamic}%
10592     \begin{lateximage}% no hashing
10593         [\MathImageAltText]% alt tag
10594         []% no add'l hashing
10595         [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
10596 }{% not dynamic math
10597     \LWR@traceinfo{subsingledollar: static}%
10598     \IfValueTF{#1}{% #1 True
10599         \LWR@findcurrenttextcolor% sets \LWR@tempcolor
```

Support for xfakebold:

```

10600 \ifbool{\LWR@xfakebold}%
10601     {\def\LWR@tempone{Y}}%
10602     {\def\LWR@tempone{N}}%

10603 \begin{lateximage}*% use hashing
10604     [#2]% alt
```

```

10605          *% do not add open/closing braces
10606          [% addl' hashing
10607             #3%
10608             FM\LWR@f@family%
10609             SR\LWR@f@series%
10610             SH\LWR@f@shape%
10611             SHC\LWR@f@shapecaps%
10612             CL\LWR@tempcolor%
10613             FB\LWR@tempone% xfakebold
10614          ]%
10615          [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
10616      }{% #1 False
10617          \begin{lateximage}% no hashing
10618          [#2]% alt
10619          [% no add'l hashing
10620          [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
10621          ]%
10622      }% not dynamic math

```

Place small and almost transparent markers on the baseline at the left and right edges of the image. These markers are seen by *pdfcrop*, and force vertically-centered objects such as a dash to be raised off the baseline in the cropped image, and also force the total width and left/right margins to be correct. (Except that in some fonts a character may exceed the bounding box, and thus may appear wider than expected when converted to an image.)

```
10623 \LWR@addbaselinemarker%
```

Support for xfakebold:

```
10624 \LWR@applyxfakebold%
```

Typeset the contents:

```
10625 \usebox{\LWR@singledollarbox}%
```

The closing baseline marker:

```
10626 \LWR@addbaselinemarker%
```

```
10627 \end{lateximage}%
```

```
10628 %
```

```
10629 }
```

```
\LWR@subsingledollar * {<2: alt text>} {<3: add'l hashing>} {<4: math expression>}
```

For inline math. Uses MathJax, or for SVG math the image is measured and adjusted to the baseline of the HTML output, and placed inside a `lateximage`.

SVG math: `\LWR@origensuredmath` is part of argument #4.

SVG math \ensuremath: `\LWR@origensuredmath` is part of argument #4.

SVG dynamic math: `\LWR@origensuredmath` is part of argument #4.

Mathjax: Argument #4 is the contents of the math expression without `\LWR@origensuredmath`. This case is handled above.

Mathjax `\ensuremath`: `\LWR@origensuredmath` is part of argument #4.

Mathjax dynamic math: Argument #4 is the contents of the math expression without `\LWR@origensuredmath`, so `\LWR@origensuredmath` is added below.

[image filename hashing](#) If starred, a hashed filename is used. If so, the hash is based on the `alt` tag and also the additional hashing argument.

This may be used to provide an expression with a simple `alt` tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated `TEX` expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple `alt` tag is still the same.

```

10630 \newlength{\LWR@singledollarwidth}
10631 \newlength{\LWR@singledollarheight}
10632 \newlength{\LWR@singledollardepth}
10633
10634 \newsavebox{\LWR@singledollarbox}
10635
10636 \NewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
10637   \LWR@traceinfo{\LWR@subsingledollar}%

10638   \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
10639   {%
10640     \LWR@traceinfo{\LWR@subsingledollar: already in a lateximage}%
10641     #4% contents
10642   }%
10643   {% not in a lateximage
10644     \begingroup%
```

Support for `xfakebold`:

```

10645   \LWR@applyxfakebold%
```

MathJax cannot parse the often complicated `TEX` expressions which appear in the various uses of `\ensuredmath`. `\ensuremath` forces the `alt` tag to “(math image)”, as translated according to `\MathImageAltText`. If this is the case, force the use of a `lateximage` even if MathJax. Likewise for `siunitx` if `parse-numbers=false`.

If MathJax, or if formatting math for a word processor, and not `\ensuredmath`, and not a dynamic math expression, print the math expression:

```

10646     \ifboolexpr{%
10647         (
10648             bool{mathjax} or
10649             ( bool{FormatWP} and bool{WPMarkMath} )
10650         ) and
10651         ( not test {
10652             \ifstrequal {#2}% from \ensuredmath
10653                 {\AltTextOpen\MathImageAltText\AltTextClose}
10654         }
10655         ) and
10656         ( not bool{LWR@dynamicmath} )
10657     }%

```

For MATHJAX, print the math between $\left($ and $\right)$:

```

10658     {%
10659         \LWR@traceinfo{LWR@subsingledollar: Mathjax}%
10660     {%
10661         \textbackslash(%
10662             \LWR@HTMLsanitize{#4}%
10663         \textbackslash)%
10664     }%
10665 }% mathjax

```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the L^AT_EX code, and a `css` style to control the baseline adjustment.

```

10666     {% not mathjax
10667         \LWR@traceinfo{%
10668             LWR@subsingledollar: NOT mathjax, or is ensuremath, or is dynamic%
10669         }%
10670         \LWR@subsingledollarsvg{#1}{#2}{#3}{#4}%
10671     }% not mathjax
10672     \endgroup%
10673 }% not in a lateximage

```

Clear the single-use `alt` text:

```

10674     \gdef\LWR@ThisAltText{}%
10675     \LWR@traceinfo{LWR@subsingledollar: done}%
10676 }

```

```

10677 \LetLtxMacro\LWR@origdollar$
10678 \LetLtxMacro\LWR@secondorigdollar$% balance for editor syntax highlighting

```

```

10679 \LetLtxMacro\LWR@origopenparen\left
10680 \LetLtxMacro\LWR@origcloseparen\right
10681 \LetLtxMacro\LWR@origopenbracket\[
10682 \LetLtxMacro\LWR@origclosebracket\]

```

\$ Redefine the dollar sign to place math inside a `lateximage`, or use MATHJAX:
\$\$

```

10683 \begingroup
10684 \catcode'\$=\active%

```

```
10685 \protected\gdef$\@ifnextchar$\LWR@doubledollar\LWR@singledollar}%
```

Used by chemformula to escape single-dollar math:

```
10686 \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`:

```
10687 \protected\gdef\LWR@doubledollar$#1$${%
```

If `MATHJAX` or formatting for a word processor, print the \LaTeX expression:

```
10688 \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }{%
```

For `MATHJAX`, print the math between `\[` and `\]`:

```
10689 {
10690
10691   \textbackslash[%
10692   \LWR@HTMLsanitize{#1}%
10693   \textbackslash]
10694
10695 }% mathjax
```

For `SVG`, print the math inside a `lateximage`, with an `<alt>` tag of the \LaTeX code:

```
10696 {% not mathjax
10697   \begin{BlockClass}{displaymath}%
10698   \LWR@newautoidanchor%
10699   \booltrue{LWR@indisplaymathimage}%
10700   \begin{lateximage}%
10701   [%
10702     \textbackslash{[] % extra space
10703     \LWR@HTMLsanitize{#1} % extra space
10704     \textbackslash{]}%
10705   ]%
10706   *% do not add open/closing braces
```

Support for `xfakebold`:

```
10707   \LWR@applyxfakebold%

10708   \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
10709   \end{lateximage}%
10710   \end{BlockClass}%
10711 }% not mathjax
```

Clear the single-use `alt` text:

```
10712 \gdef\LWR@ThisAltText{%
10713 }%
```

`\LWR@singledollar` $\langle alt\ text\rangle\ \langle math\ expression\rangle$

```

10714 \protected\gdef\LWR@singledollar#1${%
10715 \ifbool{mathjax}{%
10716   \LWR@subsingledollar*%
10717   {% alt tag
10718     \textbackslash( %
10719     \LWR@HTMLsanitize{#1} % extra space
10720     \textbackslash)%
10721   }%
10722   {singledollar}% add'l hashing
10723   {#1}% contents
10724 }{% not mathjax
10725   \LWR@subsingledollar*%
10726   {% alt tag
10727     \textbackslash( %
10728     \LWR@HTMLsanitize{#1} % extra space
10729     \textbackslash)%
10730   }%
10731   {singledollar}% add'l hashing
10732   {\LWR@origensuredmath{#1}}% contents
10733 }% not mathjax

```

Clear the single-use alt text:

```

10734 \gdef\LWR@ThisAltText{%
10735 }

```

`\(` Redefine to the above dollar macros.

`\[`

```

10736 \AtBeginDocument{
10737   \protected\gdef\(#1\){$#1$}
10738   \protected\gdef\[#1\]{$$#1$$}
10739 }
10740
10741 \endgroup

10742 \AtBeginDocument{
10743 \LetLtxMacro\LWR@openbracketnormal\[
10744 \LetLtxMacro\LWR@closebracketnormal\]
10745 }

```

`\@ensuredmath` $\langle expression\rangle$

If MathJax, a `lateximage` is used, since `\ensuremath` is often used for complex TeX expressions which MathJax may not render. If `svg math`, a hashed file is used with a simple alt tag, but additional hashing provided by the contents.

```

10746 \LetLtxMacro\LWR@origensuredmath\@ensuredmath
10747
10748 \renewcommand{\@ensuredmath}[1]{%
10749   \ifbool{mathjax}{%
10750     \LWR@subsingledollar*\AltTextOpen\MathImageAltText\AltTextClose}%

```

```

10751      {%
10752      \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
10753      }%
10754      {%
10755      \relax%
10756      \LWR@origensuredmath{#1}%
10757      }%
10758    }{% SVG math

```

If already inside a `lateximage` in math mode, continue as-is.

```

10759      \ifmmode%
10760      \LWR@origensuredmath{#1}%
10761      \else%

```

Create an inline math `lateximage` with a simple `alt` tag and additional hashing according to the contents.

```

10762      \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
10763      {\LWR@origensuredmath{#1}}%
10764      {%
10765      \LWR@subsingledollar*%
10766      {\AltTextOpen\MathImageAltText\AltTextClose}%
10767      {\protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
10768      {\LWR@origensuredmath{#1}}%
10769      }%
10770      \fi%
10771    }%

```

Clear the single-use `alt` text:

```

10772    \gdef\LWR@ThisAltText{}%
10773  }

```

Remember then remove the old `math` and `displaymath` environments:

```

10774 \let\LWR@orig@math\math
10775 \let\LWR@orig@endmath\endmath
10776 \let\LWR@orig@displaymath\displaymath
10777 \let\LWR@orig@enddisplaymath\enddisplaymath
10778
10779 \let\math\relax
10780 \let\endmath\relax
10781 \let\displaymath\relax
10782 \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`.

```

10783 \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`.

```
10784 \NewEnviron{LWR@displaymathnormal}{\expandafter[\BODY]\@ignoretrue}
```

Set the default `displaymath` to the normal version:

```
10785 \LetLtxMacro[\LWR@openbracketnormal%
10786 \LetLtxMacro]\LWR@closebracketnormal%
10787 \LetLtxMacro\displaymath\LWR@displaymathnormal%
10788 \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.

```
10789 \newenvironment{LWR@displaymathother}
10790 {%
10791   \begin{BlockClass}{displaymath}%
10792   \LWR@newautoidanchor%
10793   \booltrue{LWR@indisplaymathimage}%
10794   \begin{lateximage}%
10795     [\MathImageAltText]%
10796   \LWR@origdollar\LWR@origdollar%
10797 }
10798 {%
10799   \LWR@origdollar\LWR@origdollar%
10800   \end{lateximage}%
10801   \end{BlockClass}%
10802 }
```

Env LWR@equationother A version of `displaymath` which can handle complicated objects, but does not supply `MATHJAX` or `HTML alt` tags.

```
10803 \newenvironment{LWR@equationother}
10804 {%
10805   \begin{BlockClass}{displaymathnumbered}%
10806   \LWR@newautoidanchor%
10807   \booltrue{LWR@indisplaymathimage}%
10808   \begin{lateximage}[\MathImageAltText]%
10809   \LWR@origequation%
10810 }
10811 {%
10812   \LWR@origendequation%
10813   \end{lateximage}%
10814   \end{BlockClass}%
10815 }
```

80.4 MATHJAX support

Ctrl LWR@nextequation Used to add one to compute the next equation number.

```
10816 \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^AT_EX.

```
10817 \newcommand*{\LWR@syncmathjax}{%
```

If using chapters, place the chapter number in front of the equation. Otherwise, use the simple equation number.

```
10818     \ifcsdef{thechapter}{
10819         \LWR@stoppars%
10820         \InlineClass{hidden}{
10821             \textbackslash(
10822                 \textbackslash{}seteqsection \{\thechapter\}
10823                 \textbackslash)
10824         }
10825         \LWR@startpars%
10826     }
10827     {}% not using chapters
```

MATHJAX doesn't allow setting the equation number to 1:

```
10828     \ifthenelse{\cnttest{\value{equation}}>0}
10829     {
```

Tell MATHJAX that the next set of equations begins with the current L^AT_EX equation number, plus one.

```
10830         \setcounter{LWR@nextequation}{\value{equation}}
10831         \addtocounter{LWR@nextequation}{1}
```

Place the MATHJAX command inside “\(" and “\)” characters, to be printed to HTML, not interpreted by L^AT_EX.

```
10832         \LWR@stoppars%
10833         \InlineClass{hidden}{
10834             \textbackslash(
10835                 \textbackslash{}seteqnumber \{\arabic{LWR@nextequation}\}
10836                 \textbackslash)
10837         }
10838         \LWR@startpars%
10839     }{% not eq > 0
10840 }
```

`\LWR@hidelatexequation` $\{ \langle environment \rangle \} \{ \langle contents \rangle \}$

Creates the L^AT_EX version of the equation inside an HTML comment.

```
10841 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
```

Stop HTML paragraph handling and open an HTML comment:

```
10842 \LWR@stoppars
10843 \LWR@htmlopencomment
10844
```

Start the L^AT_EX math environment inside the HTML comment:

```
10845 \begingroup
10846 \@nameuse{LWR@orig#1}
```

While in the math environment, restore various commands to their L^AT_EX meanings.

```
10847 \LWR@restoreorigformatting
```

See `\LWR@htmlmathlabel` in section 80.7.1.

Print the contents of the equation:

```
10848 #2
```

End the L^AT_EX math environment inside the HTML comment:

```
10849 \@nameuse{LWR@origend#1}
10850 \endgroup
10851
```

Close the HTML comment and resume HTML paragraph handling:

```
10852 \LWR@htmlclosecomment
10853 \LWR@startpars
10854 }
```

```
\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^AT_EX.

```
10855 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%
```

Enclose the MATHJAX environment inside printed “\ (“ and “\)” characters.

```
10856 \LWR@origtilde\LWR@orignewline
10857 \textbackslash{}begin\{#1\}
```

Print the contents, sanitizing for HTML special characters.

```
10858 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#2}}
```

Close the MATHJAX environment:

```
10859 \textbackslash{}end\{#1\}
10860 \LWR@orignewline
10861 }
```

80.5 Equation environment

Remember existing equation environment, after redefined by amsmath, if loaded.

```

10862 \AtBeginDocument{
10863   \let\LWR@origequation\equation
10864   \let\LWR@origendequation\endequation
10865   \csletcs{LWR@origequation*}{equation*}
10866   \csletcs{LWR@origendequation*}{endequation*}
10867 }

```

```
\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.

```

10868 \newcommand*\LWR@doequation}[2]{%
10869

```

If `mathjax` or `FormatWP`, print the \LaTeX expression:

```

10870   \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%

```

`MATHJAX` output:

```

10871   {

```

Print commands to synchronize `MATHJAX`'s equation number and format to the current \LaTeX chapter/section and equation number:

```

10872       \LWR@synchronmathjax%

```

Print the \LaTeX math inside an `HTML` comment:

```

10873       \LWR@hidelatexequation{#2}{#1}
10874   }

```

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`.

```

10875   {% not mathjax

```

Begin the `lateximage` with an `<alt>` tag containing the math source:

```

10876       \ifstrequal{#2}{equation*}{%
10877         \begin{BlockClass}{displaymath}%

```

```

10878     }{%
10879     \begin{BlockClass}{displaymathnumbered}%
10880     }%
10881     \LWR@newautoanchor%
10882     \booltrue{LWR@indisplaymathimage}%
10883     \begin{lateximage}[%
10884     \ifstrequal{#2}{equation*}{%
10885     \ifdefequal{LWR@equationtag}{\theequation}{%
10886     %                               no tag was given
10887     }{%
10888     (\LWR@equationtag) % tag was given
10889     }%
10890     }{%
10891     (\LWR@equationtag) % automatic numbering
10892     }%
10893     \textbackslash{begin\{#2\}} % extra space
10894     \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#1}} % extra space
10895     \textbackslash{end\{#2\}}%
10896     ]*% alt tag

```

Support for xfakebold:

```

10897     \LWR@applyxfakebold%

```

Create the actual L^AT_EX-formatted equation inside the lateximage using the contents of the environment.

```

10898     \@nameuse{LWR@orig#2}%
10899     #1% contents collected by \collect@body
10900     \@nameuse{LWR@origend#2}%
10901     \end{lateximage}%
10902     \end{BlockClass}%
10903     }% not mathjax

```

Clear the single-use alt text:

```

10904     \gdef\LWR@ThisAltText{}%
10905 }

```

After the environment, if MATHJAX, print the math to the HTML output for MATHJAX processing. If a footnote is used, sync the footnote counter before, then unsync after for non-equation environments, as defined next.

```

10906 \newcommand*{\LWR@doendequation}[1]{%
10907   \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
10908   {%
10909     \IfSubStr{\detokenize\expandafter{\BODY}}{\detokenize{note}}{%
10910       \InlineClass{hidden}{LWR@syncnotenumbers}%
10911       \LWR@addmathjax{#1}{\BODY}%
10912       \InlineClass{hidden}{LWR@syncnotenames}%
10913     }{%
10914       \LWR@addmathjax{#1}{\BODY}%
10915     }%
10916   }{%
10917

```

Clear the single-use alt text:

```
10918 \gdef\LWR@ThisAltText{}%
10919 }
```

The following are used to synchronize footnote marks and related to MATHJAX if `*note*` is used inside the MATHJAX expression. The counter is read from L^AT_EX then defined into MATHJAX for use during the following equation. After the equation, the MATHJAX value is returned to the text from `\footnotename`. Other notes may be added by appending to `\LWR@syncnotenumbers` and `\LWR@syncnotenames`.

`\LWR@synconenotenumbers` {*MATHJAX variable*} {*mark*}

```
10920 \newcommand*\LWR@synconenotenumbers}[2]{%
10921 \textbackslash(
10922 \textbackslash{def\textbackslash{#1}\{#2\}
10923 \textbackslash)
10924 }
```

`\LWR@syncnotenumbers` Assignments to make.

```
10925 \newcommand*\LWR@syncnotenumbers{\LWR@synconenotenumbers{\LWRfootnote}{\thefootnote}}
```

`\LWR@synconenotename` {*MATHJAX variable*} {*text*}

```
10926 \newcommand*\LWR@synconenotename}[2]{%
10927 \textbackslash(
10928 \textbackslash{def\textbackslash{#1}\{#2\}
10929 \textbackslash)
10930 }
```

`\LWR@syncnotenames` Assignments to make.

```
10931 \newcommand*\LWR@syncnotenames{\LWR@synconenotename{\LWRfootnote}{\footnotename}}
```

Remove existing equation environment:

```
10932 \AtBeginDocument{
10933 \let\equation\relax
10934 \let\endequation\relax
10935 \csletcs{equation*}{relax}
10936 \csletcs{endequation*}{relax}
10937 }
```

`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`.

```
10938 \AtBeginDocument{
10939 \NewEnviron{equation}%
10940 {\LWR@doequation{\BODY}{equation}}%
```

```

10941      [\LWR@doendequation{equation}]
10942
10943      \LetLtxMacro\LWR@equationnormal\equation
10944      \LetLtxMacro\endLWR@equationnormal\endequation
10945 }% AtBeginDocument

```

Env `equation*`

```

10946 \AtBeginDocument{
10947   \NewEnviron{equation*}%
10948     {\LWR@doequation{\BODY}{equation*}}%
10949     [\LWR@doendequation{equation*}]
10950
10951   \csletcs[LWR@equationnormalstar]{equation*}
10952   \csletcs[LWR@endequationnormalstar]{endequation*}
10953 }% AtBeginDocument

```

Remember the “less” version of `equation`, which uses `MATHJAX` and `alt` tags, but does not support complicated contents such as some `Tikz` expressions.

```

10954 \AtBeginDocument{
10955   \LetLtxMacro\LWR@equationless\equation
10956   \LetLtxMacro\endLWR@equationless\endequation
10957   \csletcs[LWR@equationlessstar]{equation*}
10958   \csletcs[LWR@endequationlessstar]{endequation*}
10959 }

```

80.6 `\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.

`\displaymathnormal` Use when display math environments have simple math which is to be sent to `MATHJAX` or included in `HTML alt` tags.
simple math objects

```

10960 \newcommand*{\displaymathnormal}{%
10961   \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}%
10962   \LetLtxMacro\[\LWR@openbracketnormal%
10963   \LetLtxMacro\]\LWR@closebracketnormal%

```

```

10964 \LetLtxMacro\displaymath\LWR@displaymathnormal%
10965 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
10966 \LetLtxMacro\equation\LWR@equationnormal%
10967 \LetLtxMacro\endequation\endLWR@equationnormal%
10968 \csletcs{equation*}{LWR@equationnormalstar}%
10969 \csletcs{endequation*}{LWR@endequationnormalstar}%
10970 }

```

`\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.

```

10971 \newcommand*{\displaymathother}{%
10972   \boolfalse{mathjax}%
10973   \LetLtxMacro\displaymath\LWR@displaymathother%
10974   \LetLtxMacro\enddisplaymath\endLWR@displaymathother%
10975   \LetLtxMacro\[\LWR@displaymathother%
10976   \LetLtxMacro\]\endLWR@displaymathother%
10977   \LetLtxMacro\equation\LWR@equationother%
10978   \LetLtxMacro\endequation\endLWR@equationother%
10979   \csletcs{equation*}{displaymath}%
10980   \csletcs{endequation*}{enddisplaymath}%
10981 }

```

```
10982 \end{warpHTML}
```

for PRINT output: 10983 \begin{warpprint}

Print-mode versions:

```

10984 \newcommand*{\displaymathnormal}{}
10985 \newcommand*{\displaymathother}{}
10986 \end{warpprint}

```

for HTML output: 10987 \begin{warpHTML}

80.7 AMS Math environments

80.7.1 Support macros

Bool LWR@amsmultiline True if processing a multiline environment.

To compensate for multiline-specific code, LWR@amsmultiline 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.

```

10988 \newbool{LWR@amsmultiline}
10989 \boolfalse{LWR@amsmultiline}

```

`\LWR@htmlmathlabel` $\{\langle label \rangle\}$

`lwarp` points `\ltx@label` here. This is used by `\label` when inside a \LaTeX AMS math environment's math display environment.

`\LWR@origltx@label` points to the \LaTeX original, modified by `lwarp`, then by `amsmath`, then by `cleveref`.

```
10990 \newcommand*\LWR@htmlmathlabel}[1]{%
10991   \LWR@traceinfo{\LWR@htmlmathlabelb #1}%
```

If `mathjax` or `FormatWP`, print the \LaTeX expression:

```
10992   \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
10993   {%
```

The combined \LaTeX & HTML label is printed in a `\text` field:

```
10994   \text{%
```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
10995   \ifbool{\LWR@amsmultiline}{\hspace*{\totwidth@}}%
```

Temporarily end the HTML comment, insert the \LaTeX & HTML label, then resume the HTML comment. `\@firstofone` is required to remove extra braces introduced by the `amsmath` package.)

```
10996   \LWR@htmlclosecomment%
10997   \LWR@origltx@label{#1}%
10998   \LWR@htmlopencomment%
10999   }% text
11000 }% mathjax
11001 {%
11002   \LWR@origltx@label{#1}%
11003 }%
11004 }
```

`\LWR@beginhideamsmath` Starts hiding \LaTeX math inside an HTML comment.

```
11005 \newcommand*\LWR@beginhideamsmath){
11006   \LWR@stoppars
11007   \LWR@origtilde\LWR@orignewline
11008   \LWR@htmlopencomment
11009
11010   \begingroup
11011   \LWR@restoreorigformatting
11012 }
```

`\LWR@endhideamsmath` Ends hiding \LaTeX math inside an HTML comment.

```

11013 \newcommand*{\LWR@endhideamsmath}{
11014   \endgroup
11015
11016   \LWR@htmlclosecomment
11017   \LWR@originewline
11018   \LWR@startpars
11019 }

```

80.7.2 Environment patches

The `amsmath` environments already collect their contents in `\@envbody` for further processing. `eqnarray` is not an \mathcal{AMS} 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{AMS} environment.

For `MATHJAX`: Each environment is syched with \LaTeX 's equation numbers, typeset with \LaTeX inside an `HTML` comment, then printed to `HTML` output for `MATHJAX` to process.

Env `eqnarray` This environment is not an \mathcal{AMS} environment and thus its body is not automatically captured, so the `environ` package is used to capture the environment into `\BODY`.

```

11020 \let\LWR@origeqnarray\eqnarray
11021 \let\LWR@origendeqnarray\endeqnarray

```

To remember whether the starred environment was used, and thus whether to number the equations:

```

11022 \newbool{\LWR@numbereqnarray}
11023 \booltrue{\LWR@numbereqnarray}

```

Common code used by `eqnarray` and `Beqnarray` (from `fancybox`):

```

11024 \newcommand{\LWR@eqnarrayfactor}{%

```

If `mathjax` or `FormatWP`, print the \LaTeX expression:

```

11025   \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
11026   {%

```

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:

```

11027     \LWR@syncmathjax%
11028     \boolfalse{\LWR@amsmultiline}%
11029     \ifbool{\LWR@numbereqnarray}%
11030     {%

```

If numbering the equations, execute a copy inside an HTML comment block:

```
11031      \LWR@beginhideamsmath%
11032      \LWR@origeqnarray%
11033      \BODY%
11034      \LWR@origendeqnarray%
11035      \LWR@endhideamsmath%
```

Then print the (sanitized) contents to the output for MATHJAX to interpret:

```
11036      \LWR@addmathjax{eqnarray}{\BODY}%
11037      }%
11038      {% not LWR@numbereqnarray
```

If not numbering equations, just create the contents for MATHJAX:

```
11039      \LWR@addmathjax{eqnarray*}{\BODY}%
11040      }% LWR@numbereqnarray
11041      }% mathjax
11042      {% not mathjax
11043      \ifbool{LWR@numbereqnarray}%
11044      {%
```

For numbered svg equations, first create a latex image with an alt attribute containing sanitized copy of the source code:

```
11045      \begin{BlockClass}{displaymathnumbered}%
11046      \LWR@newautoidanchor%
11047      \booltrue{LWR@indisplaymathimage}%
11048      \begin{lateximage}[\LWR@startingequationtag--\LWR@equationtag]%
11049      \LWR@addmathjax{eqnarray}{\BODY}]*%
```

Support for xfakebold:

```
11050      \LWR@applyxfakebold%
```

Create the image contents using an actual eqnarray:

```
11051      \LWR@origeqnarray%
11052      \BODY%
11053      \LWR@origendeqnarray%
11054      \end{lateximage}%
11055      \end{BlockClass}%
11056      }%
11057      {% not LWR@numbereqnarray
```

If not numbered, do the same, but an extra \nonumber seems to be required:

```
11058      \begin{BlockClass}{displaymath}%
11059      \LWR@newautoidanchor%
11060      \booltrue{LWR@indisplaymathimage}%
11061      \begin{lateximage}[\LWR@addmathjax{eqnarray*}{\BODY}]*%
```

Support for xfakebold:

```

11062          \LWR@applyxfakebold%

11063          \def\@eqnocr{\nonumber\@seqnocr}
11064          \csuse{LWR@origeqnarray}%
11065          \BODY%
11066          \nonumber\csuse{LWR@origendeqnarray}%
11067          \end{lateximage}%
11068          \end{BlockClass}%
11069          }% LWR@numbereqnarray
11070    }% not mathjax

```

Default to number equations in the future:

```

11071    \booltrue{LWR@numbereqnarray}%

```

Clear the single-use alt text:

```

11072    \gdef\LWR@ThisAltText{}%
11073 }

```

eqnarray itself is made with a blank line before and after to force it to be on its own line:

```

11074 \RenewEnviron{eqnarray}
11075 {%
11076
11077 \LWR@eqnarrayfactor
11078
11079 }

```

The starred version is patched to turn off the numbering:

```

11080 \csgpreto{eqnarray*}{\boolfalse{LWR@numbereqnarray}}

11081 \end{warpHTML}

```

81 Lateximages

81.1 Description

Env `lateximage` A `lateximage` is a piece of the document which is typeset in \LaTeX then included in the HTML output as an image. This is used for math if `svg math` is chosen, and also for the `picture`, `tikzpicture`, and other environments.

Before typesetting the `lateximage` a large number of formatting, graphics, and symbols-related macros are temporarily restored to their print-mode meaning by `\LWR@restoreorigformatting`. (See section 78.)

A `lateximage` is typeset on its own PDF page inside an HTML comment which starts on the preceding page and ends on following page, and instructions are written to `lateximage.txt` for `lwarpmk` to extract the `lateximage` from the page of the PDF file then generate an accompanying `.svg` file image file. Meanwhile, instructions to show this image are placed into the HTML file after the comment.

An HTML `` is created to hold both the HTML comment, which will have the `pdftotext` conversion, and also the link to the final `.svg` image.

A \LaTeX label is used to remember which PDF page has the image. A label is used because footnotes, endnotes, and pagenotes may cause the image to appear at a later time. The label is declared along with the image, and so it correctly remembers where the image finally ended up.

HTML alt tag The HTML `alt` tag is set to the \LaTeX source for SVG math, some chemistry expressions, and perhaps some other expressions which make sense for text copy/paste. In some other cases, the `alt` tag is set according to the package name.

When creating an SVG math image, its HTML `alt` tag may be set to the math expression, which may be hashed for image reuse. In the case of `\ensuremath` or after `\inlinemathother`, where the contents require a unique image for each instance of the same expression, the `alt` tag is set to `\MathImageAltText`, along with `\AltTextOpen` and `\AltTextClose`, and the image is not reused.

This `alt` expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “math image”, and it may be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following SVG math images.

For many packages, the output is placed inside a `lateximage` with an HTML `alt` tag set to the package name followed by `\PackageDiagramAltText`. For example:

```
(-xy- diagram)
```

This expression is visible in the browser if images are not loaded, and appears when the text is copied and pasted. The default is “diagram”, and may it be changed according to the document’s language. This may be set in the preamble, or changed as necessary inside the document, where it will affect the following package diagrams.

SVG image font size For the `lateximage` environment, the size of the math and text used in the SVG image may be adjusted by setting `\LateximageFontSizeName` to a font size name — *without the backslash*, which defaults to:

```
\renewcommand{\LateximageFontSizeName}{normalsize}
```

For inline SVG math, font size is instead controlled by `\LateximageFontScale`, which defaults to:

```
\newcommand*{\LateximageFontScale}{.75}
```

81.2 Support counters and macros

for HTML output: 11082 `\begin{warpHTML}`

Ctrl LWR@lateximagenumber Sequence the images.

```
11083 \newcounter{LWR@lateximagenumber}
11084 \setcounter{LWR@lateximagenumber}{0}
```

Ctrl LWR@lateximagedepth Do not create `\lateximage` inside of `\lateximage`.

```
11085 \newcounter{LWR@lateximagedepth}
11086 \setcounter{LWR@lateximagedepth}{0}
```

A few utility macros to write special characters:

```
11087 \edef\LWR@hashmark{\string#} % for use in \write
11088 \edef\LWR@percent{\@percentchar} % for use in \write
```

Ctrl LWR@LIpage Used to reference the PDF page number of a `lateximage` to be written into `<project>-images.txt`.

```
11089 \newcounter{LWR@LIpage}
```

```
11090 \end{warpHTML}
```

81.3 Font size

for HTML & PRINT: 11091 `\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.

```
11092 \newcommand*{\LateximageFontSizeName}{normalsize}
```

`\LateximageFontScale` Declares how large to scale inline SVG math images. The `.svg` file text size should blend well with the surrounding HTML text size. The default is 1, but it may be redefined as needed depending on the HTML font.

```
11093 \newcommand*{\LateximageFontScale}{1}
```

```
11094 \end{warpall}
```

81.4 Equation numbers

for HTML output: 11095 `\begin{warpHTML}`

Ctrl LWR@startingequation For use with `lateximage` and multi-line numbered equations. Remembers the next equation number so that it may be printed in the alt tag.

```

11096 \newcounter{LWR@startingequation}
11097
11098 \@ifundefined{chapter}
11099 {
11100 \renewcommand{\theLWR@startingequation}{%
11101   \arabic{LWR@startingequation}%
11102 }
11103 }
11104 {% chapter defined
11105 \renewcommand{\theLWR@startingequation}{%
11106   \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}{}%
11107   \arabic{LWR@startingequation}%
11108 }
11109 }

```

Bool LWR@isstartingequation True for the first equation tag, false for later tags in the same environment.

```

11110 \newbool{LWR@isstartingequation}

```

`\LWR@startingequationtag` Prints the starting equation number or tag.

```

11111 \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@rememberitag`.

```

11112 \newcommand*{\LWR@equationtag}{}

```

Only if `svg math`, patch `\tag` after packages have loaded, in case someone else modified `\tag`.

```

11113 \AtBeginDocument{
11114
11115 \ifbool{mathjax}{}{% not mathjax

```

`\LWR@rememberitag` $\langle tag \rangle$

For use inside the math environments while using `svg math`. Sets `\theLWR@startingequation` and `\theequation` to the given tag.

```

11116 \NewDocumentCommand{\LWR@rememberitag}{m}{%
11117   \ifbool{LWR@isstartingequation}%
11118   {%
11119     \global\boolfalse{LWR@isstartingequation}%
11120     \xdef\LWR@startingequationtag{#1}%
11121   }{}%
11122   \xdef\LWR@equationtag{#1}%
11123 }%

```

```
11124 }% not mathjax
11125 }% AtBeginDocument
```

81.5 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.

```
11126 \newcommand*\LWR@amsmathbody}[1]
11127 {%
11128     \textbackslash\begin\}\{#1\} % extra space
11129     \LWR@HTMLsanitizeexpand{\detokenize\expandafter{\the\envbody}}%
11130     \textbackslash\end\}\{#1\}%
11131 }
```

`\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.

```
11132 \newcommand*\LWR@amsmathbodynumbered}[1]
11133 {%
11134     \ifnumcomp{\value{LWR@startingequation}}{=}{\value{equation}}%
11135         {(\LWR@equationtag)}%
11136         {(\LWR@startingequationtag--\LWR@equationtag)} % extra space
11137     \LWR@amsmathbody{#1} % extra space
11138 }
```

81.6 lateximage environment

`\LWR@lateximage@oneimageb` $\langle 1: alt text \rangle \langle 2: filename \rangle \langle 3: CSS style \rangle$ Creates the image for the `lateximage`.

```
11139 \newcommand{\LWR@lateximage@oneimageb}[3]{%
11140     \LWR@subinlineimage{#1}{lateximage}%
11141     {%
11142         \LWR@print@ebox{%
11143             \LWR@ImagesDirectory\OSPathSymbol%
11144             #2%
11145         }%
11146     }{svg}{#3}%
11147 }
```

`\LWR@lateximage@oneimage` $\langle 1: alt text \rangle \langle 2: filename \rangle \langle 3: css style \rangle \langle 4: delimit? \rangle$

Creates an image for the `lateximage`, whose `alt` text depends on the circumstances.

```
11148 \newcommand{\LWR@lateximage@oneimage}[4]{%
11149     \ifdefvoid{\LWR@ThisAltText}{%
11150         \IfBooleanTF{#4}{%
11151             \LWR@lateximage@oneimageb{#1}{#2}{#3}%
11152         }{%
```

```

11153         \LWR@lateximage@oneimageb%
11154         {\AltTextOpen#1\AltTextClose}%
11155         {#2}{#3}%
11156     }%
11157 }{%
11158     \LWR@lateximage@oneimageb%
11159     {\AltTextOpen\LWR@ThisAltText\AltTextClose}%
11160     {#2}{#3}%
11161 }%
11162 }

```

Env lateximage * [$\langle 2: \langle \text{alt} \rangle \text{ tag} \rangle$] * [$\langle 4: \text{add'l hashing} \rangle$] [$\langle 5: \text{css style} \rangle$]

Typesets the contents and then renders the result as an SVG file. Star #1 causes the image to be hashed for reuse. Star #3 causes the alt tag to not include \AltTextOpen and \AltTextClose, for use with math expressions.

The optional <alt> tag is included in the HTML code for use with copy/paste.

[image filename hashing](#) If starred, a hashed filename is used. If so, the hash is based on the alt tag and also the additional hashing argument.

This may be used to provide an expression with a simple alt tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated T_EX expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple alt tag is still the same.

File *_html.aux A new label is placed into the file *_html.aux:

```
\newlabel{LWR@lateximage-<BaseJobname>-<number>}{{<x>}{<y>}}
```

This is used to find the image in the PDF file, according to its name.

File *-images.txt A list of images to generate is created in <jobname>-images.txt. Each line has three pipe-delimited fields, containing the PDF page number from <jobname>_html.pdf, where the image is located, a boolean indicating whether the image is hashed, and the filename of the image. The last line has “end” in each field, and is used to detect an incomplete compile.

```

11163 \catcode'\$=\active%
11164
11165 \NewDocumentEnvironment{lateximage}{s 0{\ImageAltText} s 0{} 0{}}
11166 {%
11167 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
11168 \LWR@traceinfo{lateximage: entering depth is \arabic{LWR@lateximagedepth}}%

```

Nested lateximages remain one large lateximage:

```
11169 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
```

If nesting inside an already-existing lateximage, simply record one more level. *AMS* packages redefine `\addtocounter` to do nothing if inside a `\text`, so lower-level *TeX* macros are used for tracking nested lateximages.

```
11170 {%
11171 %     \addtocounter{LWR@lateximagedepth}{1}%
11172 %     \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
11173 }%
```

Otherwise, this is the outer-most lateximage:

```
11174 {% start of outer-most lateximage
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

```
11175     \LWR@traceinfo{lateximage: starting outer-most lateximage}%
11176     \setcounter{LWR@startingequation}{\value{equation}}%
11177     \addtocounter{LWR@startingequation}{1}%
11178     \booltrue{LWR@isstartingequation}%
11179     \let\LWR@startingequationtag\theLWR@startingequation%
```

The default equation tag, unless overwritten by `\tag`:

```
11180     \let\LWR@equationtag\theequation%
```

Starting a new lateximage:

```
11181     \addtocounter{LWR@lateximagenumber}{1}%
11182     \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}%
```

While inside a lateximage, locally do not use mathjax:

```
11183     \boolfalse{mathjax}%
```

Be sure that are doing a paragraph:

```
11184     \LWR@ensuredoingapar%
```

Next file:

```
11185     \addtocounter{LWR@externalfilecnt}{1}%
11186     \LWR@traceinfo{lateximage: LWR@externalfilecnt is \arabic{LWR@externalfilecnt}}%
```

Figure out what the next page number will be. `\setcounterpageref` assigns `LWR@LPage` to the page number for the reference `LWR@lateximage-BaseJobname-XXX`:

```
11187     \setcounterpageref{LWR@LPage}{%
11188         LWR@lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}}%
```

```
11189 }%
11190 \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:

```
11191 \LWR@htmltag{span\LWR@indentHTML%
11192   id="lateximage-\BaseJobname-\arabic{LWR@Lateximagenumber}"\LWR@indentHTML
11193   class="lateximagesource"\LWR@orignewline
11194 }%
```

Write instructions to the <ImagesDirectory>.txt file:

```
11195 \LWR@traceinfo{lateximage: about to write to \BaseJobname-images.txt}%
11196 \IfBooleanTF{#1}% starred
11197 {% hash
```

Compute and save the hashed file name for later use:

```
11198   \ifdefvoid{\LWR@ThisAltText}{%
11199     \IfBooleanTF{#3}{%
11200       \edef\LWR@hashedname{%
11201         \LWR@mdfive{\detokenize\expandafter{#2}-!-#4}%
11202       }%
11203     }{%
11204       \edef\LWR@hashedname{%
11205         \LWR@mdfive{\detokenize\expandafter{\AltTextOpen#2\AltTextClose}-!-#4}%
11206       }%
11207     }%
11208   }{%
11209     \edef\LWR@hashedname{%
11210       \LWR@mdfive{\detokenize\expandafter{\AltTextOpen\LWR@ThisAltText\AltTextClose}-!-#4}%
11211     }%
11212   }%
11213   \LWR@traceinfo{lateximage: hash is \LWR@hashedname}%
```

Write the page, hashing, and hashed name:

```
11214   \immediate\write\LWR@lateximagesfile{%
11215     |\arabic{LWR@LIpage}|true|\LWR@hashedname|%
11216   }%
11217 }% hash
11218 {% no hash
```

No hash, so write the page, no hashing, and the image number:

```
11219   \LWR@traceinfo{lateximage: hash false}%
11220   \immediate\write\LWR@lateximagesfile{%
11221     |\arabic{LWR@LIpage}|false|\LWR@ImagesName\arabic{LWR@externalfilecnt}}%
11222   }%
11223 }% no hash
```

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by *pdftotext*.

```
11224 \LWR@traceinfo{lateximage: about to create open comment}%
11225 \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.

```
11226 \addtocounter{LWR@lateximagedepth}{1}%
```

Start the new PDF page:

```
11227 \LWR@traceinfo{lateximage: about to create a new page}%
11228 \LWR@orignewpage%
```

If the current page is larger, typeset the image in a “standard” width page and font size:

```
11229 \LWR@traceinfo{lateximage: about to create minipage}%
11230 \ifdimless{\linewidth}{6in}{%
11231     \LWR@print@minipage{\linewidth}%
11232 }{%
11233     \LWR@print@minipage{6in}%
11234 }%
11235 \@nameuse{LWR@print@\LateximageFontSizeName}%
```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for \hspace, etc. inside a lateximage.

```
11236 \LWR@traceinfo{lateximage: about to temporarily restore formatting}%
11237 \LWR@restoreorigformatting%
```

Use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

```
11238 \def\@mpfn{footnote}%
11239 \def\thempfn{\thefootnote}%
11240 \LetLtxMacro\@footnotetext\LWR@footnotetext%
```

Create the LWR\lateximage<number> label:

```
11241 \LWR@traceinfo{lateximage: about to create label}%
11242 \LWR@orig@label{LWR\lateximage-\BaseJobname-\arabic{LWR@lateximagenumber}}%
11243 \LWR@traceinfo{lateximage: finished creating the label}%
```

Adjust the rule color to match HTML:

```
11244 \ifdefvoid{\LWR@ruleHTMLcolor}{}{%
11245     \LWR@print@arrayrulecolor[HTML]{\LWR@ruleHTMLcolor}%
11246 }%
```

Enable print-mode math functions:

```

11247 \LetLtxMacro$\LWR@origdollar%
11248 \catcode'\$=3% math shift
11249 \LetLtxMacro\(\LWR@origopenparen%
11250 \LetLtxMacro\)\LWR@origcloseparen%

```

Only enable print-mode display math if are not already inside display math:

```

11251 \ifbool{LWR@indisplaymathimage}{}{% not in display math
11252 \LetLtxMacro\[\LWR@origopenbracket%
11253 \LetLtxMacro\]\LWR@origclosebracket%
11254 \let\equation\LWR@origequation%
11255 \let\endequation\LWR@origendequation%
11256 \csletcs{equation*}{LWR@origequation*}%
11257 \csletcs{endequation*}{LWR@origendequation*}%
11258 }% not in display math

```

For chemformula:

```

11259 \LetLtxMacro\LWR@newsingledollar$%
11260 \LetLtxMacro\LWR@newsingledollar$% syntax highlighting

11261 }% end of outer-most lateximage
11262 \LWR@traceinfo{lateximage: finished start of environment}%
11263 }% end of \begin{lateximage}

```

`\endlateximage` When the environment closes:

```

11264 {% start of \end{lateximage}
11265 \LWR@traceinfo{lateximage: starting end of lateximage}%

```

Nested more than one deep?

```

11266 \LWR@traceinfo{lateximage: internal depth was \arabic{LWR@lateximagedepth}}%
11267 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%

```

If nesting inside an already existing lateximage, simply record one less level. Uses a lower-level T_EX macro due to $\mathcal{A}\mathcal{M}\mathcal{S}$ `\text` change of `\addtocounter`.

```

11268 {%
11269 \LWR@traceinfo{lateximage: unnesting}%
11270 \global\advance\c@LWR@lateximagedepth -1\relax%
11271 }%

```

If this is the outer-most lateximage:

```

11272 {% end of outer-most lateximage

```

Finish the lateximage minipage and start a new PDF page:

```

11273 \LWR@traceinfo{lateximage: ending outer-most lateximage}%
11274 \endLWR@print@minipage%
11275 \LWR@orignewpage%

```

Close the HTML comment which encapsulated any traces of the lateximage picked up by *pdftotext*:

```
11276 \LWR@print@vspace*{.5\baselineskip}%
11277 \LWR@htmlclosecomment%
11278 \LWR@traceinfo{lateximage: The page after the image is \arabic{page}}%
```

Create a link to the lateximage, allowing its natural height:

```
11279 \IfBooleanTF{#1}% starred
11280 {% hash
11281 \LWR@lateximage@oneimage{#2}{\LWR@hashedname}{#5}{#3}%
11282 }% hash
11283 {% no hash
11284 \LWR@Lateximage@oneimage{#2}{\LWR@ImagesName\theLWR@externalfilecnt}{#5}{#3}%
11285 }% no hash
```

Be sure that are doing a paragraph:

```
11286 \LWR@ensuredoingapar%
```

Close the HTML span which has the *pdftotext* comment and also the link to the .svg image:

```
11287 \LWR@htmltag{/span}%
11288 \ifbool{HTMLDebugComments}{%
11289 \LWR@htmlcomment{End of lateximage}%
11290 }{}%
```

Undo one lateximage level. This is not inside an \mathcal{AMS} $\text{\textbackslash text}$, so regular $\text{\textbackslash addtocounter}$ may be used here.

```
11291 \addtocounter{LWR@lateximagedepth}{-1}%
```

Clear the single-use alt text:

```
11292 \gdef\LWR@ThisAltText{}%
11293 }% end of outer-most lateximage
11294 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
11295 \LWR@traceinfo{lateximage: done}%
11296 }%
11297 \catcode'\$=3% math shift
11298 \end{warpHTML}
```

for PRINT output: 11299 $\text{\textbackslash begin}\{warpprint\}$

Env lateximage * [\langle alt tag \rangle] * [\langle add'l hashing \rangle] [\langle css style \rangle]

varwidth is used to create a box of the natural width of its contents.

```
11300 \NewDocumentEnvironment{lateximage}{s o s o o}
11301 {\begin{varwidth}[b]{\linewidth}}
11302 {\end{varwidth}}
```

```
11303 \end{warpprint}
```

82 center, flushleft, flushright

for HTML output: 11304 \begin{warpprint}

Env center Replace center functionality with CSS tags:

```
11305 \newenvironment*{LWR@HTML@center}
11306 {
11307   \LWR@forcenewpage
11308   \ifbool{FormatWP}
11309     {\BlockClass[LWR@print@mbbox{text-align:center}]{center}}
11310     {\BlockClass{center}}
11311 }
11312 {\endBlockClass}
11313
11314 \LWR@formattedenv{center}
```

Env flushright

```
11315 \newenvironment*{LWR@HTML@flushright}
11316 {
11317   \LWR@forcenewpage
11318   \ifbool{FormatWP}
11319     {\BlockClass[LWR@print@mbbox{text-align:right}]{flushright}}
11320     {\BlockClass{flushright}}
11321 }
11322 {\endBlockClass}
11323
11324 \LWR@formattedenv{flushright}
```

Env flushleft

```
11325 \newenvironment*{LWR@HTML@flushleft}
11326 {
11327   \LWR@forcenewpage
11328   \ifbool{FormatWP}
11329     {\BlockClass[LWR@print@mbbox{text-align:left}]{flushleft}}
11330     {\BlockClass{flushleft}}
11331 }
11332 {\endBlockClass}
11333
11334 \LWR@formattedenv{flushleft}
```

\centering, \raggedleft, and \raggedright usually have no effect on the HTML output, but they may be used to compare with the next token to identify their use at the start of a float. See \LWR@floatalignment.

`\centering`

```
11335 \newcommand*\LWR@HTML@centering}{%
11336     \ifbool{HTMLDebugComments}{%
11337         \LWR@htmlcomment{centering}%
11338     }{}%
11339 }
11340 \LWR@formatted{centering}
```

`\raggedleft`

```
11341 \newcommand*\LWR@HTML@raggedleft}{%
11342     \ifbool{HTMLDebugComments}{%
11343         \LWR@htmlcomment{raggedleft}%
11344     }{}%
11345 }
11346 \LWR@formatted{raggedleft}
```

`\raggedright`

```
11347 \newcommand*\LWR@HTML@raggedright}{%
11348     \ifbool{HTMLDebugComments}{%
11349         \LWR@htmlcomment{raggedright}%
11350     }{}%
11351 }
11352 \LWR@formatted{raggedright}
```

`\leftline {<text>}`

```
11353 \renewcommand{\leftline}[1]{\begin{flushleft}#1\end{flushleft}}
```

`\centerline {<text>}`

```
11354 \renewcommand{\centerline}[1]{\begin{center}#1\end{center}}
```

`\rightline {<text>}`

```
11355 \renewcommand{\rightline}[1]{\begin{flushright}#1\end{flushright}}
```

```
11356 \end{warpHTML}
```

83 Preloaded packages

for HTML output: 11357 `\begin{warpHTML}`

If the given package was loaded before or by lwarp, load the lwarp version as well.

`\LWR@PreloadedPackage {<packagename>}`

```

11358 \newcommand*{\LWR@PreloadedPackage}[1]{%
11359     \ifpackageloaded{#1}%
11360     {%
11361         \AtBeginDocument{
11362             \LWR@origRequirePackage{lwarp-#1}%
11363         }
11364     }%
11365     {}%
11366 }
```

If `inputtrc` was loaded before `lwarp`, as is usually done, explicitly load the `lwarp` patches now:

```
11367 \LWR@PreloadedPackage{inputtrc}
```

If `textcomp` was loaded before `lwarp`, perhaps as part of the font-related packages, explicitly load the `lwarp` patches now:

```
11368 \LWR@PreloadedPackage{textcomp}
```

If `xunicode` was loaded before `lwarp`, perhaps as part of the font-related packages, explicitly load the `lwarp` patches now:

```
11369 \LWR@PreloadedPackage{xunicode}
```

If `graphics` or `graphicx` were loaded before `lwarp`, perhaps by `xunicode`, explicitly load the `lwarp` patches now:

```
11370 \LWR@PreloadedPackage{graphics}
```

```
11371 \LWR@PreloadedPackage{graphicx}
```

`fontaxes` must be preloaded so that `lwarp` may patch it for `HTML`.

```
11372 \LWR@PreloadedPackage{fontaxes}
```

`nfssect-cfr` may be preloaded by `cfm-lm` or related font packages.

```
11373 \LWR@PreloadedPackage{nfssect-cfr}
```

`ulem` may be preloaded by `ctex`, `ctexart`, and related classes.

```
11374 \LWR@PreloadedPackage{ulem}
```

`xetexko-vertical` may be preloaded by `xetexko`.

```
11375 \LWR@PreloadedPackage{xetexko-vertical}
```

`geometry` is preloaded by `lwarp`, and perhaps by various classes.

```
11376 \LWR@PreloadedPackage{geometry}
```

`plex` is preloaded by some CJK classes.

```
11377 \LWR@PreloadedPackage{plex}
```

`stfloats` is preloaded by `ltj*` classes.

```
11378 \LWR@PreloadedPackage{stfloats}
```

`lltjext` is preloaded by `ltj*` classes.

```
11379 \LWR@PreloadedPackage{lltjext}
```

`luatexko` must be loaded before `lwarp`.

```
11380 \LWR@PreloadedPackage{luatexko}
```

```
11381 \end{warpHTML}
```

84 siunitx

Pkg `siunitx` The `lwarp` core passes a few options to `siunitx`.

fractions Due to *pdftotext* limitations, fraction output is replaced by symbol output for `per-mode` and `quotient-mode`.

 **math mode required** Some units will require that the expression be placed inside math mode.

 **tabular** Tabular `S` columns are rendered as simple `c` columns, and tabular `s` columns are not supported. These may be replaced by `c` columns with each cell contained in `\num` or `\si`.

 **MathJax** For math mode with `svg` display, the original `siunitx` code is used while generating the `svg` image. For text mode, `lwarp` uses an emulation which provides a very effective `HTML` interpretation of `siunitx`. For math expressions while using `MATHJAX`, a limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. `siunitx` macros with more than one optional value cannot absorb the second optional value, and complicated parsing such as for `\ang` is not supported. The result usually looks fine, and otherwise is enough to get the meaning across.

`lwarp`'s `MATHJAX` emulation for `siunitx` is meant to be a stop-gap measure until an extension is included in `MATHJAX`. As of this writing, the third-party `siunitx` extension for `MATHJAX` is not currently hosted at any public `CDN`, thus `siunitx` is not usable with this extension unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom `MathJax` script, but `lwarp`'s emulation would have to be disabled as well.

Document modifications required for `MATHJAX`:

custom units

- Custom units may be added with `\CustomizeMathJax`. See the `lwarp-siunitx` code for examples.

- ⚠ **unit spacing**
 - Units work better using ~ between units instead of using periods.
- ⚠ **\square, \cubic**
 - To square or cube compound units, enclose the following compound units in braces:


```
\cubic{\centi\meter}
```

 Single units do not require braces.

Also see [MATHJAX option](#), section 8.7.4.

for HTML output: 11382 \begin{warpHTML}

Options for siunitx:

```

11383 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}C}
11384 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
11385 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLunicode{2032}}
11386 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLunicode{2033}}
11387 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLunicode{0127}}}}
11388
11389 \appto\LWR@restoreorigformatting{%
11390 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}C}}%
11391 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}%
11392 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}%
11393 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{^\prime\prime}}}%
11394 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}%
11395 }
11396
11397 \PassOptionsToPackage{
11398   detect-mode=true,
11399   per-mode=symbol,% fraction is not seen by pdftotext
11400   text-celsius = {\LWR@siunitx@textcelsius},
11401   text-degree = {\LWR@siunitx@textdegree},
11402   text-arcminute = {\LWR@siunitx@textprime} ,
11403   text-arcsecond = {\LWR@siunitx@textdblprime} ,
11404 }{siunitx}

11405 \end{warpHTML}

```

85 Graphics print-mode modifications

85.1 General limitations

- ⚠ **scale** Avoid using the \includegraphics scale option. Change:

```
\includegraphics[scale=<xx>]{...}
```

to:

```
\includegraphics[width=<yy>\linewidth]{...}
```

[\includegraphics file formats](#) For \includegraphics with .pdf or .eps files, the user must provide a .pdf or .eps

image file for use in print mode, and also a .svg, .png, or .jpg version of the same image for use in HTML.

```
\includegraphics{filename} % print:.pdf/.eps HTML:.svg, etc.
```

For print output, `lwarp` will automatically choose the .pdf or .eps format if available, or some other format otherwise. For HTML, one of the other formats is used instead.

If a .pdf or .eps image is referred to with its file extension, the extension will be changed to .svg for HTML:

```
\includegraphics{filename.pdf} % uses .svg in html
\includegraphics{filename.eps} % uses .svg in html
```

Prog `pdftocairo` To convert a PDF image to SVG, use the utility *pdftocairo*:

PDF to SVG

```
Enter ⇒ pdftocairo -svg filename.pdf
```

Prog `lwarpmk pdftosvg` For a large number of images, use *lwarpmk*:

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)
```

Prog `lwarpmk epstopdf` For EPS images converted to PDF using the package `epstopdf`, use

Prog `epstopdf` epstopdf package

```
Enter ⇒ lwarpmk pdftosvg *.PDF
```

to convert to SVG images.

DVI latex When using DVI *latex*, it is necessary to convert EPS to PDF and then to SVG:

```
Enter ⇒ lwarpmk epstopdf *.eps (or a list of filenames)
```

```
Enter ⇒ lwarpmk pdftosvg *.pdf (or a list of filenames)
```

PNG and JPG For PNG or JPG while using *pdflaTeX*, *luaLaTeX*, or *xLaTeX*, the same file may be used in both print or HTML versions, and may be used with a file extension, but will also be used without the file extension if it is the only file of its base name.

GIF GIF files may be used for HTML, but another format must also be provided for print output.

file extension priorities If a file extension is not used, for HTML the file extension priorities are: SVG, GIF, PNG, then JPG.

⚠ **graphics vs. graphicx** If using the older `graphics` syntax, use both optional arguments for `\includegraphics`. A single optional parameter is interpreted as the newer `graphicx` syntax. Note that viewports are not supported by `lwarp`—the entire image will be shown.

⚠ **viewport**

⚠ **viewport
units**

For `\includegraphics`, avoid `px` and `%` units for width and height, or enclose them inside `warpHTML` environments. For font-proportional image sizes, use `ex` or `em`. For fixed-sized images, use `cm`, `mm`, `in`, `pt`, or `pc`. Use the keys `width=.5\linewidth`, or similar for `\textwidth` or `\textheight` to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the `scale` option, since it is not well supported by HTML browsers.

- options** `\includegraphics` accepts width and height, origin, rotate and scale, plus new class and alt keys.
- HTML class** With HTML output, `\includegraphics` accepts an optional `class=xyz` keyval combination, and if this is given then the HTML output will include that class for the image. The class is ignored for print output.
- HTML alt tags** Likewise, the `\includegraphics alt` key adds an HTML alt tag to an image, and is ignored for print output. If not assigned, each image is given an alt tag according to `\ImageAltText`.
- `\rotatebox`** `\rotatebox` accepts the optional origin key.
- ⚠ browser support** `\rotatebox`, `\scalebox`, and `\reflectbox` depend on modern browser support. The CSS3 standard declares that when an object is transformed the whitespace which they occupied is preserved, unlike L^AT_EX, so expect some ugly results for scaling and rotating.

85.2 Print-mode modifications

for PRINT output: For print output, accept and then discard the new class key:

```
11406 \begin{warpprint}
11407 \define@key{Gin}{class}{}
11408 \define@key{Gin}{alt}{}

```

Print-mode additions for the `overpic` package. See section 397 for the HTML version.

```
11409 \AtBeginDocument{
11410 \ifpackageloaded{overpic}{
11411 \newcommand*{\overpicfontsize}{12}
11412 \newcommand*{\overpicfontskip}{14}
11413 }{}
11414 }
11415 \end{warpprint}

```

86 xcolor boxes

Pkg `xcolor` A few new definitions are provided for enhanced HTML colored boxes, and `\fcolorbox` is slightly modified. Print-mode version are also provided.

Print-mode versions of new `xcolor` definitions. These are defined inside `warppall` because they are also used for HTML while inside a `lateximage`. They are defined `\AtBeginDocument` so that the `xcolor` originals may first be loaded and saved for reuse.

The framed versions are modified to allow a background color of none, in which case only the frame is drawn, allowing the background page color to show.

for HTML & PRINT: `11416 \begin{warppall}`

After xparse may have been loaded ...

```
11417 \AtBeginDocument{
```

... and *only* if xcolor was loaded:

```
11418 \@ifpackageloaded{xcolor}{
11419 \LWR@traceinfo{patching xcolor}
```

The print version:

`\colorboxBlock` `\colorboxBlock` is the same as `\colorbox`:

```
11420 \LetLtxMacro\colorboxBlock\colorbox
```

The original definition is reused by the new versions:

```
11421 \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`.)

```
11422 \newsavebox{\LWR@colorminipagebox}
11423
11424 \NewDocumentCommand{\LWR@print@fcolorbox}{o m o m +m}{%
11425 \LWR@traceinfo{\LWR@print@fcolorbox #2 #4}%
```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```
11426 \begin{lrbox}{\LWR@colorminipagebox}%
11427 #5%
11428 \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.

```
11429 \ifstrequal{#4}{none}%
11430 {% #4 none
11431   \LWR@traceinfo{background is none}%
11432   {% scope the \colorlet
11433     \colorlet{\LWR@currentcolor}{.}%
11434     \color{#2}%
11435     \fbox{%
11436       \color{\LWR@currentcolor}%
11437       \usebox{\LWR@colorminipagebox}%
```

```

11438     }% fbox
11439   }% colorlet
11440 }% #4 none
11441 {% #4 not none
11442 \LWR@traceinfo{background not none}%
11443 \IfValueTF{#1}%
11444 {%
11445   \IfValueTF{#3}%
11446   {\LWR@orig@print@fcolorbox[#1][#2][#3][#4]{\usebox{\LWR@colorminipagebox}}}%
11447   {\LWR@orig@print@fcolorbox[#1][#2][#4]{\usebox{\LWR@colorminipagebox}}}%
11448 }%
11449 {% no value #1
11450   \IfValueTF{#3}%
11451   {\LWR@orig@print@fcolorbox[#2][#3][#4]{\usebox{\LWR@colorminipagebox}}}%
11452   {\LWR@orig@print@fcolorbox[#2][#4]{\usebox{\LWR@colorminipagebox}}}%
11453 }% no value #1
11454 }% #4 not none
11455 \LWR@traceinfo{\LWR@print@fcolorbox done}%
11456 }

11457 \renewrobustcmd*{\fcolorbox}{\LWR@print@fcolorbox}%

```

`\fcolorboxBlock` [*⟨framemodel⟩*] [*⟨framecolor⟩*] [*⟨boxmodel⟩*] [*⟨boxcolor⟩*] [*⟨text⟩*]

In print mode, `\fcolorboxBlock` is the same as `\fcolorbox`.

```

11458 \newcommand*{\LWR@print@fcolorboxBlock}{\LWR@print@fcolorbox}

11459 \newrobustcmd*{\fcolorboxBlock}{\LWR@print@fcolorboxBlock}

```

Env `fcolorminipage` [*⟨1:framemodel⟩*] [*⟨2:framecolor⟩*] [*⟨3:boxmodel⟩*] [*⟨4:boxcolor⟩*] [*⟨5:align⟩*] [*⟨6:height⟩*] [*⟨7:inner-align⟩*] [*⟨8:width⟩*]

In print mode, becomes a `\fcolorbox` containing a minipage:

```

11460 \NewDocumentEnvironment{LWR@print@fcolorminipage}{o m o m O{c} O{ } o m}
11461 {%
11462 \LWR@traceinfo{*** fcolorminipage: #2 #4 #8}%

```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```

11463 \begin{lrbox}{\LWR@colorminipagebox}%

```

If inner alignment is not given, use the outer alignment instead:

```

11464 \IfValueTF{#7}%
11465 {\begin{minipage}[#5][#6][#7]{#8}}%
11466 {\begin{minipage}[#5][#6][#5]{#8}}%
11467 }%
11468 {%
11469 \end{minipage}%
11470 \end{lrbox}%
11471 \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.

```

11472 \ifstrequal{#4}{none}%
11473 {% #4 none
11474     {% scope the \colorlet
11475         \colorlet{LWR@currentcolor}{.}%
11476         \color{#2}%
11477         \fbox{%
11478             \color{LWR@currentcolor}%
11479             \usebox{LWR@colorminipagebox}%
11480         }% fbox
11481     }% colorlet
11482 }% #4 none
11483 {% #4 not none
11484     \IfValueTF{#1}%
11485     {%
11486         \IfValueTF{#3}%
11487         {\LWR@orig@print@fcolorbox[#1][#2][#3][#4]{\usebox{LWR@colorminipagebox}}}%
11488         {\LWR@orig@print@fcolorbox[#1][#2][#4]{\usebox{LWR@colorminipagebox}}}%
11489     }%
11490     {% no value #1
11491         \IfValueTF{#3}%
11492         {\LWR@orig@print@fcolorbox[#2][#3][#4]{\usebox{LWR@colorminipagebox}}}%
11493         {\LWR@orig@print@fcolorbox[#2][#4]{\usebox{LWR@colorminipagebox}}}%
11494     }% no value #1
11495 }% #4 not none
11496 \LWR@traceinfo{*** finished end fcolorminipage}%
11497 }

11498 \NewDocumentEnvironment{fcolorminipage}{}
11499     {\LWR@print@fcolorminipage}
11500     {\endLWR@print@fcolorminipage}

11501 \LWR@traceinfo{xcolor patches done}
11502 }{}% xcolor loaded
11503 }% AtBeginDocument

11504 \end{warpall}

```

87 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: `11505 \begin{warpprint}`

```
11506 \AtBeginDocument{
11507 \ifpackageloaded{chemmacros}{
```

Env polymerdelims

```
11508 \DeclareDocumentEnvironment{polymerdelims}{}
11509     {}{}
```

Env redoxreaction $\{\langle space above \rangle\} \{\langle space below \rangle\}$

For print output, extra space is include above and below the image, and a `lateximage` is not necessary. This extra space must be enforced, even inside a float, so zero-width rules are used.

For the HTML version, see section 180.4.

```
11510 \DeclareDocumentEnvironment{redoxreaction}{m m}
11511     {\rule{0pt}{#1}}{\rule[-#2]{0pt}{#2}}

11512 }{}% chemmacros
11513 }% AtBeginDocument

11514 \end{warpprint}
```

88 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 567 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 14 on page 482 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: 11515 \begin{warpHTML}

\AtEndPreamble forces cleveref to be loaded last:

```
11516 \AtEndPreamble{
11517   \RequirePackage{cleveref}
11518 }
```

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.

```
11519 \AfterEndPreamble{
11520 \LWR@traceinfo{Patching cleveref.}
```

\@@@setcref {<kindofref>} {<label>}

\@templabel becomes the section number.

```
11521 \def\LWR@orig@@@setcref#1#2{\cref@getlabel{#2}{\@templabel}#1{\@templabel}{}}%
11522
11523 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% before v0.21
11524   \renewcommand*\@@@setcref}[2]{#1{\ref{#2}}{}}
11525 }{
11526   \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
11527     \renewcommand*\@@@setcref}[2]{%
11528       #1{\ref{#2}}{}}
11529   }{
11530     \PackageWarning{lwarp-cleveref}{
11531       Unknown version of cleveref.
11532       \protect\cref\space will fail.
11533     }%
11534   }
11535 }
```

\@@@setcrefrange {<text>} {<label>} {<label>}

```
11536 \def\LWR@orig@@@setcrefrange#1#2#3{%
11537   \cref@getlabel{#2}{\@labela}%
11538   \cref@getlabel{#3}{\@labelb}%
11539   #1{\@labela}{\@labelb}{}}%
11540
11541 \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
11542   \renewcommand{\@@@setcrefrange}[3]{%
11543     #1{\ref{#2}}{\ref{#3}}{}}%
11544   }
11545 }{
11546   \ifdefequal{\@@@setcrefrange}{\LWR@orig@@@setcrefrange}{
11547     \renewcommand{\@@@setcrefrange}[3]{%
11548       #1{\ref{#2}}{\ref{#3}}{}}%
11549     }
11550   }{
```

```

11551     \PackageWarning{lwarp-cleveref}{
11552         Unknown version of cleveref.
11553         \protect\crefrange\space will fail.
11554     }
11555 }
11556 }

```

`\cpagerefFor` Redefinable word between “page(s)” and the page numbers.

```
11557 \newcommand*{\cpagerefFor}{for}
```

`\@@@setcpageref` $\langle\textit{typeofref}\rangle$ $\langle\textit{label}\rangle$, where *typeofref* is “page” or “pages”

```

11558 \def\LWR@orig@@setcpageref#1#2{% before v0.21
11559   \cref@getpageref{#2}{\@temppage}#1{\@temppage}{}}%
11560
11561 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
11562   \cpageref@getlabel{#2}{\@temppage}#1{\@temppage}{}}%
11563
11564 \ifdefequal{\@@setcpageref}{\LWR@orig@@setcpageref}{
11565   \renewcommand*{\@@setcpageref}[2]{%
11566     #1{\cpagerefFor\ \cref{#2}}{}}%
11567 }
11568 }{
11569   \ifdefequal{\@@@setcpageref}{\LWR@orig@@@setcpageref}{
11570     \renewcommand*{\@@@setcpageref}[2]{%
11571       #1{\cpagerefFor\ \cref{#2}}{}}%
11572   }
11573 }
11574 {
11575   \PackageWarning{lwarp-cleveref}{
11576     Unknown version of cleveref.
11577     \protect\cpageref\space will fail.
11578   }
11579 }
11580 }

11581 \def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
11582   \cref@getpageref{#2}{\@pagea}%
11583   \cref@getpageref{#3}{\@pageb}%
11584   #1{\@pagea}{\@pageb}{}}%
11585
11586 \def\LWR@orig@@@setcpagerefrange#1#2#3{% as of v0.21
11587   \cpageref@getlabel{#2}{\@pagea}%
11588   \cpageref@getlabel{#3}{\@pageb}%
11589   #1{\@pagea}{\@pageb}{}}%
11590
11591 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
11592   \renewcommand*{\@@setcpagerefrange}[3]{%
11593     #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{}}%
11594 }
11595 }{
11596   \ifdefequal{\@@@setcpagerefrange}{\LWR@orig@@@setcpagerefrange}{

```

```

11597     \renewcommand*{\@@@setcpagerefrange}[3]{%
11598         #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{}{}{}{}%
11599     }
11600 }
11601 {
11602     \PackageWarning{lwarp-cleveref}{
11603         Unknown version of cleveref.
11604         \protect\cpagerefrange\space will fail.
11605     }
11606 }
11607 }
11608
11609 }% AfterEndPreamble

```

Remember and patch some label-related definitions. These will be further encased and patched by other packages later.

`\label` and `\pageref` do NOT change their behavior according to print or HTML output, and thus do not use the `\LWR@formatted` system.

```

11610 \LetLtxMacro\LWR@orig@label\label% includes memoir, before cleveref
11611 \LetLtxMacro\label\LWR@new@label
11612
11613 \LetLtxMacro\LWR@orig@pageref\pageref
11614 \LetLtxMacro\pageref\LWR@new@pageref
11615 \end{warpHTML}

```

89 picture environment

Env `picture` The picture environment is enclosed inside a `\lateximage`.

for HTML output: 11616 `\begin{warpHTML}`

Env `picture`

```

11617 \BeforeBeginEnvironment{picture}{\begin{lateximage}[picture]}
11618
11619 \AfterEndEnvironment{picture}{\end{lateximage}}
11620 \end{warpHTML}

```

90 Minipages and Boxes

A CSS flexbox is used for minipages and parboxes, allowing external and internal vertical positioning.

 **inline** A line of text with an inline minipage or `\parbox` will have the minipage or `\parbox`

placed onto its own line, because a paragraph is a block element and cannot be made inline-block.

placement minipages and `\parboxes` will be placed side-by-side in HTML unless you place a `\newline` between them.

side-by-side Side-by-side minipages may be separated by `\quad`, `\qqquad`, `\enskip`, `\hspace`, `\hfill`, or a `\rule`. When inside a center environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.

⚠ **minipage in a span** There is limited support for minipages inside an HTML ``. An HTML `<div>` cannot appear inside a ``. While in a ``, minipages, and `\parboxes`, and any enclosed lists have limited HTML tags, resulting in an “inline” format, without markup except for HTML breaks. Use `\newline` or `\par` for an HTML break.

⚠ **minipage size** When using `minipage`, `\parbox`, and `fminipage`, a virtual 6 × 9 inch text area is used for `\linewidth`, `\textwidth`, and `\textheight`, both for sizing the minipage, and also for its contents.

if width is `\linewidth` If a minipage or `\parbox` is assigned a width of exactly `\linewidth`, in HTML it is automatically given no HTML width, thus allowed to fill the line as needed, similar to how it appears in print output.

full-width if HTML A new macro `\minipagefullwidth` requests that, during HTML output, the next single minipage or `\parbox` be generated without an HTML width attribute, allowing it to be the full width of the display rather than the declared print-output width. This may be useful where the printed version’s width makes no sense in HTML.

⚠ **tabular, multicols** Inside a `tabular` or `multicols` environment, where the width depends on the browser window, `\minipagefullwidth` is effectively used by default for every minipage or `\parbox` inside the environment. `\UseMinipageWidths` may be used to tell `lwarp` to honor the specified widths of all following minipages and `\parboxes` until the end of the local scope, and `\IgnoreMinipageWidths` may be used to tell `lwarp` to ignore the specified widths.

⚠ **multicol** Inside a `multicols`, `\linewidth` is divided by the specified number of columns.

⚠ **text alignment** Nested minipages adopt their parent’s text alignment in HTML, whereas in regular L^AT_EX PDF output they do not. Use a `flushleft` or similar environment in the child minipage to force a text alignment.

for HTML output: 11621 `\begin{warpHTML}`

90.1 Computed lengths

Len `\LWR@minipagewidth` Used to convert the width into printable units.

11622 `\newlength{\LWR@minipagewidth}`

Len `\LWR@minipageheight` Used to convert the height into printable units.

```
11623 \newlength{\LWR@minipageheight}
```

90.2 Virtual page size

Ctrl LWR@virtualpagedepth Used to only reset the line width at the outermost minipage.

```
11624 \newcounter{LWR@virtualpagedepth}
11625 \setcounter{LWR@virtualpagedepth}{0}
```

Env LWR@setvirtualpage * [*columns*]

If not nesting a minipage, adjust `\linewidth`, `\textwidth`, and `\textheight` for a virtual 6×9 page, and start on a new PDF page to help prevent page overflows.

If starred, force a new page in the PDF before generating more HTML. This may be done to reduce the chance of page overflow when starting a new minipage.

The optional number of columns defaults to 1.

```
11626 \NewDocumentEnvironment{LWR@setvirtualpage}{s O{1}}{%
11627   \ifnumequal{\value{LWR@virtualpagedepth}}{0}{%
11628     \IfBooleanT{#1}{\LWR@orignewpage}%
11629     \setlength{\linewidth}{6in/#2}%
11630     \setlength{\textwidth}{6in}%
11631     \setlength{\textheight}{9in}%
11632   }{%
11633     \addtocounter{LWR@virtualpagedepth}{1}%
11634 }
11635 {\addtocounter{LWR@virtualpagedepth}{-1}}
```

90.3 Footnote handling

Also see section 59 for other forms of footnotes. Minipage footnotes are gathered in section 59.5, and then placed into the document in section 90.4.

90.4 Minipage handling

Bool LWR@minipagefullwidth Should the next minipage have no HTML width?

```
11636 \newbool{LWR@minipagefullwidth}
11637 \boolfalse{LWR@minipagefullwidth}
```

Bool LWR@forceminipagefullwidth Should the next minipage have no HTML width? Used to force full width for all minipages in an environment such as `tabular` or `multicols`, where the actual width depends on the browser width. Controlled by `\useminipagewidths` and `\ignoreminipagewidths`.

```
11638 \newbool{LWR@forceminipagefullwidth}
11639 \boolfalse{LWR@forceminipagefullwidth}
```

`\minipagefullwidth` Requests that the next minipage have no width tag in HTML:

for HTML output: 11640 `\newcommand*{\minipagefullwidth}{\global\booltrue{LWR@minipagefullwidth}}`

`\UseMinipageWidths` Locally requests that minipage widths be honored.

11641 `\newcommand*{\UseMinipageWidths}{\boolfalse{LWR@forceminipagefullwidth}}`

`\IgnoreMinipageWidths` Locally requests that minipage widths be ignored.

11642 `\newcommand*{\IgnoreMinipageWidths}{\booltrue{LWR@forceminipagefullwidth}}`

11643 `\end{warpHTML}`

for PRINT output: 11644 `\begin{warpprint}`
 11645 `\newcommand*{\minipagefullwidth}{}{}`
 11646 `\newcommand*{\UseMinipageWidths}{}{}`
 11647 `\newcommand*{\IgnoreMinipageWidths}{}{}`
 11648 `\end{warpprint}`

for HTML output: 11649 `\begin{warpHTML}`

Bool LWR@minipagethispar Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

11650 `\newbool{LWR@minipagethispar}`

11651 `\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.

11652 `\NewDocumentEnvironment{LWR@HTML@sub@minipage}{m m m m}`

11653 `{%`

11654 `\LWR@traceinfo{minipage}%`

Start an environment, in which width and height is computed based on a virtual page size instead of the extra-large PDF page used during HTML tag generation.

11655 `\begin{LWR@setvirtualpage}*%`

Save the requested width now that `\linewidth`, etc. are adjusted to virtual size.

11656 `\setlength{\LWR@minipagewidth}{#4}%`

11657 `\ifnumequal{\value{LWR@virtualpagedepth}}{1}{%`

11658 `\addtolength{\LWR@minipagewidth}{3em}% room for frames`

11659 `}%}`

11660 `\LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%`

Compute height:

```
11661 \setlength{\LWR@minipageheight}{\textheight}% default unless specified
11662 \ifblank{#2}{ }\setlength{\LWR@minipageheight}{#2}}%
```

L^AT_EX wants to start a paragraph for the virtual minipage, then start a paragraph again for the contents of the minipage, so cancel the paragraph tag handling until the minipage has begun.

```
11663 \ifbool{FormatWP}{\newline}{}%
11664 \LWR@stoppars%
```

If FormatWP, add a text frame:

```
11665 \ifbool{FormatWP}{%
11666
11667 \addtocounter{LWR@thisautoidWP}{1}%
11668 \LWR@htmltag{%
11669   div id="\LWR@print@mbx{autoidWP-\arabic{LWR@thisautoidWP}}" %
11670   class="wpmminipage"%
11671 }%
11672
11673 }{}}%
```

Create the <div> tag with optional alignment style:

```
11674 \LWR@traceinfo{minipage: creating div class}%
11675 \LWR@htmltag{div class="minipage" style="%
11676 \ifthenelse{equal{#1}{t}}{\LWR@print@mbx{vertical-align:bottom} ; }{}}%
11677 \ifthenelse{equal{#1}{c}}{\LWR@print@mbx{vertical-align:middle} ; }{}}%
11678 \ifthenelse{equal{#1}{b}}{\LWR@print@mbx{vertical-align:top} ; }{}}%
11679 \ifthenelse{equal{#3}{t}}{\LWR@print@mbx{justify-content:flex-start} ; }{}}%
11680 \ifthenelse{equal{#3}{c}}{\LWR@print@mbx{justify-content:center} ; }{}}%
11681 \ifthenelse{equal{#3}{b}}{\LWR@print@mbx{justify-content:flex-end} ; }{}}%
11682 \ifthenelse{equal{#3}{s}}{\LWR@print@mbx{justify-content:space-between} ; }{}}%
```

Print the width and optional height styles:

```
11683 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
11684 \ifbool{LWR@minipagefullwidth}%
11685 {\global\boolfalse{LWR@minipagefullwidth}}%
11686 {%
11687   \ifbool{LWR@forceminipagefullwidth}%
11688     {}%
11689     {%
11690       \ifdimequal{#4}{\linewidth}%
11691         {}%
11692         {width:\LWR@printlength{\LWR@minipagewidth} ; }%
11693     }%
11694 }%
11695 \LWR@traceinfo{minipage: about to print the height}%
11696 \ifblank{#2}{ }\height:\LWR@printlength{\LWR@minipageheight} ; }%
11697 "%}
```

Finish with an empty line to start the contents on a new line.

```
11698
11699 % The preceding empty line is required.
```

Set the user-accessible line and text width and height values inside the virtual minipage. These do not affect the actual size of the PDF output, but are used by any reference to `\linewidth`, etc. inside the virtual minipage being created here. `\LWR@minipagewidth` was the original then padded by 3em, which is restored here. This is done instead of settings back to #4, in case #4 was `\linewidth`, which was changed to 6in above.

```
11700 \ifnumequal{\value{LWR@virtualpagedepth}}{1}{%
11701   \addtolength{\LWR@minipagewidth}{-3em}% undo frame padding
11702 }{%
11703 \setlength{\linewidth}{\LWR@minipagewidth}%
```

`\raggedright` cancels hyphenation, which will be done by HTML instead.

```
11704 \LWR@print@raggedright%
```

Set minipage footnotes:

```
11705 \def\@mpfn{mpfootnote}%
11706 \def\thempfn{\thempfootnote}\c@mpfootnote\z@%
11707 \let\@footnotetext\@mpfootnotetext%
```

Resume paragraph tag handling for the contents of the minipage:

```
11708 \LWR@startpars%
11709 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
11710
11711 === begin minipage ===
11712
11713 }{%
11714 \LWR@traceinfo{minipage: finished starting the minipage}%
11715 }% finished \minipage
11716 {% \endminipage
```

Print pending minipage footnotes:

```
11717 \LWR@printpendingmpfootnotes%
```

End the environment with closing tag:

```
11718 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
11719
11720 === end minipage ===
11721
11722 }{%
11723 \LWR@stoppars%
11724
11725 \ifbool{FormatWP}{%
11726
11727 \LWR@htmlElementend{div}%
```

```

11728
11729 }{}%
11730 \LWR@htmldivclassend{minipage}%
11731
11732 \end{LWR@setvirtualpage}%
11733 \LWR@startpars%
11734 \ifbool{FormatWP}{\newline}{}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

11735 \global\booltrue{LWR@minipagethispar}%
11736 \LWR@traceinfo{LWR@minipage: done}%
11737 }
11738
11739 \NewDocumentEnvironment{LWR@HTML@minipage}{0{t} 0{} 0{t} m}
11740   {\LWR@HTML@sub@minipage{#1}{#2}{#3}{#4}}
11741   {\endLWR@HTML@sub@minipage}
11742
11743 \LWR@formattedenv{minipage}

```

90.5 \parbox, \mbox, \makebox, \framebox, \fbox, \raisebox

for HTML output:

```
\parbox [pos] [height] [inner-pos] {width} {text}
```

A parbox uses the minipage code:

```

11744 \NewDocumentCommand{\LWR@HTML@parbox}{0{t} 0{} 0{t} m +m}
11745 {
11746 \LWR@traceinfo{parbox of width #4}%
11747 \begin{minipage}[#1][#2][#3]{#4}%
11748 #5
11749 \end{minipage}%
11750 }
11751
11752 \LWR@formatted{parbox}

```

```
\mbox {text}      Nullified for HTML.
```

```

11753 \newcommand*{\LWR@HTML@mbox}[1]{#1}
11754
11755 \LWR@formatted{mbox}

```

```
\LWR@makebox@paren {width} , {height}
```

Adds to the style in \LWR@temptwo.

```

11756 \NewDocumentCommand{\LWR@makebox@paren}{m m}{%
11757 \IfValueTF{#2}{%
11758   \setlength{\LWR@tempwidth}{#1\unitlength}%

```

```

11759 \setlength{\LWR@tempheight}{#2\unitlength}%
11760 \appto{\LWR@temptwo}{%
11761     \LWR@print@mbx{width:\LWR@printlength{\LWR@tempwidth}} ; % space
11762     \LWR@print@mbx{height:\LWR@printlength{\LWR@tempheight}} ; % space
11763 }%
11764 }{%
11765 \PackageError{lwarp}%
11766     {(width,height) is missing a comma ',' character}%
11767     {\protect\makebox\space and \protect\framebox\space accept
11768      a size in the format (width,height).}%
11769 }%
11770 }

```

`\LWR@makebox@align` {<*alignment character*>}

Adds to the style in `\LWR@temptwo`.

```

11771 \newcommand*{\LWR@makebox@align}[1]{%
11772     \def\LWR@align{center}%
11773     \ifstrequal{#1}{l}{\def\LWR@align{left}}{%
11774     \ifstrequal{#1}{r}{\def\LWR@align{right}}{%
11775     \ifstrequal{#1}{s}{\def\LWR@align{justify}}{%
11776     \appto{\LWR@temptwo}{%
11777         \LWR@print@mbx{text-align:\LWR@align} ; %
11778     }%
11779 }

```

`\makebox` ((*width,height*)) [*width*] [*pos*] {<*text*>}

```

11780 \NewDocumentCommand{\LWR@HTML@makebox}{>{\SplitArgument{1}{,}}d() o o +m}{%

```

Build the style depending on arguments:

```

11781 \begin{LWR@setvirtualpage}%
11782     \def\LWR@temptwo{%
11783     \IfValueTF{#1}%
11784     {% (width,height) ..
11785         \LWR@makebox@paren #1%
11786         \IfValueT{#2}%
11787         {% (width,height) [posn]
11788             \LWR@makebox@align{#2}%
11789         }%
11790     }%
11791     {% [width]
11792         \IfValueT{#2}% [width]
11793         {%
11794             \setlength{\LWR@tempwidth}{#2}%
11795             \ifdimgreater{\LWR@tempwidth}{0pt}{%
11796                 \appto{\LWR@temptwo}{%
11797                     width:\LWR@printlength{\LWR@tempwidth} ; % space
11798                 }%
11799             }{%
11800         }%
11801     }%

```

```

11802     \IfValueT{#3}%
11803     {% [width] [posn]
11804         \LWR@makebox@align{#3}%
11805     }%
11806     \InlineClass[%
11807         \LWR@print@mbx{display:inline-block} ; %
11808         \LWR@temptwo%
11809     ]%
11810     {makebox}%
11811     {#4}%
11812     \end{LWR@setvirtualpage}%
11813 }
11814 \LWR@formatted{makebox}

```

`\framebox` (*<width,height>*) [*<width>*] [*<pos>*] {*<text>*}

```

11815 \NewDocumentCommand{\LWR@HTML@framebox}{d() o o +m}{%
11816     \fbox{\makebox(#1)[#2][#3]{#4}}%
11817 }
11818
11819 \LWR@formatted{framebox}

```

`\LWR@forceminwidth` {*<legth>*}

Sets `\LWR@atleastonept` to be at least 1pt.

```

11820 \newlength{\LWR@atleastonept}
11821
11822 \newcommand*{\LWR@forceminwidth}[1]{%
11823 \setlength{\LWR@atleastonept}{#1}%
11824 \ifthenelse{%
11825     \lengthtest{\LWR@atleastonept>0pt}\AND%
11826     \lengthtest{\LWR@atleastonept<1pt}%
11827 }%
11828     {\setlength{\LWR@atleastonept}{1pt}}%
11829     {}%
11830 }

```

`\LWR@fboxstyle` Prints the HTML attributes for a black border and padding.

`\LWR@forceminwidth` must be used first in order to set the border width.

```

11831 \newcommand*{\LWR@fboxstyle}{%
11832 \LWR@findcurrenttextcolor%
11833 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@origpound\LWR@tempcolor ; %
11834 padding:\LWR@printlength{\fboxsep} ; %
11835 color:\LWR@origpound\LWR@tempcolor%
11836 }

```

`\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:

```
11837 \newcommand{\LWR@HTML@fbox}[1]{%
11838 \LWR@traceinfo{HTML fbox}%
11839 \LWR@forceminwidth{\fboxrule}%
11840 \InlineClass[%
11841   \LWR@print@mbbox{display:inline-block} ; %
11842   \LWR@fboxstyle%
11843 ]{fbox}{#1}%
11844 }
```

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:

```
11845 \AtBeginDocument{\LWR@formatted{fbox}}
```

`\fboxBlock` `{\text}` Creates a framed HTML <div> of the text.

First, a print-mode version. This is newly defined for print mode, so it is defined inside `warpall`.

for HTML & PRINT:

```
11846 \end{warpHTML}
11847 \begin{warpall}
11848 \let\fboxBlock\fbox
11849 \end{warpall}
11850
11851 \begin{warpHTML}
```

for HTML output: Next, an HTML version:

```
11852 \newcommand{\LWR@HTML@fboxBlock}[1]{%
11853 \LWR@forceminwidth{\fboxrule}%
11854 \LWR@stoppars%
11855 \begin{BlockClass}%
11856 \LWR@fboxstyle%
11857 ]{fboxBlock}
11858 #1
11859 \end{BlockClass}
11860 \LWR@startpars%
11861 }
11862
11863 \LWR@formatted{fboxBlock}
11864
11865 \end{warpHTML}
```

Env `fminipage` `[\align]` `[\height]` `[\align]` `{\width}`

Creates a framed HTML <div> around its contents.

for HTML & PRINT: Print version:

```
11866 \begin{warpall}
11867
11868 \newsavebox{\LWR@fminipagebox}
11869
```

```
11870 \NewDocumentEnvironment{LWR@print@fminipage}{0{t} o 0{t} m}
11871 {%
```

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:

```
11872 \IfValueTF{#3}%
11873 {\def\LWR@thisalign{#3}}
11874 {\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.

```
11875 \IfValueTF{#2}%
11876 {\minipage[#1][#2+2\fboxsep+2\fboxrule][\LWR@thisalign]{#4+2\fboxsep+2\fboxrule}}%
11877 {\minipage[#1]{#4+2\fboxsep+2\fboxrule}}%
```

Capture the contents of the environment:

```
11878 \begin{lrbox}{\LWR@fminipagebox}%
```

Nest the contents inside an inner minipage of the desired size:

```
11879 \IfValueTF{#2}%
11880 {\minipage[#1][#2][\LWR@thisalign]{#4}}%
11881 {\minipage[#1]{#4}}%
11882 }
11883 {%
```

Close the inner minipage and the LR box with the contents:

```
11884 \endminipage%
11885 \end{lrbox}%
```

Create a frame around the contents of the environment:

```
11886 \fbox{\usebox{\LWR@fminipagebox}}%
```

The entire thing is placed inside the outer minipage:

```
11887 \endminipage%
11888 }
11889
11890 \LetLtxMacro\fminipage\LWR@print@fminipage
11891 \LetLtxMacro\endfminipage\endLWR@print@fminipage
11892 % \newenvironment{fminipage}{\LWR@print@fminipage}{\endLWR@print@fminipage}
11893
11894 \end{warpall}
```

HTML version:

for HTML output:

```

11895 \begin{warpHTML}
11896
11897 \NewDocumentEnvironment{LWR@HTML@fminipage}{O{t} o O{t} m}
11898 {%
11899 \LWR@traceinfo{fminipage #1 #2 #3 #4}%

```

Locally change to the virtual page size before processing the requested sizes:

```

11900 \begin{LWR@setvirtualpage}*%
11901 \setlength{\LWR@tempwidth}{#4}%
11902 \IfValueT{#2}{\setlength{\LWR@tempheight}{#2}}%

```

Use a rule of at least one pixel in width:

```

11903 \LWR@forceminwidth{\fboxrule}%

11904 \LWR@stoppars%

11905 \begin{BlockClass}[%
11906 \LWR@fboxstyle ; %
11907 \IfValueT{#2}{height:\LWR@printlength{\LWR@tempheight} ; }%
11908 \ifbool{LWR@minipagefullwidth}%
11909 {\global\boolfalse{LWR@minipagefullwidth}}%
11910 {%
11911     \ifbool{LWR@forceminipagefullwidth}%
11912         {}%
11913         {%
11914             \ifdimequal{\LWR@tempwidth}{\linewidth}%
11915                 {}%
11916                 {width:\LWR@printlength{\LWR@tempwidth} ; }%
11917         }%
11918 }%
11919 ]{fminipage}%
11920 }
11921 {%
11922 \end{BlockClass}%
11923 \end{LWR@setvirtualpage}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

11924 \global\booltrue{LWR@minipagethispar}%
11925 \LWR@traceinfo{fminipage done}%
11926 }
11927
11928 \LWR@formattedenv{fminipage}

```

`\raisebox` $\langle\textit{raiselen}\rangle$ $[\langle\textit{height}\rangle]$ $[\langle\textit{depth}\rangle]$ $\langle\textit{text}\rangle$

```

11929 \NewDocumentCommand{\LWR@HTML@raisebox}{m o o m}{%
11930 #4%
11931 }
11932
11933 \LWR@formatted{raisebox}

```

```
11934 \end{warpHTML}
```

91 Direct formatting

△ **\bfseries, etc.** `\textbf`, etc. are supported, but `\bfseries`, etc. work only in some situations.

△ **HTML special chars** `&`, `<`, and `>` have special meanings in HTML. If `\&`, `\textless`, and `\textgreater` are used, proper HTML entities will be used, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.

program listings For program listings, the `listings` package is supported, and its `literate` option is used to convert `&`, `<`, and `>` to proper HTML entities.

verbatim The various `verbatim`-related environments do not convert `&`, `<`, and `>`, so care must be taken to avoid accidentally including valid HTML code inside these environments. Adding a space on either side may be sufficient.

For high-level block and inline custom CSS classes, see section 51.9.

for HTML output: 11935 `\begin{warpHTML}`

```
\emph {<text>}
```

```
11936 \DeclareRobustCommand{\LWR@HTML@emph}[1]{%
11937   {%
11938     \LWR@HTML@itshape%
11939     \LWR@htmlspan{em}{#1}%
11940   }%
11941 }
11942
11943 \LWR@formatted{emph}
```

```
\textmd {<text>}
```

```
11944 \DeclareRobustCommand{\LWR@HTML@textmd}[1]{%
11945   {%
11946     \LWR@HTML@mdseries%
11947     \InlineClass(font-weight:normal){textmd}{#1}%
11948   }%
11949 }
11950
11951 \LWR@formatted{textmd}
```

```
\textbf {<text>}
```

```
11952 \DeclareRobustCommand{\LWR@HTML@textbf}[1]{%
11953   {%
11954     \LWR@HTML@bfseries%
11955     \LWR@htmlspan{b}{#1}%
11956   }%
```

```
11957 }
11958
11959 \LWR@formatted{textbf}
```

`\texteb` $\{\langle text \rangle\}$ From `nfssex-cfr`.

```
11960 \DeclareRobustCommand{\LWR@HTML@texteb}[1]{%
11961   {%
11962     \LWR@HTML@ebweight%
11963     \InlineClass{texteb}{#1}%
11964   }%
11965 }
11966
11967 \LWR@formatted{texteb}
```

`\textlg` $\{\langle text \rangle\}$ From `nfssex-cfr`.

```
11968 \DeclareRobustCommand{\LWR@HTML@textlg}[1]{%
11969   {%
11970     \LWR@HTML@lgweight%
11971     \InlineClass{textlg}{#1}%
11972   }%
11973 }
11974
11975 \LWR@formatted{textlg}
```

`\textrm` $\{\langle text \rangle\}$

```
11976 \DeclareRobustCommand{\LWR@HTML@textrm}[1]{%
11977   {%
11978     \LWR@HTML@rmfamily%
11979     \InlineClass(font-family:serif){textrm}{#1}%
11980   }%
11981 }
11982
11983 \LWR@formatted{textrm}
```

`\textsf` $\{\langle text \rangle\}$

```
11984 \DeclareRobustCommand{\LWR@HTML@textsf}[1]{%
11985   {%
11986     \LWR@HTML@sffamily%
11987     \InlineClass(font-family:sans){textsf}{#1}%
11988   }%
11989 }
11990
11991 \LWR@formatted{textsf}
```

`\texttt` $\{\langle text \rangle\}$

```
11992 \DeclareRobustCommand{\LWR@HTML@texttt}[1]{%
11993   {%
```

```

11994      \LWR@HTML@ttfamily%
11995      \LWR@htmlspan{kbd}{#1}%
11996    }%
11997  }
11998
11999 \LWR@formatted{texttt}

```

`\textup` {*text*}

```

12000 \DeclareRobustCommand{\LWR@HTML@textup}[1]{%
12001   {%
12002     \LWR@HTML@upshape%
12003     \InlineClass(font-style:normal){textup}{#1}%
12004   }%
12005 }
12006
12007 \LWR@formatted{textup}

```

`\textit` {*text*}

```

12008 \DeclareRobustCommand{\LWR@HTML@textit}[1]{%
12009   {%
12010     \LWR@HTML@itshape%
12011     \LWR@htmlspan{i}{#1}%
12012   }%
12013 }
12014
12015 \LWR@formatted{textit}

```

`\textsc` {*text*}

```

12016 \DeclareRobustCommand{\LWR@HTML@textsc}[1]{%
12017   {%
12018     \LWR@HTML@scshape%
12019     \InlineClass{textsc}{#1}%
12020   }%
12021 }
12022
12023 \LWR@formatted{textsc}

```

`\textulc` {*text*} From fontaxes.

```

12024 \DeclareRobustCommand{\LWR@HTML@textulc}[1]{%
12025   {%
12026     \LWR@HTML@ulcshape%
12027     \InlineClass{textulc}{#1}%
12028   }%
12029 }
12030
12031 \LWR@formatted{textulc}

```

`\textsi` {*text*}

```

12032 \@ifundefined{textsi}{
12033   \LetLtxMacro\LWR@print@textsi\LWR@print@textsc
12034 }{}
12035
12036 \DeclareRobustCommand{\LWR@HTML@textsi}[1]{%
12037   {%
12038     \LWR@HTML@sishape%
12039     \textsc{\textit{#1}}%
12040     \InlineClass(
12041       font-style: italic;
12042       font-variant: small-caps ;
12043       font-variant-numeric: oldstyle-nums ;
12044     ){textsi}{#1}%
12045   }%
12046 }
12047
12048 \LWR@formatted{textsi}

```

`\textsl {<text>}`

```

12049 \DeclareRobustCommand{\LWR@HTML@textsl}[1]{%
12050   {%
12051     \slshape%
12052     \InlineClass(font-style:oblique){textsl}{#1}%
12053   }%
12054 }
12055
12056 \LWR@formatted{textsl}

```

`\textssc {<text>}`

```

12057 \newrobustcmd{\LWR@HTML@textssc}[1]{\textsc{#1}}
12058 \LWR@formatted{textssc}

```

`\textnormal {<text>}`

```

12059 \DeclareRobustCommand{\LWR@HTML@textnormal}[1]{\textmd{\textrm{\textup{#1}}}}
12060
12061 \LWR@formatted{textnormal}

12062 \FilenameNullify{%
12063   \LetLtxMacro\emph\@firstofone%
12064   \LetLtxMacro\textmd\@firstofone%
12065   \LetLtxMacro\textbf\@firstofone%
12066   \LetLtxMacro\texteb\@firstofone%
12067   \LetLtxMacro\textlg\@firstofone%
12068   \LetLtxMacro\textrm\@firstofone%
12069   \LetLtxMacro\textsf\@firstofone%
12070   \LetLtxMacro\texttt\@firstofone%
12071   \LetLtxMacro\textup\@firstofone%
12072   \LetLtxMacro\textit\@firstofone%
12073   \LetLtxMacro\textsc\@firstofone%
12074   \LetLtxMacro\textulc\@firstofone%

```

```

12075 \LetLtxMacro\textsi\@firstofone%
12076 \LetLtxMacro\textsl\@firstofone%
12077 \LetLtxMacro\textssc\@firstofone%
12078 \LetLtxMacro\textnormal\@firstofone%
12079 }

```

Remembers the current font family, series, and shape. fontaxes support is integrated here.

```

12080 \newcommand*\LWR@family}{rm}
12081 \newcommand*\LWR@series}{md}
12082 \newcommand*\LWR@shape}{up}
12083 \newcommand*\LWR@shapecaps}{ulc}

```

`\LWR@textcurrentfont` {*⟨text⟩*}

Prints the text with the current font choices. Avoids nesting repeated font selections.

```

12084 \newcounter{LWR@textcurrentfontdepth}
12085 \setcounter{LWR@textcurrentfontdepth}{0}
12086
12087 \newcommand*\LWR@textcurrentfont}[1]{%
12088   \ifnumcomp{\value{LWR@textcurrentfontdepth}}{>}{0}%
12089     {%
12090       \addtocounter{LWR@textcurrentfontdepth}{1}%
12091       #1%
12092       \addtocounter{LWR@textcurrentfontdepth}{-1}%
12093     }%
12094     {%
12095       \addtocounter{LWR@textcurrentfontdepth}{1}%
12096       \InlineClass{%
12097         text\LWR@family\LWR@origtilde{}%
12098         text\LWR@series\LWR@origtilde{}%
12099         text\LWR@shape\LWR@origtilde{}%
12100         text\LWR@shapecaps%
12101       }%
12102       {#1}%
12103       \addtocounter{LWR@textcurrentfontdepth}{-1}%
12104     }%
12105 }

```

Env `LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```

12106 \newenvironment*LWR@blocktextcurrentfont){%
12107 \LWR@stoppars%
12108 \BlockClass{%
12109   text\LWR@family\LWR@origtilde{}%
12110   text\LWR@series\LWR@origtilde{}%
12111   text\LWR@shape\LWR@origtilde{}%
12112   text\LWR@shapecaps%
12113 }%
12114 }{\endBlockClass\LWR@startpars}

```

\mdseries

```
12115 \newrobustcmd*{\LWR@HTML@mdseries}{%
12116   \LWR@print@mdseries%
12117   \renewcommand*{\LWR@f@series}{md}%
12118 }
12119 \LWR@formatted{mdseries}
```

\bfseries

```
12120 \newrobustcmd*{\LWR@HTML@bfseries}{%
12121   \LWR@print@bfseries%
12122   \renewcommand*{\LWR@f@series}{bf}%
12123 }
12124 \LWR@formatted{bfseries}
```

\ebweight From nfssex-cfr.

```
12125 \newrobustcmd*{\LWR@HTML@ebweight}{%
12126   \LWR@print@ebweight%
12127   \renewcommand*{\LWR@f@series}{eb}%
12128 }
12129 \LWR@formatted{ebweight}
```

\lgweight From nfssex-cfr.

```
12130 \newrobustcmd*{\LWR@HTML@lgweight}{%
12131   \LWR@print@lgweight%
12132   \renewcommand*{\LWR@f@series}{lg}%
12133 }
12134 \LWR@formatted{lgweight}
```

\rmfamily

```
12135 \newrobustcmd*{\LWR@HTML@rmfamily}{%
12136   \LWR@print@rmfamily%
12137   \renewcommand*{\LWR@f@family}{rm}%
12138 }
12139 \LWR@formatted{rmfamily}
```

\sffamily

```
12140 \newrobustcmd*{\LWR@HTML@sffamily}{%
12141   \LWR@print@sffamily%
12142   \renewcommand*{\LWR@f@family}{sf}%
12143 }
12144 \LWR@formatted{sffamily}
```

\ttfamily

```
12145 \newrobustcmd*{\LWR@HTML@ttfamily}{%
```

```

12146 \LWR@print@ttfamily%
12147 \renewcommand*{\LWR@f@family}{tt}%
12148 }
12149 \LWR@formatted{ttfamily}

```

The following use `\AtBeginDocument` due to the \LaTeX core `\reinstall@nfss@defs`, which redefines these `\AtBeginDocument`. See **texdoc source2e**.

`\upshape`

```

12150 \newrobustcmd*{\LWR@HTML@upshape}{%
12151 \LWR@print@upshape%
12152 \renewcommand*{\LWR@f@shape}{up}%
12153 }
12154 \AtBeginDocument{\LWR@formatted{upshape}}

```

`\itshape`

```

12155 \newrobustcmd*{\LWR@HTML@itshape}{%
12156 \LWR@print@itshape%
12157 \renewcommand*{\LWR@f@shape}{it}%
12158 }
12159 \AtBeginDocument{\LWR@formatted{itshape}}

```

`\scshape`

```

12160 \newrobustcmd*{\LWR@HTML@scshape}{%
12161 \LWR@print@scshape%
12162 \renewcommand*{\LWR@f@shapecaps}{sc}%
12163 }
12164 \AtBeginDocument{\LWR@formatted{scshape}}

```

`\ulcshape` From fontaxes.

```

12165 \@ifundefined{ulcshape}{
12166 \LetLtxMacro\ulcshape\upshape
12167 }{}
12168 \newrobustcmd*{\LWR@HTML@ulcshape}{%
12169 \LWR@print@ulcshape%
12170 \renewcommand*{\LWR@f@shapecaps}{ulc}%
12171 }
12172 \AtBeginDocument{\LWR@formatted{ulcshape}}

```

`\sishape`

```

12173 \@ifundefined{sishape}{
12174 \LetLtxMacro\sishape\scshape
12175 }{}
12176 \newrobustcmd*{\LWR@HTML@sishape}{%
12177 \LWR@print@sishape%
12178 \renewcommand*{\LWR@f@shape}{it}

```

```

12179 \renewcommand*\LWR@f@shapecaps}{sc}%
12180 }
12181 \AtBeginDocument{\LWR@formatted{sishape}}

```

\slshape

```

12182 \newrobustcmd*\LWR@HTML@slshape}{%
12183 \LWR@print@slshape%
12184 \renewcommand*\LWR@f@shape}{sl}%
12185 }
12186 \AtBeginDocument{\LWR@formatted{slshape}}

```

\sscshape

```

12187 \newrobustcmd{\LWR@HTML@sscshape}{\LWR@HTML@scshape}
12188 \AtBeginDocument{\LWR@formatted{sscshape}}

```

\normalfont

```

12189 \newrobustcmd*\LWR@HTML@normalfont){\rmfamily\mdseries\upshape\ulcshape}
12190 \LWR@formatted{normalfont}

```

```

12191 \FilenameNullify{%
12192 \LetLtxMacro\rmfamily\@empty%
12193 \LetLtxMacro\sffamily\@empty%
12194 \LetLtxMacro\ttfamily\@empty%
12195 \LetLtxMacro\bfseries\@empty%
12196 \LetLtxMacro\ebweight\@empty%
12197 \LetLtxMacro\lgweight\@empty%
12198 \LetLtxMacro\mdseries\@empty%
12199 \LetLtxMacro\upshape\@empty%
12200 \LetLtxMacro\slshape\@empty%
12201 \LetLtxMacro\sishape\@empty%
12202 \LetLtxMacro\sscshape\@empty%
12203 \LetLtxMacro\itshape\@empty%
12204 \LetLtxMacro\ulcshape\@empty%
12205 \LetLtxMacro\sscshape\@empty%
12206 \LetLtxMacro\normalfont\@empty%
12207 }

```

\sp $\langle text \rangle$

For siunitx. Must work in math mode.

```
12208 \renewcommand{\sp}[1]{\text{<sup>#1</sup>}}
```

\sb $\langle text \rangle$

For siunitx. Must work in math mode.

```
12209 \renewcommand{\sb}[1]{\text{<sub>#1</sub>}}
```

`\textsuperscript` $\{\langle text \rangle\}$

```
12210 \newrobustcmd{\LWR@HTML@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
12211 \LWR@formatted{textsuperscript}
```

`\@textsuperscript` $\{\langle text \rangle\}$

```
12212 \newcommand{\LWR@HTML@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
12213 \LWR@formatted{@textsuperscript}
```

`\textsubscript` $\{\langle text \rangle\}$

```
12214 \newrobustcmd{\LWR@HTML@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
12215 \LWR@formatted{textsubscript}
```

`\@textsubscript` $\{\langle text \rangle\}$

```
12216 \newcommand{\LWR@HTML@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
12217 \LWR@formatted{@textsubscript}
```

`\up` $\{\langle text \rangle\}$ Prints superscript.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
12218 \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.

```
12219 \AtBeginDocument{\let\fup\textsuperscript}
```

`\underline` $\{\langle text \rangle\}$

```
12220 \renewcommand{\underline}[1]{%
12221 \InlineClass%
12222 (text-decoration:underline; text-decoration-skip: auto)%
12223 {\underline}{#1}%
12224 }
```

`\LWR@overline` $\{\langle text \rangle\}$

```
12225 \newcommand{\LWR@overline}[1]{%
12226 \InlineClass%
12227 (text-decoration:overline; text-decoration-skip: auto)%
12228 {\overline}{#1}%
12229 }
```

`\LWR@currenttextcolor` The color to use for text and `\rule`, defaulting to black:

```
12230 \newcommand*{\LWR@currenttextcolor}{black}
```

`\LWR@tempcolor` The color converted to HTML colorspace.
`\LWR@tempcolortwo`

```
12231 \newcommand*{\LWR@tempcolor}{}
12232 \newcommand*{\LWR@tempcolortwo}{}

```

`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```
12233 \newcommand*{\LWR@findcurrenttextcolor}{%
12234 \renewcommand{\LWR@tempcolor}{000000}%
12235 }
```

`\LWR@textcurrentcolor` `{⟨text⟩}` Like `\textcolor` but uses the current `\color` instead.

```
12236 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%
12237   \renewcommand*{\LWR@currenttextcolor}{black}%
12238   #1%
12239 }
```

```
12240 \end{warppHTML}
```

for PRINT output: 12241 `\begin{warpprint}`

`\LWR@textcurrentfont` `{⟨text⟩}`

Prints the text with the current font choices.

```
12242 \newcommand*{\LWR@textcurrentfont}[1]{#1}
```

Env `LWR@blocktextcurrentfont` Prints the contents with the current font choices.

```
12243 \newenvironment*{LWR@blocktextcurrentfont}{}{}
```

`\FilenameNullify` `{⟨macros to nullify⟩}`

```
12244 \newcommand*{\FilenameNullify}[1]{}

```

```
12245 \end{warpprint}
```

92 Skips, spaces, font sizes

for HTML output: 12246 `\begin{warppHTML}`

`\`, and `\thinspace` may be redefined by other packages, so are redefined `\AtBeginDocument` here.

Direct-formatting space commands become HTML entities:

```
12247 \AtBeginDocument{
12248 \renewrobustcmd*{\,}{\HTMLUnicode{202f}} % HTML thin non-breakable space
12249 \renewrobustcmd*{\thinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
12250 \renewrobustcmd*{\negthinspace}{\HTMLUnicode{202f}} % HTML thin non-breakable space
12251 \renewrobustcmd*{~}{\HTMLentity{nbsp}}
12252 \renewrobustcmd*{\textellipsis}{\HTMLUnicode{2026}}
12253 }
```

Direct-formatting font sizes are remembered for future use:

```
12254 \newcommand*{\LWR@font@size}{normalsize}
12255
12256 \newrobustcmd*{\LWR@HTML@normalsize}{\renewcommand*{\LWR@font@size}{normalsize}}
12257 \LWR@formatted{normalsize}
12258
12259 \newrobustcmd*{\LWR@HTML@small}{\renewcommand*{\LWR@font@size}{small}}
12260 \LWR@formatted{small}
12261
12262 \newrobustcmd*{\LWR@HTML@footnotesize}{\renewcommand*{\LWR@font@size}{footnotesize}}
12263 \LWR@formatted{footnotesize}
12264
12265 \newrobustcmd*{\LWR@HTML@scriptsize}{\renewcommand*{\LWR@font@size}{scriptsize}}
12266 \LWR@formatted{scriptsize}
12267
12268 \newrobustcmd*{\LWR@HTML@tiny}{\renewcommand*{\LWR@font@size}{tiny}}
12269 \LWR@formatted{tiny}
12270
12271 \newrobustcmd*{\LWR@HTML@large}{\renewcommand*{\LWR@font@size}{large}}
12272 \LWR@formatted{large}
12273
12274 \newrobustcmd*{\LWR@HTML@Large}{\renewcommand*{\LWR@font@size}{Large}}
12275 \LWR@formatted{Large}
12276
12277 \newrobustcmd*{\LWR@HTML@LARGE}{\renewcommand*{\LWR@font@size}{LARGE}}
12278 \LWR@formatted{LARGE}
12279
12280 \newrobustcmd*{\LWR@HTML@huge}{\renewcommand*{\LWR@font@size}{huge}}
12281 \LWR@formatted{huge}
12282
12283 \newrobustcmd*{\LWR@HTML@Huge}{\renewcommand*{\LWR@font@size}{Huge}}
12284 \LWR@formatted{Huge}

12285 \DeclareDocumentCommand{\onecolumn}{}{}
12286
12287 \DeclareDocumentCommand{\twocolumn}{0}{}{}
12288
12289 #1
12290
12291 }
```

`\hfill`

```
12292 \newcommand*\LWR@HTML@hfill{\quad}
12293 \LWR@formatted{hfill}
```

`\hrulefill`

```
12294 \newcommand*\LWR@HTML@hrulefill{\rule{1in}{1pt}}
12295 \LWR@formatted{hrulefill}
```

`\dotfill`

```
12296 \newcommand*\LWR@HTML@dotfill{\dots}
12297 \LWR@formatted{dotfill}
```

`\newpage`

```
12298 \renewcommand*\newpage{
12299
12300 }
```

`\newline` Uses the HTML `
` element.

```
12301 \newrobustcmd*\LWR@newlinebr{\unskip\LWR@htmltag{br /}\LWR@originewline}%
12302 \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`.

```
12303 \LetLtxMacro\LWR@origendofline\\
12304 \NewDocumentCommand{\LWR@endofline}{s O{0pt}}
12305 {%
12306 \newline%
```

```
12307 \setlength{\LWR@templengthone}{#2}%
12308 \ifdimgreater{\LWR@templengthone}{0pt}{\newline}{}%
12309 }
```

`\LWR@minipagestartpars` Minipages are often placed side-by-side inside figures, with a bit of horizontal space to separate them. Since HTML does not allow a `<div>` to be inside a `p`, paragraphs must be turned off during the generation of the minipage, then turned on after the minipage is complete. When this occurs between side-by-side minipages, `lwarp` correctly suppresses the paragraph tags between the minipages, unless some other text is between the minipages. Such text forms its own paragraph, resulting in text after a minipage to

`\hspace` be on its own line. Since people often place small horizontal space between minipages, `\enskip` it is desirable to maintain this space if possible. `lwarp` tries to do this by remembering `\quad` that a minipage has been seen, in which case paragraph tags are suppressed around `\qqquad` `\hspace`, `\enskip`, `\quad`, and `\qqquad` until the end of the paragraph, when the closing `p` tag is created.

When a minipage is seen, the boolean `LWR@minipagethispar` is set, telling the following horizontal whitespace commands to try to suppress their surrounding paragraph tags. `LWR@minipagethispar` is cleared at the next end of paragraph, when the HTML paragraph closing tag is generated.

Placed just before `\hspace`, `\quad`, or `\qqquad`'s HTML output.

```
12310 \newcommand*{\LWR@minipagestartpars}{%
12311   \ifbool{LWR@minipagethispar}{\LWR@startpars}{}%
12312 }
```

`\LWR@minipagestoppars` Placed just after `\hspace`, `\quad`, or `\qqquad`'s HTML output.

```
12313 \newcommand*{\LWR@minipagestoppars}{%
12314   \ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%
12315 }
```

`\quad` Handles special minipage & horizontal space interactions. Uses 2003 EM SPACE to pass validation.

```
12316 \renewrobustcmd*{\quad}{%
12317   \LWR@minipagestoppars%
12318   \HTMLUnicode{2003}%
12319   \LWR@minipagestartpars%
12320 }
```

`\qqquad` Handles special minipage & horizontal space interactions.

```
12321 \renewrobustcmd*{\qqquad}{\quad\quad}
```

`\enskip` Handles special minipage & horizontal space interactions.

```
12322 \renewrobustcmd*{\enskip}{%
12323   \LWR@minipagestoppars%
12324   \HTMLUnicode{2002}%
12325   \LWR@minipagestartpars%
12326 }
```

Len `\LWR@tempwidth` Used to compute span width, height, raise for `\hspace` and `\rule`:

Len `\LWR@tempheight`

Len `\LWR@tempraise`

```
12327 \newlength{\LWR@tempwidth}
12328 \newlength{\LWR@tempheight}
12329 \newlength{\LWR@tempraise}
```

```
\LWR@select@html@hspace *{\langle length\rangle} *{\langle length\rangle}
\hspace
```

Handles special minipage & horizontal space interactions.

Prints a span of a given width. Ignores the optional star.

`\hspace{\fill}` is converted to `\hspace{2em}`, equal to `\quad`.

```
12330 \newcommand{\LWR@select@html@hspace}{%
12331 \RenewDocumentCommand{\hspace}{s m}{%
12332 \setlength{\LWR@tempwidth}{##2}%
```

If `\fill`, change to `\quad`:

```
12333 \ifnum\gluestretchorder\LWR@tempwidth>0%
12334 \setlength{\LWR@tempwidth}{2em}%
12335 \fi%
```

Only if the width is greater than zero:

```
12336 \ifdimcomp{\LWR@tempwidth}{>}{0pt}{%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
12337 \LWR@minipagestoppars%
```

Support the HTML thin wrappable space:

```
12338 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
12339 {%
12340 \HTMLUnicode{2009}% thin breakable space
12341 }%
```

Print the span with the converted width. Not rounded.

```
12342 {%
12343 \LWR@htmltagc{%
12344 span style="width:\LWR@printlength{\LWR@tempwidth}; % extra space
12345 display:inline-block"%
12346 }%
```

If formatting for a word processor, approximate with a number of `\quads`, in case a span of a given width is not supported:

```
12347 \ifbool{FormatWP}{%
12348 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
12349 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
12350 \quad%
12351 \addtolength{\LWR@templengthone}{-1em}%
12352 }%
12353 }%
```

If NOT formatting for a word processor, include an empty comment to avoid an empty span:

```
12354      {\LWR@htmlcomment{}}%
```

Close the span:

```
12355      \LWR@htmltagc{/span}%
12356    }%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
12357    \LWR@minipagestartpars%
12358  }{}% width greater than 0
12359  }%
12360  }
```

```
\LWR@select@html@nohspace *{\langle length\rangle}
\hspace
```

Used to disable \hspace while creating description \items.

```
12361 \newcommand{\LWR@select@html@nohspace}{%
12362   \RenewDocumentCommand{\hspace}{s m}{}%
12363 }
```

```
\LWR@select@print@hspace
```

```
12364 \newcommand*{\LWR@select@print@hspace}{%
12365   \renewrobustcmd\hspace{\@ifstar\@hspace\@hspace}%
12366 }
```

```
\hspace *{\langle length\rangle}
```

Handles special minipage & horizontal space interactions.

```
12367 \LWR@select@html@hspace
```

```
\LWR@vspace *{\langle length\rangle} Nullified vspace.
```

```
12368 \NewDocumentCommand{\LWR@HTML@vspace}{s m}{}
12369
12370 \LWR@formatted{vspace}
```

```
\linebreak [\langle num\rangle] Inserts an HTML br tag.
```

```
12371 \renewcommand*{\linebreak}[1][\newline]
```

```
\nolinebreak [\langle num\rangle]
```

```
12372 \renewcommand*{\nolinebreak}[1][\newline]
```

`\pagebreak` [*<num>*] Starts a new paragraph.

```
12373 \renewcommand*\pagebreak}[1][]{
12374
12375 }
```

`\nopagebreak` [*<num>*]

```
12376 \renewcommand*\nopagebreak}[1][{}]
```

`\enlargethispage` * *<len>*

```
12377 \RenewDocumentCommand{\enlargethispage}{s m}{} 
```

`\clearpage`

`\cleardoublepage`

```
12378 \renewcommand*\clearpage{}
12379 \renewcommand*\cleardoublepage{} 
```

`\rule` [*<raise>*] *<width>* *<height>*

Handles special minipage & horizontal space interactions.

Creates a span of a given width and height. Ignores the optional star.

`\fill` is zero-width, so `\hspace{\fill}` is ignored.

```
12380 \newcommand*\LWR@HTML@rule}[3][{}]{%
```

The width is copied into a temporary L^AT_EX length, from which comparisons and conversions may be made:

```
12381 \setlength{\LWR@tempwidth}{#2}%
```

If it's zero-width then skip the entire rule:

```
12382 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}{%
12383 {}}% zero- width
12384 {% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```
12385 \ifthenelse{%
12386 \lengthtest{\LWR@tempwidth>0pt}\AND%
12387 \lengthtest{\LWR@tempwidth<1pt}}%
12388 }%
12389 {\setlength{\LWR@tempwidth}{1pt}}%
12390 {}%
```

Likewise with height:

```

12391 \setlength{\LWR@tempheight}{#3}%
12392 \ifthenelse{%
12393   \lengthtest{\LWR@tempheight>0pt}\AND%
12394   \lengthtest{\LWR@tempheight<1pt}}%
12395   }%
12396   {\setlength{\LWR@tempheight}{1pt}}%
12397   }%

```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```
12398 \LWR@minipagestoppars%
```

Print the span with the converted width and height. The width and height are NOT rounded, since a height of less than 1pt is quite common in L^AT_EX code.

```

12399 \LWR@findcurrenttextcolor%
12400 \LWR@htmltagc{%
12401   span\LWR@indentHTML%
12402   style="%

```

The HTML background color is used to draw the filled rule according to the L^AT_EX foreground color set by `\textcolor`.

```
12403 \ifbool{FormatWP}{\background:\LWR@currenttextcolor ; }%
```

The width and height are printed, converted to PT:

```

12404   width:\LWR@printlength{\LWR@tempwidth} ; %
12405   height:\LWR@printlength{\LWR@tempheight} ; %

```

The raise height is converted to a CSS transform. The *2 raise multiplier is to approximately match HTML output's X height. Conversion to a L^AT_EX length allows a typical L^AT_EX expression to be used as an argument for the raise, whereas printing the raise argument directly to HTML output without conversion to a L^AT_EX length limits the allowable syntax. To do: A superior method would compute a ratio of L^AT_EX ex height, then print that to HTML with an ex unit.

```

12406 \ifblank{#1}%
12407   }%
12408   {%
12409     \setlength{\LWR@tempraise}{0pt-#1}%
12410     \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
12411     \LWR@indentHTML%
12412     -ms-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
12413     \LWR@indentHTML%
12414     -webkit-transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
12415     \LWR@indentHTML%
12416     transform: translate(0pt,\LWR@printlength{\LWR@tempraise}); %
12417     \LWR@indentHTML%
12418   }%

```

Display inline-block to place the span inline with the text:

```
12419   display:inline-block;"\LWR@orignewline%
12420   }%
```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```
12421   \ifbool{FormatWP}{%
12422     \setlength{\LWR@templengthone}{\LWR@tempwidth}%
12423     \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
12424       \_{}%
12425       \addtolength{\LWR@templengthone}{-1em}%
12426     }%
12427   }%
```

If NOT formatting for a word processor, add a comment to avoid an empty :

```
12428   {\LWR@htmlcomment{}}%
```

Close the span:

```
12429   \LWR@htmltagc{/span}%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```
12430   \LWR@minipagestartpars%
12431 }% non-zero width
12432 }
12433
12434 \LWR@formatted{rule}
```

```
12435 \end{warpHTML}
```

93 \phantomsection

for HTML output: 12436 \begin{warpHTML}

\phantomsection Emulate the `hyperref` \phantomsection command, often used to insert the bibliography into the table of contents. Ignores \ForceHTMLTOC.

```
12437 \newcounter{LWR@phantomsection}
12438 \DeclareDocumentCommand{\phantomsection}{}{%
12439   \begingroup%
12440   \boolfalse{LWR@forcinghtmltoc}%
12441   \section*{}%
12442   \endgroup%
12443 }
```

```
12444 \end{warpHTML}
```

94 \LaTeX and other logos

Logos for HTML and print modes:

Some of these logos may be redefined in a later package, so after loading other packages, and at the beginning of the document, their definitions are finally set by \LWR@formatted.

For CSS conversions, see:

<http://edward.oconnor.cx/2007/08/tex-poshlet>

<http://nitens.org/taraborelli/texlogo>

and the spacing described in the `metafont` package documentation.

```

for HTML & PRINT: 12445 \begin{warpall}
12446 \newbool{LWR@warnXe}
12447 \boolfalse{LWR@warnXe}
12448
12449 \newrobustcmd*{\Xe}
12450   {%
12451     X\hspace{-.1667em}\raisebox{-.5ex}{E}%
12452     \global\booltrue{LWR@warnXe}%
12453   }
12454
12455 \AtBeginDocument{
12456   \@ifpackageloaded{graphics}{
12457     \@ifpackageloaded{metalogo}{%
12458       \renewrobustcmd*{\Xe}
12459         {X\hspace{-.1667em}\raisebox{-.5ex}{\reflectbox{E}}}
12460     }
12461   }{}
12462 }
12463
12464 \AtEndDocument{
12465   \ifbool{LWR@warnXe}{
12466     \PackageWarningNoLine{lwarp}{Load graphicx or graphics
12467       for improved XeTeX logo}
12468   }{}
12469 }
12470
12471 \providerobustcmd*{\XeTeX}{\mbox{\Xe\hspace{-.125em}\TeX}}
12472 \providerobustcmd*{\XeLaTeX}{\mbox{\Xe\hspace{-.125em}\LaTeX}}
12473 \providerobustcmd*{\AmS}{%
12474   \leavevmode\hbox{$\mathcal A\kern-.2em\lower.376ex%
12475   \hbox{$\mathcal M$}\kern-.2em\mathcal S$}%
12476 }
12477 \newrobustcmd*{\LyX}{\textsf{LyX}}
12478 \providerobustcmd*{\LuaTeX}{\mbox{Lua\TeX}}
12479 \providerobustcmd*{\LuaLaTeX}{\mbox{Lua\LaTeX}}
12480 \providerobustcmd*{\BibTeX}{\mbox{B\textsc{ib}\TeX}}
12481 \providerobustcmd*{\MakeIndex}{\mbox{\textit{MakeIndex}}}
12482 \providerobustcmd*{\ConTeXt}{\mbox{Con\TeX{t}}}
12483 \providerobustcmd*{\MiKTeX}{\mbox{MiK\TeX}}
12484 \end{warpall}

```

for HTML output: 12485 \begin{warpHTML}

The print-mode versions of the following may be changed by `metalogo`, so their print formatting is recorded `\AtBeginDocument`.

`\TeX` \TeX

`latexlogo` is a css class used to properly typeset the E and A in \LaTeX and friends.

`latexlogofont` is a css class used to select the font for the rest of the logo in \LaTeX , $\text{Lua}\TeX$, $\text{Con}\TeX$ t, etc.

```

12486 \newrobustcmd*{\LWR@HTML@TeX}
12487 {%
12488   \InlineClass{latexlogofont}%
12489   {%
12490     \InlineClass{latexlogo}%
12491     {%
12492       T%
12493       \InlineClass{latexlogosub}{e}%
12494       X%
12495     }%
12496   }%
12497 }
12498 \AtBeginDocument{\LWR@formatted{TeX}}% may have been patched by metalogo

```

`\LaTeX` \LaTeX , $\LaTeX 2_{\epsilon}$

`\LaTeXe`

```

12499 \newrobustcmd*{\LWR@HTML@LaTeX}
12500 {%
12501   \InlineClass{latexlogofont}%
12502   {%
12503     \InlineClass{latexlogo}%
12504     {%
12505       L%
12506       \InlineClass{latexlogosup}{a}%
12507       T%
12508       \InlineClass{latexlogosub}{e}%
12509       X%
12510     }%
12511   }%
12512 }
12513
12514 \AtBeginDocument{\LWR@formatted{LaTeX}}% may have been patched by metalogo
12515
12516
12517 \newrobustcmd*{\LWR@HTML@LaTeXe}
12518 {%
12519   \LaTeX%
12520   \InlineClass{latexlogofont}{%
12521     \InlineClass{latexlogotwoe}{%
12522       2%
12523       \InlineClass{latexlogotwoesub}{\HTMLUnicode{03B5}}%
12524     }%

```

```

12525     }%
12526 }
12527 \AtBeginDocument{\LWR@formatted{LaTeX}}% may have been patched by metalogo

```

`\LuaTeX` `LuaTeX`, `LuaLATeX`
`\LuaLaTeX`

```

12528 \newrobustcmd*{\LWR@HTML@LuaTeX}{\InlineClass{latexlogofont}{Lua}\TeX}
12529 \AtBeginDocument{\LWR@formatted{LuaTeX}}% may have been patched by metalogo
12530
12531 \newrobustcmd*{\LWR@HTML@LuaLaTeX}{\InlineClass{latexlogofont}{Lua}\LaTeX}
12532 \AtBeginDocument{\LWR@formatted{LuaLaTeX}}% may have been patched by metalogo

```

`\XeTeX` `XETeX`, `XELATeX`
`\XeLaTeX`

`xetexlogo` is a css class which aligns the backwards E in `XETeX` and spaces `TeX` appropriately.

`xelatexlogo` is a css class which aligns the backwards E in `XELATeX` and spaces `LATeX` appropriately.

```

12533 \newrobustcmd*{\LWR@HTML@Xe}
12534     {%
12535         X%
12536         \InlineClass{xelatexlogosub}{\HTMLunicode{18e}}%
12537     }
12538 \AtBeginDocument{\LWR@formatted{Xe}}% may have been patched by metalogo
12539
12540 \newrobustcmd*{\LWR@HTML@XeTeX}{\InlineClass{xetexlogo}{\Xe}\TeX}
12541 \AtBeginDocument{\LWR@formatted{XeTeX}}% may have been patched by metalogo
12542
12543 \newrobustcmd*{\LWR@HTML@XeLaTeX}{\InlineClass{xelatexlogo}{\Xe}\LaTeX}
12544 \AtBeginDocument{\LWR@formatted{XeLaTeX}}% may have been patched by metalogo

```

`\ConTeXt` `ConTeXt`

```

12545 \newrobustcmd*{\LWR@HTML@ConTeXt}{%
12546     \InlineClass{latexlogofont}{Con}\TeX}%
12547     \InlineClass{latexlogofont}{t}%
12548 }
12549 \LWR@formatted{ConTeXt}

```

`\BibTeX` `BIBTEX`, `MakeIndex`
`\MakeIndex`

```

12550 \newrobustcmd*{\LWR@HTML@BibTeX}
12551     {\InlineClass{latexlogofont}{B\textsc{ib}}\TeX}
12552 \LWR@formatted{BibTeX}
12553
12554 \newrobustcmd*{\LWR@HTML@MakeIndex}
12555     {\InlineClass{latexlogofont}{\textit{MakeIndex}}}
12556 \LWR@formatted{MakeIndex}

```

`\AmS` \mathcal{AMS}

`amslogo` is a css class used for the \mathcal{AMS} logo.

```
12557 \AtBeginDocument{%
12558 \newrobustcmd*{\LWR@HTML@AmS}
12559 {%
12560   \InlineClass{amslogo}{%
12561     \textit{%
12562       A%
12563       \InlineClass{latexlogosub}{M}%
12564       S%
12565     }%
12566   }%
12567 }%
12568 \LWR@formatted{AmS}
12569 }
```

`\MiKTeX` MiKTeX

```
12570 \newrobustcmd*{\LWR@HTML@MiKTeX}{\InlineClass{latexlogofont}{MiK}\TeX}
12571 \LWR@formatted{MiKTeX}
```

`\LyX` LyX

`lyxlogo` is a css class used for the LyX logo.

```
12572 \newrobustcmd*{\LWR@HTML@LyX}{\InlineClass{lyxlogo}{LyX}}
12573 \LWR@formatted{LyX}

12574 \end{warpHTML}
```

95 `\AtBeginDocument`, `\AtEndDocument`

for HTML output: `12575 \begin{warpHTML}`

`\LWR@LwarpStart` Automatically sets up the HTML-related actions for the start and end of the document.

```
\LWR@LwarpEnd
12576 \AfterEndPreamble{\LWR@LwarpStart}
12577 \AtEndDocument{\LWR@LwarpEnd}
```

```
12578 \end{warpHTML}
```

96 Loading `textcomp` patches

`textcomp` has now been integrated into the $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ core, so its patches are loaded now.

for HTML output:

```

12579 \begin{warpHTML}
12580 \RequirePackage{lwarp-textcomp}
12581 \end{warpHTML}

```

97 Loading KOMA-SCRIPT class patches

Load patches to koma-script.

```

for HTML output: 12582 \begin{warpHTML}

12583 \@ifclassloaded{scrbook}{\RequirePackage{lwarp-patch-komascript}}{}
12584 \@ifclassloaded{scrartcl}{\RequirePackage{lwarp-patch-komascript}}{}
12585 \@ifclassloaded{scrreprt}{\RequirePackage{lwarp-patch-komascript}}{}

12586 \end{warpHTML}

```

98 Loading MEMOIR class patches

Load patches to memoir.

```

for HTML & PRINT: 12587 \begin{warpprint}
12588 \@ifclassloaded{memoir}{\LWR@origRequirePackage{xcolor}}{}
12589 \end{warpprint}

for HTML output: 12590 \begin{warpHTML}
12591 \@ifclassloaded{memoir}{\RequirePackage{lwarp-patch-memoir}}{}
12592 \end{warpHTML}

```

99 ut* class patches

Load patches to uj* and ut* classes, as well as ltj* classes.

```

for HTML output: 12593 \begin{warpHTML}

12594 \newcommand*{\LWR@patchujtclasses}{

  uj/t does not use \partname

12595   \def\@partnameformat{}

12596   \def\@partcntformat##1{%
12597     \prepartname%
12598     \csname the##1\endcsname%
12599     \postpartname%
12600     \quad%
12601   }

```

```

12602 \ifundefined{chapter}{}{
12603     \def\@chapcntformat##1{%
12604         \prechaptername%
12605         \csname the##1\endcsname%
12606         \postchaptername%
12607         \quad%
12608     }
12609 }

```

Use decimal points instead of centered dots:

```

12610 \renewcommand{\thepart}{\@Roman\c@part}
12611 \ifundefined{chapter}{
12612     \renewcommand{\thesection}{\@arabic\c@section}
12613 }{
12614     \renewcommand{\thechapter}{\@arabic\c@chapter}
12615     \renewcommand{\thesection}{\thechapter.\@arabic\c@section}
12616 }
12617 \renewcommand{\thesubsection}{\thesection.\@arabic\c@subsection}
12618 \renewcommand{\thesubsubsection}{%
12619     \thesubsection.\@arabic\c@subsubsection}
12620 \renewcommand{\theparagraph}{%
12621     \thesubsubsection.\@arabic\c@paragraph}
12622 \renewcommand{\thesubparagraph}{%
12623     \theparagraph.\@arabic\c@subparagraph}
12624 \ifundefined{chapter}{
12625     \renewcommand{\thefigure}{\@arabic\c@figure}
12626     \renewcommand{\thetable}{\@arabic\c@table}
12627 }{
12628     \renewcommand{\thefigure}{%
12629         \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@figure}
12630     \renewcommand{\thetable}{%
12631         \ifnum\c@chapter>\z@\thechapter.\fi\@arabic\c@table}
12632 }
12633 }
12634
12635 \@ifclassloaded{ujarticle}{\LWR@patchujtclasses}{}
12636 \@ifclassloaded{ujbook}{\LWR@patchujtclasses}{}
12637 \@ifclassloaded{ujreport}{\LWR@patchujtclasses}{}
12638 \@ifclassloaded{utarticle}{\LWR@patchujtclasses}{}
12639 \@ifclassloaded{utbook}{\LWR@patchujtclasses}{}
12640 \@ifclassloaded{utreport}{\LWR@patchujtclasses}{}
12641 \@ifclassloaded{ltjarticle}{\LWR@patchujtclasses}{}
12642 \@ifclassloaded{ltjbook}{\LWR@patchujtclasses}{}
12643 \@ifclassloaded{ltjreport}{\LWR@patchujtclasses}{}
12644 \@ifclassloaded{ltjsarticle}{\LWR@patchujtclasses}{}
12645 \@ifclassloaded{ltjsbook}{\LWR@patchujtclasses}{}
12646 \@ifclassloaded{ltjsreport}{\LWR@patchujtclasses}{}
12647 \@ifclassloaded{ltjskiyou}{\LWR@patchujtclasses}{}
12648 \@ifclassloaded{ltjspf}{\LWR@patchujtclasses}{}
12649 \@ifclassloaded{ltjtarticle}{\LWR@patchujtclasses}{}
12650 \@ifclassloaded{ltjtbook}{\LWR@patchujtclasses}{}
12651 \@ifclassloaded{ltjtreport}{\LWR@patchujtclasses}{}
12652 \end{warpHTML}

```

100 C_TE_X patches

Patches for `ctex` and related classes, which are loaded before `lwarp`.

All C_TE_X classes and the `ctex` package seem to load `ctexpatch`, so its presence is used to decide whether to have `lwarp` patch C_TE_X.

for HTML output: 12653 `\begin{warpHTML}`

`\AtBeginDocument` in case the user set `FileSectionNames` in the preamble.

```

12654 \AtBeginDocument{
12655     \@ifpackageloaded{ctexpatch}{%
12656         \def\@partcntformat#1{%
12657             \LWR@isolate{\CTEX@partname}~%
12658             \CTEX@part@aftername%
12659         }%
12660
12661         \def\@partnameformat{}
12662
12663         \def\@chapcntformat#1{%
12664             \LWR@isolate{\CTEX@chaptername}~%
12665             \CTEX@chapter@aftername%
12666         }%
12667     }{}
12668 }

12669 \end{warpHTML}

```

101 kotexutf patches

Patch for `kotexutf`, which is loaded before `lwarp`.

`kotexutf`'s `\@setref` was conflicting with `lwarp`'s cross references.

for HTML output: 12670 `\begin{warpHTML}`

If `kotexutf`'s version of `\@setref` is detected, it is reverted to the original.

```

12671 \AtBeginDocument{
12672 \@ifpackageloaded{kotexutf}{%
12673     \def\LWR@kotexutf@setref#1#2#3{%
12674         \@setref@dhuks@orig{#1}{#2}{#3}%
12675     \ifx#1\relax\else
12676         \bgroup
12677         \dhuks@make@ckchar@null
12678         \edef\@temp{\expandafter#2#1}\global\josatoks\expandafter{\@temp}%
12679         \egroup
12680     \fi%
12681 }%
12682

```

```

12683 \ifdefequal{\@setref}{\LWR@kotexutf@setref}{
12684 \let\@setref\@setref@dhucs@orig
12685 }{}
12686 }{}
12687 }

12688 \end{warpHTML}

```

102 babel and polyglossia warnings

lwarp prints a message instructing the user how to avoid the following error.

(These are not `\PackageWarnings` because there may not be a problem.)

lwarp uses `cleveref`, which has some limitations when using `polyglossia`, possibly resulting in the error

```
! Undefined control sequence. . . . \@begindocumenthook
```

To test compatibility, add

```
\usepackage{cleveref}
```

near the end of the preamble (as the last package to be loaded), and try to compile the print version. It may be necessary to set

```
\setdefaultlanguage{english}
```

or some other language supported by `cleveref`, then select other languages using `\setotherlanguages`.

Once the print version works with `cleveref` and `polyglossia`, the HTML version should work as well using `lwarp`.

```

for HTML output: 12689 \begin{warpHTML}
12690 \AtBeginDocument{
12691
12692 \ifpackageloaded{polyglossia}{
12693 \PackageWarningNoLine{lwarp}
12694 {%
12695 Polyglossia has been loaded. Lwarp also uses cleveref.\MessageBreak
12696 See the cleveref documentation regarding\MessageBreak
12697 polyglossia support. Some languages are not supported%
12698 }
12699 \typeout{---}
12700 \typeout{Package lwarp:}
12701 \typeout{If the error}
12702 \typeout{\space\space‘! Undefined control sequence.
12703 \space ... \space \protect\@begindocumenthook’}}
12704 \typeout{occurs here, use the polyglossia macro:}
12705 \typeout{\space\space\protect\setmainlanguage\protect{...}\protect}}
12706 \typeout{---}
12707 }{

```

```

12708 \@ifpackageloaded{babel}{
12709     \PackageWarningNoLine{lwarp}
12710     {%
12711         Babel has been loaded. Lwarp also uses cleveref.\MessageBreak
12712         See the cleveref documentation regarding\MessageBreak
12713         babel support. Some languages are not supported%
12714     }
12715 }{}
12716 }
12717
12718 }
12719 \end{warpHTML}

```

103 MATHJAX warnings

`\LWR@mathjaxwarn {<packagename>} {<More text.>}`

To be done `\AtBeginDocument`.

```

12720 \newcommand*{\LWR@mathjaxwarn}[2]{%
12721     \@ifpackageloaded{lwarp-#1}{%
12722         \ifblank{#2}{%
12723             \PackageWarningNoLine{lwarp}
12724             {%
12725                 Lwarp provides emulation for MathJax when used\MessageBreak
12726                 with the #1 package%
12727             }
12728         }{%
12729             \PackageWarningNoLine{lwarp}
12730             {%
12731                 Lwarp provides emulation for MathJax when used\MessageBreak
12732                 with the #1 package.\MessageBreak
12733                 #2%
12734             }
12735         }%
12736     }{}%
12737 }
12738
12739 \AtBeginDocument{
12740     \ifbool{mathjax}{
12741         \LWR@mathjaxwarn{arydshln}
12742         {In a math array, do not use the optional argument\MessageBreak
12743         for \protect\cdashline.\space\space
12744         Furthermore, \protect\cline\space is not\MessageBreak
12745         supported by MathJax}
12746         \LWR@mathjaxwarn{autonum}
12747         {MathJax does not support equation+.\MessageBreak
12748         You may use the warpprint and warpHTML\MessageBreak
12749         environments to isolate the package load\MessageBreak
12750         and the equation+ environments}
12751         \LWR@mathjaxwarn{backnaur}
12752         {You may enclose its uses inside\MessageBreak

```

```
12753         lateximage environments to force SVG output,\MessageBreak
12754         but this also changes the print output}
12755     \LWR@mathjaxwarn{bigdelim}
12756         {Delimiters appear only of the first line}
12757     \LWR@mathjaxwarn{booktabs}
12758         {In a math array, do not use (trim) for \protect\cmidrule}
12759     \LWR@mathjaxwarn{breqn}
12760         {Each environment becomes an SVG image}
12761     \LWR@mathjaxwarn{delarray}
12762         {Enclose its uses inside lateximage\MessageBreak
12763         environments to force SVG output}
12764     \LWR@mathjaxwarn{jkmath}{}
12765     \LWR@mathjaxwarn{mathspec}{}
12766     \LWR@mathjaxwarn{mathtools}
12767         {Avoid starred macros.\MessageBreak
12768         See the Lwarp manual for other limitations}
12769     \LWR@mathjaxwarn{multirow}
12770         {Multirow works as expected in text mode, but\MessageBreak
12771         limited emulation is provided for MathJax math.\MessageBreak
12772         \protect\multirow\space ignores all arguments except\MessageBreak
12773         the text}
12774     \LWR@mathjaxwarn{pb-diagram}
12775         {Enclose its uses inside lateximage environments\MessageBreak
12776         to force SVG output}
12777     \LWR@mathjaxwarn{physics}
12778         {The third-party extension is not yet used.\MessageBreak
12779         Avoid starred macros and automatic delimiters.\MessageBreak
12780         Use all mandatory arguments, adding empty as needed.\MessageBreak
12781         See the Lwarp manual for details}
12782     \LWR@mathjaxwarn{unicode-math}
12783         {Not all characters are encoded correctly.\MessageBreak
12784         Some symbol fonts are not supported by MathJax,\MessageBreak
12785         and are only approximated}
12786     \LWR@mathjaxwarn{witharrows}
12787         {Arrows can only point to the next line.\MessageBreak
12788         Text is only placed on a single line}
12789     \LWR@mathjaxwarn{xy}
12790         {xy works in text, but in math you must\MessageBreak
12791         enclose its uses inside lateximage\MessageBreak
12792         environments to force SVG output}
12793     }{}
12794 }
```

 File 2 **lwarp-2in1.sty**

§ 104 Package **2in1**

Pkg 2in1 2in1 is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{2in1}

 File 3 **lwarp-2up.sty**

§ 105 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**

§ 106 Package **a4**

Pkg a4 a4 is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{a4}[2004/04/15]

```

2 \newcommand*{\WideMargins}{}

```

File 5 **lwarp-a4wide.sty**§ 107 Package **a4wide**

Pkg a4wide a4wide is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{a4wide}[1994/08/30]

File 6 **lwarp-a5comb.sty**§ 108 Package **a5comb**

Pkg a5comb a5comb is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{a5comb}

File 7 **lwarp-abstract.sty**§ 109 Package **abstract**

(Emulates or patches code by PETER WILSON.)

Pkg abstract abstract is supported and patched by lwarp.

 **missing toc** If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a file split, which would put a table of contents out of the home page if it is after the abstract.

for HTML output: memoir provides an abstract environment even though it is not an article or report class. Meanwhile, lwarp loads book to emulate memoir, but book does not have an abstract environment, so when the abstract package is loaded for emulation there is no pre-existing abstract to redefine, which would cause an error. Thus, a null abstract is provide here:

```
1 \ProvideDocumentEnvironment{abstract}{}{}{}
```

Accept all options for lwarp-abstract:

```
2 \LWR@ProvidesPackagePass{abstract}[2009/06/08]
```

```
3 \AtBeginDocument{
4 \BeforeBeginEnvironment{abstract}{
5 \LWR@forcenewpage
6 \BlockClass{abstract}
7 }
```

```

8 \AfterEndEnvironment{abstract}{\endBlockClass}
9 }
10
11 \renewcommand{\@bsrunintitle}{%
12 \hspace*{\abstitlestitle}%
13 {\abstractnamefont%
14 \InlineClass{abstractrunintitle}{\abstractname}%
15 \@bslabeldelim}%
16 }

17 \@ifclassloaded{memoir}
18 {
19 \renewenvironment{abstract}{%
20 % \titlepage
21 % \null\vfil
22 % \@beginparpenalty\@lowpenalty
23 \setup@abstract
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{\abstitlekip}%
64         \fi
65         \fi
66         \vspace{\abstitlekip}%
67         \fi
68         \put@bsintoc%
69         \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
70         {\par\end{@bstr@ctlist}\vfil\null%\endtitlepage
71         }
72 \else
73 \renewenvironment{abstract}{%
74 \if@bsrunin
75 \else
76 \if@bsstyle
77 \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
78 \else
79 \ifnumber@bs
80 \num@bs
81 \else
82 \begin{\absnamepos}%
83 \abstractnamefont\BlockClassSingle{abstracttitle}{\abstractname}%
84 \end\absnamepos%
85 %%         \vspace{\abstitlekip}%
86         \fi
87         \fi
88         \vspace{\abstitlekip}%
89         \fi
90         \put@bsintoc%
91         \begin{@bstr@ctlist}\if@bsrunin\@bsrunintitle\fi\abstracttextfont}%
92         {\par\end{@bstr@ctlist}}
93 \fi
94 }% not memoir

```

File 8 **lwarp-academicons.sty**

§ 110 Package **academicons**

(Emulates or patches code by DIOGO A. B. FERNANDES.)

Pkg academicons **academicons** is patched for use by **lwarp**.

If `\aiicon` is used, the name of the icon is used in the `alt` tag. Otherwise, for each of the individual icon macros, a generic `alt` tag is used.

for HTML output:

```

1 \LWR@ProvidesPackagePass{academicons}[2018/06/27]
2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \let\LWR@academicons@orig@AI\AI
5
6 \newcommand*{\LWR@academicons@symbol}[1]{%
7 \begin{lateximage}*[academicon][academicons#1]%

```

```

8   \begingroup%
9   \LWR@academicons@orig@AI%
10  \LWR@orig@symbol{#1}%
11  \endgroup%
12  \end{lateximage}%
13 }
14
15 \renewcommand*{\AI}{%
16   \LetLtxMacro\symbol\LWR@academicons@symbol%
17 }
18
19 \renewcommand*{\aiicon}[1]
20 {%
21   \begin{lateximage}*[#1 icon][academicons#1]%
22   \AI\csname aiicon@#1\endcsname%
23   \end{lateximage}%
24 }

```

File 9 **lwarp-afterpage.sty**

§ 111 Package **afterpage**

(Emulates or patches code by DAVID CARLISLE.)

Pkg afterpage afterpage is emulated.

for HTML output: Discard all options for lwarp-afterpage:

```

1 \LWR@ProvidesPackageDrop{afterpage}[2014/10/28]
2 \newcommand{\afterpage}[1]{#1}

```

File 10 **lwarp-accessibility.sty**

§ 112 Package **accessibility**

Pkg accessibility accessibility is emulated.

for HTML output: Discard all options for lwarp-accessibility:

```

1 \LWR@ProvidesPackageDrop{accessibility}[2019/10/14]
2 \newcommand{\alt}[1]{\ThisAltText{#1}}
3 \newcommand{\newhref}[3]{\ThisAltText{#2}\href{#1}{#3}}%
4 \providecommand{\thead}[1]{\textbf{#1}}

```

For MATHJAX:

```

5 \begin{warpMathJax}

```

```

6 \CustomizeMathJax{\newcommand{\alt}[1]{} }
7 \CustomizeMathJax{\newcommand{\thead}[1]{\text{\textbf{#1}}}}
8 \end{warpMathJax}

```

File 11 **lwarp-accsupp.sty**

§ 113 Package **accsupp**

Pkg accsupp accsupp is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{accsupp}[2018/03/28]

```

2 \newcommand*\BeginAccSupp[1]{}
3 \newcommand*\EndAccSupp[1]{}

```

For MATHJAX:

```

4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\BeginAccSupp}[1]{} }
6 \CustomizeMathJax{\newcommand{\EndAccSupp}[1]{} }
7 \end{warpMathJax}

```

File 12 **lwarp-acro.sty**

§ 114 Package **acro**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg acro acro is patched for use by lwarp.

 **formats** Define acronymn formats using \textbf instead of \bfseries etc.

for HTML output: 1 \LWR@ProvidesPackagePass{acro}[2019/10/12]

\DeclareAcronym is used in the preamble, where lwarp has not yet made the dollar active, so temporarily enable lwarp math catcode just for this definition:

```

2 \ExplSyntaxOn
3 \NewDocumentCommand \LWR@DeclareAcronym {mm}
4 {
5   \acro_declare_acronym:nn {#1} {#2}
6   \catcode'\$=3% lwarp
7 }
8 \ExplSyntaxOff
9
10 \RenewDocumentCommand{\DeclareAcronym}{}{
11   \catcode'\$=\active% lwarp
12   \LWR@DeclareAcronym
13 }

```

Modified to activate the current font:

```

14 \ExplSyntaxOn
15 \@ifpackagelater{acro}{2020/04/29}%
16 {}% v3 or later
17 {}% before v3
18 \@ifpackagelater{acro}{2019/09/23}%
19 {}% v2.10 or later
20 \cs_gset_protected:Npn \__acro_typeset:nn #1#2
21 {
22   \mode_if_horizontal:F { \leavevmode }
23   \group_begin:
24     \use:x
25     {
26       \bool_if:cTF {l__acro_custom_#1_format_bool}
27       { \exp_not:v {l__acro_custom_#1_format_tl} }
28       { \exp_not:v {l__acro_#1_format_tl} }
29       { \exp_not:N\LWR@textcurrentfont{#2}}% lwarp
30     }
31   \group_end:
32 }
33
34 \cs_gset_protected:Npn \__acro_ending_format:nn #1#2
35 {
36   \bool_if:NTF \l__acro_include_endings_format_bool
37   {
38     \str_case:nn {#1}
39     {
40       {long}
41       {
42         \bool_if:NTF \l__acro_custom_long_format_bool
43         { \l__acro_custom_long_format_tl }
44         {
45           \bool_if:NTF \l__acro_first_instance_bool
46           { \l__acro_first_long_format_tl }
47           { \l__acro_long_format_tl }
48         }
49       }
50     } {short}
51     {
52       \bool_if:NTF \l__acro_custom_short_format_bool
53       { \l__acro_custom_short_format_tl }
54       { \l__acro_short_format_tl }
55     }
56   } {alt}
57   {
58     \bool_if:NTF \l__acro_custom_alt_format_bool
59     { \l__acro_custom_alt_format_tl }
60     { \l__acro_alt_format_tl }
61   }
62 }
63 }
64 { \use:n }
65 { \exp_not:N\LWR@textcurrentfont{#2}}% lwarp
66 }

```

```

67 }% v2.10 or later
68 {% before v2.10
69 \cs_gset_protected:Npn \acro_write_short:nn #1#2
70 {
71   \mode_if_horizontal:F { \leavevmode }
72   \group_begin:
73     \bool_if:NTF \l__acro_custom_format_bool
74       { \l__acro_custom_format_tl }
75       { \l__acro_short_format_tl }
76     {\LWR@textcurrentfont{#2}}% lwarp
77   \group_end:
78 }
79
80 \cs_gset_protected:Npn \acro_write_alt:nn #1#2
81 {
82   \mode_if_horizontal:F { \leavevmode }
83   \group_begin:
84     \bool_if:NTF \l__acro_custom_format_bool
85       { \l__acro_custom_format_tl }
86       { \l__acro_alt_format_tl }
87     {\LWR@textcurrentfont{#2}}% lwarp
88   \group_end:
89 }
90
91 \cs_gset_protected:Npn \acro_write_long:nn #1#2
92 {
93   \mode_if_horizontal:F { \leavevmode }
94   \group_begin:
95     \bool_if:NTF \l__acro_custom_long_format_bool
96       { \l__acro_custom_long_format_tl }
97       { \use:n }
98     {
99       \use:x
100      {
101        \exp_not:n {#1}
102        {
103          \bool_if:NTF \l__acro_first_upper_bool
104            { \exp_not:N \__acro_first_upper_case:n { \exp_not:n {
105              \LWR@textcurrentfont{#2}}% lwarp
106            } } }
107            { \exp_not:n {\LWR@textcurrentfont{#2}} }% lwarp
108          }
109        }
110      }
111     \group_end:
112 }
113 }% before v2.10
114 }% before v3
115 \ExplSyntaxOff

```

File 13 **lwarp-acronym.sty**§ 115 Package **acronym**

(Emulates or patches code by TOBIAS OETIKER.)

Pkg acronym acronym is patched for use by lwarp.

△ multiply-defined labels `\acresetall` does not work with `cleveref`, causing multiply-defined labels. `lwarp` patches `acronym` for HTML, but not for print mode.

for HTML output: 1 \LWR@ProvidesPackagePass{acronym}[2015/03/21]

Uses `\textit` instead of `\itshape`:

```
2 \renewcommand{\acfia}[1]{%
3   {\textit{\AC@acl{#1}}} (\ifAC@starred\acs*{#1}\else\acs{#1}\fi)}
```

Removes the `mbox` to allow math inside:

```
4 \renewcommand*\AC@acs[1]{%
5   % \mbox{
6   \expandafter\AC@get\csname fn@#1\endcsname\@firstoftwo{#1}}
7   }
```

Fix for acronym labels in the captions of floats.

```
8 \renewcommand{\@starttoc}[1]{
9   \LWR@html@elementclass{nav}{#1}
10  \LetLtxMacro\@verridelabel\@gobble
11  \LWR@orig@starttoc{#1}
12  \LWR@html@elementclassend{nav}{#1}
13 }
```

Modified for `cleveref` and `lwarp`:

```
14 \renewcommand*\AC@und@newl@bel[3]{%
15   \@ifundefined{#1@#3}%
16   {%
17     \global\expandafter\let\csname#2@#3\endcsname\@nnil
18     \global\expandafter\let\csname#2@#3@lwarp\endcsname\@nnil% lwarp
19     \global\expandafter\let\csname#2@#3@cref\endcsname\@nnil% lwarp
20   }%
21   {%
22     \global\expandafter\let\csname#1@#3\endcsname\relax
23     \global\expandafter\let\csname#1@#3@lwarp\endcsname\relax% lwarp
24     \global\expandafter\let\csname#1@#3@cref\endcsname\relax% lwarp
25   }%
26 }
```

File 14 **lwarp-adjmulticol.sty**

§ 116 Package **adjmulticol**

(Emulates or patches code by BORIS VEYTSMAN.)

Pkg adjmulticol adjmulticol is emulated.

Emulation similar to multicols is used, with adjusted margins. If the number of columns is specified as 1, it is set so, but if two or greater are used, lwarp allows a variable number of columns up to three.

for HTML output: 1 \LWR@ProvidesPackageDrop{adjmulticol}[2012/01/20]

2 \RequirePackage{multicol}

adjmulticols * {<numcols>} {<left margi>} {<right margin>}

3 \NewDocumentEnvironment{adjmulticols}{s m m m}

4 {%

Compute the margins, and limit to positive only:

5 \setlength{\LWR@templengthone}{#3}%

6 \ifdimcomp{\LWR@templengthone}{<}{0pt}{\setlength{\LWR@templengthone}{0pt}}{ }%

7 \setlength{\LWR@templengthtwo}{#4}

8 \ifdimcomp{\LWR@templengthtwo}{<}{0pt}{\setlength{\LWR@templengthtwo}{0pt}}{ }%

If one column is specified, use a <div> of class singlecolumn, else use multicols:

9 \newcommand*\LWR@mcolstype{multicols}%

10 \ifnumcomp{#2}{=}{1}{\renewcommand*\LWR@mcolstype{singlecolumn}}{ }%

Help avoid page overflow:

11 \LWR@forcenewpage%

Create the <div> with the given margin and class:

12 \BlockClass[%

13 \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ; %

14 \LWR@print@mbx{margin-right:\LWR@printlength{\LWR@templengthtwo}}%

15]{\LWR@mcolstype}%

16 }

17 {\endBlockClass}

File 15 **lwarp-addlines.sty**§ 117 Package **addlines***(Emulates or patches code by WILL ROBERTSON.)*

Pkg addlines addlines is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{addlines}[2018/12/05]

```

2 \newcommand\addlines{\@ifstar\addlines@a\addlines@a}
3 \newcommand\addlines@a[1][1]{}
4 \let\addline\addlines
5 \newcommand\removelines{\@ifstar\removelines@a\removelines@a}
6 \newcommand\removelines@a[1][1]{}
7 \let\removeline\removelines
8 \newcommand\squeezepage[1][0]{}

```

File 16 **lwarp-afterpage.sty**§ 118 Package **afterpage***(Emulates or patches code by DAVID CARLISLE.)*

Pkg afterpage afterpage is emulated.

for HTML output: Discard all options for lwarp-afterpage:

```

1 \LWR@ProvidesPackageDrop{afterpage}[2014/10/28]
2 \newcommand{\afterpage}[1]{#1}

```

File 17 **lwarp-algorithm2e.sty**§ 119 Package **algorithm2e***(Emulates or patches code by CHRISTOPHE FIORIO.)*

Pkg algorithm2e algorithm2e is patched for use by lwarp.

For print output, captions are placed according to package options, but for HTML output captions are placed where used. Therefore, to have captions appear at the top of the algorithms for both print and HTML, place each captions at the top of each algorithm.

for HTML output: 1 \LWR@ProvidesPackagePass{algorithm2e}[2017/07/18]

For the list-of entries:

```
2 \renewcommand{\l@algocf}[2]{\hypertocfloat{1}{algocf}{loa}{#1}{#2}}
```

Select the lwarp float style according to the algorithm2e style:

```
3 \newcommand*\LWR@floatstyle@algocf}{ruled}
4
5 \ifdefstring{\algocf@style}{boxed}{%
6 \renewcommand*\LWR@floatstyle@algocf}{boxed}
7 }{}
8
9 \ifdefstring{\algocf@style}{boxruled}{%
10 \renewcommand*\LWR@floatstyle@algocf}{boxruled}
11 }{}
12
13 \ifdefstring{\algocf@style}{plain}{%
14 \renewcommand*\LWR@floatstyle@algocf}{plain}
15 }{}
```

Paragraph handling to allow line numbers under certain conditions:

```
16 \newbool{LWR@algocf@dopars}
17 \booltrue{LWR@algocf@dopars}
18
19 \renewcommand{\algocf@everypar}{%
20 \ifbool{LWR@algocf@dopars}{%
21   \ifbool{LWR@doingstartpars}{%
22     \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{%
23       }%
24       {%
25         \algocf@everypar\n\algocf@everyparhanging%
26       }%
27     }{}%
28 }{}%
29 }
```

lwarp caption handling:

```
30 \renewcommand{\algocf@makecaption}[2]{%
31 \LWR@HTML@caption@begin{algocf}%
32 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
33 \LWR@HTML@caption@end%
34 }
```

Print any caption where it is declared:

```
35 \renewcommand{\algocf@makecaption@plain}[2]{%
36   \LWR@HTML@caption@begin{algocf}%
37   \LWR@isolate{\algocf@captiontext{#1}{#2}}%
38   \LWR@HTML@caption@end%
39 }
40
41 \renewcommand{\algocf@makecaption@boxed}[2]{%
42   \LWR@HTML@caption@begin{algocf}%
```

```

43 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
44 \LWR@HTML@caption@end%
45 }
46
47 \renewcommand{\algocf@makecaption@ruled}[2]{%
48 \LWR@HTML@caption@begin{\algocf}%
49 \LWR@isolate{\algocf@captiontext{#1}{#2}}%
50 \LWR@HTML@caption@end%
51 }

```

Turn off line numbering while making the caption:

```

52 \long\def\algocf@latexcaption#1[#2]#3{% original definition of caption
53 \boolfalse{LWR@algocf@dopars}% lwarp
54 \par%
55 \addcontentsline{\csname ext@#1\endcsname}{#1}%
56 {\protect\numberline{\csname the#1\endcsname}{\ignorespaces \LWR@isolate{#2}}}%
57 \begingroup%
58 \@parboxrestore%
59 \if@minipage%
60 \setminipage%
61 \fi%
62 \normalsize%
63 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par%
64 \endgroup%
65 \booltrue{LWR@algocf@dopars}% lwarp
66 }

```

Line numbers are printed in a `` of class `alg2elinenumber`:

```

67 \renewcommand{\algocf@printnl}[1]{%
68 \InlineClass{alg2elinenumber}{\NLSty{#1}}~%
69 }%

```

While initializing an algorithm environment, locally declare the style of a regular figure to be the same as the algorithm style, in case the `figure` option was used.

```

70 \preto\@algocf@init{%
71 \edef\LWR@floatstyle@figure{\LWR@floatstyle@algocf}%
72 }

```

For `lwarp`, the algorithm is not assembled inside a box, since `lateximages` would not work, so the captions are printed where declared.

```

73 \renewcommand{\@algocf@start}{%
74 \let\@mathsemicolon=\; \def\;{\ifmmode\@mathsemicolon\else\@endalgoln\fi}%
75 % \raggedright%
76 \ALFnt{}}%
77 \booltrue{LWR@algocf@dopars}% lwarp
78 }
79
80 \renewcommand{\@algocf@finish}{%
81 \boolfalse{LWR@algocf@dopars}% lwarp
82 \lineskip\normallineskip\setlength{\skiptotal}{\@defaultskiptotal}%

```

```

83 \let\;=\@mathsemicolon%
84 \let\]=\@emathdisplay%
85 }

```

Use an HTML break:

```

86 \renewcommand{\BlankLine}{%
87 \LWR@stoppars%
88 \LWR@htmltagc{br /}%
89 \LWR@startpars%
90 }

```

Simplified for HTML. The paragraph handling must be preserved.

```

91 \renewcommand{\SetKwInOut}[2]{%
92 \algocf@newcommand{#1}[1]{%
93 \ifthenelse{\boolean{algocf@hanginginout}}%
94 {\relax}%
95 {\algocf@seteveryparhanging{\relax}}%
96 \ifthenelse{\boolean{algocf@inoutnumbered}}%
97 {\relax}%
98 {\algocf@seteveryparnl{\relax}}%
99 {%
100 \KwSty{#2\algocf@typo:}%
101 ~##1\par%
102 }%
103 \algocf@linesnumbered% reset the numbering of the lines
104 \ifthenelse{\boolean{algocf@hanginginout}}%
105 {\relax}%
106 {\algocf@reseteveryparhanging}%
107 }%
108 }%
109
110 \renewcommand{\ResetInOut}[1]{%

```

Each of the following creates a <div> of a given class, and turns off line numbering while creating the <div> tags:

```

111 \renewcommand{\algocf@Vline}[1]{%
112 \boolfalse{LWR@algocf@dopars}%
113 \begin{BlockClass}{alg2evline}
114 \booltrue{LWR@algocf@dopars}%
115 #1
116 \boolfalse{LWR@algocf@dopars}%
117 \end{BlockClass}
118 \booltrue{LWR@algocf@dopars}%
119 }

```

```

120 \renewcommand{\algocf@Vsline}[1]{%
121 \boolfalse{LWR@algocf@dopars}%
122 \begin{BlockClass}{alg2evsline}
123 \booltrue{LWR@algocf@dopars}%
124 #1
125 \boolfalse{LWR@algocf@dopars}%
126 \end{BlockClass}

```

```

127 \booltrue{LWR@algocf@dopars}%
128 }

129 \renewcommand{\algocf@Noline}[1]{%
130 \boolfalse{LWR@algocf@dopars}%
131 \begin{BlockClass}{alg2enoline}
132 \booltrue{LWR@algocf@dopars}%
133 #1
134 \boolfalse{LWR@algocf@dopars}%
135 \end{BlockClass}
136 \booltrue{LWR@algocf@dopars}%
137 }

```

The [H] environment is converted to a regular float, which in HTML is placed where declared. Reusing the regular float allows the [H] version to reuse the ruled and boxed options.

```

138 \LetLtxMacro\algocf@Here\algocf
139 \LetLtxMacro\endalgocf@Here\endalgocf

```

File 18 **lwarp-algorithmicx.sty**

§ 120 Package **algorithmicx**

(Emulates or patches code by SZÁSZ JÁNOS.)

Pkg algorithmicx algorithmicx is supported with minor adjustments.

for HTML output: 1 \LWR@ProvidesPackagePass{algorithmicx}[2005/04/27]

Inside the algorithmic environment, level indenting is converted to a of the required length, and comments are placed inside a which is floated right.

 **package conflicts** If using \newfloat, trivfloat, and/or algorithmicx together, see section 544.1.

for HTML output: 2 \begin{warpHTML}

```

3 \AtBeginEnvironment{algorithmic}{%
4 %
5 \let\origALG@doentity\ALG@doentity%
6 %
7 \renewcommand*\ALG@doentity}{%
8 \origALG@doentity%
9 \LWR@htmltagc{%
10 span style="width:\LWR@printlength{\ALG@thistlm}; display:inline-block;"%
11 }%
12 \ifbool{FormatWP}{%
13 \setlength{\LWR@templengthone}{\the\ALG@thistlm}%
14 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
15 \quad%
16 \addtolength{\LWR@templengthone}{-1em}%
17 }%

```

```

18 }{}%
19 \LWR@htmltagc{/span}%
20 }%
21
22 \let\LWR@origComment\Comment%
23
24 \renewcommand{\Comment}[1]{%
25   \InlineClass{floatright}{\LWR@origComment{#1}}%
26 }%
27 }
28
29 \renewcommand\algorithmiccomment[1]{%
30 \hfill\HTMLUnicode{25B7} #1% white right triangle
31 }%

32 \end{warpHTML}

```

File 19 **lwarp-alltt.sty**

§ 121 Package **alltt**

(Emulates or patches code by JOHANNES BRAAMS.)

Pkg alltt alltt is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{alltt}[1997/06/16]

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching alltt.}
4 \AtBeginEnvironment{alltt}{%
5   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
6     {}%
7     {%
8       \LWR@forcenewpage
9       \LWR@atbeginverbatim{3}{alltt}%
10    }%
11 }
12 \AfterEndEnvironment{alltt}{%
13   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
14     {}%
15     {%
16       \LWR@afterendverbatim{2}%
17     }%
18 }
19 }

```

File 20 **lwarp-amsmath.sty**

§ 122 Package **amsmath**

(Emulates or patches code by AMERICAN MATHEMATICAL SOCIETY, L^AT_EX3 PROJECT.)

Pkg amsmath amsmath is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{amsmath}[2017/09/02]

Patches to allow \eqref inside a caption:

```
2 \def\maketag@@@#1{\text{#1}}
3 \def\tagform@#1{\maketag@@@{\ignorespaces#1\unskip}}
```

Patches for \mathcal{AMS} math \tag macro to remember the first tag:

```
4 \ifbool{mathjax}{}{% not mathjax
5
6 \LetLtxMacro\LWR@origmake@df@tag@@\make@df@tag@@
7 \LetLtxMacro\LWR@origmake@df@tag@@@\make@df@tag@@@
8
9 \renewcommand*\make@df@tag@@[1]{%
10 \LWR@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
```

For nesting \mathcal{AMS} environments:

```
20 \newcounter{LWR@amsmathdepth}
21 \setcounter{LWR@amsmathdepth}{0}
```

The following \mathcal{AMS} environments are patched in-place:

\LWR@amsmathenv@@before * {\environment name}

* if the environment was starred.

Embeds the environment inside a lateximage.

```
22 \NewDocumentCommand{\LWR@amsmathenv@@before}{s m}{%
23   \IfBooleanTF{#1}{
24     \begin{BlockClass}{displaymath}
25   }{
26     \begin{BlockClass}{displaymathnumbered}
27   }
28   \LWR@newautoidanchor%
29   \booltrue{LWR@indisplaymathimage}%
30   \begin{lateximage}[\LWR@amsmathbodynumbered{#1}]*
31   \LWR@applyxfakebold%
32 }
```

\LWR@amsmathenv@@before * {\environment name}

* if the environment was starred.

Embeds the environment with MATHJAX or a lateximage.

```

33 \NewDocumentCommand{\LWR@amsmathenv@before}{s m}{%
34   \ifnumequal{\value{LWR@amsmathdepth}}{0}{%
35     \LWR@stoppars%
36     \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
37     {
38       \LWR@syncmathjax
39       \boolfalse{LWR@amsmultline}
40       \ifstrequal{#2}{multline}{\booltrue{LWR@amsmultline}}{}
41       \ifstrequal{#2}{multline*}{\booltrue{LWR@amsmultline}}{}

```



autonom's "+" environments are not supported by MATHJAX.

```

42   \LWR@beginhideamsmath
43   }
44   {
45     \IfBooleanTF{#1}{
46       \LWR@amsmathenv@@before*{#2}
47     }{
48       \LWR@amsmathenv@@before{#2}
49     }
50   }
51 }{}
52 \addtocounter{LWR@amsmathdepth}{1}
53 }

```

\LWR@amsmathenv@@after

Embeds the environment inside a lateximage.

```

54 \newcommand*{\LWR@amsmathenv@@after}{%
55   \end{lateximage}\end{BlockClass}\LWR@startpars%
56 }

```

\LWR@amsmathenv@after * {<environment name>}

* if the environment was starred. Ignored here, only used for a consistent syntax.

Embeds the environment with MATHJAX or a lateximage.

```

57 \NewDocumentCommand{\LWR@amsmathenv@after}{s m}{%
58   \ifnumequal{\value{LWR@amsmathdepth}}{1}{%
59     \ifboolexpr{bool{mathjax} or ( bool{FormatWP} and bool{WPMarkMath} ) }%
60     {
61       \LWR@endhideamsmath
62       \boolfalse{LWR@amsmultline}
63       \LWR@addmathjax{#2}{\the\@envbody}
64     }
65     {\LWR@amsmathenv@@after}

```

Clear the single-use alt text:

```

66   \gdef\LWR@ThisAltText{}%
67   }{}
68   \addtocounter{LWR@amsmathdepth}{-1}
69 }

```

Env `multline`

```
70 \BeforeBeginEnvironment{multline}{\LWR@amsmathenv@before{multline}}
71
72 \AfterEndEnvironment{multline}{\LWR@amsmathenv@after{multline}}
```

Env `multline*`

```
73 \BeforeBeginEnvironment{multline*}{\LWR@amsmathenv@before*{multline*}}
74
75 \AfterEndEnvironment{multline*}{\LWR@amsmathenv@after*{multline*}}
76
```

Env `gather`

```
77 \BeforeBeginEnvironment{gather}{\LWR@amsmathenv@before{gather}}
78
79 \AfterEndEnvironment{gather}{\LWR@amsmathenv@after{gather}}
```

Env `gather*`

```
80 \BeforeBeginEnvironment{gather*}{\LWR@amsmathenv@before*{gather*}}
81
82 \AfterEndEnvironment{gather*}{\LWR@amsmathenv@after*{gather*}}
```

Env `align`

```
83 \BeforeBeginEnvironment{align}{\LWR@amsmathenv@before{align}}
84
85 \AfterEndEnvironment{align}{\LWR@amsmathenv@after{align}}
```

Env `align*`

```
86 \BeforeBeginEnvironment{align*}{\LWR@amsmathenv@before*{align*}}
87
88 \AfterEndEnvironment{align*}{\LWR@amsmathenv@after*{align*}}
```

Env `flalign`

```
89 \BeforeBeginEnvironment{flalign}{\LWR@amsmathenv@before{flalign}}
90
91 \AfterEndEnvironment{flalign}{\LWR@amsmathenv@after{flalign}}
```

Env `flalign*`

```
92 \BeforeBeginEnvironment{flalign*}{\LWR@amsmathenv@before*{flalign*}}
93
94 \AfterEndEnvironment{flalign*}{\LWR@amsmathenv@after*{flalign*}}
```

Env alignat

```
95 \BeforeBeginEnvironment{alignat}{\LWR@amsmathenv@before{alignat}}
96
97 \AfterEndEnvironment{alignat}{\LWR@amsmathenv@after{alignat}}
```

Env alignat*

```
98 \BeforeBeginEnvironment{alignat*}{\LWR@amsmathenv@before*{alignat*}}
99
100 \AfterEndEnvironment{alignat*}{\LWR@amsmathenv@after*{alignat*}}
```

For MATHJAX:

```
101 \begin{warpMathJax}
102 \CustomizeMathJax{\newcommand{\intertext}[1]{\text{#1}\notag \\\}}
103 \end{warpMathJax}
```

File 21 **lwarp-amsthm.sty**

§ 123 Package **amsthm**

(Emulates or patches code by PUBLICATIONS TECHNICAL GROUP — AMERICAN MATHEMATICAL SOCIETY.)

The original source code is located in `amscldotx.dtx`, and printed in `amscldotx.pdf`.

Pkg amsthm amsthm is patched for use by lwarp.

Table 16: amsthm package — css styling of theorems and proofs

Theorem: `<div>` of class `amsthmbody<theoremstyle>`

Theorem Name: `` of class `amsthmname<theoremstyle>`

Theorem Number: `` of class `amsthmnumber<theoremstyle>`

Theorem Note: `` of class `amsthmnote<theoremstyle>`

Proof: `<div>` of class `amsthmproof`

Proof Name: `` of class `amsthmproofname`

where `<theoremstyle>` is `plain`, `definition`, etc.

for HTML output:

amsthm must be loaded before mdframed:

```
1 \@ifpackageloaded{mdframed}{
2   \PackageError{lwarp}
3   {%
4     Package mdframed must be loaded after package amsthm.\MessageBreak
5     Enter 'H' for solutions%
```

```

6   }
7   {%
8     Move ‘‘\protect\usepackage{amsthm}’’ before
9     ‘‘\protect\usepackage{mdframed}’’.\MessageBreak
10    Package amsthm may be loaded by something else,\MessageBreak
11    which must also be moved before mdframed.%
12   }
13 }
14 {}

```

```
15 \LWR@ProvidesPackagePass{amsthm}[2017/10/31]
```

Storage for the style being used for new theorems:

```
16 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```

17 \renewcommand{\theoremstyle}[1]{%
18   \ifundefined{th@#1}{%
19     \PackageWarning{amsthm}{Unknown theoremstyle ‘#1’}%
20     \thm@style{plain}%
21     \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
22   }{%
23     \thm@style{#1}%
24     \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
25   }%
26 }

```

Patched to remember the style for this theorem type:

```

27 \def\xnthm#1#2{%
28   \csedef{LWR@thmstyle#2}{\LWR@newtheoremstyle}% lwarp
29   \let@tempa\relax
30   \exp@ifdefinable\csname #2\endcsname{%
31     \global\exp\let\csname end#2\endcsname\endtheorem
32     \ifx *#1% unnumbered, need to get one more mandatory arg
33       \edef@tempa#1{%
34         \gdef\exp@nx\csname#2\endcsname{%
35           \@nx@thm{\exp@nx\csname th@the\thm@style\endcsname}%
36           {}{#1}}}%
37     \else % numbered theorem, need to check for optional arg
38       \def@tempa{\@oparg{\@ynthm{#2}}{}}%
39     \fi
40     \AtBeginEnvironment{#2}{%
41       \edef\LWR@thmstyle{\@nameuse{LWR@thmstyle#2}}%
42     }% lwarp
43   }%
44   \@tempa
45 }

```

Patched to enclose with css:

```
46 \newcommand{\LWR@haveamsthmname}{
```

```

47 \renewcommand{\thmname}[1]{%
48   \InlineClass{amsthmname\LWR@thisthmstyle}{##1}%
49 }
50 }
51
52 \newcommand{\LWR@haveamsthmnumber}{
53   \renewcommand{\thmnumber}[1]{%
54     \InlineClass{amsthmnumber\LWR@thisthmstyle}{##1}%
55   }
56 }
57
58 \newcommand{\LWR@haveamsthmnote}{
59   \renewcommand{\thmnote}[1]{%
60     \InlineClass{amsthmnote\LWR@thisthmstyle}{##1}%
61   }
62 }
63
64 \LWR@haveamsthmname
65 \LWR@haveamsthmnumber
66 \LWR@haveamsthmnote

```

Patched for css:

```

67 \def\@begintheorem#1#2[#3]{%

68   \GetTitleString{#3}%                lwarp
69   \let\@currentlabelname\GetTitleStringResult%    lwarp

70   \item[
71 % \deferred@thm@head{
72 %   \the\thm@headfont \thm@indent
73   \@ifempty{#1}{\let\thmname@gobble}{\LWR@haveamsthmname}%    lwarp
74   \@ifempty{#2}{\let\thmnumber@gobble}{\LWR@haveamsthmnumber}%    lwarp
75   \@ifempty{#3}{\let\thmnote@gobble}{\LWR@haveamsthmnote}%    lwarp
76   \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
77   \the\thm@headpunct~
78   \thmheadnl % possibly a newline.
79   \hskip\thm@headsep
80 % }%
81 ]
82 \ignorespaces}

```

Patched for css:

```

83 \def\@thm#1#2#3{%
84   \ifhmode\unskip\unskip\par\fi
85   \normalfont
86   \LWR@forcenewpage%                lwarp
87   \BlockClass{amsthmbody\LWR@thisthmstyle}%    lwarp
88   \trivlist
89   \let\thmheadnl\relax
90   \let\thm@swap@gobble
91   \thm@notefont{\fontseries\mddefault\upshape}%
92   \thm@headpunct{.}% add period after heading

```

```

93  \thm@headsep 5\p@ plus\p@ minus\p@\relax
94  \thm@space@setup
95  #1% style overrides
96  \@topsep \thm@preskip          % used by thm head
97  \@topsepadd \thm@postskip      % used by \@endparenv
98  \def\@tempa{#2}\ifx\@empty\@tempa
99    \def\@tempa{\@oparg{\@begintheorem{#3}}{}}[[]]%
100  \else
101    \refstepcounter{#2}%
102    \def\@tempa{\@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[[]]%
103  \fi
104  \@tempa
105  }

```

cleveref patches `\@thm` to do `\cref@thmoptarg` if an optional argument is given. **lwarp** then patches `\cref@thmoptarg` `\AtBeginDocument`.

```

106 \AtBeginDocument{%
107 \def\cref@thmoptarg[#1]#2#3#4{%
108   \ifhmode\unskip\unskip\par\fi%
109   \normalfont%
110   \LWR@forcenewpage%                lwarp
111   \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
112   \trivlist%
113   \let\thmheadnl\relax%
114   \let\thm@swap\@gobble%
115   \thm@notefont{\fontseries\mddefault\upshape}%
116   \thm@headpunct{.}% add period after heading
117   \thm@headsep 5\p@ plus\p@ minus\p@\relax%
118   \thm@space@setup%
119   #2% style overrides
120   \@topsep \thm@preskip          % used by thm head
121   \@topsepadd \thm@postskip      % used by \@endparenv
122   \def\@tempa{#3}\ifx\@empty\@tempa%
123     \def\@tempa{\@oparg{\@begintheorem{#4}}{}}[[]]%
124   \else%
125     \refstepcounter[#1]{#3}% <<< cleveref modification
126     \def\@tempa{\@oparg{\@begintheorem{#4}{\csname the#3\endcsname}}[[]]%
127   \fi%
128   \@tempa
129 }%
130 }% AtBeginDocument
131
132 \def\@endtheorem{\endtrivlist\endBlockClass\@endpefalse }

```

Proof QED symbol:

```

133 \AtBeginDocument{
134 \ifundefined{LWR@orig@openbox}{
135 \LetLtxMacro\LWR@orig@openbox\openbox
136 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
137 \LetLtxMacro\LWR@orig@Box\Box
138
139 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
140 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof

```

```

141 \def\Box{\text{\HTMLunicode{25A1}}}% UTF-8 white box
142
143 \appto\LWR@restoreorigformatting{%
144   \LetLtxMacro\openbox\LWR@orig@openbox%
145   \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
146   \LetLtxMacro\Box\LWR@orig@Box%
147 }% appto
148 }{}% @ifundefined
149 }% AtBeginDocument

```

Patched for css:

```

150 \renewenvironment{proof}[1][\proofname]{\par
151 \LWR@forcenewpage% lwarp
152   \BlockClass{amsthmproof}% lwarp
153   \pushQED{\qed}%
154   \normalfont \topsep6\p@\@plus6\p@\relax
155   \trivlist
156   \item[
157     \InlineClass{amsthmproofname}{#1\@addpunct{.}}\ignorespaces% changes
158 ]{%
159   \InlineClass{theoremendmark}{\popQED}\endtrivlist%
160   \endBlockClass% lwarp
161   \@endpefalse
162 }

```

File 22 **lwarp-anonchap.sty**

§ 124 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^AT_EX commands to create the titles, allowing other packages to work with it.

 **tocloft & other packages**

The code is shared by tocbibind.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{anonchap}[2009/08/03]
2
3 \newcommand{\simplechapter}[1][\@empty]{%
4   \def\@chacntformat##1{%
5     #1~\cscname the##1\endcscname\simplechapterdelim\quad%
6   }%
7 }
8 \newcommand{\restorechapter}{%
9 \let\@chacntformat\@secntformat%
10 }

```

File 23 **lwarp-anysize.sty**§ 125 Package **anysize***(Emulates or patches code by MICHAEL SALZENBERG, THOMAS ESSER.)*Pkg `anysize` `anysize` is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{anysize}[1994/08/13]
2 \def\papersize#1#2{}
3 \def\marginsize#1#2#3#4{}

```

File 24 **lwarp-appendix.sty**§ 126 Package **appendix***(Emulates or patches code by PETER WILSON.)*Pkg `appendix` `appendix` is patched for use by `lwarp`.

 **incorrect toc link** During HTML conversion, the option `toc` without the option `page` results in a toc link to whichever section was before the `appendices` environment. It is recommended to use both `toc` and also `page` at the same time.

for HTML output:

```

1 \LWR@ProvidesPackagePass{appendix}[2009/09/02]
2 \renewcommand*{\@chap@pppage}{%
3 \part*\appendixpagename}
4 \if@dotoc@pp
5 \addappheadtotoc
6 \fi
7 }
8
9 \renewcommand*{\@sec@pppage}{%
10 \part*\appendixpagename}
11 \if@dotoc@pp
12 \addappheadtotoc
13 \fi
14 }

```

File 25 **lwarp-ar.sty**§ 127 Package **ar***(Emulates or patches code by AGOSTINO DE MARCO.)*

Pkg ar is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{ar}[2012/01/23]

Measure and print the width of the supplied glyph.

```
2 \newlength{\LWR@ar@width}
3
4 \newcommand*\LWR@ar@printwidth[1]{%
5   \setlength{\LWR@ar@width}{\widthof{#1}}%
6   width:%
7   \LWR@convertto{em}{\the\LWR@ar@width}em%
8 }
```

The HTML version of \AR:

```
9 \newrobustcmd*\LWR@HTML@AR}{%
```

Start a hashed lateximage, additionally hashed by the font series, with a width depending on the given glyph:

```
10   \begin{lateximage}*[AR][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@AR}]%
```

For text mode, set the font series according to the HTML font series:

```
11   \ifmmode\else\csuse{\LWR@orig\LWR@f@series series}\fi%
```

Print the original glyph using the newly set font series:

```
12   \LWR@print@AR%
```

Done.

```
13   \end{lateximage}%
14 }
```

Combine the print and HTML versions:

```
15 \LWR@formatted{AR}
```

```
16 \newrobustcmd*\LWR@HTML@ARb}{%
17   \begin{lateximage}*[AR][b][\LWR@ar@printwidth{\LWR@print@ARb}]%
18   \LWR@print@ARb%
19   \end{lateximage}%
20 }
21 \LWR@formatted{ARb}
```

```
22 \newrobustcmd*\LWR@HTML@ARss}{%
23   \begin{lateximage}*[ARss][\LWR@f@series][\LWR@ar@printwidth{\LWR@print@ARss}]%
24   \ifmmode\else\csuse{\LWR@orig\LWR@f@series series}\fi%
25   \LWR@print@ARss%
26   \end{lateximage}%
27 }
28 \LWR@formatted{ARss}
```

```

29 \newrobustcmd*{\LWR@HTML@ARssb}{%
30   \begin{lateximage}*[AR][ssb][\LWR@ar@printwidth{\LWR@print@ARssb}]%
31   \LWR@print@ARssb%
32   \end{lateximage}%
33 }
34 \LWR@formatted{ARssb}

35 \newrobustcmd*{\LWR@HTML@ARtt}{%
36   \begin{lateximage}*[AR][tt][\LWR@ar@printwidth{\LWR@print@ARtt}]%
37   \LWR@print@ARtt%
38   \end{lateximage}%
39 }
40 \LWR@formatted{ARtt}

```

For MATHJAX:

```

41 \begin{warpMathJax}
42 \CustomizeMathJax{\newcommand{\AR}{\mathit{A\!\!R}}}
43 \CustomizeMathJax{\newcommand{\ARb}{\boldsymbol{A\!\!R}}}
44 \end{warpMathJax}

```

File 26 **lwarp-arabicfront.sty**

§ 128 Package **arabicfront**

Pkg arabicfront arabicfront is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{arabicfront}[2006/09/03]

File 27 **lwarp-array.sty**

§ 129 Package **array**

Pkg array array is used as-is for print output, and emulated for HTML.

plarray and plectarray do not affect `\firstline` or `\lastline`, and so are not affected by the following.

for HTML output: Remove the default nullfied macros:

```

1 \let\firstline\relax
2 \let\lastline\relax
3
4 \LWR@ProvidesPackagePass{array}[2018/12/30]

5 \newcommand*{\LWR@HTML@firstline}{\LWR@HTMLhline}%
6 \LWR@expandableformatted{firstline}
7
8 \newcommand*{\LWR@HTML@lastline}{\LWR@HTMLhline}%
9 \LWR@expandableformatted{lastline}

```

```
10 \providecommand*\LWR@HTML@tabularnewline{\LWR@tabularendofline}
11 \LWR@formatted{tabularnewline}
```

For MATHJAX:

```
12 \CustomizeMathJax{
13   \newcommand{\multicolumn}[3]{#3}% only uses one cell
14 }
```

File 28 **lwarp-arydshln.sty**

§ 130 Package **arydshln**

(Emulates or patches code by HIROSHI NAKASHIMA.)

Pkg arydshln **arydshln** heavily patches tabular code, so the actual package is not used. **arydshln** is emulated for HTML `tabular`, and reverts to solid rules for `svg math array` and `tabular` in a `lateximage`.

css is not able to display a double-dashed border, so a single-dashed rule is displayed as a single-dashed border, and a double-dashed rule is displayed as a thicker single-dashed border.

For MATHJAX, limited emulation is provided for math mode.

for HTML output: `array` is required to allow `\newcolumn` below.

```
1 \RequirePackage{array}

2 \LWR@ProvidesPackageDrop{arydshln}[2018/09/26]
```

Ignored, but included for source compatibility:

```
3 \newdimen\dashlinedash \dashlinedash4pt %
4 \newdimen\dashlinegap \dashlinegap4pt %
5 \let\hdashlinewidth\dashlinedash
6 \let\hdashlinegap\dashlinegap
7
8 \def\ADLnullwide{}
9 \def\ADLsomewide{}
10 \def\ADLnullwidehline{}
11 \def\ADLsomewidehline{}
12
13 \def\ADLactivate{}
14 \def\ADLinactivate{}
15 \newcommand*\ADLdrawingmode}[1]{}
16 \newcommand*\ADLnoshorthanded{}
17 \newcommand*\dashgapcolor}[2]{}
18 \newcommand*\nodashgapcolor{}
```

In a `lateximage`, revert to solid vertical rules:

```

19 \appto\LWR@restoreorigformatting{%
20 \newcolumntype{:}{|}%
21 \newcolumntype{;}[1]{|}%
22 \let\hline\hdashline
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}}

70 \begin{warpMathJax}
71 \CustomizeMathJax{\newcommand{\firsthdashline}[1][\hdashline]}
72 \CustomizeMathJax{\let\lasthdashline\firsthdashline}
73 \CustomizeMathJax{\let\cdashline\cline}
74 \end{warpMathJax}

```

File 29 **lwarp-asymptote.sty**

§ 131 Package **asymptote**

(Emulates or patches code by ANDY HAMMERLINDL, JOHN BOWMAN, TOM PRINCE.)

Pkg asymptote asymptote is patched for use by lwarp.

To compile:

```

pdflatex project.tex
asy project-*.asy
pdflatex project.tex

```

```

lwarpmk print
asy project-*.asy
lwarpmk print1
lwarpmk print1

```

```

lwarpmk html
asy project_html-*.asy
lwarpmk html1
lwarpmk html1
lwarpmk limages

```

for HTML output:

```

1 \LWR@ProvidesPackagePass{asymptote}[2016/11/26]
2 \BeforeBeginEnvironment{asy}{%
3   \begin{lateximage}[-asymptote~\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{asy}{\end{lateximage}}
6
7 \xpatchcmd{\asyinclude}
8   {\begingroup}
9   {\begin{lateximage}[-asymptote~\PackageDiagramAltText]}
10  {}
11  {\LWR@patcherror{asymptote}{asyinclude-begingroup}}
12
13 \xpatchcmd{\asyinclude}
14   {\endgroup}
15   {\end{lateximage}}
16   {}
17   {\LWR@patcherror{asymptote}{asyinclude-endgroup}}

```

File 30 **lwarp-atbegshi.sty**§ 132 Package **atbegshi***(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg atbegshi atbegshi is ignored.

for HTML output: Discard all options for lwarp-atbegshi:

```

1 \LWR@ProvidesPackageDrop{atbegshi}[2011/10/05]

2 \newcommand*\AtBeginShipout}[1]{}
3 \newbox\AtBeginShipoutBox
4 \newcommand*\AtBeginShipoutNext}[1]{}
5 \newcommand*\AtBeginShipoutFirst}[1]{}
6 \newcommand*\AtBeginShipoutDiscard}{}
7 \newcommand*\AtBeginShipoutInit}{}
8 \newcommand*\AtBeginShipoutAddToBox}[1]{}
9 \newcommand*\AtBeginShipoutAddToBoxForeground}[1]{}
10 \newcommand*\AtBeginShipoutUpperLeft}[1]{}
11 \newcommand*\AtBeginShipoutUpperLeftForeground}[1]{}
12 \newcommand*\AtBeginShipoutOriginalShipout}[1]{}
13 \def\AtBeginShipoutBoxWidth{0pt}
14 \def\AtBeginShipoutBoxHeight{0pt}
15 \def\AtBeginShipoutBoxDepth{0pt}
16

```

File 31 **lwarp-attachfile.sty**§ 133 Package **attachfile***(Emulates or patches code by SCOTT PAKIN.)*

Pkg attachfile attachfile is patched for use by lwarp.



Metadata is ignored for now.

for HTML output: 1 \LWR@ProvidesPackagePass{attachfile}[2016/09/18]

Encloses each icon:

```

2 \newenvironment*LWR@attachfile@icon}
3 {
4   \begin{lateximage}%
5     [-attachfile-]%
6     [%
7     \detokenize\expandafter{\atfi@icon@icon}-%

```

```

8         \detokenize\expandafter{\atfi@color@rgb}%
9         ]%
10 }
11 {
12     \end{lateximage}
13 }

```

Each icon is enclosed inside a `LWR@attachfile@icon` environment:

```

14 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}
15 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
16
17 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
18 \xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
19
20 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
21 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}
22
23 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
24 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}

```

Disable PDF file embedding:

```

25 \DeclareRobustCommand{\atfi@embedfile}[1]{}

```

The displayed output for an `\attachfile` reference:

```

26 \newcommand*{\LWR@attachfile@appearance}{}
27
28 \DeclareRobustCommand{\atfi@set@appearance}[1]{%
29     \def\LWR@attachfile@appearance{#1}%
30 }

```

A file annotation becomes a reference:

```

31 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
32     \href{#1}{\LWR@attachfile@appearance}%
33 }

```

File 32 **lwarp-attachfile2.sty**

§ 134 Package **attachfile2**

(Emulates or patches code by HEIKO OBERDIEK.)

Pkg attachfile2 **attachfile2** is patched for use by lwarp.



Metadata is ignored for now.

for HTML output: 1 \LWR@ProvidesPackagePass{attachfile2}[2016/05/16]

Adds memory of the selected color:

```

2 \def\LWR@attachfiletwo@color{%
3
4 \define@key{AtFi}{color}{%
5   \def\LWR@attachfiletwo@color{#1}%   lwarp
6   \HyColor@AttachfileColor{#1}%
7     \atfi@color@tex\atfi@color@inline\atfi@color@annot
8     {attachfile2}{color}%
9 }

```

Encloses each icon:

```

10 \newenvironment*{LWR@attachfile@icon}
11 {
12   \begin{lateximage}*%
13     [-attachfile-%
14     [%
15       \detokenize\expandafter{\atfi@icon@icon}-%
16       \detokenize\expandafter{\LWR@attachfiletwo@color}%
17     ]%
18 }
19 {
20   \end{lateximage}
21 }

```

Each icon is enclosed inside a LWR@attachfile@icon environment:

```

22 \xpretocmd{\atfi@acroGraph}{\LWR@attachfile@icon}{}{}
23 \xapptocmd{\atfi@acroGraph}{\endLWR@attachfile@icon}{}{}
24
25 \xpretocmd{\atfi@acroPaperclip}{\LWR@attachfile@icon}{}{}
26 \xapptocmd{\atfi@acroPaperclip}{\endLWR@attachfile@icon}{}{}
27
28 \xpretocmd{\atfi@acroPushPin}{\LWR@attachfile@icon}{}{}
29 \xapptocmd{\atfi@acroPushPin}{\endLWR@attachfile@icon}{}{}
30
31 \xpretocmd{\atfi@acroTag}{\LWR@attachfile@icon}{}{}
32 \xapptocmd{\atfi@acroTag}{\endLWR@attachfile@icon}{}{}

```

Disable PDF file embedding:

```

33 \DeclareRobustCommand{\atfi@embedfile}[1]{}

```

The displayed output for an \attachfile reference:

```

34 \newcommand*{\LWR@attachfile@appearance}{}
35
36 \def\atfi@set@appearance@icon{%
37   \atfi@set@appearance{\csname atfi@acro\atfi@icon@icon\endcsname}%
38 }
39
40 \DeclareRobustCommand{\atfi@set@appearance}[1]{}
41   \def\LWR@attachfile@appearance{#1}%
42 }

```

A file annotation becomes a reference:

```
43 \DeclareRobustCommand{\atfi@insert@file@annot}[1]{%
44   \href{#1}{\LWR@attachfile@appearance}%
45 }
```

Modified for text color:

```
46 \DeclareRobustCommand{\notextattachfile}[2][]{%
47   \begingroup
48     \atfi@setup{#1}%
49     \ifatfi@print
50     \leavevmode
51     \begingroup
52       \HyColor@UseColor\atfi@color@tex
53       \LWR@textcurrentcolor{#2}%      lwarp
54 % \strut
55   \endgroup
56 %   \else
57 %     \sbox\ltx@zero{#2\strut}%
58 %     \makebox[\wd0]{}%
59   \fi
60 \endgroup
61 }
```

Modified to draw the icon:

```
62 \DeclareRobustCommand{\noattachfile}[1][]{%
63   \begingroup
64     \atfi@setup{#1}%
65     \atfi@set@appearance@icon
66     \ifatfi@print
67     \LWR@attachfile@appearance%      lwarp
68 %     \expandafter
69 %     \atfi@refxform\csname atfi@appobj@\atfi@icon@icon\endcsname
70 %   \else
71 %     \makebox[\atfi@appearancewidth]{}%
72   \fi
73 \endgroup
74 }
```

File 33 **lwarp-authblk.sty**

§ 135 Package **authblk**

(Emulates or patches code by PATRICK W. DALY.)

Pkg authblk **authblk** is patched for HTML.

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 66.8.

(Emulates or patches code by PATRICK W. DALY.)

for HTML output: Require that `authblk` be loaded before titling:

```

1 \@ifpackageloaded{titling}{
2   \PackageError{lwarp-authblk}
3     {Package authblk must be loaded before titling}
4     {%
5       Titling appends authblk's author macro,
6       so authblk must be loaded first.%
7     }
8 }
9 {}

```

Load `authblk`:

```
10 \LWR@ProvidesPackagePass{authblk}[2001/02/27]
```

Patch to add a class for the affiliation:

```

11 \LetLtxMacro\LWRAB@affil\affil
12
13 \renewcommand{\affil}[2][{}]{%
14 \LWRAB@affil[#1]{\protect\InlineClass{affiliation}{#2}}
15 }

```

Create an HTML break for an `\authorcr`:

```
16 \renewcommand*\authorcr{\protect\LWR@newlinebr}
```

File 34 **lwarp-autobreak.sty**

§ 136 Package **autobreak**

(Emulates or patches code by TAKAHIRO UEDA.)

Pkg `autobreak` `autobreak` is used as-is for SVG math, and nullified for MATHJAX.

for HTML output: `\LWR@ProvidesPackagePass{autobreak}[2017/02/23]`

For MATHJAX. The modified `align` environment is used for SVG math, but is reverted to its original for MATHJAX. (Extraneous commas were appearing in the result.)

```

2 \begin{warpMathJax}
3 \renewenvironment{autobreak}{\newcommand{\MoveEqLeft}[1]{}{}}
4 \let\start@align@autobreak@oldstart@align
5 \let\endalign@autobreak@oldendalign
6 \CustomizeMathJax{\newenvironment{autobreak}{}{}}
7 \CustomizeMathJax{\newcommand{\MoveEqLeft}[1]{}{}}
8 \CustomizeMathJax{\newcommand{\everybeforeautobreak}[1]{}{}}

```

```

9 \CustomizeMathJax{\newcommand{\everyafterautobreak}[1]{} }
10 \end{warpMathJax}

```

File 35 **lwarp-autonum.sty**

§ 137 Package **autonum**

Pkg autonum autonum is ignored.

 **numbering** All equations are numbered in HTML output.

MATHJAX does not support the “+” environments.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{autonum}[2015/01/18]

2 \RequirePackage{amsmath}
3
4
5 \newenvironment{equation+}{\equation}{\endequation}
6
7
8 \newenvironment{gather+}{\gather}{\endgather}
9
10 \BeforeBeginEnvironment{gather+}{\LWR@amsmathenv@@before{gather+}}
11
12 \AfterEndEnvironment{gather+}{\LWR@amsmathenv@@after}
13
14
15 \newenvironment{multline+}{\multline}{\endmultline}
16
17 \BeforeBeginEnvironment{multline+}{\LWR@amsmathenv@@before{multline+}}
18
19 \AfterEndEnvironment{multline+}{\LWR@amsmathenv@@after}
20
21
22 \newenvironment{flalign+}{\flalign}{\endflalign}
23
24 \BeforeBeginEnvironment{flalign+}{\LWR@amsmathenv@@before{flaline+}}
25
26 \AfterEndEnvironment{flalign+}{\LWR@amsmathenv@@after}
27
28
29 \newenvironment{align+}{\align}{\endalign}
30
31 \BeforeBeginEnvironment{align+}{\LWR@amsmathenv@@before{aline+}}
32
33 \AfterEndEnvironment{align+}{\LWR@amsmathenv@@after}
34
35
36 \newenvironment{alignat+}{\alignat}{\endalignat}
37
38 \BeforeBeginEnvironment{alignat+}{\LWR@amsmathenv@@before{alineat+}}
39

```

```

40 \AfterEndEnvironment{alignat+}{\LWR@amsmathenv@@after}
41
42
43 \newenvironment{split+}{\split}{\endsplit}

```

File 36 **lwarp-awesomebox.sty**

§ 138 Package **awesomebox**

(Emulates or patches code by ÉTIENNE DEPARIS.)

Pkg awesomebox awesomebox is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{awesomebox}[2019/07/27]

2 \newcommand*{\LWR@awesomebox@boxborders}{}%
3 \newcommand*{\LWR@awesomebox@contentsborders}{}%
4
5 \newcommand*{\LWR@awesomebox@ruleborders}{%
6   border-top: 1px solid black ;
7   border-bottom: 1px solid black%
8 }
9
10 % \awesomebox[1:vrulecolor][2:hrule][3:title]{4:vrulewidth}{5:icon}{6:iconcolor}{7:content}
11 \RenewDocumentCommand \awesomebox { 0{abvrulecolor} 0{} o m m m +m }{%
12   \begin{awesomeblock}[#1][#2][#3]{#4}{#5}{#6}
13     #7
14   \end{awesomeblock}
15 }
16
17 \begin{awesomeblock}[1:vrulecolor][2:hrule][3:title]{4:vrulewidth}{5:icon}{6:iconcolor}
18 % <contents>
19 % \end{awesomeblock}
20 \RenewDocumentEnvironment{awesomeblock}{ 0{abvrulecolor} 0{} o m m m }
21 {%
22   \LWR@forceminwidth{#4}%
23   \convertcolorspec{named}{#1}{HTML}\LWR@tempcolor%
24   \renewcommand*{\LWR@awesomebox@boxborders}{}%
25   \renewcommand*{\LWR@awesomebox@contentsborders}{}%
26   \ifdefstrequal{\abShortLine}{#2}{%
27     \renewcommand*{\LWR@awesomebox@contentsborders}{\LWR@awesomebox@ruleborders}%
28   }{}%
29   \ifdefstrequal{\abLongLine}{#2}{%
30     \renewcommand*{\LWR@awesomebox@boxborders}{\LWR@awesomebox@ruleborders}%
31   }{}%
32   \begin{BlockClass}[\LWR@awesomebox@boxborders]{awesomebox}
33   \begin{BlockClass}[%
34     margin-left: 2\% ;
35     vertical-align: top
36   ]{minipage}
37     \color{#6}\Huge #5
38   \end{BlockClass}
39   \begin{BlockClass}[%

```

```

40     width:75\% ;
41     vertical-align: top ;
42     padding-left: 1em ;
43     \LWR@awesomebox@contentsborders ;
44     border-left: \LWR@printlength{\LWR@atleastonept} %
45         solid \LWR@origpound\LWR@tempcolor%
46 ]{minipage}
47     \IfValueTF{#3}{#3\newline}{}
48 }
49 {%
50     \end{BlockClass}
51     \end{BlockClass}
52 }

```

File 37 **lwarp-axessibility.sty**

§ 139 Package **axessibility**

Pkg axessibility axessibility is ignored.

for HTML output:

```

1 \PackageInfo{lwarp}{Using the lwarp version of package ‘axessibility’.%}
2 \ProvidesPackage{lwarp-axessibility}% no date is declared by the original
3
4 \newif\iftagpdfopt
5
6 \DeclareOption{accsupp}{
7   \tagpdfoptfalse
8 }
9
10 \DeclareOption{tagpdf}{
11   \tagpdfopttrue
12 }
13
14 \ProcessOptions\relax
15
16 \iftagpdfopt
17   \RequirePackage{tagpdf}
18 \else
19   \RequirePackage{accsupp}
20 \fi

21 \long\def\wrap#1{}
22 \long\def\wrapml#1{}
23 \long\def\wrapmlstar#1{}
24 \long\def\wrapmlalt#1{}

```

For MATHJAX. These usually will not be needed.

```

25 \begin{warpMathJax}
26 \CustomizeMathJax{\newcommand{\wrap}[1]{} }
27 \CustomizeMathJax{\newcommand{\wrapml}[1]{} }
28 \CustomizeMathJax{\newcommand{\wrapmlstar}[1]{} }

```

```
29 \CustomizeMathJax{\newcommand{\wrapmlalt}[1]{} }
30 \end{wrapMathJax}
```

File 38 **lwarp-axodraw2.sty**

§ 140 Package **axodraw2**

(Emulates or patches code by JOHN C. COLLINS, J.A.M. VERMASEREN.)

Pkg axodraw2 axodraw2 is patched for use by lwarp.

for HTML output:

```
1 \LWR@ProvidesPackagePass{axodraw2}[2018/02/15]

2 \BeforeBeginEnvironment{axopicture}{%
3   \begin{lateximage}[-axopicture~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{axopicture}{\end{lateximage}}
```

File 39 **lwarp-backnaur.sty**

§ 141 Package **backnaur**

(Emulates or patches code by ADRIAN P. ROBSON.)

Pkg backnaur backnaur is patched for use by lwarp.

for HTML output:

```
1 \LWR@ProvidesPackagePass{backnaur}[2019/06/18]

2 \renewenvironment{bnf}{\eqnarray}{\endeqnarray}
3 \renewenvironment{bnf*}{\csuse{eqnarray*}}{\csuse{endeqnarray*}}
```

File 40 **lwarp-backref.sty**

§ 142 Package **backref**

(Emulates or patches code by DAVID CARLISLE AND SEBASTIAN RAHTZ.)

Pkg backref backref is patched for use by lwarp.

 **loading** Note that backref must be explicitly loaded, and is not automatically loaded by hyperref when generating HTML output.

for HTML output:

```
1 \LWR@ProvidesPackagePass{backref}[2016/05/21]
```

Force the hyperref option:

```

2 \def\backref{}
3
4 \long\def\hyper@section@backref#1#2#3{%
5   \ref{#3}%
6 }
7
8 \let\backrefxxx\hyper@section@backref

```

File 41 **lwarp-balance.sty**

§ 143 Package **balance**

(Emulates or patches code by PATRICK W. DALY.)

Pkg balance **balance** is ignored.

for HTML output: Discard all options for lwarp-balance:

```

1 \LWR@ProvidesPackageDrop{balance}[1999/02/23]

2 \newcommand*\balance{}
3 \newcommand*\nobalance{}

```

File 42 **lwarp-bbding.sty**

§ 144 Package **bbding**

(Emulates or patches code by KAREL HORAK, PETER MØLLER NEERGAARD.)

Pkg bbding **bbding** is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{bbding}[1999/04/15]

```

2 \newcommand*\LWR@bbdingsymbol}[2]{\HTMLunicode{#2}}
3
4 \newcommand{\LWR@HTML@ScissorRightBrokenBottom}{\LWR@bbdingsymbol{000} {2701}}
5 \newcommand{\LWR@HTML@ScissorRight}{\LWR@bbdingsymbol{001} {2702}}
6 \newcommand{\LWR@HTML@ScissorRightBrokenTop}{\LWR@bbdingsymbol{002} {2703}}
7 \newcommand{\LWR@HTML@ScissorLeftBrokenBottom}{\LWR@bbdingsymbol{003} {2701}}
8 \newcommand{\LWR@HTML@ScissorLeft}{\LWR@bbdingsymbol{004} {2702}}
9 \newcommand{\LWR@HTML@ScissorLeftBrokenTop}{\LWR@bbdingsymbol{005} {2703}}
10 \newcommand{\LWR@HTML@ScissorHollowRight}{\LWR@bbdingsymbol{006} {2704}}
11 \newcommand{\LWR@HTML@ScissorHollowLeft}{\LWR@bbdingsymbol{007} {2704}}
12 \newcommand{\LWR@HTML@Phone}{\LWR@bbdingsymbol{010} {260E}}
13 \newcommand{\LWR@HTML@PhoneHandset}{\LWR@bbdingsymbol{011} {2706}}
14 \newcommand{\LWR@HTML@Tape}{\LWR@bbdingsymbol{012} {2707}}
15 \newcommand{\LWR@HTML@Plane}{\LWR@bbdingsymbol{013} {2708}}
16 \newcommand{\LWR@HTML@Envelope}{\LWR@bbdingsymbol{014} {2709}}

```

17	\newcommand{\LWR@HTML@HandCuffRight}{\LWR@bbdingsymbol{015}}	{261B}}
18	\newcommand{\LWR@HTML@HandCuffLeft}{\LWR@bbdingsymbol{016}}	{261A}}
19	\newcommand{\LWR@HTML@HandCuffRightUp}{\LWR@bbdingsymbol{017}}	{261D}}
20	\newcommand{\LWR@HTML@HandCuffLeftUp}{\LWR@bbdingsymbol{020}}	{261F}}
21	\newcommand{\LWR@HTML@HandRight}{\LWR@bbdingsymbol{021}}	{261E}}
22	\newcommand{\LWR@HTML@HandLeft}{\LWR@bbdingsymbol{022}}	{261C}}
23	\newcommand{\LWR@HTML@HandRightUp}{\LWR@bbdingsymbol{023}}	{261D}}
24	\newcommand{\LWR@HTML@HandLeftUp}{\LWR@bbdingsymbol{024}}	{261F}}
25	\newcommand{\LWR@HTML@Peace}{\LWR@bbdingsymbol{025}}	{270C}}
26	\newcommand{\LWR@HTML@HandPencilLeft}{\LWR@bbdingsymbol{026}}	{270D}}
27	\newcommand{\LWR@HTML@PencilRight}{\LWR@bbdingsymbol{027}}	{270F}}
28	\newcommand{\LWR@HTML@PencilLeft}{\LWR@bbdingsymbol{030}}	{270F}}
29	\newcommand{\LWR@HTML@PencilRightUp}{\LWR@bbdingsymbol{031}}	{2710}}
30	\newcommand{\LWR@HTML@PencilLeftUp}{\LWR@bbdingsymbol{032}}	{2710}}
31	\newcommand{\LWR@HTML@PencilRightDown}{\LWR@bbdingsymbol{033}}	{270E}}
32	\newcommand{\LWR@HTML@PencilLeftDown}{\LWR@bbdingsymbol{034}}	{270E}}
33	\newcommand{\LWR@HTML@NibRight}{\LWR@bbdingsymbol{035}}	{2711}}
34	\newcommand{\LWR@HTML@NibLeft}{\LWR@bbdingsymbol{036}}	{2711}}
35	\newcommand{\LWR@HTML@NibSolidRight}{\LWR@bbdingsymbol{037}}	{2712}}
36	\newcommand{\LWR@HTML@NibSolidLeft}{\LWR@bbdingsymbol{040}}	{2712}}
37	\newcommand{\LWR@HTML@Checkmark}{\LWR@bbdingsymbol{041}}	{2713}}
38	\newcommand{\LWR@HTML@CheckmarkBold}{\LWR@bbdingsymbol{042}}	{2714}}
39	\newcommand{\LWR@HTML@XSolid}{\LWR@bbdingsymbol{043}}	{2715}}
40	\newcommand{\LWR@HTML@XSolidBold}{\LWR@bbdingsymbol{044}}	{2716}}
41	\newcommand{\LWR@HTML@XSolidBrush}{\LWR@bbdingsymbol{045}}	{2717}}
42	\newcommand{\LWR@HTML@PlusOutline}{\LWR@bbdingsymbol{046}}	{2719}}
43	\newcommand{\LWR@HTML@Plus}{\LWR@bbdingsymbol{047}}	{271A}}
44	\newcommand{\LWR@HTML@PlusCenterOpen}{\LWR@bbdingsymbol{050}}	{271C}}
45	\newcommand{\LWR@HTML@PlusThinCenterOpen}{\LWR@bbdingsymbol{051}}	{271B}}
46	\newcommand{\LWR@HTML@Cross}{\LWR@bbdingsymbol{052}}	{271D}}
47	\newcommand{\LWR@HTML@CrossOpenShadow}{\LWR@bbdingsymbol{053}}	{271E}}
48	\newcommand{\LWR@HTML@CrossOutline}{\LWR@bbdingsymbol{054}}	{271F}}
49	\newcommand{\LWR@HTML@CrossBoldOutline}{\LWR@bbdingsymbol{055}}	{271F}}
50	\newcommand{\LWR@HTML@CrossMaltese}{\LWR@bbdingsymbol{056}}	{2720}}
51	\newcommand{\LWR@HTML@DavidStarSolid}{\LWR@bbdingsymbol{057}}	{2721}}
52	\newcommand{\LWR@HTML@DavidStar}{\LWR@bbdingsymbol{060}}	{2721}}
53	\newcommand{\LWR@HTML@FourAsterisk}{\LWR@bbdingsymbol{061}}	{2722}}
54	\newcommand{\LWR@HTML@JackStar}{\LWR@bbdingsymbol{062}}	{2723}}
55	\newcommand{\LWR@HTML@JackStarBold}{\LWR@bbdingsymbol{063}}	{2724}}
56	\newcommand{\LWR@HTML@CrossCLowerTips}{\LWR@bbdingsymbol{064}}	{2725}}
57	\newcommand{\LWR@HTML@FourStar}{\LWR@bbdingsymbol{065}}	{2726}}
58	\newcommand{\LWR@HTML@FourStarOpen}{\LWR@bbdingsymbol{066}}	{2727}}
59	\newcommand{\LWR@HTML@FiveStarLines}{\LWR@bbdingsymbol{067}}	{2729}}
60	\newcommand{\LWR@HTML@FiveStar}{\LWR@bbdingsymbol{070}}	{2605}}
61	\newcommand{\LWR@HTML@FiveStarOpen}{\LWR@bbdingsymbol{071}}	{2729}}
62	\newcommand{\LWR@HTML@FiveStarOpenCircled}{\LWR@bbdingsymbol{072}}	{272A}}
63	\newcommand{\LWR@HTML@FiveStarCenterOpen}{\LWR@bbdingsymbol{073}}	{272B}}
64	\newcommand{\LWR@HTML@FiveStarOpenDotted}{\LWR@bbdingsymbol{074}}	{272C}}
65	\newcommand{\LWR@HTML@FiveStarOutline}{\LWR@bbdingsymbol{075}}	{272D}}
66	\newcommand{\LWR@HTML@FiveStarOutlineHeavy}{\LWR@bbdingsymbol{076}}	{272E}}
67	\newcommand{\LWR@HTML@FiveStarConvex}{\LWR@bbdingsymbol{077}}	{272F}}
68	\newcommand{\LWR@HTML@FiveStarShadow}{\LWR@bbdingsymbol{100}}	{2730}}
69	\newcommand{\LWR@HTML@AsteriskBold}{\LWR@bbdingsymbol{101}}	{2731}}
70	\newcommand{\LWR@HTML@AsteriskCenterOpen}{\LWR@bbdingsymbol{102}}	{2732}}
71	\newcommand{\LWR@HTML@AsteriskThin}{\LWR@bbdingsymbol{103}}	{273B}}

72	\newcommand{\LWR@HTML@AsteriskThinCenterOpen}{\LWR@bbdingsymbol{104}}	{273C}}
73	\newcommand{\LWR@HTML@EightStarTaper}{\LWR@bbdingsymbol{105}}	{2733}}
74	\newcommand{\LWR@HTML@EightStarConvex}{\LWR@bbdingsymbol{106}}	{2735}}
75	\newcommand{\LWR@HTML@SixStar}{\LWR@bbdingsymbol{107}}	{2736}}
76	\newcommand{\LWR@HTML@EightStar}{\LWR@bbdingsymbol{110}}	{2737}}
77	\newcommand{\LWR@HTML@EightStarBold}{\LWR@bbdingsymbol{111}}	{2738}}
78	\newcommand{\LWR@HTML@TwelveStar}{\LWR@bbdingsymbol{112}}	{2739}}
79	\newcommand{\LWR@HTML@SixteenStarLight}{\LWR@bbdingsymbol{113}}	{273A}}
80	\newcommand{\LWR@HTML@SixFlowerPetalRemoved}{\LWR@bbdingsymbol{114}}	{273B}}
81	\newcommand{\LWR@HTML@SixFlowerOpenCenter}{\LWR@bbdingsymbol{115}}	{273C}}
82	\newcommand{\LWR@HTML@Asterisk}{\LWR@bbdingsymbol{116}}	{273D}}
83	\newcommand{\LWR@HTML@SixFlowerAlternate}{\LWR@bbdingsymbol{117}}	{273E}}
84	\newcommand{\LWR@HTML@FiveFlowerPetal}{\LWR@bbdingsymbol{120}}	{273F}}
85	\newcommand{\LWR@HTML@SixFlowerPetalDotted}{\LWR@bbdingsymbol{121}}	{2740}}
86	\newcommand{\LWR@HTML@FiveFlowerOpen}{\LWR@bbdingsymbol{122}}	{2740}}
87	\newcommand{\LWR@HTML@EightFlowerPetal}{\LWR@bbdingsymbol{123}}	{2741}}
88	\newcommand{\LWR@HTML@SunshineOpenCircled}{\LWR@bbdingsymbol{124}}	{2742}}
89	\newcommand{\LWR@HTML@SixFlowerAltPetal}{\LWR@bbdingsymbol{125}}	{2743}}
90	\newcommand{\LWR@HTML@FourClowerOpen}{\LWR@bbdingsymbol{126}}	{273F}}
91	\newcommand{\LWR@HTML@FourClowerSolid}{\LWR@bbdingsymbol{127}}	{273F}}
92	\newcommand{\LWR@HTML@AsteriskRoundedEnds}{\LWR@bbdingsymbol{130}}	{2749}}
93	\newcommand{\LWR@HTML@EightFlowerPetalRemoved}{\LWR@bbdingsymbol{131}}	{274A}}
94	\newcommand{\LWR@HTML@EightAsterisk}{\LWR@bbdingsymbol{132}}	{274B}}
95	\newcommand{\LWR@HTML@SixFlowerRemovedOpenPetal}{\LWR@bbdingsymbol{133}}	{2740}}
96	\newcommand{\LWR@HTML@SparkleBold}{\LWR@bbdingsymbol{134}}	{2748}}
97	\newcommand{\LWR@HTML@Sparkle}{\LWR@bbdingsymbol{135}}	{2747}}
98	\newcommand{\LWR@HTML@SnowflakeChevron}{\LWR@bbdingsymbol{136}}	{2744}}
99	\newcommand{\LWR@HTML@SnowflakeChevronBold}{\LWR@bbdingsymbol{137}}	{2746}}
100	\newcommand{\LWR@HTML@Snowflake}{\LWR@bbdingsymbol{140}}	{2744}}
101	\newcommand{\LWR@HTML@CircleSolid}{\LWR@bbdingsymbol{141}}	{25CF}}
102	\newcommand{\LWR@HTML@Ellipse}{\LWR@bbdingsymbol{142}}	{274D}}
103	\newcommand{\LWR@HTML@EllipseSolid}{\LWR@bbdingsymbol{143}}	{25CF}}
104	\newcommand{\LWR@HTML@CircleShadow}{\LWR@bbdingsymbol{144}}	{274D}}
105	\newcommand{\LWR@HTML@EllipseShadow}{\LWR@bbdingsymbol{145}}	{274D}}
106	\newcommand{\LWR@HTML@Square}{\LWR@bbdingsymbol{146}}	{25A1}}
107	\newcommand{\LWR@HTML@SquareSolid}{\LWR@bbdingsymbol{147}}	{25A0}}
108	\newcommand{\LWR@HTML@SquareShadowBottomRight}{\LWR@bbdingsymbol{150}}	{2751}}
109	\newcommand{\LWR@HTML@SquareShadowTopRight}{\LWR@bbdingsymbol{151}}	{2752}}
110	\newcommand{\LWR@HTML@SquareShadowTopLeft}{\LWR@bbdingsymbol{152}}	{2752}}
111	\newcommand{\LWR@HTML@SquareCastShadowBottomRight}{\LWR@bbdingsymbol{153}}	{2751}}
112	\newcommand{\LWR@HTML@SquareCastShadowTopRight}{\LWR@bbdingsymbol{154}}	{2752}}
113	\newcommand{\LWR@HTML@SquareCastShadowTopLeft}{\LWR@bbdingsymbol{155}}	{2752}}
114	\newcommand{\LWR@HTML@TriangleUp}{\LWR@bbdingsymbol{156}}	{25B2}}
115	\newcommand{\LWR@HTML@TriangleDown}{\LWR@bbdingsymbol{157}}	{25BC}}
116	\newcommand{\LWR@HTML@DiamondSolid}{\LWR@bbdingsymbol{160}}	{25C6}}
117	\newcommand{\LWR@HTML@OrnamentDiamondSolid}{\LWR@bbdingsymbol{161}}	{2756}}
118	\newcommand{\LWR@HTML@HalfCircleRight}{\LWR@bbdingsymbol{162}}	{25D7}}
119	\newcommand{\LWR@HTML@HalfCircleLeft}{\LWR@bbdingsymbol{163}}	{25D6}}
120	\newcommand{\LWR@HTML@RectangleThin}{\LWR@bbdingsymbol{164}}	{2758}}
121	\newcommand{\LWR@HTML@Rectangle}{\LWR@bbdingsymbol{165}}	{2759}}
122	\newcommand{\LWR@HTML@RectangleBold}{\LWR@bbdingsymbol{166}}	{275A}}
123	\newcommand{\LWR@HTML@ArrowBoldRightStrobe}{\LWR@bbdingsymbol{167}}	{27A0}}
124	\newcommand{\LWR@HTML@ArrowBoldUpRight}{\LWR@bbdingsymbol{170}}	{27A6}}
125	\newcommand{\LWR@HTML@ArrowBoldDownRight}{\LWR@bbdingsymbol{171}}	{27A5}}
126	\newcommand{\LWR@HTML@ArrowBoldRightShort}{\LWR@bbdingsymbol{172}}	{27A7}}

```
127 \newcommand{\LWR@HTML@ArrowBoldRightCircled}{\LWR@bbdingsymbol{173}} {27B2}}
128
129
130 \LWR@formatted{ScissorRightBrokenBottom}
131 \LWR@formatted{ScissorRight}
132 \LWR@formatted{ScissorRightBrokenTop}
133 \LWR@formatted{ScissorLeftBrokenBottom}
134 \LWR@formatted{ScissorLeft}
135 \LWR@formatted{ScissorLeftBrokenTop}
136 \LWR@formatted{ScissorHollowRight}
137 \LWR@formatted{ScissorHollowLeft}
138 \LWR@formatted{Phone}
139 \LWR@formatted{PhoneHandset}
140 \LWR@formatted{Tape}
141 \LWR@formatted{Plane}
142 \LWR@formatted{Envelope}
143 \LWR@formatted{HandCuffRight}
144 \LWR@formatted{HandCuffLeft}
145 \LWR@formatted{HandCuffRightUp}
146 \LWR@formatted{HandCuffLeftUp}
147 \LWR@formatted{HandRight}
148 \LWR@formatted{HandLeft}
149 \LWR@formatted{HandRightUp}
150 \LWR@formatted{HandLeftUp}
151 \LWR@formatted{Peace}
152 \LWR@formatted{HandPencilLeft}
153 \LWR@formatted{PencilRight}
154 \LWR@formatted{PencilLeft}
155 \LWR@formatted{PencilRightUp}
156 \LWR@formatted{PencilLeftUp}
157 \LWR@formatted{PencilRightDown}
158 \LWR@formatted{PencilLeftDown}
159 \LWR@formatted{NibRight}
160 \LWR@formatted{NibLeft}
161 \LWR@formatted{NibSolidRight}
162 \LWR@formatted{NibSolidLeft}
163 \LWR@formatted{Checkmark}
164 \LWR@formatted{CheckmarkBold}
165 \LWR@formatted{XSolid}
166 \LWR@formatted{XSolidBold}
167 \LWR@formatted{XSolidBrush}
168 \LWR@formatted{PlusOutline}
169 \LWR@formatted{Plus}
170 \LWR@formatted{PlusCenterOpen}
171 \LWR@formatted{PlusThinCenterOpen}
172 \LWR@formatted{Cross}
173 \LWR@formatted{CrossOpenShadow}
174 \LWR@formatted{CrossOutline}
175 \LWR@formatted{CrossBoldOutline}
176 \LWR@formatted{CrossMaltese}
177 \LWR@formatted{DavidStarSolid}
178 \LWR@formatted{DavidStar}
179 \LWR@formatted{FourAsterisk}
180 \LWR@formatted{JackStar}
181 \LWR@formatted{JackStarBold}
```

182 \LWR@formatted{CrossLowerTips}
183 \LWR@formatted{FourStar}
184 \LWR@formatted{FourStarOpen}
185 \LWR@formatted{FiveStarLines}
186 \LWR@formatted{FiveStar}
187 \LWR@formatted{FiveStarOpen}
188 \LWR@formatted{FiveStarOpenCircled}
189 \LWR@formatted{FiveStarCenterOpen}
190 \LWR@formatted{FiveStarOpenDotted}
191 \LWR@formatted{FiveStarOutline}
192 \LWR@formatted{FiveStarOutlineHeavy}
193 \LWR@formatted{FiveStarConvex}
194 \LWR@formatted{FiveStarShadow}
195 \LWR@formatted{AsteriskBold}
196 \LWR@formatted{AsteriskCenterOpen}
197 \LWR@formatted{AsteriskThin}
198 \LWR@formatted{AsteriskThinCenterOpen}
199 \LWR@formatted{EightStarTaper}
200 \LWR@formatted{EightStarConvex}
201 \LWR@formatted{SixStar}
202 \LWR@formatted{EightStar}
203 \LWR@formatted{EightStarBold}
204 \LWR@formatted{TwelveStar}
205 \LWR@formatted{SixteenStarLight}
206 \LWR@formatted{SixFlowerPetalRemoved}
207 \LWR@formatted{SixFlowerOpenCenter}
208 \LWR@formatted{Asterisk}
209 \LWR@formatted{SixFlowerAlternate}
210 \LWR@formatted{FiveFlowerPetal}
211 \LWR@formatted{SixFlowerPetalDotted}
212 \LWR@formatted{FiveFlowerOpen}
213 \LWR@formatted{EightFlowerPetal}
214 \LWR@formatted{SunshineOpenCircled}
215 \LWR@formatted{SixFlowerAltPetal}
216 \LWR@formatted{FourCLowerOpen}
217 \LWR@formatted{FourCLowerSolid}
218 \LWR@formatted{AsteriskRoundedEnds}
219 \LWR@formatted{EightFlowerPetalRemoved}
220 \LWR@formatted{EightAsterisk}
221 \LWR@formatted{SixFlowerRemovedOpenPetal}
222 \LWR@formatted{SparkleBold}
223 \LWR@formatted{Sparkle}
224 \LWR@formatted{SnowflakeChevron}
225 \LWR@formatted{SnowflakeChevronBold}
226 \LWR@formatted{Snowflake}
227 \LWR@formatted{CircleSolid}
228 \LWR@formatted{Ellipse}
229 \LWR@formatted{EllipseSolid}
230 \LWR@formatted{CircleShadow}
231 \LWR@formatted{EllipseShadow}
232 \LWR@formatted{Square}
233 \LWR@formatted{SquareSolid}
234 \LWR@formatted{SquareShadowBottomRight}
235 \LWR@formatted{SquareShadowTopRight}
236 \LWR@formatted{SquareShadowTopLeft}

```

237 \LWR@formatted{SquareCastShadowBottomRight}
238 \LWR@formatted{SquareCastShadowTopRight}
239 \LWR@formatted{SquareCastShadowTopLeft}
240 \LWR@formatted{TriangleUp}
241 \LWR@formatted{TriangleDown}
242 \LWR@formatted{DiamondSolid}
243 \LWR@formatted{OrnamentDiamondSolid}
244 \LWR@formatted{HalfCircleRight}
245 \LWR@formatted{HalfCircleLeft}
246 \LWR@formatted{RectangleThin}
247 \LWR@formatted{Rectangle}
248 \LWR@formatted{RectangleBold}
249 \LWR@formatted{ArrowBoldRightStrobe}
250 \LWR@formatted{ArrowBoldUpRight}
251 \LWR@formatted{ArrowBoldDownRight}
252 \LWR@formatted{ArrowBoldRightShort}
253 \LWR@formatted{ArrowBoldRightCircled}

```

File 43 **lwarp-biblatex.sty**

§ 145 Package **biblatex**

(Emulates or patches code by PHILIPP LEHMAN.)

Pkg biblatex When **biblatex** is used, modifications from **newfloat** may have to be undone.

for HTML output:

1. **lwarp** uses **newfloat**.
2. For classes with chapters which **newfloat** does not know about, such as CTEX-related classes, **newfloat** may modify `\addtocontents`.
3. **biblatex**, though, wants to patch `\addtocontents`, which causes an error if `\addtocontents` has been changed.
4. Therefore, `\addtocontents` is restored to its original here, since **biblatex** is about to be loaded.
5. This means that the **newfloat**'s `chapterlistsgaps` option may no longer work.

```

1 \ifdef{\newfloat@addtocontents@ORI}{
2   \let\addtocontents\newfloat@addtocontents@ORI
3 }{}

```

hyperref emulation is loaded `\AtBeginDocument` to avoid an options clash.

```

4 \AtBeginDocument{\RequirePackage{hyperref}}
5
6 \LWR@ProvidesPackagePass{biblatex}[2018/03/04]

```

The following create hyperlinks to the references. The original code to use **hyperref** is recreated here, because **hyperref** is emulated.

```

7 \AfterPreamble{
8
9 \let\blx@anchors\@empty
10 \protected\def\blx@anchor{%
11   \xifinlist{\the\c@refsection @\abx@field@entrykey}{\blx@anchors}
12     {}
13     {\listxadd\blx@anchors{\the\c@refsection @\abx@field@entrykey}%
14       \hypertarget{cite.\the\c@refsection @\abx@field@entrykey}{}}
15 \protected\def\blx@imc@bibhyperref{%
16   \@ifnextchar[%
17     {\blx@bibhyperref}
18     {\blx@bibhyperref[\abx@field@entrykey]}}%
19
20 \long\def\blx@bibhyperref[#1]#2{%
21   % \blx@sfsave
22     \hyperlink{cite.\the\c@refsection @#1}{%
23     % \blx@sfrest
24       #2%
25     % \blx@sfsave
26     }%
27 % \blx@sfrest%
28 }% \def\blx@nohyperref[#1]#2{#2}%
29
30 \protected\long\def\blx@imc@bibhyperlink#1#2{%
31   % \blx@sfsave
32     \hyperlink{cite.\the\c@refsection:#1}{%
33     % \blx@sfrest
34       #2%
35     % \blx@sfsave
36     }%
37 % \blx@sfrest%
38 }%
39
40 \protected\long\def\blx@imc@bibhypertarget#1#2{%
41   % \blx@sfsave%
42     \hypertarget{cite.\the\c@refsection:#1}{%
43     % \blx@sfrest
44       #2%
45     % \blx@sfsave%
46     }%
47 % \blx@sfrest%
48 }
49
50 \let\blx@imc@ifhyperref\@firstoftwo
51 }

```

File 44 **lwarp-bibunits.sty**

§ 146 Package **bibunits**

(Emulates or patches code by THORSTEN HANSEN.)

Pkg bibunits **bibunits** is patched for use by **lwarp**.

for HTML output:

```
1 \LWR@ProvidesPackagePass{bibunits}[2004/05/12]
2 \def\bu@bibdata{\BaseJobname}
```

File 45 **lwarp-bigdelim.sty**

§ 147 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 `` class of `ldelim` or `rdelim`, and the default CSS sets this to `font-size:200%`

 **use `\mrowcell`** `\ldelim` and `\rdelim` use `\multirow`, so `\mrowcell` must be used in the proper number of empty cells in the same column below `\ldelim` or `\rdelim`, but not in cells which are above or below the delimiter:

```
\begin{tabular}{lll}
<empty> & a & b \\
\ldelim{\}{3}{.25in}[left ] & c & d \\
\mrowcell & e & f \\
\mrowcell & g & h \\
<empty> & i & j \\
\end{tabular}
```

```
<-> a b
      {
left { c d
      { e f
      { g h
<-> i j
```

For MATHJAX, limited emulation is provided which merely prints the delimiter and optional text in the first row.

for HTML output: First, remove the temporary definitions of `\ldelim` and `\rdelim`, which were previously defined for tabular scanning in case `bigdelim` was not loaded:

```
1 \let\ldelim\relax
2 \let\rdelim\relax
```

Next, load the package's new definitions:

```
3 \LWR@ProvidesPackagePass{bigdelim}[2018/08/03]
```

```

\ldelim  {\langle 1:delimiter\rangle} {\langle 2:#rows\rangle} {\langle 3:width\rangle} [\langle 4:text\rangle]
\rldelim

4 \NewDocumentCommand{\LWR@HTML@ldelim}{m m m O{}}{%
5 \renewcommand{\LWR@multirowborder}{right}%
6 \multirow{#2}{#3}{#4 \InlineClass{ldelim}{#1}}%
7 }
8
9 \LWR@formatted{ldelim}
10
11 \NewDocumentCommand{\LWR@HTML@rdelim}{m m m O{}}{%
12 \renewcommand{\LWR@multirowborder}{left}%
13 \multirow{#2}{#3}{\InlineClass{rdelim}{#1} #4}%
14 }
15
16 \LWR@formatted{rdelim}

```

Limited emulation for MATHJAX. The delimiter is printed on the first row, along with any optional text.

```

17 \begin{warpMathJax}
18 % \ldelim ( [n]{width}[text]
19 \CustomizeMathJax{\newcommand{\LWRldelim}[1][\text{#1}~\LWRbigdelim]}
20 \CustomizeMathJax{\def\ldelim#1#2#3{\def\LWRbigdelim{#1}\LWRldelim}}
21 % \rdelim ) [n]{width}[text]
22 \CustomizeMathJax{\newcommand{\LWRrdelim}[1][\LWRbigdelim~\text{#1}]}
23 \CustomizeMathJax{\def\rdelim#1#2#3{\def\LWRbigdelim{#1}\LWRrdelim}}
24 \end{warpMathJax}

```

File 46 **lwarp-bigfoot.sty**

§ 148 Package **bigfoot**

Pkg bigfoot bigfoot is emulated.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{bigfoot}[2015/08/30]

2 \RequirePackage{manyfoot}
3 \RequirePackage{perpage}
4
5 \def\RestyleFootnote#1#2{}
6 \def\FootnoteSpecific#1{}
7 \def\DefineFootnoteStack#1{}
8 \def\PushFootnoteMark#1{}
9 \def\PopFootnoteMark#1{}
10 \def\hfootfraction{0.9}
11 \def\vtypefraction{0.7}
12 \def\FootnoteMinimum{1sp}
13 \def\FootnoteMainMinimum{0pt}
14 \newcount\bigfoottolerance
15 \bigfoottolerance=100
16 \providecommand\footnotecarryratio{2}

```

File 47 **lwarp-bigstrut.sty**§ 149 Package **bigstrut**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

Pkg bigstrut bigstrut is used as-is for print or lateximage, and patched for HTML.

for HTML output:

```

1 \LWR@ProvidesPackagePass{bigstrut}[2018/08/03]

2 \LetLtxMacro\LWR@origbigstrut\bigstrut
3
4 \renewcommand\bigstrut[1][x]{}
5
6 \appto\LWR@restoreorigformatting%
7 \LetLtxMacro\bigstrut\LWR@origbigstrut%
8 }
9

10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\bigstrut}[1][{}]}
12 \end{warpMathJax}

```

File 48 **lwarp-bitpattern.sty**§ 150 Package **bitpattern**

(Emulates or patches code by JEAN-MARC BOURGUET.)

Pkg bitpattern bitpattern is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{bitpattern}[2015/12/11]

2 \xpatchcmd{\bitpattern}
3   {\begin{group}
4   {\begin{lateximage}[-bitpattern-~\PackageDiagramAltText]}
5   {}
6   {\LWR@patcherror{bitpattern}{bitpattern}}
7
8 \xpatchcmd{\bp@Done}
9   {\end{group}
10  {\end{lateximage}}}
11  {}
12  {\LWR@patcherror{bitpattern}{bp@Done}}

```

File 49 **lwarp-blowup.sty**

§ 151 Package **blowup**

Pkg blowup blowup is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{blowup}[2018/01/02]

2 \newcommand*\blowUp[1]{}

File 50 **lwarp-bm.sty**

§ 152 Package **bm**

(Emulates or patches code by DAVID CARLISLE, FRANK MITTELBACH.)

Pkg bm bm is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{bm}[2019/07/24]

\DeclareBoldMathCommand must only be used in the preamble, since it adds to the MATHJAX setup code.

```

2 \begin{warpMathJax}
3 \LetLtxMacro\LWR@orig@DeclareBoldMathCommand\DeclareBoldMathCommand
4
5 \renewcommand\DeclareBoldMathCommand[3][bold]{%
6   \LWR@orig@DeclareBoldMathCommand[#1]{#2}{#3}%
7   \CustomizeMathJax{\newcommand{#2}{\boldsymbol{#3}}}%
8 }
9
10 \@onlypreamble\DeclareBoldMathCommand
11
12 \CustomizeMathJax{\newcommand{\bm}[1]{\boldsymbol{#1}}}
13 \end{warpMathJax}

```

File 51 **lwarp-booklet.sty**

§ 153 Package **booklet**

(Emulates or patches code by PETER WILSON.)

Pkg booklet booklet is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{booklet}[2009/09/02]

```

2 \newdimen\pageseplength
3 \newdimen\pagesepwidth
4 \newdimen\pagesepoffset
5 \newif\ifsidebyside \sidebysidetrue
6 \newif\ifuselandscape \uselandscapefalse
7 \newif\ifprintoption \printoptionfalse
8 \newcommand*\pagespersignature}[1]{}
9 \def\magstepminus#1{}
10 \newcommand*\target}[3]{}
11 \newcommand*\source}[3]{}
12 \newcommand*\setpdftargetpages{}{}
13 \newcommand*\setdvipstargetpages{}{}
14 \newcommand*\targettopbottom{}{}
15 \newcommand*\twoupemptypage{}{}
16 \newcommand*\twoupclearpage{}{}
17 \newcommand*\checkforlandscape{}{}

```

File 52 **lwarp-bookmark.sty**

§ 154 Package **bookmark**

(Emulates or patches code by HEIKO OBERDIEK.)

Pkg bookmark **bookmark** is ignored.

for HTML output: Discard all options for lwarp-bookmark:

```

1 \LWR@ProvidesPackageDrop{bookmark}[2016/05/17]

2 \newcommand*\bookmarksetup}[1]{}
3 \newcommand*\bookmarksetupnext}[1]{}
4 \newcommand*\bookmark}[2][{}{}
5 \newcommand*\bookmarkdefinestyle}[2]{}
6 \newcommand*\bookmarkget}[1]{}
7 \newcommand{\BookmarkAtEnd}[1]{}

```

File 53 **lwarp-booktabs.sty**

§ 155 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`.

 `\cmidrule` For MATHJAX, emulation is provided in math mode, but `\cmidrule trim` must not be used.

for HTML output:

If `booktabs` has already been loaded before `lwarp`, such as by `memoir`, use it as-is. If not, the `lwarp` core will have placed some dummy macros which should be removed before loading the actual `booktabs` definitions.

```

1 \@ifpackageloaded{booktabs}{
2   \LetLtxMacro\toprule\relax
3   \LetLtxMacro\midrule\relax
4   \LetLtxMacro\cmidrule\cline
5   \LetLtxMacro\bottomrule\relax
6   \LetLtxMacro\addlinespace\relax
7   \LetLtxMacro\morecmidrules\relax
8   \LetLtxMacro\specialrule\relax
9 }

```

Next, load the `booktabs` package:

```
10 \LWR@ProvidesPackagePass{booktabs}[2019/10/08]
```

Adjust to work even if `xltabular` is loaded:

```

11 % \def\LWR@HTML@BLTrule{\@BTnormal}
12 %
13 % \LWR@formatted{@BLTrule}
14 \LetLtxMacro@BLTrule\@BTnormal

15 \DeclareDocumentCommand{\LWR@HTML@toprule}{o d()}%
16   {%
17     \IfValueTF{#1}%
18       {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
19   {%
20     \ifbool{FormatWP}%
21       {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
22     {\booltrue{LWR@doingtbrule}}}%
23   }%
24   \LWR@getmynexttoken}
25
26 \LWR@expandableformatted{toprule}
27
28 \DeclareDocumentCommand{\LWR@HTML@midrule}{o d()}%
29   {%
30     \IfValueTF{#1}%
31       {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
32   {%
33     \ifbool{FormatWP}%
34       {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
35     {\defaddtocounter{LWR@hlines}{1}}}%
36   }%
37   \LWR@getmynexttoken}
38
39 \LWR@expandableformatted{midrule}
40
41 \DeclareDocumentCommand{\LWR@HTML@cmidrule}{O{\LWR@cmidrulewidth} d() m}{%
42   \LWR@docmidrule[#1](#2){#3}%
43   \LWR@getmynexttoken%

```

```

44 }%
45
46 \LWR@expandableformatted{cmidrule}
47
48 \DeclareDocumentCommand{\LWR@HTML@bottomrule}{o d()}{%
49   \IfValueTF{#1}%
50     {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
51   {%
52     \ifbool{FormatWP}%
53       {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}}%
54     {\booltrue{LWR@doingtbrule}}}%
55   }%
56   \LWR@getmynexttoken%
57 }%
58
59 \LWR@expandableformatted{bottomrule}
60
61 \DeclareDocumentCommand{\LWR@HTML@addlinespace}{o}{}%
62
63 \LWR@expandableformatted{addlinespace}
64
65 \DeclareDocumentCommand{\LWR@HTML@morecmidrules}{o}{}%
66
67 \LWR@expandableformatted{morecmidrules}
68
69 \DeclareDocumentCommand{\LWR@HTML@specialrule}{m m m d()}%
70   {\LWR@docmidrule[#1]}{1-\arabic{LWR@tabletotalLaTeXcols}}\LWR@getmynexttoken}%
71
72 \LWR@expandableformatted{specialrule}

```

For MATHJAX:

```

73 \begin{warpMathJax}
74 \CustomizeMathJax{\newcommand{\toprule}[1][\hline]}
75 \CustomizeMathJax{\let\midrule\toprule}
76 \CustomizeMathJax{\let\bottomrule\toprule}
77 \CustomizeMathJax{\newcommand{\cmidrule}[2][{}]}% avoid (trim)
78 \CustomizeMathJax{\newcommand{\morecmidrules}{}}
79 \CustomizeMathJax{\newcommand{\specialrule}[3]{\hline}}
80 \CustomizeMathJax{\newcommand{\addlinespace}[1][{}]}
81 \end{warpMathJax}

```

File 54 **lwarp-bophook.sty**

§ 156 Package **bophook**

Pkg bophook **bophook is ignored.**

for HTML output: 1 \LWR@ProvidesPackageDrop{bophook}[2001/03/29]

```

2 \newcommand*{\AtBeginPage}[1]{}
3 \newcommand*{\PageLayout}[1]{}

```

File 55 **lwarp-bounddvi.sty**

§ 157 Package **bounddvi**

Pkg bounddvi bounddvi is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bounddvi}[2016/12/28]

File 56 **lwarp-boxedminipage.sty**

§ 158 Package **boxedminipage**

(Emulates or patches code by SCOTT PAKIN.)

Pkg boxedminipage boxedminipage is emulated for HTML, and used as-is for lateximages.

for HTML output: 1 \LWR@ProvidesPackagePass{boxedminipage}[2020/04/19]

```

2 \newenvironment{LWR@HTML@boxedminipage}{%
3   \LWR@stoppars%
4   \begin{BlockClass}{framebox}%
5   \minipage%
6 }
7 {%
8   \endminipage%
9   \end{BlockClass}%
10  \LWR@startpars%
11 }
12 \LWR@formattedenv{boxedminipage}

```

File 57 **lwarp-boxedminipage2e.sty**

§ 159 Package **boxedminipage2e**

(Emulates or patches code by SCOTT PAKIN.)

Pkg boxedminipage2e boxedminipage2e has been renamed boxedminipage by the author.

for HTML output: Automatically loads boxedminipage:

```

1 \LWR@ProvidesPackagePass{boxedminipage2e}

```

File 58 **lwarp-braket.sty**

§ 160 Package **braket**

(Emulates or patches code by DONALD ARSENEAU.)

Pkg braket **braket** works as-is for HTML with SVG math. For MATHJAX, emulation is provided by MATHJAX macros.

for HTML output:

```

1 \LWR@ProvidesPackagePass{braket}% No date is provided by the file.

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\bra}[1]{\langle#1\vert}}
4 \CustomizeMathJax{\newcommand{\Bra}[1]{\left\langle#1\right\vert}}
5 \CustomizeMathJax{\newcommand{\ket}[1]{\vert#1\rangle}}
6 \CustomizeMathJax{\newcommand{\Ket}[1]{\left\vert#1\right\rangle}}
7 \CustomizeMathJax{\newcommand{\braket}[1]{\langle#1\rangle}}
8 \CustomizeMathJax{\newcommand{\Braket}[1]{\left\langle#1\right\rangle}}
9 \CustomizeMathJax{\newcommand{\set}[1]{\{#1\}}}
10 \CustomizeMathJax{\newcommand{\Set}[1]{\left\{#1\right\}}}
11 \end{warpMathJax}

```

File 59 **lwarp-breakurl.sty**

§ 161 Package **breakurl**

(Emulates or patches code by VILAR CAMARA NETO.)

Pkg breakurl **breakurl** is emulated.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{breakurl}[2013/04/10]

2 \LetLtxMacro\url\url
3
4 \NewDocumentCommand{\LWR@burlalbtb}{O{} +m m}{%
5   \LWR@ensuredoingapar%
6   \LWR@subhyperref{#2}%
7   \LWR@subhyperreftext{#3}%
8   \endgroup% restore catcodes
9 }
10
11 \newrobustcmd*{\burlalbt}{%
12   \begingroup%
13   \LWR@linkcatcodes%
14   \LWR@burlalbt%
15 }
16
17 \LetLtxMacro\urlalbt\burlalbt

```

File 60 **lwarp-breqn.sty**

§ 162 Package **breqn**

(Emulates or patches code by MICHAEL J. DOWNES, MORTEN HØGHOLM.)

Pkg breqn **breqn** is patched for use by **lwarp**.

 **darray** darray is not supported, and in fact does not work in the print version either.

While using **MATHJAX**, **breqn** objects are converted to SVG images.

for HTML output:

```

1 \LWR@ProvidesPackagePass{breqn}[2017/01/27]
2 \setkeys{breqn}{spread={5pt}}
3
4 \def\eqnumside{R}
5 % \def\eqnumplace{T}
6
7 \BeforeBeginEnvironment{dmath}{
8   \begin{BlockClass}{displaymathnumbered}
9   \LWR@newautoidanchor%
10  \booltrue{LWR@indisplaymathimage}%
11  \begin{lateximage}[-breqn dmath- \MathImageAltText]
12 }
13
14 \AfterEndEnvironment{dmath}{
15   \end{lateximage}\end{BlockClass}
16 }
17
18 \BeforeBeginEnvironment{dmath*}{
19   \begin{BlockClass}{displaymath}
20   \LWR@newautoidanchor%
21   \booltrue{LWR@indisplaymathimage}%
22   \begin{lateximage}[-breqn dmath*- \MathImageAltText]
23 }
24
25 \AfterEndEnvironment{dmath*}{
26   \end{lateximage}\end{BlockClass}
27 }
28
29 \BeforeBeginEnvironment{dseries}{
30   \begin{BlockClass}{displaymathnumbered}
31   \LWR@newautoidanchor%
32   \booltrue{LWR@indisplaymathimage}%
33   \begin{lateximage}[-breqn dseries- \MathImageAltText]
34 }
35
36 \AfterEndEnvironment{dseries}{
37   \end{lateximage}\end{BlockClass}
38 }

```

```

39
40 \BeforeBeginEnvironment{dseries*}{
41   \begin{BlockClass}{displaymath}
42   \LWR@newautoidanchor%
43   \booltrue{LWR@indisplaymathimage}%
44   \begin{lateximage}[-breqn dseries*- \MathImageAltText]
45 }
46
47 \AfterEndEnvironment{dseries*}{
48   \end{lateximage}\end{BlockClass}
49 }
50
51 \BeforeBeginEnvironment{dgroup}{
52   \begin{BlockClass}{displaymath}
53   \LWR@newautoidanchor%
54   \booltrue{LWR@indisplaymathimage}%
55   \begin{lateximage}[-breqn dgroup- \MathImageAltText]
56 }
57
58 \AfterEndEnvironment{dgroup}{
59   \end{lateximage}\end{BlockClass}
60 }
61
62 \BeforeBeginEnvironment{dgroup*}{
63   \begin{BlockClass}{displaymath}
64   \LWR@newautoidanchor%
65   \booltrue{LWR@indisplaymathimage}%
66   \begin{lateximage}[-breqn dgroup*- \MathImageAltText]
67 }
68
69 \AfterEndEnvironment{dgroup*}{
70   \end{lateximage}\end{BlockClass}
71 }

```

File 61 **lwarp-bsheaders.sty**

§ 163 Package **bsheaders**

Pkg bsheaders bsheaders is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bsheaders}[1997/10/06]

File 62 **lwarp-bxpapersize.sty**

§ 164 Package **bxpapersize**

Pkg bxpapersize bxpapersize is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{bxpapersize}[2017/10/08]

```
2 \providecommand*\papersizesetup{\bxpapersizesetup}
3 \newcommand*\bxpapersizesetup[1]{}

```

File 63 **lwarp-bytefield.sty**

§ 165 Package **bytefield**

(Emulates or patches code by SCOTT PAKIN.)

Pkg bytefield **bytefield** is patched for use by lwarp.

for HTML output:

```
1 \LWR@ProvidesPackagePass{bytefield}[2017/09/15]

2 \BeforeBeginEnvironment{bytefield}{%
3   \begin{lateximage}[-bytefield-~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{bytefield}{\end{lateximage}}

```

File 64 **lwarp-cancel.sty**

§ 166 Package **cancel**

Pkg cancel **cancel** is used as-is for SVG math, and emulated for HTML text output.

for HTML output:

```
1 \LWR@origRequirePackage{lwarp-xcolor}% for \convertcolorspec
2 \LWR@ProvidesPackagePass{cancel}[2013/04/12]

```

`\cancelto` is math-only, so is used as-is.

```
3 \LetLtxMacro\LWR@origcancel\cancel
4 \LetLtxMacro\LWR@origbcancel\bcancel
5 \LetLtxMacro\LWR@origxcancel\xcancel
6
7 \appto\LWR@restoreorigformatting{%
8 \LetLtxMacro\cancel\LWR@origcancel%
9 \LetLtxMacro\bcancel\LWR@origbcancel%
10 \LetLtxMacro\xcancel\LWR@origxcancel%
11 }

```

```
\LWR@cancelcolor {<text>} {<color>} {<class>} {<colorstyle>} {<FormatWPstyle>}

```

Add colors if not empty:

```
12 \newcommand{\LWR@cancelcolor}[5]{%
13 \ifcsempy{#2}%
14 {\InlineClass{#5}{#3}{#1}}%
15 {\LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}}%
16 }

```

```

\cancel    {<text>}

17 \DeclareRobustCommand{\cancel}[1]{%
18 \begingroup%
19 \CancelColor%
20 \LWR@findcurrenttextcolor%
21 \color{black}%
22 \LWR@cancelcolor{#1}{LWR@tempcolor}{sout}{text-decoration-color}%
23   {text-decoration:line-through}%
24 \endgroup%
25 }
26
27 \LetLtxMacro\bcancel\cancel
28 \LetLtxMacro\xcancel\cancel

```

File 65 **lwarp-canonlayout.sty**

§ 167 Package **canoniclayout**

Pkg canoniclayout canoniclayout is ignored.

for HTML output: s1 \LWR@ProvidesPackageDrop{canoniclayout}[2011/11/05]

```

2 \newcommand*{\currentfontletters}{}
3 \newcommand*{\charactersperpage}{}

```

File 66 **lwarp-caption.sty**

§ 168 Package **caption**

(Emulates or patches code by AXEL SOMMERFELDT.)

Pkg caption caption is patched for use by lwarp.

for HTML output:

```

1 \typeout{---}
2 \typeout{Packages lwarp and caption:}
3 \typeout{If a ‘‘Missing \protect\begin\protect{document\protect}’’ error occurs here,}
4 \typeout{try using: \space \protect\usepackage\protect{caption\protect}\space%
5   \protect\captionsetup{options}}
6 \typeout{instead of: \protect\usepackage[options]\protect{caption\protect}.}
7 \typeout{---}
8
9 \LWR@ProvidesPackagePass{caption}[2020/01/03]

10 \long\def\caption@iiibox@#1#2#3#4{%
11 %   \setbox\@tempboxa\hbox{#4}%
12   \caption@iiibox{#1}{#2}{#3}%
13 %       [\wd\@tempboxa]%
14       []%

```

lwarp

```

15     [\captionbox@hj@default]%
16 %     {\unhbox\@tempboxa}%
17     {{#4}}%                               lwarp
18 }

19 \long\def\caption@iiiiibox#1#2#3#4#5[#6][#7]#8{%
20 \begingroup
21 #1*% set \caption@position
22 \caption@iftop{%
23 \endgroup
24 \minipagefullwidth%
25 \parbox[t]{\linewidth}{%
26 #1\relax
27 \caption@setposition t%
28 % #2%
29     {\caption#4{#5}}%
30 % \captionbox@hrule
31 % \csname caption@hj@#7\endcsname
32 #8%
33 }%
34 }{%
35 \endgroup
36 % \parbox[b]{#6}{%
37 \minipagefullwidth%
38 \parbox[b]{\linewidth}{%
39 #1\relax
40 \caption@setposition b%
41 % \csname caption@hj@#7\endcsname
42 #8%
43 % \captionbox@hrule
44 % #3
45     {\caption#4{#5}}%
46 }%
47 }%
48 }

\caption@@@make   {\langle caption label\rangle} {\langle caption text\rangle}

49 \renewcommand\caption@@@make[2]{%
50 \LWR@traceinfo{caption@@@make}%
51 \LWR@stoppars%                               lwarp
52 % \sbox\@tempboxa{#1}%
53 % \ifdim\wd\@tempboxa=\z@
54 % \let\caption@lsep\relax
55 % \fi
56 \caption@ifempty{#2}{%
57 \let\caption@lsep\@empty
58 \let\caption@tfmt\@firstofone
59 }%
60 \caption@applyfont

\caption@fmt with plain format is defined as {#1#2#3\par}:

61 % \caption@fmt
62 {\ifcaption@star\else
63 \begingroup

```

```

64     \captionlabelfont
65     \LWR@isolate{#1}%          lwarp
66     \endgroup
67     \fi}%
68     {\ifcaption@star\else
69     \begingroup
70     \caption@iflf\captionlabelfont
71     \relax
72     \caption@lsep
73     \endgroup
74     \fi}%
75     {%
76     \captiontextfont
77     \let\\newline%            lwarp
78 %     \caption@ifstrut
79 %     {\vrule\@height\ht\strutbox\@width\z}%
80 %     {}%
81 %     \nobreak\hskip\z@skip % enable hyphenation
82     \LWR@isolate{\caption@tfmt{#2}}%    lwarp
83 %     \caption@ifstrut
84 %     {\ifhmode\@finalstrut\strutbox\fi}%
85 %     {}%
86     }%
87     \LWR@startpars%          lwarp
88 \LWR@traceinfo{caption@@@make done}%
89 }

```

\caption@@make@ {<>} {<>}

```

90 \renewcommand{\caption@@make@}[2]{%
91   \caption@stepthecounter%
92   \caption@beginhook%
93   \caption@@make{#1}{#2}%
94   \caption@endhook%
95 }

```

\caption@makecaption

```

96 \long\def\caption@makecaption#1#2{%
97   \caption@iftop
98 %   {\vskip\belowcaptionskip}%
99 %   {\caption@rule\vskip\abovecaptionskip}%
100  \caption@@make{#1}{#2}%
101 %   \caption@iftop
102 %   {\vskip\abovecaptionskip\caption@rule}%
103 %   {\vskip\belowcaptionskip}%
104 }
105
106 \AtBeginDocument{
107   \let\@makecaption\caption@makecaption
108 }

```

Redefined to look ahead for \centering, etc:

```

109 \AtBeginDocument{

```

```

110 \def\xfloat#1[#2]{%
111   \caption@ORI\xfloat{#1}[#2]%
112   \caption@settype{#1}%
113   \LWR@futurenonospacelet\LWR@mynexttoken\LWR@floatalignment%
114 }%
115 \def\xdblfloat#1[#2]{%
116   \caption@ORI\xfloat{#1}[#2]%
117   \caption@settype{#1}%
118   \LWR@futurenonospacelet\LWR@mynexttoken\LWR@floatalignment%
119 }%
120 }

```

Add non-breakable spaces:

```

121 \long\def\caption@lsep@default{.~}
122 \long\def\caption@lsep@colon{:~}
123 \long\def\caption@lsep@period{.~}
124 \long\def\caption@lsep@space{~}
125 \long\def\caption@lsep@endash{~\textendash~}
126 \long\def\caption@lsep@arabi{~::~}

127 \DeclareCaptionBox{none}{#2}
128 \DeclareCaptionBox{parbox}{%
129   #2%
130 }
131
132 \DeclareCaptionBox{colorbox}{%
133   #2%
134 }

```

File 67 **lwarp-cases.sty**

§ 169 Package **cases**

(Emulates or patches code by DONALD ARSENEAU.)

Pkg cases **cases** is patched for use by **lwarp**.

While using **MATHJAX**, **cases** objects are converted to **svg** math images.

for HTML output:

```

1 \LWR@ProvidesPackagePass{cases}[2002/05/02]

2 \BeforeBeginEnvironment{numcases}{
3   \begin{BlockClass}{displaymathnumbered}
4   \LWR@newautoidanchor%
5   \booltrue{LWR@indisplaymathimage}%
6   \begin{lateximage}[-cases- \MathImageAltText]
7 }
8
9 \AfterEndEnvironment{numcases}{
10  \end{lateximage}\end{BlockClass}
11 }

```

```

12
13 \BeforeBeginEnvironment{subnumcases}{
14   \begin{BlockClass}{displaymathnumbered}
15   \LWR@newautoanchor%
16   \booltrue{LWR@indisplaymathimage}%
17   \begin{lateximage}[-cases- \MathImageAltText]
18 }
19
20 \AfterEndEnvironment{subnumcases}{
21   \end{lateximage}\end{BlockClass}
22 }

```

File 68 **lwarp-centernot.sty**

§ 170 Package **centernot**

(Emulates or patches code by HEIKO OBERDIEK.)

Pkg centernot **centernot** is used as-is for SVG math, and emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{centernot}[2016/05/16]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\centernot}[1]{\not{!\#1\,}}}
4 \end{warpMathJax}

```

File 69 **lwarp-changebar.sty**

§ 171 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 70 **lwarp-changelayout.sty**

§ 172 Package **changelayout**

(Emulates or patches code by AHMED MUSA.)

Pkg changelayout changelayout is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{changelayout}[2009/10/07]
2 \renewrobustcmd\cpl@backtodefautls{}
3
4 \renewrobustcmd\cpl@checkifoddpagelayout{%
5   \cpl@oddpagelayoutfalse%
6 }
7
8 \renewrobustcmd\changepagelayout[1]{%
9   \setkeys[KV]{changelayout}{#1}%
10 }
11
12 \renewrobustcmd{\changetextlayout}[1]{\changepagelayout{#1}}
13
14 \renewrobustcmd\adjustpagelayout[1]{%
15   \setkeys[KV@X]{changelayout}{#1}%
16 }
17
18 \renewrobustcmd{\adjusttextlayout}[1]{\adjustpagelayout{#1}}
19
20 \renewrobustcmd\adjusttextwidth[1]{%
21   \setkeys[KV]{changelayout}{#1}%
22   \begin{BlockClass}[color:\LWR@colorstyle{named}{\cpl@textcolor}]{changelayout}
23     \color{\cpl@textcolor}%
24     \cpl@content
25   \end{BlockClass}
26 }

```

File 71 **lwarp-changepage.sty**

§ 173 Package **changepage**

(Emulates or patches code by PETER WILSON.)

Pkg changepage changepage is ignored.

for HTML output: Discard all options for lwarp-changepage:

```

1 \LWR@ProvidesPackageDrop{changepage}[2009/10/20]

```

```

2 \newif\ifoddpag
3 \DeclareRobustCommand{\checkoddpag}{\oddpagetrue}
4 \DeclareRobustCommand{\changetext}[5]{}
5 \DeclareRobustCommand{\changepag}[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 72 **lwarp-changes.sty**

§ 174 Package **changes**

(Emulates or patches code by EKKART KLEINOD.)

Pkg changes changes is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{changes}[2019/01/26]

\BaseJobname is added to the label in case xr or xr-hyper are used.

```

2 \renewcommand{\ChangesListline}[4]{%
3   \IfSubStr{\Changes@loc@show}{#1}{%
4     \LWR@startpars%
5     #2: #3 \quad
6     \nameref{\BaseJobname-autopage-#4}%
7     \LWR@stoppars%
8   }{}%
9 }
10
11 \renewcommand{\Changes@summaryline}[4]{%
12   \IfSubStr{\Changes@loc@show}{#1}{%
13     \ifthenelse{\not\equal{\Changes@loc@style}{compactsummary} \or #2 > 0}%
14     {%
15       #3:~#2#4%
16     }{}%
17   }{}%
18 }
19
20 \xpatchcmd{\listofchanges}
21   {{\changesauthorname: \changesanonymousname}}
22   {{\LWR@textcurrentcolor{\changesauthorname: \changesanonymousname}}}
23   {}
24   {\LWR@patcherror{changes}{listofchanges A}}
25

```

```

26 \xpatchcmd{\listofchanges}
27   {\changesauthorname: \Changes@InID}
28   {\LWR@textcurrentcolor{\changesauthorname: \Changes@InID}}
29   {}
30   {\LWR@patcherror{changes}{listofchanges B}}
31
32 \xpatchcmd{\listofchanges}
33   {(\Changes@InName)}
34   {\LWR@textcurrentcolor{(\Changes@InName)}}
35   {}
36   {\LWR@patcherror{changes}{listofchanges C}}
37
38 \xpatchcmd{\listofchanges}
39   {\parbox{\Changes@summary@width}}
40   {}
41   {}
42   {\LWR@patcherror{changes}{listofchanges D}}
43
44 \xpatchcmd{\Changes@Markup@comment}
45   {%
46     \ifthenelse{\isAnonymous{#2}}%
47     {\textbf{[\arabic{Changes@commentCount#2}]:} }%
48     {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
49     #1%
50   }
51   {%
52     \LWR@textcurrentcolor{%           lwarp
53     \ifthenelse{\isAnonymous{#2}}%
54     {\textbf{[\arabic{Changes@commentCount#2}]:} }%
55     {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
56     #1%
57     }%           lwarp
58   }
59   {}
60   {\LWR@patcherror{changes}{\Changes@Markup@comment A}}
61
62 \xpatchcmd{\Changes@Markup@comment}
63   {%
64     \uwave{%
65       \ifthenelse{\isAnonymous{#2}}%
66       {\textbf{[\arabic{Changes@commentCount#2}]:} }%
67       {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
68       #1%
69     }%
70   }
71   {%
72     \LWR@textcurrentcolor{%           lwarp
73     \uwave{%
74       \ifthenelse{\isAnonymous{#2}}%
75       {\textbf{[\arabic{Changes@commentCount#2}]:} }%
76       {\textbf{[#3~\arabic{Changes@commentCount#2}]:} }%
77       #1%
78     }%
79     }%           lwarp
80   }

```

```

81  {}
82  {\LWR@patcherror{changes}{\Changes@Markup@comment B}}
83
84  \xpatchcmd{\Changes@output}
85    {\Changes@Markup@author{\Changes@output@author{#2}{left}}}
86    {\LWR@textcurrentcolor{\Changes@Markup@author{\Changes@output@author{#2}{left}}}}
87    {}
88    {\LWR@patcherror{changes}{Changes@output A}}
89
90  \xpatchcmd{\Changes@output}
91    {%
92      \ifthenelse{\equal{#1}{added}}{\Changes@Markup@added{#3}}{}%
93      \ifthenelse{\equal{#1}{deleted}}{\Changes@Markup@deleted{#4}}{}%
94      \ifthenelse{\equal{#1}{replaced}}{}%
95      {\Changes@Markup@added{#3}}\allowbreak\Changes@Markup@deleted{#4}%
96    }{}%
97    \ifthenelse{\equal{#1}{highlight}}{\Changes@Markup@highlight{#3}}{}%
98  }
99  {%
100   \LWR@textcurrentcolor{%
101     \ifthenelse{\equal{#1}{added}}{\Changes@Markup@added{#3}}{}%
102     \ifthenelse{\equal{#1}{deleted}}{\Changes@Markup@deleted{#4}}{}%
103     \ifthenelse{\equal{#1}{replaced}}{}%
104     {\Changes@Markup@added{#3}}\allowbreak\Changes@Markup@deleted{#4}%
105   }{}%
106   \ifthenelse{\equal{#1}{highlight}}{\Changes@Markup@highlight{#3}}{}%
107   }%
108  }
109  {}
110  {\LWR@patcherror{changes}{Changes@output B}}
111
112  \xpatchcmd{\Changes@output}
113    {\Changes@Markup@author{\Changes@output@author{#2}{right}}}
114    {\LWR@textcurrentcolor{\Changes@Markup@author{\Changes@output@author{#2}{right}}}}
115    {}
116    {\LWR@patcherror{changes}{Changes@output C}}

```

File 73 **lwarp-chappg.sty**

§ 175 Package **chappg**

(Emulates or patches code by ROBIN FAIRBAIRNS.)

Pkg chappg chappg is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{chappg}[2006/05/09]

2 \renewcommand{\pagenumbering}[2][{}]

3 \providecommand{\chappgsep}{--}

File 74 **lwarp-chapterbib.sty**§ 176 Package **chapterbib**

(Emulates or patches code by DONALD ARSENEAU.)

Pkg chapterbib chapterbib is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{chapterbib}[2010/09/18]

2 \xdef\@savedjobname{\BaseJobname}
3 \let\@currentipfile\@savedjobname

```

File 75 **lwarp-chemfig.sty**§ 177 Package **chemfig**

(Emulates or patches code by CHRISTIAN TELLECHEA.)

Pkg chemfig chemfig is patched for use by lwarp.

If using `\polymerdelim` to add delimiters to a `\chemfig`, wrap both inside a single `lateximage`:

```

\begin{lateximage}[-chemfig~\PackageDiagramAltText]
\chemfig{. . . }
\polymerdelim[. . . ]{. . . }
\end{lateximage}

```

The images are not hashed because they depend on external settings which may be changed at any time, and are unlikely to be reused inline anyhow.

for HTML output:

```

1 \LWR@ProvidesPackagePass{chemfig}[2020/03/05]

2
3 \catcode'\_ =11
4
5 \@ifpackagelater{chemfig}{2020/03/05}
6 {
7   \xpretocmd\charge{\begin{lateximage}[-chemfig~\PackageDiagramAltText]}
8     {}{\LWR@patcherror{chemfig}{charge}}
9   \xpretocmd\Charge{\begin{lateximage}[-chemfig~\PackageDiagramAltText]}
10    {}{\LWR@patcherror{chemfig}{Charge}}
11   \xapptocmd\charge_c{\end{lateximage}}
12     {}{\LWR@patcherror{chemfig}{charge_c}}
13 }{}
14
15 \@ifpackagelater{chemfig}{2019/04/18}%

```

```
16 {% 2019/04/18 or newer
17
18
19 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
20
21 \renewcommand*\chemfig[2][]{%
22 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
23 \LWR@chemfig@origchemfig[#1]{#2}%
24 \end{lateximage}%
25 }
26
27 \GlobalLetLtxMacro\LWR@chemfig@origCF_lewisc\CF_lewisc
28 \gdef\CF_lewisc#1,#2\_nil{%
29 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
30 \LWR@chemfig@origCF_lewisc#1,#2\_nil
31 \end{lateximage}
32 }
33
34 \gpreto{\schemestart}{%
35 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
36 }
37 \gappto{\CF_schemestop}{\end{lateximage}}
38
39 }% 2019/04/18 or newer
40 {% older than 2019/04/18
41
42 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
43
44 \DeclareDocumentCommand\chemfig{s O{} O{} m}{%
45 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
46 \IfBooleanTF{#1}{%
47 \LWR@chemfig@origchemfig*[#2][#3]{#4}%
48 }{%
49 \LWR@chemfig@origchemfig[#2][#3]{#4}%
50 }
51 \end{lateximage}%
52 }
53
54 \LetLtxMacro\LWR@chemfig@origCF@Lewis@b\CF@Lewis@b
55
56 \def\CF@Lewis@b#1#2{%
57 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
58 \LWR@chemfig@origCF@Lewis@b{#1}{#2}%
59 \end{lateximage}%
60 }
61
62 \preto{\schemestart}{%
63 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
64 }
65 \appto{\CF@schemestop}{\end{lateximage}}
66
67 }% older than 2019/04/18
68
69 \catcode'\_ =8%
70
```

```

71
72
73 \LetLtxMacro\LWR@chemfig@origchemleft\chemleft
74
75 \def\chemLeft#1#2\chemright#3{%
76 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
77 \LWR@chemfig@origchemLeft#1#2\chemright#3%
78 \end{lateximage}%
79 }
80
81 \LetLtxMacro\LWR@chemfig@origchemup\chemup
82
83 \def\chemup#1#2\chemdown#3{%
84 \begin{lateximage}[-chemfig-~\PackageDiagramAltText]%
85 \LWR@chemfig@origchemup#1#2\chemdown#3%
86 \end{lateximage}%
87 }

```

File 76 **lwarp-chemformula.sty**

§ 178 Package **chemformula**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemformula chemformula is patched for use by lwarp.

The svg images are hashed according to contents and local options. Global options are assumed to be constant document-wide.

 **chemformula with MATHJAX** chemformula works best without MATHJAX. If MATHJAX is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The chemformula package adapts to array, but does not know about MATHJAX, and MATHJAX does not know about chemformula.)

While using MATHJAX, `\displaymathother` may also be used for other forms of display and inline math which contain chemformula expressions.

for HTML output: 1 \LWR@ProvidesPackagePass{chemformula}[2019/10/13]

2 \ExplSyntaxOn

\ch Enclose in an inline svg image or MathJax. The alt tag is is the contents of the \ch expression. The filename is hashed, and also has additional hashing information based on the local options.

```

3 \RenewDocumentCommand \ch { O{}m }
4 { %

```

To work inside align with `\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 \@ifpackagelater{chemformula}{2019/10/13}{
24 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
25 {
26   \begingroup%
27   \boolfalse{mathjax}%
28   \LWR@subsingledollar*{% lwarp
29     \textbackslash{}chcpd{\LWR@HTMLsanitize{#2}\}%
30   }{%
31     \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
32   }{% original
33   \group_begin:
34     \tl_if_blank:nF {#2}
35     {
36       \keys_set:nn {chemformula} {#1}
37       \__chemformula_save_catcodes:
38       \__chemformula_sanitize:Nn
39         \l__chemformula_chemformula_tmpa_tl
40         {#2}
41       \__chemformula_input_compound_no_check:NV
42         \l__chemformula_compound_tl
43         \l__chemformula_chemformula_tmpa_tl
44       \__chemformula_prepare_output:NV
45         \l__chemformula_compound_tl
46         \l__chemformula_catcodes_tl
47       \chemformula_write:V \l__chemformula_compound_tl
48     }
49   \group_end:
50   }
51   \endgroup
52 }
53 }% later than 2019/10/13

```

```

54 {% earlier than 2019/10/13
55 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
56 {
57   \begingroup%
58   \boolfalse{mathjax}%
59   \LWR@subsingledollar*{% lwarp
60     \textbackslash}chcpd{\LWR@HTMLsanitize{#2}\}%
61   }{%
62     \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
63   }{% original
64   \group_begin:
65     \tl_if_blank:nF {#2}
66     {
67       \keys_set:nn {chemformula} {#1}
68       \__chemformula_save_catcodes:
69       \__chemformula_sanitize:Nn
70         \l__chemformula_chemformula_tmpa_tl
71         {#2}
72       \__chemformula_input_compound_no_check:NV
73       \l__chemformula_compound_tl
74       \l__chemformula_chemformula_tmpa_tl
75       \__chemformula_prepare_output:N \l__chemformula_compound_tl
76       \chemformula_write:V \l__chemformula_compound_tl
77     }
78   \group_end:
79   }
80   \endgroup
81 }
82 }% earlier than 2019/10/13

```

`\charrow` If standalone, appears in a regular `lateximage`.

```

83 \RenewDocumentCommand \charrow { mO{}O{} }
84 {
85   \begin{lateximage}[-chemformula- charrow]
86   \group_begin:
87     \__chemformula_draw_arrow:nnn {#1} {#2} {#3}
88   \group_end:
89   \end{lateximage}
90 }

```

`\chname` If standalone, appears in a regular `lateximage`, hashed according to contents.

```

91 \RenewDocumentCommand \chname { R(){}R(){} }
92 {
93   \begin{lateximage}*[%
94     \textbackslash}chname(\LWR@HTMLsanitize{#1})(\LWR@HTMLsanitize{#2})
95   ]*%
96   \chemformula_chwritebelow:nn {#1} {#2}
97   \end{lateximage}
98 }

```

`\chlewis` Placed inline, hashed according to contents and options.

```

99 \RenewDocumentCommand \chlewis { O{}mm }

```

```

100 {
101   \begingroup%
102   \boolfalse{mathjax}%
103   \LWR@subsingledollar*{\textbackslash}chlewis\{#2\}\{#3\}%
104   {
105     \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
106   }{
107     \chemformula_lewis:nnn {#1} {#2} {#3}
108   }
109   \endgroup%
110 }

```

lwarp redefines the \$ character, so special handling is required to escape math expressions inside \ch.

This boolean tracks a new kind of escaped math:

```
111 \bool_new:N      \l__chemformula_first_last_LWRdollar_bool
```

\chemformula_input_escape_math

Adds additional escaping for the new dollar definition:

```

112 \cs_gset_protected:Npn \l__chemformula_input_escape_math:n #1
113 {
114   \l__chemformula_first_last_math:n {#1}
115   \bool_if:NT \l__chemformula_first_last_dollar_bool
116     {
117       \bool_set_true:N \l__chemformula_first_last_math_bool
118       \__chemformula_read_escape_dollar:w #1 \q_nil
119     }
120   \bool_if:NT \l__chemformula_first_last_mathbraces_bool
121     {
122       \bool_set_true:N \l__chemformula_first_last_math_bool
123       \__chemformula_read_escape_mathbraces:w #1 \q_nil
124     }

```

Added by lwarp:

```

125   \bool_if:NT \l__chemformula_first_last_LWRdollar_bool%      lwarp
126   {
127     \bool_set_true:N \l__chemformula_first_last_math_bool%    lwarp
128     \__chemformula_read_escape_LWRdollar:w #1 \q_nil%          lwarp
129   }
130 }

```

\chemformula_read_escape_LWRdollar

The following parses the contents inside the new dollars.

lwarp keeps the dollar as its original math shift until the document starts. While **chemmacros** is being patched, the dollar must temporarily be set to its new meaning during the following definition.

```
131 \begingroup
```

```

132 \catcode'\$=\active
133
134 \cs_new_protected:Npn \__chemformula_read_escape_LWRdollar:w $#1$ \q_nil
135 {
136   \__chemformula_read_escape_math:n {#1}
137 }
138
139 \endgroup

```

\chemformula_bool_set_if_first_last

The following looks at the first and last tokens for delimiters to escape math inside \ch. The original definition is modified to look for the control sequences which are used by the new meaning of \$.

```

140 \cs_new_protected:Npn \__chemformula_bool_cs_set_if_first_last:NnNN #1#2#3#4
141 {
142   \int_zero:N \l__chemformula_tmpa_int
143   \int_zero:N \l__chemformula_tmpb_int
144   \int_set:Nn \l__chemformula_tmpa_int { \tl_count:n {#2} }
145   \tl_map_inline:nn {#2}
146   {
147     \int_incr:N \l__chemformula_tmpb_int
148     \int_compare:nT { \l__chemformula_tmpb_int = 1 }
149     {

```

At the start, the cs_ version compares control sequences:

```

150       \ifdefstrequal{##1}{#3}% lwarp
151       {
152         \bool_set_true:N #1
153       }% lwarp
154     {}
155   }

```

At the end, compare more control sequences:

```

156     \int_compare:nT { \l__chemformula_tmpb_int = \l__chemformula_tmpa_int }
157     {
158       \ifdefstrequal{##1}{#4}
159       {}
160       {
161         \bool_set_false:N #1
162       }
163     }
164   }
165 }

```

\chemformula_first_last_math

Modified to check for the new meaning of \$ at first/last:

```

166 \cs_gset_protected:Npn \__chemformula_first_last_math:n #1
167 {
168   \bool_set_false:N \l__chemformula_first_last_math_bool
169   \bool_set_false:N \l__chemformula_first_last_dollar_bool

```

```

170 \bool_set_false:N \l__chemformula_first_last_LWRdollar_bool% lwarp
171 \bool_set_false:N \l__chemformula_first_last_mathbraces_bool
172 \__chemformula_bool_set_if_first_last:Nnnn
173 \l__chemformula_first_last_dollar_bool
174 {#1}
175 { $ } { $ }
176 \bool_if:NF \l__chemformula_first_last_dollar_bool
177 {
178 \__chemformula_bool_set_if_first_last:Nnnn
179 \l__chemformula_first_last_mathbraces_bool
180 {#1}
181 { \ ( } { \ ) }

```

Added by lwarp:

```

182 \bool_if:NF \l__chemformula_first_last_mathbraces_bool% lwarp
183 {
184 \__chemformula_bool_cs_set_if_first_last:Nnnn
185 \l__chemformula_first_last_LWRdollar_bool
186 {#1}
187 { \LWR@newsingledollar } { \LWR@newsingledollar }
188 }% lwarp
189 }
190 }

```

```
191 \ExplSyntaxOff
```

File 77 **lwarp-chemgreek.sty**

§ 179 Package **chemgreek**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemgreek chemgreek is patched for use by lwarp.

 **Greek symbols package selection** To use text-mode symbols, use packages `textalpha` or `textgreek`. Using the other packages supported by `chemgreek` will result in math-mode greek characters, which will result in svg images being used. These images will be hashed.

 **X_YL^AT_EX, Lua^AT_EX** If using X_YL^AT_EX or Lua^AT_EX, select the fontspec mapping:

```
\selectchemgreekmapping{fontspec}
```

for HTML output:

```

1 \LWR@ProvidesPackagePass{chemgreek}[2020/01/16]
2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemgreek_text:n #1
5 { { \text {#1} } }
6
7 \appto\LWR@restoreorigformatting{%
8 \cs_set_protected:Npn \chemgreek_text:n #1%
9 { \ensuremath { \text {#1} } }%

```

```
10 }
11
12 \ExplSyntaxOff
```

File 78 **lwarp-chemmacros.sty**

§ 180 Package **chemmacros**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemmacros chemmacros is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{chemmacros}[2017/08/28]

SVG file hashing assumes that the relevant options are constant for the entire document.

§ 180.1 **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{-[ $\text{op}$ , .75]}CH_2-CH(-[6]Cl)-[ $\text{cl}$ , 0.25]}
\makepolymerdelims{5pt}[27pt]{ $\text{op}$ }{ $\text{cl}$ }
\end{polymerdelims}
```

 **redox reactions** Redox reactions must be enclosed inside a `redoxreaction` environment. For print output, extra space must be included above and/or below the result, so they are declared as arguments to the environment, instead of being manually entered as per the `chemmacros` manual. For HTML output, the extra space is ignored and a `lateximage` is used instead.

```
\begin{redoxreaction}{7mm}{7mm}
\OX{a,Na} $\rightarrow$ \OX{b,Na}\pch\redox(a,b){oxidation}
\end{redoxreaction}
```

§ 180.2 **Code**

§ 180.3 **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

```

§ 180.4 New environments

`\makepolymerdelims` and redox reactions must be enclosed in a `lateximage` during HTML output. These environments are provided here in HTML mode, and in the `lwarp` core in print mode, as a high-level semantic syntax which automatically embeds the contents in a `lateximage` with an appropriate `alt` tag.

Env `polymerdelims`

```

9 \DeclareDocumentEnvironment{polymerdelims}{}
10 {\begin{lateximage}[-chemmacros- polymer]}
11 {\end{lateximage}}

```

Env `redoxreaction` $\langle \textit{space above} \rangle \langle \textit{space below} \rangle$

For HTML output, the above and below space is ignored, and a `lateximage` is used instead. For the print output version, see section 87.

```

12 \DeclareDocumentEnvironment{redoxreaction}{m m}
13 {\begin{lateximage}[-chemmacros- redoxreaction]}
14 {\end{lateximage}}

```

```

15 \ExplSyntaxOn

```

§ 180.5 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

```

§ 180.6 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

```

§ 180.7 Nomenclature

```

139 \AtBeginDocument{
140 \ifchemmacrosmoduleloaded{nomenclature}{
141 \PackageInfo{lwarp}{Patching~chemmacros~module~nomenclature}
142

```

```

143 \cs_gset_protected:Npn \chemmacros_charge:n #1
144 {
145   \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}
146   {\chemmacros_chemformula:n { }^{#1} }}
147   {
148     \ifmmode
149       {\chemmacros_chemformula:n { }^{#1} }}
150     \else
151       { \textsuperscript{\ensuremath{#1}} }
152     \fi
153   }
154 }
155
156
157 \LetLtxMacro\LWR@chemmacros@origchemprime\chemprime
158
159 \protected\def\chemprime { \HTMLUnicode{2032} }
160
161 \appto\LWR@restoreorigformatting{%
162 \LetLtxMacro\chemprime\LWR@chemmacros@origchemprime%
163 }

164 \ChemCompatibilityFrom{5.8}
165 \cs_gset_protected:Npn \__chemmacros_cip:n #1
166 {
167   \tl_set:Nn \l__chemmacros_tmpa_tl {#1}
168   \int_step_inline:nnnn {0} {1} {9}
169   {
170     \tl_replace_all:Nnn \l__chemmacros_tmpa_tl
171     {##1}
172     { { \l__chemmacros_cip_number_tl ##1} }
173   }
174   {
175     \l__chemmacros_cip_inner_tl
176     \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
177       \l__chemmacros_tmpa_tl
178     }}% lwarp
179   }
180 }
181 \EndChemCompatibility

182 \RenewDocumentCommand \Sconf { O{S} } {
183 \begin{lateximage}[\textbackslash{}Sconf{[#1{]]}]*
184   \chemmacros_sconf:n {#1}
185 \end{lateximage}
186 }
187
188 \RenewDocumentCommand \Rconf { O{R} } {
189 \begin{lateximage}[\textbackslash{}Rconf{[#1{]]}]*
190   \chemmacros_rconf:n {#1}
191 \end{lateximage}
192 }

193 \cs_gset_protected:Npn \chemmacros_hapto:n #1
194 {
195   \begingroup

```

```

196   \boolfalse{mathjax}
197   \LWR@subsingledollar*{\textbackslash{}hpto\{#1\}}{chemmacros}{
198     \chemmacros_coordination_symbol:nnnn
199     { \l__chemmacros_coord_use_hyphen_bool }
200     {
201       \chemmacros_if_compatibility:nnTF {>} {5.7}
202       { \c_true_bool }
203       { \c_false_bool }
204     }
205     { \chemeta }
206     {#1}
207   }
208   \endgroup
209 }
210
211 \cs_gset_protected:Npn \chemmacros_dento:n #1
212 {
213   \begingroup
214   \boolfalse{mathjax}
215   \LWR@subsingledollar*{\textbackslash{}dento\{#1\}}{chemmacros}{
216     \chemmacros_coordination_symbol:nnnn
217     { \l__chemmacros_coord_use_hyphen_bool }
218     {
219       \chemmacros_if_compatibility:nnTF {>} {5.7}
220       { \c_true_bool }
221       { \c_false_bool }
222     }
223     { \chemkappa }
224     {#1}
225   }
226   \endgroup
227 }
228
229 \cs_gset_protected:Npn \chemmacros_bridge:n #1
230 {
231   \begingroup
232   \boolfalse{mathjax}
233   \LWR@subsingledollar*{\textbackslash{}bridge\{#1\}}{chemmacros}{
234     \chemmacros_coordination_symbol:nnnn
235     { \l__chemmacros_coord_use_hyphen_bool }
236     { \l__chemmacros_bridge_super_bool }
237     { \chemmu }
238     {#1}
239   }
240   \endgroup
241 }
242 }{}% \@ifchemmacrosmoduleloaded
243 }% AtBeginDocument

```

§ 180.8 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 { #1 }
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

```

§ 180.9 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       \mode_leave_vertical:
286
287       \bool_if:NTF \l__chemmacros_phases_sub_bool
288       {
289         \ifnumequal{\value{LWR@lateximagedepth}}{0}
290         {
291           \textsubscript{ (#1) }
292         }
293         {
294           \chemformula_subscript:n { (#1) }
295         }
296       }
297       {
298         \skip_horizontal:N \l__chemmacros_phases_space_dim
299         \chemmacros_text:n { (#1) }

```

```

299     }
300   }
301
302 }{}% \@ifchemmacrosmoduleloaded
303 }% AtBeginDocument

```

§ 180.10 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

```

§ 180.11 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

```

§ 180.12 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

```

§ 180.13 Reactions

```

\chemmacros_declare_reaction_env {<chem>} {<math>} {<args number>} {<argument list ({#2}{#3}...)}

```

```

467 \AtBeginDocument{
468 \@ifchemmacrosmoduleloaded{reactions}{
469   \PackageInfo{lwarp}{Patching~chemmacros~module~reactions}
470 }
471 \cs_gset_protected:Npn \chemmacros_declare_reaction_env:nnnn #1#2#3#4
472 {
473   \exp_args:Nnx \DeclareDocumentEnvironment {#1} { 0{} \prg_replicate:nn {#3+0} {m} }
474   {
475     \boolfalse{mathjax}%                lwarp
476     \ifdefvoid{\LWR@ThisAltText}{%      lwarp
477       \ThisAltText{-chemmacros~reaction}% lwarp
478     }{}%                                  lwarp
479     \chemmacros_add_reaction_description:n {##1}
480     \__chemmacros_begin_reaction:
481     \chemmacros_reaction_read:nnw {#2} {#4}
482   }
483   {
484     \__chemmacros_end_reaction:
485     \gdef\LWR@ThisAltText{}%           lwarp
486   }
487 }
488 \cs_generate_variant:Nn \chemmacros_declare_reaction_env:nnnn {nnnV}
489
490 \RenewChemReaction {reaction} {equation}
491 \RenewChemReaction {reaction*} {equation*}
492 \RenewChemReaction {reactions} {align}
493 \RenewChemReaction {reactions*} {align*}
494
495 }{}% \@ifchemmacrosmoduleloaded
496 }% AtBeginDocument

```

§ 180.14 **Redox**

```

497 \AtBeginDocument{
498 \@ifchemmacrosmoduleloaded{redox}{
499 \PackageInfo{lwarp}{Patching~chemmacros~module~redox}
500
501 \NewDocumentCommand \LWR@chemmacros@ox { s m >{\SplitArgument{1}{,}}m }
502 {
503   \IfBooleanTF {#1}
504     { \chemmacros_ox:nnnn {#1} {#2} #3 }
505     { \chemmacros_ox:nnnn { } {#2} #3 }
506 }
507
508 \RenewDocumentCommand \ox { s O{ } m }
509 {
510   \begingroup
511   \boolfalse{mathjax}
512   \IfBooleanTF {#1}
513     {
514       \LWR@subsingledollar*{% yes hash
515         \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
516       }{%
517         star \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}%
518       }{%
519         \LWR@chemmacros@ox* {#2} {#3}% contents
520       }%
521     }
522     {
523       \LWR@subsingledollar*{% yes hash
524         \textbackslash{}ox*\{\LWR@HTMLsanitize{#3}\}% alt
525       }{%
526         \protect\LWR@HTMLsanitize{\detokenize\expandafter{#2}}%
527       }{%
528         \LWR@chemmacros@ox {#2} {#3}% contents
529       }%
530     }
531   \endgroup
532 }
533
534 }{}% \@ifchemmacrosmoduleloaded
535 }% AtBeginDocument

```

§ 180.15 **Scheme**

Fix for chemmacros as of v5.8b, when using newfloat and babel:

```

536 \AtBeginDocument{
537 \@ifchemmacrosmoduleloaded{scheme}{
538 \PackageInfo{lwarp}{Patching~chemmacros~module~scheme}
539
540 \ifdefstring{\schemename}{\los}{
541 \SetupFloatingEnvironment{scheme}{
542 name = \chemmacros_translate:n {scheme-name}
543 }
544 }{}

```

```

545
546 }{}% \@ifchemmacrosmoduleloaded
547 }% AtBeginDocument

```

§ 180.16 Spectroscopy

```

548 \AtBeginDocument{
549 \@ifchemmacrosmoduleloaded{spectroscopy}{
550 \PackageInfo{lwarp}{Patching~chemmacros~module~spectroscopy}
551
552 \ChemCompatibilityTo{5.8}
553 \cs_gset_protected:Npn \__chemmacros_nmr_base:nn #1#2
554 {
555   \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
556   {
557     \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
558     \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
559   }
560   \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
561 %   \chemmacros_chemformula:n { ^{#1} }
562   \textsuperscript{#1}
563   \bool_if:NTF \l__chemmacros_nmr_parse_bool
564   { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
565   { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
566   \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
567   \tl_use:N \l__chemmacros_nmr_method_tl
568 }
569 \EndChemCompatibility
570 \ChemCompatibilityFrom{5.8}
571 \cs_gset_protected:Npn \__chemmacros_nmr_base:nn #1#2
572 {
573   \group_begin:
574   \tl_use:N \l__chemmacros_nmr_base_format_tl
575   \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
576   {
577     \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
578     \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
579   }
580   \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
581 %   \chemmacros_chemformula:n { ^{#1} }
582   \textsuperscript{#1}
583   \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
584   {
585     \bool_if:NTF \l__chemmacros_nmr_parse_bool
586     { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
587     { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
588   }
589   \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
590   \tl_use:N \l__chemmacros_nmr_method_tl
591   \group_end:
592 }
593 \EndChemCompatibility
594
595
596 \cs_gset_protected:Npn \chemmacros_nmr_position:n #1

```

```

597 {
598   \chemmacros_chemformula:x
599   {
600     \exp_not:V \g__chemmacros_nmr_element_tl
601     \bool_if:NF \l__chemmacros_nmr_position_side_bool
602     {
603       \tl_if_eq:NnTF \l__chemmacros_nmr_position_tl {^}% lwarp
604       { \textsuperscript{\exp_not:n { {#1} }} }% lwarp
605       { \textsubscript{\exp_not:n { {#1} }} }% lwarp
606 %       \exp_not:V \l__chemmacros_nmr_position_tl
607 %       \exp_not:n { {#1} }
608     }
609   }
610   \bool_if:NT \l__chemmacros_nmr_position_side_bool
611   {
612     \tl_use:N \l__chemmacros_nmr_position_tl
613     \__chemmacros_nmr_position:n {#1}
614   }
615 }
616
617 \cs_gset_protected:Npn \__chemmacros_nmr_coupling:w (#1;#2)
618 {
619   \tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
620   {
621     \l__chemmacros_nmr_coupling_bonds_pre_tl
622     #1
623     \l__chemmacros_nmr_coupling_bonds_post_tl
624   }
625   \bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
626   {
627     \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
628     {
629 %       \c_math_subscript_token
630       \textsubscript% lwarp
631       {
632         \l__chemmacros_nmr_coupling_nuclei_pre_tl
633         \chemmacros_chemformula:n {#2}
634         \l__chemmacros_nmr_coupling_nuclei_post_tl
635       }
636     }
637   }
638   {
639     \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
640     {
641       \l__chemmacros_nmr_coupling_nuclei_pre_tl
642       \chemmacros_chemformula:n {#2}
643       \l__chemmacros_nmr_coupling_nuclei_post_tl
644     }
645   }
646   \__chemmacros_nmr_coupling_aux_i:w
647 }
648 \AfterEndPreamble{% After \AtBeginDocument
649 % \NMR{<num>,<elem>}<num>,<unit>}<solvent>] ALL arguments are optional
650 % \NMR* same but without ": $\delta$" at end
651 \cs_gset_protected:Npn \chemmacros_nmr:n nnn #1#2#3#4

```

```

652 {
653 \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
654 \group_begin:

655 \mode_leave_vertical:

656 \bool_set_false:N \l__chemmacros_nmr_frequency_bool
657 \bool_set_false:N \l__chemmacros_nmr_solvent_bool
658 \tl_if_empty:nF {#3}
659 { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
660 \tl_if_empty:nF {#4}
661 { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
662 \bool_if:nT
663 {
664 \l__chemmacros_nmr_frequency_bool
665 ||
666 \l__chemmacros_nmr_solvent_bool
667 }
668 { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
669 \bool_if:nT
670 {
671 \l__chemmacros_nmr_frequency_bool
672 &&
673 \l__chemmacros_nmr_solvent_bool
674 }
675 { \bool_set_true:N \l__chemmacros_nmr_comma_bool }
676 \tl_if_empty:nTF {#2}
677 {
678 \__chemmacros_nmr_nucleus:VV
679 \l__chemmacros_nmr_isotope_default_tl
680 \l__chemmacros_nmr_element_default_tl
681 }
682 { \__chemmacros_nmr_nucleus:w #2 \q_stop }
683 \mode_if_math:TF
684 {
685 \text
686 {
687 \group_begin:
688 \tl_use:N \l__chemmacros_nmr_format_tl
689 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
690 \__chemmacros_nmr_base:VV
691 \g__chemmacros_nmr_isotope_tl
692 \g__chemmacros_nmr_element_tl
693 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
694 { ~ ( }
695 \bool_if:NT \l__chemmacros_nmr_frequency_bool
696 { \__chemmacros_nmr_frequency:n {#3} }
697 \bool_if:NT \l__chemmacros_nmr_comma_bool
698 { , ~ }
699 \bool_if:NT \l__chemmacros_nmr_solvent_bool
700 { \chemmacros_chemformula:n {#4} }
701 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
702 { ) }
703 \tl_if_blank:nT {#1} {::~}
704 }}% lwarp

```

```

705         \group_end:
706     }
707     \tl_if_blank:nT {#1}
708     {
709         \delta
710         \text { \l__chemmacros_nmr_delta_tl }
711         \bool_if:NT \l__chemmacros_nmr_use_equal_bool {=}
712     }
713 }
714 {
715     \group_begin:
716     \tl_use:N \l__chemmacros_nmr_format_tl
717 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
718     \__chemmacros_nmr_base:VV
719     \g__chemmacros_nmr_isotope_tl
720     \g__chemmacros_nmr_element_tl
721     \bool_if:NT \l__chemmacros_nmr_delimiters_bool
722     {~()}
723     \bool_if:NT \l__chemmacros_nmr_frequency_bool
724     { \__chemmacros_nmr_frequency:n {#3} }
725     \bool_if:NT \l__chemmacros_nmr_comma_bool
726     {,~}
727     \bool_if:NT \l__chemmacros_nmr_solvent_bool
728     {
729         \bool_if:NTF \l__chemmacros_nmr_parse_bool

730 %             { \chemformula_ch:nn { } {#4} }% original
731 %             {\ch{#4}}% lwarp
732 %             {#4}
733 %         }
734     \bool_if:NT \l__chemmacros_nmr_delimiters_bool
735     {}}
736 }}% lwarp
737     \tl_if_blank:nT {#1} {:}
738     \group_end:
739     \tl_if_blank:nT {#1}
740     {
741         \tl_use:N \c_space_tl
742         \c_math_toggle_token
743         \delta
744         \c_math_toggle_token
745         \l__chemmacros_nmr_delta_tl
746         \bool_if:NT \l__chemmacros_nmr_use_equal_bool {~=}
747     }
748 }
749 \group_end:
750 }
751 ]% AfterEndPreamble
752
753
754 \RenewDocumentCommand \chemmacros_data:w { smo }
755 {
756     \bool_if:NT \l__chemmacros_nmr_list_bool { \item }
757     {
758 %         \tl_use:N \l__chemmacros_nmr_format_tl #2

```

```

759     \tl_use:N \l__chemmacros_nmr_format_tl
760     \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
761       #2
762       \IfNoValueF {#3} { ~ ( #3 ) }
763       \IfBooleanT {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { : } }
764     }% lwarp
765   }
766   \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
767 }
768
769 }{}% \@ifchemmacrosmoduleloaded
770 }% AtBeginDocument

```

§ 180.17 Thermodynamics

```

771 \AtBeginDocument{
772 \@ifchemmacrosmoduleloaded{thermodynamics}{
773 \PackageInfo{lwarp}{Patching~chemmacros~module~thermodynamics}
774
775 \cs_gset_protected:Npn \chemmacros_state:nn #1#2
776 {
777   \group_begin:
778   \boolfalse{mathjax}
779   \chemmacros_set_keys:nn {thermodynamics} {#1}
780   \LWR@subsingledollar*{% yes hashing
781     \textbackslash{}state{\LWR@HTMLsanitize{#2}\}% alt
782   }{%
783     chemmacros_state% add'l hashing
784     #1% options
785     LSP \tl_use:N \l__chemmacros_state_sp_left_tl% super/subscripts
786     LSB \tl_use:N \l__chemmacros_state_sb_left_tl
787     RSP \tl_use:N \l__chemmacros_state_sp_right_tl
788     RSB \tl_use:N \l__chemmacros_state_sb_right_tl
789   }
790   {
791     \LWR@origensuredmath{
792       \chemmacros_text:V \l__chemmacros_state_pre_tl
793       \c_math_superscript_token
794       { \chemmacros_text:V \l__chemmacros_state_sp_left_tl }

```

Only add the subscripts if they are being used. This avoids causing an incorrect depth, as the empty subscript will be measured by TeX but cropped out by *pdfcrop*.

```

795     \tl_if_empty:NTF \l__chemmacros_state_sb_left_tl
796     {}
797     {
798       \c_math_subscript_token
799       { \chemmacros_text:V \l__chemmacros_state_sb_left_tl }
800     }
801     #2
802     \c_math_superscript_token
803     { \chemmacros_text:V \l__chemmacros_state_sp_right_tl }
804     \tl_if_empty:NTF \l__chemmacros_state_sb_right_tl
805     {}
806     {

```

```

807         \c_math_subscript_token
808         { \chemmacros_text:V \l__chemmacros_state_sb_right_tl }
809     }
810     \chemmacros_text:V \l__chemmacros_state_post_tl
811 }
812 }
813 \group_end:
814 }
815 \cs_generate_variant:Nn \chemmacros_state:nn { nV }
816
817 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
818 {
819     \chemmacros_define_keys:xn
820     {thermodynamics/\chemmacros_remove_backslash:N #1}
821     {
822         pre .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
823         post .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
824         superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
825         superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,
826         superscript .meta:n = { superscript-right = ##1 } ,
827         subscript-left .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
828         subscript-right .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
829         subscript .meta:n = { subscript-left = ##1 } ,
830         subscript-pos .choices:nn =
831             { left , right }
832             { \tl_set_eq:NN \l__chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
833         symbol .tl_set:N = \l__chemmacros_state_symbol_tl ,
834         unit .tl_set:N = \l__chemmacros_state_unit_tl
835     }
836     \DeclareDocumentCommand #1 { sO{}D(){}m }
837     {
838         \group_begin:
839         \chemmacros_set_keys:xn
840         {thermodynamics/\chemmacros_remove_backslash:N #1}
841         {#2}
842         \tl_if_blank:nF {##3}
843         {
844             \chemmacros_set_keys:nx {thermodynamics}
845             { subscript-\l__chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
846         }
847         \chemmacros_state:nV {##2} \l__chemmacros_state_symbol_tl
848         \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
849         \IfBooleanF {##1} { = ~ \SI {##4} { \l__chemmacros_state_unit_tl } }
850     \group_end:
851 }
852 }

```

The pre-existing macros are redefined with the new definition:

```

853 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
854 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
855 \RenewChemState \gibbs { symbol = G , unit = \kilo\joule\per\mole }
856
857 }{}% \ifchemmacrosmoduleloaded
858 }% AtBeginDocument

```

859 \ExplSyntaxOff

File 79 **lwarp-chemnum.sty**

§ 181 Package **chemnum**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg chemnum chemnum is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{chemnum}[2016/04/14]
2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemnum_compound_write:n #1
5 {
6   \chemnum_get_compound_property:nn {#1} {pre-main-label-code}
7   \group_begin:
8     \bool_if:NTF \l__chemnum_compound_local_bool
9     { \l__chemnum_local_label_format_tl }
10    { \chemnum_get_compound_property:nn {#1} {label-format} }
11  {
12    \LWR@textcurrentfont{
13      \chemnum_get_compound_property:nn {#1} {counter-representation}
14    }
15  }
16  \group_end:
17  \chemnum_get_compound_property:nn {#1} {post-main-label-code}
18 }
19
20 \cs_gset_protected:Npn \chemnum_subcompound_write:nn #1#2
21 {
22   \group_begin:
23     \bool_if:NTF \l__chemnum_compound_local_bool
24     { \l__chemnum_local_label_format_tl }
25     { \chemnum_get_compound_property:nn {#1} {label-format} }
26   {
27     \LWR@textcurrentfont{
28       \chemnum_get_subcompound_property:nnn {#1} {#2}
29       {counter-representation}
30     }
31   }
32   \group_end:
33 }
34
35 \ExplSyntaxOff

```

File 80 **lwarp-chkfloat.sty**

§ 182 Package **chkfloat**

Pkg chkfloat chkfloat is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{chkfloat}[2012/08/19]

File 81 **lwarp-chngpage.sty**

§ 183 Package **chngpage**

(Emulates or patches code by PETER WILSON.)

Pkg chngpage chngpage is ignored.

for HTML output: Discard all options for lwarp-chngpage:

```
1 \LWR@ProvidesPackageDrop{chngpage}[2009/10/20]
2 \LWR@origRequirePackage{lwarp-chngpage}
```

File 82 **lwarp-cite.sty**

§ 184 Package **cite**

(Emulates or patches code by DONALD ARSENEAU.)

Pkg cite cite is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{cite}[2015/02/27]

For the [super] option, the \kern must be removed:

```
2 \def\LWRCT@biblabel#1{\@citess{#1}\kern-\labelsep\,}
3
4 \ifdefstrequal{\@biblabel}{\LWRCT@biblabel}
5 {
6   \def\@biblabel#1{\@citess{#1}}
7 }{}
```

For the [super] option, \textsuperscript is used instead of math superscript:

```
8 \def\@citess#1{\textsuperscript{#1}}
9
10 \DeclareDocumentCommand\citepunct{}{\, \, \relax}
```

File 83 **lwarp-CJK.sty**§ 185 Package **CJK**

Pkg CJK CJK does not work with lwarp unless called from ctex.

for HTML output:

```

1 \@ifpackageloaded{xeCJK}{}{
2   \LWR@loadnever{CJK}{ctex, xeCJK}
3 }
4
5 \LWR@ProvidesPackagePass{CJK}[2015/04/18]
```

File 84 **lwarp-CJKutf8.sty**§ 186 Package **CJKutf8**

Pkg CJKutf8 CJKutf8 does not work with lwarp unless called from ctex.

for HTML output:

```

1 \@ifpackageloaded{xeCJK}{}{
2   \LWR@loadnever{CJKutf8}{ctex, xeCJK}
3 }
4
5 \LWR@ProvidesPackagePass{CJKutf8}[2015/04/18]
```

File 85 **lwarp-clrdblpg.sty**§ 187 Package **clrdblpg**

Pkg clrdblpg clrdblpg is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{clrdblpg}[2018/04/21]
```

File 86 **lwarp-cmdtrack.sty**§ 188 Package **cmdtrack**

Pkg cmdtrack cmdtrack is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{cmdtrack}[2012/12/18]
2 \newcommand{\untrack}[1]{}

```

File 87 **lwarp-colonequals.sty**

§ 189 Package **colonequals**

(Emulates or patches code by HEIKO OBERDIEK.)

Pkg colonequals colonequals is used as-is for SVG math, and is emulated for MATHJAX.

Since UNICODE symbols are not available for each of the following, only two are used for the single and double colons, and the other symbols are derived in a consistent manner. Occasional negative space is added as well. This may need to be undone for some fonts.

for HTML output:

```

1 \LWR@ProvidesPackagePass{colonequals}[2016/05/16]
2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{colonequals}
4
5 \CustomizeMathJax{\newcommand{\ratio}{\unicode{x2236}}}
6 \CustomizeMathJax{\newcommand{\coloncolon}{\unicode{x2237}}}
7 \CustomizeMathJax{\newcommand{\colonequals}{\coloncolon=}}
8 \CustomizeMathJax{\newcommand{\coloncolonequals}{\coloncolon=}}
9 \CustomizeMathJax{\newcommand{equalscolon}{=! \ratio}}
10 \CustomizeMathJax{\newcommand{equalscoloncolon}{=! \coloncolon}}
11 \CustomizeMathJax{\newcommand{\colonminus}{\ratio-}}
12 \CustomizeMathJax{\newcommand{\coloncolonminus}{\coloncolon-}}
13 \CustomizeMathJax{\newcommand{\minuscolon}{-\ratio}}
14 \CustomizeMathJax{\newcommand{\minuscoloncolon}{-\coloncolon}}
15 \CustomizeMathJax{\newcommand{\colonapprox}{\ratio\approx}}
16 \CustomizeMathJax{\newcommand{\coloncolonapprox}{\coloncolon\approx}}
17 \CustomizeMathJax{\newcommand{\approxcolon}{\approx\! \ratio}}
18 \CustomizeMathJax{\newcommand{\approxcoloncolon}{\approx\! \coloncolon}}
19 \CustomizeMathJax{\newcommand{\colonsim}{\ratio\sim}}
20 \CustomizeMathJax{\newcommand{\coloncolonsim}{\coloncolon\sim}}
21 \CustomizeMathJax{\newcommand{\simcolon}{\sim\! \ratio}}
22 \CustomizeMathJax{\newcommand{\simcoloncolon}{\sim\! \coloncolon}}
23 \end{warpMathJax}

```

File 88 **lwarp-color.sty**

§ 190 Package **color**

Pkg color Allowed but ignored. xcolor is then required as well.

color is superceded by xcolor, and lwarp requires several of the features of xcolor. When color is requested, xcolor is loaded as well.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{color}[2016/07/10]
2 \RequirePackage{xcolor}

```

File 89 **lwarp-colortbl.sty**§ 191 Package **colortbl**

Pkg colortbl colortbl is used as-is for print output, and emulated for HTML.

 **row/cell color** Only use `\rowcolor` and `\cellcolor` at the start of a row, in that order.

colortbl ignores the overhang arguments.

for HTML output: A placeholder definition is forgotten first:

```
1 \let\rowcolor\relax
2
3 \LWR@ProvidesPackagePass{colortbl}[2018/12/12]
```

The following `\LWR@HTML` versions are used inside an HTML tabular.

`\columncolor` [*model*] [*color*] [*left overhang*] [*right overhang*]

`\LWR@getmynexttoken` is not used here because `\columncolor` is not used inside the data area of the tabular.

```
4 \NewDocumentCommand{\LWR@HTML@columncolor}{O{named} m o o}{%
5   \convertcolorspec{#1}{#2}{HTML}\LWR@columnHTMLcolor%
6   \LWR@addtabularcellcolor%
7 }
8
9 \AtBeginDocument{\LWR@formatted{columncolor}}
```

`\LWR@getmynexttoken` is used for `\rowcolor` because it is used inside the data area of the tabular.

`\rowcolor` [*model*] [*color*] [*left overhang*] [*right overhang*]

```
10 \NewDocumentCommand{\LWR@HTML@rowcolor}{O{named} m o o}{%
11   \convertcolorspec{#1}{#2}{HTML}\LWR@rowHTMLcolor%
12   \LWR@getmynexttoken%
13 }
14
15 \AtBeginDocument{\LWR@expandableformatted{rowcolor}}
```

`\cellcolor` [*model*] [*color*] [*left overhang*] [*right overhang*]

```
16 \NewDocumentCommand{\LWR@HTML@cellcolor}{O{named} m o o}{%
17   \convertcolorspec{#1}{#2}{HTML}\LWR@cellHTMLcolor%
18   \LWR@addtabularcellcolor%
19 }
20
21 \AtBeginDocument{\LWR@formatted{cellcolor}}
```

`\arrayrulecolor` [*model*] {*color*}

The HTML version for use outside a tabular. Inside a tabular, `\LWR@HTML@arrayrulecolornexttoken` is used instead.

```
22 \newcommand{\LWR@HTML@arrayrulecolor}[2][named]{%
23   \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
24 }
25
26 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolor}}
```

[*model*] {*color*}

`\LWR@arrayrulecolornexttoken`

The HTML version for use inside a tabular.

```
27 \newcommand{\LWR@HTML@arrayrulecolornexttoken}[2][named]{%
28   \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
29   \LWR@getmynexttoken%
30 }
31
32 \AtBeginDocument{\LWR@expandableformatted{arrayrulecolornexttoken}}
```

`\doublerulesepcolor` [*model*] {*color*}

The version for use outside a tabular.

```
33 \newcommand{\LWR@HTML@doublerulesepcolor}[2][named]{%
34
35 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolor}}
```

[*model*] {*color*}

`\LWR@doublerulesepcolornexttoken`

The version for use inside a tabular.

```
36 \newcommand{\LWR@HTML@doublerulesepcolornexttoken}[2][named]{\LWR@getmynexttoken}
37
38 \AtBeginDocument{\LWR@expandableformatted{doublerulesepcolornexttoken}}
```

File 90 **lwarp-continue.sty**

§ 192 Package **continue**

Pkg continue continue is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{continue}[2018/12/09]

```
2 \newcommand*\flagcont{}
3 \newcommand*\flagend{}
4 \newcommand*\flagword{}
5 \newcommand*\preflagword{}
6 \newcommand*\postflagword{}
7 \newlength\contsep
8 \newlength\contdrop
```

File 91 **lwarp-copyrightbox.sty**

§ 193 Package **copyrightbox**

(Emulates or patches code by THOMAS FISCHER, IVES VAN DER FLAAS.)

Pkg copyrightbox **copyrightbox** is emulated for use by **lwarp**.

The entire copyright box is placed inside a <div> of class `copyrightbox`.

The contents are placed inside a <div> of class `copyrightboxcontents`.

The copyright notice is placed inside a <div> of class `copyrightboxnote`.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{copyrightbox}[2011/11/27]

2 \newcommand{\copyrightbox}[3][r]{%
3 \begin{BlockClass}[
4   display: inline-flex;
5   flex-direction: column ;
6 ]{copyrightbox}
7 \begin{BlockClass}{copyrightboxcontents}
8 #2
9 \end{BlockClass}
10 \begin{BlockClass}{copyrightboxnote}
11 #3
12 \end{BlockClass}
13 \end{BlockClass}
14 }
15
16 \newcommand{\CRB@setcopyrightfont}{}
17 \newcommand{\CRB@setcopyrightparagraphstyle}{}

```

File 92 **lwarp-crop.sty**

§ 194 Package **crop**

(Emulates or patches code by MELCHIOR FRANZ.)

Pkg crop **crop** is ignored.

for HTML output: Discard all options for **lwarp-crop**:

```

1 \LWR@ProvidesPackageDrop{crop}[2003/05/20]

2 \newcommand*{\crop}[1][{}]{
3 \newcommand*{\cropdef}[6][{}]{

```

File 93 **lwarp-ctable.sty**

§ 195 Package **ctable**

(Emulates or patches code by WYBO DEKKER.)

Pkg ctable ctable is patched for use by lwarp.

⚠ **Misplaced alignment tab character &** Use `\StartDefiningTabulars` before one or more `\ctables`, and `\StopDefiningTabulars` after. These change the meaning of the ampersand & character.

for HTML output: 1 `\LWR@ProvidesPackagePass{ctable}[2015/10/17]`

The following is in the original:

```

2 \newcommand{\LWR@HTML@ctable}[4][[]]{%
3   \let\@CTtaborfig \@dfLTtaborfig
4   \let\@CTalign \@dfLTalign
5   \let\@CTsideways \@dfLTsideways
6   \let\@CTcontinued \empty
7   \let\@CTpos \@dfLTpos
8   \let\@CTcaption \empty
9   \let\@CTcap \undefined
10  \let\@CTlabel \empty
11  \let\@CTbotcap \@dfLTbotcap
12  \let\@CTstarred \@dfLTstarred
13  \let\@CTsuper \@dfLTsuper
14  \let\@CTnotespar \@dfLTnotespar
15  \let\@CTdoinside \@dfLTdoinside
16  \let\@CTbgopacity \@dfLTbgopacity
17  \@CTframerule \@dfLTframerule
18  \@CTcaptionskip \@dfLTcaptionskip
19  \@CTframesep \@dfLTframesep
20  \@CTwidth \@dfLTwidth
21  \@CTmaxwidth \@dfLTmaxwidth
22  \@CTmincapwidth \@dfLTmincapwidth
23  \@CTfooterwidth \@dfLTfooterwidth
24  \def\@CTfgactual {@dfLTframefg}%
25  \def\@CTbgactual {@dfLTframebg}%
26  \def\@CTbeg {\begin{\@CTsideways\@CTtaborfig\@CTstarred}}%
27  \def\@CTbegin {\@CTbeg}%
28  \def\@CTend {\end{\@CTsideways\@CTtaborfig\@CTstarred}}%
29  \setkeys{CT}{#1}%
30  \ifx\@CTcap\undefined\let\@CTcap\@CTcaption\fi
31  \ifx\@CTcap\empty
32    \if@CTcaptionloaded\else
33      \PackageWarningNoLine[lwarp-ctable]{\MessageBreak
34        An empty cap= option prevents lot/loc entry only\MessageBreak
35        if the caption package is loaded!}
36    \fi
37  \fi

```

```

38 \if@CTinmemoir\else
39   \ifx\@CTbotcap\undefined
40     \PackageError{lwarp-ctable}{\MessageBreak
41       You can, currently, use the sidecap option only with\MessageBreak
42       memoir documents. Use topcap or botcap only}
43     {}
44   \fi
45 \fi
46 \ifdim\@CTwidth=0pt\else
47   \ifdim\@CTmaxwidth=0pt\else
48     \PackageError{lwarp-ctable}{\MessageBreak
49       You may not use the width and maxwidth options together\MessageBreak
50       Use either width or maxwidth}
51     {}
52   \fi
53 \fi
54 \ifx\@CTpos\empty
55   \ifx\@CTsideways\empty\else
56     \PackageError{lwarp-ctable}{\MessageBreak
57       You may not use the pos and sideways options together\MessageBreak
58       Rotated tables and figures are always typeset on a separate page}
59     {}
60   \fi
61 \fi
62 \ifx\@CTcaption\empty
63   \ifx\@CTlabel\empty\else
64     \PackageError{lwarp-ctable}{\MessageBreak
65       You may not label a captionless table\MessageBreak
66       Such a label can't be referenced}
67     {}
68   \fi
69 \fi

```

Some of the original, regarding computing the width of \CT@t, is removed here.

```

70 \@CTbegin
71   \ifx\@CTcontinued\empty\else\addtocounter{\@CTaborfig}{-1}\fi
72   \@CTalign

```

lwarp's patches begin here:

```

73 \begin{center}
74   \setlength{\fboxrule}{\@CTframerule}
75   \setlength{\fboxsep}{\@CTframesep}
76   \LWR@forceminwidth{\fboxrule}% lwarp
77   \convertcolorspec{named}{\@CTbgactual}{HTML}\LWR@tempcolor% lwarp
78   \begin{BlockClass}[%
79     border:
80       \LWR@printlength{\LWR@atleastonept}
81       solid
82       \LWR@colorstyle{named}{\@CTfgactual} ; %
83     padding:\LWR@printlength{\fboxsep} ; %
84     \ifdefstring{\LWR@tempcolor}{FFFFFF}{%
85       background: \LWR@colorstyle{named}{\@CTbgactual} ; %
86     }%

```

```

87     ]{fminipage}%         lwarp
88     \ifx\@CTbotcap\@CTfalse\@CTCaption\vskip\@CTcaptionskip\fi
89     \ifx\@CTbotcap\undefined%
90         \begin{sidecaption}[\@CTcap]{\@CTcaption}[\@CTlabel]
91     \fi
92     \@CTdoinside
93     \begin{tabularx}{\linewidth}{#2}%         lwarp
94         #4%
95     \end{tabularx}%             lwarp
96     \def\@CTfootnotes{#3}%
97     \ifx#3\empty\else{% append footnotes, if any
98         \begin{BlockClass}{tnotes}%         lwarp
99         #3
100        \end{BlockClass}%             lwarp
101    }
102    \fi
103    \ifx\@CTbotcap\undefined\end{sidecaption}\fi
104    \ifx\@CTbotcap\@CTtrue\vskip\@CTcaptionskip\@CTCaption\fi
105    \end{BlockClass}
106    \end{center}
107    \@CTend
108 }
109 \LWR@formatted{ctable}

```

Required to properly detect the toprule:

```
110 \LetLtxMacro\FL\toprule
```

Table notes are redefined for HTML:

```

111 \newcommand{\LWR@HTML@tmark}[1][a]{%
112     \textsuperscript{\textrm{\textit{#1}}}}
113 }
114 \LWR@formatted{tmark}
115
116 \newcommand{\LWR@HTML@tnote}[2][a]{%
117     \tmark[#1]\, #2\par
118 }
119 \LWR@formatted{tnote}

```

File 94 **lwarp-cuted.sty**

§ 196 Package **cuted**

(Emulates or patches code by SIGITAS TOLUŠIS.)

Pkg cuted **cuted** is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{cuted}[2012/10/04]

2 \newenvironment{strip}{}{}
3 \newskip\stripsep
4 \def\oldcolsbreak#1{}

```

File 95 **lwarp-cutwin.sty**§ 197 Package **cutwin**

(Emulates or patches code by PETER WILSON AND ALAN HOENIG.)

Pkg cutwin cutwin is emulated.

for HTML output: Discard all options for lwarp-cutwin:

```

1 \LWR@ProvidesPackageDrop{cutwin}[2010/09/29]

2 \newcommand*\opencutleft{}
3 \newcommand*\opencutright{}
4 \newcommand*\opencutcenter{}
5 \newcommand*\cutfuzz{}
6
7 \newenvironment{cutout}[4]
8 {\marginpar{\windowpagestuff}}
9 {}
10
11 \newcommand*\windowpagestuff{}
12
13 \newcommand*\pageinwindow{%
14 % \begin{minipage}{.3\linewidth}
15 \windowpagestuff
16 % \end{minipage}
17 }
18
19 \newenvironment{shapedcutout}[3]
20 {\marginpar{\picinwindow}}
21 {}
22
23 \newcommand*\putstuffinpic{}
24
25 \newcommand*\picinwindow{%
26 \begin{picture}(0,0)
27 \putstuffinpic
28 \end{picture}}
```

File 96 **lwarp-dblfloatfix.sty**§ 198 Package **dblfloatfix**

Pkg dblfloatfix dblfloatfix is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dblfloatfix}[2012/12/31]

File 97 **lwarp-dblfnote.sty**

§ 199 Package **dblfnote**

(Emulates or patches code by HIROSHI NAKASHIMA.)

Pkg dblfnote **dblfnote** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dblfnote}[1999/07/14]

```
2 \newcounter{DFNsloppiness}
3 \newdimen\DFNcolumnsep
4 \newdimen\DFNcolumnwidth
5 \def\DFNallowcbreak{}
6 \def\DFNinhibitcbreak{}
7 \def\DFNtrysingle{}
8 \def\DFNalwaysdouble{}
9 \def\DFNruleboth{}
10 \def\DFNruleleft{}
```

File 98 **lwarp-dcolumn.sty**

§ 200 Package **dcolumn**

Pkg dcolumn **dcolumn** is emulated by the lwarp core.

1 \LWR@ProvidesPackageDrop{dcolumn}[2014/10/28]

File 99 **lwarp-decimal.sty**

§ 201 Package **decimal**

(Emulates or patches code by A. SYROPOULOS AND R. W. D. NICKALLS.)

Pkg decimal **decimal** works as-is for SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{decimal}[2011/06/03]

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\def\.\{\mbox{.}\}}
4 \end{warpMathJax}
```

File 100 **lwarp-diagbox.sty**

§ 202 Package **diagbox**

(Emulates or patches code by LEO LIU.)

Pkg diagbox **diagbox** is patched for use by **lwarp**.

for HTML output: 1 \LWR@ProvidesPackagePass{diagbox}[2016/12/28]

To restore print-mode inside a lateximage:

```
2 \LetLtxMacro\LWR@origdiagbox@double\diagbox@double
3 \LetLtxMacro\LWR@origdiagbox@triple\diagbox@triple
4
5 \appto\LWR@restoreorigformatting{%
6 \LetLtxMacro\diagbox@double\LWR@origdiagbox@double%
7 \LetLtxMacro\diagbox@triple\LWR@origdiagbox@triple%
8 }
```

```
\LWR@diagbox@AB  {\langle E/W \rangle} {\langle A \rangle} {\langle E/W \rangle} {\langle B \rangle}
9 \newcommand{\LWR@diagbox@AB}[4]{
10 \begingroup%
11 \LetLtxMacro\\newline%
12 \BlockClassSingle{diagbox#1}{#2}%
13 \BlockClassSingle{diagbox#3}{#4}%
14 \endgroup%
15 \LWR@stoppars%
16 }
```

```
\LWR@diagboxNW  {\langle A \rangle} {\langle B \rangle}
17 \newcommand{\LWR@diagboxNW}[2]{%
18 \LWR@diagbox@AB{E}{#2}{W}{#1}%
19 }
```

Likewise for NE, SW, SE:

```
20 \newcommand{\LWR@diagboxNE}[2]{%
21 \LWR@diagbox@AB{W}{#1}{E}{#2}%
22 }
23
24 \let\LWR@diagboxSW\LWR@diagboxNE
25 \let\LWR@diagboxSE\LWR@diagboxNW
```

```
\diagbox@double  {\langle keys \rangle} {\langle A \rangle} {\langle B \rangle}
26 \def\diagbox@double#1#2#3{%
```

```

27 \setkeys{diagbox}{dir=NW,#1}%
28 \@nameuse{LWR@diagbox\diagbox@dir}{#2}{#3}%
29 }

```

`\LWR@diagboxTNW` $\langle title \rangle \langle A \rangle \langle B \rangle$

```

30 \newcommand{\LWR@diagboxTNW}[3]{%
31 \BlockClassSingle{diagboxtitleN}{#1}
32 \LWR@diagboxNW{#2}{#3}
33 }

```

Likewise for NE, SW, SE:

```

34 \newcommand{\LWR@diagboxTNE}[3]{%
35 \BlockClassSingle{diagboxtitleN}{#1}
36 \LWR@diagboxNE{#2}{#3}
37 }
38
39 \newcommand{\LWR@diagboxTSW}[3]{%
40 \LWR@diagboxSW{#2}{#3}
41 \BlockClassSingle{diagboxtitleS}{#1}
42 \LWR@stoppars%
43 }
44
45 \newcommand{\LWR@diagboxTSE}[3]{%
46 \LWR@diagboxSE{#2}{#3}
47 \BlockClassSingle{diagboxtitleS}{#1}
48 \LWR@stoppars%
49 }

```

`\diagbox@triple` $\langle keys \rangle \langle A \rangle \langle T \rangle \langle B \rangle$

```

50 \def\diagbox@triple#1#2#3#4{%
51 \setkeys{diagbox}{dir=NW,#1}%
52 \@nameuse{LWR@diagboxT\diagbox@dir}{#3}{#2}{#4}%
53 }

```

File 101 **lwarp-dingbat.sty**

§ 203 Package **dingbat**

(Emulates or patches code by SCOTT PAKIN.)

Pkg dingbat dingbat is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{dingbat}[2001/04/27]

2 \newcommand*{\LWR@dingbatsymbol}[1]{\HTMLUnicode{#1}}
3
4 \newcommand{\LWR@HTML@rightpointright}{\LWR@dingbatsymbol{261E}}
5 \newcommand{\LWR@HTML@leftpointright}{\LWR@dingbatsymbol{261E}}
6 \newcommand{\LWR@HTML@leftthumbsdown}{\LWR@dingbatsymbol{1F44E}}

```

```

7 \newcommand{\LWR@HTML@leftthumbsup}{\LWR@dingbatsymbol{1F44D}}
8 \newcommand{\LWR@HTML@rightpointleft}{\LWR@dingbatsymbol{261C}}
9 \newcommand{\LWR@HTML@rightthumbsdown}{\LWR@dingbatsymbol{1F44E}}
10 \newcommand{\LWR@HTML@rightthumbsup}{\LWR@dingbatsymbol{1F44D}}
11 \newcommand{\LWR@HTML@squarewithdots}{\LWR@dingbatsymbol{25C7}}
12 \newcommand{\LWR@HTML@filledsquarewithdots}{\LWR@dingbatsymbol{25C6}}
13 \newcommand{\LWR@HTML@Sborder}{\LWR@dingbatsymbol{271A}}
14 \newcommand{\LWR@HTML@Zborder}{\LWR@dingbatsymbol{274B}}
15 \newcommand{\LWR@HTML@largepencil}{\LWR@dingbatsymbol{270E}}
16 \newcommand{\LWR@HTML@anchor}{\LWR@dingbatsymbol{2693}}
17 \newcommand{\LWR@HTML@carriagereturn}{\LWR@dingbatsymbol{23CE}}
18 \newcommand{\LWR@HTML@checkmark}{\LWR@dingbatsymbol{2713}}
19 \newcommand{\LWR@HTML@eye}{\LWR@dingbatsymbol{1F441}}
20 \newcommand{\LWR@HTML@satellitedish}{\LWR@dingbatsymbol{1F4E1}}
21 \newcommand{\LWR@HTML@smallpencil}{\LWR@dingbatsymbol{270E}}
22
23 \LWR@formatted{rightpointright}
24 \LWR@formatted{leftpointright}
25 \LWR@formatted{leftthumbsdown}
26 \LWR@formatted{leftthumbsup}
27 \LWR@formatted{rightpointleft}
28 \LWR@formatted{rightthumbsdown}
29 \LWR@formatted{rightthumbsup}
30 \LWR@formatted{squarewithdots}
31 \LWR@formatted{filledsquarewithdots}
32 \LWR@formatted{Sborder}
33 \LWR@formatted{Zborder}
34 \LWR@formatted{largepencil}
35 \LWR@formatted{anchor}
36 \LWR@formatted{carriagereturn}
37 \LWR@formatted{checkmark}
38 \LWR@formatted{eye}
39 \LWR@formatted{satellitedish}
40 \LWR@formatted{smallpencil}

```

File 102 **lwarp-DotArrow.sty**

§ 204 Package **DotArrow**

(Emulates or patches code by SVEN SCHNEIDER.)

Pkg DotArrow **DotArrow** is patched for use by lwarp, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{DotArrow}[2007/02/12]

The width must be recomputed each time, depending on print or HTML output.

```

2 \xpretocmd{\dotarrow}{\settowidth{\oneWidth}{\onePartX}}{}{}
3
4 \begin{warpMathJax}
5 \CustomizeMathJax{\newcommand{\dotarrow}[1]{\stackrel{#1}{\unicode{x21E2}}}}
6 \end{warpMathJax}

```

File 103 **lwarp-dotlessi.sty**

§ 205 Package **dotlessi**

(Emulates or patches code by JAVIER BEZOS.)

Pkg dotlessi dotlessi is used as-is for SVG math, and is emulated for MATHJAX.

 HTML `\dotlessj` Use `\usepackage{cmap}` if `\dotlessj` does not appear in HTML in text mode. See section 7.4.

 not bold For MATHJAX, use `\boldsymbol` instead of `\mathbf`.

for HTML output: 1 \LWR@ProvidesPackagePass{dotlessi}[1999/10/12]

For MATHJAX:

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{\let\dotlessi\imath}
4 \CustomizeMathJax{\let\dotlessj\jmath}
5 \end{warpMathJax}
```

File 104 **lwarp-dprogress.sty**

§ 206 Package **dprogress**

Pkg dprogress dprogress is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{dprogress}[2008/02/21]

File 105 **lwarp-draftcopy.sty**

§ 207 Package **draftcopy**

Pkg draftcopy draftcopy is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{draftcopy}[2002/02/25]

```
2 \newcommand{\draftcopyVersion}[1]{}
3 \newcommand{\draftcopySetGrey}[1]{}
4 \newcommand{\draftcopySetScale}[1]{}
5 \newcommand{\draftcopySetScaleFactor}[1]{}
6 \newcommand{\draftcopyFirstPage}[1]{}
7 \newcommand{\draftcopyLastPage}[1]{}
8 \newcommand{\draftcopyName}[2]{}

```

```

9 \newcommand{\draftcopyPageTransform}[1]{}
10 \newcommand{\draftcopyBottomTransform}[1]{}
11 \newcommand{\draftcopyPageX}[1]{}
12 \newcommand{\draftcopyPageY}[1]{}
13 \newcommand{\draftcopyBottomX}[1]{}
14 \newcommand{\draftcopyBottomY}[1]{}

```

File 106 **lwarp-draftfigure.sty**

§ 208 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 107 **lwarp-draftwatermark.sty**

§ 209 Package **draftwatermark**

(Emulates or patches code by SERGIO CALLEGARI.)

Pkg draftwatermark draftwatermark is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{draftwatermark}[2020/03/14]

2 \newcommand{\DraftwatermarkOptions}[1]{}
3 \newcommand{\DraftwatermarkStdMark}{}
4 \newcommand{\SetWatermarkAngle}[1]{}
5 \newcommand{\SetWatermarkColor}[1]{}
6 \newcommand{\SetWatermarkLightness}[1]{}
7 \newcommand{\SetWatermarkFontSize}[1]{}
8 \newcommand{\SetWatermarkScale}[1]{}
9 \newcommand{\SetWatermarkHorCenter}[1]{}
10 \newcommand{\SetWatermarkVertCenter}[1]{}
11 \newcommand{\SetWatermarkText}[1]{}

```

File 108 **lwarp-easy-todo.sty**

§ 210 Package **easy-todo**

(Emulates or patches code by JUAN RADA-VILELA.)

Pkg easy-todo **easy-todo** is patched for use by **lwarp**.

To remove the “P” heading for HTML:

```
\warpHTMLonly{\renewcommand{\todoindexpagetitle}{}}
```

for HTML output: 1 \LWR@ProvidesPackagePass{easy-todo}[2014/01/01]

`\listoftodos` Modified to correct buggy use of `\flushright`.

```
2 \let\LWR@easytodo@origlistoftodos\listoftodos
3
4 \renewcommand{\listoftodos}{%
5 \begingroup
6 \renewcommand{\flushright}{}
7 \LWR@easytodo@origlistoftodos
8 \endgroup
9 }
```

`\todoui` Modified to use `\textcolor` instead of `\color`.

```
10 \renewcommand{\todoui}[2]{%
11 \ifthenelse{\equal{\@todoobeyfinal}{true}}{%
12   {%
13     \ifoptionfinal{\todoenable{false}}{\todoenable{true}}%
14   }%
15 }%
16 \ifthenelse{\equal{\@todoenable}{true}}{%
17   {%
18     \refstepcounter{todos}%
19     \noindent{%
20       \todocolor%
21       \LWR@textcurrentcolor{%
22         \normalfont\scriptsize{\bfseries{\thetodos.#1}}%
23       }%
24     }%
25     \addcontentsline{lod}{todos}{\protect{\thetodos. } \LWR@isolate{#2}}%
26   }%
27 }%
28 }
```

File 109 **lwarp-ebook.sty**

§ 211 Package **ebook**

(Emulates or patches code by JØRGEN STEENSGAARD.)

Pkg ebook ebook is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{ebook}

2 \setcounter{secnumdepth}{0}
3 \setcounter{tocdepth}{2}
4
5 \providecommand{\pagefilll}[1][0.001mm]{\noindent}
6
7 \providecommand{\ebook}{
8 \setcounter{secnumdepth}{0}
9 \setcounter{tocdepth}{2}
10 }
```

File 110 **lwarp-econometrics.sty**

§ 212 Package **econometrics**

(Emulates or patches code by ERIK KOLE.)

Pkg econometrics econometrics is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{econometrics}% no date specified in the original

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{econometrics}
4
5 \CustomizeMathJax{\newcommand{\SC}{\mathbb{C}}}
6 \CustomizeMathJax{\newcommand{\SN}{\mathbb{N}}}
7 \CustomizeMathJax{\newcommand{\SQ}{\mathbb{Q}}}
8 \CustomizeMathJax{\newcommand{\SR}{\mathbb{R}}}
9 \CustomizeMathJax{\newcommand{\SZ}{\mathbb{Z}}}
10
11 \CustomizeMathJax{\newcommand{\calA}{\mathcal{A}}}
12 \CustomizeMathJax{\newcommand{\calB}{\mathcal{B}}}
13 \CustomizeMathJax{\newcommand{\calC}{\mathcal{C}}}
14 \CustomizeMathJax{\newcommand{\calD}{\mathcal{D}}}
15 \CustomizeMathJax{\newcommand{\calE}{\mathcal{E}}}
16 \CustomizeMathJax{\newcommand{\calF}{\mathcal{F}}}
17 \CustomizeMathJax{\newcommand{\calG}{\mathcal{G}}}
18 \CustomizeMathJax{\newcommand{\calH}{\mathcal{H}}}
19 \CustomizeMathJax{\newcommand{\calI}{\mathcal{I}}}
```

```
20 \CustomizeMathJax{\newcommand{\calJ}{\mathcal{J}}}
21 \CustomizeMathJax{\newcommand{\calK}{\mathcal{K}}}
22 \CustomizeMathJax{\newcommand{\calL}{\mathcal{L}}}
23 \CustomizeMathJax{\newcommand{\calM}{\mathcal{M}}}
24 \CustomizeMathJax{\newcommand{\calN}{\mathcal{N}}}
25 \CustomizeMathJax{\newcommand{\calO}{\mathcal{O}}}
26 \CustomizeMathJax{\newcommand{\calP}{\mathcal{P}}}
27 \CustomizeMathJax{\newcommand{\calQ}{\mathcal{Q}}}
28 \CustomizeMathJax{\newcommand{\calR}{\mathcal{R}}}
29 \CustomizeMathJax{\newcommand{\calS}{\mathcal{S}}}
30 \CustomizeMathJax{\newcommand{\calT}{\mathcal{T}}}
31 \CustomizeMathJax{\newcommand{\calU}{\mathcal{U}}}
32 \CustomizeMathJax{\newcommand{\calV}{\mathcal{V}}}
33 \CustomizeMathJax{\newcommand{\calW}{\mathcal{W}}}
34 \CustomizeMathJax{\newcommand{\calX}{\mathcal{X}}}
35 \CustomizeMathJax{\newcommand{\calY}{\mathcal{Y}}}
36 \CustomizeMathJax{\newcommand{\calZ}{\mathcal{Z}}}
37
38 \CustomizeMathJax{\newcommand{\mA}{\bm A}}
39 \CustomizeMathJax{\newcommand{\va}{\bm a}}
40 \CustomizeMathJax{\newcommand{\mB}{\bm B}}
41 \CustomizeMathJax{\newcommand{\vb}{\bm b}}
42 \CustomizeMathJax{\newcommand{\mC}{\bm C}}
43 \CustomizeMathJax{\newcommand{\vc}{\bm c}}
44 \CustomizeMathJax{\newcommand{\mD}{\bm D}}
45 \CustomizeMathJax{\newcommand{\vd}{\bm d}}
46 \CustomizeMathJax{\newcommand{\mE}{\bm E}}
47 \CustomizeMathJax{\newcommand{\ve}{\bm e}}
48 \CustomizeMathJax{\newcommand{\mF}{\bm F}}
49 \CustomizeMathJax{\newcommand{\vf}{\bm f}}
50 \CustomizeMathJax{\newcommand{\mG}{\bm G}}
51 \CustomizeMathJax{\newcommand{\vg}{\bm g}}
52 \CustomizeMathJax{\newcommand{\mH}{\bm H}}
53 \CustomizeMathJax{\newcommand{\vh}{\bm h}}
54 \CustomizeMathJax{\newcommand{\mI}{\bm I}}
55 \CustomizeMathJax{\newcommand{\vi}{\bm i}}
56 \CustomizeMathJax{\newcommand{\mJ}{\bm J}}
57 \CustomizeMathJax{\newcommand{\vj}{\bm j}}
58 \CustomizeMathJax{\newcommand{\mK}{\bm K}}
59 \CustomizeMathJax{\newcommand{\vk}{\bm k}}
60 \CustomizeMathJax{\newcommand{\mL}{\bm L}}
61 \CustomizeMathJax{\newcommand{\vl}{\bm l}}
62 \CustomizeMathJax{\newcommand{\mM}{\bm M}}
63 \CustomizeMathJax{\newcommand{\vm}{\bm m}}
64 \CustomizeMathJax{\newcommand{\mN}{\bm N}}
65 \CustomizeMathJax{\newcommand{\vn}{\bm n}}
66 \CustomizeMathJax{\newcommand{\mO}{\bm O}}
67 \CustomizeMathJax{\newcommand{\vo}{\bm o}}
68 \CustomizeMathJax{\newcommand{\mP}{\bm P}}
69 \CustomizeMathJax{\newcommand{\vp}{\bm p}}
70 \CustomizeMathJax{\newcommand{\mQ}{\bm Q}}
71 \CustomizeMathJax{\newcommand{\vq}{\bm q}}
72 \CustomizeMathJax{\newcommand{\mR}{\bm R}}
73 \CustomizeMathJax{\newcommand{\vr}{\bm r}}
74 \CustomizeMathJax{\newcommand{\mS}{\bm S}}
```

```

75 \CustomizeMathJax{\newcommand{\vs}{\bm s}}
76 \CustomizeMathJax{\newcommand{\mT}{\bm T}}
77 \CustomizeMathJax{\newcommand{\vt}{\bm t}}
78 \CustomizeMathJax{\newcommand{\mU}{\bm U}}
79 \CustomizeMathJax{\newcommand{\vu}{\bm u}}
80 \CustomizeMathJax{\newcommand{\mV}{\bm V}}
81 \CustomizeMathJax{\newcommand{\vv}{\bm v}}
82 \CustomizeMathJax{\newcommand{\mW}{\bm W}}
83 \CustomizeMathJax{\newcommand{\vw}{\bm w}}
84 \CustomizeMathJax{\newcommand{\mX}{\bm X}}
85 \CustomizeMathJax{\newcommand{\vx}{\bm x}}
86 \CustomizeMathJax{\newcommand{\mY}{\bm Y}}
87 \CustomizeMathJax{\newcommand{\vy}{\bm y}}
88 \CustomizeMathJax{\newcommand{\mZ}{\bm Z}}
89 \CustomizeMathJax{\newcommand{\vz}{\bm z}}
90
91 \CustomizeMathJax{\newcommand{\valpha}{\bm \alpha}}
92 \CustomizeMathJax{\newcommand{\vbeta}{\bm \beta}}
93 \CustomizeMathJax{\newcommand{\vgamma}{\bm \gamma}}
94 \CustomizeMathJax{\newcommand{\vdelta}{\bm \delta}}
95 \CustomizeMathJax{\newcommand{\vepsi}{\bm \epsilon}}
96 \CustomizeMathJax{\newcommand{\vvarepsilon}{\bm \varepsilon}}
97 \CustomizeMathJax{\newcommand{\vzeta}{\bm \zeta}}
98 \CustomizeMathJax{\newcommand{\veta}{\bm \eta}}
99 \CustomizeMathJax{\newcommand{\vtheta}{\bm \theta}}
100 \CustomizeMathJax{\newcommand{\viota}{\bm \iota}}
101 \CustomizeMathJax{\newcommand{\vkappa}{\bm \kappa}}
102 \CustomizeMathJax{\newcommand{\vLambda}{\bm \Lambda}}
103 \CustomizeMathJax{\newcommand{\vmu}{\bm \mu}}
104 \CustomizeMathJax{\newcommand{\vnu}{\bm \nu}}
105 \CustomizeMathJax{\newcommand{\vxi}{\bm \xi}}
106 \CustomizeMathJax{\newcommand{\vpi}{\bm \pi}}
107 \CustomizeMathJax{\newcommand{\vrho}{\bm \rho}}
108 \CustomizeMathJax{\newcommand{\vsigma}{\bm \sigma}}
109 \CustomizeMathJax{\newcommand{\vtau}{\bm \tau}}
110 \CustomizeMathJax{\newcommand{\vupsilon}{\bm \upsilon}}
111 \CustomizeMathJax{\newcommand{\vphi}{\bm \phi}}
112 \CustomizeMathJax{\newcommand{\vchi}{\bm \chi}}
113 \CustomizeMathJax{\newcommand{\vpsi}{\bm \psi}}
114 \CustomizeMathJax{\newcommand{\vomega}{\bm \omega}}
115
116 \CustomizeMathJax{\newcommand{\mGamma}{\bm \varGamma}}
117 \CustomizeMathJax{\newcommand{\mDelta}{\bm \varDelta}}
118 \CustomizeMathJax{\newcommand{\mTheta}{\bm \varTheta}}
119 \CustomizeMathJax{\newcommand{\mLambda}{\bm \varLambda}}
120 \CustomizeMathJax{\newcommand{\mXi}{\bm \varXi}}
121 \CustomizeMathJax{\newcommand{\mPi}{\bm \varPi}}
122 \CustomizeMathJax{\newcommand{\mSigma}{\bm \varSigma}}
123 \CustomizeMathJax{\newcommand{\mUpsilon}{\bm \varUpsilon}}
124 \CustomizeMathJax{\newcommand{\mPhi}{\bm \varPhi}}
125 \CustomizeMathJax{\newcommand{\mPsi}{\bm \varPsi}}
126 \CustomizeMathJax{\newcommand{\mOmega}{\bm \varOmega}}
127
128 \CustomizeMathJax{\newcommand{\rb}{\mathrm{b}}}
129 \CustomizeMathJax{\newcommand{\rB}{\mathrm{B}}}

```

```

130 \CustomizeMathJax{\newcommand{\rC}{\mathrm{C}}}
131 \CustomizeMathJax{\newcommand{\rD}{\mathrm{D}}}
132 \CustomizeMathJax{\newcommand{\rf}{\mathrm{f}}}
133 \CustomizeMathJax{\newcommand{\rF}{\mathrm{F}}}
134 \CustomizeMathJax{\newcommand{\rH}{\mathrm{H}}}
135 \CustomizeMathJax{\newcommand{\rL}{\mathrm{L}}}
136 \CustomizeMathJax{\newcommand{\rN}{\mathrm{N}}}
137 \CustomizeMathJax{\newcommand{\rt}{\mathrm{t}}}
138 \CustomizeMathJax{\newcommand{\rU}{\mathrm{U}}}
139 \CustomizeMathJax{\newcommand{\rGam}{\mathrm{Gam}}}
140 \CustomizeMathJax{\newcommand{\rBeta}{\mathrm{Beta}}}
141
142 \CustomizeMathJax{\newcommand{\Bin}{\mathrm{Bin}}}
143 \CustomizeMathJax{\newcommand{\eu}{\mathrm{e}}}
144 \CustomizeMathJax{\newcommand{\iu}{\mathrm{i}}}
145 \CustomizeMathJax{\newcommand{\LN}{\mathrm{LN}}}
146 \CustomizeMathJax{\newcommand{\IN}{\mathrm{IN}}}
147
148 \CustomizeMathJax{\newcommand{\Poi}{\mathrm{Poi}}}
149
150 \CustomizeMathJax{\newcommand{\ped}[1]{_\mathrm{#1}}}
151 \CustomizeMathJax{\newcommand{\ap}[1]{^\mathrm{#1}}}
152 \CustomizeMathJax{\renewcommand{\Re}{\mathrm{Re}}{\nolimits}}
153 \CustomizeMathJax{\renewcommand{\Im}{\mathrm{Im}}{\nolimits}}
154
155 \CustomizeMathJax{\newcommand{\deriv}[3][]{%
156   \frac{\mathrm{d}^{#1}\mathrm{d}}{\mathrm{d}\,^{#3}\mathrm{#1}}%
157 }}
158 \CustomizeMathJax{\newcommand{\pderiv}[3][]{%
159   \frac{\partial^{#1}\mathrm{d}}{\partial \mathrm{#3}\mathrm{#1}}%
160 }}
161
162 \CustomizeMathJax{\newcommand{\bias}{\operatorname{bias}}}
163 \CustomizeMathJax{\newcommand{\col}{\operatorname{col}}}
164 \CustomizeMathJax{\newcommand{\corr}{\operatorname{corr}}}
165 \CustomizeMathJax{\newcommand{\cov}{\operatorname{cov}}}
166 \CustomizeMathJax{\newcommand{\dg}{\operatorname{dg}}}
167 \CustomizeMathJax{\newcommand{\diag}{\operatorname{diag}}}
168 \CustomizeMathJax{\newcommand{\E}{\operatorname{E}}}
169 \CustomizeMathJax{\newcommand{\etr}{\operatorname{etr}}}
170 \CustomizeMathJax{\newcommand{\ip}{\mathrm{int}}{\nolimits}}
171 \CustomizeMathJax{\newcommand{\kur}{\operatorname{kur}}}
172 \CustomizeMathJax{\newcommand{\MSE}{\operatorname{MSE}}}
173 \CustomizeMathJax{\newcommand{\MSFE}{\operatorname{MSFE}}}
174 \CustomizeMathJax{\newcommand{\OLS}{\operatorname{OLS}}}
175 \CustomizeMathJax{\newcommand{\plim}{\operatorname{plim}}}
176 \CustomizeMathJax{\newcommand{\resid}{\operatorname{resid}}}
177 \CustomizeMathJax{\newcommand{\rk}{\operatorname{rk}}}
178 \CustomizeMathJax{\newcommand{\SE}{\operatorname{SE}}}
179 \CustomizeMathJax{\newcommand{\sgn}{\operatorname{sgn}}}
180 \CustomizeMathJax{\newcommand{\tr}{\operatorname{tr}}}
181 \CustomizeMathJax{\newcommand{\var}{\operatorname{var}}}
182 \CustomizeMathJax{\renewcommand{\vec}{\operatorname{vec}}}
183 \CustomizeMathJax{\newcommand{\vech}{\operatorname{vech}}}
184

```

```

185 \CustomizeMathJax{\newcommand{\distr}{\sim}}
186 \CustomizeMathJax{\newcommand{\adistr}{\stackrel{a}{\distr}}}
187 \CustomizeMathJax{\newcommand{\diff}{\Delta}}
188 \CustomizeMathJax{\newcommand{\fdiff}{\diff_{\rf}}}
189 \CustomizeMathJax{\newcommand{\bdiff}{\diff_{\rb}}}
190
191 \CustomizeMathJax{\newcommand{\eps}{\epsilon}}
192 \CustomizeMathJax{\newcommand{\epsi}{\varepsilon}}
193
194 \CustomizeMathJax{\newcommand{\longto}{\longrightarrow}}
195 \CustomizeMathJax{\newcommand{\pto}{\stackrel{p}{\longrightarrow}}}
196 \CustomizeMathJax{\newcommand{\dto}{\stackrel{d}{\longrightarrow}}}
197 \CustomizeMathJax{\newcommand{\wto}{\stackrel{w}{\longrightarrow}}}
198
199 \CustomizeMathJax{\newcommand{\Infmat}{\bm{calI}}}
200 \CustomizeMathJax{\newcommand{\Hesmat}{\bm{calH}}}
201 \CustomizeMathJax{\newcommand{\bcdot}{\bullet}}
202
203 \CustomizeMathJax{\newcommand{\vones}{\bm{\imath}}}
204 \CustomizeMathJax{\newcommand{\vzeros}{\boldsymbol{0}}}
205 \CustomizeMathJax{\newcommand{\mZeros}{\mathbf{0}}}
206
207 \CustomizeMathJax{\newcommand{\e}{\eu}}
208 \CustomizeMathJax{\newcommand{\mply}{\cdot}}
209 \CustomizeMathJax{\newcommand{\rW}{\ensuremath{\mathrm{W}}}}
210 \end{warpMathJax}

```

File 111 **lwarp-ed.sty**

§ 213 Package **ed**

(Emulates or patches code by MICHAEL KOHLHASE.)

Pkg ed **ed** is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{ed}[2012/01/29]

Bugs:

1. todoList fails with the hide option, as does \edexplanation.
2. \edstubURI is actually \edstuURI.

```

2 \RequirePackage{xcolor}
3
4 \renewenvironment{edstub}[2][The following blue text]
5 {%
6   \def@test{#1}%
7   \begin{center}%
8     \huge%
9     \textcolor{red}{%
10      #1 is only a provisional stub\\Large

```

```

11         the Office document
12         \ifx\ed@stubURI\@empty{#2}\else\href{\ed@stubURI}{#2}\fi\
13         contains more text\which will be merged for the final document%
14     }%
15 \end{center}%
16 \BlockClass[color:blue]{edstub}%
17 }
18 {\endBlockClass}

```

File 112 **lwarp-ellipsis.sty**

§ 214 Package **ellipsis**

(Emulates or patches code by PETER J. HESLIN.)

Pkg ellipsis ellipsis is emulated.

```

1 \LWR@ProvidesPackageDrop{ellipsis}[2004/09/28]
2
3 \newcommand{\ellipsisgap}{0.1em}
4
5 \newcommand*{\midwordellipsis}{\,\textellipsis\,}

```

File 113 **lwarp-embrac.sty**

§ 215 Package **embrac**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg embrac embrac is nullfied for HTML and used as-is for print.

for HTML output:

```

1 \LWR@ProvidesPackagePass{embrac}[2017/07/04]
2
3 \LetLtxMacro\LWR@orig@HTML@emph\LWR@HTML@emph
4 \RenewDocumentCommand{\LWR@HTML@emph}{s m}{\LWR@orig@HTML@emph{#2}}
5
6 \LetLtxMacro\LWR@orig@HTML@textit\LWR@HTML@textit
7 \RenewDocumentCommand{\LWR@HTML@textit}{s m}{\LWR@orig@HTML@textit{#2}}
8
9 \LetLtxMacro\LWR@orig@HTML@textsl\LWR@HTML@textsl
10 \RenewDocumentCommand{\LWR@HTML@textsl}{s m}{\LWR@orig@HTML@textsl{#2}}
11
12 \ifxetexorluatex
13 \LetLtxMacro\LWR@orig@HTML@textsi\LWR@HTML@textsi
14 \RenewDocumentCommand{\LWR@HTML@textsi}{s m}{
15 \LWR@orig@HTML@textsi{#2}}
16 \fi
17 \AtBeginDocument{
18 \LWR@formatted{emph}

```

```

19 \LWR@formatted{textit}
20 \LWR@formatted{textsl}
21 \ifxetexorluatex
22   \LWR@formatted{textsi}
23 \fi
24 }
25
26 \newcommand{\LWR@HTML@EmbracOff}{}
27 \LWR@formatted{EmbracOff}
28
29 \newcommand{\LWR@HTML@EmbracOn}{}
30 \LWR@formatted{EmbracOn}

```

File 114 **lwarp-emptypage.sty**

§ 216 Package **emptypage**

Pkg emptypage emptypage is ignored.

for HTML output: Discard all options for lwarp-emptypage:

```
1 \LWR@ProvidesPackageDrop{emptypage}[2010/05/30]
```

File 115 **lwarp-endfloat.sty**

§ 217 Package **endfloat**

Pkg endfloat endfloat is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{endfloat}[2019/04/15]

```

2 \newcommand\figureplace{}
3 \newcommand\tableplace{}
4 \newcommand\floatplace[1]{}
5 \newcounter{posttable}
6 \newcounter{postfigure}
7 \newcommand*\theposttbl{}
8 \newcommand*\thepostfig{}
9 \newcommand{\AtBeginFigures}[1]{}
10 \newcommand{\AtBeginTables}[1]{}
11 \newcommand{\AtBeginDelayedFloats}[1]{}
12 \newcommand*\processdelayedfloats{}
13 \newcommand*\efloatseparator{}
14 \def\efloattype{}
15 \providecommand\efloatheading[1]{}
16 \providecommand\efloatpreamble{}
17 \providecommand\efloatpostamble{}
18 \NewDocumentCommand{\addtodelayedfloat}{s m m}{}
19 \providecommand{\efloatbegin}{}
20 \providecommand{\efloatend}{}

```

```
21 \providecommand{\efloatbeginlist}{}
22 \providecommand{\efloatendlist}{}

```

File 116 **lwarp-endheads.sty**

§ 218 Package **endheads**

Pkg endheads endheads is ignored.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{endheads}[2017/04/06]

2 \newcommand{\changesinglepageabbrev}[1]{}
3 \newcommand{\changemultiplepageabbrev}[1]{}
4 \newcommand{\changenotesname}[1]{}
5 \newcommand{\changenotesheader}[1]{}
6 \newcommand{\changenotescontentsname}[1]{}
7 \newcommand{\changechapternotesline}[1]{}
8 \newcommand{\checknoteheaders}{}
9 \newif\ifnotesincontentson \notesincontentsonfalse
10 \newcommand{\notesincontents}{\notesincontentsontrue}
11 \newif\ifendnoteheaderson \endnoteheadersonfalse
12 \newcommand{\setupendnoteheaders}{%
13   \endnoteheadersontrue%
14 }
15 \newif\iftitleinnotes \titleinnotesttrue
16 \newcommand{\styleforchapternotebegin}{}
17 \newcommand{\styleforchapternoteend}{}
18 \newcommand{\setstyleforchapternotebegin}[1]{%
19   \renewcommand{\styleforchapternotebegin}{#1}%
20 }
21 \newcommand{\setstyleforchapternoteend}[1]{%
22   \renewcommand{\styleforchapternoteend}{#1}%
23 }
24 \newcommand{\resetendnotes}{}
25 \newif\ifnotesbychapteron \notesbychapteronfalse
26 \newcommand{\notesbychapter}{\notesbychapterontrue}

```

File 117 **lwarp-endnotes.sty**

§ 219 Package **endnotes**

(Emulates or patches code by JOHN LAVAGNINO.)

Pkg endnotes Patched for HTML.

[table of contents](#) To place the endnotes in the TOC, use:

```
\usepackage{endnotes}
\appto\enoteheading{\addcontentsline{toc}{section}{\notesname}}
\renewcommand*{\notesname}{Endnotes} % optional

```

HTML page To additionally have the endnotes on their own HTML page, if FileDepth allows:

```
\ForceHTMLPage
\theendnotes
```

 **\endnotemark numbering** If using MATHJAX, see section 8.5.4 regarding the use of \endnotemark and \endnotetext.

for HTML output:

```
1 \LWR@ProvidesPackagePass{endnotes}

2 \def\enoteformat{%
3 % \rightskip\z@ \leftskip\z@ \parindent=1.8em
4 \leavevmode
5 % \llap{
6 \makeenmark
7 % }
8 }

9 \def\LWR@HTML@makeenmark{\hbox{\LWR@htmlspan{sup}{\normalfont\theenmark}}}
10 \LWR@formatted{@makeenmark}
11
12 \def\makeenmark{@makeenmark}
```

For MATHJAX:

```
13 \begin{warpMathJax}
14 \def\endnotenamename{endnote}
15 \appto\LWR@syncnotenumbers{\LWR@synconenotenummer{\LWRendnote}{\theendnote}}
16 \appto\LWR@syncnotenames{\LWR@synconenotename{\LWRendnote}{\endnotenamename}}
17 \CustomizeMathJax{\def\LWRendnote{1}}
18 \CustomizeMathJax{\newcommand{\endnote}[2][\LWRendnote]{{}^{\mathrm{#1}}}}
19 \CustomizeMathJax{\newcommand{\endnotemark}[1][\LWRendnote]{{}^{\mathrm{#1}}}}
20 \end{warpMathJax}
```

File 118 **lwarp-engt1c.sty**

§ 220 Package **engt1c**

(Emulates or patches code by CLAUDIO FIANDRINO.)

Pkg engt1c engt1c is patched for use by lwarp. MATHJAX is emulated.

 For MATHJAX, \sight, \signf, \signn, and \signz do not force letter case as they do in SVG math.

for HTML output:

```
1 \LWR@ProvidesPackagePass{engt1c}[2012/12/18]

2 \newcommand{\LWR@HTML@finees}{%
3   \begin{BlockClass}[text-align:right]{exerend}%
4   \HTMLUnicode{220E}%
5   \end{BlockClass}%
6 }
```

```
7 \LWR@formatted{fines}
8
9 \newcommand{\LWR@HTML@exerend}{\fines}
10 \LWR@formatted{exerend}
11
12 \begin{warpMathJax}
13 \LWR@infoprocessingmathjax{engtlc}
14
15 \CustomizeMathJax{\newcommand{\unit}[1]{\, \mathrm{#1}}}
16 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
17 %
18 \CustomizeMathJax{\newcommand{\ho}{\unit{h}}}
19 \CustomizeMathJax{\newcommand{\s}{\unit{s}}}
20 \CustomizeMathJax{\newcommand{\ms}{\unit{ms}}}
21 \CustomizeMathJax{\newcommand{\us}{\unit{\micro s}}}
22 \CustomizeMathJax{\newcommand{\ns}{\unit{ns}}}
23 \CustomizeMathJax{\newcommand{\ps}{\unit{ps}}}
24 %
25 \CustomizeMathJax{\newcommand{\um}{\unit{\micro m}}}
26 \CustomizeMathJax{\newcommand{\mm}{\unit{mm}}}
27 \CustomizeMathJax{\newcommand{\cm}{\unit{cm}}}
28 \CustomizeMathJax{\newcommand{\dm}{\unit{dm}}}
29 \CustomizeMathJax{\newcommand{\m}{\unit{m}}}
30 \CustomizeMathJax{\newcommand{\km}{\unit{km}}}
31 %
32 \CustomizeMathJax{\newcommand{\MA}{\unit{MA}}}
33 \CustomizeMathJax{\newcommand{\kA}{\unit{kA}}}
34 \CustomizeMathJax{\newcommand{\A}{\unit{A}}}
35 \CustomizeMathJax{\newcommand{\mA}{\unit{mA}}}
36 \CustomizeMathJax{\newcommand{\uA}{\unit{\micro A}}}
37 \CustomizeMathJax{\newcommand{\nA}{\unit{nA}}}
38 %
39 \CustomizeMathJax{\newcommand{\MV}{\unit{MV}}}
40 \CustomizeMathJax{\newcommand{\kV}{\unit{kV}}}
41 \CustomizeMathJax{\newcommand{\V}{\unit{V}}}
42 \CustomizeMathJax{\newcommand{\mV}{\unit{mV}}}
43 \CustomizeMathJax{\newcommand{\uV}{\unit{\micro V}}}
44 %
45 \CustomizeMathJax{\newcommand{\mohm}{\unit{m\Omega}}}
46 \CustomizeMathJax{\newcommand{\ohm}{\unit{\Omega}}}
47 \CustomizeMathJax{\newcommand{\kohm}{\unit{k\Omega}}}
48 \CustomizeMathJax{\newcommand{\Mohm}{\unit{M\Omega}}}
49 %
50 \CustomizeMathJax{\newcommand{\pSi}{\unit{pS}}}
51 \CustomizeMathJax{\newcommand{\nSi}{\unit{nS}}}
52 \CustomizeMathJax{\newcommand{\uSi}{\unit{\micro S}}}
53 \CustomizeMathJax{\newcommand{\mSi}{\unit{mS}}}
54 \CustomizeMathJax{\newcommand{\Si}{\unit{S}}}
55 \CustomizeMathJax{\newcommand{\kSi}{\unit{kS}}}
56 \CustomizeMathJax{\newcommand{\MSi}{\unit{MS}}}
57 %
58 \CustomizeMathJax{\newcommand{\fFa}{\unit{fF}}}
59 \CustomizeMathJax{\newcommand{\pFa}{\unit{pF}}}
60 \CustomizeMathJax{\newcommand{\nFa}{\unit{nF}}}
61 \CustomizeMathJax{\newcommand{\uFa}{\unit{\micro F}}}
```

```

62 \CustomizeMathJax{\newcommand{\mFa}{\unit{mF}}}
63 \CustomizeMathJax{\newcommand{\Fa}{\unit{F}}}
64 %
65 \CustomizeMathJax{\newcommand{\fHe}{\unit{fH}}}
66 \CustomizeMathJax{\newcommand{\pHe}{\unit{pH}}}
67 \CustomizeMathJax{\newcommand{\nHe}{\unit{nH}}}
68 \CustomizeMathJax{\newcommand{\uHe}{\unit{\micro H}}}
69 \CustomizeMathJax{\newcommand{\mHe}{\unit{mH}}}
70 \CustomizeMathJax{\newcommand{\He}{\unit{H}}}
71 %
72 \CustomizeMathJax{\newcommand{\dB}{\unit{dB}}}
73 \CustomizeMathJax{\newcommand{\dBm}{\unit{dBm}}}
74 %
75 \CustomizeMathJax{\newcommand{\uW}{\unit{\micro W}}}
76 \CustomizeMathJax{\newcommand{\mW}{\unit{mW}}}
77 \CustomizeMathJax{\newcommand{\W}{\unit{W}}}
78 \CustomizeMathJax{\newcommand{\kW}{\unit{kW}}}
79 \CustomizeMathJax{\newcommand{\MW}{\unit{MW}}}
80 %
81 \CustomizeMathJax{\newcommand{\Hz}{\unit{Hz}}}
82 \CustomizeMathJax{\newcommand{\kHz}{\unit{kHz}}}
83 \CustomizeMathJax{\newcommand{\MHz}{\unit{MHz}}}
84 \CustomizeMathJax{\newcommand{\GHz}{\unit{GHz}}}
85 \CustomizeMathJax{\newcommand{\THz}{\unit{THz}}}
86 %
87 \CustomizeMathJax{\newcommand{\bit}{\unit{bit}}}
88 \CustomizeMathJax{\newcommand{\kbit}{\unit{Kib}}}
89 \CustomizeMathJax{\newcommand{\Mbit}{\unit{Mib}}}
90 \CustomizeMathJax{\newcommand{\Byte}{\unit{B}}}
91 \CustomizeMathJax{\newcommand{\kByte}{\unit{KiB}}}
92 \CustomizeMathJax{\newcommand{\MByte}{\unit{Mib}}}
93 \CustomizeMathJax{\newcommand{\GByte}{\unit{GiB}}}
94 \CustomizeMathJax{\newcommand{\TByte}{\unit{TiB}}}
95 \CustomizeMathJax{\newcommand{\bits}{\unit{bit/s}}}
96 \CustomizeMathJax{\newcommand{\kbits}{\unit{Kib/s}}}
97 \CustomizeMathJax{\newcommand{\Mbits}{\unit{Mib/s}}}
98 \CustomizeMathJax{\newcommand{\Bytes}{\unit{B/s}}}
99 \CustomizeMathJax{\newcommand{\kBytes}{\unit{KiB/s}}}
100 \CustomizeMathJax{\newcommand{\MBytes}{\unit{MiB/s}}}
101 \CustomizeMathJax{\newcommand{\GBytes}{\unit{GiB/s}}}
102 \CustomizeMathJax{\newcommand{\TBytes}{\unit{TiB/s}}}
103 \CustomizeMathJax{\newcommand{\chips}{\unit{chip/s}}}
104 \CustomizeMathJax{\newcommand{\kchips}{\unit{Ki\mkern2mu chip/s}}}
105 \CustomizeMathJax{\newcommand{\Mchips}{\unit{Mi\mkern2mu chip/s}}}
106 \CustomizeMathJax{\newcommand{\chipsbit}{\unit{chip/bit}}}
107 %
108 \CustomizeMathJax{\newcommand{\frecciadex}[1][0.5]{%
109   \hspace{.25cm}\Longrightarrow \hspace{.25cm}}%
110 }
111 \CustomizeMathJax{\newcommand{\varianzarumore}{\frac{N_0}{2}}}
112 %
113 \CustomizeMathJax{\newcommand{\etsymbolbracearg}[2]{%
114   #1\mathopen{ }\left\lbrace#2\right\rbrace\mathclose{ }}%
115 }
116 \CustomizeMathJax{\newcommand{\fourier}[1]{\etsymbolbracearg{\mathcal{F}}{#1}}}

```

```

117 \CustomizeMathJax{\newcommand{\invfourier}[1]{\etsymbolbracearg{\mathcal{F}^{-1}}{#1}}}
118 \CustomizeMathJax{\newcommand{\partereale}[1]{\etsymbolbracearg{\textbf{Re}}{#1}}}
119 \CustomizeMathJax{\newcommand{\parteimm}[1]{\etsymbolbracearg{\textbf{Im}}{#1}}}
120 \CustomizeMathJax{\newcommand{\Info}[1]{\left(#1\right)}}
121 \CustomizeMathJax{\newcommand{\versore}[1]{\hat{#1}}}
122 \CustomizeMathJax{\newcommand{\vettore}[1]{\overrightarrow{#1}}}
123 \CustomizeMathJax{\newcommand{\coseno}[1]{\cos\left(2\pi\#1t\right)}}
124 \CustomizeMathJax{\newcommand{\seno}[1]{\sin\left(2\pi\#1t\right)}}
125 \CustomizeMathJax{\newcommand{\energia}[1]{\mathcal{E}_{#1}}}
126 \CustomizeMathJax{\newcommand{\moduloexp}[2]{\left\vert\#1\right\vert^{\#2}}}
127 \CustomizeMathJax{\newcommand{\modulo}[1]{\left\vert\#1\right\vert}}
128 \CustomizeMathJax{\newcommand{\indB}[1]{%
129   \mathopen{\left.#1\right\vert}_{\mathrm{dB}}\mathclose{}}}
130 \CustomizeMathJax{\newcommand{\for}[2]{\left.#1\right\vert_{\#2}}}
131 \CustomizeMathJax{\newcommand{\massimo}[1]{\etsymbolbracearg{\max}{#1}}}
132 \CustomizeMathJax{\newcommand{\minimo}[1]{\etsymbolbracearg{\min}{#1}}}
133 \CustomizeMathJax{\newcommand{\valc}{3\cdot 10^8}}
134 \CustomizeMathJax{\newcommand{\loga}[2]{\log_{#1}\#2}}
135 \CustomizeMathJax{\newcommand{\analitic}[1]{\mathring{#1}}}
136 \CustomizeMathJax{\newcommand{\diff}{\mathop{\mathopen{\mathrm{d}}}}}
137 \CustomizeMathJax{\newcommand{\intinf}[1]{\int_{-\infty}^{+\infty}{#1}}}
138 \CustomizeMathJax{\newcommand{\deltain}[1]{\delta\left(\#1\right)}}
139 \CustomizeMathJax{\newcommand{\iu}{\mathrm{j}}}
140 \CustomizeMathJax{\newcommand{\ex}[1]{\mathrm{e}^{\#1}}}
141 %
142 \CustomizeMathJax{\newcommand{\gammatens}{\{\}\^{\mathrm{V}}\Gamma}}
143 \CustomizeMathJax{\newcommand{\gammacorr}{\{\}\^{\mathrm{I}}\Gamma}}
144 \CustomizeMathJax{\newcommand{\gammatensin}[1]{\{\}\^{\mathrm{V}}\Gamma_{\mathrm{#1}}}}
145 \CustomizeMathJax{\newcommand{\gammacorrin}[1]{\{\}\^{\mathrm{I}}\Gamma_{\mathrm{#1}}}}
146 \CustomizeMathJax{\newcommand{\gammain}[1]{\Gamma_{\mathrm{#1}}}}
147 \CustomizeMathJax{\newcommand{\gammak}{\{\}\^{\mathrm{k}}\Gamma}}
148 %
149 \CustomizeMathJax{\newcommand{\lbvt}{\lambda_0}}
150 \CustomizeMathJax{\newcommand{\lbg}{\lambda_g}}
151 \CustomizeMathJax{\newcommand{\lbgvt}{\lambda_{g_0}}}
152 %
153 \CustomizeMathJax{\newcommand{\potin}[1]{P_{\mathrm{#1}}}}
154 \CustomizeMathJax{\newcommand{\potdisp}[1][P_{\mathrm{disp}}^{\#1}}
155 \CustomizeMathJax{\newcommand{\potDC}[1][P_{\mathrm{DC}}^{\#1}}
156 \CustomizeMathJax{\newcommand{\potCC}[1][P_{\mathrm{CC}}^{\#1}}
157 \CustomizeMathJax{\newcommand{\potirr}[1][P_{\mathrm{irr}}^{\#1}}
158 \CustomizeMathJax{\newcommand{\potdiss}[1][P_{\mathrm{diss}}^{\#1}}
159 \CustomizeMathJax{\newcommand{\potinc}[1][P_{\mathrm{inc}}^{\#1}}
160 %
161 \CustomizeMathJax{\newcommand{\z}[1]{Z_{\mathrm{#1}}}}
162 \CustomizeMathJax{\newcommand{\znorm}[1]{z_{\mathrm{#1}}}}
163 \CustomizeMathJax{\newcommand{\y}[1]{Y_{\mathrm{#1}}}}
164 \CustomizeMathJax{\newcommand{\ynorm}[1]{y_{\mathrm{#1}}}}
165 \CustomizeMathJax{\newcommand{\zinf}[1][Z_{\infty\#1}}
166 \CustomizeMathJax{\newcommand{\zinfn}[1]{zinf[\#1]}
167 \CustomizeMathJax{\newcommand{\yinf}[1][Y_{\infty\#1}}
168 \CustomizeMathJax{\newcommand{\yinfn}[1]{yinf[\#1]}
169 \CustomizeMathJax{\newcommand{\zvt}{Z_0}}
170 \CustomizeMathJax{\newcommand{\yvt}{Y_0}}
171 %

```

```

172 \CustomizeMathJax{\newcommand{\campoe}{\underline{\mathcal{E}}(\underline{r},t)}}
173 \CustomizeMathJax{\newcommand{\campoe fas}{\underline{E}(\underline{r})}}
174 \CustomizeMathJax{\newcommand{\campoh}{\underline{\mathcal{H}}(\underline{r},t)}}
175 \CustomizeMathJax{\newcommand{\campoh fas}{\underline{H}(\underline{r})}}
176 %
177 \CustomizeMathJax{\newcommand{\signt}[1]{\#1}(t)}
178 \CustomizeMathJax{\newcommand{\signf}[1]{\#1}(f)}
179 \CustomizeMathJax{\newcommand{\signn}[1]{\#1}(n)}
180 \CustomizeMathJax{\newcommand{\signz}[1]{\#1}(z)}
181 %
182 \CustomizeMathJax{\newcommand{\prob}[1]{\mathcal{P}\left(\#1\right)}}
183 \CustomizeMathJax{\newcommand{\valatt}[1]{\mathbb{E}\left[\#1\right]}}
184 \CustomizeMathJax{\newcommand{\var}[1]{\mathrm{Var}\left[\#1\right]}}
185 \CustomizeMathJax{\newcommand{\comma}{\ , \ , \ ,}}
186 \CustomizeMathJax{\newcommand{\dato}{\ , | \ ,}}
187 %
188 \CustomizeMathJax{\let\bfRe\partereale}
189 \CustomizeMathJax{\let\bfIm\parteimm}
190 \CustomizeMathJax{\let\noisevar\varianzarumore}
191 % \CustomizeMathJax{\let\exerend\finees}
192 \CustomizeMathJax{\let\Spimplies\frecciadex}
193 \CustomizeMathJax{\let\Downimplies\frecciadown}
194 \CustomizeMathJax{\let\unitvec\versore}
195 \CustomizeMathJax{\let\vector\vettore}
196 \CustomizeMathJax{\let\cosine\coseno}
197 \CustomizeMathJax{\let\sine\seno}
198 \CustomizeMathJax{\let\energy\energia}
199 \CustomizeMathJax{\let\Abs\modulo}
200 \CustomizeMathJax{\let\AbsPow\moduloexp}
201 \CustomizeMathJax{\let\Max\massimo}
202 \CustomizeMathJax{\let\Min\minimo}
203 \CustomizeMathJax{\let\clight\valc}
204 \CustomizeMathJax{\let\Log\loga}
205 \CustomizeMathJax{\let\analytic\analitic}
206 \CustomizeMathJax{\let\infint\intinf}
207 \CustomizeMathJax{\let\deltaimp\deltaimp}
208 \CustomizeMathJax{\let\Vgamma\gammatens}
209 \CustomizeMathJax{\let\Cgamma\gammacorr}
210 \CustomizeMathJax{\let\Vgammain\gammatensin}
211 \CustomizeMathJax{\let\Cgammain\gammacorrin}
212 \CustomizeMathJax{\let\Kgamma\gammak}
213 \CustomizeMathJax{\let\powerin\potin}
214 \CustomizeMathJax{\let\availpow\potdisp}
215 \CustomizeMathJax{\let\irrpow\potirr}
216 \CustomizeMathJax{\let\disppow\potdiss}
217 \CustomizeMathJax{\let\incpow\potinc}
218 \CustomizeMathJax{\let\potalim\potCC}
219 \CustomizeMathJax{\let\potDC\potCC}
220 \CustomizeMathJax{\let\Efield\campoe}
221 \CustomizeMathJax{\let\Hfield\campoh}
222 \CustomizeMathJax{\let\phasorEfield\campoe fas}
223 \CustomizeMathJax{\let\phasorHfield\campoh fas}
224 \CustomizeMathJax{\let\given\dato}
225 \CustomizeMathJax{\let\expval\valatt}
226 \CustomizeMathJax{\let\rmexp\ex}

```

```
227 \end{warpMathJax}
```

File 119 **lwarp-enumerate.sty**

§ 221 Package **enumerate**

Pkg enumerate enumerate is supported with no changes.

This package is only required because it was used in the past to drop and then emulate the package. It cannot be removed because an older version which dropped the package may still remain, for example in a local vs. distribution directory, but it is now supported directly by `lwarp` and thus must no longer be dropped.

for HTML output: 1 \LWR@ProvidesPackagePass{enumerate}[2015/07/23]

File 120 **lwarp-enumitem.sty**

§ 222 Package **enumitem**

(Emulates or patches code by JAVIER BEZOS.)

Pkg enumitem enumitem is supported with minor adjustments.

for HTML output: 1 \LWR@ProvidesPackagePass{enumitem}[2018/11/30]

for HTML output: 2 \begin{warpHTML}

```
\newlist {<name>} {<type>} {<maxdepth>}
\renewlist {<name>} {<type>} {<maxdepth>}
```

For `enumitem` lists, new lists must have the start and end actions assigned to the new environment. Renewed lists already have their actions assigned, and thus need no changes.

```
3 \let\LWR@enumitem@orignewlist\newlist
4
5 \renewcommand*{\newlist}[3]{%
6 \LWR@enumitem@orignewlist{#1}{#2}{#3}%
7 \AtBeginEnvironment{#1}{\@nameuse{LWR@#2start}}%
8 \AtEndEnvironment{#1}{\@nameuse{LWR@#2end}}%
9 }
10
11 \def\DrawEnumitemLabel{}
```

```
12 \end{warpHTML}
```

File 121 **lwarp-epigraph.sty**

§ 223 Package **epigraph**

(Emulates or patches code by PETER WILSON.)

Pkg epigraph epigraph is emulated for HTML, and used as-is for print output.

Use css to format epigraphs.

for HTML output:

```

1 \LWR@ProvidesPackagePass{epigraph}[2020/01/02]

2 \DeclareDocumentCommand{\LWR@HTML@qitem}{m m}
3 {%
4   \begin{BlockClass}{qitem}%
5   #1%
6   \LWR@stoppars%
7   \ifbool{FormatWP}%
8     {\begin{BlockClass}[border-top:1px solid gray]{epigraphsource}}%
9     {\begin{BlockClass}{epigraphsource}}%
10  #2%
11  \end{BlockClass}%
12  \end{BlockClass}%
13 }
14 \LWR@formatted{qitem}

15 \DeclareDocumentCommand{\LWR@HTML@epigraph}{m m}
16 {%
17   \begin{LWR@BlockClassWP}{\LWR@print@mbbox{text-align:right}}{epigraph}%
18   \qitem{#1}{#2}%
19   \end{LWR@BlockClassWP}%
20 }
21 \LWR@formatted{epigraph}
22
23 \DeclareDocumentEnvironment{LWR@HTML@epigraphs}{}
24   {\LWR@BlockClassWP{\LWR@print@mbbox{text-align:right}}{epigraph}}
25   {\endLWR@BlockClassWP}
26 \LWR@formattedenv{epigraphs}

```

The following cannot be used in print mode while generating HTML:

```

27 \renewcommand{\epigraphhead}[2][0]{#2}
28 \renewcommand{\dropchapter}[1]{}
29 \renewcommand*\undodrop{}

```

File 122 **lwarp-epsfig.sty**§ 224 Package **epsfig**

Pkg epsfig epsfig is emulated for use by lwarp.

 Only the L^AT_EX2e 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 123 **lwarp-epstopdf.sty**§ 225 Package **epstopdf**

Pkg epstopdf Previous versions of lwarp had a nullfied version, but now `epstopdf-base` is supported. `lwarp-epstopdf` becomes a placeholder to overwrite previous versions.

See package `epstopdf-base` for details.

for HTML output: 1 \LWR@ProvidesPackagePass{epstopdf}[2016/05/15]

File 124 **lwarp-epstopdf-base.sty**

§ 226 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 125 **lwarp-eqlist.sty**

§ 227 Package **eqlist**

Pkg eqlist eqlist is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{eqlist}[2002/08/15]

```

2 \newenvironment{eqlist}[1][\description]{\enddescription}
3 \newenvironment{eqlist*}[1][\description]{\enddescription}
4 \newenvironment{EqList}[2][\description]{\enddescription}
5 \newenvironment{EqList*}[2][\description]{\enddescription}
6 \newcommand*\longitem[1][\item[#1]}
7 \newcommand*\eqlistinit{}
8 \newcommand*\eqliststarinit{}
9 \newcommand*\eqlistinitpar{}
10 \def\eqlistlabel#1{#1}
11 \newcommand{\eqlistauto}[1]{}
12 \newcommand{\eqlistnoauto}{}

```

File 126 **lwarp-eqparbox.sty**

§ 228 Package **eqparbox**

(Emulates or patches code by SCOTT PAKIN.)

Pkg eqparbox eqparbox is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{eqparbox}[2017/09/03]

```

2 \NewDocumentCommand{\LWR@HTML@eqparbox}{O{t} O{} O{t} m +m}{%
3   {%
4     \minipagefullwidth%
5     \parbox[#1][#2][#3]{\linewidth}{#5}%
6   }%
7 }
8 \LWR@formatted{eqparbox}
9
10 \NewDocumentCommand{\LWR@HTML@eqmakebox}{o o m}{%
11   \makebox[#2][#3]%
12 }
13 \LWR@formatted{eqmakebox}
14
15 \NewDocumentCommand{\LWR@HTML@eqframebox}{o o m}{%
16   \framebox[#2][#3]%
17 }
18 \LWR@formatted{eqframebox}
19

```

```

20 \NewDocumentEnvironment{LWR@HTML@eqminipage}{0{t} 0{} 0{t} m}
21 {%
22   \begingroup%
23   \minipagefullwidth%
24   \minipage[#1][#2][#3]{\linewidth}%
25 }%
26 {%
27   \endminipage%
28   \endgroup%
29 }
30
31 \newcommand*\LWR@HTML@eqboxwidth}[1]{.25\linewidth}
32 \LWR@formatted{eqboxwidth}
33
34 \newcommand*\LWR@HTML@eqsetminwidth}[2]{}
35 \newcommand*\LWR@HTML@eqsetmaxwidth}[2]{}
36
37 \newcommand*\LWR@HTML@eqsetminwidthto}[2]{}
38 \newcommand*\LWR@HTML@eqsetmaxwidthto}[2]{}

```

File 127 **lwarp-errata.sty**

§ 229 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}\textsuperscript{\@thefnmark}}
35   {}
36   {\LWR@patcherror{erratum}{eDelete}}
37
38 \xpatchcmd{\erratum}
39   {$_r^{\@thefnmark}$}
40 %   {\inlinemathother$_r^{\@thefnmark}$\inlinemathnormal}
41   {\textsubscript{r}\textsuperscript{\@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 128 **lwarp-eso-pic.sty**

§ 230 Package **eso-pic**

(Emulates or patches code by ROLF NIEPRASCHK.)

Pkg eso-pic **eso-pic** is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{eso-pic}[2018/04/12]
2 \newcommand*{\LenToUnit}{}
3 \newcommand{\AtPageUpperLeft}[1]{}
4 \newcommand{\AtPageLowerLeft}[1]{}

```

```

5 \newcommand{\AtPageCenter}[1]{}
6 \newcommand{\AtStockLowerLeft}[1]{}
7 \newcommand{\AtStockUpperLeft}[1]{}
8 \newcommand{\AtStockCenter}[1]{}
9 \newcommand{\AtTextUpperLeft}[1]{}
10 \newcommand{\AtTextLowerLeft}[1]{}
11 \newcommand{\AtTextCenter}[1]{}
12 \NewDocumentCommand{\AddToShipoutPictureBG}{s +m}{}

13 \newcommand{\AddToShipoutPicture}{\AddToShipoutPictureBG}
14 \NewDocumentCommand{\AddToShipoutPictureFG}{s +m}{}
15 \newcommand*\ClearShipoutPictureBG{}
16 \newcommand*\ClearShipoutPicture{}
17 \newcommand*\ClearShipoutPictureFG{}
18 \newcommand{\gridSetup}[6][[]]{}

```

File 129 **lwarp-etoc.sty**

§ 231 Package **etoc**

Pkg etoc etoc is ignored. All commands are nullified.

⚠ **\tableofcontents with \ref** The etoc package uses a non-standard syntax which looks ahead after a `\tableofcontents` for a following `\ref`. These `\refs` appear in the HTML result unless they are removed. Where a `\tableofcontents` is followed by `\ref`, and perhaps also `\label` as well, enclose all of them inside `\warpprintonly`:

```
\warpprintonly{\tableofcontents \ref{toc:abc} \label{toc:def}}
```

or place all code related to a local `\tableofcontents` inside a `warpprint` environment.

⚠ **home page** Be sure to keep the initial `\tableofcontents` on the home page, perhaps in its own `\warppHTMLonly` macro or `warppHTML` environment.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{etoc}[2019/11/17]

2 \def\etocsetlevel#1#2{}
3 \def\etocskipfirstprefix{}
4 \let\etocthename \@empty
5 \let\etocthenumber \@empty
6 \let\etocthepage \@empty
7 \let\etocthelinkedname \@empty
8 \let\etocthelinkednumber \@empty
9 \let\etocthelinkedpage \@empty
10 \let\etocthelink \@firstofone % prior to 1.08j its was \let to \@empty
11 \DeclareRobustCommand*\etocname {}
12 \DeclareRobustCommand*\etocnumber{}
13 \DeclareRobustCommand*\etocpage {}
14 \DeclareRobustCommand*\etoclink {}{\@firstofone}
15 \DeclareRobustCommand*\etocifnumbered{\@firstoftwo}
16 \DeclareRobustCommand*\etociffirst{\@firstoftwo}
17 \DeclareRobustCommand*\etocifwasempty{\@firstoftwo}

```

```

18 \let\etocaftertitlehook \empty
19 \let\etocaftercontentshook \empty
20 \def\etocstableofcontents{}
21 \newcommand*\localtableofcontents{}
22 \newcommand*\localtableofcontentswithrelativedepth[1]{}
23 \newcommand\etocsettocstyle[2]{}
24 \long\def\etocsetstyle#1#2#3#4#5{}
25 \def\etocfontminustwo {\normalfont \LARGE \bfseries}
26 \def\etocfontminusone {\normalfont \Large \bfseries}
27 \def\etocfontzero {\normalfont \Large \bfseries}
28 \def\etocfontone {\normalfont \normalsize \bfseries}
29 \def\etocfonttwo {\normalfont \normalsize}
30 \def\etocfontthree {\normalfont \footnotesize}
31 \def\etocsepminustwo {4ex \@plus .5ex \@minus .5ex}
32 \def\etocsepminusone {4ex \@plus .5ex \@minus .5ex}
33 \def\etocsepzero {2.5ex \@plus .4ex \@minus .4ex}
34 \def\etocsepone {1.5ex \@plus .3ex \@minus .3ex}
35 \def\etocseptwo {.5ex \@plus .1ex \@minus .1ex}
36 \def\etocseptthree {.25ex \@plus .05ex \@minus .05ex}
37 \def\etocbaselinespreadminustwo {1}
38 \def\etocbaselinespreadminusone {1}
39 \def\etocbaselinespreadzero {1}
40 \def\etocbaselinespreadone {1}
41 \def\etocbaselinespreadtwo {1}
42 \def\etocbaselinespreadthree {.9}
43 \def\etocminustwoleftmargin {1.5em plus 0.5fil}
44 \def\etocminustworightmargin {1.5em plus -0.5fil}
45 \def\etocminusoneleftmargin {1em}
46 \def\etocminusonerightmargin {1em}
47 \def\etocclineleaders
48 {\hbox{\normalfont\normalsize\hb@xt@2ex {\hss.\hss}}}
49 \def\etocabbrevpagenamename {p.~}
50 \def\etocpartname {Part}% modified 1.08b
51 \def\etocbookname {Book}
52 \def\etocdefaultlines{}
53 \def\etocabovetocskip{3.5ex \@plus 1ex \@minus .2ex}
54 \def\etocbelovetocskip{3.5ex \@plus 1ex \@minus .2ex}
55 \def\etoccolumnsep{2em}
56 \def\etocmulticolsep{0ex}
57 \def\etocmulticolpretolerance{-1}
58 \def\etocmulticoltolerance{200}
59 \def\etocdefaultnbcol{2}
60 \def\etocinnertopsep{2ex}
61 \newcommand\etocmulticolstyle[2][1]{}
62 \def\etocinnerbottomsep{3.5ex}
63 \def\etocinnerleftsep{2em}
64 \def\etocinnerrightsep{2em}
65 \def\etocoprerule{\hrule}
66 \def\etocleftrule{\vrule}
67 \def\etocrightrule{\vrule}
68 \def\etocbottomrule{\hrule}
69 \def\etocoprulecolorcmd{\relax}
70 \def\etocbottomrulecolorcmd{\relax}
71 \def\etocleftrulecolorcmd{\relax}
72 \def\etocrightrulecolorcmd{\relax}

```

```

73 \newcommand*\etocruledstyle[2][1]{}
74 \def\etocframedmhook{\relax}
75 \long\def\etocbkgcolorcmd{\relax}
76 \newcommand*\etocframedstyle[2][1]{}
77 \def\etocmulticol{}
78 \def\etocruled{}
79 \def\etocframed{}
80 \def\etoclocalmulticol{}
81 \def\etoclocalruled{}
82 \def\etoclocalframed{}
83 \def\etocarticlestyle{}
84 \def\etocarticlestylenomarks{}
85 \def\etocbookstyle{}
86 \def\etocbookstylenomarks{}
87 \let\etocreportstyle\etocbookstyle
88 \let\etocreportstylenomarks\etocbookstylenomarks
89 \def\etocmemoirtocformat #1#2{}
90 \def\etocmemoirstyle{}
91 \def\etocscrartclstyle{}
92 \let\etocscrbookstyle\etocscrartclstyle
93 \let\etocscrreprtstyle\etocscrartclstyle
94 \def\etocstandarddisplaystyle{\etocarticlestyle}
95 \newcommand*\etocmarkboth[1]{}
96 \newcommand*\etocmarkbothnouc[1]{}
97 \newcommand\etocstyle[3][section]{}
98 \newcommand\etocstylewithmarks[4][section]{}
99 \newcommand\etocstylewithmarksnouc[4][section]{}
100 \def\etocignoretoctocdepth{}
101 \def\etocsettocdepth[1]{}
102 \def\etocdepthtag #1#{\Etoc@depthtag }
103 \def\Etoc@depthtag #1{}
104 \def\etocignoredepthtags {}
105 \def\etocobeydepthtags {}
106 \def\etocsettagdepth #1#2{}
107 \def\invisibletableofcontents {}
108 \def\invisiblelocaltableofcontents{}
109 \def\etocsetnexttocdepth #1{}
110 \def\etocsetlocaltop #1#{\Etoc@set@localtop}
111 \def\Etoc@set@localtop #1{}
112 \def\etocstandardlines {}
113 \def\etococlines {}
114 \let\etocaftertochook \@empty
115 \let\etocbeforetitlehook \@empty
116 \appto\tableofcontents{\def\tableofcontents{}}

```

File 130 **lwarp-eurosym.sty**

§ 232 Package **eurosym**

(Emulates or patches code by HENRIK THEILING.)

Pkg eurosym **eurosym** is patched for use by **lwarp**.

for HTML output:

```

1 \LWR@ProvidesPackagePass{eurosym}[1998/08/06]

2 \renewrobustcmd\officialeuro{\HTMLentity{euro}}
3 \let\geneuro\officialeuro
4 \let\geneuronarrow\officialeuro
5 \let\geneurowide\officialeuro
6 \let\euro\officialeuro
7 \renewrobustcmd\eurobars{}
8 \renewrobustcmd\eurobarsnarrow{}
9 \renewrobustcmd\eurobarswide{}

```

File 131 **lwarp-everypage.sty**

§ 233 Package **everypage**

(Emulates or patches code by SERGIO CALLEGARI.)

Pkg everypage **everypage** is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{everypage}[2007/06/20]

2 \newcommand*\AddEverypageHook[1]{}
3 \newcommand*\AddThispageHook[1]{}

```

File 132 **lwarp-everyshi.sty**

§ 234 Package **everyshi**

(Emulates or patches code by MARTIN SCHRÖDER.)

Pkg everyshi ignored.

for HTML output: Discard all options for lwarp-everyshi:

```

1 \LWR@ProvidesPackageDrop{everyshi}[2001/05/15]

2 \newcommand*\EveryShipout[1]{}
3 \newcommand*\AtNextShipout[1]{}

```

File 133 **lwarp-extarrows.sty**

§ 235 Package **extarrows**

(Emulates or patches code by HUYNH KY ANH.)

Pkg extarrows **extarrows** is used as-is for SVG math, and emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{extarrows}[2008/05/15]

```

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\Newextarrow\xLongleftarrow{10,10}{0x21D0}}
4 \CustomizeMathJax{\Newextarrow\xLongrightarrow{10,10}{0x21D2}}
5 \CustomizeMathJax{\Newextarrow\xLonglefttrightarrow{10,10}{0x21D4}}
6 \CustomizeMathJax{\Newextarrow\xLeftrightarrow{10,10}{0x21D4}}
7 \CustomizeMathJax{\Newextarrow\xlonglefttrightarrow{10,10}{0x2194}}
8 \CustomizeMathJax{\Newextarrow\xleftrightarrow{10,10}{0x2194}}
9 \CustomizeMathJax{\let\xlongleftarrow\xleftarrow}
10 \CustomizeMathJax{\let\xlongrightarrow\xrightarrow}
11 \end{warpMathJax}

```

File 134 **lwarp-extramarks.sty**

§ 236 Package **extramarks**

(Emulates or patches code by PIET VAN OOSTRUM.)

Pkg extramarks **extramarks** is ignored.

for HTML output: Discard all options for **lwarp-extramarks**:

```

1 \LWR@ProvidesPackageDrop{extramarks}[2019/01/31]

2 \newcommand*{\extramarks}[2]{}
3 \newcommand*{\firstleftxmark}{}
4 \newcommand*{\lastleftxmark}{}
5 \newcommand*{\firstrightxmark}{}
6 \newcommand*{\lastrightxmark}{}
7 \newcommand*{\firstxmark}{}
8 \newcommand*{\lastxmark}{}
9 \newcommand*{\topxmark}{}
10 \newcommand*{\topleftxmark}{}
11 \newcommand*{\toprightxmark}{}
12 \newcommand*{\firstleftmark}{}
13 \newcommand*{\lastrightmark}{}
14 \newcommand*{\firstrightmark}{}
15 \newcommand*{\lastleftmark}{}

```

File 135 **lwarp-fancybox.sty**

§ 237 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 of a 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 does lose some `HTML` formatting. A better method is to enclose the table's contents inside a `fminipage` environment. The caption may be placed either inside or outside the `fminipage`:

```
\begin{table}
\begin{fminipage}{\linewidth}
\begin{tabular}{lr}
...
\end{tabular}
\end{fminipage}
\end{table}
```

△ framed verbatim `lwarp` does not support the `verbatim` environment inside a `span`, `box`, or `fancybox`'s `\Sbox`, but a `verbatim` may be placed inside a `fminipage`. The `fancybox` documentation's example `FramedVerb` may be defined as:

```
\newenvironment{FramedVerb}[1] % width
{
\VerbatimEnvironment
\fminipage{#1}
\beginVerbatim
}{
\endVerbatim
\endfminipage
}
```

framed \VerbBox `fancybox`'s `\VerbBox` may be used inside `\fbox`.

indented alignment `LVerbatim`, `\LVerbatimInput`, and `\LUseVerbatim` indent with horizontal space which may not line up exactly with what `pdftotext` detects. Some lines may be off slightly in their left edge.

fancybox, fancyvrb If using `fancybox` or `fancyvrb` with `\VerbatimFootnotes`, and using footnotes in a sectioning command or display math, use `\footnotemark` and `\footnotetext`:

△ \VerbatimFootnotes
△ sectioning or displaymath

```

\subsection[Subsection Name]
  {Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+verbtim+.}

```

and likewise for equations or display math.

At present there is a bug such that paragraph closing tags are not present in footnotes when `\VerbatimFootnotes` are selected. The browser usually compensates.

```
1 \LWR@ProvidesPackagePass{fancybox}[2010/05/15]
```

After the preamble is loaded, after any patches to `Verbatim`:

```
2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching fancybox.}

```

`\VerbatimFootnotes` Patched to use the new version.

```
4 \def\VerbatimFootnotes{%
5 \let\@footnotetext\V@footnotetext%
6 \let\LWR@footnotetext\V@footnotetext% lwarp
7 }

```

`\V@footnotetext` Patches in a subset of `lwarp`'s `\LWR@footnotetext` to the `fancyvrb` version of `\V@footnotetext`.

```
8 \def\V@footnotetext{%
9 \LWR@traceinfo{V@footnotetext}%
10 \global\setbox\LWR@footnotebox=\vbox\bgroup%

```

Add to any current footnotes:

```
11 \unvbox\LWR@footnotebox%
```

Remember the footnote number for `\ref`:

```
12 \protected@edef\@currentlabel{%
13 \csname p@footnote\endcsname\@thefnmark%
14 }% @currentlabel

```

Use HTML superscripts in the footnote even inside a `lateximage`:

```
15 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
16 \ifthenelse{%
17 \boolean{LWR@doingstartpars} \AND%
18 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
19 }%
20 {}%
21 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@orignewline}%

```

Append the footnote to the list:

```
22 \@makefntext{ }%
```

The footnote text will follow after `\V@@@footnotetext` has completed.

```

23 \bgroup%
24 \aftergroup{\V@@@footnotetext}%
25 \ignorespaces%
26 }%

27 }% AfterEndPreamble

28 \renewcommand*{\@shadowbox}[1]{%
29 \ifbool{FormatWP}%
30 {\InlineClass[border:1px solid black]{shadowbox}{#1}}%
31 {\InlineClass{shadowbox}{#1}}%
32 }
33
34 \renewcommand*{\@doublebox}[1]{%
35 \ifbool{FormatWP}%
36 {\InlineClass[border:1px double black]{doublebox}{#1}}%
37 {\InlineClass{doublebox}{#1}}%
38 }
39
40 \renewcommand*{\@ovalbox}[2]{%
41 \ifbool{FormatWP}%
42 {\InlineClass[border:1px solid black; border-radius:1ex]{ovalbox}{#2}}%
43 {%
44   \ifthenelse{\isequivalentto{#1}{\thinlines}}%
45     {\InlineClass{ovalbox}{#2}}%
46     {\InlineClass{Ovalbox}{#2}}%
47 }%
48 }

```

Convert minipages, parboxes, and lists into linear text using the LWR@nestspan environment:

```

49 \let\LWR@origSbox\Sbox
50
51 \def\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{Beqnarray*}{\boolfalse{LWR@numbereqnarray}}

```

\GenericCaption is enclosed in an HTML block:

```

61 \renewcommand{\GenericCaption}[1]{%
62 \LWR@figcaption%
63 \LWR@isolate{#1}%
64 \endLWR@figcaption%

```

65 }

Btrivlist is enclosed in an HTML block. This is a tabular, and does not use \item.

```
\trivlist  {\langle/lc/r\rangle} [\langle/tc/b\rangle]
66 \RenewDocumentEnvironment{Btrivlist}{m o}
67 {%
68   \LWR@stoppars%
69   \begin{BlockClass}{Btrivlist}%
70   \tabular{#1}%
71 }
72 {%
73   \endtabular%
74   \end{BlockClass}%
75   \LWR@startpars%
76 }
```

Btrivlist is also neutralized when used inside a span:

```
77 \AtBeginEnvironment{LWR@nestspan}{%
78 \RenewDocumentEnvironment{Btrivlist}{m o}{\}{}%
79 }
```

lwarp's handling of \item is patched to accept fancybox's optional arguments:

```
80 \let\LWRFB@origitemizeitem\LWR@itemizeitem
81 \let\LWRFB@origdescitem\LWR@descitem
82
83 \RenewDocumentCommand{\LWR@itemizeitem}{d(o)}{%
84   \IfValueTF{#2}{%
85     \LWRFB@origitemizeitem[#2]%
86   }{%
87     \LWRFB@origitemizeitem%
88   }%
89 }
90
91 \RenewDocumentCommand{\LWR@descitem}{d(o)}{%
92   \IfValueTF{#2}{%
93     \LWRFB@origdescitem[#2]~%
94   }{%
95     \LWRFB@origdescitem%
96   }%
97 }

98 \RenewDocumentCommand{\LWR@nestspanitem}{d(o)}{%
99 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
100 \LWR@origitem%
101 }
```

The various boxed lists become regular lists:

```
102 \renewenvironment{Bitemize}[1][\begin{itemize}]{\end{itemize}}
```

```
103 \renewenvironment{Benumerate}[1][\begin{enumerate}]{\end{enumerate}}
104 \renewenvironment{Bdescription}[1][\begin{description}]{\end{description}}
```

`\boxput` simply prints one then the other argument, side-by-side instead of above and behind:

```
105 \RenewDocumentCommand{\boxput}{s d() m m}{%
106 \IfBooleanTF{#1}{#3\quad#4}{#4\quad#3}%
107 }
```

Neutralized commands:

```
108 \RenewDocumentCommand{\fancyput}{s d() m}{%}
109 \RenewDocumentCommand{\thisfancyput}{s d() m}{%}
110
111 \RenewDocumentCommand{\fancypage}{m m}{%}
112 \RenewDocumentCommand{\thisfancypage}{m m}{%}
113
114 \def\LandScape#1{}
115 \def\endLandScape{}
116 \def\@Landscape#1#2#3{}
117 \def\endLandscape{}%
```

Low-level patches for `UseVerbatim` and friends:

```
118 \let\LWRFB@UseVerbatim\UseVerbatim
119 \renewcommand*{\UseVerbatim}[1]{%
120 \LWR@atbeginverbatim{3}{Verbatim}%
121 \LWRFB@UseVerbatim{#1}%
122 \LWR@afterendverbatim{.5}%
123 }
124
125 \let\LWRFB@LUseVerbatim\LUseVerbatim
126
127 \renewcommand*{\LUseVerbatim}[1]{%
128 \LWR@atbeginverbatim{3}{LVerbatim}%
129 \noindent%
130 \LWRFB@LUseVerbatim{#1}%
131 \LWR@afterendverbatim{.5}%
132 }
133
134 \def\@BUseVerbatim[#1]#2{%
135 \LWR@atbeginverbatim{3}{BVerbatim}%
136 \LWRFB@UseVerbatim{#2}%
137 \LWR@afterendverbatim{.5}%
138 }
```

File 136 **lwarp-fancyhdr.sty**

§ 238 Package **fancyhdr**

(Emulates or patches code by PIET VAN OOSTRUM.)

Pkg fancyhdr fancyhdr is ignored.

for HTML output: Discard all options for lwarp-fancyhdr:

```

1 \LWR@ProvidesPackageDrop{fancyhdr}[2019/01/31]

2 \newcommand*\fancyhead[2][]{ }
3 \newcommand*\fancyfoot[2][]{ }
4 \newcommand*\fancyhf[2][]{ }
5 \newcommand*\fancypagestyle[2]{ }
6 \newcommand*\lhead[2][]{ }
7 \newcommand*\chead[2][]{ }
8 \newcommand*\rhead[2][]{ }
9 \newcommand*\lfoot[2][]{ }
10 \newcommand*\cfoot[2][]{ }
11 \newcommand*\rfoot[2][]{ }
12 \newcommand*\headrulewidth{ }
13 \newcommand*\footrulewidth{ }
14 \newcommand*\headrule{ }
15 \newcommand*\footrule{ }
16 \newlength\headwidth
17 \newcommand*\fancyheadoffset[2][]{ }
18 \newcommand*\fancyfootoffset[2][]{ }
19 \newcommand*\fancyhfoffset[2][]{ }
20 \newcommand*\iffloatpage[2]{#2}
21 \newcommand*\ifftopfloat[2]{#2}
22 \newcommand*\iffbotfloat[2]{#2}
23 \newcommand*\iffootnote[2]{#2}

```

File 137 **lwarp-fancyref.sty**

§ 239 Package **fancyref**

Pkg fancyref fancyref is emulated.

for HTML output: 1 \LWR@ProvidesPackagePass{fancyref}[1999/02/03]

To remove the margin option, if \fancyrefhook is anything other than the paren option, then force it to the default instead. (Comparing to the margin option was not possible since lwarp has revised the meaning of \mbox so the comparison failed.)

```

2 \newcommand*\LWRfref@parenfancyrefhook[1]{(#1)}
3
4 \ifdefstrequal{\fancyrefhook}{\LWRfref@parenfancyrefhook}
5 { }{
6   \renewcommand*\fancyrefhook[1]{#1}%
7 }

```

Modified to ignore the page number and varioref.

```

8 \renewcommand*\@f@ref[4]{%
9   \ifundefined{#1r@#2@#3}{%

```

```

10 \PackageError{lwarp-fancyref}{%
11 \backslashchar#1ref\space format ‘‘#2’’
12 undefined\MessageBreak
13 for label type ‘‘#3’’%
14 }{%
15 The format ‘‘#2’’ was not defined for the label type
16 ‘‘#3’’\MessageBreak
17 and the \backslashchar#1ref\space command. Perhaps
18 you have only misspelled its name.\MessageBreak
19 Otherwise you will have to define it with
20 \protect\new#1refformat\MessageBreak
21 prior to using it.%
22 }%
23 }{%
24 \fancyrefhook{%
25 \@nameuse{#1r#2@#3}%
26 {\ref{#3\fancyrefargdelim#4}}%
27 {\pageref{#3\fancyrefargdelim#4}}% original
28 {\@fancyref@page@ref{#3\fancyrefargdelim#4}}% original
29 }% lwarp
30 }% lwarp
31 }%
32 }%
33 }%

```

File 138 **lwarp-fancytabs.sty**

§ 240 Package **fancytabs**

Pkg fancytabs fancytabs is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fancytabs}[2016/03/29]

```

2 \newcommand{\fancytab}[3][RIGHT]{}
3 \newcommand{\fancytabsStyle}[1]{}
4 \newcommand{\fancytabsHeight}[1]{}
5 \newcommand{\fancytabsWidth}[1]{}
6 \newcommand{\fancytabsCount}[1]{}
7 \newcommand{\fancytabsLeftColor}[1]{}
8 \newcommand{\fancytabsRightColor}[1]{}
9 \newcommand{\fancytabsTop}[1]{}
10 \newcommand{\fancytabsTextVPos}[1]{}
11 \newcommand{\fancytabsTextHPos}[1]{}
12 \newcommand{\fancytabsGap}[1]{}
13 \newcommand{\fancytabsFloor}[1]{}
14 \newcommand{\fancytabsRotate}[1]{}

```

File 139 **lwarp-fancyvrb.sty**

§ 241 Package **fancyvrb**

(Emulates or patches code by TIMOTHY VAN ZANDT.)

Pkg fancyvrb fancyvrb is supported with some patches.

HTML classes The fancy verbatim environment is placed inside a <div> of class fancyvrb. The label is placed inside a <div> of class fancyvrblabel. The verbatim text itself is placed inside a <div> of class verbatim.

fancybox, fancyvrb

If using fancybox or fancyvrb with \VerbatimFootnotes, and using footnotes in a sectioning command or display math, use \footnotemark and \footnotetext:



\VerbatimFootnotes



sectioning or displaymath

```
\subsection[Subsection Name]
  {Subsection Name\protect\footnotemark}
\footnotetext{A footnote with \verb+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 \AtBeginDocument{\RequirePackage{xcolor}}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{fancyvrb}[2008/02/07]
```

Initial default patch for fancyvrb:

```
4 \fvset{frame=none}%
```

After the preamble is loaded, after any patches to Verbatim:

```
5 \AfterEndPreamble{
6 \LWR@traceinfo{Patching fancyvrb.}
```

\VerbatimFootnotes Patched to use the new version.

```
7 \def\VerbatimFootnotes{%
8 \let\@footnotetext\V@footnotetext%
9 \let\footnote\V@footnote%
10 \let\LWR@footnotetext\V@footnotetext% lwarp
11 }
```

\V@footnotetext Patches in a subset of lwarp's \LWR@footnotetext to the fancyvrb version of \V@footnotetext.

```
12 \def\V@footnotetext{%
13 \LWR@traceinfo{V@footnotetext}%
```

```
14 \global\setbox\LWR@footnotebox=\vbox\bgroup%
```

Add to any current footnotes:

```
15 \unvbox\LWR@footnotebox%
```

Remember the footnote number for \ref:

```
16 \protected@edef\@currentlabel{%
17 \csname p@footnote\endcsname\@thefnmark%
18 }% @currentlabel
```

Use HTML superscripts in the footnote even inside a lateximage:

```
19 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a lateximage:

```
20 \ifthenelse{%
21 \boolean{LWR@doingstartpars} \AND%
22 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
23 }%
24 {}%
25 {\LWR@htmltagc{\LWR@tagregularparagraph}\LWR@originewline}%
```

Append the footnote mark to the list:

```
26 \@makefnmark{}%
```

The footnote text will follow after \V@@@footnotetext has completed.

```
27 \bgroup%
28 \aftergroup{\V@@@footnotetext}%
29 \ignorespaces%
30 }%
```

```
31 \preto\FVB@Verbatim{\LWR@forcenewpage}
32 \preto\FVB@LVerbatim{\LWR@forcenewpage}
33 % \preto\FVB@BVerbatim{\LWR@forcenewpage}% Fails, so done below.
```

Simplified to remove PDF formatting:

```
34 \def\FV@BeginListFrame@Single{%
35 \FV@SingleFrameLine{\z@}%
36 }
37
38 \def\FV@EndListFrame@Single{%
39 \FV@SingleFrameLine{\@ne}%
40 }
41
42 \def\FV@BeginListFrame@Lines{%
43 \FV@SingleFrameLine{\z@}%
44 }
45
46 \def\FV@EndListFrame@Lines{%
47 \FV@SingleFrameLine{\@ne}%
48 }
49
50 \renewcommand*{\FV@SingleFrameSep}{}
```

Adds HTML formatting:

```

51 \def\FV@BUseVerbatim#1{%
52   \LWR@atbeginverbatim{0}{verbatim}%
53   \FV@BVerbatimBegin#1\FV@BVerbatimEnd%
54   \LWR@afterendverbatim{0}%
55 }

```

`\LWR@FVstyle` Holds the style of the verbatim.

```

56 \newcommand*{\LWR@FVstyle}{}

```

The following patches to `Verbatim` are executed at the start and end of the environment, depending on the choice of frame. Original code is from the `fancyvrb` package.

```

57 \newcommand*{\LWR@fvstartnone}{%
58 \LWR@traceinfo{fvstartnone}%
59 % \hbox to\z@{
60 \BlockClass[\LWR@FVstyle]{fancyvrb}
61 \LWR@stoppars
62 \ifx\FV@LabelPositionTopLine\relax\else
63   \ifx\FV@LabelBegin\relax\else
64     \FancyVerbRuleColor{\LWR@FVfindbordercolor}
65     \LWR@htmltagc{%
66       div class="fancyvrblabel" % extra space
67       style="color: \LWR@origpound\LWR@tempcolor"%
68     }
69     \LWR@print@textrm{\FV@LabelBegin}% \textrm preserves emdash
70     \LWR@htmltagc{/div}\LWR@orignewline%
71   \fi
72 \fi
73 \LWR@atbeginverbatim{0}{verbatim}%
74 % }%
75 }
76
77 \newcommand*{\LWR@fvendnone}{%
78 \LWR@traceinfo{fvendnone}%
79 % \hbox to\z@{
80 \LWR@afterendverbatim{0}%
81 \LWR@stoppars%
82 \ifx\FV@LabelPositionBottomLine\relax\else
83   \ifx\FV@LabelEnd\relax\else
84     \FancyVerbRuleColor{\LWR@FVfindbordercolor}
85     \LWR@htmltagc{%
86       div class="fancyvrblabel" % extra space
87       style="color: \LWR@origpound\LWR@tempcolor"%
88     }
89     \LWR@print@textrm{\FV@LabelEnd}
90     \LWR@htmltagc{/div}\LWR@orignewline%
91   \fi
92 \fi
93 \endBlockClass
94 }

```

```

95
96 \newcommand*{\LWR@fvstartsingle}{%
97 \LWR@traceinfo{fvstartsingle}%
98 \LWR@fvstartnone%
99 \FV@BeginListFrame@Single%
100 }
101
102 \newcommand*{\LWR@fvendsingle}{%
103 \LWR@traceinfo{fvendsingle}%
104 \FV@endListFrame@Single%
105 \LWR@fvendnone%
106 }
107
108 \newcommand*{\LWR@fvstartline}{%
109 \LWR@traceinfo{fvstartline}%
110 \LWR@fvstartnone%
111 % \setlength{\LWR@templengthone}{\baselineskip}%
112 \FV@BeginListFrame@Lines%
113 % \setlength{\baselineskip}{\LWR@templengthone}%
114 % \setlength{\baselineskip}{5pt}%
115 }
116
117 \newcommand*{\LWR@fvendline}{%
118 \LWR@traceinfo{fvendline}%
119 \FV@endListFrame@Lines%
120 \LWR@fvendnone%
121 }

```

The following patches select the start/left/right/end behaviors depending on frame. Original code is from the fancyvrb package.

```

122 \newcommand*{\LWR@FVfindbordercolor}{%
123 \FancyVerbRuleColor%
124 \LWR@findcurrenttextcolor%
125 \color{black}%
126 }
127
128 % border width of \FV@FrameRule
129 \newcommand*{\LWR@FVborderstyle}[1]{%
130 padding#1: \strip@pt\dimexpr \FV@FrameSep\relax\relax pt ; % space
131 \LWR@FVfindbordercolor\LWR@indentHTMLtwo%
132 border#1: \strip@pt\dimexpr \FV@FrameRule\relax\relax pt % space
133 solid {\FancyVerbRuleColor{\LWR@origpound\LWR@tempcolor}} ; % space
134 }
135
136 \def\FV@Frame@none{%
137 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle}%
138 \let\FV@BeginListFrame\LWR@fvstartnone%
139 \let\FV@LeftListFrame\relax%
140 \let\FV@RightListFrame\relax%
141 \let\FV@endListFrame\LWR@fvendnone%
142
143 \FV@Frame@none% default values
144
145 \def\FV@Frame@single{%

```

```

146 \renewcommand*{\LWR@FVstyle}{%
147   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
148   \LWR@FVborderstyle{}}%
149 }%
150 \let\FV@BeginListFrame\LWR@fvstartsingl%
151 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
152 \let\FV@RightListFrame\FV@RightListFrame@Single%
153 \let\FV@EndListFrame\LWR@fvendsingle}
154
155 \def\FV@Frame@lines{%
156 \renewcommand*{\LWR@FVstyle}{%
157   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
158   \LWR@FVborderstyle{-top}%
159   \LWR@indentHTMLtwo%
160   \LWR@FVborderstyle{-bottom}}%
161 }%
162 \let\FV@BeginListFrame\LWR@fvstartline%
163 \let\FV@LeftListFrame\relax%
164 \let\FV@RightListFrame\relax%
165 \let\FV@EndListFrame\LWR@fvendline}
166
167 \def\FV@Frame@topline{%
168 \renewcommand*{\LWR@FVstyle}{%
169   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
170   \LWR@FVborderstyle{-top}}%
171 }%
172 \let\FV@BeginListFrame\LWR@fvstartline%
173 \let\FV@LeftListFrame\relax%
174 \let\FV@RightListFrame\relax%
175 \let\FV@EndListFrame\LWR@fvendnone}
176
177 \def\FV@Frame@bottomline{%
178 \renewcommand*{\LWR@FVstyle}{%
179   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
180   \LWR@FVborderstyle{-bottom}}%
181 }%
182 \let\FV@BeginListFrame\LWR@fvstartnone%
183 \let\FV@LeftListFrame\relax%
184 \let\FV@RightListFrame\relax%
185 \let\FV@EndListFrame\LWR@fvendline}
186
187 \def\FV@Frame@leftline{%
188 \renewcommand*{\LWR@FVstyle}{%
189   \LWR@currenttextcolorstyle\LWR@indentHTMLtwo%
190   \LWR@FVborderstyle{-left}}%
191 }%
192 % To define the \FV@FrameFillLine macro (from \FV@BeginListFrame)
193 \ifx\FancyVerbFillColor\relax%
194 \let\FV@FrameFillLine\relax%
195 \else%
196 \@tempdima\FV@FrameRule\relax%
197 \multiply\@tempdima-\tw@%
198 \edef\FV@FrameFillLine{%
199 \noexpand\FancyVerbFillColor{\vrule\@width\@number\@tempdima sp}%
200 \kern-\@number\@tempdima sp}}%

```

```

201 \fi%
202 \let\FV@BeginListFrame\LWR@fvstartnone%
203 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
204 \let\FV@RightListFrame\relax%
205 \let\FV@EndListFrame\LWR@fvendnone}

```

Adds the optional label to the top and bottom edges. Original code is from the fancyvrb package.

```

206 \def\FV@SingleFrameLine#1{%
207 % \hbox to\z@{%
208 % \kern\leftmargin
209 % \ifnum#1=\z@\relax
210 % \let\FV@Label\FV@LabelBegin
211 % \else
212 % \let\FV@Label\FV@LabelEnd
213 % \fi
214 % \ifx\FV@Label\relax
215 % \FancyVerbRuleColor{\vrule \@width\linewidth \@height\FV@FrameRule}%
216 % \else
217 % \ifnum#1=\z@
218 % \setbox\z@\hbox{\strut\enspace\FV@LabelBegin\enspace\strut}%
219 % \ifx\FV@LabelPositionTopLine\relax
220 % \else
221 % \fi
222 % \else
223 % \setbox\z@\hbox{\strut\enspace\FV@LabelEnd\enspace\strut}%
224 % \ifx\FV@LabelPositionBottomLine\relax
225 % \else
226 % \fi
227 % \fi
228 % \fi
229 % \hss
230 % }
231 }

```

Processes each line, adding optional line numbers. Original code is from the fancyvrb package.

```

232 \def\FV@ListProcessLine#1{%
233 \hbox to \hsize{%
234 % \kern\leftmargin
235 % \hbox to \VerbatimHTMLWidth {%
236 % \ifcvoid{FV@LeftListNumber}{\kern 2.5em}%
237 % \FV@LeftListNumber%
238 % \FV@LeftListFrame
239 % \FancyVerbFormatLine{#1}%
240 % \hss%
241 % \FV@RightListFrame
242 % \FV@RightListNumber%
243 % }%
244 % \hss% required to avoid underfull hboxes
245 }
246 }

```

Env BVerbatim

```

247 \AtBeginEnvironment{BVerbatim}
248 {%
249 \LWR@forcenewpage% instead of \preto
250 \LWR@atbeginverbatim{0}{bverbatim}%
251 }
252
253 \AfterEndEnvironment{BVerbatim}
254 {%
255 \LWR@afterendverbatim{0}%
256 }

```

End of the modifications to make at the end of the preamble:

```

257 } % \AfterEndPreamble

```

File 140 **lwarp-fewerfloatpages.sty**

§ 242 Package **fewerfloatpages**

Pkg fewerfloatpages fewerfloatpages is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fewerfloatpages}[2020/02/14]

```

2 \newcommand\floatpagekeepfraction{\textfraction}
3 \newcounter{floatpagedeferlimit}
4 \newcounter{floatpagekeeplimit}

```

File 141 **lwarp-figcaps.sty**

§ 243 Package **figcaps**

(Emulates or patches code by PATRICK W. DALY.)

Pkg figcaps figcaps is ignored.

for HTML output: Discard all options for lwarp-figcaps:

```

1 \LWR@ProvidesPackageDrop{figcaps}[1999/02/23]

2 \newcommand*\figcapson{}
3 \newcommand*\figcapsoff{}
4 \newcommand*\printfigures{}
5 \newcommand*\figmarkon{}
6 \newcommand*\figmarkoff{}
7 \def\figurecapname{Figure Captions}
8 \def\tablepagename{Tables}
9 \def\figurepagename{Figures}

```

File 142 **lwarp-figsize.sty**

§ 244 Package **figsize**

(Emulates or patches code by ANTHONY A. TANBAKUHL.)

Pkg figsize figsize is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{figsize}[2002/03/18]

Emulates a virtual 6×9 inch textsize.

```

2 \newlength{\figwidth}
3 \newlength{\figheight}
4
5 \newcommand{\SetFigLayout}[3][0]{%
6 \setlength{\figheight}{8in}%
7 \setlength{\figheight}{\figheight / #2}%
8 %
9 \setlength{\figwidth}{5.5in}%
10 \setlength{\figwidth}{\figwidth / #3}%
11 }
```

File 143 **lwarp-fitbox.sty**

§ 245 Package **fitbox**

Pkg fitbox fitbox is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fitbox}[2019/02/20]

```

2 \NewDocumentCommand{\fitbox}{s o m}{%
3   \begin{BlockClass}{fitbox}
4     #3
5   \end{BlockClass}
6 }
7
8 \newcommand*{\fitboxset}[1]{}
9
10 \newdimen\fitboxnatheight
11 \newdimen\fitboxnatwidth
12
13 \newcommand\SetFitboxLayout[3][[]]{}

```

File 144 **lwarp-fix2col.sty**

§ 246 Package **fix2col**

Pkg fix2col fix2col is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fix2col}[2015/11/13]

File 145 **lwarp-fixme.sty**

§ 247 Package **fixme**

(Emulates or patches code by DIDIER VERNA.)

Pkg fixme fixme is patched for use by lwarp.

 **external layouts** External layouts (\fxloadlayouts) are not supported.

User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after fixme is loaded:

```
\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}
```

for HTML output: 1 \LWR@ProvidesPackagePass{fixme}[2017/03/05]

Restore lwarp’s version of \@wrindex, ignoring the fixme package’s target option:

```
2 \let\@wrindex\LWR@wrindex
```

Float-related macros required by lwarp:

```
3 \newcommand{\ext@fixme}{lox}
4
5 \renewcommand{\l@fixme}[2]{%
6   \hypertocfloat{1}{fixme}{lox}%
7     {\LWR@nameref{\BaseJobname-autopage-\arabic{LWR@nextautopage}} --- #1}
8     {#2}
9 }
```

Other modifications:

```
10 \def\FXFaceInlineHTMLStyle{font-weight:bold}
11
12 \renewcommand*\FXLayoutInline[3]{ %
```

```

13 \InlineClass[\FXFaceInlineHTMLStyle]{fixmeinline}%
14   {\@fxttextstd{#1}{#2}{#3}}%
15 }
16
17 \def\FXFaceEnvHTMLStyle{font-weight:bold}
18
19 \renewcommand*\FXEnvLayoutPlainBegin[2]{%
20 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
21 \ignorespaces#2 \fxnotename{#1}: \ignorespaces}
22
23 \renewcommand*\FXEnvLayoutPlainEnd[2]{\endBlockClass}
24
25 \renewcommand*\FXEnvLayoutSignatureBegin[2]{%
26 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
27 \fxnotename{#1}: \ignorespaces}
28
29 \renewcommand*\FXEnvLayoutSignatureEnd[2]{\@fxsignature{#2}\endBlockClass}
30
31 \def\FXFaceSignatureHTMLStyle{font-style:italic}
32
33 \DeclareRobustCommand*\@fxsignature[1]{%
34 \ifthenelse{\equal{#1}{}}%
35   {}%
36   { -- {\InlineClass[\FXFaceSignatureHTMLStyle]{fixmesignature}{#1}}}%
37 }
38
39
40 \def\FXFaceTargetHTMLStyle{font-style:italic}
41
42 \renewcommand\FXTargetLayoutPlain[2]{%
43   \InlineClass[\FXFaceTargetHTMLStyle]{fixmetarget}{#2}%
44 }

```

File 146 **lwarp-fixmetodonotes.sty**

§ 248 Package **fixmetodonotes**

(Emulates or patches code by GIOELE BARABUCCI.)

Pkg fixmetodonotes **fixmetodonotes** is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{fixmetodonotes}[2013/04/28]
2 \renewcommand{\NOTES@addtolist}[2]{%
3   \refstepcounter{NOTES@note}%
4 %   \phantomsection% REMOVED
5   \addcontentsline{notes}{NOTES@note}{%
6     \protect\numberline{\theNOTES@note}{#1}: {#2}}%
7   }%
8 }
9
10 \renewcommand{\NOTES@marker}[2]{\fbox{%
11   \textcolor{#2}{% WAS \color

```

```

12     \textbf{#1}}%
13   }}
14
15 \renewcommand{\NOTES@colorline}[2]{%
16   \bgroup%
17     \ULon{\LWR@backgroundcolor{#1}{#2}}%
18 }

```

File 147 **lwarp-flafter.sty**

§ 249 Package **flafter**

Pkg flafter flafter is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{flafter}[2018/01/08]
2 \providecommand\fl@trace[1]{}

File 148 **lwarp-flippdf.sty**

§ 250 Package **flippdf**

Pkg flippdf flippdf is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{flippdf}[2006/06/30]

2 \newcommand\FlipPDF{}
3 \newcommand\UnFlipPDF{}

File 149 **lwarp-float.sty**

§ 251 Package **float**

(Emulates or patches code by ANSELM LINGNAU.)

Pkg float float is emulated.

Float styles boxed and ruled are emulated by css and a float class according to style.

The HTML <figure> class is set to the float type, so css may also be used to format the float and its caption, according to float type. Furthermore, an additional class is set to the float style: plain, plaintop, boxed, or ruled, so css may be used to format by float style as well. Default formatting by css is provided for ruled and boxed styles.

for HTML output: 1 \LWR@ProvidesPackageDrop{float}[2001/11/08]

\listof See section 75.2 for the \listof command.

`\LWR@floatstyle` The default float style:

```
2 \newcommand*\LWR@floatstyle{plain}
```

`\newfloat` $\langle 1: type \rangle \langle 2: placement \rangle \langle 3: ext \rangle [\langle 4: within \rangle]$

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   \csdef\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%
```

Like `size`, `newfloat` also creates `\l@<type>`, but `float` does not, so remove it here:

```
10  \cslet{l@#1}\relax%
11 }
```

`\floatname` $\langle type \rangle \langle name \rangle$

Sets the text name of the float, such as “Figure”. Avoids trying to set a recursive name, from `trivfloat`.

```
12 \NewDocumentCommand{\floatname}{m +m}{%
13   \def\LWR@tempone{#2}%
14   \def\LWR@temptwo{\@nameuse{#1name}}%
15   \ifdefequal{\LWR@tempone}{\LWR@temptwo}{}%
16     \SetupFloatingEnvironment{#1}{name=#2}%
17   }%
18 }
```

`\floatplacement` $\langle type \rangle \langle placement \rangle$

Float placement is ignored.

```
19 \newcommand*\floatplacement[2]{%
20   \SetupFloatingEnvironment{#1}{placement=#2}%
21 }
```

`\floatstyle` $\langle style \rangle$

Remember the style for future floats:

```
22 \newcommand{\floatstyle}[1]{%
23   \def\LWR@floatstyle{#1}%
24 }
```

`\restylefloat` * $\langle type \rangle$

Remember the style for this float:

```
25 \NewDocumentCommand{\restylefloat}{s m}{%
26   \csedef{LWR@floatstyle@#2}{\LWR@floatstyle}%
27 }
```

File 150 **lwarp-floatflt.sty**

§ 252 Package **floatflt**

(Emulates or patches code by MATS DAHLGREN.)

Pkg floatflt floatflt is emulated.

for HTML output: Discard all options for lwarp-floatflt:

```
1 \LWR@ProvidesPackageDrop{floatflt}[1997/07/16]
```

Env [$\langle \rangle$] offset $\langle type \rangle$ $\langle width \rangle$ Borrowed from the lwarp version of keyfloat:

```
2 \NewDocumentEnvironment{KFLTfloatflt@marginfloat}{0{-1.2ex} m m}
3 {%
4   \begin{LWR@setvirtualpage}*%
5   \ifblank{#3}{%
6     \LWR@BlockClassWP{%
7       float:right; %
8       width: 1.5in; % reasonable dummy width for word processor
9       margin:10pt%
10    }{%
11    {marginblock}%
12  }{%
13    \setlength{\LWR@templengthone}{#3}%
14    \LWR@BlockClassWP{%
15      float:right; %
16      width:\LWR@printlength{\LWR@templengthone}; % extra space
17      margin:10pt%
18    }{%
19      width:\LWR@printlength{\LWR@templengthone}%
20    }%
21    {marginblock}%
22  }%
23  \renewcommand*\@capttype{#2}%
24 }
25 {%
26   \endLWR@BlockClassWP%
27   \end{LWR@setvirtualpage}%
28 }
```

Env floatingfigure [$\langle placement \rangle$] $\langle width \rangle$

```

29 \DeclareDocumentEnvironment{floatingfigure}{o m}
30   {\begin{KFLTfloatflt@marginfloat}{figure}{#2}}
31   {\end{KFLTfloatflt@marginfloat}}

```

Env floatingtable [*(placement)*]

```

32 \DeclareDocumentEnvironment{floatingtable}{o}
33   {\begin{KFLTfloatflt@marginfloat}{table}{}}
34   {\end{KFLTfloatflt@marginfloat}}

```

File 151 **lwarp-floatpag.sty**

§ 253 Package **floatpag**

(Emulates or patches code by VYTAS STATULEVIČIUS AND SIGITAS TOLUŠIS.)

Pkg floatpag floatpag is ignored.

for HTML output: Discard all options for lwarp-floatpag:

```

1 \LWR@ProvidesPackageDrop{floatpag}[2012/05/29]

2 \newcommand*{\floatpagestyle}[1]{}
3 \newcommand*{\rotfloatpagestyle}[1]{}
4 \newcommand*{\thisfloatpagestyle}[1]{}

```

File 152 **lwarp-floatrow.sty**

§ 254 Package **floatrow**

(Emulates or patches code by OLGA LAPKO.)

Pkg floatrow floatrow is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{floatrow}[2008/08/02]

⚠ **Misplaced alignment tab character &** Use `\StartDefiningTabulars` and `\StopDefiningTabulars` before and after defining macros using `\ttabbox` with a tabular inside. See section 8.10.1.

⚠ **subfig package** When combined with the subfig package, while inside a subfloatrow `\ffigbox` and `\ttabbox` must have the caption in the first of the two of the mandatory arguments.

⚠ **\FBwidth, \FBheight** The emulation of floatrow does not support `\FBwidth` or `\FBheight`. These values are pre-set to `.3\linewidth` and `2in`. Possible solutions include:

- Use fixed lengths. lwarp will scale the HTML lengths appropriately.
- Use `warpprint` and `warpHTML` environments to select appropriate values for each case.

- Inside a warpHTML environment, manually change `\FBwidth` or `\FBheight` before the `\ffigbox` or `\ttabbox`. Use `\FBwidth` or `\FBheight` normally afterwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

After everything has loaded, remember whether `subcaption` was loaded. If not, it is assumed that `subfig` is used instead:

```

2 \newbool{LWR@subcaptionloaded}
3
4 \AtBeginDocument{
5 \ifpackageloaded{subcaption}
6   {\booltrue{LWR@subcaptionloaded}}
7   {\boolfalse{LWR@subcaptionloaded}}
8 }

```

```

\floatbox [1 preamble] [2 captype] [3 width] [4 height] [5 vert pos] [6 caption]
[7 object]

```

Only parameters for `captype`, `width`, `caption`, and `object` are used.

`LWR@insubfloatrow` is true if inside a `subfloatrow` environment.

There are two actions, depending on the use of `subcaption` or `subfig`.

```

9 \NewDocumentCommand{\floatbox}{o m o o +m +m}{%
10 \ifbool{LWR@subcaptionloaded}%
11 {% subcaption

```

For `subcaption`:

```

12   \ifbool{LWR@insubfloatrow}%
13   {% subcaption in a subfloatrow

```

`subfigure` and `subtable` environments take `width` as an argument.

```

14   \IfValueTF{#3}%
15   {\@nameuse{sub#2}{#3}}%
16   {\@nameuse{sub#2}{\linewidth}}%
17   }% subcaption in a subfloatrow
18   {% subcaption not in subfloatrow

```

`figure` and `table` environments do not take a `width` argument.

```

19   \@nameuse{#2}%
20   }% subcaption not in subfloatrow
21   #6
22
23   #7

```

End the environments:

```

24   \ifbool{LWR@insubfloatrow}%
25   {\@nameuse{endsub#2}}%
26   {\@nameuse{end#2}}%
27 }% subcaption
28 {% assume subfig

```

For subfig:

```
29 \ifbool{LWR@infloatrow}%
30 {% subfig in a floatrow
```

`\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 floatrow
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*\capttop{}
48 \newlength{\FBwidth}
49 \setlength{\FBwidth}{.3\linewidth}
50 \newlength{\FBheight}
51 \setlength{\FBheight}{2in}
52 \newcommand*\useFCwidth{}
53 \newcommand{\floatsetup}[2][{}]{
54 \newcommand{\thisfloatsetup}[1]{
55 \newcommand{\clearfloatsetup}[1]{
56 \newcommand*\killfloatstyle}{}
```

`\newfloatcommand` $\langle 1 \text{ command} \rangle$ $\langle 2 \text{ capttype} \rangle$ $\langle 3 \text{ preamble} \rangle$ $\langle 4 \text{ default width} \rangle$

Preamble and default width are ignored.

```
57 \NewDocumentCommand{\newfloatcommand}{m m o}{%
58 \@namedef{#1}{
59 \floatbox{#2}
60 }
61 }
```

`\renewfloatcommand` $\langle 1 \text{ command} \rangle$ $\langle 2 \text{ capttype} \rangle$ $\langle 3 \text{ preamble} \rangle$ $\langle 4 \text{ default width} \rangle$

Preamble and default width are ignored.

```

62 \NewDocumentCommand{\renewfloatcommand}{m m o o}{%
63 \@namedef{#1}{%
64 \floatbox{#2}
65 }
66 }

```

```

\ffigbox    [⟨width⟩] [⟨height⟩] [⟨vposn⟩] {⟨caption commands⟩} {⟨contents⟩}
67 \newfloatcommand{ffigbox}{figure}[\nocapbeside][

```

```

\ttabbox    [⟨width⟩] [⟨height⟩] [⟨vposn⟩] {⟨caption commands⟩} {⟨contents⟩}
68 \newfloatcommand{ttabbox}{table}[\capttop][\FBwidth]

```

```

\fcapside   [⟨width⟩] [⟨height⟩] [⟨vposn⟩] {⟨caption commands⟩} {⟨contents⟩}
69 \newfloatcommand{fcapside}{figure}[\capbeside][

```

Env floatrow [⟨numfloats⟩]

The row of floats is placed into a <div> of class floatrow.

```

70 \newenvironment*{floatrow}[1][2]
71 {%
72   \begin{LWR@setvirtualpage}*%
73   \BlockClass{floatrow}%
74 }
75 {
76   \endBlockClass%
77   \end{LWR@setvirtualpage}%
78 }

```

Keys for \DeclareNewFloatType:

```

79 \newcommand*{\LWR@frowkeyplacement}{}
80 \newcommand*{\LWR@frowkeyname}{}
81 \newcommand*{\LWR@frowkeyfileext}{}
82 \newcommand*{\LWR@frowkeywithin}{}
83 \newcommand*{\LWR@frowkeycapstyle}{}
84
85 \define@key{frowkeys}{placement}{}%
86 \define@key{frowkeys}{name}{\renewcommand{\LWR@frowkeyname}{#1}}%
87 \define@key{frowkeys}{fileext}{\renewcommand{\LWR@frowkeyfileext}{#1}}%
88 \define@key{frowkeys}{within}{\renewcommand{\LWR@frowkeywithin}{#1}}%
89 \define@key{frowkeys}{relatedcapstyle}{}%

```

\DeclareNewFloatType {⟨type⟩} {⟨options⟩}

Use \listof{type}{Title} to print a list of the floats.

```

90 \newcommand*{\DeclareNewFloatType}[2]{%

```

Reset key values:

```

91 \renewcommand*{\LWR@frowkeyplacement}{}%
92 \renewcommand*{\LWR@frowkeyname}{}%

```

```

93 \renewcommand*{\LWR@frowkeyfileext}{}%
94 \renewcommand*{\LWR@frowkeywithin}{}%
95 \renewcommand*{\LWR@frowkeycapstyle}{}%

```

Read new key values:

```

96 \LWR@traceinfo{about to setkeys frowkeys}%
97 \setkeys{frowkeys}{#2}%
98 \LWR@traceinfo{finished setkeys frowkeys}%

```

Create a new float with optional [within]:

```

99 \ifthenelse{\equal{\LWR@frowkeywithin}{}%
100 {%
101   \DeclareFloatingEnvironment[
102     placement=\LWR@frowkeyplacement,
103     fileext=\LWR@frowkeyfileext
104   ]{#1}%
105 }%
106 {%
107   \DeclareFloatingEnvironment[
108     placement=\LWR@frowkeyplacement,
109     fileext=\LWR@frowkeyfileext,
110     within=\LWR@frowkeywithin
111   ]{#1}%
112 }%
113 }%

```

Rename the float if a name was given:

```

114 \ifthenelse{\equal{\LWR@frowkeyname}{}%
115   {}%
116   {%
117     \SetupFloatingEnvironment{#1}{name={\LWR@frowkeyname}}%
118   }%
119 }

```

Not used:

```

120 \newcommand{\buildFBBOX}[2]{}
121 \newcommand*{\CenterFloatBoxes}{}
122 \newcommand*{\TopFloatBoxes}{}
123 \newcommand*{\BottomFloatBoxes}{}
124 \newcommand*{\PlainFloatBoxes}{}
125
126 \newcommand{\capsubrowsettings}{}
127
128 \NewDocumentCommand{\RawFloats}{o o}{}

```

`\RawCaption` $\{ \langle text \rangle \}$

To be used inside a minipage or parbox.

```
129 \newcommand{\RawCaption}[1]{#1}
```

`\floatfoot` $\{ \langle text \rangle \}$

Places additional text inside a float, inside a css <div> of class floatfoot.

```

130 \NewDocumentCommand{\floatfoot}{s +m}{%
131   \begin{BlockClass}{floatfoot}
132   #2
133   \end{BlockClass}
134 }

```

Used to compute `\linewidth`.

```

135 \newbool{LWR@insubfloatrow}
136 \boolfalse{LWR@insubfloatrow}

```

Env `subfloatrow` [*<num_floats>*]

```

137 \newenvironment*{subfloatrow}[1][2]
138 {

```

The row of floats is placed into a `<div>` of class `floatrow`:

```

139   \LWR@forcenewpage
140   \BlockClass{floatrow}

```

While inside the `floatrow`, `LWR@insubfloatrow` is set true, which tells `\floatbox` to use `\subfigure` or `\subtable`.

```

141   \begingroup%
142   \booltrue{LWR@insubfloatrow}%
143 }
144 {%
145   \endgroup%
146   \endBlockClass%
147   \boolfalse{LWR@insubfloatrow}%
148 }

```

File 153 **lwarp-fltrace.sty**

§ 255 Package **fltrace**

Pkg `fltrace` **fltrace** is ignored.

for HTML output: 1 `\LWR@ProvidesPackageDrop{fltrace}[2018/01/08]`

```

2 \def\tracefloats{}
3 \def\tracefloatsoff{}
4 \def\tracefloatvals{}

```

File 154 **lwarp-flushend.sty**

§ 256 Package **flushend**

(Emulates or patches code by SIGITAS TOLUŠIS.)

Pkg flushend flushend is ignored.

for HTML output: Discard all options for lwarp-flushend:

```
1 \LWR@ProvidesPackageDrop{flushend}[2017/03/27]

2 \newcommand*\flushend{}
3 \newcommand*\raggedend{}
4 \newcommand*\flushcolsend{}
5 \newcommand*\raggedcolsend{}
6 \newcommand*\atColsBreak[1]{}
7 \newcommand*\atColsEnd[1]{}
8 \newcommand*\showcolsendrule{}

```

File 155 **lwarp-fnbreak.sty**

§ 257 Package **fnbreak**

Pkg fnbreak fnbreak is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnbreak}[2012/01/01]

```
2 \newcommand*\fnbreakverbose{}
3 \newcommand*\fnbreaknonverbose{}
4 \newcommand*\fnbreaklabel{}
5 \newcommand*\fnbreaknolabel{}

```

File 156 **lwarp-fncychap.sty**

§ 258 Package **fncychap**

(Emulates or patches code by ULF A. LINDGREN.)

Pkg fncychap fncychap is ignored.

for HTML output: Discard all options for lwarp-fncychap:

```
1 \LWR@ProvidesPackageDrop{fncychap}[2007/07/30]

2 \def\mghrulefill#1{}
3 \def\ChNameLowerCase{}
4 \def\ChNameUpperCase{}
5 \def\ChNameAsIs{}
6 \def\ChTitleLowerCase{}
7 \def\ChTitleUpperCase{}
8 \def\ChTitleAsIs{}
9 \newcommand{\ChRuleWidth}[1]{}
10 \newcommand{\ChNameVar}[1]{}
11 \newcommand{\ChNumVar}[1]{}
12 \newcommand{\ChTitleVar}[1]{}

```

```

13 \newcommand{\TheAlphaChapter}{}
14 \newcommand{\DOCH}{}
15 \newcommand{\DOTI}[1]{}
16 \newcommand{\DOTIS}[1]{}
17 \newlength{\mylen}
18 \newlength{\myhi}
19 \newlength{\px}
20 \newlength{\py}
21 \newlength{\pyy}
22 \newlength{\pxx}
23 \newlength{\RW}
24 \newcommand{\FmN}[1]{#1}
25 \newcommand{\FmTi}[1]{#1}

```

File 157 **lwarp-fnlineno.sty**

§ 259 Package **fnlineno**

Pkg fnlineno fnlineno is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnlineno}[2011/01/07]

File 158 **lwarp-fnpara.sty**

§ 260 Package **fnpara**

Pkg fnpara fnpara is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnpara}

File 159 **lwarp-fnpos.sty**

§ 261 Package **fnpos**

(Emulates or patches code by HIROSHI NAKASHIMA.)

Pkg fnpos fnpos is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fnpos}[1999/07/14]

```

2 \newcommand*{\makeFNbottom}{}
3 \newcommand*{\makeFNmid}{}
4 \newcommand*{\makeFNbelow}{}
5 \newcommand*{\makeFNabove}{}

```

File 160 **lwarp-fontawesome.sty**

§ 262 Package **fontawesome**

(Emulates or patches code by XAVIER DANAUX.)

Pkg fontawesome fontawesome is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

 **poppler syntax warning** If using pdfL^AT_EX, *poppler* may issue a syntax warning regarding parsing a ligature component. X_YL^AT_EX or LuaL^AT_EX may be used to avoid this warning.

In the following, the general strategy is to intercept `\symbol` and embed it inside a `lateximage`. These changes are done inside a local group.

For pdfL^AT_EX, the `alt` tag includes the icon (symbol) number. For X_YL^AT_EX and LuaL^AT_EX, the `alt` tag is generic.

```

for HTML output: 1 \LWR@ProvidesPackagePass{fontawesome}[2016/05/15]

2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \ifxetexorluatex
5
6 \newfontfamily{\LWR@orig@FA}{FontAwesome}
7
8 \newcommand*{\LWR@fontawesome@xelatex@symbol}[1]{%
9   \LWR@findcurrenttextcolor%
10  \begin{lateximage}*[icon][fontawesomexetex#1SZ\LWR@font@size{}CL\LWR@tempcolor]%
11  \csuse{\LWR@font@size}%
12  \LWR@orig@FA%
13  \LWR@orig@symbol{#1}%
14  \end{lateximage}%
15 }
16
17 \RenewDocumentCommand{\FA}{}{%
18   \LetLtxMacro\symbol\LWR@fontawesome@xelatex@symbol%
19 }
20
21 \else
22
23 \newcommand*{\LWR@fontawesome@symbolX}[2]{%
24   \LWR@findcurrenttextcolor%
25   \begin{lateximage}*[icon #1][fontawesome#2#1SZ\LWR@font@size{}CL\LWR@tempcolor]%
26   \csuse{\LWR@font@size}%
27   \fontencoding{U}\fontfamily{fontawesome#2}\selectfont%
28   \LWR@orig@symbol{#1}%
29   \end{lateximage}%
30 }
31

```

```

32 \newcommand*\LWR@fontawesome@symbolone}[1]{%
33   \LWR@fontawesome@symbolX{#1}{one}%
34 }
35
36 \newcommand*\LWR@fontawesome@symboltwo}[1]{%
37   \LWR@fontawesome@symbolX{#1}{two}%
38 }
39
40 \newcommand*\LWR@fontawesome@symbolthree}[1]{%
41   \LWR@fontawesome@symbolX{#1}{three}%
42 }
43
44 \renewrobustcmd\FAone{%
45   \LetLtxMacro\symbol\LWR@fontawesome@symbolone%
46 }
47
48 \renewrobustcmd\FAtwo{%
49   \LetLtxMacro\symbol\LWR@fontawesome@symboltwo%
50 }
51
52 \renewrobustcmd\FAthree{%
53   \LetLtxMacro\symbol\LWR@fontawesome@symbolthree%
54 }
55 \fi

```

File 161 **lwarp-fontawesome5.sty**

§ 263 Package **fontawesome5**

(Emulates or patches code by MARCEL KRÜGER.)

Pkg fontawesome5 fontawesome5 is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

The `alt` tag has the name of the icon.

for HTML output:

```

1 \LWR@ProvidesPackagePass{fontawesome5}[2018/07/27]
2 \ExplSyntaxOn
3 \cs_set:Nn\fontawesome_use_icon:nn{
4   \LWR@findcurrenttextcolor
5   \cs_if_exist:cTF{c__fontawesome_slot_#2_tl}{
6     \begin{lateximage}*[#2][fontawesome5#1SZ\LWR@font@size{}CL\LWR@tempcolor]
7     \csuse{\LWR@font@size}
8     \exp_last_unbraced:Nv
9       \__fontawesome_icon_at:nnnn
10      {c__fontawesome_slot_#2_tl}
11      {#1}{#2}
12     \end{lateximage}
13   }{
14     \msg_error:nnxx{fontawesome5}{icon-not-found}{#2}{#1}
15   }

```

```
16 }
17 \ExplSyntaxOff
```

File 162 **lwarp-fontaxes.sty**

§ 264 Package **fontaxes**

(Emulates or patches code by ANDREAS BÜHMANN, MICHAEL UMMELS.)

Pkg fontaxes fontaxes is emulated for HTML, and used as-is for print output.

Functionality for small caps is in the `lwarp` core. Swashes and figure styles are ignored for HTML.

for HTML output: 1 \LWR@ProvidesPackagePass{fontaxes}[2014/03/23]

```
2 \ifdef{\LWR@HTML@swshape}{}{% duplicated by nfssect-cfr
3   \newcommand{\LWR@HTML@swshape}{}
4   \LWR@formatted{swshape}
5
6   \newcommand{\LWR@HTML@textsw}[1]{#1}
7   \LWR@formatted{textsw}
8
9   \FilenameNullify{%
10     \LetLtxMacro\swshape\@empty%
11     \LetLtxMacro\textsw\firstofone%
12   }
13 }
```

File 163 **lwarp-fontenc.sty**

§ 265 Package **fontenc**

Pkg fontenc If using pdfL^AT_EX, `lwarp` used to require `fontenc` be loaded before `lwarp`, but now `lwarp` itself loads `\fontenc` with T1 encoding, which `lwarp` requires. `fontenc` is now allowed to be loaded with another encoding after `lwarp`.

`lwarp-fontenc` is no longer necessary, but is still provided to overwrite older versions.

for HTML output: 1 \LWR@ProvidesPackagePass{fontenc}[2017/04/05]

File 164 **lwarp-footmisc.sty**

§ 266 Package **footmisc**

(Emulates or patches code by ROBIN FAIRBAIRNS.)

Pkg footmisc footmisc is emulated.

lwarp incidentally happens to emulate the stable option.

```
1 \LWR@ProvidesPackageDrop{footmisc}[2011/06/06]
```

Some nullified commands:

```
2 \newcommand{\footnotelayout}{}
3 \newcommand{\setfnsymbol}[1]{}
4 \NewDocumentCommand{\DefineFNsymbols}{s m o m}{}
5
6 \newdimen\footnotemargin
7 \footnotemargin1.8em\relax
8
9 \newcommand*\hangfootparskip{0.5\baselineskip}
10 \newcommand*\hangfootparindent{0em}%
11
12 \let\pagefootnoterule\footnoterule
13 \let\mpfootnoterule\footnoterule
14 \def\splitfootnoterule{\kern-3\p@ \hrule \kern2.6\p@}
15
16 \providecommand*\multiplefootnotemarker}{3sp}
17 \providecommand*\multfootsep}{, }
```

Using `cleveref`. `\labelcref` only prints the number of the object, not its type.

```
18 \providecommand*\footref}[1]{\labelcref{#1}}
```

The following work as-is:

```
19 \newcommand\mpfootnotemark{%
20   \@ifnextchar[%
21     \xmpfootnotemark%
22     {%
23       \stepcounter\@mpfn%
24       \protected@xdef\@thefnmark{\thempfn}%
25       \@footnotemark%
26     }%
27 }
28 \def\xmpfootnotemark[#1]{%
29   \begingroup%
30   \csname c@\@mpfn\endcsname #1\relax%
31   \unrestored@protected@xdef\@thefnmark{\thempfn}%
32   \endgroup%
33   \@footnotemark%
34 }
```

File 165 **lwarp-footnote.sty**

§ 267 Package **footnote**

(Emulates or patches code by MARK WOODING.)

Pkg footnote footnote is used with minor patches.

for HTML output: 1 \LWR@ProvidesPackagePass{footnote}[1997/01/28]

Removed print-version formatting:

```

2 \def\fn@startnote{%
3 %   \@parboxrestore%
4   \protected@edef\@currentlabel{\csname p@\@mpfn@endcsname\@thefnmark}%
5 %   \color@begingroup% *** conflicts with lwarp
6 }
7
8 % \let\fn@endnote\color@endgroup% *** conflicts with lwarp
9 \def\fn@endnote{%
10 \LWR@htmltagc{/\LWR@tagregularparagraph}%
11 \LWR@originewline%
12 }

```

Removed print-version formatting:

```

13 \def\fn@startfntext{%
14   \setbox\z@\vbox\bgroup%
15     \fn@startnote%
16     \ignorespaces%
17 }

```

Removed print-version formatting, added closing paragraph tag:

```

18 \def\fn@endfntext{%
19   \LWR@htmltagc{/\LWR@tagregularparagraph}%
20   \LWR@originewline%
21 \egroup%
22 \begingroup%
23   \let\@makefntext\@empty%
24   \let\@finalstrut\@gobble%
25   \LetLtxMacro\rule\@gobbletwo% *8* also the optional argument?
26   \@footnotetext{\unvbox\z@}%
27 \endgroup%
28 }

```

These have been redefined, so re-\let them again:

```

29 \let\endfootnote\fn@endfntext
30 \let\endfootnotetext\endfootnote

```

File 166 **lwarp-footnotebackref.sty**

§ 268 Package **footnotebackref**

Pkg footnotebackref footnotebackref is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{footnotebackref}[2012/07/01]

File 167 **lwarp-footnotehyper.sty**

§ 269 Package **footnotehyper**

Pkg footnotehyper footnotehyper is a hyperref-safe version of footnote. For lwarp, footnotehyper is emulated.

for HTML output: Discard all options for lwarp-footnotehyper:

```
1 \RequirePackage{footnote}
2 \LWR@ProvidesPackageDrop{footnotehyper}[2018/01/23]
```

File 168 **lwarp-footnoterange.sty**

§ 270 Package **footnoterange**

(Emulates or patches code by H.-MARTIN MÜNCH.)

Pkg footnoterange footnoterange is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{footnoterange}[2012/02/17]

```
2 \csletcs{footnoterange}{footnoterange*}
3 \csletcs{endfootnoterange}{endfootnoterange*}
```

File 169 **lwarp-footnpag.sty**

§ 271 Package **footnpag**

Pkg footnpag footnpag is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{footnpag}

File 170 **lwarp-foreign.sty**

§ 272 Package **foreign**

(Emulates or patches code by PHILIP G. RATCLIFFE.)

Pkg foreign foreign is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{foreign}[2012/09/25]

```
2 \renewcommand\foreignabbrfont{\emph}
```

File 171 **lwarp-forest.sty**

§ 273 Package **forest**

(Emulates or patches code by SAŠO ŽIVANOVIĆ.)

Pkg forest **forest** is patched for use by **lwarp**.

 **\Forest*** The starred version of the macro **\Forest*** is not supported. **lwarp** encases each **lateximage** in an environment, so the global results of the starred **\Forest*** are lost.

for HTML output:

```
1 \LWR@ProvidesPackagePass{forest}[2017/07/14]

2 \BeforeBeginEnvironment{forest}{%
3   \begin{lateximage}[-forest-~\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{forest}{\end{lateximage}}
7
8 \RenewDocumentCommand{\Forest}{s D(){} m}{%
9   \forest@config{#2}%
10  \IfBooleanTF{#1}{%
11    \PackageError{lwarp-forest}%
12    {\protect\Forest* is not supported}%
13    {Lwarp uses an environment for images,\MessageBreak
14     but \protect\Forest* cannot work in an environment.}%
15    \let\forest@next\forest@env%
16    }\let\forest@next\forest@group@env}%
17  \begin{lateximage}[-forest-~\PackageDiagramAltText]   lwarp
18  \forest@next{#3}%
19  \end{lateximage}%                                     lwarp
20 }
```

File 172 **lwarp-fouridx.sty**

§ 274 Package **fouridx**

(Emulates or patches code by STEFAN KARRMANN.)

Pkg fouridx **fouridx** works as-is with SVG math, and is emulated for MATHJAX.

for HTML output:

```
1 \LWR@ProvidesPackagePass{fouridx}[2013/11/21]

2 \begin{warpMathJax}
3 \CustomizeMathJax{%
4   \newcommand{\fourIdx}[5]{%
5     \vphantom{#5}^{\hphantom{#2}#1}_{\hphantom{#1}#2}{#5}^{\#3}_{\#4}%
```

```

6   }%
7 }
8 \end{warpMathJax}

```

File 173 **lwarp-framed.sty**

§ 275 Package **framed**

(Emulates or patches code by DONALD ARSENEAU.)

Pkg framed framed is supported and patched by lwarp.

for HTML output: Accept all options for lwarp-framed:

```

1 \LWR@ProvidesPackagePass{framed}[2011/10/22]
2 \AtBeginDocument{\RequirePackage{xcolor}}% for \convertcolorspec

3
4 \renewenvironment{framed}{%
5 \LWR@forcenewpage
6 \BlockClass{framed}%
7 }
8 {\endBlockClass}
9
10 \renewenvironment{oframed}{%
11 \LWR@forcenewpage
12 \BlockClass{framed}%
13 }
14 {\endBlockClass}
15
16
17 \renewenvironment{shaded}{%
18 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
19 \LWR@forcenewpage
20 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
21 }
22 {\endBlockClass}
23
24 \renewenvironment{shaded*}{%
25 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
26 \LWR@forcenewpage
27 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
28 }
29 {\endBlockClass}
30
31
32 \renewenvironment{leftbar}{%
33 \LWR@forcenewpage
34 \BlockClass{framedleftbar}
35 \def\FrameCommand{%
36 \MakeFramed {}
37 }%
38 {\endMakeFramed\endBlockClass}

```

```

39
40
41 \renewenvironment{snugshade}{%
42 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
43 \LWR@forcenewpage
44 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
45 }
46 {\endBlockClass}
47
48 \renewenvironment{snugshade*}{%
49 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
50 \LWR@forcenewpage
51 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
52 }
53 {\endBlockClass}
54
55 \let\oframed\framed
56 \let\endoframed\endframed
57
58
59 \RenewEnviron{titled-frame}[1]{%
60 \CustomFBox{#1}{0pt}{0pt}{0pt}{\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 174 **lwarp-ftcap.sty**

§ 276 Package **ftcap**

Pkg ftcap ftcap is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ftcap}

File 175 **lwarp-ftnright.sty**

§ 277 Package **ftnright**

Pkg ftnright ftnright is ignored.

for HTML output: Discard all options for lwarp-ftnright:

1 \LWR@ProvidesPackageDrop{ftnright}[2014/10/28]

File 176 **lwarp-fullminipage.sty**

§ 278 Package **fullminipage**

Pkg fullminipage fullminipage is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fullminipage}[2014/07/06]

```
2 \newenvironment{fullminipage}[1][{}]{}
```

File 177 **lwarp-fullpage.sty**

§ 279 Package **fullpage**

Pkg fullpage fullpage is ignored.

for HTML output: Discard all options for lwarp-fullpage:

```
1 \LWR@ProvidesPackageDrop{fullpage}[1994/06/01]
```

File 178 **lwarp-fullwidth.sty**

§ 280 Package **fullwidth**

(Emulates or patches code by MARCO DANIEL.)

Pkg fullwidth fullwidth is emulated.

A minipage is used, of no HTML width.

for HTML output: 1 \LWR@ProvidesPackageDrop{fullwidth}[2011/11/18]

```
2 \newenvironment*{fullwidth}[1][{}]{%
3 \minipagefullwidth%
4 \minipage{\linewidth}%
5 }
6 {%
7 \endminipage%
8 }
```

File 179 **lwarp-fwlw.sty**

§ 281 Package **fwlw**

Pkg fwlw fwlw is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{fwlw}

```
2 \newbox\FirstWordBox \global\setbox\FirstWordBox\hbox{}
3 \newbox\NextWordBox \global\setbox\NextWordBox\hbox{}
4 \newbox\LastWordBox \global\setbox\LastWordBox\hbox{}
5 \def\ps@fwlwhead{}
6 \def\ps@NextWordFoot{}
```

File 180 **lwarp-gensymb.sty**

§ 282 Package **gensymb**

(Emulates or patches code by WALTER SCHMIDT.)

Pkg gensymb gensymb works as-is for SVG math, and is emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{gensymb}[2003/07/02]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}
4 \CustomizeMathJax{\newcommand{\celsius}{\unicode{x2103}}}
5 \CustomizeMathJax{\newcommand{\perthousand}{\unicode{x2030}}}
6 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
7 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
8 \end{warpMathJax}

```

File 181 **lwarp-gentombow.sty**

§ 283 Package **gentombow**

Pkg gentombow gentombow is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{gentombow}[2018/05/17]

2 \newcommand{\settombowbanner}[1]{}
3 \newcommand{\settombowbannerfont}[1]{}
4 \newcommand{\settombowwidth}[1]{}
5 \newcommand{\settombowbleed}[1]{}
6 \newcommand{\settombowcolor}[1]{}

```

File 182 **lwarp-geometry.sty**

§ 284 Package **geometry**

(Emulates or patches code by HIDEO UMEKI.)

Pkg geometry geometry is preloaded by lwarp, but must be nullified as seen by the user's source code.

for HTML output: Discard all options for lwarp-geometry:

```

1 \LWR@ProvidesPackageDropA{geometry}{2018/04/16}

```

If `geometry` is never loaded by the user, it will be loaded by `lwarp \AtBeginDocument`. If this is the case, the page layout should not be changed but the user macros should still be nullified.

```
2 \ifbool{LWR@allowanothergeometry}{%
```

Assign and set the selected geometry with `reset` prepended. `\AtEndPreamble lwarp` will save this, then set its own geometry.

```
3   \edef\LWR@tempone{reset,\optionlist{\@currname.\@current}}%
4   \expandafter\LWR@origgeometry\expandafter{\LWR@tempone}%
5 }{}% LWR@allowanothergeometry
```

The user-level commands are nullified:

```
6 \renewcommand*\geometry[1]{}
7 \renewcommand*\newgeometry[1]{}
8 \renewcommand*\restoregeometry{}
9 \renewcommand*\savegeometry[1]{}
10 \renewcommand*\loadgeometry[1]{}

```

File 183 **lwarp-ghsystem.sty**

§ 285 Package **ghsystem**

(Emulates or patches code by CLEMENS NIEDERBERGER.)

Pkg ghsystem **ghsystem** is patched for use by `lwarp`.

⚠ **\ghspic images** Images must be provided in `svg` format, unless `jpg` is specified. It is recommended to create a local `images` directory, copy into it the relevant PDF `ghsystem` images, and then convert them with

```
Enter ⇒ lwarpmk pdftosvg images/*.pdf
```

for HTML output:

```
1 \LWR@ProvidesPackagePass{ghsystem}[2020/02/17]
2 \ExplSyntaxOn
3
4 \cs_set_protected:Npn \ghsystem_filler:n #1
5 { \emph { \textless #1 \textgreater } }
6
7 \cs_set_protected:Npn \ghsystem_pic:n #1
8 {
9   \__ghsystem_includegraphics:xn
10  {
11 %     scale = \fp_to_tl:N \l__ghsystem_picture_scale_fp
12     width = 1.25cm
13     \exp_not:V \l__ghsystem_picture_includegraphics_tl
14   }
15   { ghsystem_ #1 . \l__ghsystem_picture_type_tl }
16 }
```

```
17
18 \ExplSyntaxOff
```

File 184 **lwarp-gloss.sty**

§ 286 Package **gloss**

(Emulates or patches code by JOSE LUIS DÍAZ, JAVIER BEZOS.)

Pkg gloss gloss is patched for use by lwarp.

To process the HTML glossary:

```
bibtex <projectname>_html.gls
```

for HTML output: 1 \LWR@ProvidesPackagePass{gloss}[2002/07/26]

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
2 \xpatchcmd{\gls@gloss@iii}
3   {\thepage}
4   {\theLWR@previousautopagelabel}
5   {}
6   {\LWR@patcherror{gloss}{\gls@gloss@iii}}
7
8 \def\gls@page@i#1#2{%
9   \endgroup%
10  \global\@namedef{gls@#1}{\nameref{\BaseJobname-autopage-#2}}}%
```

File 185 **lwarp-glossaries.sty**

§ 287 Package **glossaries**

(Emulates or patches code by NICOLA L.C. TALBOT.)

Pkg glossaries
processing glossaries

Opt GlossaryCmd

Default: **makeglossaries**

Opt [lwarpmk] printglossary

Opt [lwarpmk] htmlglossary

lwarpmk has the commands **lwarpmk printglossary** and **lwarpmk htmlglossary**, which process the glossaries created by the glossaries package using that package's *makeglossaries* program.

The shell command to execute is set by the lwarp option GlossaryCmd, which defaults to **makeglossaries**. The print or HTML glossary filename is appended to this command.

 **makeglossaries not found**

In some situations it may be required to modify the default command, such as to add the **perl** command in front:

```
\usepackage[
  GlossaryCmd={perl makeglossaries},
] {lwarp}
```

xindy language To set the language to use for processing glossaries with *xindy*:

```
\usepackage[
  GlossaryCmd={makeglossaries -L english},
] {lwarp}
```

Other options for *makeglossaries* may be set as well.

placement and toc options The glossaries may be placed in a numbered or unnumbered section, given a toc entry, and placed inline or on their own HTML page:

Numbered section, on its own HTML page:

```
\usepackage[xindy,toc,numberedsection=nolabel]{glossaries}
...
\printglossaries
```

Unnumbered section, inline with the current HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\printglossaries
```

Unnumbered section, on its own HTML page:

```
\usepackage[xindy,toc]{glossaries}
...
\ForceHTMLPage
\printglossaries
```

△ **glossary style** The default `style=item` option for `glossaries` conflicts with `lwarp`, so the style is forced to `index` instead.

△ **number list** The page number list in the printed form would become `\namerefs` in HTML, which could become a very long string if many items are referenced. For now, the number list is simply turned off.

print/HTML versions The print and HTML versions of the glossary differ in their internal page numbers. Separate commands for generating print and HTML glossaries are used, even though the page number is currently ignored.

for HTML output:

```
1 \PassOptionsToPackage{xindy}{glossaries}
2
3 \LWR@ProvidesPackagePass{glossaries}[2018/07/23]
4
5 \setupglossaries{nonumberlist}
6 \setglossarystyle{index}
```

Patched to fix toc pointing to the previous page:

```
7 \renewcommand*{\@p@glossarysection}[2]{%
8   \glsclearpage
9   \phantomsection
10  \ifdefempty\@glossarysecstar
11  {%
12   \csname\@glossarysec\endcsname{#2}%
13  }%
14  {%
```

In the original, the toc entry was made before the section, thus linking to the phantomsection in the printed version, but for HTML, this caused the link to point to the page before the glossaries, which could be a different HTML file. Here, the toc entry is made after the section is created:

```

15     \csname\@glossarysec\endcsname*{#2}%
16     \@gls@toc{#1}{\@glossarysec}% Moved after the previous line.
17 }%
18 \@glossaryseclabel
19 }

```

lwarp's sectioning commands cannot handle robust macros when splitting HTML into named filenames. glossaries uses \translate in sectioning names, and \translate is robust and cannot be expanded. The following pre-expands the translations at this moment, making use of \translatelet.

```

20 \newcommand*\LWR@comp@glossaryname{\translate{Glossary}}
21
22 \ifdefstrequal{\glossaryname}{\LWR@comp@glossaryname}{
23     \translatelet\LWR@translatetemp{Glossary}
24     \edef\glossaryname{\LWR@translatetemp}
25 }{}
26
27 \newcommand*\LWR@comp@acronymname{\translate{Acronym}}
28
29 \ifdefstrequal{\acronymname}{\LWR@comp@acronymname}{
30     \translatelet\LWR@translatetemp{Acronym}
31     \edef\acronymname{\LWR@translatetemp}
32 }{}
33
34 \newcommand*\LWR@comp@glsymbolsgroupname{\translate{Symbols (glossaries)}}
35
36 \ifdefstrequal{\glsymbolsgroupname}{\LWR@comp@glsymbolsgroupname}{
37     \translatelet\LWR@translatetemp{Symbols (glossaries)}
38     \edef\glsymbolsgroupname{\LWR@translatetemp}
39 }{}
40
41 \newcommand*\LWR@comp@glsnumbersgroupname{\translate{Numbers (glossaries)}}
42
43 \ifdefstrequal{\glsnumbersgroupname}{\LWR@comp@glsnumbersgroupname}{
44     \translatelet\LWR@translatetemp{Numbers (glossaries)}
45     \edef\glsnumbersgroupname{\LWR@translatetemp}
46 }{}

```

File 186 **lwarp-gmeometric.sty**

§ 288 Package **gmeometric**

Pkg gmeometric gmeometric is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{gmeometric}[2008/11/22]
2 \RequirePackageWithOptions{geometry}

```

File 187 **lwarp-graphics.sty**

§ 289 Package **graphics**

(Emulates or patches code by D. P. CARLISLE.)

Pkg graphics graphics is emulated.

for HTML output: 1 \LWR@ProvidesPackagePass{graphics}[2017/06/25]

§ 289.1 **Graphics extensions**

\DeclareGraphicsExtensions `{\list}`

\AtBeginDocument allow SVG files instead of PDF:

```
2 \AtBeginDocument{
3 \DeclareGraphicsExtensions{.svg,.SVG,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}
4 \DeclareGraphicsRule{.svg}{svg}{.svg}{}
5 \DeclareGraphicsRule{.SVG}{svg}{.SVG}{}
6 }
```

Inside a lateximage, allow PDF instead of SVG:

```
7 \ifpdf
8 \appto\LWR@restoreorigformatting{%
9 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
10 }
11 \else% \ifpdf
12     \ifXeTeX
13 \appto\LWR@restoreorigformatting{%
14 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
15 }
16     \else
17 \appto\LWR@restoreorigformatting{%
18 \DeclareGraphicsExtensions{.eps,.EPS,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
19 }
20     \fi
21 \fi
```

§ 289.2 Length conversions and graphics options



whitespace

A scaled image in L^AT_EX by default takes only as much space on the page as it requires, but HTML browsers use as much space as the original unscaled image would have taken, with the scaled image over- or under-flowing the area.

Used to store the user's selected dimensions and HTML class.

The class defaults to “inlineimage” unless changed by a `class=xyx` option.

```

22 \newlength{\LWR@igwidth}
23 \newlength{\LWR@igheight}
24 \newcommand*\LWR@igwidthstyle{}
25 \newcommand*\LWR@igheightstyle{}
26 \newcommand*\LWR@igorigin{}
27 \newcommand*\LWR@igangle{}
28 \newcommand*\LWR@igxscale{1}
29 \newcommand*\LWR@igyyscale{1}
30 \newcommand*\LWR@igclass{inlineimage}

31 \newcommand*\LWR@igalt{\ImageAltText}

```

Set the actions of each of the key/value combinations for `\includegraphics`. Many are ignored.

If an optional width was given, set an HTML style:

```

32 \define@key{igraph}{width}{%
33 \setlength{\LWR@igwidth}{#1}%
34 \ifthenelse{\lengthtest{\LWR@igwidth > 0pt}}%
35 {%

```

Default to use the converted fixed length given:

```

36 \renewcommand*\LWR@igwidthstyle{width:\LWR@printlength{\LWR@igwidth}}%

```

If ex or em dimensions were given, use those instead:

```

37 \IfEndWith{#1}{ex}%
38 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes ex
39 {}% not ex
40 \IfEndWith{#1}{em}%
41 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes em
42 {}% not em
43 \IfEndWith{#1}{\}%
44 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes percent
45 {}% not percent
46 \IfEndWith{#1}{px}%
47 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes px
48 {}% not px
49 }{}% end of length > 0pt
50 }

```

If an optional height was given, set an HTML style:

```
51 \define@key{igraph}{height}{%
52 \setlength{\LWR@igheight}{#1}%
53 \ifthenelse{\lengthtest{\LWR@igheight > 0pt}}%
54 {%
```

Default to use the converted fixed length given:

```
55   \renewcommand*\LWR@igheightstyle}{%
56   height:\LWR@printlength{\LWR@igheight} % extra space
57   }%
```

If ex or em dimensions were given, use those instead:

```
58   \IfEndWith{#1}{ex}%
59   {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes ex
60   {}% not ex
61   \IfEndWith{#1}{em}%
62   {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes em
63   {}% not em
64   \IfEndWith{#1}{\}%
65   {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes percent
66   {}% not percent
67   \IfEndWith{#1}{px}%
68   {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes px
69   {}% not px
70 }{}% end of length > 0pt
71 }
```

Handle origin key:

```
72 \define@key{igraph}{origin}[c]{%
73   \renewcommand*\LWR@igorigin}{#1}%
74 }
```

Handle angle key:

```
75 \define@key{igraph}{angle}{\renewcommand*\LWR@igangle}{#1}}
```

Handle class key:

```
76 \define@key{igraph}{class}{\renewcommand*\LWR@igclass}{#1}}
```

Handle alt key:

```
77 \define@key{igraph}{alt}{\renewcommand*\LWR@igalt}{#1}}
```

It appears that `graphicx` does not have separate keys for `xscale` and `yscale`. `scale` adjusts both at the same time.

```
78 \define@key{igraph}{scale}{%
79   \ifthenelse{equal{#1}{1}}{}{}% must expand #1
80   \PackageWarning{lwarp}{%
```

```

81         It is recommended to use ‘‘[width=xx\protect\linewidth]’’\MessageBreak
82         instead of ‘‘[scale=yy]’’,%
83     ]%
84 }%
85 \renewcommand*\LWR@igxscale{#1}%
86 \renewcommand*\LWR@igyscale{#1}%
87 }

```

Numerous ignored keys:

```

88 \define@key{igraph}{bb}{}
89 \define@key{igraph}{bblx}{}
90 \define@key{igraph}{bblly}{}
91 \define@key{igraph}{bburx}{}
92 \define@key{igraph}{bbury}{}
93 \define@key{igraph}{natwidth}{}
94 \define@key{igraph}{natheight}{}
95 \define@key{igraph}{hiresbb}[true]{}
96 \define@key{igraph}{viewport}{}
97 \define@key{igraph}{trim}{}
98 \define@key{igraph}{totalheight}{}
99 \define@key{igraph}{keepaspectratio}[true]{}
100 \define@key{igraph}{clip}[true]{}
101 \define@key{igraph}{draft}[true]{}
102 \define@key{igraph}{type}{}
103 \define@key{igraph}{ext}{}
104 \define@key{igraph}{read}{}
105 \define@key{igraph}{command}{}

```

New in v1.1a:

```

106 \define@key{igraph}{quite}{}
107 \define@key{igraph}{page}{}
108 \define@key{igraph}{pagebox}{}
109 \define@key{igraph}{interpolate}[true]{}

```

New in v1.1b:

```

110 \define@key{igraph}{decodearray}{}

```

§ 289.3 **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.

```

111 \newcommand*\LWR@rotstyle}[2]{%
112     \edef\LWR@tempone{#2}%
113     \setcounter{LWR@tempcountone}{-1*\real{\LWR@tempone}} % space
114     #1transform:rotate(\arabic{LWR@tempcountone}deg); % space
115 }

```

`\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.

```
116 \newcommand*\LWR@scalestyle}[3]{%
117   #1transform:scale(#2,#3);
118 }
```

§ 289.4 **\includegraphics**

`\LWR@opacity` For HTML, used only for `\includegraphics`.

`\LWR@opacity` may be set by the `transparent` package.

```
119 \def\LWR@opacity{1}
```

`\LWR@imagesizebox` Used to determine the actual image size if needed.

```
120 \newsavebox{\LWR@imagesizebox}
```

`\LWR@HTML@Gin@setfile` $\langle w \rangle$ $\langle h \rangle$ $\langle filename \rangle$ Sets the parsed filename for HTML output.

```
121 \newcommand*\LWR@HTML@Gin@setfile}[3]{%
122   \xdef\LWR@parsedfilename{#3}%
123 }
```

`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`.

```
124 \AtBeginDocument{
125 \define@key{Gin}{class}{}
126 \define@key{Gin}{alt}{}
127 }
```

`\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.

```
128 \AtBeginDocument{
129 \@ifpackageloaded{epstopdf}
130 {
131   \newcommand*\LWR@replaceEPSSVG{}
132 }{}
133 \newcommand*\LWR@replaceEPSSVG{%
134   \StrSubstitute{\LWR@tempone}{.eps}{.svg}[\LWR@tempone]%
135   \StrSubstitute{\LWR@tempone}{.EPS}{.SVG}[\LWR@tempone]%
136 }
137 }%
138 }
```

`\LWR@ig@wpimagesizes` * [$\langle 2: options \rangle$] [$\langle 3: options \rangle$] $\langle 4: filename \rangle$

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:

```

139 \newcommand*\LWR@ig@wpimagesizes}[4]{%
140   \ifbool{FormatWP}{%
141     \begingroup%
142     \LWR@restoreorigformatting%
143     \ifpdf%
144     \appto\LWR@restoreorigformatting{%
145       \DeclareGraphicsExtensions{%
146         .pdf, .PDF, .gif, .GIF, .png, .PNG, .jpg, .JPG, .jpeg, .JPEG%
147       }%
148     }%
149   \else% \ifpdf
150     \ifXeTeX%
151     \appto\LWR@restoreorigformatting{%
152       \DeclareGraphicsExtensions{%
153         .pdf, .PDF, .gif, .GIF, .png, .PNG, .jpg, .JPG, .jpeg, .JPEG%
154       }%
155     }%
156   \else%
157     \appto\LWR@restoreorigformatting{%
158       \DeclareGraphicsExtensions{%
159         .eps, .EPS, .gif, .GIF, .png, .PNG, .jpg, .JPG, .jpeg, .JPEG%
160       }%
161     }%
162     \fi%
163   \fi% \ifpdf
164   \define@key{Gin}{angle}{}%
165   \IfBooleanTF{#1}%
166   {% starred
167     \IfValueTF{#3}%
168     {%
169       \global\abox{\LWR@imagesizebox}{%
170         \LWR@originincludegraphics*[#2][#3]{#4}%
171       }%
172     }%
173     {%
174       \IfValueTF{#2}%
175       {%
176         \global\abox{\LWR@imagesizebox}{%
177           \LWR@originincludegraphics*[#2]{#4}%
178         }%
179       }{%
180         \global\abox{\LWR@imagesizebox}{%
181           \LWR@originincludegraphics*{#4}%
182         }%
183       }%
184     }%
185   }% starred
186   {% not starred
187     \IfValueTF{#3}%
188     {%
189       \global\abox{\LWR@imagesizebox}{%
190         \LWR@originincludegraphics[#2][#3]{#4}%
191       }%

```

```

192     }%
193     {%
194         \IfValueTF{#2}%
195         {%
196             \global\abox{\LWR@imagesizebox}{%
197                 \LWR@originincludegraphics[#2]{#4}%
198             }%
199         }{%
200             \global\abox{\LWR@imagesizebox}{%
201                 \LWR@originincludegraphics{#4}%
202             }%
203         }%
204     }%
205 }% not starred
206 \endgroup%
207 \settowidth{\LWR@igwidth}{\usebox{\LWR@imagesizebox}}%
208 \global\renewcommand*\LWR@igwidthstyle{%
209     width:\LWR@printlength{\LWR@igwidth}%
210 }%
211 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
212 \global\renewcommand*\LWR@igheightstyle{%
213     height:\LWR@printlength{\LWR@igheight}%
214 }%
215 }{}% FormatWP
216 }

```

`\LWR@ig@htmltag` For the HTML reference, add the graphicspath, filename, extension, alt tag, style, and class.

```

217 \newcommand*\LWR@ig@htmltag{%
218     img\LWR@indentHTML%
219     src="%
220     \detokenize\expandafter{\LWR@parsedfilename}%
221     "\LWR@indentHTML%

```

Only include a style tag if a width, height, angle, or scale was given:

```

222     \ifthenelse{
223         \NOT\equal{\LWR@igwidthstyle}{} \OR
224         \NOT\equal{\LWR@igheightstyle}{} \OR
225         \NOT\equal{\LWR@igorigin}{} \OR
226         \NOT\equal{\LWR@igangle}{} \OR
227         \NOT\equal{\LWR@igxscale}{1} \OR
228         \NOT\equal{\LWR@igyscale}{1}
229     }%
230     {%
231         style="\LWR@indentHTML
232         \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{} }%
233             {\LWR@igwidthstyle;\LWR@indentHTML}{}%
234         \ifthenelse{\NOT\equal{\LWR@igheightstyle}{} }%
235             {\LWR@igheightstyle;\LWR@indentHTML}{}%
236         \ifthenelse{\NOT\equal{\LWR@igorigin}{} }%
237             {%
238                 transform-origin: \LWR@originnames{\LWR@igorigin};%

```

```

239         \LWR@indentHTML%
240     }{}%
241     \ifthenelse{\NOT\equal{\LWR@igangle}{}}%
242     {%
243         \LWR@rotstyle{-ms-}{\LWR@igangle}\LWR@indentHTML
244         \LWR@rotstyle{-webkit-}{\LWR@igangle}\LWR@indentHTML
245         \LWR@rotstyle{}{\LWR@igangle }\LWR@indentHTML
246     }{}%
247     \ifthenelse{%
248         \NOT\equal{\LWR@igxscale}{1}\OR%
249         \NOT\equal{\LWR@igyscale}{1}%
250     }%
251     {%
252         \LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyscale}%
253         \LWR@indentHTML
254         \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyscale}%
255         \LWR@indentHTML
256         \LWR@scalestyle{}{\LWR@igxscale}{\LWR@igyscale}%
257         \LWR@indentHTML
258     }{}%
259     %
260     \ifthenelse{\NOT\equal{\LWR@opacity}{1}}%
261     {opacity:\LWR@opacity;\LWR@indentHTML}{}%
262     %
263     "\LWR@indentHTML%
264 }{}%

```

Set the class and alt tag:

```

265     class="\LWR@igclass"\LWR@indentHTML%
266     alt="\AltTextOpen\LWR@igalt\AltTextClose" \LWR@orignewline%
267 }% end of image tags

```

`\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.

```

268 \NewDocumentCommand{\LWR@includegraphicsb}{s o o m}
269 {%

```

Start the image tag on a new line, allow PDF output word wrap:

```

270     \LWR@origtilde \LWR@orignewline%

```

Temporarily compute `\linewidth`, `\textwidth`, `\textheight` arguments with a 6x9 inch size until the next `\endgroup`.

```

271     \begin{LWR@setvirtualpage}%

```

For correct em sizing during the width and height conversions:

```

272     \large%

```

Reset some defaults, possibly will be changed below if options were given:

```

273 \setlength{\LWR@igwidth}{0pt}%
274 \setlength{\LWR@igheight}{0pt}%
275 \renewcommand*\LWR@igwidthstyle{}%
276 \renewcommand*\LWR@igheightstyle{}%
277 \renewcommand*\LWR@igorigin{}%
278 \renewcommand*\LWR@igangle{}%
279 \renewcommand*\LWR@igxscale}{1}%
280 \renewcommand*\LWR@igyyscale}{1}%
281 \renewcommand*\LWR@igclass}{inlineimage}%

282 \ifdefvoid{\LWR@ThisAltText}{%
283   \edef\LWR@igalt{\ImageAltText}%
284 }{%
285   \edef\LWR@igalt{\LWR@ThisAltText}%
286 }%

```

If #3 is empty, only one optional argument was given, thus graphicx syntax:

```

287 \IfValueF{#3}{%
288   \IfValueTF{#2}%
289     {\setkeys{igraph}{#2}}%
290     {\setkeys{igraph}{}}%
291 }%

```

Fully expand and detokenize the filename, changing the file extension to .svg if necessary.

```

292 \begingroup%
293 \LetLtxMacro\Gin@setfile\LWR@HTML@Gin@setfile%
294 \edef\LWR@tempone{#4}%
295 \StrSubstitute{\LWR@tempone}{.pdf}{.svg}[\LWR@tempone]%
296 \StrSubstitute{\LWR@tempone}{.PDF}{.SVG}[\LWR@tempone]%
297 \LWR@replaceEPSSVG%
298 \xdef\LWR@parsedfilename{\LWR@tempone}%
299 \Gin@include@graphics{\detokenize\expandafter{\LWR@tempone}}%
300 \endgroup%
301 \filename@parse{\LWR@parsedfilename}%
302 \LWR@traceinfo{\LWR@parsedfilename is \LWR@parsedfilename}%
303 % \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:

```

304 \LWR@ig@wpimagesizes{#1}{#2}{#3}{#4}%

```

Create the HTML reference with the graphicspath, filename, extension, alt tag, style, and class:

```

305 \LWR@traceinfo{\LWR@includegraphicsb: about to create href}%
306 \href{\LWR@parsedfilename}%
307 {% start of href
308   \LWR@traceinfo{\LWR@includegraphicsb: about to LWR@htmltag}%
309   \LWR@htmltag{\LWR@ig@htmltag}%
310 }% end of href

```

Return to original page size and font size:

```

311 \end{\LWR@setvirtualpage}%

```

Clear the single-use alt text:

```
312 \gdef\LWR@ThisAltText{}%
313 \LWR@traceinfo{LWR@includegraphicsb done}%
314 }
```

`\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.

```
315 \AtBeginDocument{
316
317 \LWR@traceinfo{Patching includegraphics.}
318
319 \LetLtxMacro\LWR@originincludegraphics\includegraphics

320 \renewrobustcmd*{\includegraphics}
321 {%
```

This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:

```
322 \LWR@traceinfo{includegraphics}%
323 \LWR@ensuredoingapar%
324 \LWR@includegraphicsb%
325 }% includegraphics
326 }% AtBeginDocument
```

§ 289.5 Boxes

`\LWR@rotboxorigin` Holds the origin key letters.

```
327 \newcommand*\LWR@rotboxorigin{}
```

`\LWR@originname` {*(letter)*}

Given one L^AT_EX origin key value, translate into an HTML origin word:

```
328 \newcommand*\LWR@originname[1]{%
329 \ifthenelse{equal{#1}{t}}{top}{}%
330 \ifthenelse{equal{#1}{b}}{bottom}{}%
331 \ifthenelse{equal{#1}{c}}{center}{}%
332 \ifthenelse{equal{#1}{l}}{left}{}%
333 \ifthenelse{equal{#1}{r}}{right}{}%
334 }
```

`\LWR@originnames` {*(letters)*}

Given one- or two-letter L^AT_EX origin key values, translate into HTML origin words:

```
335 \newcommand*\LWR@originnames[1]{%
336 \StrChar{#1}{1}[\LWR@strresult]%
337 \LWR@originname{\LWR@strresult}
```

```

338 \StrChar{#1}{2}[\LWR@strresult]%
339 \LWR@originname{\LWR@strresult}
340 }

```

Handle the origin key for `\rotatebox`:

```

341 \define@key{krotbox}{origin}{%
342 \renewcommand*\LWR@rotboxorigin{#1}%
343 }

```

These keys are ignored:

```

344 \define@key{krotbox}{x}{}
345 \define@key{krotbox}{y}{}
346 \define@key{krotbox}{units}{}

```

`\rotatebox` [*keyval list*] {*angle*} {*text*}

```

347 \AtBeginDocument{

```

The HTML version:

```

348 \NewDocumentCommand{\LWR@HTML@rotatebox}{0{} m +m}{%

```

Reset the origin to “none-given”:

```

349 \renewcommand*\LWR@rotboxorigin{}

```

Process the optional keys, which may set `\LWR@rotateboxorigin`:

```

350 \setkeys{krotbox}{#1}%

```

Select inline-block so that HTML will transform this span:

```

351 \LWR@htmltagc{%
352   span\LWR@indentHTML
353   style="\LWR@indentHTML
354   display: inline-block;\LWR@indentHTML

```

If an origin was given, translate and print the origin information:

```

355   \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{}}%
356     {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@indentHTML}%
357     {}%

```

Print the rotation information:

```

358   \LWR@rotstyle{-ms-}{#2}\LWR@indentHTML
359   \LWR@rotstyle{-webkit-}{#2}\LWR@indentHTML
360   \LWR@rotstyle}{#2}"\LWR@orignewline%
361 }\LWR@orignewline%

```

Print the text to be rotated:

```
362 \begin{LWR@nestspan}%
363 #3%
```

Close the span:

```
364 \LWR@htmltagc{/span}%
365 \end{LWR@nestspan}%
366 }
```

The high-level interface:

```
367 \LWR@formatted{rotatebox}
368
369 }% AtBeginDocument
```

`\scalebox` $\{\langle h-scale \rangle\} [\langle v-scale \rangle] \{\langle text \rangle\}$

```
370 \AtBeginDocument{
```

The HTML version:

```
371 \NewDocumentCommand{\LWR@HTML@scalebox}{m o m}{%
```

Select inline-block so that HTML will transform this span:

```
372 \LWR@htmltagc{%
373   span\LWR@indentHTML
374   style="\LWR@indentHTML
375   display: inline-block;\LWR@indentHTML
```

Print the scaling information:

```
376   \LWR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
377   \LWR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}}\LWR@indentHTML
378   \LWR@scalestyle{#1}{\IfNoValueTF{#2}{#1}{#2}}
379   "\LWR@orignewLine
380 }\LWR@orignewLine%
```

Print the text to be scaled:

```
381 \begin{LWR@nestspan}%
382 #3%
```

Close the span:

```
383 \LWR@htmltagc{/span}%
384 \end{LWR@nestspan}%
385 }
```

The high-level interface:

```

386 \LWR@formatted{scalebox}
387
388 }% AtBeginDocument

```

`\reflectbox` $\{\langle text \rangle\}$

```

389 \AtBeginDocument{
390
391 \newcommand{\LWR@HTML@reflectbox}[1]{%
392   \scalebox{-1}[1]{#1}%
393 }% \reflectbox
394
395 \LWR@formatted{reflectbox}
396
397 }% AtBeginDocument

```

`\resizebox` $\{\langle h-length \rangle\} \{\langle v-length \rangle\} \{\langle text \rangle\}$

Simply prints its text argument.

```

398 \AtBeginDocument{
399
400 \NewDocumentCommand{\LWR@HTML@resizebox}{s m m m}{%
401   #4%
402 }
403
404 \LWR@formatted{resizebox}
405
406 }% AtBeginDocument

```

File 188 **lwarp-graphics.sty**

§ 290 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 189 **lwarp-grffile.sty**

§ 291 Package **grffile**

Pkg grffile grffile is supported as-is. File types known to the browser are displayed, and unknown

**matching PDF and SVG**

file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

lwarp-grffile now exists as a placeholder since grffile used to be emulated by lwarp, and thus older versions of lwarp-grffile may exist and should be overwritten by this newer version.

for HTML output: 1 \LWR@ProvidesPackagePass{grffile}[2017/06/30]

File 190 **lwarp-grid.sty**

§ 292 Package **grid**

Pkg grid grid is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{grid}[2009/06/16]

2 \newenvironment*{gridenv}{}{}

File 191 **lwarp-grid-system.sty**

§ 293 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 192 **lwarp-gridset.sty**

§ 294 Package **gridset**

Pkg gridset gridset is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{gridset}[2020-02-12]

```

2 \newcommand*\gridbase{}
3 \newcommand*\gridinterval{}
4 \newcommand*\SavePos}[1]{}
5 \ifLuaTeX
6 \else
7 \let\savepos\SavePos
8 \fi
9 \newcommand*\vskipnextgrid{}
10 \newcommand*\thegridinfo}[1]{(thegridinfo)}
11 \newcommand*\theposinfo}[1]{(theposinfo)}
12 \newcommand*\theypos}[1]{(theypos)}

```

File 193 **lwarp-hang.sty**

§ 295 Package **hang**

(Emulates or patches code by ANDREAS NOLDA.)

Pkg hang **hang** is emulated.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{hang}[2017/02/18]

2 \newlength{\hangingindent}
3 \setlength{\hangingindent}{1em}
4 \newlength{\hangingleftmargin}
5 \setlength{\hangingleftmargin}{0em}
6
7 \newcommand*\LWR@findhangingleftmargin{%
8 \setlength{\LWR@templengthone}{\hangingleftmargin}%
9 \addtolength{\LWR@templengthone}{\hangingindent}%
10 }
11
12 \newenvironment{hangingpar}
13 {
14   \LWR@findhangingleftmargin%
15   \BlockClass[%
16     \LWR@print@mbx{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
17     \LWR@print@mbx{text-indent:-\LWR@printlength{\hangingindent}}%
18   ]%
19   {hangingpar}%
20 }
21 {\endBlockClass}
22
23 \newenvironment{hanginglist}
24 {%
25   \renewcommand*\LWR@printcloselist{\LWR@printcloseitemize}%
26   \renewcommand*\LWR@printopenlist{%
27     \LWR@findhangingleftmargin%
28     ul style=""
29     \LWR@print@mbx{list-style-type:none;} % extra space
30     \LWR@print@mbx{%
31       margin-left:\LWR@printlength{\LWR@templengthone}%
32     } ; % extra space

```

```

33         \LWR@print@mbbox{%
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@mbbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
55         \LWR@print@mbbox{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 194 **lwarp-hanging.sty**

§ 296 Package **hanging**

Pkg hanging **hanging** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{hanging}[2009/09/02]

```

2 \@ifclassloaded{memoir}{
3 \let\hangpara\relax
4 \let\hangparas\relax
5 \let\endhangparas\relax
6 \let\hangpunct\relax
7 \let\endhangpunct\relax
8 }{}

```

```

\hangpara  {<indent>} {<afternum>}
Use hangparas instead.
9 \newcommand*{\hangpara}[2]{}

Env  hangparas  {<indent>} {<afternum>}
10 \newenvironment*{hangparas}[2]
11 {%
12   \BlockClass[%
13     \LWR@print@mbx{margin-left:\LWR@printlength{#1}} ; %
14     \LWR@print@mbx{text-indent:-\LWR@printlength{#1}}}%
15   ]%
16   {hangingpar}%
17 }
18 {\endBlockClass}

Env  hangpunct
19 \newenvironment*{hangpunct}
20 {\BlockClass{hangpunct}}
21 {\endBlockClass}

22 \newcommand{\nhpt}{.}
23 \newcommand{\nhlq}{'}
24 \newcommand{\nhrq}{'}

```

File 195 **lwarp-hhline.sty**

§ 297 Package **hhline**

(Emulates or patches code by DAVID CARLISLE.)

Pkg hhline hhline is patched for use by lwarp.

Only a rudimentary emulation is provided so far. If the argument contains any = characters, the result is a double \hline. If none, the result is a single \hline.

for HTML output:

```

1 \LWR@ProvidesPackagePass{hhline}[2014/10/28]

2 \newrobustcmd*{\LWR@HTML@hhline}[1]{%
3   \edef\LWR@tempone{\detokenize\expandafter{#1}}%
4   \IfSubStr[1]{\LWR@tempone}{=}{\hline\hline}{\hline}%
5 }
6 % ^^A or:
7 % ^^A \newrobustcmd*{\LWR@HTML@hhline}[1]{\LWR@getmynexttoken}
8
9 \AtBeginDocument{\LWR@expandableformatted{hhline}}

```

For MATHJAX. A simple \hline is used.

```

10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\hhline}[1]{\hline}}
12 \end{warpMathJax}

```

File 196 **lwarp-hypbmsec.sty**

§ 298 Package **hypbmsec**

Pkg hypbmsec hypbmsec is emulated by the lwarp core.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypbmsec}[2016/05/16]

File 197 **lwarp-hypcap.sty**

§ 299 Package **hypcap**

Pkg hypcap hypcap is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypcap}[2016/05/16]

```

2 \newcommand*{\capstart}{}
3 \newcommand*{\hypcapspace}{}
4 \newcommand*{\hypcapredef}[1]{}
5 \newcommand*{\capstartfalse}{}
6 \newcommand*{\capstarttrue}{}

```

File 198 **lwarp-hypdestopt.sty**

§ 300 Package **hypdestopt**

Pkg hypdestopt hypdestopt is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypdestopt}[2016/05/21]

File 199 **lwarp-hypernat.sty**

§ 301 Package **hypernat**

Pkg hypernat hypernat is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{hypernat}[2001/07/09]

File 200 **lwarp-hyperref.sty**

§ 302 Package **hyperref**

(Emulates or patches code by SEBASTIAN RAHTZ, HEIKO OBERDIEK.)

Pkg hyperref **hyperref** is emulated.

for HTML output:

```

1 % \LWR@ProvidesPackageDrop{hyperref}% not allowed
2 % \ProvidesPackage{lwarp-#1-#2}% not allowed
3 \PackageInfo{lwarp}{%
4 Using the lwarp HTML version of package ‘hyperref’,\MessageBreak
5 and discarding options.\MessageBreak
6 (Not using \protect\ProvidesPackage, so that other packages\MessageBreak
7 do not attempt to patch lwarp’s version of ‘hyperref’.)\MessageBreak}
8
9 \DeclareOption*{}

10 % \ProcessOptions\relax
11 \let\ds@\empty%      from the original \ProcessOptions
12 \edef\@curroptions{}% lwarp modification to \ProcessOptions
13 \@processoptions\relax% from the original \ProcessOptions

14 \newcommand*\hypersetup}[1]{}
15 \newcommand*\hyperbaseurl}[1]{}

```

`\hyperimage` `{\langle URL \rangle}{\langle alt text \rangle}`

Insert an image with alt text:

```

16 \NewDocumentCommand{\LWR@hyperimageb}{m +m}{%
17   \LWR@ensuredoingapar%
18   \def\LWR@templink{#1}%
19   \@onelevel@sanitize\LWR@templink%
20   \LWR@htmltag{img src="\LWR@templink" alt="#2" class="hyperimage"}%
21   \LWR@ensuredoingapar%
22   \endgroup%
23 }
24
25 \newrobustcmd*\hyperimage}{%
26   \begingroup%
27   \LWR@linkcatcodes%
28   \LWR@hyperimageb%
29 }
30

```

`\hyperdef` `{\langle 1: category \rangle}{\langle 2: name \rangle}{\langle 3: text \rangle}`

Creates an HTML anchor to `category.name` with the given text.

```

31 \NewDocumentCommand{\LWR@hyperdefb}{m m +m}{%

```

```

32 \LWR@ensuredoingapar%
33 \LWR@label@createtag{#1.#2}%
34 #3%
35 \endgroup%
36 }
37
38 \newcommand*\hyperdef}{%
39 \begingroup%
40 \LWR@linkcatcodes%
41 \LWR@hyperdefb%
42 }
43

```

`\LWR@hyperrefb` $\{\langle 1: URL \rangle\} \{\langle 2: category \rangle\} \{\langle 3: name \rangle\} \{\langle 4: text \rangle\}$

Creates an HTML link to URL#category.name with the given text.

```

44 \newcommand{\LWR@hyperreffinish}[1]{%
45 \begingroup%
46 \RenewDocumentCommand{\ref}{\LWR@ref@ignorestar}%
47 #1%
48 \endgroup%
49 \LWR@htmltag{/a}%
50 }
51
52 \newcommand*\LWR@hyperrefbb}[3]{%
53 \LWR@htmltag{%
54 a href="%
55 \detokenize\expandafter{#1}\LWR@hashmark%
56 \detokenize\expandafter{#2}.\detokenize\expandafter{#3}%
57 "%
58 \LWR@addlinktitle%
59 }%
60 \endgroup%
61 \LWR@hyperreffinish%
62 }
63
64 \newrobustcmd*\LWR@hyperrefb}{%
65 \begingroup%
66 \LWR@linkcatcodes%
67 \LWR@hyperrefbb%
68 }

```

`\LWR@hyperrefc` $[\langle label \rangle] \{\langle text \rangle\}$

Creates text as an HTML link to the L^AT_EX label.

```

69
70 \NewDocumentCommand{\LWR@hyperrefcb}{0{label}}{%
71 \LWR@startref{#1}%
72 \endgroup%
73 \LWR@hyperreffinish%
74 }
75
76 \newcommand*\LWR@hyperrefc}{%
77 \begingroup%

```

```

78 \LWR@linkcatcodes%
79 \LWR@hyperrefcb%
80 }

```

`\hyperref` $\langle 1: URL \rangle \langle 2: category \rangle \langle 3: name \rangle \langle 4: text \rangle$ — or —
 $\langle 1: label \rangle \langle 2: text \rangle$

```

81 \DeclareRobustCommand*\hyperref}{%
82 \LWR@ensuredoingapar%
83 \@ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
84 }

```

`\hypertarget` $\langle name \rangle \langle text \rangle$

Creates an anchor to name with the given text.

```

85 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%
86 \label{\LWR-ht-#1}%
87 #2%
88 \endgroup%
89 }
90
91 \newcommand*\hypertarget}{%
92 \begingroup%
93 \LWR@linkcatcodes%
94 \LWR@hypertargetb%
95 }

```

`\hyperlink` $\langle name \rangle \langle text \rangle$

Creates a link to the anchor created by `hypertarget`, with the given link text.

Declared because also defined by `memoir`.

```

96 \DeclareDocumentCommand{\LWR@hyperlinkb}{m}{%
97 \LWR@hyperrefcb[\LWR-ht-#1]%
98 }
99
100 \DeclareDocumentCommand{\hyperlink}{}{}%
101 \LWR@ensuredoingapar%
102 \begingroup%
103 \LWR@linkcatcodes%
104 \LWR@hyperlinkb%
105 }

```

`\autoref` * $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

106 \NewDocumentCommand{\autoref}{s m}{%
107 \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%
108 }

```

`\autopageref` $\langle label \rangle$

For HTML, `\cleveref` is used instead.

```

109 \NewDocumentCommand{\autopageref}{s m}{%
110   \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}%
111 }

```

```

\pdfstringdef   {<macroname>} {<TEXstring>}
112 \newcommand{\pdfstringdef}[2]{}

```

```

\pdfbookmark   [ <level> ] {<text>} {<name>}
113 \newcommand{\pdfbookmark}[3][1]{}

```

```

\currentpdfbookmark {<text>} {<name>}
114 \newcommand{\currentpdfbookmark}[2]{}

```

```

\subpdfbookmark {<text>} {<name>}
115 \newcommand{\subpdfbookmark}[2]{}

```

```

\belowpdfbookmark {<text>} {<name>}
116 \newcommand{\belowpdfbookmark}[2]{}

```

```

\texorpdfstring {<TEXstring>} {<PDFstring>}
117 \newcommand{\texorpdfstring}[2]{#1}

```

```

\pdfstringdefDisableCommands {<commands>}
118 \newcommand{\pdfstringdefDisableCommands}[1]{}

```

```

\hypercalcbp   {<dimen>}   From hyperref.
119 \def\hypercalcbp#1{%
120   \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
121 }%

```

```

\Acrobatmenu   {<menuoption>} {<text>}
122 \newcommand{\Acrobatmenu}[2]{}

```

```

\TextField     [ <parameters> ] {<label>}
123 \DeclareRobustCommand{\TextField}[2][1]{}

```

```

\CheckBox      [ <parameters> ] {<label>}
124 \DeclareRobustCommand{\CheckBox}[2][1]{}

```

<code>\ChoiceMenu</code>	<code>[\langle parameters \rangle] \{\langle label \rangle\} \{\langle choices \rangle\}</code>
	125 <code>\DeclareRobustCommand{\ChoiceMenu}[3][\{\}</code>
<code>\PushButton</code>	<code>[\langle parameters \rangle] \{\langle label \rangle\}</code>
	126 <code>\DeclareRobustCommand{\PushButton}[2][\{\}</code>
<code>\Submit</code>	<code>[\langle parameters \rangle] \{\langle label \rangle\}</code>
	127 <code>\DeclareRobustCommand{\Submit}[2][\{\}</code>
<code>\Reset</code>	<code>[\langle parameters \rangle] \{\langle label \rangle\}</code>
	128 <code>\DeclareRobustCommand{\Reset}[2][\{\}</code>
<code>\Gauge</code>	<code>[\langle parameters \rangle] \{\langle label \rangle\}</code>
	129 <code>\DeclareRobustCommand{\Gauge}[2][\{\}</code>
<code>\LayoutTextField</code>	<code>\{\langle label \rangle\} \{\langle field \rangle\}</code>
	130 <code>\newcommand*\LayoutTextField}[2]{\}</code>
<code>\LayoutChoiceField</code>	<code>\{\langle label \rangle\} \{\langle field \rangle\}</code>
	131 <code>\newcommand*\LayoutChoiceField}[2]{\}</code>
<code>\LayoutCheckField</code>	<code>\{\langle label \rangle\} \{\langle field \rangle\}</code>
	132 <code>\newcommand*\LayoutCheckField}[2]{\}</code>
<code>\MakeRadioField</code>	<code>\{\langle width \rangle\} \{\langle height \rangle\}</code>
	133 <code>\newcommand*\MakeRadioField}[2]{\}</code>
<code>\MakeCheckField</code>	<code>\{\langle width \rangle\} \{\langle height \rangle\}</code>
	134 <code>\newcommand*\MakeCheckField}[2]{\}</code>
<code>\MakeTextField</code>	<code>\{\langle width \rangle\} \{\langle height \rangle\}</code>
	135 <code>\newcommand*\MakeTextField}[2]{\}</code>
<code>\MakeChoiceField</code>	<code>\{\langle width \rangle\} \{\langle height \rangle\}</code>
	136 <code>\newcommand*\MakeChoiceField}[2]{\}</code>
<code>\MakeFieldButton</code>	<code>\{\langle text \rangle\}</code>

```
137 \newcommand{\MakeFieldButton}[1]{}
```

File 201 **lwarp-hyperxmp.sty**

§ 303 Package **hyperxmp**

Pkg hyperxmp hyperxmp is ignored.

for HTML output: Discard all options for lwarp-hyperxmp:

```
1 \LWR@ProvidesPackageDrop{hyperxmp}[2018/11/27]
```

File 202 **lwarp-hyphenat.sty**

§ 304 Package **hyphenat**

Pkg hyphenat hyphenat is emulated during HTML output, while the print-mode version is used inside a lateximage.

for HTML output: 1 \LWR@ProvidesPackagePass{hyphenat}[2009/09/02]

```
2 \LetLtxMacro\LWRHYNAT@origtextnhtt\textnhtt
3 \LetLtxMacro\LWRHYNAT@originhttfamily\nhttfamily
4 \LetLtxMacro\LWRHYNAT@originohyphens\nohyphens
5 \LetLtxMacro\LWRHYNAT@origbshyp\bshyp
6 \LetLtxMacro\LWRHYNAT@origfshyp\fshyp
7 \LetLtxMacro\LWRHYNAT@origdothyp\dothyp
8 \LetLtxMacro\LWRHYNAT@origcolonyhyp\colonyhyp
9 \LetLtxMacro\LWRHYNAT@orighyp\hyp
10
11 \LetLtxMacro\textnhtt\texttt
12 \LetLtxMacro\nhttfamily\ttfamily
13
14 \renewcommand{\nohyphens}[1]{#1}
15 \renewrobustcmd{\bshyp}{%
16   \ifmode\backslash\else\textbackslash\fi%
17 }
18 \renewrobustcmd{\fshyp}{/}
19 \renewrobustcmd{\dothyp}{.}
20 \renewrobustcmd{\colonyhyp}{:}
21 \renewrobustcmd{\hyp}{-}
22
23 \appto\LWR@restoreorigformatting{%
24 \LetLtxMacro\textnhtt\LWRHYNAT@origtextnhtt%
25 \LetLtxMacro\nhttfamily\LWRHYNAT@originhttfamily%
26 \LetLtxMacro\nohyphens\LWRHYNAT@originohyphens%
27 \LetLtxMacro\bshyp\LWRHYNAT@origbshyp%
28 \LetLtxMacro\fshyp\LWRHYNAT@origfshyp%
29 \LetLtxMacro\dothyp\LWRHYNAT@origdothyp%
30 \LetLtxMacro\colonyhyp\LWRHYNAT@origcolonyhyp%
```

```
31 \LetLtxMacro\hyp\LWRHYNAT@orighyp%
32 }
```

File 203 **lwarp-idxlayout.sty**

§ 305 Package **idxlayout**

(Emulates or patches code by THOMAS TITZ.)

Pkg idxlayout idxlayout is emulated.

for HTML output: Discard all options for lwarp-idxlayout:

```
1 \LWR@ProvidesPackageDrop{idxlayout}[2012/03/30]
```

```
2 \newcommand{\LWR@indexprenote}{}
```

\AtBeginDocument to help with package load order.

```
3 \AtBeginDocument{
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 204 **lwarp-ifoddpag.sty**

§ 306 Package **ifoddpag**

(Emulates or patches code by MARTIN SCHARRER.)

Pkg ifoddpag ifoddpag is emulated.

for HTML output: Discard all options for lwarp-ifoddpag:

```
1 \LWR@ProvidesPackageDrop{ifoddpag}[2016/04/23]
```

```

2 \newif\ifoddpge
3
4 \newif\ifoddpgeoroneside
5
6 \DeclareRobustCommand{\checkoddpge}{\oddpgetrue\oddpgeoronesidetrue}
7
8 \def\oddpge@pge{1}
9
10 \def\@ifoddpge{%
11     \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpgeoroneside{%
15     \expandafter\@firstoftwo
16 }

```

File 205 **lwarp-imakeidx.sty**

§ 307 Package **imakeidx**

(Emulates or patches code by ENRICO GREGORIO.)

Pkg imakeidx imakeidx is patched for use by lwarp.

letter headings When using *makeindex*, to match the print and HTML output's display of index letter headings, specify the `lwarp.ist` style:

```
\makeindex[options={-s lwarp.ist}]
```

(For HTML the `lwarp.ist` style is used automatically, which displays letter headings. When using *xindy* the default style also displays letter headings.)

index setup See section 8.6.18 for how to setup *lwarpmk* to process the indexes with imakeidx, both with and without shell escape.

for HTML output: 1 \LWR@ProvidesPackagePass{imakeidx}[2016/10/15]

Use the new HTML suffix:

```

2 \catcode'\_ =12%
3 \define@key{imki}{name}{\def\imki@name{#1_html}}
4 \catcode'\_ =8%

```

\printindex The HTML version of `\printindex`:

```

5 \catcode'\_ =12%
6
7 \renewcommand*\printindex[1][\imki@jobname]{%
8 \LWR@originpage%
9 \LWR@startpars%
10 \ifstrequal{#1}{\imki@jobname}{%
11 \ifundefined{#1@idxfile}{%

```

```

12     \imki@error{#1}%
13   }{%
14     \imki@putindex{#1}%
15   }%
16 }{%
17 \@ifundefined{#1_html@idxfile}{\imki@error{#1_html}}{\imki@putindex{#1_html}}%
18 }%
19 }
20
21 \catcode'\_ =8%

```

\@index The HTML version of \@index:

```

22 \catcode'\_ =12%
23
24 \def\@index[#1]{%
25   \ifstrequal{#1}{\imki@jobname}%
26   {%
27     \@ifundefined{#1@idxfile}%
28     {%
29       \PackageWarning{lwarp-imakeidx}{Undefined index file '#1'}%
30       \begingroup
31       \@sanitize
32       \imki@nowrindex%
33     }%
34     {%
35       \edef\@idxfile{#1}%
36       \begingroup
37       \@sanitize
38       \@wrindex\@idxfile%
39     }%
40   }%
41   {%
42     \@ifundefined{#1_html@idxfile}%
43     {%
44       \PackageWarning{lwarp-imakeidx}{Undefined index file '#1_html'}%
45       \begingroup
46       \@sanitize
47       \imki@nowrindex%
48     }%
49     {%
50       \edef\@idxfile{#1_html}%
51       \begingroup
52       \@sanitize
53       \@wrindex\@idxfile%
54     }%
55   }%
56 }
57
58 \catcode'\_ =8%

```

```

\item
\subitem
\subsubitem HTML versions of \item, etc.:

```

```

59 \appto\theindex{%
60   \let\item\LWR@indexitem%
61   \let\subitem\LWR@indexsubitem%
62   \let\subsubitem\LWR@indexsubsubitem%
63 }

```

```
\imki@wrindexentrysplit  {\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{LWR@index-\arabic{LWR@autoindex}}%
74 \protected@write@indexfile{%
75   {\string\indexentry[#1]{#2}{\arabic{LWR@autoindex}}}%
76 }
77
78 \def\imki@wrindexsplit#1#2{%
79 \imki@wrindexentrysplit{#1}{#2}{\thepage}%
80 \endgroup\imki@showidxentry{#1}{#2}%
81 \@esphack%
82 }
83
84 \def\imki@wrindexunique#1#2{%
85 \imki@wrindexentryunique{#1}{#2}{\thepage}%
86 \endgroup\imki@showidxentry{#1}{#2}%
87 \@esphack%
88 }
89

```

```
\LWR@imki@setxdydefopts
```

Sets the xindy HTML options, ignoring the user's settings.

```

90 \newcommand*\LWR@imki@setxdydefopts{%
91   \edef\imki@options{ \space %
92     -M \space \LWR@xindyStyle\space %
93     -L \space \LWR@xindyLanguage\space %
94     -C \space \LWR@xindyCodepage\space %
95   }%
96 }

```

```
\LWR@imki@setdefopts  {\langle user options\rangle}
```

Sets the HTML options, added to the user's settings, depending on whether `makeindex` or `xindy` are used.

For *makeindex*, the user's choice is ignored, and only the lwarp version is used. (Only one style at a time is possible.)

For *xindy*, multiple modules may be specified, and the lwarp version is appended.

```

97 \newcommand*\LWR@imki@setdefopts}[1]{%
98 \ifblank{#1}{%
99   \edef\imki@options{\space -s \space \LWR@makeindexStyle \space}%
100   \ifdefstring{\imki@progdefault}{xindy}{\LWR@imki@setxdydefopts}{}%
101   \ifdefstring{\imki@progdefault}{texindy}{\LWR@imki@setxdydefopts}{}%
102   \ifdefstring{\imki@progdefault}{truexindy}{\LWR@imki@setxdydefopts}{}%
103 }{%
104   \edef\imki@options{\space #1 \space}%
105 }%
106 }

```

`\imki@makeindex` Use the new HTML options:

```

107 \xpatchcmd{\imki@makeindex}
108   {\let\imki@options\space}
109   {\LWR@imki@setdefopts{}}%
110   {}
111   {\LWR@patcherror{imakeidx}{makeindex}}

```

Use the new HTML options.

```

112 \define@key{imki}{options}{\LWR@imki@setdefopts{#1}}

```

`\imki@resetdefaults` Use the new HTML options:

```

113 \xpatchcmd{\imki@resetdefaults}
114   {\def\imki@options{ }}
115   {\LWR@imki@setdefopts{}}
116   {}
117   {\LWR@patcherror{imakeidx}{resetdefaults}}

```

`theindex` was already defined `\AtBeginDocument` by the lwarp core, so it must be redefined here similarly, but patched for `imakeidx`:

Env `theindex`

```

118 \AtBeginDocument{
119 \renewenvironment*{theindex}{%
120   \imki@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 206 **lwarp-index.sty**

§ 308 Package **index**

(Emulates or patches code by DAVID M. JONES.)

Pkg index **index** is patched for use by `lwarp`.

for HTML output: 1 `\LWR@ProvidesPackagePass{index}[2004/01/20]`

Use `\theLWR@autoindex` instead of `\thepage`. `\@tempwattrue` is used to force an immediate write to the index file instead of waiting until the end of the page.

```

2 \xpatchcmd{\newindex}
3   {\x@newindex[thepage]}
4   {%
5     \@tempwattrue%
6     \x@newindex[theLWR@autoindex]%
7   }
8   {}
9   {\LWR@patcherror{index}{newindex}}
10
11 \xpatchcmd{\renewindex}
12   {\x@renewindex[thepage]}
13   {%
14     \@tempwattrue%
15     \x@renewindex[theLWR@autoindex]%
16   }
17   {}
18   {\LWR@patcherror{index}{renewindex}}

```

Patched to set a new autoindex:

```

19 \xpatchcmd{\@wrindex}
20   {\begingroup}
21   {%
22     \addtocounter{LWR@autoindex}{1}%          lwarp
23     \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}% lwarp
24     \begingroup%
25   }
26   {}
27   {\LWR@patcherror{index}{@wrindex}}

```

\AtBeginDocument **lwarp** core \lets \@wrindex to \LWR@wrindex. Since the index package has been loaded, \let to its version instead:

```

28 \let\LWR@index@wrindex\@wrindex
29
30 \AtBeginDocument{
31 \let\@wrindex\LWR@index@wrindex
32 }

```

Modified to add \index@prologue:

```

33 \AtBeginDocument{
34 \renewenvironment*{theindex}{%
35   \LWR@indexsection{\indexname}%
36   \ifx\index@prologue\@empty\else
37     \index@prologue
38     \bigskip
39   \fi
40   \let\item\LWR@indexitem%
41   \let\subitem\LWR@indexsubitem%
42   \let\subsubitem\LWR@indexsubsubitem%
43 }{}
44 }% AtBeginDocument

```

Disabled:

```

45 \def\@showidx#1{}
46 \let\@texttop\relax
47 \renewcommand*{\raggedbottom}{}
48 \renewcommand*{\flushbottom}{}
49 \renewcommand*{\markboth}[2]{}
50 \renewcommand*{\markright}[1]{}

```

File 207 **lwarp-inputtrc.sty**

§ 309 Package **inputtrc**

(Emulates or patches code by UWE LÜCK.)

Pkg inputtrc inputtrc is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{inputtrc}[2012/10/10]

Patched to remove extraneous spaces, which sometimes showed up in logos inside a lateximage.

```

2 \renewcommand*{\IT@prim@input}[1]{%
3   \typeout{\IT@indent\IT@currfile INPUTTING #1}%
4 %% ... TODO: option to write to '.log' only.
5   \xdef\IT@filestack{\IT@currfile\IT@filestack}%
6   \xdef\IT@currfile{#1}%
7   \expandafter \gdef\expandafter \IT@indent\expandafter{%
8     \IT@indent \IT@indent@unit}%          lwarp
9   \@input#1%                               lwarp
10  \expandafter\IT@pop@indent\IT@indent \@nil% lwarp
11  \expandafter\IT@pop@file \IT@filestack\@nil% lwarp
12  \IT@maybe@returnmessage% v0.2          lwarp
13 }
```

File 208 **lwarp-intopdf.sty**

§ 310 Package **intopdf**

Pkg intopdf intopdf is emulated.

The filespec, MIME type, and description are ignored for now.

for HTML output: 1 \LWR@ProvidesPackageDrop{intopdf}[2019/05/28]

```

2 \NewDocumentCommand{\attachandlink}{o m o m m}{%
3   \href{#2}{#5}%
4 }
```

File 209 **lwarp-karnaugh-map.sty**

§ 311 Package **karnaugh-map**

(Emulates or patches code by MATTIAS JACOBSSON.)

Pkg karnaugh-map karnaugh-map is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{karnaugh-map}[2017/02/20]

(It is hard to patch this macro, so the entire thing is redefined here, with the lwarp modifications identified in comments.)

```

2 \RenewDocumentEnvironment{karnaugh-map}{s O{4} O{4} O{1} O{$X_1X_0$} O{$X_3X_2$} O{$X_5X_4$}}{%
3   \begingroup
4   % store map size {[START]
```

```

5     \renewcommand{\@karnaughmap@var@mapsize@}{#2}%
6     \renewcommand{\@karnaughmap@var@mapsizey@}{#3}%
7     \renewcommand{\@karnaughmap@var@mapsizez@}{#4}%
8     % [END]}
9     % determinate if markings should be color or black and white
10    \IfBooleanTF{#1}{%
11      % should be black and white
12      \renewcommand{\@karnaughmap@var@bw@}{1}%
13    }{%
14      % should be color
15      \renewcommand{\@karnaughmap@var@bw@}{0}%
16    }%
17    %
18    % find matching matrix template and alignment parameters {[START]
19    \newcommand{\@karnaughmap@local@matrixtemplate@}{0}% '0' is considered as missing matrix template
20    \newcommand{\@karnaughmap@local@maprealignmentx@}{0}%
21    \newcommand{\@karnaughmap@local@maprealignmenty@}{0}%
22    \ifnum\@karnaughmap@var@mapsize@=\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsize@=221
23      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
24        \&          0 \&          1 \& \phantom{0} \&
25        0 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& \&
26        1 \& |(000010)| \phantom{0} \& |(000011)| \phantom{0} \& \&
27        \phantom{0} \&          \&          \&          \& \&
28      }%
29      \fi
30    \ifnum\@karnaughmap@var@mapsize@=\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsize@=241
31      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
32        \&          0 \&          1 \& \phantom{00} \&
33        00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& \&
34        01 \& |(000010)| \phantom{0} \& |(000011)| \phantom{0} \& \&
35        11 \& |(000110)| \phantom{0} \& |(000111)| \phantom{0} \& \&
36        10 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& \&
37        \phantom{00} \&          \&          \&          \& \&
38      }%
39      \fi
40    \ifnum\@karnaughmap@var@mapsize@=\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsize@=421
41      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
42        \&          00 \&          01 \&          11 \&          10 \& \phantom{0}
43        0 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(000010)
44        1 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(000110)
45        \phantom{00} \&          \&          \&          \&          \&
46      }%
47      \fi
48    \ifnum\@karnaughmap@var@mapsize@=\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsize@=441
49      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
50        \&          00 \&          01 \&          11 \&          10 \& \phantom{0}
51        00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(000010)
52        01 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(000110)
53        11 \& |(001100)| \phantom{0} \& |(001101)| \phantom{0} \& |(001111)| \phantom{0} \& |(001110)
54        10 \& |(001000)| \phantom{0} \& |(001001)| \phantom{0} \& |(001011)| \phantom{0} \& |(001010)
55        \phantom{00} \&          \&          \&          \&          \&
56      }%
57      \fi
58    \ifnum\@karnaughmap@var@mapsize@=\@karnaughmap@var@mapsizey@\@karnaughmap@var@mapsize@=442
59      \renewcommand{\@karnaughmap@local@matrixtemplate@}{%

```

```

60          \&                00 \&                01 \&                11 \&                10 \& \phantom
61          00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(0000
62          01 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(0001
63          11 \& |(001100)| \phantom{0} \& |(001101)| \phantom{0} \& |(001111)| \phantom{0} \& |(0011
64          10 \& |(001000)| \phantom{0} \& |(001001)| \phantom{0} \& |(001011)| \phantom{0} \& |(0010
65          \phantom{00} \&                \&                \&                \&                \&
66          }%
67          \renewcommand{\@karnaughmap@local@maprealignmentx@}{2.5}%
68          \fi
69          \ifnum\@karnaughmap@var@mapsize@=\@karnaughmap@var@mapsize@=\@karnaughmap@var@mapsize@=444
70          \renewcommand{\@karnaughmap@local@matrixtemplate@}{%
71          \&                00 \&                01 \&                11 \&                10 \& \phantom
72          00 \& |(000000)| \phantom{0} \& |(000001)| \phantom{0} \& |(000011)| \phantom{0} \& |(0000
73          01 \& |(000100)| \phantom{0} \& |(000101)| \phantom{0} \& |(000111)| \phantom{0} \& |(0001
74          11 \& |(001100)| \phantom{0} \& |(001101)| \phantom{0} \& |(001111)| \phantom{0} \& |(0011
75          10 \& |(001000)| \phantom{0} \& |(001001)| \phantom{0} \& |(001011)| \phantom{0} \& |(0010
76          \phantom{00} \&                \&                \&                \&                \&
77          00 \& |(100000)| \phantom{0} \& |(100001)| \phantom{0} \& |(100011)| \phantom{0} \& |(1000
78          01 \& |(100100)| \phantom{0} \& |(100101)| \phantom{0} \& |(100111)| \phantom{0} \& |(1001
79          11 \& |(101100)| \phantom{0} \& |(101101)| \phantom{0} \& |(101111)| \phantom{0} \& |(1011
80          10 \& |(101000)| \phantom{0} \& |(101001)| \phantom{0} \& |(101011)| \phantom{0} \& |(1010
81          \phantom{00} \&                \&                \&                \&                \&
82          }%
83          \renewcommand{\@karnaughmap@local@maprealignmentx@}{2.5}%
84          \renewcommand{\@karnaughmap@local@maprealignmenty@}{-2.5}%
85          \fi
86          % [END]}
87          % test if a matrix template is found or not(aka "\@karnaughmap@local@matrixtemplate@" equals to '0')
88          \ifdefstring{\@karnaughmap@local@matrixtemplate@}{0}{% lwarp
89          \ifnum0=\@karnaughmap@local@matrixtemplate@% original
90          % print error if no template could be found
91          \PackageError{lwarp-karnaugh-map}{%
92          Can not find a template fitting your specification (\@karnaughmap@var@mapsize@ \space x \@karnaughma
93          }{%
94          Existing templates have the following dimensions: 2x2x1, 2x4x1, 4x2x1, 4x4x1, 4x4x2, and 4x4x4.
95          }%
96          \fi original
97          }{% lwarp
98          \begin{tikzpicture}
99          % grid
100         % for all dimensions
101         \draw[color=black, ultra thin] (0,0) grid (\@karnaughmap@var@mapsize@,\@karnaughmap@var@mapsize@);
102         % when there are 2 sub maps
103         \ifnum\@karnaughmap@var@mapsize@=2
104         \draw[color=black, ultra thin] (5,0) grid (9,4);
105         \fi
106         % when there are 4 sub maps
107         \ifnum\@karnaughmap@var@mapsize@=4
108         \draw[color=black, ultra thin] (5,0) grid (9,4);
109         \draw[color=black, ultra thin] (0,-5) grid (4,-1);
110         \draw[color=black, ultra thin] (5,-5) grid (9,-1);
111         \fi
112         % labels
113         % for all dimensions
114         \node[above] at (\@karnaughmap@var@mapsize@*0.5,\@karnaughmap@var@mapsize@+0.9) {\small{#5}};

```

```

115     \node[left] at (-0.9,\@karnaughmap@var@mapsizex@*0.5) {\small{#6}};
116     % when there are 2 sub maps
117     \ifnum\@karnaughmap@var@mapsizex@=2
118         \node[above] at (7,4.9) {\small{#5}};
119         % extra sub maps labels
120         \node[below] at (2,-0.1) {\small{#7$=0$}};
121         \node[below] at (7,-0.1) {\small{#7$=1$}};
122     \fi
123     % when there are 4 sub maps
124     \ifnum\@karnaughmap@var@mapsizex@=4
125         \node[above] at (7,4.9) {\small{#5}};
126         \node[left] at (-0.9,-3) {\small{#6}};
127         % extra sub maps labels
128         \node[below] at (2,-0.1) {\small{#7$=00$}};
129         \node[below] at (7,-0.1) {\small{#7$=01$}};
130         \node[below] at (2,-5.1) {\small{#7$=10$}};
131         \node[below] at (7,-5.1) {\small{#7$=11$}};
132     \fi
133     % data
134     \matrix[
135         matrix of nodes,
136         ampersand replacement=\&,
137         column sep={1cm,between origins},
138         row sep={1cm,between origins},
139     ] at (\@karnaughmap@var@mapsizex@*0.5+\@karnaughmap@local@maprealignmentx@,\@karnaughmap@var@mapsizex@*\@karnaughmap@local@matrixtemplate@%
140         \@karnaughmap@local@matrixtemplate@%
141     );
142 }{
143     \end{tikzpicture}
144 \endgroup
145 }

```

File 210 **lwarp-keyfloat.sty**

§ 312 Package **keyfloat**

(Emulates or patches code by BRIAN DUNN.)

Pkg keyfloat keyfloat is supported with a considerable amount of hacking. (It's a mashup of lwarp, keyfloat, and tocdata.)

 **keywrap** If placing a `\keyfig[H]` inside a keywrap, use an absolute width for `\keyfig`, instead of lw-proportional widths. (The [H] option forces the use of a minipage, which internally adjusts for a virtual 6-inch wide minipage, which then corrupts the lw option.)

for HTML output:

```

1 \LWR@ProvidesPackagePass{keyfloat}[2019/09/23]
2
3 \@ifpackagelater{keyfloat}{2019/09/23}{}{
4     \PackageError{lwarp-keyfloat}
5     {%
6         The keyfloat package is out of date.\MessageBreak
7         Update to keyfloat v2.01 2019/09/23 or later%
8     }

```

```

9    {%
10      Please update the keyfloat package.  It's worth it!%
11    }
12 }

```

After keyfloat has loaded:

```

13 \AtBeginDocument{

14 \providecommand*\KFLT@LWR@hook@boxouter{}
15 \renewcommand*\KFLT@LWR@hook@boxouter{%
16   \ifbool{KFLT@keywrap}{%
17     }{%
18       \ifnumequal{\value{KFLT@keyfloatdepth}}{0}{%
19         \setlength{\linewidth}{6in}%
20         \setlength{\textwidth}{6in}%
21         \setlength{\textheight}{9in}%
22       }{%
23     }%
24   \normalcolor%
25 }

26 \LetLtxMacro\KFLT@LWR@hook@keysubfloats\KFLT@LWR@hook@boxouter
27
28 \let\KFLT@LWR@hook@keyfloatsminipage\relax
29 \let\endKFLT@LWR@hook@keyfloatsminipage\relax
30 \newenvironment*{KFLT@LWR@hook@keyfloatsminipage}[1]{}{}

31 \LetLtxMacro\KFLT@LWR@hook@keyfloats\KFLT@LWR@hook@boxouter
32
33 \renewcommand*\KFLT@maybeendfloatrow{%
34   \ifnumless{\value{KFLT@thiscol}}{\value{KFLT@numcols}}%
35   }{% thiscol < numcols
36   }{% >=
37     \defcounter{KFLT@thiscol}{0}%
38   }%
39 }%
40
41 \renewcommand{KFLT@trackrows}%
42 {%

```

If are nested inside a keyfloats or a subfloat:

```

43   \ifboolexpr{%
44     test {\ifnumgreater{\value{KFLT@keyfloatdepth}}{0}} or%
45     bool{KFLT@inkeysubfloats}%
46   }{%
47     {% nested

```

Tracks row start and end:

```

48     \KFLT@maybestartfloatrow%

```

Possibly fill space between columns:

```

49     \ifnumgreater{\value{KFLT@thiscol}}{1}%
50     {%
51     \hfill%
52     }%
53     {}%
54 }% nested
55 {}% not nested
56 }

57 \RenewDocumentCommand{\KFLT@onefigureimage}{m}
58 {%
59 \LWR@traceinfo{KFLT@onefigureimage}%
60 % \begin{lrbox}{\KFLT@envbox}%
61 \ifthenelse{\NOT\equal{\KFLT@lw}{}}%
62     {%
63     \KFLT@frame{\includegraphics%
64     [scale=\KFLT@es,width=\KFLT@imagewidth]{#1}}%
65     }%
66     {% not linewidth
67     \ifthenelse{\dimtest{\KFLT@w}{>}{0pt}}%
68     {% width is given
69     \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
70     {% w and h
71     \KFLT@frame{\includegraphics%
72     [scale=\KFLT@es,%
73     width=\KFLT@imagewidth,height=\KFLT@h]{#1}}%
74     }% w and h
75     {% only w
76     \KFLT@frame{\includegraphics%
77     [scale=\KFLT@es,width=\KFLT@imagewidth]{#1}}%
78     }% only w
79     }% width is given
80     {% width is not given
81     \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
82     {%
83     \KFLT@frame{\includegraphics%
84     [scale=\KFLT@es,height=\KFLT@h]{#1}}%
85     }%
86     {%
87     \KFLT@frame{\includegraphics%
88     [scale=\KFLT@es]{#1}}%
89     }%
90     }% width is not given
91     }% not linewidth
92 % \end{lrbox}%
93 % \unskip%
94 % \KFLT@findenvboxwidth%
95 % \begin{turn}{\KFLT@r}%
96 % \KFLT@frame{\usebox{\KFLT@envbox}}%
97 % \unskip%
98 % \end{turn}%
99 \LWR@traceinfo{KFLT@onefigureimage: done}%
100 }

```

```

101 \RenewDocumentEnvironment{KFLT@boxinner}{}
102 {%
103   \LWR@traceinfo{KFLT@boxinner}%
104   \LWR@stoppars%
105   \minipagefullwidth%
106   \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
107     \fminipage{\KFLT@imagewidth}%
108   }{%
109     \minipage{\KFLT@imagewidth}%
110   }%
111 }
112 {%
113   \ifboolexpr{bool{KFLT@ft} or bool{KFLT@f}}{%
114     \endfminipage%
115   }{%
116     \endminipage%
117   }%
118   \LWR@startpars%
119   \LWR@traceinfo{KFLT@boxinner: done}%
120 }

121 \newcommand*{\LWR@KFLT@settetalign}[1]{%
122   \def\LWR@KFLT@textalign{justify}%
123   \ifcsstring{KFLT@#1textalign}{\centering}%
124     {\def\LWR@KFLT@textalign{center}}%
125     {}%
126   \ifcsstring{KFLT@#1textalign}{\raggedleft}%
127     {\def\LWR@KFLT@textalign{right}}%
128     {}%
129   \ifcsstring{KFLT@#1textalign}{\raggedright}%
130     {\def\LWR@KFLT@textalign{left}}%
131     {}%
132 }
133
134 \renewcommand{\KFLT@addtext}[1]
135 {%

```

Is there text to add?

```

136   \ifcempty{KFLT@#1t}%
137   {}% no text
138   {% text to add
139   {% local

```

Add some space, then create a <div> to contain the text:

```

140     \addvspace{\smallskipamount}%
141     \LWR@KFLT@settetalign{#1}%
142     \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%

```

Set the alignment and some text parameters:

```

143 %     \csuse{KFLT@#1textalign}%
144 %     \footnotesize%

```

```

145     \setlength{\parskip}{1.5ex}%
146     \setlength{\parindent}{0em}%

```

Typeset the actual text:

```

147     \csuse{KFLT@#1t}%

```

Close it all out with a little more space:

```

148     \end{BlockClass}%
149 %     \par\addvspace{2ex}%
150     }% local
151 }% text to add
152 }
153
154 \@ifpackageloaded{tocdata}
155 {}
156 {% tocdata not loaded
157
158     \newcommand*\LWR@KFLT@setnamealign[1]{%
159         \def\LWR@KFLT@textalign{justify}%
160         \ifstrequal{#1}{\centering}%
161             {\def\LWR@KFLT@textalign{center}}%
162             {}%
163         \ifstrequal{#1}{\raggedleft}%
164             {\def\LWR@KFLT@textalign{right}}%
165             {}%
166         \ifstrequal{#1}{\raggedright}%
167             {\def\LWR@KFLT@textalign{left}}%
168             {}%
169     }
170
171     \renewcommand*\KFLT@addartisttext[3]{%
172

```

Add space and create the name inside a <div>:

```

173 %     \addvspace{\medskipamount}%
174 %     \begin{minipage}{\linewidth}%
175     \LWR@KFLT@setnamealign{#3}%
176     \begin{BlockClass}[text-align:\LWR@KFLT@textalign]{floatnotes}%
177

```

Text alignment is #3, and depends on artist or author:

```

178 %     #3%
179

```

#1 is empty or 'subgrp'
#2 is empty for artist, 'u' for author:

```

180     \footnotesize\textsc{%
181         \KFLT@optionalname{\csuse{KFLT@#1a#2p}}%
182         \KFLT@optionalname{\csuse{KFLT@#1a#2f}}%

```

```

183         \csuse{KFLT@#1a#2l}%
184         \csuse{KFLT@#1a#2s}%
185     ]%
186 %     \end{minipage}%
187     \end{BlockClass}
188 %     \par\addvspace{2ex}%
189 }
190
191 ]% tocd data not loaded

```

Env KFLT@marginfloat [*<offset>*] {*<type>*}

```

192 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}
193 {%
194     \uselengthunit{PT}%
195     \LWR@BlockClassWP%
196     {float:right; width:2in; margin:10pt}%
197     {}%
198     {marginblock}%
199     \renewcommand*{\@capttype}{#2}%
200     \minipage{\LWR@usersmarginparwidth}%
201     \setlength{\marginparwidth}{.95\LWR@usersmarginparwidth}%
202 }
203 {%
204     \endminipage%
205     \endLWR@BlockClassWP%
206 }

207 \DeclareDocumentEnvironment{marginfigure}{o}
208     {\begin{KFLT@marginfloat}{figure}}
209     {\end{KFLT@marginfloat}}
210
211 \DeclareDocumentEnvironment{margintable}{o}
212     {\begin{KFLT@marginfloat}{table}}
213     {\end{KFLT@marginfloat}}

```

Env keywrap {*<width>*} {*<keyfloat>*}

```

214 \DeclareDocumentEnvironment{keywrap}{m +m}
215 {%
216     \begin{LWR@setvirtualpage}*
217     \setlength{\LWR@templengthone}{#1}%
218     \begin{LWR@BlockClassWP}%
219         {%
220             float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
221             margin:10pt%
222         }%
223         {}%
224         {marginblock}%
225     \setlength{\linewidth}{.95\LWR@templengthone}%
226     \booltrue{KFLT@keywrap}%
227     #2%
228     \end{LWR@BlockClassWP}%
229     \end{LWR@setvirtualpage}%

```

```

230 }
231 {}

232 }% AtBeginDocument

```

File 211 **lwarp-layaureo.sty**

§ 313 Package **layaureo**

Pkg layaureo layaureo is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{layaureo}[2004/09/16]

File 212 **lwarp-layout.sty**

§ 314 Package **layout**

Pkg layout layout is ignored.

for HTML output: Discard all options for lwarp-layout:

```

1 \LWR@ProvidesPackageDrop{layout}[2014/10/28]

2 \NewDocumentCommand{\layout}{s}{}

```

File 213 **lwarp-layouts.sty**

§ 315 Package **layouts**

Pkg layouts layouts is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{layouts}[2009/09/02]

```

2 \newif\ifoddpagelayout
3 \oddpagelayouttrue
4 \newif\iftwocolumnlayout
5 \twocolumnlayoutfalse
6 \newif\ifdrawmarginpars
7 \drawmarginparstrue
8 \newif\ifdrawparameters
9 \drawparameterstrue
10 \newif\iflistaspara
11 \listasparatrue
12 \newif\ifruninhead
13 \runinheadfalse
14 \newif\ifprintparameters

```

```
15 \printparameterstrue
16 \newif\ifdrawdimensions
17 \drawdimensionsfalse
18 \newif\ifprintheadings
19 \printheadingstrue
20 \newcommand{\testdrawdimensions}{}
21 \newcommand{\testprintparameters}{}
22 \newcommand{\setlabelfont}[1]{}
23 \newcommand{\setparameterfont}[1]{}
24 \newcommand{\setvaluetextsize}[1]{}
25 \newcommand{\setlayoutscales}[1]{}
26 \newcommand{\setuplayouts}{}
27 \newcommand{\printinunitsof}[1]{}
28 \newcommand{\prntlen}[1]{}
29 \newcommand{\trypaperwidth}[1]{}
30 \newcommand{\trypaperheight}[1]{}
31 \newcommand{\tryoffset}[1]{}
32 \newcommand{\tryvoffset}[1]{}
33 \newcommand{\trytopmargin}[1]{}
34 \newcommand{\tryheadheight}[1]{}
35 \newcommand{\tryheadsep}[1]{}
36 \newcommand{\trytextheight}[1]{}
37 \newcommand{\tryfootskip}[1]{}
38 \newcommand{\tryoddsidemargin}[1]{}
39 \newcommand{\tryevensidemargin}[1]{}
40 \newcommand{\trytextwidth}[1]{}
41 \newcommand{\trymarginparsep}[1]{}
42 \newcommand{\trymarginparwidth}[1]{}
43 \newcommand{\trymarginparpush}[1]{}
44 \newcommand{\trycolumnsep}[1]{}
45 \newcommand{\trycolumnseprule}[1]{}
46 \newcommand{\setfootbox}[2]{}
47 \newcommand{\currentpage}{}
48 \newcommand{\drawpage}{(draw page)}
49 \newcommand{\pagediagram}{(page diagram)}
50 \newcommand{\pagedesign}{(page design)}
51 \newcommand{\pagevalues}{(page values)}
52 \newcommand{\trystockwidth}[1]{}
53 \newcommand{\trystockheight}[1]{}
54 \newcommand{\trytrimedge}[1]{}
55 \newcommand{\trytrimtop}[1]{}
56 \newcommand{\tryuppermargin}[1]{}
57 \newcommand{\tryspinmargin}[1]{}
58 \newcommand{\currentstock}{}
59 \newcommand{\drawstock}{(draw stock)}
60 \newcommand{\stockdiagram}{(stock diagram)}
61 \newcommand{\stockdesign}{(stock design)}
62 \newcommand{\stockvalues}{(stock values)}
63 \newcommand{\tryitemindent}[1]{}
64 \newcommand{\trylabelwidth}[1]{}
65 \newcommand{\trylabelsep}[1]{}
66 \newcommand{\tryleftmargin}[1]{}
67 \newcommand{\tryrightmargin}[1]{}
68 \newcommand{\trylistparindent}[1]{}
69 \newcommand{\trytopsep}[1]{}

```

```
70 \newcommand{\tryparskip}[1]{}
71 \newcommand{\trypartopsep}[1]{}
72 \newcommand{\tryparsep}[1]{}
73 \newcommand{\tryitemsep}[1]{}
74 \newcommand{\currentlist}{}
75 \newcommand{\drawlist}{(draw list)}
76 \newcommand{\listdiagram}{(list diagram)}
77 \newcommand{\listdesign}{(list design)}
78 \newcommand{\listvalues}{(list values)}
79 \newcommand{\tryfootins}[1]{}
80 \newcommand{\tryfootnoteseq}[1]{}
81 \newcommand{\tryfootnotebaseline}[1]{}
82 \newcommand{\tryfootruleheight}[1]{}
83 \newcommand{\tryfootrulefrac}[1]{}
84 \newcommand{\currentfootnote}{}
85 \newcommand{\drawfootnote}{(draw footnote)}
86 \newcommand{\footnotediagram}{(footnote diagram)}
87 \newcommand{\footnotedesign}{(footnote design)}
88 \newcommand{\footnotevalues}{(footnote values)}
89 \newcommand{\tryparindent}[1]{}
90 \newcommand{\tryparlinewidth}[1]{}
91 \newcommand{\tryparbaselineskip}[1]{}
92 \newcommand{\currentparagraph}{}
93 \newcommand{\drawparagraph}{(draw paragraph)}
94 \newcommand{\paragraphdiagram}{(paragraph diagram)}
95 \newcommand{\paragraphdesign}{(paragraph design)}
96 \newcommand{\paragraphvalues}{(paragraph values)}
97 \newcommand{\trybeforeskip}[1]{}
98 \newcommand{\tryafterskip}[1]{}
99 \newcommand{\tryindent}[1]{}
100 \newcommand{\currentheading}{}
101 \newcommand{\drawheading}[1]{}{(draw heading)}
102 \newcommand{\headingdiagram}[1]{}{(heading diagram)}
103 \newcommand{\headingdesign}[1]{}{(heading design)}
104 \newcommand{\headingvalues}{(heading values)}
105 \newcommand{\trytextfloatsep}[1]{}
106 \newcommand{\tryfloatsep}[1]{}
107 \newcommand{\tryintextsep}[1]{}
108 \newcommand{\trytopfigrule}[1]{}
109 \newcommand{\trybotfigrule}[1]{}
110 \newcommand{\currentfloat}{}
111 \newcommand{\drawfloat}{(draw float)}
112 \newcommand{\floatdiagram}{(float diagram)}
113 \newcommand{\floatdesign}{(float design)}
114 \newcommand{\floatvalues}{(float values)}
115 \newcommand{\trytotalnumber}[1]{}
116 \newcommand{\trytopnumber}[1]{}
117 \newcommand{\trybottomnumber}[1]{}
118 \newcommand{\trytopfraction}[1]{}
119 \newcommand{\trytextfraction}[1]{}
120 \newcommand{\trybottomfraction}[1]{}
121 \newcommand{\currentfloatpage}{}
122 \newcommand{\drawfloatpage}{(draw floatpage)}
123 \newcommand{\floatpagediagram}{(floatpage diagram)}
124 \newcommand{\floatpagedesign}{(floatpage design)}
```

```

125 \newcommand{\floatpagevalues}{(floatpage values)}
126 \newcommand{\trytocindent}[1]{ }
127 \newcommand{\trytocnumwidth}[1]{ }
128 \newcommand{\trytoclinewidth}[1]{ }
129 \newcommand{\trytocrmarg}[1]{ }
130 \newcommand{\trytocpnumwidth}[1]{ }
131 \newcommand{\trytocdotsep}[1]{ }
132 \newcommand{\currenttoc}{ }
133 \newcommand{\drawtoc}{(draw toc)}
134 \newcommand{\tocdiagram}{(toc diagram)}
135 \newcommand{\tocdesign}{(toc design)}
136 \newcommand{\tocvalues}{(toc values)}
137 \newcommand{\drawspread}[8][0]{(a spread)}
138 \newcommand{\drawfontframe}[1]{(font frame)}
139 \newcommand{\drawfontframelabel}[1]{ }

```

File 214 **lwarp-leading.sty**

§ 316 Package **leading**

Pkg leading leading is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{leading}[2008/12/11]
 2 \newcommand\leading[1]{ }

File 215 **lwarp-leftidx.sty**

§ 317 Package **leftidx**

(Emulates or patches code by HARALD HARDERS.)

Pkg leftidx leftidx works as-is with SVG math, and is emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{leftidx}[2003/09/24]
 2 \begin{warpMathJax}
 3 \CustomizeMathJax{\newcommand{\leftidx}[3]{\vphantom{#2}}#1#2#3}
 4 \CustomizeMathJax{\newcommand{\ltrans}[1]{\leftidx{^\mathrm{t}}{\!#1}{}}}
 5 \end{warpMathJax}

File 216 **lwarp-letterspace.sty**

§ 318 Package **letterspace**

(Emulates or patches code by R SCHLICHT.)

Pkg letterspace **letterspace** is a subset of microtype, which is pre-loaded by **lwarp**. All user options and macros are ignored and disabled.

for HTML output: Discard all options for **lwarp-letterspace**:

```
1 \LWR@ProvidesPackageDrop[letterspace][2018/01/14]
2 \newcommand*\lsstyle{}
3 \newcommand\textls[2][{}]{
4 \def\textls#1#{}
5 \newcommand*\lslig[1]{#1}
```

File 217 **lwarp-lettrine.sty**

§ 319 Package **lettrine**

(Emulates or patches code by DANIEL FLIPO.)

Pkg lettrine **lettrine** is emulated.

for HTML output: Discard all options for **lwarp-lettrine**:

```
1 \LWR@ProvidesPackageDrop[lettrine][2018-08-28]
```

The initial letter is in a `` of class `lettrine`, and the following text is in a `` of class `lettrinetext`. `\lettrine [keys] {letter} {additional text}`

```
2 \DeclareDocumentCommand{\lettrine}{o m m}{%
3   \InlineClass{lettrine}{#2}\InlineClass{lettrinetext}{#3} % extra space
4 }
5
6 \newcounter{DefaultLines}
7 \setcounter{DefaultLines}{2}
8 \newcounter{DefaultDepth}
9 \newcommand*\DefaultOptionsFile{\relax}
10 \newcommand*\DefaultLoversize{0}
11 \newcommand*\DefaultLraise{0}
12 \newcommand*\DefaultLhang{0}
13 \newdimen\DefaultFindent
14 \setlength{\DefaultFindent}{\z@}
15 \newdimen\DefaultNindent
16 \setlength{\DefaultNindent}{0.5em}
17 \newdimen\DefaultSlope
18 \setlength{\DefaultSlope}{\z@}
19 \newdimen\DiscardVskip
20 \setlength{\DiscardVskip}{0.2\p@}
21 \newif\ifLettrineImage
22 \newif\ifLettrineOnGrid
23 \newif\ifLettrineRealHeight
24
25 \newcommand*\LettrineTextFont{\scshape}
26 \newcommand*\LettrineFontHook{}
27 \newcommand*\LettrineFont[1]{\InlineClass{lettrine}{#1}}
```

```
28 \newcommand*\LettrineFontEPS}[1]{\includegraphics[height=1.5ex]{#1}}
```

File 218 **lwarp-lineno.sty**

§ 320 Package **lineno**

(Emulates or patches code by STEPHAN I. BÖTTCHER.)

Pkg linenno **lineno** is partly emulated, but mostly ignored.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{lineno}[2005/11/02]

2 \newcommand*\resetlinenumber[1][\@ne]{}
3
4 \def\linenumbers{%
5     \@ifnextchar[\resetlinenumber]{}
6         {\@ifstar{\resetlinenumber}{}{}}%
7     }
8
9 \newcommand*\nolinenumbers{}
10
11 \@namedef{linenumbers*}{\par\linenumbers*}
12 \@namedef{runninglinenumbers*}{\par\runninglinenumbers*}
13
14 \def\endlinenumbers{\par}
15 \let\endrunninglinenumbers\endlinenumbers
16 \let\endpagewiselinenumbers\endlinenumbers
17 \expandafter\let\csname endlinenumbers*\endcsname\endlinenumbers
18 \expandafter\let\csname endrunninglinenumbers*\endcsname\endlinenumbers
19 \let\endnolinenumbers\endlinenumbers
20
21 \def\pagewiselinenumbers{\linenumbers\setpagewiselinenumbers}
22
23 \def\runninglinenumbers{\setrunninglinenumbers\linenumbers}
24
25 \def\setpagewiselinenumbers{}
26
27 \def\setrunninglinenumbers{}
28
29 \def\linenomath{}%
30 \@namedef{linenomath*}{}%
31 \def\endlinenomath{}
32 \expandafter\let\csname endlinenomath*\endcsname\endlinenomath
33
34 \let\line\label\label
35
36 \def\switchlinenumbers{\@ifstar{}{}}
37 \def\setmakelinenumbers#1{\@ifstar{}{}}
38
39 \def\leftlinenumbers{\@ifstar{}{}}
40 \def\rightlinenumbers{\@ifstar{}{}}
41
42 \newcounter{linenumber}
```

```
43 \newcount\c@pagewiselinenumbers
44 \let\c@runninglinenumbers\c@linenumbers
45
46 \def\runningpagewiselinenumbers{}
47 \def\realpagewiselinenumbers{}
48
49
50 \NewDocumentCommand\modulolinenumbers{s o}{}
51
52 \chardef\c@linenumbersmodulo=5
53 \modulolinenumbers[1]
54
55 \newcommand*\firstlinenumbers[1]{}
56
57 \newcommand\internallinenumbers{}
58 \let\endinternallinenumbers\endlinenumbers
59 \@namedef{internallinenumbers*}{\internallinenumbers*}
60 \expandafter\let\csname endinternallinenumbers*\endcsname\endlinenumbers
61
62 \newcommand*\linenoplaceholder[1]{% redefine per language
63   (line number reference for \detokenize\expandafter{#1})
64 }
65
66 \newcommand*\lineref}[2][\linenoplaceholder{#2}]
67 \newcommand*\linerefp}[2][\linenoplaceholder{#2}]
68 \newcommand*\linerefr}[2][\linenoplaceholder{#2}]
69
70 \newcommand\quotelinenumbers
71   {\@ifstar\linenumbers{\@ifnextchar[\linenumbers{\linenumbers*}}}
72
73 \newdimen\linenumbersep
74 \newdimen\linenumberwidth
75 \newdimen\quotelinenumbersep
76
77 \quotelinenumbersep=\linenumbersep
78 \let\quotelinenumberfont\linenumberfont
79
80 \def\linenumberfont{\normalfont\tiny\sffamily}
81
82
83 \linenumberwidth=10pt
84 \linenumbersep=10pt
85
86 \def\thelinenumbers{}
87
88 \def\LineNumber{}
89 \def\makeLineNumber{}
90 \def\makeLineNumberLeft{}
91 \def\makeLineNumberRight{}
92 \def\makeLineNumberOdd{}
93 \def\makeLineNumberEven{}
94 \def\makeLineNumberRunning{}
95
96
97 \newenvironment{numquote}      {\quote}{\endquote}
```

```

98 \newenvironment{numquotation} {\quotation}\endquotation}
99 \newenvironment{numquote*} {\quote}\endquote}
100 \newenvironment{numquotation*}{\quotation}\endquotation}
101
102 \newdimen\bframerule
103 \bframerule=\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 219 **lwarp-lips.sty**

§ 321 Package **lips**

(Emulates or patches code by MATT SWIFT.)

Pkg lips lips is emulated.

```

1 % \LWR@ProvidesPackageDrop{lips}
2 \PackageInfo{lwarp}{Using the lwarp version of package 'lips'.}%
3 \ProvidesPackage{lwarp-lips}[2001/08/31]
4
5 \NewDocumentCommand{\Lips}{}{\textellipsis}
6
7 \NewDocumentCommand{\BracketedLips}{}{[\textellipsis]}
8
9 \let\lips\Lips
10 \let\olips\lips
11
12 \DeclareOption*{}
13 \DeclareOption{mla}{
14 \let\lips\BracketedLips
15 }
16 \ProcessOptions\relax
17
18 \newcommand \LPNobreakList {}

```

File 220 **lwarp-listings.sty**

§ 322 Package **listings**

(Emulates or patches code by CARSTEN HEINZ, BROOKS MOSES, JOBST HOFFMANN.)

Pkg listings listings is supported with some limitations. Text formatting is not yet supported.

for HTML output: 1 \begin{warpHTML}

2 \LWR@ProvidesPackagePass{listings}[2018/09/02]

Force flexible columns. Fixed columns inserts spaces in the PDF output.

3 \lst@column@flexible

Patches to embed listings inside pre tags:

4 \let\LWR@origlst@Init\lst@Init

5 \let\LWR@origlst@DeInit\lst@DeInit

6

7 \let\LWR@origlsthkEveryPar\lsthk@EveryPar

8

9 \renewcommand{\l@lstlisting}[2]{\hypertocfloat{1}{\lstlisting}{lol}{#1}{#2}}

\lstset {<options>}

Use the listings literate option to replace HTML entities:

10 \def\lstset@#1{\endgroup%

11 % \ifx\@empty#1%

12 % \@empty%

13 % \else%

14 % \setkeys{lst}{%

15 % #1%

16 % ,literate=%

17 % {<}{\HTMLentity{lt}}{4}%

18 % {>}{\HTMLentity{gt}}{4}%

19 % {\&}{\HTMLentity{amp}}{5}%

20 % }%

21 % \fi%

22 }

\lst@Init {<backslash-processing>} Done at the start of a listing.

23 \renewcommand{\lst@Init}[1]{%

Perform the listings initialization:

24 \LWR@traceinfo{\lst@Init}%

25 \renewcommand*{\@capttype}{\lstlisting}%

```

26 \let\lst@aboveskip\z@\let\lst@belowskip\z@%
27 \gdef\lst@boxpos{t}%
28 \let\lst@frame\@empty
29   \let\lst@frametshape\@empty
30   \let\lst@framershape\@empty
31   \let\lst@framebshape\@empty
32   \let\lst@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@frame{r{}}%
37 \LWR@traceinfo{finished origlst@Init}%
38 \lst@ifdisplaystyle%

```

Creating a display.

Disable line numbers, produce the <pre>, then reenable line numbers.

```

39   \LWR@traceinfo{About to create verbatim.}%
40   \let\lsthk@EveryPar\relax%
41   \LWR@forcenewpage%
42   \LWR@atbeginverbatim{2}{programlisting}%
43
44   \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
45 \else%

```

Inline, so open a :

```

46   \ifbool{LWR@verbtags}{\LWR@htmltag{span class="inlineprogramlisting"}}{}%
47 \fi%
48 }
49

```

`\lst@DeInit` Done at the end of a listing.

```

50 \renewcommand*{\lst@DeInit}{%
51 \lst@ifdisplaystyle%

```

Creating a display.

Disable line numbers, produce the </pre>, then reenable line numbers:

```

52 \let\lsthk@EveryPar\relax%
53 \LWR@afterendverbatim{0}%
54 \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
55 \else%

```

Inline, so create the closing :

```

56 \ifbool{LWR@verbtags}{\noindent\LWR@htmltag{/span}}{}%
57 \fi%

```

Final listings deinit:

```

58 \LWR@origlst@DeInit%
59 }

```

```
\lst@MakeCaption {</b>}
```

This is called BOTH at the top and at the bottom of each listing.

Patched for lwarp.

```
60
61 \def\lst@MakeCaption#1{%
62 \LWR@traceinfo{MAKING CAPTION at #1}%
63 \lst@ifdisplaystyle
64 \LWR@traceinfo{making a listings display caption}%
65 \ifx #1t%
66 \ifx\lst@@caption\@empty\expandafter\lst@HRefStepCounter \else
67 \expandafter\refstepcounter
68 \fi {lstlisting}%
69 \LWR@traceinfo{About to assign label: !\lst@label!}%
70 % \ifx\lst@label\@empty\else
71 % \label{\lst@label}\fi
72 \LWR@traceinfo{Finished assigning the label.}%
73 \let\lst@arg\lst@intname \lst@ReplaceIn\lst@arg\lst@filenamerrpl
74 \global\let\lst@name\lst@arg \global\let\lstname\lst@name
75 \lst@ifnol\else
76 \ifx\lst@@caption\@empty
77 \ifx\lst@caption\@empty
78 \ifx\lst@intname\@empty \else \def\lst@temp{ }%
79 \ifx\lst@intname\lst@temp \else
```

This code places a contents entry for a non-float. This would have to be modified for lwarp:

```
80 \LWR@traceinfo{addcontents lst@name: -\lst@name-}%
81 % \addcontentsline{lol}{lstlisting}{\lst@name}
82 \fi\fi
83 \fi
84 \else
```

This would have to be modified for lwarp:

```
85 \LWR@traceinfo{addcontents lst@@caption: -\lst@@caption-}%
86 \addcontentsline{lol}{lstlisting}%
87 {\protect\numberline{\thelstlisting}%
88 {\protect\ignorespaces \LWR@isolate{\lst@@caption} \protect\relax}}%
89 \fi
90 \fi
91 \fi
92 \ifx\lst@caption\@empty\else
93 \LWR@traceinfo{lst@caption not empty-}%
94 \lst@ifsubstring #1\lst@captionpos
95 {\begingroup
96 \LWR@traceinfo{at the selected position}%
```

These space and box commands are not needed for HTML output:

```
97 % \let\@vskip\vskip
98 % \def\vskip{\afterassignment\lst@vskip \@tempskipa}%
99 % \def\lst@vskip{\nobreak\@vskip\@tempskipa\nobreak}%
100 % \par\@parboxrestore\normalsize\normalfont % \noindent (AS)
101 % \ifx #1t\allowbreak \fi
102 \ifx\lst@title\@empty
```

New `lwarp` code to create a caption:

```
103             \LWR@stoppars%
104             \lst@makecaption\fnnum@lstlisting{\ignorespaces \lst@caption}
105             \else
```

New `lwarp` code to create a title:

```
106 %             \lst@maketitle\lst@title % (AS)
107 \LWR@traceinfo{Making title: \lst@title}%
108 \begin{BlockClass}{lstlistingtitle}%   lwarp
109 \lst@maketitle\lst@title%             lwarp
110 \end{BlockClass}%                     lwarp
111             \fi
112 \LWR@traceinfo{About to assign label: !\lst@label!}%
113             \ifx\lst@label\@empty\else
114 \leavevmode% gets rid of bad space factor error
115 \GetTitleStringExpand{\lst@caption}%
116 \edef\LWR@lntemp{\GetTitleStringResult}%
117 \edef\@currentlabelname{\detokenize\expandafter{\LWR@lntemp}}%
118 \label{\lst@label}\fi
119 \LWR@traceinfo{Finished assigning the label.}%
```

Not needed for `lwarp`:

```
120 %             \ifx #1b\allowbreak \fi
121             \endgroup}{}%
122     \fi
123 \LWR@traceinfo{end of making a listings display caption}%
124 \else
125 \LWR@traceinfo{INLINE}%
126 \fi
127 \LWR@traceinfo{DONE WITH CAPTION at #1}%
128 }
129
130 \renewcommand{\lst@maketitle}[1]{%
131     \LWR@isolate{#1}%
132 }%
133
```

[line numbers](#) Patched to keep left line numbers outside of the left margin, and place right line numbers in a field `\VerbatimHTMLWidth` wide.

```
134 \lst@Key{numbers}{none}{%
135     \let\lst@PlaceNumber\@empty
136     \lstKV@SwitchCases{#1}%
137     {none:\%
138     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.

```
139 %             \LWR@origllap{
140             \LWR@orignormalfont%
141             \lst@numberstyle{\thelstnumber}\kern\lst@numbersep%
142 %             }
143     }\\%
```

```

144     right:\def\lst@PlaceNumber{\LWR@origrlap{\LWR@orignormalfont
145         \kern 6in \kern\lst@numbersep
146         \lst@numberstyle{\thelstnumber}}}%
147     }\PackageError{lwarp-listings}{Numbers #1 unknown}\@ehc}}

148 \end{warpHTML}

```

File 221 **lwarp-listliketab.sty**

§ 323 Package **listliketab**

Pkg listliketab listliketab is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{listliketab}[2005/01/09]

2 \newcommand*\storestyleof[1]{}
3 \newcommand*\storeliststyle{}
4 \newenvironment{listliketab}{}{}

```

File 222 **lwarp-lltjext.sty**

§ 324 Package **lltjext**

(Emulates or patches code by THE L^AT_EX-JA PROJECT TEAM.)

Pkg lltjext lltjext is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{lltjext}[2018/10/07]

2 \protected\def\yoko{%
3   \directlua{luatexja.direction.set_list_direction(4, 'yoko')}%
4 }
5 \protected\def\tate{\yoko}
6 \protected\def\dtou{\yoko}
7 \protected\def\utod{\yoko}
8
9 \define@key[ltj]{japaram}{direction}{}
10
11 \yoko
12
13 \DeclareExpandableDocumentCommand{\rensuji}{s o m}{#3}
14
15 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
16
17 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
18
19 \LetLtxMacro\pccaption\caption
20
21 \DeclareDocumentCommand{\layoutcaption}{d<> d() o}{}

```

```

22
23 \let\captiondir\relax
24 \RenewDocumentEnvironment{LWR@HTML@minipage}{d<> O{t} O{ } O{t} m}
25   {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
26   {\endLWR@HTML@sub@minipage}
27
28 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{ } O{t} m +m}
29 {
30 \LWR@traceinfo{parbox of width #4}%
31 \begin{minipage}[#2][#3][#4]{#5}%
32 #6
33 \end{minipage}%
34 }
35
36 \RenewDocumentCommand{\pbox}{d<> O{0pt} O{c} m}{%
37 \global\booltrue{LWR@minipagefullwidth}%
38 \parbox{#2}{#4}%
39 }

```

File 223 **lwarp-longtable.sty**

§ 325 Package **longtable**

(Emulates or patches code by DAVID CARLISLE.)

Pkg Longtable **longtable** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{longtable}[2014/10/28]

Use one of either `\endhead` or `\endfirsthead` for both print and HTML, and use a `\warpprintonly` macro to disable the other head phrase, and also the `\endfoot` and `\endfirstfoot` phrases. (See section 8.10.4 if using `threeparttablex`.)

```

\begin{longtable}{ [column specifiers] }
[ . . . ] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[ . . . ] \endhead % or \endfirsthead
[ . . . ] \endfoot
[ <lastfoot macros> ] \endlastfoot
}
. . . table contents . . .
\warpHTMLonly{
[ <lastfoot macros> ] % HTML last footer, without \endfoot
% or \endlastfoot.
}
\end{longtable}

```

⚠ **Misplaced `\noalign`** Use the `\warpprintonly` macro instead of the `\warpprint` environment. Doing so helps avoid “Misplaced `\noalign`.” when using `\begin{warpprint}`.

⚠ **`\kill`** `\kill` is ignored, place a `\kill` line inside

```
\begin{warpprint} . . . \end{warpprint}
```

or place it inside `\warpprintonly`.

 **lateximage** `longtable` is not supported inside a `lateximage`.

See:

<http://tex.stackexchange.com/questions/43006/why-is-input-not-expandable>

Used to detect more than one of `\endhead` and `\endfirsthead` in use for HTML at the same time.

```
2 \newbool{LWR@longtable@havehead}
3 \boolfalse{LWR@longtable@havehead}
```

Env `longtable` * [*horizontalignment*] [*colspec*] Emulates the `longtable` environment.

Per the `caption` package, the starred version steps the counter per caption. The unstarred version steps the counter once at the beginning, but not at each caption.

Options [c], [l], and [r] are ignored.

```
4 \newenvironment{longtable*}[2][]{%
5   \LWR@floatbegin{table}%
6   \ifdef{\setcaptiontype}{% caption package:
7     \setcaptiontype{LTcapttype}%
8     \caption@setoptions{longtable}%
9     \caption@setoptions{@longtable}%
10    \caption@LT@setup%
11  }{% w/o caption package:
12    \renewcommand*{\@capttype}{\LTcapttype}%
13  }%
14  \booltrue{LWR@starredlongtable}%
15  \boolfalse{LWR@longtable@havehead}%
16  \let\captionlistentry\LWR@LTcaptionlistentry%
17  \tabular{#2}%
18 }
19 {\endtabular\LWR@floatend}
20
21 \newenvironment{longtable}[2][]{%
22   \LWR@floatbegin{table}%
23   \ifdef{\setcaptiontype}{% caption package:
24     \setcaptiontype{LTcapttype}%
25     \caption@setoptions{longtable}%
26     \caption@setoptions{@longtable}%
27     \caption@LT@setup%
28   }{% w/o caption package:
29     \renewcommand*{\@capttype}{\LTcapttype}%
30   }%
31   \refstepcounter{\LTcapttype}%
32   \boolfalse{LWR@longtable@havehead}%
33   \let\captionlistentry\LWR@LTcaptionlistentry%
34   \tabular{#2}%
35 }
36 {\endtabular\LWR@floatend}
```

Provided for compatibility, but ignored:

```
37 \newcounter{LTchunksize}
```

Error for heads which should have been in `\warpprintonly`:

```
38 \newcommand*{\LWR@longtable@headerror}{%
39   \PackageError{lwarp-longtable}
40   {For longtable:\MessageBreak
41   1: Keep either one of an \protect\endhead\space or
42     \protect\endfirsthead\space\MessageBreak
43     \space phrase as-is, to be used by both print and HTML.\MessageBreak
44   2: Place any other \protect\end... phrases inside a\MessageBreak
45     \space\protect\warpprintonly\space macro,
46     to be ignored by HTML.\MessageBreak
47   3: Add a final footer for HTML at the end of the table\MessageBreak
48     \space inside a \protect\warpprintonly\space macro.
49     This can be\MessageBreak
50     \space a copy of an \protect\endfoot\space or
51     \protect\endfirstfoot\space phrase,\MessageBreak
52     \space but without the actual \protect\endfoot\space
53     or \protect\endfirstfoot\MessageBreak
54     \space macros. If using threeparttablex, add\MessageBreak
55     \space \protect\insertTableNotes\space here,
56     optionally with\MessageBreak
57     \space \protect\UseMinipageWidths\space in front.\MessageBreak
58   See the Lwarp documentation regarding longtables\MessageBreak
59   and threeparttablex}
60   {See the Lwarp documentation regarding longtables and threeparttablex.}
61 }
```

Error if more than one of `\endhead` or `\endfirsthead` is outside of `\warpprintonly`.

```
62 \newcommand*{\LWR@longtable@maybeheaderror}{%
63   \ifbool{\LWR@longtable@havehead}%
64     {\LWR@longtable@headerror}%
65     {%
66       \booltrue{\LWR@longtable@havehead}
67       \LWR@tabularendofline% throws away options //[dim] and //*
68     }%
69 }
```

Error if more than one of these is outside of `\warpprint`.

```
70 \def\endhead{\LWR@longtable@maybeheaderror}
71 \def\endfirsthead{\LWR@longtable@maybeheaderror}
```

Error if ANY of these is outside of `\warpprint`.

```
72 \def\endfoot{\LWR@longtable@headerror}
73 \def\endlastfoot{\LWR@longtable@headerror}
```

```
74 \providecommand*{\LWR@HTML@tabularnewline}{\LWR@tabularendofline}
75 \LWR@formatted{tabularnewline}
```

```

76 \newcommand{\setlongtables}{}% Obsolete command, does nothing.
77 \newlength{\LTleft}
78 \newlength{\LTright}
79 \newlength{\LTpre}
80 \newlength{\LTpost}
81 \newlength{\LTcapwidth}

82 \LetLtxMacro\LWR@origkill\kill
83 \renewcommand*\kill{\LWR@tabularendofline}
84 \appto\LWR@restoreorigformatting{%
85 \LetLtxMacro\kill\LWR@origkill%
86 }

```

File 224 **lwarp-lscape.sty**

§ 326 Package **lscape**

(Emulates or patches code by D. P. CARLISLE.)

Pkg lscape **lscape** is ignored.

for HTML output: Discard all options for lwarp-lscape.

```

1 \LWR@ProvidesPackageDrop{lscape}[2000/10/22]

2 \newenvironment*{landscape}{}{}

```

File 225 **lwarp-ltablex.sty**

§ 327 Package **ltablex**

(Emulates or patches code by ANIL K. GOEL.)

Pkg ltablex **ltablex** is emulated by lwarp.

for HTML output: Relies on tabularx.

```

1 \RequirePackage{longtable}
2 \RequirePackage{tabularx}
3
4 \LWR@ProvidesPackageDrop{ltablex}[2014/08/13]
5
6 \DeclareDocumentEnvironment{tabularx}{m o m}
7 {\longtable{#3}}
8 {\endlongtable}
9
10 \DeclareDocumentEnvironment{tabularx*}{m o m}
11 {\longtable{#3}}
12 {\endlongtable}

```

```

13
14 \newcommand*{\keepXColumns}{}
15 \newcommand*{\convertXColumns}{}

```

File 226 **lwarp-ltcaption.sty**

§ 328 Package **ltcaption**

(Emulates or patches code by AXEL SOMMERFELDT.)

Pkg ltcaption ltcaption is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ltcaption}[2018/08/26]

\LTcaptype is already defined by lwarp.

longtable* is already defined by lwarp-longtable.

```

2 \newlength{\LTcapskip}
3 \newlength{\LTcapleft}
4 \newlength{\LTcapright}
5 \newcommand*{\LTcapmarginfalse}{}

```

File 227 **lwarp-ltxgrid.sty**

§ 329 Package **ltxgrid**

Pkg ltxgrid ltxgrid is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{ltxgrid}[2010/07/25]

```

2 \newcommand*{\onecolumngrid}{}
3 \newcommand*{\twocolumngrid}{}
4 \newcommand*{\removestuff}{}
5 \newcommand*{\addstuff}[2]{}
6 \newcommand*{\replacestuff}[2]{}

```

File 228 **lwarp-ltxtable.sty**

§ 330 Package **ltxtable**

Pkg ltxtable ltxtable is emulated.

 **table numbering** The print version does not seem to honor longtable* from the caption package, while lwarp does.

for HTML output: 1 \RequirePackage{tabularx, longtable}
2 \LWR@ProvidesPackageDrop{ltxtable}[1995/12/11]

```

\LTxtable  {\langle width\rangle} {\langle file\rangle}
           3 \newcommand*\LTxtable}[2]{%
           4   \input{#2}%
           5 }

```

File 229 **lwarp-lua-check-hyphen.sty**

§ 331 Package **lua-check-hyphen**

Pkg lua-check-hyphen lua-check-hyphen is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{lua-check-hyphen}[2018/04/19]

2 \newcommand*\LuaCheckHyphen}[1]{}

File 230 **lwarp-lua-visual-debug.sty**

§ 332 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 231 **lwarp-luacolor.sty**

§ 333 Package **luacolor**

Pkg luacolor luacolor is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{luacolor}[2016/05/16]

2 \newcommand*\luacolorProcessBox}[1]{}

File 232 **lwarp-luamplib.sty**

§ 334 Package **luamplib**

(Emulates or patches code by HANS HAGEN, TACO HOEKWATER, ELIE ROUX, PHILIPP GESANG, KIM DOHYUN.)

Pkg luamplib luamplib is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{luamplib}[2020/02/24]

```

2 \BeforeBeginEnvironment{mplibcode}{%
3   \begin{lateximage}[-mplibcode~\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{mplibcode}{\end{lateximage}}

```

File 233 **lwarp-luatexko.sty**

§ 335 Package **luatexko**

(Emulates or patches code by DOHYUN KIM, SOOJIN NAM.)

Pkg luatexko **luatexko** is patched for use by **lwarp**.

Modern HTML is used for `\dotemph`, `\ruby`, and offset and thickness control for `\uline`, etc.

for HTML output:

```

1 \LWR@ProvidesPackagePass{luatexko}[2020/03/20]

2 \newcommand{\LWR@HTML@dotemph}[1]{%
3   \uline{#1}%
4   \InlineClass[text-emphasis-style: dot]{dotemph}{#1}%
5 }
6 \LWR@formatted{dotemph}
7
8 \newcommand{\LWR@HTML@ruby}[2]{%
9   \LWR@htmltagc{ruby}%
10  \LWR@htmltagc{rb}#1\LWR@htmltagc{/rb}%
11  \LWR@htmltagc{rp}(\LWR@htmltagc{/rp}%
12  \LWR@htmltagc{rt}#2\LWR@htmltagc{/rt}%
13  \LWR@htmltagc{rp})\LWR@htmltagc{/rp}%
14  \LWR@htmltagc{/ruby}%
15 }
16 \LWR@formatted{ruby}

```

The following is modified from **lwarp-ulem**:

```

17 \NewDocumentCommand{\LWR@HTML@uline}{+m}{%
18   \InlineClass%
19     (text-decoration:underline; text-decoration-skip: auto)%
20     [%
21       text-decoration-offset: \ulinedown ;
22       text-decoration-thickness: \ulinewidth%
23     ]%
24     {uline}{\LWR@isolate{#1}}%
25 }
26 \LWR@formatted{uline}
27
28 \NewDocumentCommand{\LWR@HTML@uuline}{+m}{%
29   \InlineClass%
30     (%
31       text-decoration:underline; text-decoration-skip: auto;%
32       text-decoration-style:double%

```

```
33     )%
34     [%
35         text-underline-offset: \ulinedown ;
36         text-decoration-thickness: \ulinewidth%
37     ]%
38     {\uuline}{\LWR@isolate{#1}}%
39 }
40 \LWR@formatted{uuline}
41
42 \NewDocumentCommand{\LWR@HTML@uwave}{+m}{%
43     \InlineClass%
44     (%
45         text-decoration:underline; text-decoration-skip: auto;%
46         text-decoration-style:wavy%
47     )%
48     [%
49         text-underline-offset: \ulinedown ;
50         text-decoration-thickness: \ulinewidth%
51     ]%
52     {\uwave}{\LWR@isolate{#1}}%
53 }
54 \LWR@formatted{uwave}
55
56 \NewDocumentCommand{\LWR@HTML@sout}{+m}{%
57     \InlineClass%
58     (text-decoration:line-through)%
59     [text-decoration-thickness: \ulinewidth]%
60     {\sout}{\LWR@isolate{#1}}%
61 }
62 \LWR@formatted{sout}
63
64 \NewDocumentCommand{\LWR@HTML@xout}{+m}{%
65     \InlineClass%
66     (text-decoration:line-through)%
67     [text-decoration-thickness: \ulinewidth]%
68     {\xout}{\LWR@isolate{#1}}%
69 }
70 \LWR@formatted{xout}
71
72 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
73     \InlineClass%
74     (%
75         text-decoration:underline;%
76         text-decoration-skip: auto;%
77         text-decoration-style:dashed%
78     )%
79     [%
80         text-underline-offset: \ulinedown ;
81         text-decoration-thickness: \ulinewidth%
82     ]%
83     {\dashuline}{\LWR@isolate{#1}}%
84 }
85 \LWR@formatted{dashuline}
86
87 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
```

```

88   \InlineClass%
89   ( %
90       text-decoration:underline;%
91       text-decoration-skip: auto;%
92       text-decoration-style: dotted%
93   ) %
94   [ %
95       text-underline-offset: \ulinedown ;
96       text-decoration-thickness: \linewidth%
97   ] %
98   {dotuline}{\LWR@isolate{#1}}%
99 }
100 \LWR@formatted{dotuline}

```

File 234 **lwarp-luatodonotes.sty**

§ 336 Package **luatodonotes**

(Emulates or patches code by FABIAN LIPP.)

Pkg luatodonotes **luatodonotes** is emulated.

The documentation for `todonotes` and `luatodonotes` have an example with a `todo` inside a caption. If this example does not work it will be necessary to move the `todo` outside of the caption.

for HTML output: 1 \LWR@ProvidesPackagePass{luatodonotes}[2017/09/30]

Nullify options:

```

2 \@todonotes@additionalMarginEnabledfalse
3 \if@todonotes@disabled
4 \else
5
6 \newcommand{\ext@todo}{tdo}
7
8 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{todo}{ldo}{#1}{#2}}

9 \let\LWR@TODONOTES@orig@todotoc\todotoc
10
11 \renewcommand*{\todotoc}{%
12 \phantomsection%
13 \LWR@TODONOTES@orig@todotoc%
14 }
15
16
17 \renewcommand{\@todonotes@drawMarginNoteWithLine}{%
18 \fcolorbox
19   {\@todonotes@currentbordercolor}
20   {\@todonotes@currentbackgroundcolor}
21   {\arabic{@todonotes@numberoftodonotes}}

```

```

22 \marginpar{\@todonotes@drawMarginNote}
23 }
24
25 \renewcommand{\@todonotes@drawInlineNote}{%
26 \fcolorboxBlock%
27   {\@todonotes@currentbordercolor}%
28   {\@todonotes@currentbackgroundcolor}%
29   {%
30     \if@todonotes@authorgiven%
31     {\@todonotes@author:\,}%
32     \fi%
33     \@todonotes@text%
34   }%
35 }
36
37 \newcommand{\@todonotes@drawMarginNote}{%
38   \if@todonotes@authorgiven%
39     \@todonotes@author\par%
40   \fi%
41   \arabic{\@todonotes@numberoftodonotes}: %
42   \fcolorbox%
43   {\@todonotes@currentbordercolor}%
44   {\@todonotes@currentbackgroundcolor}%
45   {%
46     \@todonotes@sizecommand%
47     \@todonotes@text %
48   }%
49 }%
50
51 \renewcommand{\missingfigure}[2][{}]{%
52 \setkeys{todonotes}{#1}%
53 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
54 \fcolorboxBlock%
55   {\@todonotes@currentbordercolor}%
56   {\@todonotes@currentfigcolor}%
57   {%
58     \setlength{\fboxrule}{4pt}%
59     \fcolorbox{red}{white}{Missing figure} \quad #2%
60   }
61 }
62
63 \LetLtxMacro\LRWRTODONOTES@orig@todocommon\@todocommon
64
65 \RenewDocumentCommand{\@todocommon}{m m}{%
66 \begingroup%
67 \renewcommand*\phantomsection{}%
68 \LRWRTODONOTES@orig@todocommon{#1}{#2}%
69 \endgroup%
70 }
71
72 \renewcommand{\@todoarea}[3][{}]{%
73   \@todonotes@areaselectedtrue%
74   \@todocommon{#1}{#2}%
75   \@todonotes@textmark@highlight{#3}%
76   \zref@label{\@todonotes@arabic{\@todonotes@numberoftodonotes}@end}%

```

```

77 }%
78
79
80 \DeclareDocumentCommand{\todonotes@textmark@highlight}{m}{%
81 \InlineClass[background:\LWR@origpound{ }B3FFB3]{highlight}{#1}%
82 }
83
84 \fi% \if@todonotes@disabled

```

File 235 **lwarp-lyluatex.sty**

§ 337 Package **lyluatex**

(Emulates or patches code by FR. JACQUES PERON, URS LISKA, BR. SAMUEL SPRINGUEL.)

Pkg lyluatex lyluatex is patched for use by lwarp.

For the first compile, to set *lwarpmk*'s configuration, use:

```
lualatex --shell-escape <filename>
```

 **images** After compiling the document with **lwarpmk html**, use **lwarpmk images** to convert the Lilypond images for HTML.

The option `insert=systems` results in an image per system. Each music image “system” is placed inside a `` of class `lyluatex`, which defaults to `display: inline-block`.

 **insert=fullpage** The option `insert=fullpage` results in a single image per page of printed output. Each music “fullpage” image is placed inside a `<div>` of class `lyluatex`. To match the number of measures per line with the printed version, use the `geometry` package to select the page geometry, or use the `lyluatex` options for page and staff sizes.

 **options** To use `\linewidth` or `\textwidth` inside the package options for `lyluatex`, use the `kvoptions-patch` package first:

```

\usepackage{kvoptions-patch}
\usepackage[... ,line-width=0.8\linewidth,...]{lyluatex}

```

 **raw-pdf** If using `raw-pdf`, the resulting PDF images must be converted to SVG:

```
Enter ⇒ lwarpmk pdftosvg tmp-ly/*.pdf
```

for HTML output:

```

1 \LWR@origRequirePackage{luacode}
2
3 \LWR@ProvidesPackagePass{lyluatex}[2019/05/27]

```

User-redefinable ALT tag:

```
4 \newcommand*{\LyluatexImageAltText}{-lilypond-~\PackageDiagramAltText}
```

```

\ly@compilescore  {\langle Lilypond object \rangle}
5 \LetLtxMacro\LWR@orig@ly@compilescore\ly@compilescore
6
7 \renewcommand*\ly@compilescore}[1]{%

```

A local group holds a number of changes:

```
8 \begingroup%
```

The user's original geometry and font size are restored to match the print version. This allows for correct spacing in the musical score.

```
9 \LWR@orignewpage%
10 \LWR@origloadgeometry{\LWR@usergeometry}%
11 \LWR@print@normalsize%
```

A local group holds a redefined `\includegraphics` which is used by *lyluatex.lua* to insert the *Lilypond* score if `insert=systems` is used. This is now placed inside a `lateximage`, which itself is placed inside a `` of class `lyluatex`.

`\LWR@addbaselinemarker` preserves the left margins.

```
12 \renewcommand{\includegraphics}[2][]{%
13   \InlineClass{lyluatex}{%
14     \begin{lateximage}[\LyluatexImageAltText]%
15     \LWR@addbaselinemarker%
16     \LWR@originincludegraphics{##2}%
17     \end{lateximage}%
18   }%
19 }%
```

From the original:

```
20 \ly@setunits%
21 \directlua{
22   ly_opts:set_option('currfiledir', [[\currfiledir]])
23   ly_opts:set_option('twoside', '\ly@istwosided')
24   #1
25 }%
26 \ly@resetunits%
27 \ly@currentfonts%
```

The fullpage version is set inside an HTML `<div>`:

```
28 \directlua{
29   if (ly.score.insert == 'fullpage') then
30     tex.print{[[\string\begin{BlockClass}{lyluatex}]]}
31   end
32 }%
```

Generate the score:

```
33 \directlua{ly.score:process()}%
```

Close the `<div>`:

```
34 \directlua{
35   if (ly.score.insert == 'fullpage') then
36     tex.print{[[\string\end{BlockClass}]]}
37   end

```

```
38 }%
```

Move to a new page and renew the regular page geometry:

```
39 \LWR@orignewpage%
40 \LWR@origrestoregeometry%
```

End of the local group.

```
41 \endgroup%
42 }
```

In HTML the following generates an error, so is removed:

```
43 \xpatchcmd{\endly@bufferenv}
44   {\hspace{0pt}\}
45   {}
46   {}
47   {\LWR@patcherror{lyluatex}{endly@bufferenv}}
```

File 236 **lwarp-magaz.sty**

§ 338 Package **magaz**

Pkg magaz **magaz** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{magaz}[2011/11/24]

```
2 \newcommand\FirstLine[1]{%
3   \begingroup%
4   \FirstLineFont{%
5     \LWR@textcurrentcolor{%
6       \LWR@textcurrentfont{%
7         #1%
8       }%
9     }%
10  }%
11  \endgroup%
12 }
13
14 \providecommand\FirstLineFont{\scshape}
```

File 237 **lwarp-makeidx.sty**

§ 339 Package **makeidx**

(Emulates or patches code by L^AT_EX PROJECT TEAM.)

Pkg makeidx **makeidx** is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{makeidx}[2014/09/29]

`\@wrindex` is redefined `\AtBeginDocument` by the `lwarp` core.

`\printindex`

```
2 \preto\printindex{%
3   \LWR@originewpage%
4   \LWR@startpars%
5 }
```

File 238 **lwarp-manyfoot.sty**

§ 340 Package **manyfoot**

Pkg manyfoot manyfoot is emulated.

bigfoot, **manyfoot** Verbatim footnotes are not yet supported.

 **verbatim**

If using the `bigfoot` package, and possibly also `manyfoot`, problems may occur with counter allocation because `lwarp` uses many counters, and there is a difference in how counters numbered 256 and up are handled in `pdfLATEX`. With `bigfoot` this has been known to show up as an error related to one footnote insert being forbidden inside another. Another problem showed up as a input stack error, and which of these problems occurred depended on how many counters were allocated.

As a possible solution, try creating several new counters before defining `bigfoot` or `manyfoot` footnotes, hoping to shift the problematic counter above the 256 threshold. It may instead be necessary to use `XYLATEX` or `LuaLATEX` instead of `pdfLATEX`.

`lwarp`'s emulation of `bigfoot` uses `manyfoot`, so some of the `bigfoot` enhancements are included here.

The `bigfoot` “default” footnote is ignored, using the `lwarp` version instead.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{manyfoot}[2005/09/11]

2 \RequirePackage{nccfoots}
3
4 \newcommand{\extrafootnoterule}{}
5
6 \let\defaultfootnoterule\footnoterule
7
8 \newcommand*{\SelectFootnoteRule}[2][0]{}
9
10 \newcommand{\footnoterulepriority}{1}
11
12 \newcommand{\SetFootnoteHook}[1]{}
13 \@onlypreamble\SetFootnoteHook
14
15 \newcommand{\SplitNote}{}
16
17 \newcommand*\ExtraParaSkip[1]{}

```

```

18
19 \newcommand*{\newfootnote}[2][plain]{%
20   \ifstrequal{#2}{default}{}% not "default"
21     \expandafter\newbox\csname LWR@footnote#2box\endcsname%
22     \appto{\LWR@printpendingfootnotes}{%
23       \LWR@@printpendingfootnotes{footnote#2}%
24     }
25     \long\csdef{Footnotetext#2}##1##2{%
26       \NCC@makefnmark{##1}%
27       \LWR@@footnotetext{##2}{LWR@footnote#2box}%
28     }%
29     \long\csdef{Footnotetext#2+}##1##2{%
30       \NCC@makefnmark{##1}%
31       \LWR@@footnotetext{##2}{LWR@footnote#2box}%
32     }%
33   }% not "default"
34 }
35 \@onlypreamble\newfootnote
36
37 \newcommand*{\DeclareNewFootnote}[2][plain]{%
38   \ifnextchar[%
39     {\LWR@manyfoot@declare{#1}{#2}}%
40     {\LWR@manyfoot@declare{#1}{#2}[arabic]}%
41 }
42
43 \def\LWR@manyfoot@declare#1#2[#3]{%
44 \ifstrequal{#2}{default}{}% not "default"
45   \newfootnote[#1]{#2}%
46   \newcounter{footnote#2}%
47   \newcounter{footnote#2Reset}%
48   \setcounter{footnote#2Reset}{0}%
49   \csdef{thefootnote#2}{%
50     \expandafter\noexpand\csname @#3\endcsname%
51     \expandafter\noexpand\csname c@footnote#2\endcsname%
52   }%

```

For **bigfoot**, the footnote commands may be appended with one or two plusses or one or two minuses, which are ignored in HTML.

```

53   \expandafter\NewDocumentCommand\csname footnote#2\endcsname{t{+}t{+}t{-}t{-}}{%
54     \stepcounter{footnote#2}%
55     \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
56     \@footnotemark%
57     \csuse{Footnotetext#2}\@thefnmark}% absorbs the footnote contents
58   }%
59   \csdef{footnotemark#2}{%
60     \stepcounter{footnote#2}%
61     \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
62     \@footnotemark%
63   }%
64 \expandafter\NewDocumentCommand\csname footnotetext#2\endcsname{t{+}t{+}t{-}t{-}}{%
65   \protected@xdef\@thefnmark{\csname thefootnote#2\endcsname}%
66   \csuse{Footnotetext#2}\@thefnmark}% absorbs the footnote contents
67 }%
68 \csdef{Footnotemark#2}{%

```

```

69     \Footnotemark%
70   }%
71   \csdef{Footnote#2}##1{%
72     \Footnotemark{##1}%
73     \csuse{Footnotetext#2}{##1}%
74   }%
75 }% not "default"
76 }
77 \@onlypreamble\DeclareNewFootnote

```

File 239 **lwarp-marginal.sty**

§ 341 Package **marginal**

Pkg marginal marginal is ignored.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{marginal}

2 \newcommand*{\showlostmarginals}{}
3 \newcommand*{\enlargefreelist}{}
4 \newcommand*{\onesidemarginals}{}

```

File 240 **lwarp-marginfit.sty**

§ 342 Package **marginfit**

Pkg marginfit marginfit is ignored.

for HTML output: Discard all options for lwarp-marginfit:

```

1 \LWR@ProvidesPackageDrop{marginfit}[2018/06/08]

```

File 241 **lwarp-marginfix.sty**

§ 343 Package **marginfix**

(Emulates or patches code by STEPHEN HICKS.)

Pkg marginfix marginfix is ignored.

for HTML output: Discard all options for lwarp-marginfix:

```

1 \LWR@ProvidesPackageDrop{marginfix}[2013/09/08]

2 \newcommand*{\marginsskip}[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 242 **lwarp-marginnote.sty**

§ 344 Package **marginnote**

(Emulates or patches code by MARKUS KOHM.)

Pkg marginnote marginnote is emulated.

for HTML output: Discard all options for lwarp-marginnote:

```

1 \LWR@ProvidesPackageDrop{marginnote}[2018/08/09]

2 \NewDocumentCommand{\marginnote}{+o +m o}{\marginpar{#2}}

3 \newcommand*\marginnoteleftadjust{}
4 \newcommand*\marginnoterightadjust{}
5 \newcommand*\marginnotetextwidth{}
6 \let\marginnotetextwidth\textwidth
7 \newcommand*\marginnotevadjust{}
8 \newcommand*\marginfont{}
9 \newcommand*\raggedleftmarginnote{}
10 \newcommand*\raggedrightmarginnote{}

11 \appto\LWR@restoreorigformatting{%
12   \RenewDocumentCommand{\marginnote}{+o +m o}{
13 }

For MATHJAX:

14 \begin{warpMathJax}
15 \CustomizeMathJax{\newcommand{\LWRmarginnote}[1][{}]}
16 \CustomizeMathJax{\newcommand{\marginnote}[2][{}]{\quad\small\textrm{#2}}\LWRmarginnote}}
17 \end{warpMathJax}

```

File 243 **lwarp-marvosym.sty**

§ 345 Package **marvosym**

(Emulates or patches code by THOMAS HENLICH, MOJCA MIKLAVEC.)

Pkg marvosym marvosym is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

for HTML output:

```

1 \LWR@ProvidesPackagePass{marvosym}[2011/07/20]

2 \renewcommand{\mvchr}[1]{%
3   \begin{lateximage}*[symbol #1][marvosym #1]%
4   \mvs\char#1%
5   \end{lateximage}%
6 }
7
8 \renewcommand{\textmvs}[1]{%
9   \begin{lateximage}%
10  \mvs #1%
11  \end{lateximage}%
12 }
```

File 244 **lwarp-mathcomp.sty**

§ 346 Package **mathcomp**

(Emulates or patches code by TILMANN BÖB.)

Pkg mathcomp **mathcomp** is supported as-is for SVG math, and is emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{mathcomp}[2001/01/07]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\tcohm}{\mathrm{\Omega}}}
4 \CustomizeMathJax{\newcommand{\tcelsius}{\unicode{x2103}}}
5 \CustomizeMathJax{\newcommand{\tcmu}{\mathrm{\unicode{x00B5}}}}
6 \CustomizeMathJax{\newcommand{\tcpertousand}{\unicode{x2030}}}
7 \CustomizeMathJax{\newcommand{\tcpertenthousand}{\unicode{x2031}}}
8 \CustomizeMathJax{\newcommand{\tcdegree}{\mathrm{^\circ}}}
9 \CustomizeMathJax{\newcommand{\tcdigitoldstyle}[1]{\oldstyle{#1}}}
10 \end{warpMathJax}
```

File 245 **lwarp-mathdots.sty**

§ 347 Package **mathdots**

(Emulates or patches code by DAN LUECKING.)

Pkg mathdots **mathdots** is used as-is for SVG math, and emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{mathdots}[2014/06/11]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\iddots}{\unicode{x22F0}}}
4 \end{warpMathJax}
```

File 246 **lwarp-mathfixs.sty**

§ 348 Package **mathfixs**

(Emulates or patches code by NIKLAS BEISERT.)

Pkg mathfixs mathfixs is used as-is for SVG math, and is emulated for MATHJAX.

 Greek letters are unchanged.

for HTML output:

```
1 \LWR@ProvidesPackagePass{mathfixs}[2018/12/30]
2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\rfrac}[2]{\tfrac{#1}{#2}}}
4 \CustomizeMathJax{\newcommand{\vfrac}[2]{\frac{#1}{#2}}}
5 \CustomizeMathJax{\newcommand{\ProvideMathFix}[1]{} }
6 \CustomizeMathJax{\newcommand{\mathbold}[1]{\boldsymbol{#1}}}
7 \CustomizeMathJax{\newcommand{\.}{\,}}
8 \end{warpMathJax}
```

File 247 **lwarp-mathtools.sty**

§ 349 Package **mathtools**

(Emulates or patches code by MORTEN HØGHOLM, LARS MADSEN.)

Pkg mathtools mathtools is patched for use by lwarp. Emulation macros are provided for MATHJAX.

 **equation numbering** showonlyrefs is disabled, as it conflicts with cleveref, which is used by lwarp. Equation numbers may not match the print version.

 **italic correction** mathic is not emulated for HTML.

 **MATHJAX** If using MATHJAX:

- Starred macros are not available. Starred environments do work.
- mathtools disallowspaces does not work for MATHJAX. Protect brackets which are not optional arguments, such as:


```
\begin{gathered}{ }
[p]=1 . . .
\end{gathered}
```
- showonlyrefs does not work in MATHJAX, and will result in a difference in equation numbering compared to the print version.
- Due to MATHJAX limitations, the following do not render well: \overbracket, \underbracket, \overbrace, \underbrace, rcases, drcases, \Aboxed, and \ArrowBetweenLines.

- For the new cases-like environments, `\text` must be used to set the normal roman font if desired.
- `alignat` in `MATHJAX` requires math mode, but in `LATEX` it doesn't. It may be required to use `warpHTML` and `warpprint` to isolate a version for each mode.
- `\DeclareParedDelimiter` and related must be in the preamble before `\begin{document}`. The starred versions of each macro are not created.

for HTML output:

```
1 \LWR@ProvidesPackagePass{mathtools}[2018/01/08]
```

```
2 \RequirePackage{graphicx}
```

```
3 \MHInternalSyntaxOn
```

Forces `showonlyrefs` off because `lwarp` uses `cleveref`, which is not compatible with `showonlyrefs`.

```
4 \renewcommand*{\MT_showonlyrefs_true}{%
5   \PackageWarningNoLine{lwarp}
6   {%
7     Mathtools \space showonlyrefs \space conflicts \space
8     with \space cleveref,\MessageBreak
9     which \space is \space used \space by \space lwarp, \space
10    so \space showonlyrefs \space is\space\space\space\space\space\space\space\space\space
11    forced \space off. \space\space
12    Equation \space numbers \space may \space not \space match%
13   }
14   \MT_showonlyrefs_false:
15 }
16 \mathtoolsset{showonlyrefs=false}
```

Forces math italic correction off. Not patched for `lwarp`.

```
17 \renewcommand*{\MT_mathic_true:}{\MT_mathic_false:}
18 \mathtoolsset{mathic=false}
```

```
19 \MHInternalSyntaxOff
```

For `MATHJAX`:

```
20 \begin{warpMathJax}
21 \LWR@infoprocessingmathjax{mathtools}
22
23 \CustomizeMathJax{\newcommand{\mathllap}[2][\{\#1\#2\}}
24 \CustomizeMathJax{\newcommand{\mathrLap}[2][\{\#1\#2\}}
25 \CustomizeMathJax{\newcommand{\mathcLap}[2][\{\#1\#2\}}
26 \CustomizeMathJax{\newcommand{\mathmbox}[1]{\#1}}
27 \CustomizeMathJax{\newcommand{\cLap}[1]{\#1}}
28 \CustomizeMathJax{\newcommand{\LWRmathmakebox}[2][\#2]}
29 \CustomizeMathJax{\newcommand{\mathmakebox}[1][\LWRmathmakebox]}
30 \CustomizeMathJax{\newcommand{\cramped}[2][\{\#1\#2\}}
31 \CustomizeMathJax{\newcommand{\crampedllap}[2][\{\#1\#2\}}
```

```

32 \CustomizeMathJax{\newcommand{\crampedrlap}[2][{\#1#2}}
33 \CustomizeMathJax{\newcommand{\crampedclap}[2][{\#1#2}}
34 \CustomizeMathJax{\newenvironment{crampedsubarray}[1]{}}
35 \CustomizeMathJax{\newcommand{\crampedsubstack}{}}
36 \CustomizeMathJax{\newcommand{\smashoperator}[2][{\#2}}
37 \CustomizeMathJax{\newcommand{\SwapAboveDisplaySkip}{}}
38
39 \CustomizeMathJax{\require{extpfeil}}
40 \CustomizeMathJax{\Newextarrow\xleftarrow{10,10}{0x2194}}
41 \CustomizeMathJax{\Newextarrow\xleftarrow{10,10}{0x21d0}}
42 \CustomizeMathJax{\Newextarrow\xhookrightarrow{10,10}{0x21a9}}
43 \CustomizeMathJax{\Newextarrow\xmapsto{10,10}{0x21a6}}
44 \CustomizeMathJax{\Newextarrow\xrightarrow{10,10}{0x21d2}}
45 \CustomizeMathJax{\Newextarrow\xleftarrow{10,10}{0x21d4}}
46 \CustomizeMathJax{\Newextarrow\xhookrightarrow{10,10}{0x21aa}}
47 \CustomizeMathJax{\Newextarrow\xrightharpoondown{10,10}{0x21c1}}
48 \CustomizeMathJax{\Newextarrow\xleftharpoondown{10,10}{0x21bd}}
49 \CustomizeMathJax{\Newextarrow\xrightleftharpoons{10,10}{0x21cc}}
50 \CustomizeMathJax{\Newextarrow\xrightharpoonup{10,10}{0x21c0}}
51 \CustomizeMathJax{\Newextarrow\xleftharpoonup{10,10}{0x21bc}}
52 \CustomizeMathJax{\Newextarrow\xleftrightharpoons{10,10}{0x21cb}}
53
54 \CustomizeMathJax{\newcommand{\LWRdunderbracket}[1]{\underline{\#1}}}
55 \CustomizeMathJax{\newcommand{\LWRunderbracket}[2][{\LWRdunderbracket{\#2}}]}
56 \CustomizeMathJax{\newcommand{\underbracket}[1][{\LWRunderbracket}}]
57 \CustomizeMathJax{\newcommand{\LWRdooverbracket}[1]{\overline{\#1}}}
58 \CustomizeMathJax{\newcommand{\LWRoverbracket}[2][{\LWRdooverbracket{\#2}}]}
59 \CustomizeMathJax{\newcommand{\overbracket}[1][{\LWRoverbracket}}]
60
61 \CustomizeMathJax{\newcommand{\LaTeXunderbrace}[1]{\underbrace{\#1}}}
62 \CustomizeMathJax{\newcommand{\LaTeXoverbrace}[1]{\overbrace{\#1}}}
63
64 \CustomizeMathJax{\newenvironment{matrix*}[1][{\begin{matrix}}{\end{matrix}}]}
65 \CustomizeMathJax{\newenvironment{pmatrix*}[1][{\begin{pmatrix}}{\end{pmatrix}}]}
66 \CustomizeMathJax{\newenvironment{bmatrix*}[1][{\begin{bmatrix}}{\end{bmatrix}}]}
67 \CustomizeMathJax{\newenvironment{Bmatrix*}[1][{\begin{Bmatrix}}{\end{Bmatrix}}]}
68 \CustomizeMathJax{\newenvironment{vmatrix*}[1][{\begin{vmatrix}}{\end{vmatrix}}]}
69 \CustomizeMathJax{\newenvironment{Vmatrix*}[1][{\begin{Vmatrix}}{\end{Vmatrix}}]}
70 \CustomizeMathJax{\newenvironment{smallmatrix*}[1][{\begin{matrix}}{\end{matrix}}]}
71 \CustomizeMathJax{\newenvironment{psmallmatrix*}[1][{\begin{pmatrix}}{\end{pmatrix}}]}
72 \CustomizeMathJax{\newenvironment{bsmallmatrix*}[1][{\begin{bmatrix}}{\end{bmatrix}}]}
73 \CustomizeMathJax{\newenvironment{Bsmallmatrix*}[1][{\begin{Bmatrix}}{\end{Bmatrix}}]}
74 \CustomizeMathJax{\newenvironment{vsmallmatrix*}[1][{\begin{vmatrix}}{\end{vmatrix}}]}
75 \CustomizeMathJax{\newenvironment{Vsmallmatrix*}[1][{\begin{Vmatrix}}{\end{Vmatrix}}]}
76 \CustomizeMathJax{\newenvironment{psmallmatrix}[1][{\begin{pmatrix}}{\end{pmatrix}}]}
77 \CustomizeMathJax{\newenvironment{bsmallmatrix}[1][{\begin{bmatrix}}{\end{bmatrix}}]}
78 \CustomizeMathJax{\newenvironment{Bsmallmatrix}[1][{\begin{Bmatrix}}{\end{Bmatrix}}]}
79 \CustomizeMathJax{\newenvironment{vsmallmatrix}[1][{\begin{vmatrix}}{\end{vmatrix}}]}
80 \CustomizeMathJax{\newenvironment{Vsmallmatrix}[1][{\begin{Vmatrix}}{\end{Vmatrix}}]}
81
82
83 \CustomizeMathJax{\newcommand{\LWRmultlined}[1][{\begin{multline*}}]}
84 \CustomizeMathJax{\newenvironment{multlined}[1][{\LWRmultlined}{\end{multline*}}]}
85
86 \CustomizeMathJax{\let\LWRorigshoveleft\shoveleft}

```

```

87 \CustomizeMathJax{\renewcommand{\shoveleft}[1][\LWRorigshoveleft]}
88 \CustomizeMathJax{\let\LWRorigshoveright\shoveright}
89 \CustomizeMathJax{\renewcommand{\shoveright}[1][\LWRorigshoveright]}
90
91 \CustomizeMathJax{\newenvironment{dcases}{\begin{cases}}{\end{cases}}}
92 \CustomizeMathJax{\newenvironment{dcases*}{\begin{cases}}{\end{cases}}}
93 \CustomizeMathJax{\newenvironment{rcases}{\begin{cases}}{\end{cases}}}
94 \CustomizeMathJax{\newenvironment{rcases*}{\begin{cases}}{\end{cases}}}
95 \CustomizeMathJax{\newenvironment{drcases}{\begin{cases}}{\end{cases}}}
96 \CustomizeMathJax{\newenvironment{drcases*}{\begin{cases}}{\end{cases}}}
97 \CustomizeMathJax{\newenvironment{cases*}{\begin{cases}}{\end{cases}}}
98
99 \CustomizeMathJax{\newcommand{\MoveEqLeft}[1][{}]}
100
101 \CustomizeMathJax{% special parsing to handle '&' in argument
102   \def\LWRAbomed#1&#2&#3!|!{\fbox{\(#1\)}&\fbox{\(#2\)}}
103   \newcommand{\Abomed}[1]{\LWRAbomed#1&#!|!}
104 }
105
106 \CustomizeMathJax{
107   \newcommand{\ArrowBetweenLines}[1][\Updownarrow]{#1}% no starred
108 }

109 \CustomizeMathJax{\newcommand{\shortintertext}[1]{\text{#1}\notag \\\}}
110
111 \CustomizeMathJax{\newcommand{\vdotswithin}[1]{\hspace{.5em}\vdots}}
112 \CustomizeMathJax{\newcommand{\shortvdotswithin}[1]{ & \hspace{.5em}\vdots \\\}}
113 \CustomizeMathJax{\newcommand{\MTFlushSpaceAbove}{}}
114 \CustomizeMathJax{\newcommand{\MTFlushSpaceBelow}{\\\}}
115
116 % The following does not create a starred version of the macro:
117 \LetLtxMacro\LWR@mathtools@orig@DeclarePairedDelimiter\DeclarePairedDelimiter
118 \renewcommand{\DeclarePairedDelimiter}[3]{
119   \LWR@mathtools@orig@DeclarePairedDelimiter{#1}{#2}{#3}
120   \CustomizeMathJax{\newcommand{#1}[2][\{##1#2##2##1#3\}}
121 }
122 \@onlypreamble\DeclarePairedDelimiter
123
124 % (DeclarePairedDelimiterX is already defined to use \DeclarePairedDelimiterXPP.)
125
126 % The following does not create a starred version of the macro.
127 \LetLtxMacro\LWR@mathtools@orig@DeclarePairedDelimiterXPP\DeclarePairedDelimiterXPP
128 \DeclareDocumentCommand{\DeclarePairedDelimiterXPP}{m O{1} m m m m m}{
129   \LWR@mathtools@orig@DeclarePairedDelimiterXPP{#1}[#2]{#3}{#4}{#5}{#6}{#7}
130   \appto\LWR@customizedMathJax{\LWRbackslash{}}
131   \appto\LWR@customizedMathJax{%
132     \LWRbackslash{ }newcommand{\LWRbackslash\macroto{name{#1}LWRsub\}}
133   }%
134   \appto\LWR@customizedMathJax{[#2]}%
135   \appto\LWR@customizedMathJax{\{\LWRbackslash\}delimsize}%
136   \LWR@subcustomizedmathjax{#3#4#7}%
137   \appto\LWR@customizedMathJax{\LWRbackslash\}delimsize}%
138   \LWR@subcustomizedmathjax{#5#6}%
139   \appto\LWR@customizedMathJax{\}\}%
140   \appto\LWR@customizedMathJax{\LWRbackslash}\par}%

```

```

141 \appto\LWR@customizedMathJax{\LWRbackslash}%
142 \appto\LWR@customizedMathJax{%
143   \LWRbackslash{}newcommand{\LWRbackslash\macroto{name}{#1}}[1][1]%
144 }%
145 \appto\LWR@customizedMathJax{%
146   \{
147   \LWRbackslash{}def\LWRbackslash{}delimsizel{\#1\}
148   \LWRbackslash\macroto{name}{#1}LWRsub
149   \}%
150 }%
151 \appto\LWR@customizedMathJax{\LWRbackslash}\par}%
152 }
153 \@onlypreamble\DeclareParedDelimiterXPP
154 \@onlypreamble\DeclareParedDelimiterX
155
156 \CustomizeMathJax{\newcommand\lparen{}}
157 \CustomizeMathJax{\newcommand\rparen{}}
158 \CustomizeMathJax{\newcommand\vcentcolon}{:}}
159 \CustomizeMathJax{\newcommand\ordinarycolon}{:}}
160
161 \CustomizeMathJax{\newcommand\dblcolon{\vcentcolon\vcentcolon}}
162 \CustomizeMathJax{\newcommand\coloneqq{\vcentcolon=}}
163 \CustomizeMathJax{\newcommand\Coloneqq{\dblcolon=}}
164 \CustomizeMathJax{\newcommand\coloneq{\vcentcolon{-}}}
165 \CustomizeMathJax{\newcommand\Coloneq{\dblcolon{-}}}
166
167 \CustomizeMathJax{\newcommand\eqqcolon{=\vcentcolon}}
168 \CustomizeMathJax{\newcommand\Eqqcolon{=\dblcolon}}
169 \CustomizeMathJax{\newcommand\eqcolon{\mathrel{-}\vcentcolon}}
170 \CustomizeMathJax{\newcommand\Eqcolon{\mathrel{-}\dblcolon}}
171
172 \CustomizeMathJax{\newcommand\colonapprox{\vcentcolon\approx}}
173 \CustomizeMathJax{\newcommand\Colonapprox{\dblcolon\approx}}
174 \CustomizeMathJax{\newcommand\colonsim{\vcentcolon\sim}}
175 \CustomizeMathJax{\newcommand\Colonsim{\dblcolon\sim}}
176
177 \CustomizeMathJax{\newcommand\canceluparrow{\cancel{\uparrow}}}
178 \CustomizeMathJax{\newcommand\canceldownarrow{\cancel{\downarrow}}}
179 \CustomizeMathJax{\newcommand\bigtimes{\Large\times}}
180
181 \CustomizeMathJax{\newcommand\prescript[3]{{}^{\#1}_{\#2}\#3}}
182
183
184 \CustomizeMathJax{\newenvironment{lgathered}{\begin{gathered}}{\end{gathered}}}
185 \CustomizeMathJax{\newenvironment{rgathered}{\begin{gathered}}{\end{gathered}}}
186
187 \LetLtxMacro\LWR@mathtools@orig@newgathered\newgathered
188 \renewcommand{\newgathered}[4]{%
189   \LWR@mathtools@orig@newgathered{\#1}{\#2}{\#3}{\#4}%
190   \appto\LWR@customizedMathJax{\LWRbackslash}%
191   \LWR@subcustomizedmathjax{%
192     \newenvironment{\#1}{\begin{gathered}}{\end{gathered}}%
193   }%
194   \appto\LWR@customizedMathJax{\LWRbackslash}%
195 }

```

```

196 \@onlypreamble\newgathered
197
198 \CustomizeMathJax{\newcommand{\splitfrac}[2]{\{^{\#1}_{\#2}\}}
199 \CustomizeMathJax{\let\splitfrac\splitfrac}
200 \end{warpMathJax}

```

File 248 **lwarp-mcaption.sty**

§ 350 Package **mcaption**

(Emulates or patches code by STEPHAN HENNIG.)

Pkg mcaption mcaption is ignored.

for HTML output: Discard all options for lwarp-mcaption:

```

1 \LWR@ProvidesPackageDrop{mcaption}[2009/03/13]

2 \newenvironment{margincap}{}{}
3 \newcommand*{\margincapalign}{}
4 \newlength{\margincapsep}

```

File 249 **lwarp-mdframed.sty**

§ 351 Package **mdframed**

(Emulates or patches code by MARCO DANIEL, ELKE SCHUBERT.)

Pkg mdframed mdframed is loaded with options forced to framemethod=none.

§ 351.1 **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.

§ 351.2 Package loading

for HTML output:

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackageDrop{mdframed}[2013/07/01]
```

Do not require `Tikz` or `pstricks`:

```
4 \LWR@origRequirePackage[framemethod=none]{mdframed}
```

§ 351.3 Patches

Patch to remove PDF formatting and add HTML tags:

```
5 \AtBeginDocument{
6 \def\mdf@trivlist#1{%
7 \edef\mdf@temp{%
8 % \topsep=\the\topsep\relax%
9 % \partopsep=\the\partopsep\relax%
10 % \parsep=\the\parsep\relax%
11 }%
12 % \setlength{\topsep}{#1}%
13 % \topskip\z@%
14 % \partopsep\z@%
15 % \parsep\z@%
16 % \@nmblistfalse%
17 % \@trivlist%
18 % \labelwidth\z@%
19 % \leftmargin\z@%
20 % \itemindent\z@%
21 \let\@itemlabel\@empty%
22 \def\makeLabel##1{##1}%
23 % \item\relax\mdf@temp\relax%
24 }
25
26 \renewcommand*{\endmdf@trivlist}{%
27 \LWR@traceinfo{endmdf@trivlist}%
28 % \endtrivlist%
29 \LWR@listend%
```

```
30 }
31 }% AtBeginDocument
```

§ 351.4 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 }
```

§ 351.5 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 }
```

§ 351.6 Environment encapsulation

`\LWR@mdframedstart` Actions before an `mdframe` starts.

Encapsulate a frame inside a `<div>` of the desired class.

```
46 \newcommand*{\LWR@mdframedstart}{%
47 \LWR@traceinfo{\LWR@mdframedstart start}%
```

Warn if starting a frame inside a ``:

```
48    \LWR@spanwarninvalid{mdframe}%
```

Turn off paragraph handling during the generation of the encapsulating tags:

```
49 \LWR@stoppars%
```

Open a `<div>` and with custom class and custom style. A `BlockClass` environment is not used because this `<div>` is created by the `mdframed` `startcode` and `endcode` settings, which do not properly nest the `<div>` inside the `mdframed` environment.

```
50 \LWR@htmltagc{div class=""%
51 mdframed%
52 \ifdefstring{\LWR@mdthisenv}{mdframed}}{\ \LWR@mdthisenv}%
53 " \LWR@orignewline
54 style=" \LWR@orignewline
```

Convert and print the background color:

```
55 background: \LWR@mdfprintcolor{backgroundcolor} ; \LWR@orignewline
```

Convert and print the border color and width:

```
56 border: \LWR@mdfprintlength{linewidth} solid
57 \LWR@mdfprintcolor{linecolor} ; \LWR@orignewline
```

Convert and print the border radius:

```
58 border-radius: \LWR@mdfprintlength{roundcorner} ; \LWR@orignewline
```

Convert and print the shadow:

```
59 \ifbool{mdf@shadow}{%
60   box-shadow:
61   \LWR@mdfprintlength{shadowsize}
62   \LWR@mdfprintlength{shadowsize}
63   \LWR@mdfprintlength{shadowsize}
64   \LWR@mdfprintcolor{shadowcolor} ;
65 }
66 {box-shadow: none ;}
67 \LWR@orignewline

68 "}
69 % \LWR@htmldivclass{\LWR@mdthisenv}
```

mdframed environment may not work with the HTML versions of the following, so restore them to their originals while inside mdframed:

```
70 \LWR@select@print@hspace%
71 \renewcommand*{\rule}{\LWR@print@rule}
72 \LetLtxMacro\makebox\LWR@print@makebox%

73 \LWR@startpars%
74 \LWR@traceinfo{LWR@mdframedstart done}%
75 }
```

\LWR@mdframedend Actions after an mdframe ends.

After closing the <div>, globally restore to the default environment type:

```
76 \newcommand*{\LWR@mdframedend}{
77 \LWR@traceinfo{LWR@mdframedend start}%
```

Close the custom <div>:

```
78 \LWR@htmldivclassend{\LWR@mdthisenv}
```

Reset future custom class to the default:

```
79 \gdef\LWR@mdthisenv{mdframed}
```

Resume paragraph handling:

```
80 \LWR@startpars%
81 \LWR@traceinfo{LWR@mdframedend done}%
82 }
```

§ 351.7 **Mdframed environment**

```

83 \renewenvironment{mdframed}[1][[]]{%
84 \color@begingroup%
85 \mdfsetup{userdefinedwidth=\linewidth,#1}%
86 \mdf@startcode%
87 \mdf@preenvsetting%
88 \ifdefempty{\mdf@firstframetitle}{}%
89     {\let\mdf@frametitlesave\mdf@frametitle%
90     \let\mdf@frametitle\mdf@firstframetitle%
91     }%
92 \ifvmode\nointerlineskip\fi%
93     \ifdefempty{\mdf@frametitle}{}%
94     {\mdfframedtitleenv{\mdf@frametitle}%
95     \mdf@@frametitle@use%
96     }%
97 \mdf@trivlist{\mdf@skipabove@length}%%
98 \mdf@settings%
99 \mdf@lrbox{\mdf@splitbox@one}%
100 % \mdf@startinnercode%
101 }%
102 {%
103 % \mdf@@ignorelastdescenders%
104 \par%
105 % \unskip\ifvmode\nointerlineskip\hrule \@height\z@ \@width\hsize\fi%%
106 \ifmdf@footnoteinside%
107     \def\mdf@reserveda{%
108     \mdf@footnoteoutput%
109     \mdf@endinnercode%
110     \endmdf@lrbox%
111     \ifdefempty{\mdf@frametitle}{}%
112     {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
113     \detected@mdf@put@frame
114     }%
115 \else%
116     \def\mdf@reserveda{%
117     \mdf@endinnercode%
118     \endmdf@lrbox%
119     \ifdefempty{\mdf@frametitle}{}%
120     {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
121     \detected@mdf@put@frame%
122     \mdf@footnoteoutput%
123     }%
124 \fi%
125 \mdf@reserveda%
126 \aftergroup\endmdf@trivlist%
127 \color@endgroup%
128 \mdf@endcode%
129 }

```

\mdf@footnoteoutput

```

130 \renewrobustcmd*\mdf@footnoteoutput{%
131     \LWR@printpendingmpfootnotes%
132 }

```

§ 351.8 **Titles and subtitles**

`\mdfframedtitleenv` $\langle title \rangle$

Place the title inside a `<div>` of class `mdfframedtitle`:

```
133 \newlength{\LWR@titleroundcorner}
134
135 \renewrobustcmd\mdfframedtitleenv[1]{%
136 \LWR@traceinfo{\LWR@mdfframedtitleenv start}%
```

Open a `<div>` with a custom `class` and custom style:

```
137 \begin{BlockClass}{%}
```

Convert and print the title background color:

```
138 background:
139 \LWR@mdfprintcolor{frametitlebackgroundcolor}
140 ; \LWR@orignewline
```

Convert and print the title rule:

```
141 \ifbool{mdf@frametitlerule}{%
142   border-bottom:
143     \LWR@mdfprintlength{frametitlerulewidth}
144     solid
145     \LWR@mdfprintcolor{frametitlerulecolor}
146   ; \LWR@orignewline
147 }{%}
```

Finish the custom style and the opening `<div>` tag:

```
148 ]{mdfframedtitle}%
```

Print the title inside the `<div>`:

```
149 \mdf@frametitlefont{\LWR@textcurrentfont{#1}}%
```

Close the `<div>`:

```
150 \end{BlockClass}%
151 \LWR@traceinfo{\LWR@mdfframedtitleenv end}%
152 }
```

`\LWR@mdfsubtitlecommon` $\langle sub \text{ — or — } subsub \rangle$ [$\langle options \rangle$] $\langle title \rangle$

Common code for `\LWR@mdfsubtitle` and `\LWR@mdfsubsubtitle`.

Encapsulate the subtitle inside a `<div>` of class `mdfframedsubtitle`:

```
153 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}
154 {% the following empty line is required
155
156 \LWR@traceinfo{\LWR@mdfframedsubtitlecommon start}%
```

Open a `<div>` with a custom `class` and custom style:

```
157 \begin{BlockClass}{%}
```

Convert and print the background color:

```
158 background:
159 \LWR@mdfprintcolor{#1titlebackgroundcolor}
160 ; \LWR@orignewline
```

Convert and print the above line:

```
161 \ifbool{mdf@#1titleaboveline}{%
162   border-top:
163   \LWR@mdfprintlength{#1titleabovelinewidth}
164   solid
165   \LWR@mdfprintcolor{#1titleabovelinecolor}
166   ; \LWR@orignewline
167 }{}
```

Convert and print the below line:

```
168 \ifbool{mdf@#1titlebelowline}{%
169   border-bottom:
170   \LWR@mdfprintlength{#1titlebelowlinewidth}
171   solid
172   \LWR@mdfprintcolor{#1titlebelowlinecolor}
173   ; \LWR@orignewline
174 }{}
```

Finish the custom style and the opening <div> tag:

```
175 ]{mdframed#1title}%
```

Perform the original subtitle action:

```
176 \IfNoValueTF{#2}
177 {\@nameuse{LWR@origmdf#1title}}{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}%
178 {\@nameuse{LWR@origmdf#1title}[#2]}{\csuse{mdf@#1titlefont}{\LWR@textcurrentfont{#3}}}%
```

Close the <div>:

```
179 \end{BlockClass}%
180 \LWR@traceinfo{LWR@mdframedsubtitlecommon end}%
181 }
```

`\LWR@mdfsubtitle` [*<options>*] {*<title>*}

```
182 \newcommand*{\LWR@mdfsubtitle}{%
183 \LWR@mdfsubtitlecommon{sub}%
184 }
185 \let\mdfsubtitle\LWR@mdfsubtitle
```

`\LWR@mdfsubsubtitle` [*<options>*] {*<title>*}

```
186 \newcommand*{\LWR@mdfsubsubtitle}{%
187 \LWR@mdfsubtitlecommon{subsub}%
188 }
189 \let\mdfsubsubtitle\LWR@mdfsubsubtitle
```

§ 351.9 New environments

`\LWR@mdthisenv` Stores the environment of the frame about to be created:

```
190 \newcommand*\LWR@mdthisenv{\mdframed}
```

`\newmdenv` [*options*] {*env-name*}

Modified from the original to remember the environment.

```
191 \renewrobustcmd*\newmdenv[2][]{%
192 \newenvironment{#2}%
193 {%
194 \mdfsetup{#1}%
195 \renewcommand*\LWR@mdthisenv{\md#2}%
196 \begin{mdframed}%
197 }
198 {\end{mdframed}}%
199 }
```

`\surroundwithmdframed` [*options*] {*environment*}

Modified from the original to remember the environment.

```
200 \renewrobustcmd*\surroundwithmdframed[2][]{%
201 \BeforeBeginEnvironment{#2}{%
202 \renewcommand*\LWR@mdthisenv{\md#2}%
203 \begin{mdframed}[#1]}%
204 \AfterEndEnvironment{#2}{\end{mdframed}}%
205 }
```

`\mdtheorem` [*mdframed-options*] {*envname*} [*numberedlike*] {*caption*} [*within*]

Modified from the original to remember the environment.

```
206 \DeclareDocumentCommand{\mdtheorem}{ O{ } m o m o }%
207 {\ifcsdef{#2}%
208 {\mdf@PackageWarning{Environment #2 already exists\MessageBreak}}%
209 {%
210 \IfNoValueTF {#3}%
211 {%#3 not given -- number relationship
212 \IfNoValueTF {#5}%
213 {%#3+#5 not given
214 \@definecounter{#2}%
215 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
216 \newenvironment{#2}[1][]{%
217 \refstepcounter{#2}%
218 \ifstrempy{##1}%
219 {\let\@temptitle\relax}%
220 {%
221 \def\@temptitle{\mdf@theoremseparator%
222 \mdf@theoremspace%
223 \mdf@theoremtitlefont%
224 \LWR@textcurrentfont{##1}}% lwarp
225 \mdf@thm@caption{#2}{#4}{\csname the#2\endcsname}{##1}}%
226 }%
227 \begin{mdframed}[#1,frametitle={\strut#4\ \csname the#2\endcsname%
```

```

228                                     \@temptitle}}]]}%
229     {\end{mdframed}}}%
230     \newenvironment{#2*}[1][[]]{%
231       \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ #1}}}%
232       \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}}]]}%
233       {\end{mdframed}}}%
234     }%
235     {%#5 given -- reset counter
236     \@definecounter{#2}\@newctr{#2}[#5]%
237     \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
238     \expandafter\xdef\csname the#2\endcsname{%
239       \expandafter\noexpand\csname the#5\endcsname \@thmcountersep%
240       \@thmcounter{#2}}}%
241     \newenvironment{#2}[1][[]]{%
242       \refstepcounter{#2}%
243       \ifstrempy{##1}%
244         {\let\@temptitle\relax}%
245         {%
246           \def\@temptitle{\mdf@theoremseparator%
247             \mdf@theoremspace%
248             \mdf@theoremtitlefont%
249             \LWR@textcurrentfont{##1}}% lwarp
250           \mdf@thm@caption{#2}{{#4}{\csname the#2\endcsname}{##1}}%
251           }
252       \begin{mdframed}[#1,frametitle={\strut#4 \csname the#2\endcsname%
253         \@temptitle}}]]}%
254       {\end{mdframed}}}%
255     \newenvironment{#2*}[1][[]]{%
256       \ifstrempy{##1}%
257         {\let\@temptitle\relax}%
258         {%
259           \def\@temptitle{\mdf@theoremseparator%
260             \mdf@theoremspace%
261             \mdf@theoremtitlefont%
262             \LWR@textcurrentfont{##1}}% lwarp
263           \mdf@thm@caption{#2}{{#4}{\csname the#2\endcsname}{##1}}%
264           }%
265       \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}}]]}%
266       {\end{mdframed}}}%
267     }%
268   }%
269   {%#3 given -- number relationship
270   \global\@namedef{the#2}{\@nameuse{the#3}}%
271   \newenvironment{#2}[1][[]]{%
272     \refstepcounter{#3}%
273     \ifstrempy{##1}%
274       {\let\@temptitle\relax}%
275       {%
276         \def\@temptitle{\mdf@theoremseparator%
277           \mdf@theoremspace%
278           \mdf@theoremtitlefont%
279           \LWR@textcurrentfont{##1}}% lwarp
280         \mdf@thm@caption{#2}{{#4}{\csname the#2\endcsname}{##1}}%
281         }
282     \begin{mdframed}[#1,frametitle={\strut#4 \csname the#2\endcsname%

```

```

283                                     \@temptitle}}]%
284     {\end{mdframed}}%
285     \newenvironment{#2*}[1][]{%
286       \ifstrepty{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ ##1}}%
287       \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}}]%
288       {\end{mdframed}}%
289     }%
290     \BeforeBeginEnvironment{#2}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
291     \BeforeBeginEnvironment{#2*}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
292   }%
293 }

```

`\newmdtheoremenv` [*⟨1: mdframed-options⟩*] [*⟨2: envname⟩*] [*⟨3: numberedlike⟩*] [*⟨4: caption⟩*] [*⟨5: within⟩*]

Modified from the original to remember the environment.

```

294 \DeclareDocumentCommand\newmdtheoremenv{O{ } m o m o }{%
295   \ifboolexpr{ test {\IfNoValueTF {#3}} and test {\IfNoValueTF {#5}} }%
296     {\newtheorem{#2}{#4}}%
297     {%
298       \IfValueT{#3}{\newtheorem{#2}[#3]{#4}}%
299       \IfValueT{#5}{\newtheorem{#2}{#4}[#5]}%
300     }%
301   \BeforeBeginEnvironment{#2}{%
302     \renewcommand*\LWR@mdthisenv}{md#2}}%
303   \begin{mdframed}[#1]}%
304   \AfterEndEnvironment{#2}{%
305     \end{mdframed}}%
306 }

```

File 250 **lwarp-media9.sty**

§ 352 Package **media9**

Pkg `media9` **media9** is emulated.

The packages `multimedia`, `movie15`, and `media9` are supported.

HTML5 `<audio>` and `<video>` objects are created for `.mp3` and `.mp4` files.

HTML5 `<embed>` objects are created for `http` and `ftp` links.

`\href` links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For `media9`, a multimedia object is inserted for each `addressource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each HTML multimedia object includes the poster text, except for `<embed>` objects. For `movie15`, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

`media9 \addmediapath` is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each `<audio>` and `<video>` object.

`media9` slideshows are not supported.

`\hyperlinkmovie`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a YOUTUBE™ video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

 **& in a URL** Many special characters are converted to regular catcode 12 characters for use inside a URL. `&` is used in the flash variables fields, which are split with `xparse \SplitList`, which does not seem to work with a catcode 12 divider token, so `&` is not converted to catcode 12, and will not work in a URL with `media9`. Using `&` in a URL in a `flashvars` field may also cause parsing problems with print output, as well.

for HTML output:

```
1 \LWR@ProvidesPackageDrop{media9}[2019/02/21]
```

```
2 \LWR@origRequirePackage{lwarp-common-multimedia}
```

```
3
```

```
4 \RequirePackage{xkeyval}
```

`\addmediapath` `{\path}`

Supported.

```
5 \newcommand*\LWR@medianine@path{}
```

```
6
```

```
7 \newcommand*\addmediapath}[1]{\appto\LWR@medianine@path{#{1}}}
```

The options and poster text are reused in several places.

```
8 \newcommand*\LWR@medianine@postertext{}
```

```
9 \newcommand*\LWR@medianine@options{}
```

Each `addresource` can generate a multimedia object.

```
10 \define@key\LWR@medianine{addresource}{%
```

```
11   \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]
```

```
12     {\LWR@medianine@postertext}
```

```
13     {#1}
```

```
14 }
```

Each flashvars source can generate a multimedia object.

```

15 \newcommand*{\LWR@medianine@flashvarsb}[1]{%
16   \IfBeginWith{#1}{source=}{%
17     \StrGobbleLeft{#1}{7}[\LWR@tempone]%
18     \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
19     {\LWR@medianine@postertext}%
20     {\LWR@tempone}%
21   }{%
22   \IfBeginWith{#1}{src=}{%
23     \StrGobbleLeft{#1}{4}[\LWR@tempone]%
24     \expandafter\LWR@multimedia\expandafter[\LWR@medianine@options]%
25     {\LWR@medianine@postertext}%
26     {\LWR@tempone}%
27   }{%
28 }
29
30 \NewDocumentCommand{\LWR@medianine@flashvars}{ >[\SplitList{&}] m }{%
31   \ProcessList {#1}{\LWR@medianine@flashvarsb}%
32 }
33
34 \define@key{\LWR@medianine}{flashvars}{%
35   \LWR@medianine@flashvars{#1}%
36 }

```

`\includemedia` [*<options>*] {*<poster text>*} {*<file or URL>*}

```

37 \newcommand*{\LWR@includemediab}[3][[]]{%
38   \let\input@path\LWR@medianine@path%
39   \renewcommand*{\LWR@medianine@options}{#1}%
40   \renewcommand*{\LWR@medianine@postertext}{#2}%
41   \setkeys*{\LWR@medianine}{#1}%
42   \IfBeginWith{#3}{http}{\LWR@multimedia[#1]{#2}{#3}}{%
43   \IfBeginWith{#3}{HTTP}{\LWR@multimedia[#1]{#2}{#3}}{%
44   \IfBeginWith{#3}{ftp}{\LWR@multimedia[#1]{#2}{#3}}{%
45   \IfBeginWith{#3}{FTP}{\LWR@multimedia[#1]{#2}{#3}}{%
46   }}}%
47   \endgroup%
48 }
49
50 \newrobustcmd*{\includemedia}{%
51   \begingroup%
52   \LWR@linkmediacatcodes%
53   \LWR@includemediab%
54 }

```

`\mediabutton` [*<options>*] {*<text>*}

Ignored.

```

55 \newcommand*{\mediabutton}[2][[]]{

```

File 251 **lwarp-memhfixc.sty**

§ 353 Package **memhfixc**

Pkg memhfixc memhfixc is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{memhfixc}[2013/05/30]

File 252 **lwarp-metalogo.sty**

§ 354 Package **metalogo**

(Emulates or patches code by ANDREW GILBERT MOSCHOU.)

Pkg metalogo metalogo is used in print mode, and emulated in HTML.

for HTML output: 1 \LWR@ProvidesPackagePass{metalogo}[2010/05/29]

```

2 \newcommand*{\LWR@HTML@setlogokern}[2]{}
3 \newcommand*{\LWR@HTML@setlogodrop}[2][XeTeX]{}
4 \newcommand*{\LWR@HTML@setLaTeXa}[1]{}
5 \newcommand*{\LWR@HTML@setLaTeXee}[1]{}
6 \newcommand*{\LWR@HTML@seteverylogo}[1]{}
7 \newcommand*{\LWR@HTML@everylogo}[1]{}
8
9 \LWR@formatted{setlogokern}
10 \LWR@formatted{setlogodrop}
11 \LWR@formatted{setLaTeXa}
12 \LWR@formatted{setLaTeXee}
13 \LWR@formatted{seteverylogo}
14 \LWR@formatted{everylogo}

```

File 253 **lwarp-metalogox.sty**

§ 355 Package **metalogox**

(Emulates or patches code by BRIAN DUNN.)

Pkg metalogox metalogox is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{metalogox}[2019/01/20]

\AtBeginDocument, adjust the logo setting according to the font which is active at that moment.

```

2 \AtBeginDocument{
3   \let\LWR@metalogox@currentformatting\LWR@formatting
4   \renewcommand*\LWR@formatting}{print}%
5   \autoadjustlogos*
6   \let\LWR@formatting\LWR@metalogox@currentformatting
7 }

```

File 254 **lwarp-mhchem.sty**

§ 356 Package **mhchem**

(Emulates or patches code by MARTIN HENSEL.)

Pkg mhchem mhchem is patched for use by lwarp.

without MATHJAX Without MATHJAX, mhchem expressions are converted to svg math. Inline expressions use hashed filenames to allow reuse, and assume that any mhchem options are global.

MATHJAX with mhchem extension For MATHJAX, the mhchem extension is used if the mhchem expression is used inside a math expression:

$$\text{\ce{C6H5-CHO}}$$

not inside math

If *not* used inside a math expression, lwarp converts standalone mhchem expressions into svg math images.

MATHJAX without mhchem extension If the MATHJAX mhchem extension is not used, expressions inside math must be placed between `\displaymathother` and `\displaymathnormal`:

```

\displaymathother
[ \ce{ . . . } \] . . . $ \ce { . . . } $
\displaymathnormal

```

⚠ **nested math**

When producing HTML output without the MATHJAX mhchem extension, lwarp does not support the use of nested dollar signs in mhchem expressions.

For some examples from the mhchem manual, change as follows:

<code>\ce{NaOH(aq,\infty)}</code>	% old
<code>\ce{NaOH(aq,\infty)}</code>	% new
<code>\ce{Fe(CN)_{\frac{6}{2}}}</code>	% old
<code>\ce{Fe(CN)_{\frac{6}{2}}}</code>	% new
<code>\ce{NO_x}</code>	% old
<code>\ce{NO_x}</code>	% new
<code>\ce{NO_x}</code>	% old
<code>\ce{NO_x}</code>	% new
<code>\ce{\\$cis\{-}[PtCl2(NH3)2]}</code>	% old
<code>\ce{\mathit{cis}\{-}[PtCl2(NH3)2]}</code>	% new

for HTML output: 1 \LWR@ProvidesPackagePass{mhchem}[2018/06/22]

The original definition of \ce:

```
2 \LetLtxMacro\LWR@mhchem@origce\ce
```

The new definition, called from the new \ce after math shift is set. The starred lateximage uses a hashed filename for the svg image. The alt tag is set to the mhchem expression.

```
3 \newcommand{\LWR@mhchem@HTML@ce}[1]{%
4 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
5 \ifbool{\LWR@xfakebold}%
6   {\def\LWR@tempone{Y}}%
7   {\def\LWR@tempone{N}}%
8 \begin{lateximage}*[\textbackslash{}ce{\LWR@HTMLsanitize{#1}\}]*%
9   [%
10     FM\LWR@f@family%
11     SR\LWR@f@series%
12     SH\LWR@f@shape%
13     SHC\LWR@f@shapecaps%
14     CL\LWR@tempcolor%
15     FB\LWR@tempone% xfakebold
16   ]%
17 \LWR@setcurrentfont%
18 \LWR@mhchem@origce{#1}%
19 \end{lateximage}%
20 \endgroup%
21 \addtocounter{\LWR@mhchem@cedepth}{-1}%
22 }
```

Only set math shift if outer depth:

```
23 \newcounter{\LWR@mhchem@cedepth}
24 \setcounter{\LWR@mhchem@cedepth}{0}
```

The new \ce. Sets math shift then continues.

```
25 \renewcommand{\ce}{%
26 \begingroup%
27 \ifnumequal{\value{\LWR@mhchem@cedepth}}{0}{%
28   \catcode'\$=3% math shift
29 }{%
30 \addtocounter{\LWR@mhchem@cedepth}{1}%
31 \LWR@mhchem@HTML@ce%
32 }
```

The original definition of \cesplit:

```
33 \LetLtxMacro\LWR@mhchem@origcesplit\cesplit
```

The new definition, called from the new `\cesplit` after math shift is set. The starred `lateximage` uses a hashed filename for the svg image. The `alt` tag is set to the `mhchem` expression.

```

34 \newcommand*{\LWR@mhchem@HTML@cesplit}[2]
35 {%
36 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
37 \ifbool{\LWR@xfakebold}%
38   {\def\LWR@tempone{Y}}%
39   {\def\LWR@tempone{N}}%
40 \begin{lateximage}*\textbackslash{}cesplit\{\LWR@HTMLsanitize{#2}\}*%
41   [%
42     FM\LWR@f@family%
43     SR\LWR@f@series%
44     SH\LWR@f@shape%
45     SHC\LWR@f@shapecaps%
46     CL\LWR@tempcolor%
47     FB\LWR@tempone% xfakebold
48   ]%
49 \LWR@setcurrentfont%
50 \LWR@mhchem@origcesplit{#1}{#2}%
51 \end{lateximage}%
52 \endgroup%
53 }

```

Only set math shift if outer depth:

```

54 \newcounter{\LWR@mhchem@cesplitdepth}
55 \setcounter{\LWR@mhchem@cesplitdepth}{0}

```

The new `\cesplit`. Sets math shift then continues.

```

56 \renewcommand{\cesplit}{%
57 \begingroup%
58 \ifnumequal{\value{\LWR@mhchem@cesplitdepth}}{0}{%
59   \catcode'\$=3% math shift
60 }{ }%
61 \addtocounter{\LWR@mhchem@cesplitdepth}{1}%
62 \LWR@mhchem@HTML@cesplit%
63 }

```

Resore originals inside a `lateximage`:

```

64 \appto\LWR@restoreorigformatting{%
65 \LetLtxMacro\ce\LWR@mhchem@origce%
66 \LetLtxMacro\cesplit\LWR@mhchem@origcesplit%
67 }

```

File 255 **lwarp-microtype.sty**

§ 357 Package **microtype**

(Emulates or patches code by R SCHLICHT.)

Pkg microtype **microtype** is pre-loaded by **lwarp**. All user options and macros are ignored and disabled.

for HTML output: Discard all options for **lwarp-microtype**:

```

1 \LWR@ProvidesPackageDrop{microtype}[2018/01/14]

2 \DeclareDocumentCommand{\DeclareMicrotypeSet}{o m m}{}
3 \DeclareDocumentCommand{\UseMicrotypeSet}{o m}{}
4 \DeclareDocumentCommand{\DeclareMicrotypeSetDefault}{o m}{}
5 \DeclareDocumentCommand{\SetProtrusion}{o m m}{}
6 \DeclareDocumentCommand{\SetExpansion}{o m m}{}
7 \DeclareDocumentCommand{\SetTracking}{o m m}{}
8 \DeclareDocumentCommand{\SetExtraKerning}{o m m}{}
9 \DeclareDocumentCommand{\SetExtraSpacing}{o m m}{}
10 \DeclareDocumentCommand{\DisableLigatures}{o m}{}
11 \DeclareDocumentCommand{\DeclareCharacterInheritance}{o m m}{}
12 \DeclareDocumentCommand{\DeclareMicrotypeVariants}{m}{}
13 \DeclareDocumentCommand{\DeclareMicrotypeAlias}{m m}{}
14 \DeclareDocumentCommand{\LoadMicrotypeFile}{m}{}
15 \DeclareDocumentCommand{\DeclareMicrotypeBabelHook}{m m}{}
16 \DeclareDocumentCommand{\microtypesetup}{m}{}
17 \DeclareDocumentCommand{\microtypecontext}{m}{}
18 \DeclareDocumentCommand{\textmicrotypecontext}{m m}{#2}
19 \ifpackageloaded{letterspace}{\let\MT@textls\relax}{%
20 \DeclareDocumentCommand{\lsstyle}{}{}
21 \DeclareDocumentCommand{\textls}{o +m}{}
22 \DeclareDocumentCommand{\lslig}{m}{#1}
23 }
24 \def\DeclareMicrotypeSet#1#{\@gobbletwo}
25 \def\DeclareMicrotypeVariants#1#{\@gobble}
26 \@onlypreamble\DeclareMicrotypeSet
27 \@onlypreamble\UseMicrotypeSet
28 \@onlypreamble\DeclareMicrotypeSetDefault
29 \@onlypreamble\DisableLigatures
30 \@onlypreamble\DeclareMicrotypeVariants
31 \@onlypreamble\DeclareMicrotypeBabelHook

```

File 256 **lwarp-midfloat.sty**

§ 358 Package **midfloat**

(Emulates or patches code by SIGITAS TOLUŠIS.)

Pkg midfloat midfloat is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{midfloat}[2012/05/29]

```
2 \newenvironment{strip}[1][{}]{  
3 \newskip\stripsep
```

File 257 **lwarp-midpage.sty**

§ 359 Package **midpage**

Pkg midpage midpage is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{midpage}[2009/09/03]

```
2 \newenvironment{midpage}  
3 {\begin{BlockClass}[%  
4 \LWR@print@mbx{margin-top:6ex} ; \LWR@print@mbx{margin-bottom:6ex}%  
5 ]{midpage}}  
6 {\end{BlockClass}}
```

File 258 **lwarp-minibox.sty**

§ 360 Package **minibox**

(Emulates or patches code by WILL ROBERTSON.)

Pkg minibox minibox is patched for use by lwarp.

Due to HTML limitations regarding paragraphs and <div>s, miniboxes inline with other text will appear on their own line.

for HTML output: 1 \LWR@ProvidesPackagePass{minibox}[2013/06/21]

```
2 \ExplSyntaxOn  
3 \newcommand\LWR@HTML@minibox[2][{}]{%  
4 \LWR@stoppars%  
5 \group_begin:  
6 \keys_set:nn {minibox} {#1}  
7 \bool_if:NTF \l_minibox_frame_bool  
8 {  
9 \setlength\fbxrule{\l_minibox_rule_dim}  
10 \setlength\fbxsep{\l_minibox_pad_dim}  
11 \fbxBlock{%  
12 \begin{tabular}[\l_minibox_tabular_valign_tl]%  
13 {\l_minibox_tabular_preamble_tl}  
14 {#2}  
15 \end{tabular}  
16 }%
```

```

17   }
18   {
19     \begin{BlockClass}[display:inline-block]{minibox}
20     \begin{tabular}[\l_minibox_tabular_valign_tl]%
21       {\l_minibox_tabular_preamble_tl}
22       {#2}
23     \end{tabular}
24     \end{BlockClass}
25   }
26   \group_end:
27   \LWR@startpars%
28 }
29 \ExplSyntaxOff
30
31 \LWR@formatted{minibox}

```

File 259 **lwarp-minitoc.sty**

§ 361 Package **minitoc**

Pkg minitoc minitoc is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{minitoc}[2018/07/12]

mtcoff disables minitoc.

2 \usepackage{mtcoff}

File 260 **lwarp-mismath.sty**

§ 362 Package **mismath**

(Emulates or patches code by ANTOINE MISSIER.)

Pkg mismath mismath is patched for SVG math, and emulated for MATHJAX.

 **MATHJAX** \enumber, \inumber, \jnumber, and \pinumber are ignored for MATHJAX, except that \itpi is made available as a clone of \pi.

For MATHJAX, \boldvect and \arrowvect are honored if in the preamble.

If \boldvectcommand is set to \mathbf in the preamble, it will be used for MATHJAX, otherwise it will default to \mathit. \boldvectcommand may also be set with \CustomizeMathJax in the preamble. See section 8.7.5. Note that as of this writing there is not a bold italic font across all MATHJAX fonts.

If \probastyle is set to \mathbb in the preamble, it will be used for MATHJAX, otherwise it will default to \mathrm. \probastyle may be set with \CustomizeMathJax in the preamble.

If `\mathset` is set to `\mathbb` in the preamble, it will be used for MATHJAX, otherwise it will default to `\mathbf`. `\mathset` may be set with `\CustomizeMathJax` in the preamble.

for HTML output: `1 \LWR@ProvidesPackagePass{mismath}[2019/12/27]`

For MATHJAX, used in the HTML comment before the environment.

```
2 \ifbool{mathjax}{
3   \RenewEnviron{mathcols}{%
4     \preto\BODY{\begin{aligned}\displaystyle}
5     \appto\BODY{\end{aligned}}
6     \expandafter\(\\BODY\)
7   }
8 }% mathjax
```

For svg math. The `lateximage` restores the original definition of the math environment.

```
9 {% svg
10   \renewenvironment{mathcols}{
11     \begin{lateximage}
12     \begin{math}
13     \begin{aligned}\displaystyle
14   }{
15     \end{aligned}%
16     \end{math}
17     \end{lateximage}
18   }
19 }% svg
20
21 \renewcommand{\changeacol}{
22   \end{aligned} \quad
23   \begin{aligned}\displaystyle
24 }
25
26 \begin{warpMathJax}
27 \CustomizeMathJax{\newcommand{\mathup}[1]{\mathrm{#1}}}
28 \CustomizeMathJax{\newcommand{\e}{\mathrm{e}}}
29 \CustomizeMathJax{\newcommand{\i}{\mathrm{i}}}
30 \CustomizeMathJax{\newcommand{\j}{\mathrm{j}}}
31
32 \CustomizeMathJax{\newcommand{\boldvect}{}{}}
33 \CustomizeMathJax{\newcommand{\arrowvect}{}{}}
34 \CustomizeMathJax{\newcommand{\pinumber}[1][{}]}
35 \CustomizeMathJax{\newcommand{\hvect}[1]{\vec{\vphantom{h}#1}}}
36 \CustomizeMathJax{\newcommand{\hvec}[1]{\vec{\vphantom{t}#1}}}
37 \CustomizeMathJax{%
38   \newcommand{\norm}[1]{\left\| \left\| \left\| \left\| \right\| \right\| \right\| \right\|}
39 }
40 \CustomizeMathJax{\newcommand{\di}{\mathop{!}\mathrm{d}}}
41
42 \CustomizeMathJax{\newcommand{\P}{\operatorname{\probastyle{P}}}}
43 \CustomizeMathJax{\newcommand{\E}{\operatorname{\probastyle{E}}}}
44 \CustomizeMathJax{\newcommand{\V}{\operatorname{\probastyle{V}}}}
45 \CustomizeMathJax{\newcommand{\Par}{\unicode{x00B6}}}
46
```

```

47 \CustomizeMathJax{\newcommand{\adj}{\mathrm{adj}}}
48 \CustomizeMathJax{\newcommand{\Aut}{\mathrm{Aut}}}
49 \CustomizeMathJax{\newcommand{\Conv}{\mathrm{Conv}}}
50 \CustomizeMathJax{\newcommand{\cov}{\mathrm{cov}}}
51 \CustomizeMathJax{\newcommand{\Cov}{\mathrm{Cov}}}
52 \CustomizeMathJax{\newcommand{curl}{\operatorname{\vect{\mathrm{curl}}}}}
53 \CustomizeMathJax{\newcommand{divg}{\mathrm{div}}}
54 \CustomizeMathJax{\newcommand{End}{\mathrm{End}}}
55
56 \CustomizeMathJax{\newcommand{erf}{\mathrm{erf}}}
57 \CustomizeMathJax{\newcommand{grad}{\operatorname{\vect{\mathrm{grad}}}}}
58 \CustomizeMathJax{\newcommand{id}{\mathrm{id}}}
59 \CustomizeMathJax{\newcommand{Id}{\mathrm{Id}}}
60 \CustomizeMathJax{\newcommand{im}{\mathrm{im}}}
61 \CustomizeMathJax{\let\oldIm\Im}
62 \CustomizeMathJax{\renewcommand{\Im}{\operatorname{Im}}}
63 \CustomizeMathJax{\newcommand{lb}{\mathrm{lb}}}
64 \CustomizeMathJax{\newcommand{lcm}{\mathrm{lcm}}}
65
66 \CustomizeMathJax{\newcommand{rank}{\mathrm{rank}}}
67 \CustomizeMathJax{\let\oldRe\Re}
68 \CustomizeMathJax{\renewcommand{\Re}{\operatorname{Re}}}
69 \CustomizeMathJax{\newcommand{rot}{\operatorname{\vect{\mathrm{rot}}}}}
70 \CustomizeMathJax{\newcommand{sgn}{\mathrm{sgn}}}
71 \CustomizeMathJax{\newcommand{spa}{\mathrm{span}}}
72 \CustomizeMathJax{\newcommand{tr}{\mathrm{tr}}}
73 \CustomizeMathJax{\newcommand{Var}{\mathrm{Var}}}
74 \CustomizeMathJax{\newcommand{Zu}{\mathrm{Z}}}
75
76 \CustomizeMathJax{\newcommand{arccot}{\mathrm{arccot}}}
77 \CustomizeMathJax{\newcommand{sech}{\mathrm{sech}}}
78 \CustomizeMathJax{\newcommand{csch}{\mathrm{csch}}}
79 \CustomizeMathJax{\newcommand{arsinh}{\mathrm{arsinh}}}
80 \CustomizeMathJax{\newcommand{arcosh}{\mathrm{arcosh}}}
81 \CustomizeMathJax{\newcommand{artanh}{\mathrm{artanh}}}
82 \CustomizeMathJax{\newcommand{arcoth}{\mathrm{arcoth}}}
83 \CustomizeMathJax{\newcommand{arsech}{\mathrm{arsech}}}
84 \CustomizeMathJax{\newcommand{arcsch}{\mathrm{arcsch}}}
85
86 \CustomizeMathJax{\newcommand{big0}{\mathcal{0}}}
87 \CustomizeMathJax{\newcommand{bigo}{\mathrm{0}}}
88 \CustomizeMathJax{\newcommand{lito}{\mathrm{o}}}
89
90 \CustomizeMathJax{\newcommand{R}{\mathset{R}}}
91 \CustomizeMathJax{\newcommand{C}{\mathset{C}}}
92 \CustomizeMathJax{\newcommand{N}{\mathset{N}}}
93 \CustomizeMathJax{\newcommand{Z}{\mathset{Z}}}
94 \CustomizeMathJax{\newcommand{Q}{\mathset{Q}}}
95 \CustomizeMathJax{\newcommand{F}{\mathset{F}}}
96 \CustomizeMathJax{\newcommand{K}{\mathset{K}}}
97
98 \CustomizeMathJax{\newcommand{ds}{\displaystyle}}
99 \CustomizeMathJax{\newcommand{dlim}{\lim\limits}}
100 \CustomizeMathJax{\newcommand{dsum}{\sum\limits}}
101 \CustomizeMathJax{\newcommand{dprod}{\prod\limits}}

```

```

102 \CustomizeMathJax{\newcommand{\dcup}{\bigcup\limits}}
103 \CustomizeMathJax{\newcommand{\dcap}{\bigcap\limits}}
104 \CustomizeMathJax{\newcommand{\lbar}{\overline{}}}
105 \CustomizeMathJax{\newcommand{\hlbar}[1]{\overline{\vphantom{h}#1}}}
106 \CustomizeMathJax{\newcommand{\eqdef}{\stackrel{\text{\mathrm{def}}}{=}}}
107 \CustomizeMathJax{\newcommand{\unbr}{\underbrace{}}}
108 \CustomizeMathJax{\newcommand{\iif}{if and only if }}
109
110 \CustomizeMathJax{\newcommand{\mul}{\mathord{\times}}}
111 \CustomizeMathJax{\newcommand{\then}{\ \Longrightarrow \ \mbox{ } }}
112 \CustomizeMathJax{\newcommand{\txt}[1]{\quad\text{#1}\quad}}
113 \CustomizeMathJax{\newcommand{\paren}[1]{\mathopen{\left( #1 \right)}}}
114 \CustomizeMathJax{\newcommand{\pow}[2]{\left( #1 \right)^{\!#2}}
115 \CustomizeMathJax{\newcommand{\abs}[1]{\left| \! \left| #1 \right| \! \right|}}
116 \CustomizeMathJax{\newcommand{\lfrac}[2]{\frac{\!#1\!}{\!#2\!}}}
117
118 \CustomizeMathJax{\newenvironment{system}[1][L]%
119   {\left\{\begin{array}{@{.15em}#1@{}}
120   {\end{array}\right.}
121 }
122
123 \CustomizeMathJax{\newenvironment{spmatrix}
124   {\left(\begin{smallmatrix}
125   {\end{smallmatrix}\right)}
126 }
127
128 \CustomizeMathJax{%
129   \newenvironment{mathcols}
130     {\begin{aligned}\displaystyle}
131     {\end{aligned}}
132 }
133 \CustomizeMathJax{\newcommand{\changeacol}{\end{aligned}\quad\begin{aligned}}}

```

User-adjustable settings, detected if in the preamble.

```

134 \AtBeginDocument{
135 \ifdef{\itpi}{
136   \CustomizeMathJax{\let\itpi\pi}
137 }{ }
138 \ifdefstring{\boldvectcommand}{\mathbf}{
139   \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\mathbf{#1}}}
140 }{
141   \CustomizeMathJax{\newcommand{\boldvectcommand}[1]{\boldsymbol{#1}}}
142 }
143 \ifbool{arrowvect}{
144   \CustomizeMathJax{\newcommand{\vect}[1]{\overrightarrow{#1}}}
145 }{
146   \CustomizeMathJax{\newcommand{\vect}[1]{\boldvectcommand{#1}}}
147 }
148 \ifdefstring{\probastyle}{\mathbb}{
149   \CustomizeMathJax{\newcommand{\probastyle}[1]{\mathbb{#1}}}
150 }{
151   \CustomizeMathJax{\newcommand{\probastyle}[1]{\mathrm{#1}}}
152 }
153 \ifdefstring{\mathset}{\mathbb}{

```

```

154 \CustomizeMathJax{\newcommand{\mathset}[1]{\mathbb{#1}}}
155 }{
156 \CustomizeMathJax{\newcommand{\mathset}[1]{\mathbf{#1}}}
157 }
158 }
159 \end{warpMathJax}

```

File 261 **lwarp-morefloats.sty**

§ 363 Package **morefloats**

Pkg morefloats morefloats is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{morefloats}[2015/07/22]

File 262 **lwarp-moreverb.sty**

§ 364 Package **moreverb**

(Emulates or patches code by ROBIN FAIRBAIRNS.)

Pkg moreverb moreverb is supported with some patches.

for HTML output:

```

1 \begin{warpHTML}

2 \LWR@ProvidesPackagePass{moreverb}[2008/06/03]

3 \BeforeBeginEnvironment{verbatimtab}{%
4 \LWR@forcenewpage
5 \LWR@atbeginverbatim{3}{Verbatim}%
6 }
7 \AfterEndEnvironment{verbatimtab}{%
8 \LWR@afterrendverbatim{1}%
9 }
10
11
12 \LetLtxMacro\LWRMV@orig@verbatimtabinput\@verbatimtabinput
13
14 \renewcommand{\@verbatimtabinput}[2][]{%
15 \LWR@forcenewpage
16 \LWR@atbeginverbatim{3}{Verbatim}%
17 \LWRMV@orig@verbatimtabinput[#1]{#2}%
18 \LWR@afterrendverbatim{1}%
19 }
20
21 \BeforeBeginEnvironment{listing}{%
22 \LWR@forcenewpage
23 \LWR@atbeginverbatim{3}{programlisting}%
24 }
25

```

```

26 \AfterEndEnvironment{listing}{%
27 \LWR@afterendverbatim{1}%
28 }
29
30 \BeforeBeginEnvironment{listingcont}{%
31 \LWR@forcenewpage
32 \LWR@atbeginverbatim{3}{programlisting}%
33 }
34
35 \AfterEndEnvironment{listingcont}{%
36 \LWR@afterendverbatim{1}%
37 }

38 \LetLtxMacro\LWRMV@listinginput\@listinginput
39
40 \renewcommand{\@listinginput}[3][]{
41 \LWR@forcenewpage
42 \LWR@atbeginverbatim{3}{programlisting}%
43 \LWRMV@listinginput[#1]{#2}{#3}%
44 \LWR@afterendverbatim{1}%
45 }
46
47
48 \renewenvironment*{boxedverbatim}
49 {
50 \LWR@forcenewpage
51 \LWR@atbeginverbatim{3}{boxedverbatim}%
52 \verbatim%
53 }
54 {
55 \endverbatim%
56 \LWR@afterendverbatim{1}%
57 }

58 \end{warpHTML}

```

File 263 **lwarp-movie15.sty**

§ 365 Package **movie15**

Pkg movie15 movie15 is emulated.

The packages multimedia, movie15, and media9 are supported.

HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For `media9`, a multimedia object is inserted for each `addressource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each HTML multimedia object includes the poster text, except for `<embed>` objects. For `movie15`, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

`media9 \addmediapath` is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each `<audio>` and `<video>` object.

`media9` slideshows are not supported.

`\hyperlinkmovie`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a YOUTUBE™ video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

for HTML output:

```

1 \LWR@ProvidesPackageDrop{movie15}[2012/05/16]
2 \LWR@origRequirePackage{lwarp-common-multimedia}
3
4 \RequirePackage{xkeyval}
5
6 \newcommand*\LWR@moviefifteen@text{}
7
8 \define@key{LWR@moviefifteen}{text}{\renewcommand{\LWR@moviefifteen@text}{#1}}
9
10 \newcommand*\LWR@includemovieb}[4][[]]{%
11   \renewcommand{\LWR@moviefifteen@text}{(multimedia)}
12   \setkeys*{LWR@moviefifteen}{#1}%
13   \LWR@multimediab[#1,width=#2,height=#3]{\LWR@moviefifteen@text}{#4}%
14 }
15
16 \newrobustcmd*\includemovie){%
17   \begingroup%
18   \LWR@linkmediacatcodes%
19   \LWR@includemovieb%
20 }
21
22
23 \newcommand*\movieref}[3][[]]{
24
25 \LetLtxMacro\movie\LWR@multimedia
26 % \LetLtxMacro\sound\LWR@multimedia% not in media15
27

```

```
28 \newcommand{\hyperlinkmovie}[3][[]]{}
```

File 264 **lwarp-mparhack.sty**

§ 366 Package **mparhack**

Pkg mparhack mparhack is ignored.

for HTML output: Discard all options for lwarp-mparhack:

```
1 \LWR@ProvidesPackageDrop{mparhack}[2005/04/17]
```

File 265 **lwarp-multicap.sty**

§ 367 Package **multicap**

Pkg multicap multicap is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{multicap}[2002/05/04]

```
2 \newcommand*{\mfcaption}{\captionof{figure}}
3 \newcommand*{\mtcaption}{\captionof{table}}
4 \newcounter{mcapsize}
5 \newcounter{mcapskip}
6 \newlength{\abvmcapskip}
7 \newlength{\blwmcapskip}
```

File 266 **lwarp-multicol.sty**

§ 368 Package **multicol**

(Emulates or patches code by FRANK MITTELBACH.)

Pkg multicol multicol is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{multicol}[2018/12/27]

Multicols are converted into a 1–3 column display, browser-supported.

The optional multicols heading is placed inside a <div> of class multicolsheading.

The content is placed inside a <div> of class multicols.

```
2 \begin{warpHTML}
```

Env multicols * {<numcols>} [<heading>]

```
3 \NewDocumentEnvironment{multicols}{s m o}
```

HTML <div> class to contain everything:

```
4 {
5   \LWR@forcenewpage
6   \BlockClass{multicols}
```

Optional HTML <div> class for the heading:

```
7   \IfValueT{#3}{\begin{BlockClass}{multicolsheading}#3\end{BlockClass}}%
```

Change \linewidth to compensate for expected size:

```
8   \setlength{\linewidth}{\linewidth/#2}
```

Locally force any minipages to be fullwidth:

```
9   \booltrue{LWR@forceminipagefullwidth}
10 }
```

When done with the environment, close the <div>:

```
11 {\endBlockClass}
```

Emulated null functions which are not used in HTML:

```
12 \newcommand*\columnbreak{}
13 \newcommand*\RLmulticolcolumns{}
14 \newcommand*\LRmulticolcolumns{}
15
16 \newlength{\premulticols}
17 \newlength{\postmulticols}
18 \newlength{\multicolsep}
19 \newlength{\multicolbaselineskip}
20 \newlength{\multicoltolerance}
21 \newlength{\multicolpretolerance}
22 \newcommand*\columnseprulecolor{\normalcolor}
23 \newcounter{columnbadness}
24 \newcounter{finalcolumnbadness}
25 \newcounter{collectmore}
26 \newcounter{unbalance}
27 \newlength{\multicolovershoot}
28 \newlength{\multicolundershoot}

29 \NewDocumentCommand{\docolaction}{s o m m}{%
30   \IfValueTF{#2}{#2}{#3}%
31 }

32 \end{warpHTML}
```

File 267 **lwarp-multicolrule.sty**

§ 369 Package **multicolrule**

Pkg multicolrule multicolrule is ignored.

for HTML output:

```

1 \RequirePackage{multicol}
2
3 \LWR@ProvidesPackageDrop{multicolrule}[2019/01/01]

4 \newcommand*{\SetMCRule}[1]{ }
5 \NewDocumentCommand{\DeclareMCRulePattern}{m m}{ }

```

File 268 **lwarp-multimedia.sty**

§ 370 Package **multimedia**

Pkg multimedia multimedia is emulated.

The packages multimedia, movie15, and media9 are supported.

HTML5 <audio> and <video> objects are created for .mp3 and .mp4 files.

HTML5 <embed> objects are created for http and ftp links.

\href links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For media9, a multimedia object is inserted for each addressource=, as well as each flashvars source= and src=. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside \warpprintonly or the warpprint environment.

Each HTML multimedia object includes the poster text, except for <embed> objects. For movie15, the text option is supported to specify the poster text.

The width, height, and totalheight options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 \addmediapath is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each <audio> and <video> object.

media9 slideshows are not supported.

\hyperlinkmovie, \movieref, and \mediabutton are not supported.

3D objects are not supported.

If using a YOUTUBE™ video, use an “embedded” URL with .../embed/... instead of .../v/...

for HTML output: 1 \LWR@ProvidesPackageDrop{multimedia}[2012/05/02]

```

2 \LWR@origRequirePackage{lwarp-common-multimedia}
3
4 \LetLtxMacro\movie\LWR@multimedia
5 \LetLtxMacro\sound\LWR@multimedia
6
7 \newcommand{\hyperlinkmovie}[3][[]]{

```

File 269 **lwarp-multiobjective.sty**

§ 371 Package **multiobjective**

(Emulates or patches code by LUIS MARTÍ.)

Pkg multiobjective **multiobjective** is used as-is for SVG math, and is emulated for MATHJAX.

for HTML output:

```

1 \LWR@ProvidesPackagePass{multiobjective}[2008/08/19]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\dom}{\prec}}
4 \CustomizeMathJax{\newcommand{\negdom}{\not\prec}}
5 \CustomizeMathJax{\newcommand{\weakdom}{\preccurlyeq}}
6 \CustomizeMathJax{\newcommand{\negweakdom}{\not\preccurlyeq}}
7 \CustomizeMathJax{\newcommand{\strictdom}{\prec!!!\prec}}
8 \CustomizeMathJax{\newcommand{\negstrictdom}{\not\prec!!!\prec}}
9 \CustomizeMathJax{\newcommand{\multepsilondom}{\preccurlyeq_{\epsilon\cdot}}}
10 \CustomizeMathJax{\newcommand{\addiepsilondom}{\preccurlyeq_{\epsilon +}}}
11 \CustomizeMathJax{\newcommand{\better}{\triangleleft}}
12 \CustomizeMathJax{\def\vec#1{%
13   \mathchoice
14     {{\displaystyle\boldsymbol{#1}}}%
15     {{\textstyle\boldsymbol{#1}}}%
16     {{\scriptstyle\boldsymbol{#1}}}%
17     {{\scriptscriptstyle\boldsymbol{#1}}}%
18 }}
19
20 \CustomizeMathJax{\newcommand{\set}[1]{%
21   \mathchoice
22     {{\displaystyle\mathcal{#1}}}%
23     {{\textstyle\mathcal{#1}}}%
24     {{\scriptstyle\mathcal{#1}}}%
25     {{\scriptscriptstyle\mathcal{#1}}}%
26 }}
27 \CustomizeMathJax{\def\argmax{\mathop{\{\mathrm{arg}\}}\, \max}}
28 \CustomizeMathJax{\def\argmin{\mathop{\{\mathrm{arg}\}}\, \min}
29 }}
30 \end{warpMathJax}

```

File 270 **lwarp-multirow.sty**

§ 372 Package **multirow**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

Pkg multirow **multirow** is emulated during HTML output, and used as-is while inside a lateximage.

vposn • Note that recent versions of **multirow** include a new optional **vposn** argument.

multirow cells • For **multirow**, insert `\mrowcell` into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output. An error is generated if this is missed.

```
... & \multirow{2}{.5in}{text} & ...
... & \mrowcell & ...
```

colored cells • The **multirow** documentation regarding colored cells recommends using a negative number of rows. This will not work with **lwarp**, so `\warpprintonly` and `\warpHTMLonly` must be used to make versions for print and HTML.

with `\multicolumn` • See section 372.2 for `\multicolumnrow`.

⚠ `\multicolumn & \multirow` **lwarp** does not support directly combining `\multicolumn` and `\multirow`. Use `\multicolumnrow` instead. To create a 2 column, 3 row cell:

```
\multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text}
```

The two arguments for `\multicolumn` come first, followed by the five arguments for `\multirow`, many of which are optional, followed by the contents.

⚠ **skipped cells** As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped. An error is generated if this is missed.

```
... & \multicolumnrow{2}{c}[c]{3}[0]{1in}[0pt]{Text} & ...
... & \mcolrowcell & \mcolrowcell & ...
... & \mcolrowcell & \mcolrowcell & ...
```

⚠ **MathJax** • **MATHJAX** does not support **multirow**, so it is emulated to only print its text on the first row. `\multirow` works as expected in text tabulars or SVG math.

In a lateximage, `\LWR@restoreorigformatting` restores the original print-mode versions.

See section 72.25 for the print-mode versions.

for HTML output: Remove the placeholder macro which was used if **multirow** was not loaded:

```
1 \LetLtxMacro\multirow\relax
```

```
2 \LWR@ProvidesPackagePass{multirow}[2018/08/03]
```

`\LWR@multirowborder` Set to left or right to create a thick border for the cell, for use by `bigdelim`:

```
3 \newcommand{\LWR@multirowborder}{}%
```

§ 372.1 Multirow

```
\multirow [vpos] [numrows] [bigstruts] [width] [fixup] [text]
```

```
4 \NewDocumentCommand{\LWR@HTML@multirow}{O{c} m o m o +m}%
```

```
5 {%
```

```
6 \LWR@traceinfo{*** LWR@HTML@multirow #1 #2 #4}%
```

```
7 \booltrue{LWR@usedmultirow}%
```

```
8 \LWR@maybenewtablerow%
```

```
9 \LWR@tabularleftedge%
```

Print the start of a new table data cell:

```
10 \LWR@htmltag{td rowspan="#2" %
```

A class adds the column spec and the rule:

```
11 class="td%
```

Append this column's spec:

```
12 \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.

```
13 \LWR@addcmidruletrim%
```

```
14 \LWR@addleftmostbartag%
```

```
15 \LWR@printbartag{\arabic{LWR@tableLaTeXcolindex}}%
```

```
16 "%
```

```
17 \LWR@tdstartstyles%
```

The vertical alignment, if given:

```
18 \ifstrequal{#1}{c}{\LWR@tdaddstyle\LWR@print@box{vertical-align:middle}}{}%
```

```
19 \ifstrequal{#1}{b}{\LWR@tdaddstyle\LWR@print@box{vertical-align:bottom}}{}%
```

```
20 \ifstrequal{#1}{t}{\LWR@tdaddstyle\LWR@print@box{vertical-align:top}}{}%
```

The left/right border, if given:

```
21 \ifdefvoid{\LWR@multirowborder}{}{}%
```

```

22 \LWR@tdaddstyle%
23 \LWR@print@mbox{border-\LWR@multirowborder:} 2px dotted black ; %
24 \LWR@print@mbox{padding-\LWR@multirowborder:} 2px%
25 }%

```

Additional style elements:

```

26 \LWR@addcmidrulewidth%
27 \LWR@addcdashline%
28 \LWR@addtabularrulecolors%
29 \LWR@tdendstyles%
30 }%

```

The column's < spec:

```

31 \LWR@getexparray{\LWR@colbeforespec}{\arabic{\LWR@tableLaTeXcolindex}}%

```

While printing the text, redefine `\` to generate a new line

```

32 \begingroup\LetLtxMacro{\}{\LWR@endofline}#6\endgroup%
33 \LWR@stoppars%
34 \boolfalse{\LWR@intabularmetadata}%
35 \renewcommand{\LWR@multirowborder}{}%
36 \LWR@traceinfo{*** LWR@HTML@multirow done}%
37 }%
38
39 \LWR@formatted{multirow}

```

§ 372.2 Combined multicolumn and multirow

```

\multicolumnrow {<1:cols>} {<2:halign>} [<3:vpos>] {<4:numrows>} [<5:bigstruts>] {<6:width>} [<7:fixup>]
{<8:text>}

```

`\ifpackageloaded{multirow}` determines if v2.0 or later of `multirow` was used, which included the `\ProvidesPackage` macro.

The HTML version follows.

`\AtBeginDocument` because the print version had to see if `multirow` was loaded before determining how to define `\LWR@print@multicolumnrow`.

```

40 \AtBeginDocument{
41
42 \NewExpandableDocumentCommand{\LWR@HTML@multicolumnrow}{m m O{} m O{} m O{} +m}{%
43 \booltrue{\LWR@usedmultirow}%

```

Figure out how many extra HTML columns to add for @ and ! columns:

```

44 \LWR@tabularhtmlcolumns{\arabic{\LWR@tableLaTeXcolindex}}{#1}

```

Create the multicolumn/multirow tag, temporarily redefining the end of line. (Using a group caused problems with a nested `tabular`.)

```

45 \LetLtxMacro{\}\{LWR@endofline}%
46 \LWR@domulticolumn[#3][#4]{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#8}%
47 \LetLtxMacro{\}\{LWR@tabularendofline}%

```

Move to the next L^AT_EX column:

```

48 \defaddtcounter{LWR@tableLaTeXcolindex}{#1}%
49 \defaddtcounter{LWR@tableLaTeXcolindex}{-1}%

```

Skip any trailing @ or ! columns for this cell:

```

50 \booltrue{LWR@skipatbang}%
51 }
52
53 \LWR@expandableformatted{multicolumnrow}
54
55 }% \AtBeginDocument

```

For MATHJAX. Only the text is used. All other parameters are ignored.

```

56 \begin{warpMathJax}
57 % \multirow[vpos]{num}[bigstruts]{width}[vmove]{text}
58 \CustomizeMathJax{\newcommand{LWRsubmultirow}[2][]{#2}}
59 \CustomizeMathJax{\newcommand{LWRmultirow}[2][]{LWRsubmultirow}}
60 \CustomizeMathJax{\newcommand{multirow}[2][]{LWRmultirow}}
61 %
62 \CustomizeMathJax{\newcommand{mrowcell}{}{}}
63 \CustomizeMathJax{\newcommand{mcolrowcell}{}{}}
64 \CustomizeMathJax{\newcommand{STneed}[1]{}{}}
65 \end{warpMathJax}

```

File 271 **lwarp-multitoc.sty**

§ 373 Package **multitoc**

Pkg multitoc multitoc is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{multitoc}[1999/06/08]

```

2 \newcommand{\multicolumntoc}{2}
3 \newcommand{\multicolumnlot}{2}
4 \newcommand{\multicolumnlof}{2}
5 \newcommand*{\immediateaddtocontents}[2]{}

```

File 272 **lwarp-musicography.sty**

§ 374 Package **musicography**

(Emulates or patches code by ANDREW A. CASHNER.)

Pkg musicography musicography is patched for use by lwarp.

Images are used for the meter symbols and fingered bass, since the HTML fonts tend not to be the correct size and HTML cannot stack items. The HTML alt tag copies C and 3/2, etc. Hashes are used for the meter images, which are then reused as necessary.



Note that browser support for musical symbols may be buggy. ALT text and copy/paste into a text editor work well.

for HTML output:

```

1 \LWR@ProvidesPackagePass{musicography}[2019/05/28]

2 \NewDocumentCommand{\LWR@HTML@musSymbol}{ O{\musFont} m m m m }{%
3 \begin{lateximage}%
4 {#1\kern#2\raisebox{#3}{#5}\kern#4}%
5 \end{lateximage}%
6 }
7
8 \LWR@formatted{musSymbol}
9
10 \NewDocumentCommand{\LWR@HTML@musStemmedNote}{ m }{%
11 \begin{lateximage}%
12 \musSymbol{0.05em}{0.5ex}{0.2em}{#1\musStem}%
13 \end{lateximage}%
14 }
15
16 \LWR@formatted{musStemmedNote}
17
18 \NewDocumentCommand{\LWR@HTML@musFlaggedNote}{ m m }{%
19 \begin{lateximage}%
20 \musSymbol{0.05em}{0.5ex}{0pt}{#1\musStem}%
21 \musSymbol{0pt}{0pt}{0.9em}{#2}%
22 \end{lateximage}%
23 }
24
25 \LWR@formatted{musFlaggedNote}
26
27 \NewDocumentCommand{\LWR@HTML@musDottedNote}{ m }{%
28 \begin{lateximage}%
29 #1\musDot%
30 \end{lateximage}%
31 }
32
33 \LWR@formatted{musDottedNote}
34
35 \NewDocumentCommand{\LWR@HTML@musMeter}{ m m }{%
36 \begin{lateximage}*[#1/#2][#1#2]*%
37 \musStack{#1 #2}\kern0.05em%
38 \end{lateximage}%
39 }
40
41 \LWR@formatted{musMeter}
42
43 \NewDocumentCommand{\LWR@HTML@meterCplus}{ m }{%
44 \begin{lateximage}*[C#1]*%
45 \meterC{\}\kern-0.7pt#1%

```

```

46 \end{lateximage}%
47 }
48
49 \LWR@formatted{meterCplus}
50
51 \NewDocumentCommand{\LWR@HTML@meterC}{}{%
52 \begin{lateximage}*[C]*%
53 \musSymbolMeter{\symbol{83}}%
54 \end{lateximage}%
55 }
56
57 \LWR@formatted{meterC}
58
59 \NewDocumentCommand{\LWR@HTML@meterCutC}{}{%
60 \begin{lateximage}*[C]*%
61 \musSymbolMeter{\symbol{82}}%
62 \end{lateximage}%
63 }
64
65 \LWR@formatted{meterCutC}
66
67 \NewDocumentCommand{\LWR@HTML@meterCThreeTwo}{}{%
68 \begin{lateximage}*[C3/2]*%
69 \meterCplus{\musStack{3 2}}%
70 \end{lateximage}%
71 }
72
73 \LWR@formatted{meterCThreeTwo}
74
75 \NewDocumentCommand{\LWR@HTML@meterO}{}{\HTMLUnicode{25EF}}
76
77 \LWR@formatted{meterO}
78
79 \newcommand{\LWR@null@noFig}[1][{}]{%
80
81 \NewDocumentCommand{\LWR@HTML@musFig}{ m }{%
82 \begin{lateximage}*[%
83   {% ALT text for copy/paste
84     \LetLtxMacro\noFig\LWR@null@noFig%
85     \LetLtxMacro\musSharp\LWR@HTML@musSharp%
86     \LetLtxMacro\musDoubleSharp\LWR@HTML@musDoubleSharp%
87     \LetLtxMacro\musFlat\LWR@HTML@musFlat%
88     \LetLtxMacro\musDoubleFlat\LWR@HTML@musDoubleFlat%
89     \LetLtxMacro\musNatural\LWR@HTML@musNatural%
90     {#1}% braces here because \noFig uses []
91   ]%
92 ]*%
93   \musStack[\musFigFont]{#1}%
94 \end{lateximage}%
95 }
96
97 \LWR@formatted{musFig}
98
99 \NewDocumentCommand{\LWR@HTML@musFlat}      {}{\HTMLUnicode{266D}}
100 \NewDocumentCommand{\LWR@HTML@musDoubleFlat} {}{\HTMLUnicode{1D12B}}

```

```
101 \NewDocumentCommand{\LWR@HTML@musSharp}      {}{\HTMLUnicode{266F}}
102 \NewDocumentCommand{\LWR@HTML@musDoubleSharp}{\HTMLUnicode{1D12A}}
103 \NewDocumentCommand{\LWR@HTML@musNatural}      {}{\HTMLUnicode{266E}}
104
105 \LWR@formatted{musFlat}
106 \LWR@formatted{musDoubleFlat}
107 \LWR@formatted{musSharp}
108 \LWR@formatted{musDoubleSharp}
109 \LWR@formatted{musNatural}
110
111 \NewDocumentCommand{\LWR@HTML@musWhole}        {}{\HTMLUnicode{1D15D}}
112 \NewDocumentCommand{\LWR@HTML@musHalf}        {}{\HTMLUnicode{1D15E}}
113 \NewDocumentCommand{\LWR@HTML@musQuarter}     {}{\HTMLUnicode{1D15F}}
114 \NewDocumentCommand{\LWR@HTML@musEighth}     {}{\HTMLUnicode{1D160}}
115 \NewDocumentCommand{\LWR@HTML@musSixteenth}  {}{\HTMLUnicode{1D161}}
116 \NewDocumentCommand{\LWR@HTML@musThirtySecond} {}{\HTMLUnicode{1D162}}
117 \NewDocumentCommand{\LWR@HTML@musSixtyFourth} {}{\HTMLUnicode{1D163}}
118
119 \LWR@formatted{musWhole}
120 \LWR@formatted{musHalf}
121 \LWR@formatted{musQuarter}
122 \LWR@formatted{musEighth}
123 \LWR@formatted{musSixteenth}
124 \LWR@formatted{musThirtySecond}
125 \LWR@formatted{musSixtyFourth}
126
127 \NewDocumentCommand{\LWR@HTML@musWholeDotted}{}
128   {\HTMLUnicode{1D15D}\HTMLUnicode{1D16D}}
129 \NewDocumentCommand{\LWR@HTML@musHalfDotted}{}
130   {\HTMLUnicode{1D15E}\HTMLUnicode{1D16D}}
131 \NewDocumentCommand{\LWR@HTML@musQuarterDotted}{}
132   {\HTMLUnicode{1D15F}\HTMLUnicode{1D16D}}
133 \NewDocumentCommand{\LWR@HTML@musEighthDotted}{}
134   {\HTMLUnicode{1D160}\HTMLUnicode{1D16D}}
135 \NewDocumentCommand{\LWR@HTML@musSixteenthDotted}{}
136   {\HTMLUnicode{1D161}\HTMLUnicode{1D16D}}
137 \NewDocumentCommand{\LWR@HTML@musThirtySecondDotted}{}
138   {\HTMLUnicode{1D162}\HTMLUnicode{1D16D}}
139 \NewDocumentCommand{\LWR@HTML@musSixtyFourthDotted}{}
140   {\HTMLUnicode{1D163}\HTMLUnicode{1D16D}}
141
142 \LWR@formatted{musWholeDotted}
143 \LWR@formatted{musHalfDotted}
144 \LWR@formatted{musQuarterDotted}
145 \LWR@formatted{musEighthDotted}
146 \LWR@formatted{musSixteenthDotted}
147 \LWR@formatted{musThirtySecondDotted}
148 \LWR@formatted{musSixtyFourthDotted}
```

File 273 **lwarp-nameauth.sty**

§ 375 Package **nameauth**

(Emulates or patches code by CHARLES P. SCHAUM.)

Pkg nameauth nameauth is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{nameauth}[2017/03/22]

lwarp formatting is inserted in the following.

```

2 \renewcommand*\@nameauth@Hook[1]
3 {%
4   \if@nameauth@Lock
5     \@nameauth@InHooktrue%
6     \protected@edef\test{#1}%
7     \expandafter\@nameauth@TestDot\expandafter{\test}%
8     \if@nameauth@InAKA
9       \if@nameauth@ALwaysFormat
10        \@nameauth@FirstFormattrue%
11      \else
12        \unless\if@nameauth@AKAFormat
13          \@nameauth@FirstFormatfalse\fi
14      \fi
15    \if@nameauth@MainFormat
16      \if@nameauth@FirstFormat
17        \bgroup\NamesFormat{%
18          \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%   lwarp
19        }\egroup%
20      \else
21        \bgroup\MainNameHook{%
22          \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%   lwarp
23        }\egroup%
24      \fi
25    \else
26      \if@nameauth@FirstFormat
27        \bgroup\FrontNamesFormat{%
28          \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%   lwarp
29        }\egroup%
30      \else
31        \bgroup\FrontNameHook{%
32          \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%   lwarp
33        }\egroup%
34      \fi
35    \fi
36  \else
37    \if@nameauth@ALwaysFormat
38      \@nameauth@FirstFormattrue%
39    \fi
40    \if@nameauth@MainFormat

```

```

41     \if@nameauth@FirstFormat
42     \bgroup\NamesFormat{%
43         \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%   lwarp
44     }\egroup%
45     \else
46     \bgroup\MainNameHook{%
47         \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%   lwarp
48     }\egroup%
49     \fi
50 \else
51     \if@nameauth@FirstFormat
52     \bgroup\FrontNamesFormat{%
53         \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%   lwarp
54     }\egroup%
55     \else
56     \bgroup\FrontNameHook{%
57         \LWR@textcurrentcolor{\LWR@textcurrentfont{#1}}%   lwarp
58     }\egroup%
59     \fi
60     \fi
61 \fi
62 \@nameauth@FirstFormatfalse%
63 \@nameauth@InHookfalse%
64 \fi
65 }

```

File 274 **lwarp-nameref.sty**

§ 376 Package **nameref**

Pkg nameref **nameref** is emulated by **lwarp**.

for HTML output: Discard all options for **lwarp-nameref**:

```

1 \PackageInfo{lwarp}{%
2 Using the lwarp HTML version of package 'nameref',\MessageBreak
3 and discarding options.\MessageBreak
4 (Not using \protect\ProvidesPackage, so that other packages\MessageBreak
5 do not attempt to patch lwarp's version of 'nameref'.)\MessageBreak
6 }
7 \DeclareOption*{}
8 \ProcessOptions\relax

```

File 275 **lwarp-natbib.sty**

§ 377 Package **natbib**

(Emulates or patches code by PATRICK W. DALY.)

Pkg natbib **natbib** is patched for use by **lwarp**.

for HTML output: 1 \LWR@ProvidesPackagePass{natbib}[2010/09/13]

Replace math < and > with \textless and \textgreater:

A macro to compare:

```
2 \newcommand{\LWRNB@NAT@open}{<}
```

To patch \NAT@open and \NAT@close

```
3 \newcommand{\LWRNB@patchnatbibopenclose}{
4 \ifdefstrequal{\NAT@open}{\LWRNB@NAT@open}
5 {
6   \renewcommand{\NAT@open}{\textless}
7   \renewcommand{\NAT@close}{\textgreater}
8 }{ }
9 }
```

Do it now in case angle was selected as an option:

```
10 \LWRNB@patchnatbibopenclose
```

Also patch \setcitestyle to patch after settings are made:

```
11 \let\LWRNB@origsetcitestyle\setcitestyle
12
13 \renewcommand{\setcitestyle}[1]{%
14 \LWRNB@origsetcitestyle{#1}%
15 \LWRNB@patchnatbibopenclose%
16 }
```

File 276 **lwarp-nccfancyhdr.sty**

§ 378 Package **nccfancyhdr**

(Emulates or patches code by ALEXANDER I. ROZHENKO.)

Pkg nccfancyhdr **nccfancyhdr is ignored.**

for HTML output: 1 \LWR@ProvidesPackageDrop{nccfancyhdr}[2004/12/07]

```
2 \newcommand*{\headrulewidth}{}
3 \newcommand*{\footrulewidth}{}
4 \newcommand{\headstrutheight}{}
5 \newcommand{\footstrutheight}{}
6 \newcommand*{\headrule}{}
7 \newcommand*{\footrule}{}
8
9 \newdimen\headwidth
10 \newcommand*{\extendedheaders}{}
11 \newcommand*{\normalheaders}{}

```

```

12
13 \newcommand*\fancyhead}[2][{}
14 \newcommand*\fancyfoot}[2][{}
15 \newcommand*\fancyhf}[2][{}
16 \newcommand*\fancypagestyle}[2]{
17 \newcommand*\lhead}[2][{}
18 \newcommand*\chead}[2][{}
19 \newcommand*\rhead}[2][{}
20 \newcommand*\lfoot}[2][{}
21 \newcommand*\cfoot}[2][{}
22 \newcommand*\rfoot}[2][{}
23
24 \newcommand{\nouppercase}[1]{#1}
25
26 \NewDocumentCommand{\fancycenter}{o o m m m}{
27
28 \NewDocumentCommand{\newpagestyle}{m o m}{
29
30 \newcommand*\iffloatpage}[2]{#2}
31 \newcommand*\ifftopfloat}[2]{#2}
32 \newcommand*\iffbotfloat}[2]{#2}

```

File 277 **lwarp-nccfoots.sty**

§ 379 Package **nccfoots**

(Emulates or patches code by ALEXANDER I. ROZHENKO.)

Pkg nccfoots nccfoots is used as-is, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{nccfoots}[2005/02/03]



For MATHJAX. There is no way to test for an empty argument, so the mark is not automatically duplicated.

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\Footnotemark}[1]{{}^{\mathrm{#1}}}}
4 \CustomizeMathJax{\newcommand{\Footnote}[2]{\Footnotemark{#1}}}
5 \end{warpMathJax}

```

File 278 **lwarp-nccmath.sty**

§ 380 Package **nccmath**

(Emulates or patches code by ALEXANDER I. ROZHENKO.)

Pkg nccmath nccmath is patched for use by lwarp, and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{nccmath}[2006/01/20]

```

2 \let\LWR@origeqnarray\eqnarray
3 \let\LWR@origendeqnarray\endeqnarray
4
5 \csletcs{LWR@origeqnarraystar}{eqnarray*}
6 \csletcs{LWR@origendeqnarraystar}{endeqnarray*}
7
8 \RenewEnviron{eqnarray}
9 {%
10
11     \LWR@eqnarrayfactor
12
13 }
14
15 \RenewEnviron{eqnarray*}
16 {%
17
18     \begingroup
19     \csletcs{LWR@origeqnarray}{LWR@origeqnarraystar}
20     \csletcs{LWR@origendeqnarray}{LWR@origendeqnarraystar}
21     \boolfalse{LWR@numbereqnarray}
22     \LWR@eqnarrayfactor
23     \endgroup
24
25 }
26
27 \def\eqs{%
28     \@ifstar\LWR@nccmath@eqsstar\LWR@nccmath@eqs%
29 }
30 \newcommand*{\LWR@nccmath@eqsstar}[2][\begin{eqnarray*}#2\end{eqnarray*}]
31 \newcommand*{\LWR@nccmath@eqs}[2][\begin{eqnarray}#2\end{eqnarray}]
32
33 \begin{warpMathJax}

34 \CustomizeMathJax{\renewcommand{\intertext}[2][\text{#2}\notag \\\}}

35 \CustomizeMathJax{\newenvironment{fleqn}[1][\]}
36 \CustomizeMathJax{\newenvironment{ceqn}[\]}
37 \CustomizeMathJax{\newenvironment{darray}[2][c]{\begin{array}[#1][#2]{\end{array}}}}
38 \CustomizeMathJax{\newcommand{\dmulticolumn}[3][#3]}
39 \CustomizeMathJax{\newcommand{\nr}{\[\.5ex]}}
40 \CustomizeMathJax{\newcommand{\mrel}[1]{\begin{aligned}#1\end{aligned}}}
41 \CustomizeMathJax{\newcommand{\underrel}[2][\#1_{\#2}}
42 \CustomizeMathJax{\newcommand{\medmath}[1][\#1]}
43 \CustomizeMathJax{\newcommand{\medop}[1][\#1]}
44 \CustomizeMathJax{\newcommand{\medint}[1][\#1]}
45 \CustomizeMathJax{\newcommand{\medintcorr}[1][\#1]}
46 \CustomizeMathJax{\newcommand{\mfrac}[2][\frac{\#1}{\#2}}
47 \CustomizeMathJax{\newcommand{\mbinom}[2][\binom{\#1}{\#2}}
48 \CustomizeMathJax{\newenvironment{mmatrix}{\begin{matrix}}{\end{matrix}}}
49 \end{warpMathJax}

```

File 279 **lwarp-needspace.sty**

§ 381 Package **needspace**

(Emulates or patches code by PETER WILSON.)

Pkg needspace needspace is ignored.

for HTML output: Discard all options for lwarp-needspace:

```
1 \LWR@ProvidesPackageDrop{needspace}[2010/09/12]
2
3 \DeclareDocumentCommand{\needspace}{m}{}
4 \DeclareDocumentCommand{\Needspace}{s m}{}

```

File 280 **lwarp-nextpage.sty**

§ 382 Package **nextpage**

(Emulates or patches code by PETER WILSON.)

Pkg nextpage nextpage is ignored.

for HTML output: Discard all options for lwarp-nextpage.

```
1 \LWR@ProvidesPackageDrop{nextpage}[2009/09/03]
2
2 \DeclareDocumentCommand{\cleartoevenpage}{o}{}
3 \DeclareDocumentCommand{\movetoevenpage}{o}{}
4 \DeclareDocumentCommand{\cleartooddpage}{o}{}
5 \DeclareDocumentCommand{\movetooddpage}{o}{}

```

File 281 **lwarp-nfssex-cfr.sty**

§ 383 Package **nfssex-cfr**

(Emulates or patches code by CLEA F. REES.)

Pkg nfssex-cfr nfssex-cfr is emulated in HTML, and used as-is in print output.

Results depend on the browser's font.

for HTML output: `1 \LWR@ProvidesPackagePass{nfssex-cfr}[2017/03/28]`

Macros which are present in the lwarp core are commented out here.

```

2 \newrobustcmd{\LWR@HTML@lnstyle}{ }
3 \newrobustcmd{\LWR@HTML@osstyle}{\LWR@HTML@scshape}
4 \newrobustcmd{\LWR@HTML@instyle}{ }
5 \newrobustcmd{\LWR@HTML@sustyle}{ }
6 \newrobustcmd{\LWR@HTML@swstyle}{ }
7 \newrobustcmd{\LWR@HTML@pstyle}{ }
8 \newrobustcmd{\LWR@HTML@tistyle}{ }
9 \newrobustcmd{\LWR@HTML@ostyle}{\LWR@HTML@scshape}
10 \newrobustcmd{\LWR@HTML@postyle}{\LWR@HTML@scshape}
11 \newrobustcmd{\LWR@HTML@ltstyle}{ }
12 \newrobustcmd{\LWR@HTML@ofstyle}{ }
13 \newrobustcmd{\LWR@HTML@altstyle}{ }
14 \newrobustcmd{\LWR@HTML@regstyle}{ }
15 \newrobustcmd{\LWR@HTML@embosstyle}{ }
16 \newrobustcmd{\LWR@HTML@ornamentalstyle}{ }
17 \newrobustcmd{\LWR@HTML@qstyle}{ }
18 \newrobustcmd{\LWR@HTML@shstyle}{ }
19 \newrobustcmd{\LWR@HTML@swashstyle}{ }
20 \newrobustcmd{\LWR@HTML@tmstyle}{\renewcommand*{\LWR@f@family}{tt}}
21 \newrobustcmd{\LWR@HTML@tvstyle}{\renewcommand*{\LWR@f@family}{tt}}
22 \newrobustcmd{\LWR@HTML@tstyle}{ }
23 \newrobustcmd{\LWR@HTML@lstyle}{ }
24 \newrobustcmd{\LWR@HTML@tlstyle}{ }
25 \newrobustcmd{\LWR@HTML@plstyle}{ }
26 \newrobustcmd{\LWR@HTML@tostyle}{\LWR@HTML@scshape}
27 % \newrobustcmd{\LWR@HTML@sishape}{ }
28 \newrobustcmd{\LWR@HTML@olshape}{ }
29 \newrobustcmd{\LWR@HTML@scolshape}{ }
30 \newrobustcmd{\LWR@HTML@ushape}{ }
31 \newrobustcmd{\LWR@HTML@scushape}{ }
32 \newrobustcmd{\LWR@HTML@uishape}{\LWR@HTML@itshape}
33 \newrobustcmd{\LWR@HTML@rishape}{ }
34 \newrobustcmd{\LWR@HTML@regwidth}{ }
35 \newrobustcmd{\LWR@HTML@nwidth}{ }
36 \newrobustcmd{\LWR@HTML@cdwidth}{ }
37 \newrobustcmd{\LWR@HTML@ecwidth}{ }
38 \newrobustcmd{\LWR@HTML@ucwidth}{ }
39 \newrobustcmd{\LWR@HTML@etwidth}{ }
40 \newrobustcmd{\LWR@HTML@epwidth}{ }
41 \newrobustcmd{\LWR@HTML@exwidth}{ }
42 \newrobustcmd{\LWR@HTML@uxwidth}{ }
43 \newrobustcmd{\LWR@HTML@mbweight}{\renewcommand*{\LWR@f@series}{md}}
44 \newrobustcmd{\LWR@HTML@dbweight}{\renewcommand*{\LWR@f@series}{db}}
45 \newrobustcmd{\LWR@HTML@sbweight}{\renewcommand*{\LWR@f@series}{sb}}
46 % \newrobustcmd{\LWR@HTML@ebweight}{\renewcommand*{\LWR@f@series}{eb}}
47 \newrobustcmd{\LWR@HTML@ubweight}{\renewcommand*{\LWR@f@series}{ub}}
48 % \newrobustcmd{\LWR@HTML@lgweight}{\renewcommand*{\LWR@f@series}{lg}}
49 \newrobustcmd{\LWR@HTML@elweight}{\renewcommand*{\LWR@f@series}{el}}
50 \newrobustcmd{\LWR@HTML@ulweight}{\renewcommand*{\LWR@f@series}{ul}}
51 % \newrobustcmd{\LWR@HTML@itshape}{ }
52 % \newrobustcmd{\LWR@HTML@scshape}{ }
53 % \newrobustcmd{\LWR@HTML@upshape}{ }
54 \newrobustcmd{\LWR@HTML@dfshape}{ }
55
56 \ifdef{\LWR@HTML@swshape}{ }{% duplicated by fontaxes

```

```
57 \newrobustcmd{\LWR@HTML@swshape}{}
58 }
59
60 \newrobustcmd{\LWR@HTML@ornament}[1]{}
61
62 \LWR@formatted{lnstyle}
63 \LWR@formatted{osstyle}
64 \LWR@formatted{instyle}
65 \LWR@formatted{sustyle}
66 \LWR@formatted{swstyle}
67 \LWR@formatted{pstyle}
68 \LWR@formatted{tistyle}
69 \LWR@formatted{ostyle}
70 \LWR@formatted{postyle}
71 \LWR@formatted{ltstyle}
72 \LWR@formatted{ofstyle}
73 \LWR@formatted{altstyle}
74 \LWR@formatted{regstyle}
75 \LWR@formatted{embossstyle}
76 \LWR@formatted{ornamentalstyle}
77 \LWR@formatted{qtstyle}
78 \LWR@formatted{shstyle}
79 \LWR@formatted{swashstyle}
80 \LWR@formatted{tmstyle}
81 \LWR@formatted{tvstyle}
82 \LWR@formatted{tstyle}
83 \LWR@formatted{lstyle}
84 \LWR@formatted{tlstyle}
85 \LWR@formatted{plstyle}
86 \LWR@formatted{tostyle}
87 % \LWR@formatted{sisshape}
88 \LWR@formatted{olshape}
89 \LWR@formatted{colshape}
90 \LWR@formatted{ushape}
91 \LWR@formatted{scushape}
92 \LWR@formatted{uishape}
93 \LWR@formatted{rishape}
94 \LWR@formatted{regwidth}
95 \LWR@formatted{nwwidth}
96 \LWR@formatted{cdwidth}
97 \LWR@formatted{ecwidth}
98 \LWR@formatted{ucwidth}
99 \LWR@formatted{etwidth}
100 \LWR@formatted{epwidth}
101 \LWR@formatted{exwidth}
102 \LWR@formatted{uxwidth}
103 \LWR@formatted{mbweight}
104 \LWR@formatted{dbweight}
105 \LWR@formatted{sbweight}
106 % \LWR@formatted{ebweight}
107 \LWR@formatted{ubweight}
108 % \LWR@formatted{lgweight}
109 \LWR@formatted{elweight}
110 \LWR@formatted{ulweight}
111 \LWR@formatted{itshape}% adapt to the new print version
```

```
112 \LWR@formatted{scshape}% adapt to the new print version
113 \LWR@formatted{upshape}% adapt to the new print version
114 \LWR@formatted{dfshape}
115
116 \ifdef{\LWR@HTML@swshape}{}{% duplicated by fontaxes
117   \LWR@formatted{swshape}
118 }
119
120 \LWR@formatted{ornament}

121 \FilenameNullify{%
122   \LetLtxMacro\lnstyle\@empty%
123   \LetLtxMacro\osstyle\@empty%
124   \LetLtxMacro\instyle\@empty%
125   \LetLtxMacro\sustyle\@empty%
126   \LetLtxMacro\swstyle\@empty%
127   \LetLtxMacro\pstyle\@empty%
128   \LetLtxMacro\tistyle\@empty%
129   \LetLtxMacro\ostyle\@empty%
130   \LetLtxMacro\postyle\@empty%
131   \LetLtxMacro\ltstyle\@empty%
132   \LetLtxMacro\ofstyle\@empty%
133   \LetLtxMacro\altstyle\@empty%
134   \LetLtxMacro\regstyle\@empty%
135   \LetLtxMacro\embosstyle\@empty%
136   \LetLtxMacro\ornamentalstyle\@empty%
137   \LetLtxMacro\qtstyle\@empty%
138   \LetLtxMacro\shstyle\@empty%
139   \LetLtxMacro\swashstyle\@empty%
140   \LetLtxMacro\tmstyle\@empty%
141   \LetLtxMacro\tvstyle\@empty%
142   \LetLtxMacro\tstyle\@empty%
143   \LetLtxMacro\lstyle\@empty%
144   \LetLtxMacro\lstyle\@empty%
145   \LetLtxMacro\plstyle\@empty%
146   \LetLtxMacro\tostyle\@empty%
147 % \LetLtxMacro\sisshape\@empty%
148   \LetLtxMacro\olshape\@empty%
149   \LetLtxMacro\scolshape\@empty%
150   \LetLtxMacro\ushape\@empty%
151   \LetLtxMacro\scushape\@empty%
152   \LetLtxMacro\uishape\@empty%
153   \LetLtxMacro\rishape\@empty%
154   \LetLtxMacro\regwidth\@empty%
155   \LetLtxMacro\nwidth\@empty%
156   \LetLtxMacro\cdwidth\@empty%
157   \LetLtxMacro\ecwidth\@empty%
158   \LetLtxMacro\ucwidth\@empty%
159   \LetLtxMacro\etwidth\@empty%
160   \LetLtxMacro\epwidth\@empty%
161   \LetLtxMacro\exwidth\@empty%
162   \LetLtxMacro\uxwidth\@empty%
163   \LetLtxMacro\mbweight\@empty%
164   \LetLtxMacro\dbweight\@empty%
165   \LetLtxMacro\sbweight\@empty%
```

```
166 % \LetLtxMacro\ebweight\@empty%
167 \LetLtxMacro\ubweight\@empty%
168 % \LetLtxMacro\lgweight\@empty%
169 \LetLtxMacro\elweight\@empty%
170 \LetLtxMacro\ulweight\@empty%
171 % \LetLtxMacro\itshape\@empty%
172 % \LetLtxMacro\scshape\@empty%
173 % \LetLtxMacro\upshape\@empty%
174 \LetLtxMacro\dfshape\@empty%
175 \LetLtxMacro\swshape\@empty%
176 \LetLtxMacro\ornament\@gobble%
177 }
178
179 \newrobustcmd{\LWR@HTML@textln}[1]{\InlineClass{textln}{#1}}
180 \newrobustcmd{\LWR@HTML@textos}[1]{\textsc{#1}}
181 \newrobustcmd{\LWR@HTML@textin}[1]{#1}
182 \newrobustcmd{\LWR@HTML@textsu}[1]{#1}
183 % \newrobustcmd{\LWR@HTML@textsi}[1]{#1}
184 \newrobustcmd{\LWR@HTML@textdf}[1]{#1}
185
186 \ifdef{\LWR@HTML@swshape}{% duplicated by fontaxes
187 \newrobustcmd{\LWR@HTML@textsw}[1]{#1}
188 }
189
190 \newrobustcmd{\LWR@HTML@textti}[1]{#1}
191 \newrobustcmd{\LWR@HTML@textlt}[1]{#1}
192 \newrobustcmd{\LWR@HTML@textof}[1]{#1}
193 \newrobustcmd{\LWR@HTML@textalt}[1]{#1}
194 \newrobustcmd{\LWR@HTML@textreg}[1]{#1}
195 \newrobustcmd{\LWR@HTML@emboss}[1]{#1}
196 \newrobustcmd{\LWR@HTML@textorn}[1]{#1}
197 \newrobustcmd{\LWR@HTML@textqt}[1]{#1}
198 \newrobustcmd{\LWR@HTML@textsh}[1]{#1}
199 \newrobustcmd{\LWR@HTML@texttm}[1]{\texttt{#1}}
200 \newrobustcmd{\LWR@HTML@texttv}[1]{\texttt{#1}}
201 \newrobustcmd{\LWR@HTML@textl}[1]{\InlineClass{textln}{#1}}
202 \newrobustcmd{\LWR@HTML@texto}[1]{\textsc{#1}}
203 \newrobustcmd{\LWR@HTML@textp}[1]{\InlineClass{textp}{#1}}
204 \newrobustcmd{\LWR@HTML@textt}[1]{\InlineClass{textt}{#1}}
205 \newrobustcmd{\LWR@HTML@textpl}[1]{#1}
206 \newrobustcmd{\LWR@HTML@textpo}[1]{\textsc{#1}}
207 \newrobustcmd{\LWR@HTML@texttl}[1]{\InlineClass{textln}{#1}}
208 \newrobustcmd{\LWR@HTML@textto}[1]{\textsc{#1}}
209 \newrobustcmd{\LWR@HTML@textol}[1]{#1}
210 \newrobustcmd{\LWR@HTML@textswash}[1]{#1}
211 \newrobustcmd{\LWR@HTML@textu}[1]{#1}
212 \newrobustcmd{\LWR@HTML@textscu}[1]{#1}
213 \newrobustcmd{\LWR@HTML@textui}[1]{\LWR@HTML@textit{#1}}
214 \newrobustcmd{\LWR@HTML@textri}[1]{#1}
215 \newrobustcmd{\LWR@HTML@textnw}[1]{#1}
216 \newrobustcmd{\LWR@HTML@textcd}[1]{#1}
217 \newrobustcmd{\LWR@HTML@textec}[1]{#1}
218 \newrobustcmd{\LWR@HTML@textuc}[1]{#1}
219 \newrobustcmd{\LWR@HTML@textet}[1]{#1}
220 \newrobustcmd{\LWR@HTML@textep}[1]{#1}
```

```
221 \newrobustcmd{\LWR@HTML@textex}[1]{#1}
222 \newrobustcmd{\LWR@HTML@textux}[1]{#1}
223 \newrobustcmd{\LWR@HTML@textrw}[1]{#1}
224 \newrobustcmd{\LWR@HTML@textmb}[1]{\LWR@HTML@mbweight\InlineClass{textmb}{#1}}
225 \newrobustcmd{\LWR@HTML@textdb}[1]{\LWR@HTML@dbweight\InlineClass{textdb}{#1}}
226 \newrobustcmd{\LWR@HTML@textsb}[1]{\LWR@HTML@sbweight\InlineClass{textsb}{#1}}
227 % \newrobustcmd{\LWR@HTML@texteb}[1]{#1}
228 \newrobustcmd{\LWR@HTML@textub}[1]{\LWR@HTML@ubweight\InlineClass{textub}{#1}}
229 % \newrobustcmd{\LWR@HTML@textlg}[1]{#1}
230 \newrobustcmd{\LWR@HTML@textel}[1]{\LWR@HTML@elweight\InlineClass{textel}{#1}}
231 \newrobustcmd{\LWR@HTML@textul}[1]{\LWR@HTML@ulweight\InlineClass{textul}{#1}}
232
233 \LWR@formatted{textln}
234 \LWR@formatted{textos}
235 \LWR@formatted{textin}
236 \LWR@formatted{textsu}
237 % \LWR@formatted{textsi}
238 \LWR@formatted{textdf}
239 \LWR@formatted{textsw}
240 \LWR@formatted{textti}
241 \LWR@formatted{textlt}
242 \LWR@formatted{textof}
243 \LWR@formatted{textalt}
244 \LWR@formatted{textreg}
245 \LWR@formatted{emboss}
246 \LWR@formatted{textorn}
247 \LWR@formatted{textqt}
248 \LWR@formatted{textsh}
249 \LWR@formatted{texttm}
250 \LWR@formatted{texttv}
251 \LWR@formatted{textl}
252 \LWR@formatted{texto}
253 \LWR@formatted{textp}
254 \LWR@formatted{textt}
255 \LWR@formatted{textpl}
256 \LWR@formatted{textpo}
257 \LWR@formatted{texttl}
258 \LWR@formatted{textto}
259 \LWR@formatted{textol}
260 \LWR@formatted{textswash}
261 \LWR@formatted{textu}
262 \LWR@formatted{textscu}
263 \LWR@formatted{textui}
264 \LWR@formatted{textri}
265 \LWR@formatted{textnw}
266 \LWR@formatted{textcd}
267 \LWR@formatted{textec}
268 \LWR@formatted{textuc}
269 \LWR@formatted{textet}
270 \LWR@formatted{textep}
271 \LWR@formatted{textex}
272 \LWR@formatted{textux}
273 \LWR@formatted{textrw}
274 \LWR@formatted{textmb}
275 \LWR@formatted{textdb}
```

```
276 \LWR@formatted{textsb}
277 % \LWR@formatted{texteb}
278 \LWR@formatted{textub}
279 % \LWR@formatted{textlg}
280 \LWR@formatted{textel}
281 \LWR@formatted{textul}
282

283 \FilenameNullify{%
284     \LetLtxMacro\textln\@firstofone%
285     \LetLtxMacro\textos\@firstofone%
286     \LetLtxMacro\textin\@firstofone%
287     \LetLtxMacro\textsu\@firstofone%
288 % \LetLtxMacro\textsi\@firstofone%
289     \LetLtxMacro\textdf\@firstofone%
290     \LetLtxMacro\textsw\@firstofone%
291     \LetLtxMacro\textti\@firstofone%
292     \LetLtxMacro\textlt\@firstofone%
293     \LetLtxMacro\textof\@firstofone%
294     \LetLtxMacro\textalt\@firstofone%
295     \LetLtxMacro\textreg\@firstofone%
296     \LetLtxMacro\emboss\@firstofone%
297     \LetLtxMacro\textorn\@firstofone%
298     \LetLtxMacro\textqt\@firstofone%
299     \LetLtxMacro\textsh\@firstofone%
300     \LetLtxMacro\texttm\@firstofone%
301     \LetLtxMacro\texttv\@firstofone%
302     \LetLtxMacro\textl\@firstofone%
303     \LetLtxMacro\texto\@firstofone%
304     \LetLtxMacro\textp\@firstofone%
305     \LetLtxMacro\textt\@firstofone%
306     \LetLtxMacro\textpl\@firstofone%
307     \LetLtxMacro\textpo\@firstofone%
308     \LetLtxMacro\texttl\@firstofone%
309     \LetLtxMacro\textto\@firstofone%
310     \LetLtxMacro\textol\@firstofone%
311     \LetLtxMacro\textswash\@firstofone%
312     \LetLtxMacro\textu\@firstofone%
313     \LetLtxMacro\textscu\@firstofone%
314     \LetLtxMacro\textui\@firstofone%
315     \LetLtxMacro\textri\@firstofone%
316     \LetLtxMacro\textnw\@firstofone%
317     \LetLtxMacro\textcd\@firstofone%
318     \LetLtxMacro\textec\@firstofone%
319     \LetLtxMacro\textuc\@firstofone%
320     \LetLtxMacro\textet\@firstofone%
321     \LetLtxMacro\textep\@firstofone%
322     \LetLtxMacro\textex\@firstofone%
323     \LetLtxMacro\textux\@firstofone%
324     \LetLtxMacro\textrw\@firstofone%
325     \LetLtxMacro\textmb\@firstofone%
326     \LetLtxMacro\textdb\@firstofone%
327     \LetLtxMacro\textsb\@firstofone%
328 % \LetLtxMacro\texteb\@firstofone%
329     \LetLtxMacro\textub\@firstofone%
```

```

330 % \LetLtxMacro\textlg\@firstofone%
331 \LetLtxMacro\textel\@firstofone%
332 \LetLtxMacro\textul\@firstofone%
333 }
334
335 \providecommand*\zeroslash{}{0}
336 \newrobustcmd*\LWR@HTML@zeroslash{}{0}
337 \LWR@formatted{zeroslash}

```

File 282 **lwarp-nicefrac.sty**

§ 384 Package **nicefrac**

(Emulates or patches code by AXEL REICHERT.)

Pkg nicefrac nicefrac is patched for use by lwarp.

for HTML output:

```

1 \LWR@ProvidesPackagePass{nicefrac}[1998/08/04]
2 \DeclareRobustCommand*\LWR@HTML@UnitsNiceFrac}[3][[]]{%
3   {% localize font selection
4     #1{%
5       \LWR@textcurrentfont{%
6         \InlineClass{numerator}{#2}%
7         /%
8         \InlineClass{denominator}{#3}%
9       }%
10    }%
11  }%
12 }
13
14 \LWR@formatted{@UnitsNiceFrac}
15
16 \DeclareRobustCommand*\LWR@HTML@UnitsUglyFrac}[3][[]]{%
17   {% localize font selection
18     #1{\LWR@textcurrentfont{#2/#3}}%
19   }%
20 }
21
22 \LWR@formatted{@UnitsUglyFrac}

```

For Mathjax:

```

23 \begin{warpMathJax}
24 \CustomizeMathJax{\newcommand{\nicefrac}[3][[]]{#2/#3}}
25 \end{warpMathJax}

```

File 283 **lwarp-niceframe.sty**

§ 385 Package **niceframe**

Pkg niceframe niceframe is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{niceframe}% the original date is in yyyy/dd/mm format

```

2 \newcommand{\LWR@niceframe}[3]{%
3   \begin{LWR@setvirtualpage}*%
4   \setlength{\LWR@templengthone}{#1}%
5   \begin{BlockClass}[max-width:\LWR@printlength{\LWR@templengthone}]{#3}%
6   #2
7   \end{BlockClass}%
8   \end{LWR@setvirtualpage}%
9 }
10
11 \newcommand{\niceframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{niceframe}}
12 \newcommand{\curlyframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{curlyframe}}
13 \newcommand{\artdecoframe}[2][\textwidth]{\LWR@niceframe{#1}{#2}{artdecoframe}}
14
15 \newcommand{\generalframe}[9]{\LWR@niceframe{\textwidth}{#9}{generalframe}}
```

File 284 **lwarp-noitcrul.sty**

§ 386 Package **noitcrul**

(Emulates or patches code by PAUL EBERMANN.)

Pkg noitcrul noitcrul is used as-is for SVG and emulated for MATHJAX.

for HTML output: 1 \LWR@ProvidesPackagePass{noitcrul}[2006/04/11]

```

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\noitUnderline}[1]{\underline{#1}\!}}
4 \end{warpMathJax}
```

File 285 **lwarp-nolbreaks.sty**

§ 387 Package **nolbreaks**

(Emulates or patches code by DONALD ARSENEAU.)

Pkg nolbreaks nolbreaks is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{nolbreaks}[2012/05/31]

```
2 \NewDocumentCommand{\nolbreaks}{s m}{\InlineClass{nolbreaks}{#2}}
```

File 286 **lwarp-nomencl.sty**

§ 388 Package **nomenc1**

(Emulates or patches code by BORIS VEYTSMAN, BERND SCHANDL, LEE NETHERTON, CV RADHAKRISHNAN.)

Pkg nomenc1 **nomenc1** is patched for use by **lwarp**.

To process the HTML nomenclature:

```
makeindex <project>_html.nlo -s nomenc1.ist -o <project>_html.nls
```

for HTML output: 1 \LWR@ProvidesPackagePass{nomenc1}[2005/09/22]

\BaseJobname is added to the label in case xr or xr-hyper are used.

```
2 \def\@@@nomenclature[#1]#2#3{%
3 \def\@tempa{#2}\def\@tempb{#3}%
4 \protected@write\@nomenclaturefile{%
5 {\string\nomenclatureentry{#1\nom@verb\@tempa @[\nom@verb\@tempa]}%
6 \begin@group\nom@verb\@tempb\protect\nomeqref{\theequation}%
7 |nompageref}{\theLWR@previousautopagelabel}}% lwarp
8 \end@group
9 \@esphack}
10
11 \renewcommand*{\pagedeclaration}[1]{, \nameref{\BaseJobname-autopage-#1}}%
```

File 287 **lwarp-nonfloat.sty**

§ 389 Package **nonfloat**

(Emulates or patches code by KAI RASCHER.)

Pkg nonfloat **nonfloat** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{nonfloat}[1999/07/05]

```
2 \LetLtxMacro\topcaption\caption
3 \newcommand{\figcaption}{\def\@captype{figure}\caption}
4 \newcommand{\tabcaption}{\def\@captype{table}\topcaption}
5 \newenvironment{narrow}[2]{}{}
```

File 288 **lwarp-nonumonpart.sty**

§ 390 Package **nonumonpart**

Pkg nonumonpart **nonumonpart** is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{nonumonpart}[2011/04/15]

File 289 **lwarp-nopageno.sty**

§ 391 Package **nopageno**

Pkg nopageno nopageno is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{nopageno}[1989/01/01]

File 290 **lwarp-notes.sty**

§ 392 Package **notes**

Pkg notes notes is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{notes}[2002/10/29]

```

2 \newcommand*{\LWR@notes@onenote}[2]{%
3 \newenvironment{#1}
4   {
5     \BlockClass{notes#1}
6     \begin{BlockClass}{notesicon}\textcircled{~#2~}\end{BlockClass}
7     \BlockClass{notescontents}
8   }
9   {\endBlockClass\endBlockClass}
10 }
11
12 \LWR@notes@onenote{importantnote}{!}
13
14 \LWR@notes@onenote{warningnote}{--}
15
16 \LWR@notes@onenote{informationnote}{i}

```

File 291 **lwarp-notespages.sty**

§ 393 Package **notespages**

Pkg notespages notespages is ignored.

for HTML output: 1 \LWR@ProvidesPackageDrop{notespages}[2016/08/21]

```

2 \newcommand*{\nnotesname}{}
3 \newcommand*{\nnotestext}{}
4 \newcommand*{\remainingtextheight}{}
5 \newdimen\remainingtextheight

```

```

6 \newcommand*\notestitletext{}
7 \newcommand*\notesareatext{}
8 \newcommand*\nnpinfo}[1]{}
9 \newcommand*\tracingnmarks{}
10 \newcommand*\notespage}[1][{}
11 \newcommand*\notespages}[1][{}
12 \newcommand*\notesfill}[1][{}
13 \newcommand*\setnotespages}[1]{}
14 \newcommand*\definnotesoption}[2]{}
15 \newcommand*\definnotesstyle}[2]{}
16 \newcommand*\definetitlestyle}[2]{}
17 \newcommand*\nnpatchchapter}[1]{}
18 \newcommand*\npunpatchchapter{}

```

File 292 **lwarp-nowidow.sty**

§ 394 Package **nowidow**

(Emulates or patches code by RAPHAËL PINSON.)

Pkg nowidow nowidow is ignored.

for HTML output: ~~DISCARD~~ ~~Package lwarp-nowidow~~ [2011/09/20]

```

\nowidow [(lines)]
\setnowidow [(lines)]

2 \newcommand*\nowidow}[1][{}
3 \newcommand*\setnowidow}[1][{}

\noclub [(lines)]
\setnoclub [(lines)]

4 \newcommand*\noclub}[1][{}
5 \newcommand*\setnoclub}[1][{}

```

File 293 **lwarp-ntheorem.sty**

§ 395 Package **ntheorem**

(Emulates or patches code by WOLFGANG MAY, ANDREAS SCHEDLER.)

Pkg ntheorem ntheorem is patched for use by lwarp.

Table 17: Ntheorem package — css styling of theorems and proofs

Theorem: <div> of class theorembody<theoremstyle>

Theorem Header: of class theoremheader<style>

where <theoremstyle> is plain, break, etc.

§ 395.1 Limitations

-  **Font control** This conversion is not total. Font control is via css, and the custom L^AT_EX font settings are ignored.
-  **cref reference format undefined** If the print version does not use `cleveref`, place all `\theoremstyle` and `\newtheorem` declarations in the preamble inside `\AtBeginDocument`.¹⁹ For some theorems, it may also be required to add inside `\AtBeginDocument` something such as:
- ```
\AtBeginDocument{ % if not using cleveref package
 \theoremstyle{definition}
 \newtheorem{dtheorem}{Definition}
 . . .
 \usepackage{etoolbox} % for \ifdef
 \ifdef{\cref}{
 \crefname{Proof}{Proof}{Proofs}
 }{
 }
}
```
-  **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.

### § 395.2 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 \AtEndDocument{
3 \PackageWarningNoLine{lwarp}{%
4 Lwarp uses cleveref, which takes over ntheorem's\MessageBreak
```

<sup>19</sup>`lwarp` uses `cleveref` for the HTML conversion, and loads `cleveref` `\AtEndPreamble`, just before `\AtBeginDocument`.

```

5 referencing, including
6 \protect\label \space and \protect\thref.\MessageBreak
7 Cleveref does not accept ntheorem's optional\MessageBreak
8 argument for \protect\label, so it will appear\MessageBreak
9 in the text. It is recommended to remove the\MessageBreak
10 thref option, \protect\usepackage{cleveref} instead,\MessageBreak
11 and remove any trailing optional arguments for \protect\label%
12 }%
13 }
14 }
15
16
17 \newbool{LWR@theoremmarks}
18 \boolfalse{LWR@theoremmarks}
19
20 \DeclareOption{thmmarks}{
21 \booltrue{LWR@theoremmarks}
22 \newif\ifsetendmark\setendmarktrue
23 }
24
25
26 \newbool{LWR@theoremamsthm}
27 \boolfalse{LWR@theoremamsthm}
28
29 \DeclareOption{amsthm}{\booltrue{LWR@theoremamsthm}}
30
31
32 \DeclareOption{amsmath}{}
33 \DeclareOption{hyperref}{}
34
35 \LWR@ProvidesPackagePass{ntheorem}[2011/08/15]

```

### § 395.3 Remembering the theorem style

Storage for the style being used for new theorems.

```

36 \newcommand{\LWR@newtheoremstyle}{plain}

37 \AtBeginDocument{
38 \@ifpackageloaded{cleveref}{
39 \gdef\@thm#1#2#3{%
40 \if@thmmarks
41 \stepcounter{end\InTheoType ctr}%
42 \fi
43 \renewcommand{\InTheoType}{#1}%
44 \if@thmmarks
45 \stepcounter{curr#1ctr}%
46 \setcounter{end#1ctr}{0}%
47 \fi
48 \refstepcounter[#1]{#2}% <<< cleveref modification
49 \theorem@prework
50 \LWR@forcenewpage% lwarp
51 \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
52 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
53 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist

```

```

54 \ifthm@inframe
55 \thm@topsep\theoremframepreskipamount
56 \thm@topsepadd\theoremframepostskipamount
57 \else
58 \thm@topsep\theorempreskipamount
59 \thm@topsepadd\theorempostskipamount
60 \fi
61 \else% oldframeskips
62 \thm@topsep\theorempreskipamount
63 \thm@topsepadd \theorempostskipamount
64 \ifvmode\advance\thm@topsepadd\partopsep\fi
65 \fi
66 \@topsep\thm@topsep
67 \@topsepadd\thm@topsepadd
68 \advance\linewidth -\theorem@indent
69 \advance\linewidth -\theorem@rightindent
70 \advance\@totalleftmargin \theorem@indent
71 \parshape \@ne \@totalleftmargin \linewidth
72 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
73 }
74 }{% not @ifpackageloaded{cleveref}
75 \gdef\@thm#1#2#3{%
76 \if@thmmarks
77 \stepcounter{end\InTheoType ctr}%
78 \fi
79 \renewcommand{\InTheoType}{#1}%
80 \if@thmmarks
81 \stepcounter{curr#1ctr}%
82 \setcounter{end#1ctr}{0}%
83 \fi
84 \refstepcounter{#2}%
85 \theorem@prework
86 \LWR@forcenewpage% lwarp
87 \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
88 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
89 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
90 \ifthm@inframe
91 \thm@topsep\theoremframepreskipamount
92 \thm@topsepadd\theoremframepostskipamount
93 \else
94 \thm@topsep\theorempreskipamount
95 \thm@topsepadd\theorempostskipamount
96 \fi
97 \else% oldframeskips
98 \thm@topsep\theorempreskipamount
99 \thm@topsepadd \theorempostskipamount
100 \ifvmode\advance\thm@topsepadd\partopsep\fi
101 \fi
102 \@topsep\thm@topsep
103 \@topsepadd\thm@topsepadd
104 \advance\linewidth -\theorem@indent
105 \advance\linewidth -\theorem@rightindent
106 \advance\@totalleftmargin \theorem@indent
107 \parshape \@ne \@totalleftmargin \linewidth
108 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}

```

```

109 }
110 }
111 }% AtBeginDocument

```

Patched to remember the style being used for new theorems:

```

112 \gdef\theoremstyle#1{%
113 \ifundefined{th@#1}{\@warning
114 {Unknown theoremstyle '#1'. Using 'plain'}}%
115 \theoremstyle{plain}
116 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
117 }%
118 {
119 \theoremstyle{#1}
120 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
121 }
122 }

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

123
124 \gdef\@xnthm#1#2[#3]{%
125 \ifthm@tempif
126 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
127 \expandafter\ifundefined{c@#1}%
128 {\@definecounter{#1}}{}%
129 \@newctr{#1}[#3]%
130 \expandafter\xdef\csname the#1\endcsname{%
131 \expand\noexpand\csname the#3\endcsname \@thmcountersep
132 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}}%
133 \expandafter\gdef\csname mkheader@#1\endcsname
134 {\csname setparms@#1\endcsname
135 \@thm{#1}{#1}{#2}
136 }%
137 \global\@namedef{end#1}{\@endtheorem}
138 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
139 \fi
140 }
141
142 \gdef\@ynthm#1#2{%
143 \ifthm@tempif
144 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
145 \expandafter\ifundefined{c@#1}%
146 {\@definecounter{#1}}{}%
147 \expandafter\xdef\csname the#1\endcsname
148 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}}%
149 \expandafter\gdef\csname mkheader@#1\endcsname
150 {\csname setparms@#1\endcsname
151 \@thm{#1}{#1}{#2}
152 }%
153 \global\@namedef{end#1}{\@endtheorem}
154 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
155 \fi
156 }

```

```

157
158 \gdef\@thm#1[#2]#3{%
159 \@ifundefined{c@#2}{\@nocounterr{#2}}%
160 {\ifthm@tempif
161 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
162 \global\@namedef{the#1}{\@nameuse{the#2}}%
163 \expandafter\protected@xdef\csname num@addtheorem#1\endcsname{%
164 \noexpand\@num@addtheoremline{#1}{#3}}%
165 \expandafter\protected@xdef\csname nonum@addtheorem#1\endcsname{%
166 \noexpand\@nonum@addtheoremline{#1}{#3}}%
167 \theoremkeyword{#3}%
168 \expandafter\protected@xdef\csname #1Keyword\endcsname
169 {\the\theoremkeyword}%
170 \expandafter\gdef\csname mkheader@#1\endcsname
171 {\csname setparms@#1\endcsname
172 \@thm{#1}{#2}{#3}
173 }%
174 \global\@namedef{end#1}{\@endtheorem}
175 \@AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
176 \fi}
177 }

```

#### § 395.4 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.

```

178 \newcommand{\LWR@inctheorem}{%
179 \addtocounter{LWR@thisautoid}{1}%
180 \LWR@stoppars%
181 \LWR@htmltag{a id="\LWR@print@mbox{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
182 \LWR@startpars%
183 }

```

#### § 395.5 \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>.

```

184 \gdef\newtheoremstyle#1#2#3{%
185 \expandafter\@ifundefined{th#1}%
186 {\expandafter\gdef\csname th@#1\endcsname{%
187 \def\@begintheorem####1####2{%
188 \LWR@inctheorem% lwarp
189 #2}%
190 \def\@opargbegintheorem####1####2####3{%
191 \LWR@inctheorem% lwarp
192 #3}%
193 }%

```

```

194 }%
195 {\PackageError{\basename}{Theorem style #1 already defined}\@eha}
196 }

```

### § 395.6 Standard styles

```

197 \renewtheoremstyle{plain}%
198 {\item[
199 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]]%
200 {\item[
201 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]]}
202
203 \renewtheoremstyle{break}%
204 {\item[
205 \InlineClass{theoremheaderbreak}{##1\ ##2\theorem@separator}\newline
206]}%
207 {\item[
208 \InlineClass{theoremheaderbreak}%
209 {##1\ ##2\ (##3)\theorem@separator}\newline
210]}
211
212 \renewtheoremstyle{change}%
213 {\item[
214 \InlineClass{theoremheaderchange}{##2\ ##1\theorem@separator}]]%
215 {\item[
216 \InlineClass{theoremheaderchange}{##2\ ##1\ (##3)\theorem@separator}]]}
217
218 \renewtheoremstyle{changebreak}%
219 {\item[
220 \InlineClass{theoremheaderchangebreak}%
221 {##2\ ##1\theorem@separator}\newline
222]}%
223 {\item[
224 \InlineClass{theoremheaderchangebreak}%
225 {##2\ ##1\ (##3)\theorem@separator}\newline
226]}
227
228 \renewtheoremstyle{margin}%
229 {\item[
230 \InlineClass{theoremheadermargin}{##2 \quad ##1\theorem@separator}
231]}%
232 {\item[
233 \InlineClass{theoremheadermargin}{##2 \quad ##1\ (##3)\theorem@separator}
234]}
235
236 \renewtheoremstyle{marginbreak}%
237 {\item[
238 \InlineClass{theoremheadermarginbreak}%
239 {##2 \quad ##1\theorem@separator}\newline
240]}%
241 {\item[
242 \InlineClass{theoremheadermarginbreak}%
243 {##2 \quad ##1\ (##3)\theorem@separator}\newline
244]}
245

```

```

246 \renewtheoremstyle{nonumberplain}%
247 {\item[
248 \InlineClass{theoremheaderplain}{##1\theoremseparator}]}%
249 {\item[
250 \InlineClass{theoremheaderplain}{##1\ (##3)\theoremseparator}]}
251
252 \renewtheoremstyle{nonumberbreak}%
253 {\item[
254 \InlineClass{theoremheaderbreak}{##1\theoremseparator}\newline
255]}%
256 {\item[
257 \InlineClass{theoremheaderbreak}{##1\ (##3)\theoremseparator}\newline
258]}
259
260 \renewtheoremstyle{empty}%
261 {\item[]}%
262 {\item[
263 \InlineClass{theoremheaderplain}{##3}]}
264
265 \renewtheoremstyle{emptybreak}%
266 {\item[]}%
267 {\item[
268 \InlineClass{theoremheaderplain}{##3}] \ \newline}

```

### § 395.7 Additional objects

The following manually adjust the css for the standard configuration objects which are not a purely plain style:

```
269 \ifbool{LWR@theoremamsthm}{}{%
```

Upright text via CSS:

```

270 \newtheoremstyle{plainupright}%
271 {\item[
272 \InlineClass{theoremheaderplain}{##1\ ##2\theoremseparator}]}%
273 {\item[
274 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theoremseparator}]}

```

Upright text and small caps header via CSS:

```

275 \newtheoremstyle{nonumberplainuprightsc}%
276 {\item[
277 \InlineClass{theoremheadersc}{##1\theoremseparator}]}%
278 {\item[
279 \InlineClass{theoremheadersc}{##1\ (##3)\theoremseparator}]}
280]% not amsthm

```

### § 395.8 Renewed standard configuration

The following standard configuration is renewed using the new css:

```

281 \ifbool{LWR@theoremamsthm}{}{%

282 \ifx\thm@usestd\undefined
283 \else
284 \theoremnumbering{arabic}
285 \theoremstyle{plain}
286 \RequirePackage{latexsym}
287 \theoremsymbol{\Box}
288 \theorembodyfont{\itshape}
289 \theoremheaderfont{\normalfont\bfseries}
290 \theoremseparator{}
291 \renewtheorem{Theorem}{Theorem}
292 \renewtheorem{theorem}{Theorem}
293 \renewtheorem{Satz}{Satz}
294 \renewtheorem{satz}{Satz}
295 \renewtheorem{Proposition}{Proposition}
296 \renewtheorem{proposition}{Proposition}
297 \renewtheorem{Lemma}{Lemma}
298 \renewtheorem{lemma}{Lemma}
299 \renewtheorem{Korollar}{Korollar}
300 \renewtheorem{korollar}{Korollar}
301 \renewtheorem{Corollary}{Corollary}
302 \renewtheorem{corollary}{Corollary}
303
304 \theoremstyle{plainupright}
305 \theorembodyfont{\upshape}
306 \theoremsymbol{\HTMLUnicode{25A1}}% UTF-8 white box
307 \renewtheorem{Example}{Example}
308 \renewtheorem{example}{Example}
309 \renewtheorem{Beispiel}{Beispiel}
310 \renewtheorem{beispiel}{Beispiel}
311 \renewtheorem{Bemerkung}{Bemerkung}
312 \renewtheorem{bemerkung}{Bemerkung}
313 \renewtheorem{Anmerkung}{Anmerkung}
314 \renewtheorem{anmerkung}{Anmerkung}
315 \renewtheorem{Remark}{Remark}
316 \renewtheorem{remark}{Remark}
317 \renewtheorem{Definition}{Definition}
318 \renewtheorem{definition}{Definition}
319
320 \theoremstyle{nonumberplainuprightsc}
321 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
322 \renewtheorem{Proof}{Proof}
323 \renewtheorem{proof}{Proof}
324 \renewtheorem{Beweis}{Beweis}
325 \renewtheorem{beweis}{Beweis}
326 \qedsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
327
328 \theoremsymbol{}
329 \fi
330 }% not amsthm

```

§ 395.9 **amsthm option**

Only if the `amsthm` option was given:

```

331 \ifbool{LWR@theoremamsthm}{
332
333 \gdef\th@plain{%
334 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
335 \def\@begintheorem##1##2{%
336 \LWR@intheorem% lwarp
337 \item[
338 \InlineClass{theoremheaderplain}{##1\ ##2.}
339]}%
340 \def\@opargbegintheorem##1##2##3{%
341 \LWR@intheorem% lwarp
342 \item[
343 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3).}
344]}}
345
346 \gdef\th@nonumberplain{%
347 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
348 \def\@begintheorem##1##2{%
349 \LWR@intheorem% lwarp
350 \item[
351 \InlineClass{theoremheaderplain}{##1.}
352]}%
353 \def\@opargbegintheorem##1##2##3{%
354 \LWR@intheorem% lwarp
355 \item[
356 \InlineClass{theoremheaderplain}{##1\ (##3).}
357]}}
358
359 \gdef\th@definition{%
360 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
361 \def\@begintheorem##1##2{%
362 \LWR@intheorem% lwarp
363 \item[
364 \InlineClass{theoremheaderdefinition}{##1\ ##2.}
365]}%
366 \def\@opargbegintheorem##1##2##3{%
367 \LWR@intheorem% lwarp
368 \item[
369 \InlineClass{theoremheaderdefinition}{##1\ ##2\ (##3).}
370]}}
371
372 \gdef\th@nonumberdefinition{%
373 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
374 \def\@begintheorem##1##2{%
375 \LWR@intheorem% lwarp
376 \item[
377 \InlineClass{theoremheaderdefinition}{##1.}
378]}%
379 \def\@opargbegintheorem##1##2##3{%
380 \LWR@intheorem% lwarp
381 \item[

```

```

382 \InlineClass{theoremheaderdefinition}{##1\ (##3).}
383]}}
384
385 \gdef\th@remark{%
386 \def\theorem@headerfont{\itshape}\normalfont%
387 \def\@begintheorem##1##2{%
388 \LWR@intheorem% lwarp
389 \item[
390 \InlineClass{theoremheaderremark}{##1\ ##2.}
391]}%
392 \def\@opargbegintheorem##1##2##3{%
393 \LWR@intheorem% lwarp
394 \item[
395 \InlineClass{theoremheaderremark}{##1\ ##2\ (##3).}
396]}}
397
398 \gdef\th@nonumberremark{%
399 \def\theorem@headerfont{\itshape}\normalfont%
400 \def\@begintheorem##1##2{%
401 \LWR@intheorem% lwarp
402 \item[
403 \InlineClass{theoremheaderremark}{##1.}
404]}%
405 \def\@opargbegintheorem##1##2##3{%
406 \LWR@intheorem% lwarp
407 \item[
408 \InlineClass{theoremheaderremark}{##1\ (##3).}
409]}}
410
411 \gdef\th@proof{%
412 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
413 \def\@begintheorem##1##2{%
414 \LWR@intheorem% lwarp
415 \item[
416 \InlineClass{theoremheaderproof}{##1.}
417]}%
418 \def\@opargbegintheorem##1##2##3{%
419 \LWR@intheorem% lwarp
420 \item[
421 \InlineClass{theoremheaderproof}{##1\ (##3).}
422]}}
423
424
425
426 \newcounter{proof}%
427 \if@thmmarks
428 \newcounter{currproofctr}%
429 \newcounter{endproofctr}%
430 \fi
431
432 \gdef\proofSymbol{\openbox}
433
434 \newcommand{\proofname}{Proof}
435
436 \newenvironment{proof}[1][\proofname]{

```

```

437 \th@proof
438 \def\theorem@headerfont{\itshape}%
439 \normalfont
440 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
441 \@thm{proof}{proof}{#1}
442 }%
443 {\@endtheorem}
444
445 }{}% amsthm option

```

### § 395.10 **Ending a theorem**

Patched for CSS:

```

446 \let\LWR@origendtheorem\@endtheorem
447 \renewcommand{\@endtheorem}{%
448 \ifbool{LWR@theoremmarks}{%
449 \ifsetendmark%
450 \InlineClass{theoremendmark}{\csname\InTheoType Symbol\endcsname}%
451 \setendmarkfalse%
452 \fi%
453 }{}%
454 \LWR@origendtheorem% also does \@endtrivlist
455 \ifbool{LWR@theoremmarks}{\global\setendmarktrue}{}%
456 \endBlockClass%
457 }

```

### § 395.11 **\NoEndMark**

```

458 \gdef\NoEndMark{\global\setendmarkfalse}

```

### § 395.12 **List-of**

Redefined to reuse the float mechanism to add list-of-theorem links:

```
\thm@thmline {<1: printed type>} {<2: #>} {<3: optional>} {<4: page>}
```

```

459 \renewcommand{\thm@thmline@noname}[4]{%
460 \hypertocfloat{1}{theorem}{thm}{#2 #3}{}%
461 }
462
463 \renewcommand{\thm@thmline@name}[4]{%
464 \hypertocfloat{1}{theorem}{thm}{#1 #2 #3}{}%
465 }

```

This was redefined by `ntheorem` when loaded, so it is now redefined for `lwarp`:

```

466 \def\thm@thmline{\thm@thmline@name}

```

Patch for CSS:

```

467 \def\listtheorems#1{
468 \LWR@htmlElementClass{nav}{lothm}%
469 \begingroup

```

```

470 \c@tocdepth=-2%
471 \def\thm@list{#1}\thm@processlist
472 \endgroup
473 \LWR@html@elementclassend{nav}{\lohtm}%
474 }

```

### § 395.13 Symbols

Proof QED symbol:

```

475 \newcommand{\qed}{\qquad\the\qedsymbol}
476
477 \AtBeginDocument{
478 \ifundefined{LWR@orig@openbox}{
479 \LetLtxMacro\LWR@orig@openbox\openbox
480 \LetLtxMacro\LWR@orig@blacksquare\blacksquare
481 \LetLtxMacro\LWR@orig@Box\Box
482
483 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
484 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
485 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
486
487 \appto\LWR@restoreorigformatting{%
488 \LetLtxMacro\openbox\LWR@orig@openbox%
489 \LetLtxMacro\blacksquare\LWR@orig@blacksquare%
490 \LetLtxMacro\Box\LWR@orig@Box%
491 }% appto
492 }{}% @ifundefined
493 }% AtBeginDocument

```

### § 395.14 Cross-referencing

```

\thref {<label>}

494 \newcommand*{\thref}[1]{\cref{#1}}%

```

File 294 **lwarp-octave.sty**

### § 396 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 295 **lwarp-overpic.sty**

§ 397 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 [85.2](#) for the print-mode version of `\overpicfontsize` and `\overpicfontskip`.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{overpic}[2017/10/06]
2 \newcommand*\overpicfontsize{12}
3 \newcommand*\overpicfontskip{14}
4
5 \BeforeBeginEnvironment{overpic}{%
6 \begin{lateximage}%
7 \fontsize{\overpicfontsize}{\overpicfontskip}%
8 \selectfont%
9 }
10
11 \AfterEndEnvironment{overpic}{\end{lateximage}}
12
13 \BeforeBeginEnvironment{Overpic}{%
14 \begin{lateximage}%
15 \fontsize{\overpicfontsize}{\overpicfontskip}%
16 \selectfont%
17 }
18
19 \AfterEndEnvironment{Overpic}{\end{lateximage}}
```

---

File 296 **lwarp-pagegrid.sty**

§ 398 Package **pagegrid**

Pkg pagegrid **pagegrid** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagegrid}[2016/05/16]
2 \newcommand*\pagegridsetup[1]{}

```

---

File 297 **lwarp-pagenote.sty**

§ 399 Package **pagenote**

Pkg pagenote pagenote works as-is, but the page option is disabled.

 **labels** Note that labels in page notes do not appear as expected, even in the print version.

**for HTML output:**

```
1 \DeclareOption{page}{}
2 \LWR@ProvidesPackagePass{pagenote}[2009/09/03]
```

For MATHJAX:

```
3 \begin{warpMathJax}
4 \appto\LWR@syncnotenumbers{\LWR@synconenotenummer{\LWRpagenote}{\thepagenote}}
5 \CustomizeMathJax{\def\LWRpagenote{1}}
6 \CustomizeMathJax{\newcommand{\pagenote}[2][\LWRpagenote]{\mathrm{#1}}}
7 \end{warpMathJax}
```

There is no `\pagenotemark`, so the following are not required:

```
\providecommand{\pagenotename}{pagenote}
\appto\LWR@syncnotenames{\LWR@synconenotename{\LWRpagenote}{\pagenotename}}
```

---

File 298 **lwarp-pagesel.sty**

§ 400 Package **pagesel**

Pkg pagesel pagesel is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{pagesel}[2016/05/16]
```

---

File 299 **lwarp-paralist.sty**

§ 401 Package **paralist**

*(Emulates or patches code by BERND SCHANDL.)*

Pkg paralist paralist is supported with minor changes.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{paralist}[2017/01/22]
```

The compact environments are identical to the regular ones:

```
2 \LetLtxMacro\compactitem\itemize
```

```

3 \LetLtxMacro\compactenum\enumerate
4 \LetLtxMacro\compactdesc\description
5 \LetLtxMacro\endcompactitem\enditemize
6 \LetLtxMacro\endcompactenum\endenumerate
7 \LetLtxMacro\endcompactdesc\enddescription

```

For the inline environments, revert `\item` to its original print-mode version:

```

8 \AtBeginEnvironment{inparaitem}{\LetLtxMacro\item\LWR@origitem}
9 \AtBeginEnvironment{inparaenum}{\LetLtxMacro\item\LWR@origitem}
10 \AtBeginEnvironment{inparadesc}{\LetLtxMacro\item\LWR@origitem}

```

Manual formatting of the description labels:

```

11 \def\paradescriptionlabel#1{{\normalfont\textbf{#1}}}

```

File 300 **lwarp-parallel.sty**

§ 402 Package **parallel**

*(Emulates or patches code by MATTHIAS ECKERMAN.)*

Pkg parallel parallel is emulated.

Package options are ignored. Footnotes are treated as normal lwarp footnotes.

Environment option `c` gives side-by-side `<div>`s of class `minipage`, each of whose width is a percent depending on the given left and right widths, proportional to `\linewidth`.

Inside each environment, `\linewidth` and `\textwidth` are set for the print-output sizes.

**for HTML output:** Discard all options for `lwarp-parallel`:

```

1 \LWR@ProvidesPackageDrop{parallel}[2003/04/13]

2 \newcounter{LWR@parallel@Lwidth}
3 \newcounter{LWR@parallel@Rwidth}
4 \newcommand*{\LWR@parallel@border}
5
6 \newenvironment*{Parallel}[3][[%
7 {%
8 \LWR@printpendingfootnotes%
9 \setlength{\linewidth}{\LWR@userstextwidth}%
10 \setlength{\textwidth}{\LWR@userstextwidth}%
11 \renewcommand*{\LWR@parallel@border}{}%
12 \ifstrequal{#1}{v}%
13 {%
14 \renewcommand*{\LWR@parallel@border}{ ; border-left: 2px solid black}%
15 }%
16 }%
17 \ifblank{#2}{%
18 \ifblank{#3}{% {}{}

```

```

19 \setcounter{LWR@parallel@Lwidth}{45}%
20 \setcounter{LWR@parallel@Rwidth}{45}%
21 }% {}{}
22 {% {}{x}
23 \setlength{LWR@templengthone}{\linewidth-#3}%
24 \setcounter{LWR@parallel@Lwidth}{%
25 90*\ratio{LWR@templengthone}{\linewidth}%
26 }%
27 \setcounter{LWR@parallel@Rwidth}{%
28 90*\ratio{#3}{\linewidth}%
29 }%
30 }% {}{x}
31 }% #2 blank
32 {% #2 non-blank
33 \ifblank{#3}{% {}{}
34 \setcounter{LWR@parallel@Lwidth}{%
35 90*\ratio{#2}{\linewidth}%
36 }%
37 \setlength{LWR@templengthone}{\linewidth-#2}%
38 \setcounter{LWR@parallel@Rwidth}{%
39 90*\ratio{LWR@templengthone}{\linewidth}%
40 }%
41 }% {}{}
42 {% {}{x}
43 \setcounter{LWR@parallel@Lwidth}{%
44 90*\ratio{#2}{\linewidth}%
45 }%
46 \setcounter{LWR@parallel@Rwidth}{%
47 90*\ratio{#3}{\linewidth}%
48 }%
49 }% {}{x}
50 }% #2 non-blank
51 }
52 {%
53 \ParallelAtEnd%
54 \renewcommand*{\ParallelAtEnd}{}%
55 \LWR@printpendingfootnotes%
56 }
57
58 \newcommand*{\ParallelLText}[1]{%
59 \begin{BlockClass}[%
60 width:\arabic{LWR@parallel@Lwidth}\% ; % space
61 padding: .5ex 1\% ; % space
62]{minipage}%
63 #1%
64 \end{BlockClass}%
65 }
66
67 \newcommand*{\ParallelRText}[1]{%
68 \begin{BlockClass}[%
69 width:\arabic{LWR@parallel@Rwidth}\% ; % space
70 padding: .5ex 1\% ; % space
71 \LWR@parallel@border%
72]{minipage}%
73 #1%

```

```

74 \end{BlockClass}%
75 }
76
77 \newcommand*\ParallelPar{\LWR@printpendingfootnotes}
78
79 \newcommand*\ParallelAtEnd{}
```

File 301 **lwarp-parcolumns.sty**

§ 403 Package **parcolumns**

*(Emulates or patches code by JONATHAN SAUER.)*

Pkg parcolumns parcolumns is emulated.

rulebetween is honored. The other keys are ignored, including colwidths.

Each column is placed inside a <div> of class minipage, each of whose width is fixed at 85% divided by the number of columns. In most cases, this results in side-by-side minipages adapting to the browser width. Inside each minipage, \linewidth, \textwidth, and \textheight are set for a virtual 6 × 9 inch page, with \linewidth divided by the number of columns.

**for HTML output:** Discard all options for lwarp-parcolumns:

```

1 \RequirePackage{keyval}%
2
3 \LWR@ProvidesPackageDrop{parcolumns}[2004/11/25]

4 \newcounter{LWR@parcolumns@numcols}
5 \newcounter{LWR@parcolumns@thiscol}
6 \newcounter{LWR@parcolumns@width}
7 \newbool{LWR@parcolumns@started}
8 \newbool{LWR@parcolumns@rule}
9
10 \define@key{LWRparcols}{colwidths}{}
11 \define@key{LWRparcols}{distance}{}
12 \define@key{LWRparcols}{rulebetween}[true]{}%
13 \setbool{LWR@parcolumns@rule}{#1}%
14 }
15 \define@key{LWRparcols}{nofirstindent}{}
16 \define@key{LWRparcols}{sloppy}{}
17 \define@key{LWRparcols}{sloppyspaces}{}
18
19 \newenvironment*{parcolumns}[2][[]
20 {%
21 \begin{LWR@setvirtualpage}*[#2]%
22 \setcounter{LWR@parcolumns@numcols}{#2}%
23 \setcounter{LWR@parcolumns@thiscol}{1}%
24 \boolfalse{LWR@parcolumns@started}%
25 \boolfalse{LWR@parcolumns@rule}%
26 \setcounter{LWR@parcolumns@width}{%
27 85/#2
```

```

28 }%
29 \setkeys{LWRparcols}{#1}%
30 }
31 {%

32 \colplacechunks%
33 \end{LWR@setvirtualpage}%
34 }
35
36 \newcommand{\LWR@parcolumns@onecol}[1]{%
37 \ifbool{LWR@parcolumns@started}%
38 {}%
39 {%
40 \LWR@htmldivclass{parcolumns}%
41 \booltrue{LWR@parcolumns@started}%
42 }%
43 \ifboolexpr{%
44 bool {LWR@parcolumns@rule} and
45 test {%
46 \ifnumgreater
47 {\value{LWR@parcolumns@thiscol}}
48 {1}
49 }%
50 }%
51 {\renewcommand{\LWR@tempone}{ ; border-left: 2px solid black}}%
52 {\renewcommand{\LWR@tempone}{}}%
53 \begin{BlockClass}[%
54 width:\arabic{LWR@parcolumns@width}\% ; % space
55 padding: .5ex 1\% ; % space
56 \LWR@tempone%
57]{minipage}%
58 #1%
59 \end{BlockClass}%
60 \addtocounter{LWR@parcolumns@thiscol}{1}%
61 }
62
63 \newcommand{\colchunk}[2][\value{LWR@parcolumns@thiscol}]{%
64 \whileboolexpr{%
65 test {%
66 \ifnumcomp%
67 {\value{LWR@parcolumns@thiscol}}
68 {<}
69 {#1}%
70 }%
71 }{%
72 \LWR@parcolumns@onecol}%
73 }%
74 \LWR@parcolumns@onecol{#2}%
75 }
76
77 \newcommand*\colplacechunks{%
78 \ifbool{LWR@parcolumns@started}%
79 {%
80 \LWR@htmldivclassend{div}%
81 \boolfalse{LWR@parcolumns@started}%

```

```

82 }%
83 {}%
84 \setcounter{LWR@parcolumns@thiscol}{1}%
85 }

```

---

File 302 **lwarp-parnotes.sty**

§ 404 Package **parnotes**

*(Emulates or patches code by CHELSEA HUGHES.)*

Pkg parnotes **parnotes** is supported with some patches.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{parnotes}[2016/08/15]

2 \long\def\PN@parnote@real#1#2{%
3 \parnotemark{#1}%
4 % Unless this is the first parnote in \PN@text, add a separator first
5 \unless\ifx\PN@text\empty\g@addto@macro\PN@text{\parnoteintercmd}\fi
6 % Redefine \@currentlabel to the parnote label, so \label works
7 \g@addto@macro\PN@text{%
8 \phantomsection%
9 \def\@currentlabel{#1}%
10 \def\cref@currentlabel{% lwarp
11 [parnotemark][\arabic{parnotemark}][\the parnotemark%
12]}%
13 }%
14 \g@addto@macro\PN@text{%
15 \LWR@textcurrentfont{% lwarp
16 \parnotemark{#1}\nolinebreak\thinspace#2%
17 }%
18 }%
19 }
20
21 \def\PN@parnotes@real{%
22 % We call \par later, so this avoids recursion with \PN@parnotes@auto
23 \PN@inparnotestruer
24 \unless\ifvmode\par\fi
25 % Avoid page breaks between a paragraph and its parnotes
26 \nopagebreak\addvspace{\parnotevskip}%
27 \LWR@forcenewpage% lwarp
28 \begin{BlockClass}{footnotes}% lwarp
29 {\parnotefmt{\PN@text}\par}%
30 \end{BlockClass}% lwarp
31 \global\def\PN@text{}%
32 \addvspace{\parnotevskip}%
33 %
34 % These can be enabled or disabled by package options
35 %
36 \PN@disable@indent
37 \PN@reset@optional
38 \PN@inparnotesfalse
39 }

```

```

40
41 \AtBeginDocument{
42 \crefname{parnotemark}{paragraph note}{paragraph notes}
43 \Crefname{parnotemark}{Paragraph note}{Paragraph notes}
44 }

```

For MATHJAX:

```

45 \begin{warpMathJax}
46 \providecommand{\parnotename}{parnote}
47 \appto\LWR@syncnotenumbers{%
48 \addtocounter{parnotemark}{-1}% specific to parnotes
49 \LWR@synconenotenummer{LWRparnote}{\theparnotemark}%
50 \addtocounter{parnotemark}{1}% specific to parnotes
51 }
52 \appto\LWR@syncnotenames{\LWR@synconenotename{LWRparnote}{\parnotename}}
53 \CustomizeMathJax{\def\LWRparnote{1}}
54 \CustomizeMathJax{\newcommand{\parnote}[2][LWRparnote]{{}^{\mathrm{#1}}}}
55 \CustomizeMathJax{\newcommand{\parnotemark}[1][LWRparnote]{{}^{\mathrm{#1}}}}
56 \end{warpMathJax}

```

---

File 303 **lwarp-parskip.sty**

§ 405 Package **parskip**

Pkg parskip parskip is ignored.

**for HTML output:** Discard all options for lwarp-parskip.

```
1 \LWR@ProvidesPackageDrop{parskip}[2001/04/09]
```

---

File 304 **lwarp-pbox.sty**

§ 406 Package **pbox**

*(Emulates or patches code by SIMON LAW.)*

Pkg pbox pbox is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pbox}[2011/12/07]

2 \NewDocumentCommand{\pbox}{0{t} 0{} 0{t} m +m}{%
3 \global\booltrue{LWR@minipagefullwidth}%
4 \parbox[#1][#2][#3]{#4}{#5}%
5 }
6
7 \newcommand{\settoinwidth}[3][\columnwidth]{%
8 \settowidth{#2}{#3}%
9 }
10

```

---

```

11 \newcommand{\widthofpbox}[1]{%
12 \widthof{#1}%
13 }

```

---

File 305 **lwarp-pdfcol.sty**

§ 407 Package **pdfcol**

Pkg pdfcol pdfcol is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfcol}[2018/11/01]
2
3 \ltx@newif\ifpdfcolAvailable
4 \pdfcolAvailablefalse
5
6 \def\pdfcolErrorNoStacks{
7 \PackageInfo{lwarp-pdfcol}{Ignoring pdfcol for HTML output.}
8 }
9
10 \def\pdfcolInitStack#1{%
11
12 \long\def\pdfcolIfStackExists#1#2#3{#3}%
13
14 \def\pdfcolSwitchStack#1{%
15
16 \def\pdfcolSetCurrentColor{%
17
18 \def\pdfcolSetCurrent#1{%

```

---

File 306 **lwarp-pdfcolfoot.sty**

§ 408 Package **pdfcolfoot**

Pkg pdfcolfoot pdfcolfoot is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfcolfoot}[2016/05/16]
2
3 \newcommand*{\pdfcolfoot@switch}{}
4
5 \newcommand*{\pdfcolfoot@current}{}

```

---

File 307 **lwarp-pdfcolmk.sty**

§ 409 Package **pdfcolmk**

Pkg pdfcolmk pdfcolmk is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pdfcolmk}[2016/05/16]

```

---

File 308 **lwarp-pdfcolparallel.sty**

§ 410 Package **pdfcolparallel**

Pkg pdfcolparallel pdfcolparallel is ignored.

**for HTML output:**

```

1 \RequirePackage{keyval}%
2
3 \LWR@ProvidesPackageDropA{pdfcolparallel}{2016/05/16}

```

Pass options to parallel:

```

4 \DeclareOption*{%
5 \PassoptionsToPackage{\CurrentOption}{parallel}%
6 }

```

Process the options:

```

7 \LWR@ProvidesPackageDropB

```

Require parallel with the given options:

```

8 \RequirePackage{parallel}[2003/04/13]

```

Ignore the new key:

```

9 \define@key{parallel}{rulebetweencolor}{}

```

---

File 309 **lwarp-pdfcolparcolumns.sty**

§ 411 Package **pdfcolparcolumns**

Pkg pdfcolparcolumns pdfcolparcolumns is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDropA{pdfcolparcolumns}{2016/05/16}

```

Pass options to parcolumns:

```

2 \DeclareOption*{%
3 \PassoptionsToPackage{\CurrentOption}{parcolumns}%
4 }

```

Process the options:

```

5 \LWR@ProvidesPackageDropB

```

Require parcolumns with the given options:

```
6 \RequirePackage{parcolumns}[2004/11/25]
```

Ignore the new key:

```
7 \define@key{LWRparcols}{rulebetweencolor}{}
```

File 310 **lwarp-pdfcomment.sty**

§ 412 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{\pdfcommentssetup}[2][{}]
```

```
12 \newcommand{\listofpdfcomments}[1][{}]
```

```
13 \newcommand{\setliststyle}[1][{}]
```

```
14 \newcommand{\defineliststyle}[2][{}]
```

```
15 \newcommand{\defineavatar}[2][{}]
```

```
16 \newcommand{\definestyle}[2][{}]
```

For MATHJAX:

```
17 \begin{warpMathJax}
```

```
18 \CustomizeMathJax{\newcommand{\pdfmarkupcomment}[3][{}]{#2}}
```

```
19 \CustomizeMathJax{\newcommand{\pdftooltip}[3][{}]{#2}}
```

```
20 \end{warpMathJax}
```

File 311 **lwarp-pdfcrypt.sty**

§ 413 Package **pdfcrypt**

Pkg pdfcrypt pdfcrypt is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfcrypt}[2016/05/16]

```
2 \newcommand*\pdfcryptsetup}[1][{}]
```

---

File 312 **lwarp-pdflandscape.sty**

§ 414 Package **pdfscape**

Pkg pdfscape pdfscape is ignored.

**for HTML output:** Discard all options for lwarp-pdfscape:

```
1 \LWR@ProvidesPackageDrop{pdfscape}[2016/05/14]
```

---

File 313 **lwarp-pdfmarginpar.sty**

§ 415 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 314 **lwarp-pdfpages.sty**

§ 416 Package **pdfpages**

*(Emulates or patches code by ANDREAS MATTHIAS.)*

Pkg pdfpages pdfpages is patched for use by lwarp.

Option link and linkname work:

---

```
\hyperlink{<filename>.pdf.<pagenumber>}{some text}
\hyperlink{<linkname>.<pagenumber>}{some text}
```

---

Options which make no sense in HTML are disabled.

**for HTML output:** 1 \LWR@ProvidesPackagePass{pdfpages}[2017-10-31]

Disable option which have no meaning for HTML output:

```
2 \define@key{pdfpages}{fitpaper}[false]{}
3 \define@key{pdfpages}{landscape}[false]{}

```

```

4 \define@key{pdfpages}{openright}[false]{}
5 \define@key{pdfpages}{signature}{}
6 \define@key{pdfpages}{signature*}{}
7 \define@key{pdfpages}{booklet}[false]{}
8 \define@key{pdfpages}{rotateoversize}[false]{}
9 \define@key{pdfpages}{doublepages}[false]{}
10 \define@key{pdfpages}{doublepagetwist}[false]{}
11 \define@key{pdfpages}{doublepagetwistodd}[false]{}
12 \define@key{pdfpages}{doublepagetwist*}[false]{}
13 \define@key{pdfpages}{doublepagetwistodd*}[false]{}
14 \define@key{pdfpages}{duplicatepages}[2]{}
15 \define@key{pdfpages}{thread}[false]{}
16 \define@key{pdfpages}{threadname}{}
17 \define@key{pdfpages}{linkfit}{}
18 \define@key{pdfpages}{linktodoc}[false]{}
19 \define@key{pdfpages}{linktodocfit}{}
20 \define@key{pdfpages}{linkfilename}{}
21 \define@key{pdfpages}{survey}[false]{}
22 \define@key{pdfpages}{survey-nolink}[false]{}
23 \define@key{pdfpages}{newwindow}[false]{}

```

Use print mode while measuring the page numbers:

```
24 \xpretocmd{\AM@getpagecount}{\LWR@restoreorigformatting}{}{}
```

Emulate a bit of `eso-pic`:

```

25 \newif\ifESO@texcoord
26
27 \newcommand{\ESO@HookIIBG}{}
28
29 \renewcommand{\AM@AddToShipoutPicture}{\g@addto@macro\ESO@HookIIBG}
30
31 \renewcommand{\ClearShipoutPicture}{}

```

`\LWR@esopic@newpage` At each `\newpage`.

```
32 \newcommand*{\LWR@esopic@newpage}{%
```

Is there something to draw?

```

33 \ifdefvoid{\ESO@HookIIBG}%
34 {}%
35 {%

```

If the link option was specified, add a hyper target:

```

36 \ifAM@link%
37 \hypertarget{\AM@linkname.\AM@page}{}%
38 \fi%

```

Draw inside a picture environment of the size of a virtual page:

```

39 \begingroup%
40 \setlength{\unitlength}{1in}%
41 \begin{picture}(8,10.5)%
42 \ESO@HookIIBG%

```

```

43 \end{picture}%
44 \endgroup%
45 \global\let\ESO@HookIIBG\@empty%
46 }
47 }

```

`\AM@output`    Patched to use `\LWR@esopic@newpage`.

```

48 \xpatchcmd{\AM@output}
49 {\newpage}
50 {\LWR@esopic@newpage}
51 {}
52 {\LWR@patcherror{pdfpages}{AM@output-1}}
53
54 \xpatchcmd{\AM@output}
55 {\newpage}
56 {\LWR@esopic@newpage}
57 {}
58 {\LWR@patcherror{pdfpages}{AM@output-2}}
59
60 \xpatchcmd{\AM@output}
61 {\newpage}
62 {\LWR@esopic@newpage}
63 {}
64 {\LWR@patcherror{pdfpages}{AM@output-3}}

```

`\includepdf`    Patched to set the user's paper size.

```

65 \xpretocmd{\includepdf}{%
66 \begin{group}
67 \setlength{\paperwidth}{\LWR@userspaperwidth}%
68 \setlength{\paperheight}{\LWR@userspaperheight}%
69 }{}{}
70
71 \xapptocmd{\includepdf}{%
72 \end{group}%
73 }{}{}

```

`\includepdfmerge`    Patched to set the user's paper size.

```

74 \xpretocmd{\includepdfmerge}{%
75 \begin{group}
76 \setlength{\paperwidth}{\LWR@userspaperwidth}%
77 \setlength{\paperheight}{\LWR@userspaperheight}%
78 }{}{}
79
80 \xapptocmd{\includepdfmerge}{%
81 \end{group}%
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 315 **lwarp-pdfprivacy.sty**

§ 417 Package **pdfprivacy**

Pkg pdfprivacy pdfprivacy is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfprivacy}[2017/12/03]

---

File 316 **lwarp-pdfrender.sty**

§ 418 Package **pdfrender**

Pkg pdfrender pdfrender is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfrender}[2016/05/17]

2 \newcommand\*{\pdfrender}[1]{}

3 \newcommand{\textpdfrender}[2]{#2}

---

File 317 **lwarp-pdfsync.sty**

§ 419 Package **pdfsync**

*(Emulates or patches code by J. LAURENS.)*

Pkg pdfsync pdfsync is ignored.

**for HTML output:** Discard all options for lwarp-pdfsync:

1 \LWR@ProvidesPackageDrop{pdfsync}[2008/01/26]

2 \newcommand\*{\pdfsync}{}  
 3 \newcommand\*{\pdfsyncstart}{}  
 4 \newcommand\*{\pdfsyncstop}{}  


---

File 318 **lwarp-pdftricks.sty**

§ 420 Package **pdftricks**

*(Emulates or patches code by C. V. RADHAKRISHNAN, C. V. RAJAGOPAL, ANTOINE CHAMBERT-LOIR.)*

Pkg pdftricks pdftricks is patched for use by lwarp.

 **convert image files** The `pdftricks` image files `<jobname>-fig*.pdf` must be converted to `.svg`, or else a missing file error will occur. The image files must also be converted again whenever they change. To convert the images:

```
Enter => lwarpmk pdftosvg <jobname>-fig*.pdf
```

**for HTML output:** `1 \LWR@ProvidesPackagePass{pdftricks}[2003/08/10]`

Reuse the print-mode images:

```
2 \def\PDFTfigname{\BaseJobname-fig\thepsfig}
```

If the `.pdf` images have not yet been converted to `.svg` then an error about a missing file will occur. Warn the user to convert the images.

```
3 \PackageWarning{lwarp-pdftricks}{
4 When the pdftricks images change,
5 remember to convert PDF images to SVG using 'lwarpmk pdftosvg *-fig.pdf',
6 }
7
8 \AfterEndDocument{\typeout{***}}
9 \AfterEndDocument{\typeout{*** Note: If pdftricks images are not found, new, or updated,}}
10 \AfterEndDocument{\typeout{*** \space use 'lwarpmk pdftosvg \BaseJobname-fig*.pdf'}}
11 \AfterEndDocument{\typeout{***}}
```

---

File 319 **lwarp-pdfx.sty**

§ 421 Package **pdfx**

Pkg pdfx pdfx is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{pdfx}[2017/05/18]`

---

File 320 **lwarp-perpage.sty**

§ 422 Package **perpage**

*(Emulates or patches code by DAVID KASTRUP.)*

Pkg perpage perpage is mostly ignored, but support is added for footnote counters.

There is no page number in HTML, so most counters are not reset. If the document redefines `\the<countername>` to include `\theperpage`, it is necessary to place that redefinition inside a `warpprint` environment to avoid modifying the HTML definitions.

`\AddAbsoluteCounter` must not be inside `warpprint`, as the counter must be added for HTML also, although it is not incremented.

**footnote numbering** To have footnote numbers reset each time footnotes are printed:

```
\setcounter{footnoteReset}{1}
```

For **bigfoot**, **manyfoot**, or **perpage**:

```
\MakePerPage{footnoteX}
```

— or —

```
\MakeSortedPerPage{footnoteX}
```

The footnotes are reset when they are printed, according to section level as set by `FootnoteDepth`, which is not necessarily by HTML page. This is recommended for `\alph`, `\Alph`, or `\fnsymbol` footnotes, due to the limited number of symbols which are available.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{perpage}[2014/10/25]

2 \newcommand\AddAbsoluteCounter[1]
3 {
4 \ifundefined{c@abs#1}{%
5 \expandafter\newcount\csname c@abs#1\endcsname
6 \global\value{abs#1}\@ne
7 % \global\expandafter\let\csname cl@abs#1\endcsname\@empty
8 \expandafter\xdef\csname theabs#1\endcsname{%
9 % \noexpand\number \csname c@abs#1\endcsname
10 }%
11 % \global\@namedef{c@pabs@#1}{\pp@cl@begin
12 % \stepcounter{abs#1}%
13 % \pp@cl@end}%
14 % \@addtoreset{pabs@#1}{#1}
15 }
16 {}
17 }
18
19 \AddAbsoluteCounter{page}
20 \def\theabspage{1}
21
22 \newcommand*\MakePerPage[2][1]{%
23 \ifltxcounter{#2Reset}{%
24 \setcounter{#2Reset}{#1}%
25 }{
26
27 }%
28 }
29
30 \newcommand*\MakeSorted[1]{}
31
32 \newcommand*\MakeSortedPerPage[2][1]{%
33 \ifltxcounter{#2Reset}{%
34 \setcounter{#2Reset}{#1}%
35 }{
36 }%
37 }
38
39 \newcommand*\theperpage{1}
```

File 321 **lwarp-pfnote.sty**

§ 423 Package **pfnote**

Pkg pfnote pfnote is ignored.

 **pfnote** While emulating pfnote, lwarp is not able to reset HTML footnote numbers per page number to match the printed version, as HTML has no concept of page numbers. lwarp therefore uses continuous footnote numbering even for pfnote.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pfnote}[1999/07/14]

File 322 **lwarp-phfqit.sty**

§ 424 Package **phfqit**

*(Emulates or patches code by PHILIPPE FAIST.)*

Pkg phfqit phfqit is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{phfqit}[2017/08/16]

```

2 \LetLtxMacro\LWR@origbitstring\bitstring
3
4 \renewcommand\bitstring[1]{%
5 \InlineClass[%
6 text-decoration: overline underline ;
7]{bitstring}{#1}%
8 % \phfqit@bitstring{#1}%
9 }
10
11 \appto\LWR@restoreorigformatting{%
12 \LetLtxMacro\bitstring\LWR@origbitstring%
13 }
```

File 323 **lwarp-physics.sty**

§ 425 Package **physics**

*(Emulates or patches code by SERGIO C. DE LA BARRERA.)*

Pkg physics physics works as-is for HTML with SVG math.

For MATHJAX, emulation is provided via MATHJAX macros. These are not the same as the third-party MATHJAX extension.

- The `notrig` option is honored.
- ⚠ • Starred macros are not yet detected.
- ⚠ • Most macros don't work with `\big`, etc.
- ⚠ • Macros do not auto-detect variable numbers of mandatory arguments. Provide empty `{}` arguments for those which are not used.
- ⚠ • Many of the macros do not work with auto-detected delimiters. Use the delimiter-specific versions instead. Some macros do not even consider the following arguments, so they may work as expected.
- ⚠ • For `\Re` and `\Im`, the arguments must be in braces.
- For `\functionalderivative`, for the example in the manual with  $(E - TS)$ , enclose the parens in braces.
- ⚠ • `\expectationvalue` requires and uses two mandatory arguments, unlike the third-party MATHJAX physics extension.
- Each of `\matrixquantity`, `\smallmatrixquantity`, and `\matrixdeterminant` work, while `\identitymatrix` and the following simply print a place-holder, and must be replaced by hand.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{physics}% No date is provided by the package.

2 % doesn't work with \big, etc:
3 \begin{warpMathJax}
4 \LWR@infoprocessingmathjax{physics}
5
6 \CustomizeMathJax{\newcommand{\quantity}{}}
7 \CustomizeMathJax{\let\qty\quantity}
8 \CustomizeMathJax{\newcommand{\pqty}[1]{\left(#1\right)}}
9 \CustomizeMathJax{\newcommand{\bqty}[1]{\left\llbracket#1\right\rrbracket}}
10 \CustomizeMathJax{\newcommand{\vqty}[1]{\left\lvert#1\right\rvert}}
11 \CustomizeMathJax{\newcommand{\Bqty}[1]{\left\llbrace#1\right\llbrace}}
12
13 % doesn't work with \big, etc., no star
14 \CustomizeMathJax{\newcommand{\absolutevalue}[1]{\left\lvert#1\right\rvert}}
15 \CustomizeMathJax{\let\abs\absolutevalue}
16
17 % doesn't work with \big, etc., no star
18 \CustomizeMathJax{\newcommand{\norm}[1]{%
19 \left\lvert\left\lvert#1\right\rvert\right\rvert}}
20 }
21
22 % doesn't work with \big, etc., no star, no paren or bracket
23 \CustomizeMathJax{\newcommand{\evaluated}[1]{#1\vert}}
24 \CustomizeMathJax{\let\eval\evaluated}
25
26 % no \Big, star
27 \CustomizeMathJax{\newcommand{\order}[1]{\mathcal{O}\left(#1\right)}}
28
29 % no \Big, star

```

```

30 \CustomizeMathJax{\newcommand{\commutator}[2]{\left\lbrack#1,#2\right\rbrack}}
31 \CustomizeMathJax{\let\comm\commutator}
32
33 % no \Big, star
34 \CustomizeMathJax{\newcommand{\anticommutator}[2]{%
35 \left\lbrack#1,#2\right\rbrack}%
36 }
37 \CustomizeMathJax{\let\acomm\anticommutator}
38
39 % no \Big, star
40 \CustomizeMathJax{\let\poissonbracket\anticommutator}
41 \CustomizeMathJax{\let\pb\anticommutator}
42
43 % no star
44 \CustomizeMathJax{\newcommand{\vectorbold}[1]{\mathbf{#1}}}
45 \CustomizeMathJax{\let\vb\vectorbold}
46
47 % no star
48 \CustomizeMathJax{\newcommand{\vectorarrow}[1]{\vec{\mathbf{#1}}}}
49 \CustomizeMathJax{\let\va\vectorarrow}
50
51 % no star
52 \CustomizeMathJax{\newcommand{\vectorunit}[1]{\mathbf{\hat{#1}}}}
53 \CustomizeMathJax{\let\va\vectorunit}
54
55 \CustomizeMathJax{\newcommand{\dotproduct}{\boldsymbol\cdot}}
56 \CustomizeMathJax{\let\vdot\dotproduct}
57
58 \CustomizeMathJax{\newcommand{\crossproduct}{\boldsymbol\times}}
59 \CustomizeMathJax{\let\cross\crossproduct}
60 \CustomizeMathJax{\let\cp\crossproduct}
61
62 \CustomizeMathJax{\newcommand{\gradient}{\mathbf{\nabla}}}
63 \CustomizeMathJax{\let\grad\gradient}
64
65 \CustomizeMathJax{\let\divisionsymbol\div}
66
67 \CustomizeMathJax{\newcommand{\divergence}{\nabla\cdot}}
68 \CustomizeMathJax{\let\div\divergence}
69
70 \CustomizeMathJax{\newcommand{\curl}{\nabla\cross}}
71
72 \CustomizeMathJax{\newcommand{\laplacian}{\nabla^2}}
73
74 % responds to notrig option
75 \ifx\trigopt 1
76 \CustomizeMathJax{\DeclareMathOperator{\sine}{sin}}
77 \CustomizeMathJax{\DeclareMathOperator{\cosine}{cos}}
78 \CustomizeMathJax{\DeclareMathOperator{\tangent}{tan}}
79 \CustomizeMathJax{\DeclareMathOperator{\cosecant}{csc}}
80 \CustomizeMathJax{\DeclareMathOperator{\secant}{sec}}
81 \CustomizeMathJax{\DeclareMathOperator{\cotangent}{cot}}
82 \CustomizeMathJax{\DeclareMathOperator{\arcsine}{arcsin}}
83 \CustomizeMathJax{\DeclareMathOperator{\arccosine}{arccos}}
84 \CustomizeMathJax{\DeclareMathOperator{\arctangent}{arctan}}

```

```

85 \CustomizeMathJax{\DeclareMathOperator{\hypusine}{sinh}}
86 \CustomizeMathJax{\DeclareMathOperator{\hypcosine}{cosh}}
87 \CustomizeMathJax{\DeclareMathOperator{\hyptangent}{tanh}}
88 \CustomizeMathJax{\DeclareMathOperator{\hypcotangent}{coth}}
89 \CustomizeMathJax{\DeclareMathOperator{\exponential}{exp}}
90 \CustomizeMathJax{\DeclareMathOperator{\logarithm}{log}}
91 \CustomizeMathJax{\DeclareMathOperator{\naturallogarithm}{\ln}}
92 \CustomizeMathJax{\DeclareMathOperator{\determinant}{det}}
93 \CustomizeMathJax{\DeclareMathOperator{\Probability}{Pr}}
94 \CustomizeMathJax{\newcommand{\sin}[1][{}]{\mathrm{sin}^{\#1}}}
95 \CustomizeMathJax{\newcommand{\sinh}[1][{}]{\mathrm{sinh}^{\#1}}}
96 \CustomizeMathJax{\newcommand{\arcsin}[1][{}]{\mathrm{arcsin}^{\#1}}}
97 \CustomizeMathJax{\newcommand{\asin}[1][{}]{\mathrm{asin}^{\#1}}}
98 \CustomizeMathJax{\newcommand{\cos}[1][{}]{\mathrm{cos}^{\#1}}}
99 \CustomizeMathJax{\newcommand{\cosh}[1][{}]{\mathrm{cosh}^{\#1}}}
100 \CustomizeMathJax{\newcommand{\arccos}[1][{}]{\mathrm{arccos}^{\#1}}}
101 \CustomizeMathJax{\newcommand{\acos}[1][{}]{\mathrm{acos}^{\#1}}}
102 \CustomizeMathJax{\newcommand{\tan}[1][{}]{\mathrm{tan}^{\#1}}}
103 \CustomizeMathJax{\newcommand{\tanh}[1][{}]{\mathrm{tanh}^{\#1}}}
104 \CustomizeMathJax{\newcommand{\arctan}[1][{}]{\mathrm{arctan}^{\#1}}}
105 \CustomizeMathJax{\newcommand{\atan}[1][{}]{\mathrm{atan}^{\#1}}}
106 \CustomizeMathJax{\newcommand{\csc}[1][{}]{\mathrm{csc}^{\#1}}}
107 \CustomizeMathJax{\newcommand{\csch}[1][{}]{\mathrm{csch}^{\#1}}}
108 \CustomizeMathJax{\newcommand{\arccsc}[1][{}]{\mathrm{arccsc}^{\#1}}}
109 \CustomizeMathJax{\newcommand{\acsc}[1][{}]{\mathrm{acsc}^{\#1}}}
110 \CustomizeMathJax{\newcommand{\sec}[1][{}]{\mathrm{sec}^{\#1}}}
111 \CustomizeMathJax{\newcommand{\sech}[1][{}]{\mathrm{sech}^{\#1}}}
112 \CustomizeMathJax{\newcommand{\arcsec}[1][{}]{\mathrm{arcsec}^{\#1}}}
113 \CustomizeMathJax{\newcommand{\asec}[1][{}]{\mathrm{asec}^{\#1}}}
114 \CustomizeMathJax{\newcommand{\cot}[1][{}]{\mathrm{cot}^{\#1}}}
115 \CustomizeMathJax{\newcommand{\coth}[1][{}]{\mathrm{coth}^{\#1}}}
116 \CustomizeMathJax{\newcommand{\arccot}[1][{}]{\mathrm{arccot}^{\#1}}}
117 \CustomizeMathJax{\newcommand{\acot}[1][{}]{\mathrm{acot}^{\#1}}}
118 \else
119 \CustomizeMathJax{\DeclareMathOperator{\arccsc}{arccsc}}
120 \CustomizeMathJax{\DeclareMathOperator{\arcsec}{arcsec}}
121 \CustomizeMathJax{\DeclareMathOperator{\arccot}{arccot}}
122 \CustomizeMathJax{\DeclareMathOperator{\asin}{asin}}
123 \CustomizeMathJax{\DeclareMathOperator{\acos}{acos}}
124 \CustomizeMathJax{\DeclareMathOperator{\atan}{atan}}
125 \CustomizeMathJax{\DeclareMathOperator{\acsc}{acsc}}
126 \CustomizeMathJax{\DeclareMathOperator{\asec}{asec}}
127 \CustomizeMathJax{\DeclareMathOperator{\acot}{acot}}
128 \CustomizeMathJax{\DeclareMathOperator{\csch}{csch}}
129 \CustomizeMathJax{\DeclareMathOperator{\sech}{sech}}
130 \CustomizeMathJax{\newcommand{\tr}{\trace}}
131 \CustomizeMathJax{\newcommand{\Tr}{\Trace}}
132 \CustomizeMathJax{\newcommand{\Res}{\Residue}}
133 \fi
134
135 \CustomizeMathJax{\DeclareMathOperator{\trace}{tr}}
136 \CustomizeMathJax{\let\tr\trace}
137 \CustomizeMathJax{\DeclareMathOperator{\Trace}{Tr}}
138 \CustomizeMathJax{\let\Tr\Trace}
139 \CustomizeMathJax{\DeclareMathOperator{\rank}{rank}}

```

```

140 \CustomizeMathJax{\DeclareMathOperator{\erf}{erf}}
141 \CustomizeMathJax{\DeclareMathOperator{\Residue}{Res}}
142 \CustomizeMathJax{\newcommand{\principalvalue}{\mathcal{P}}}
143 \CustomizeMathJax{\let\pv\principalvalue}
144 \CustomizeMathJax{\newcommand{\PV}{\text{P.V.}}}
145 \CustomizeMathJax{\newcommand{\real}{\mathcal{R}}}
146 \CustomizeMathJax{\newcommand{\imaginary}{\mathcal{I}}}
147
148 % must be brace arguments
149 \CustomizeMathJax{\newcommand{\Re}[1]{\mathrm{Re}\left\lbrace#1\right\rbrace}}
150 \CustomizeMathJax{\newcommand{\Im}[1]{\mathrm{Im}\left\lbrace#1\right\rbrace}}
151
152 \CustomizeMathJax{\newcommand{\qqtext}[1]{\quad\mathrm{#1}\quad}}
153 \CustomizeMathJax{\let\qq\qqtext}
154 \CustomizeMathJax{\newcommand{\qqcomma}{\text{,}\quad}}
155 \CustomizeMathJax{\let\qc\qqcomma}
156 \CustomizeMathJax{\newcommand{\qcc}{\quad\text{c.c.}\quad}}
157 \CustomizeMathJax{\let\qcc}
158 \CustomizeMathJax{\newcommand{\qif}{\quad\text{if}\quad}}
159 \CustomizeMathJax{\newcommand{\qthen}{\quad\text{then}\quad}}
160 \CustomizeMathJax{\newcommand{\qelse}{\quad\text{else}\quad}}
161 \CustomizeMathJax{\newcommand{\qotherwise}{\quad\text{otherwise}\quad}}
162 \CustomizeMathJax{\newcommand{\qunless}{\quad\text{unless}\quad}}
163 \CustomizeMathJax{\newcommand{\qgiven}{\quad\text{given}\quad}}
164 \CustomizeMathJax{\newcommand{\qusing}{\quad\text{using}\quad}}
165 \CustomizeMathJax{\newcommand{\qassume}{\quad\text{assume}\quad}}
166 \CustomizeMathJax{\newcommand{\qsince}{\quad\text{since}\quad}}
167 \CustomizeMathJax{\newcommand{\qlet}{\quad\text{let}\quad}}
168 \CustomizeMathJax{\newcommand{\qfor}{\quad\text{for}\quad}}
169 \CustomizeMathJax{\newcommand{\qall}{\quad\text{all}\quad}}
170 \CustomizeMathJax{\newcommand{\qeven}{\quad\text{even}\quad}}
171 \CustomizeMathJax{\newcommand{\qodd}{\quad\text{odd}\quad}}
172 \CustomizeMathJax{\newcommand{\qinteger}{\quad\text{integer}\quad}}
173 \CustomizeMathJax{\newcommand{\qand}{\quad\text{and}\quad}}
174 \CustomizeMathJax{\newcommand{\qor}{\quad\text{or}\quad}}
175 \CustomizeMathJax{\newcommand{\qas}{\quad\text{as}\quad}}
176 \CustomizeMathJax{\newcommand{\qin}{\quad\text{in}\quad}}
177
178 \CustomizeMathJax{\newcommand{\differential}[1][1]{\text{d}^{#1}}}
179 \CustomizeMathJax{\let\dd\differential}
180
181 \CustomizeMathJax{\newcommand{\derivative}[3][1]{%
182 \frac{\text{d}^{#1}\#2}{\text{d}^{#3}\#1}}%
183 }
184 \CustomizeMathJax{\let\dv\derivative}
185
186 \CustomizeMathJax{\newcommand{\partialderivative}[3][1]{%
187 \frac{\partial^{#1}\#2}{\partial^{#3}\#1}}%
188 }
189 \CustomizeMathJax{\let\pderivative\partialderivative}
190 \CustomizeMathJax{\let\pdv\partialderivative}
191
192 \CustomizeMathJax{\newcommand{\variation}{\delta}}
193 \CustomizeMathJax{\let\var\variation}
194

```

```

195 % Must provide two mandatory args.
196 % For the example in the manual with (E-TS), enclose the parens in braces
197 \CustomizeMathJax{\newcommand{\functionalderivative}[3][1]{\left\langle\right\rangle}
198 \frac{\delta^{\#1}\#2}{\delta^{\#3}\#1}}%
199 }
200 \CustomizeMathJax{\let\fdv\functionalderivative}
201
202
203 % use \braket to contract
204 \CustomizeMathJax{\newcommand{\bra}[1]{\langle\#1\rangle}}
205 \CustomizeMathJax{\newcommand{\ket}[1]{\lvert\#1\rangle}}
206
207 % must have two args
208 \CustomizeMathJax{\newcommand{\innerproduct}[2]{\left\langle\#1\middle\vert\#2\right\rangle}}
209 \left\langle\#1\middle\vert\#2\right\rangle}%
210 }
211 \CustomizeMathJax{\let\braket\innerproduct}
212 \CustomizeMathJax{\let\ip\innerproduct}
213
214 % must have two args
215 \CustomizeMathJax{\newcommand{\outerproduct}[2]{\left\lvert\#1\middle\rangle!\middle\langle\#2\right\rvert}}
216 \left\lvert\#1\middle\rangle!\middle\langle\#2\right\rvert}%
217 }
218 \CustomizeMathJax{\let\dyad\outerproduct}
219 \CustomizeMathJax{\let\op\outerproduct}
220
221 % must have two args, unlike the MathJax version
222 \CustomizeMathJax{\newcommand{\expectationvalue}[2]{\left\langle\#2\middle\vert\#1\middle\vert\#2\right\rangle}}
223 \left\langle\#2\middle\vert\#1\middle\vert\#2\right\rangle}%
224 }
225 \CustomizeMathJax{\let\expval\expectationvalue}
226 \CustomizeMathJax{\let\ev\expectationvalue}
227
228 \CustomizeMathJax{\newcommand{\matricelement}[3]{\left\langle\#1\middle\vert\#2\middle\vert\#3\right\rangle}}
229 \left\langle\#1\middle\vert\#2\middle\vert\#3\right\rangle}%
230 }
231 \CustomizeMathJax{\let\mel\matricelement}
232
233 \CustomizeMathJax{\newcommand{\matrixquantity}[1]{\begin{matrix}\#1\end{matrix}}}
234 \CustomizeMathJax{\let\mqty\matrixquantity}
235 \CustomizeMathJax{\newcommand{\pmqty}[1]{\begin{pmatrix}\#1\end{pmatrix}}}
236 \CustomizeMathJax{\newcommand{\Pmqty}[1]{\left\lgroup\begin{matrix}\#1\end{matrix}\right\rgroup}}
237 \left\lgroup\begin{matrix}\#1\end{matrix}\right\rgroup}%
238 }
239 \CustomizeMathJax{\newcommand{\bmqty}[1]{\begin{bmatrix}\#1\end{bmatrix}}}
240 \CustomizeMathJax{\newcommand{\vmqty}[1]{\begin{vmatrix}\#1\end{vmatrix}}}
241
242 \CustomizeMathJax{\newcommand{\smallmatrixquantity}[1]{\begin{smallmatrix}\#1\end{smallmatrix}}}
243 \begin{smallmatrix}\#1\end{smallmatrix}}%
244 }
245 \CustomizeMathJax{\let\smqty\smallmatrixquantity}
246 \CustomizeMathJax{\newcommand{\spmqty}[1]{\pqty{\begin{smallmatrix}\#1\end{smallmatrix}}}}
247 \pqty{\begin{smallmatrix}\#1\end{smallmatrix}}}%
248 }
249 \CustomizeMathJax{\newcommand{\sPmqty}[1]{\Pmqty}[1]}%

```

```

250 \left\lgroup\begin{smallmatrix}#1\end{smallmatrix}\right\rgroup}%
251 }
252 \CustomizeMathJax{\newcommand{\sbmqty}[1]{%
253 \bqty{\begin{smallmatrix}#1\end{smallmatrix}}}%
254 }
255 \CustomizeMathJax{\newcommand{\svmqty}[1]{%
256 \vqty{\begin{smallmatrix}#1\end{smallmatrix}}}%
257 }
258
259 \CustomizeMathJax{\let\matrixdeterminant\vmqty}
260 \CustomizeMathJax{\let\mdet\vmqty}
261 \CustomizeMathJax{\let\smdet\svmqty}
262
263 \CustomizeMathJax{\newcommand{\identitymatrix}[1]{(\text{imat}\{#1\})}}
264 \CustomizeMathJax{\let\imat\identitymatrix}
265
266 \CustomizeMathJax{\newcommand{\xmatrix}[3]{(\text{xmat}\{\}\{#2\}\{#3\})}}
267 \CustomizeMathJax{\let\xmat\xmatrix}
268
269 \CustomizeMathJax{\newcommand{\zeromatrix}[2]{(\text{zmat}\{#1\}\{#2\})}}
270 \CustomizeMathJax{\let\zmat\zeromatrix}
271
272 \CustomizeMathJax{\newcommand{\paulimatrix}[1]{(\text{pmat}\{#1\})}}
273 \CustomizeMathJax{\let\pmat\paulimatrix}
274
275 \CustomizeMathJax{\newcommand{\diagonalmatrix}[2][]{%
276 \left(\text{dmat}\right)}%
277 }
278 \CustomizeMathJax{\let\dmat\diagonalmatrix}
279
280 \CustomizeMathJax{\newcommand{\antidiagonalmatrix}[2][]{%
281 \left(\text{admat}\right)}%
282 }
283 \CustomizeMathJax{\let\admat\antidiagonalmatrix}
284 \end{warpMathJax}

```

---

File 324 **lwarp-physunits.sty**

§ 426 Package **physunits**

(Emulates or patches code by BRIAN W. MULLIGAN.)

Pkg physunits **physunits** is supported as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{physunits}[2020/03/26]
2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{physunits}
4
5 \CustomizeMathJax{\newcommand{\micro}{\mu}}
6 \CustomizeMathJax{\newcommand{\V}[1][]{\,\mathrm{#1V}}}
7 \CustomizeMathJax{\newcommand{\Volt}[1][]{\,\mathrm{#1V}}}
8 \CustomizeMathJax{\newcommand{\Coulomb}[1][]{\,\mathrm{#1C}}}

```

```

9 \CustomizeMathJax{\newcommand{\esu}{\, \mathrm{esu}}}
10 \CustomizeMathJax{\newcommand{\Ohm}[1][]{\, \mathrm{#1\Omega}}}
11 \CustomizeMathJax{\newcommand{\Amp}[1][]{\, \mathrm{#1A}}}
12 \CustomizeMathJax{\newcommand{\Farad}[1][]{\, \mathrm{#1F}}}
13 \CustomizeMathJax{\newcommand{\Tesla}[1][]{\, \mathrm{#1T}}}
14 \CustomizeMathJax{\newcommand{\Gauss}[1][]{\, \mathrm{#1G}}}
15 \CustomizeMathJax{\newcommand{\Henry}[1][]{\, \mathrm{#1H}}}
16 \CustomizeMathJax{\newcommand{\eV}[1][]{\, \mathrm{#1eV}}}
17 \CustomizeMathJax{\newcommand{\keV}{\, \mathrm{keV}}}
18 \CustomizeMathJax{\newcommand{\MeV}{\, \mathrm{MeV}}}
19 \CustomizeMathJax{\newcommand{\J}[1][]{\, \mathrm{#1J}}}
20 \CustomizeMathJax{\newcommand{\Joule}[1][]{\, \mathrm{#1J}}}
21 \CustomizeMathJax{\newcommand{\erg}{\, \mathrm{erg}}}
22 \CustomizeMathJax{\newcommand{\kcal}{\, \mathrm{kcal}}}
23 \CustomizeMathJax{\newcommand{\Cal}{\, \mathrm{Cal}}}
24 \CustomizeMathJax{\newcommand{\calorie}[1][]{\, \mathrm{#1cal}}}
25 \CustomizeMathJax{\newcommand{\BTU}{\, \mathrm{BTU}}}
26 \CustomizeMathJax{\newcommand{\tnt}{\, \mathrm{ton\, of\, TNT}}}
27 \CustomizeMathJax{\newcommand{\Watt}[1][]{\, \mathrm{#1W}}}
28 \CustomizeMathJax{\newcommand{\hpi}{\, \mathrm{hp(I)}}}
29 \CustomizeMathJax{\newcommand{\hpm}{\, \mathrm{hp(M)}}}
30 \CustomizeMathJax{\newcommand{\hp}{\, \mathrm{hp}}}
31 \CustomizeMathJax{\newcommand{\meter}[1][]{\, \mathrm{#1m}}}
32 \CustomizeMathJax{\newcommand{\m}[1][]{\, \mathrm{#1m}}}
33 \CustomizeMathJax{\newcommand{\km}{\, \mathrm{km}}}
34 \CustomizeMathJax{\newcommand{\au}{\, \mathrm{au}}}
35 \CustomizeMathJax{\newcommand{\pc}[1][]{\, \mathrm{#1pc}}}
36 \CustomizeMathJax{\newcommand{\ly}[1][]{\, \mathrm{#1ly}}}
37 \CustomizeMathJax{\newcommand{\cm}{\, \mathrm{cm}}}
38 \CustomizeMathJax{\newcommand{\nm}{\, \mathrm{nm}}}
39 \CustomizeMathJax{\newcommand{\ft}{\, \mathrm{ft}}}
40 \CustomizeMathJax{\newcommand{\inch}{\, \mathrm{in}}}
41 \CustomizeMathJax{\newcommand{\mi}{\, \mathrm{mi}}}
42 \CustomizeMathJax{\newcommand{\s}[1][]{\, \mathrm{#1s}}}
43 \CustomizeMathJax{\newcommand{\Sec}[1][]{\, \mathrm{#1s}}}
44 \CustomizeMathJax{\newcommand{\Min}{\, \mathrm{min}}}
45 \CustomizeMathJax{\newcommand{\h}{\, \mathrm{h}}}
46 \CustomizeMathJax{\newcommand{\y}[1][]{\, \mathrm{#1y}}}
47 \CustomizeMathJax{\newcommand{\Day}{\, \mathrm{d}}}
48
49 \CustomizeMathJax{\newcommand{\gm}[1][]{\, \mathrm{#1g}}}
50 \CustomizeMathJax{\newcommand{\kg}{\, \mathrm{kg}}}
51 \CustomizeMathJax{\newcommand{\lb}{\, \mathrm{lb}}}
52 \CustomizeMathJax{\newcommand{\amu}{\, \mathrm{amu}}}
53 \CustomizeMathJax{\newcommand{\N}[1][]{\, \mathrm{#1N}}}
54 \CustomizeMathJax{\newcommand{\Newton}[1][]{\, \mathrm{#1N}}}
55 \CustomizeMathJax{\newcommand{\dyne}[1][]{\, \mathrm{#1dyn}}}
56 \CustomizeMathJax{\newcommand{\lbf}{\, \mathrm{lbf}}}
57 \CustomizeMathJax{\newcommand{\kmph}{\, \mathrm{km}\, \mathrm{s}^{-1}}}
58 \CustomizeMathJax{\newcommand{\kmph}{\, \mathrm{km}\, \mathrm{h}^{-1}}}
59 \CustomizeMathJax{\newcommand{\mps}[1][]{\, \mathrm{#1m}\, \mathrm{s}^{-1}}}
60 \CustomizeMathJax{\newcommand{\miph}{\, \mathrm{mi}\, \mathrm{h}^{-1}}}
61 \CustomizeMathJax{\newcommand{\kts}{\, \mathrm{kts}}}
62
63 \CustomizeMathJax{\newcommand{\mpss}[1][]{\, \mathrm{#1m}\, \mathrm{s}^{-2}}}

```

```

64 \CustomizeMathJax{\newcommand{\gacc}{\, \mathrm{g}}}
65 \CustomizeMathJax{\newcommand{\ftpss}{\, \mathrm{ft}\, \mathrm{s}^{-2}}}
66 \CustomizeMathJax{\newcommand{\K}[1][]{\, \mathrm{#1K}}}
67 \CustomizeMathJax{\newcommand{\Kelvin}[1][]{\, \mathrm{#1K}}}
68 \CustomizeMathJax{\newcommand{\Celcius}{\, ^\circ\mathrm{C}}}
69 \CustomizeMathJax{\newcommand{\Rankine}{\, ^\circ\mathrm{R}}}
70 \CustomizeMathJax{\newcommand{\Fahrenheit}{\, ^\circ\mathrm{F}}}
71
72 \CustomizeMathJax{\newcommand{\rpm}{\, \mathrm{rev}\, \mathrm{Min}^{-1}}}
73
74 \CustomizeMathJax{\newcommand{\Hz}[1][]{\, \mathrm{#1Hz}}}
75 \CustomizeMathJax{\newcommand{\barP}[1][]{\, \mathrm{#1bar}}}
76 \CustomizeMathJax{\newcommand{\atm}{\, \mathrm{atm}}}
77 \CustomizeMathJax{\newcommand{\Pa}[1][]{\, \mathrm{#1Pa}}}
78 \CustomizeMathJax{\newcommand{\mmHg}{\, \mathrm{mmHg}}}
79 \CustomizeMathJax{\newcommand{\inHg}{\, \mathrm{inHg}}}
80 \CustomizeMathJax{\newcommand{\lbsi}{\, \mathrm{psi}}}
81 \CustomizeMathJax{\newcommand{\lbsf}{\, \mathrm{psf}}}
82 \CustomizeMathJax{\newcommand{\Ba}[1][]{\, \mathrm{#1Ba}}}
83 \CustomizeMathJax{\newcommand{\Torr}[1][]{\, \mathrm{#1Torr}}}
84 \CustomizeMathJax{\newcommand{\mol}{\, \mathrm{mol}}}
85 \end{CustomizeMathJax}

```

---

File 325 **lwarp-pifont.sty**

§ 427 Package **pifont**

*(Emulates or patches code by WALTER SCHMIDT.)*

Pkg pifont pifont is patched for use by lwarp.

Hashed inline images are used, as there may not be Unicode support for all icons.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pifont}[2005/04/12]
2 \renewcommand{\Pisymbol}[2]{%
3 \begin{lateximage}*[Pisymbol][pisymbol#1#2]%
4 {\Pifont{#1}\char#2}%
5 \end{lateximage}%
6 }
7
8 \newcommand{\LWR@HTML@Pifill}[2]{
9 \Pisymbol{#1}{#2} \Pisymbol{#1}{#2} \Pisymbol{#1}{#2}
10 }
11 \LWR@formatted{Pifill}
12
13 \newcommand{\LWR@HTML@Piline}[2]{%
14 \par\noindent\hspace*{0.5in}
15 \Pifill{#1}{#2} \Pifill{#1}{#2} \Pifill{#1}{#2}
16 }
17 \LWR@formatted{Piline}

```

File 326 **lwarp-placeins.sty**

§ 428 Package **placeins**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg placeins placeins is ignored.

Discard all options for lwarp-placeins:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{placeins}[2005/04/18]
2 \newcommand*{\FloatBarrier}{}

```

File 327 **lwarp-plarydshln.sty**

§ 429 Package **plarydshln**

Pkg plarydshln plarydshln is emulated by lwarp-arydshln.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{plarydshln}[2018/10/20]
2 \LWR@origRequirePackage{lwarp-arydshln}

```

File 328 **lwarp-plext.sty**

§ 430 Package **plext**

Pkg plext plext is preloaded by jarticle and related classes.

**for HTML output:**

```
1 \LWR@loadbefore{plext}
2
3 \LWR@ProvidesPackagePass{plext}[2017/07/21]

4 \let\tate\relax
5
6 \DeclareExpandableDocumentCommand{\rensuji}{s o m}{#3}
7
8 % \layoutfloat(width,height)[pos]#4
9 \DeclareDocumentCommand{\layoutfloat}{d() o m}{}
10
11 % \DeclareLayoutCaption{type} <dir>(width)[pos1pos2]
12 \DeclareDocumentCommand{\DeclareLayoutCaption}{m d<> d() o}{}
13
14 \LetLtxMacro\pcaption\caption

```

```

15
16 % \layoutcaption<dir>(width)[pos]
17 \DeclareDocumentCommand{\layoutcaption}{d<> d() o{}}
18
19 \let\captiondir\relax

```

Add the optional <t/y> direction:

```

20 \RenewDocumentEnvironment{LWR@HTML@minipage}{d<> O{t} O{ } O{t} m}
21 {\LWR@HTML@sub@minipage{#2}{#3}{#4}{#5}}
22 {\endLWR@HTML@sub@minipage}
23
24 \RenewDocumentCommand{\LWR@HTML@parbox}{d<> O{t} O{ } O{t} m +m}
25 {
26 \LWR@traceinfo{parbox of width #4}%
27 \begin{minipage}[#2][#3][#4]{#5}%
28 #6
29 \end{minipage}%
30 }
31
32 % \pbox <t/y> [width] [l/r] {contents}
33 \RenewDocumentCommand{\pbox}{d<> O{0pt} O{c} m}{%
34 \global\booltrue{LWR@minipagefullwidth}%
35 \parbox{#2}{#4}%
36 }

```

picture, as modified by pext, is encapsulated by the lwarp core.

---

File 329 **lwarp-plextarydshln.sty**

§ 431 Package **plextarydshln**

Pkg plextarydshln plextarydshln is emulated by lwarp-arydshln.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{plextarydshln}[2018/10/20]
2 \LWR@origRequirePackage{lwarp-arydshln}

```

---

File 330 **lwarp-plextcolortbl.sty**

§ 432 Package **plextcolortbl**

Pkg plextcolortbl plextcolortbl is emulated by lwarp-colortbl.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{plextcolortbl}[2018/09/19]
2 \LWR@origRequirePackage{lwarp-colortbl}

```

---

File 331 **lwarp-prelim2e.sty**

§ 433 Package **prelim2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg `prelim2e` `prelim2e` is ignored.

**for HTML output:** Discard all options for `lwarp-prelim2e`:

```
1 \LWR@ProvidesPackageDrop{prelim2e}[2009/05/29]

2 \newcommand{\PrelimText}{}
3 \newcommand{\PrelimTextStyle}{}
4 \newcommand{\PrelimWords}{}

```

---

File 332 **lwarp-prettyref.sty**

§ 434 Package **prettyref**

*(Emulates or patches code by KEVIN S. RULAND.)*

Pkg `prettyref` `prettyref` is patched for use by `lwarp`.

**for HTML output:** `1 \LWR@ProvidesPackagePass{prettyref}[1998/07/09]`

```
2 \newreformat{fig}{Figure \ref{#1}}
3 \newreformat{tab}{Table \ref{#1}}

```

---

File 333 **lwarp-preview.sty**

§ 435 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 334 **lwarp-psfrag.sty**

§ 436 Package **psfrag**

*(Emulates or patches code by MICHAEL C. GRANT, DAVID CARLISLE.)*

Pkg psfrag **psfrag** is patched for use by **lwarp**.

 **use psfrags** The `psfrags` environment is modified to use `lateximage` to encapsulate the image. Always use a `psfrags` environment to contain any local `\psfrag` macros and the associated `\includegraphics` or `\epsfig` calls. Outside of a `psfrags` environment, `psfrags` adjustments will not be seen by **lwarp**.

 **Tip:** Use a mono-spaced font for the tags in the EPS file.

**for HTML output:** 1 \LWR@ProvidesPackagePass{psfrag}[1998/04/11]

A `lateximage` captures the modified image from the document.

```
2 \BeforeBeginEnvironment{psfrags}{%
3 \begin{lateximage}[-psfrags--\PackageDiagramAltText]%
4 }
5
6 \AfterEndEnvironment{psfrags}{\end{lateximage}}
```

---

File 335 **lwarp-psfragx.sty**

§ 437 Package **psfragx**

*(Emulates or patches code by PASCAL KOCKAERT.)*

Pkg psfragx **psfragx** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{psfragx}[2012/05/02]

A `lateximage` captures the modified image from the document.

```
2 \def\pfx@includegraphicx#1#2{%
3 \begin{lateximage}[-psfragx--\PackageDiagramAltText]%
4 \mbox{\pfx@overpix{#1}{#2}\endpfx@overpix}%
5 \end{lateximage}%
6 }
7
8 \def\@@@overpix[#1]<#2>[#3]#4{%
9 \begin{lateximage}[-psfragx--\PackageDiagramAltText]%
10 \pfx@overpix{#1,ovpfgd={#2},ovpbgd={#3}}{#4}%
11 }
12
```

```

13 \def\endoverpix{%
14 \endpfx@overpix%
15 \end{lateximage}%
16 }

```

---

File 336 **lwarp-pst-eps.sty**

§ 438 Package **pst-eps**

*(Emulates or patches code by HERBERT VOSS.)*

Pkg pst-eps **pst-eps** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{pst-eps}[2005/05/20]

```

2 \renewenvironment{TeXtoEPS}{}{}
3 \renewcommand{\PSTtoEPS}[3][{}{}

```

---

File 337 **lwarp-pstool.sty**

§ 439 Package **pstool**

*(Emulates or patches code by ZEBB PRIME, WILL ROBERTSON.)*

Pkg pstool **pstool** is patched for use by **lwarp**.

`\graphicspath` is ignored, and the file directory must be stated.

 **path and filename** The filename must not have a file extension.

Use

Enter ⇒ **lwarpmk html**

followed by

Enter ⇒ **lwarpmk limages**

.

**for HTML output:** 1 \LWR@ProvidesPackagePass{pstool}[2018/01/20]

Each image is placed inside a `lateximage` to capture the results of `psfrag`.

```

2 \renewcommand\pstool@alwaysprocess[3][{}{}
3 \begin{lateximage}[-pstool-~\PackageDiagramAltText]%
4 \includegraphics{#2.pdf}%
5 \end{lateximage}%
6 }
7 \LetLtxMacro\pstool@neverprocess\pstool@alwaysprocess

```

```

8 \LetLtxMacro\pstool@maybeprocess\pstool@alwaysprocess
9
10 \renewcommand\pstool@psfragfig[4]{%
11 \begin{lateximage}[-pstool-~\PackageDiagramAltText]%
12 \includegraphics{#2.pdf}%
13 \end{lateximage}%
14 }

```

---

File 338 **lwarp-pstricks.sty**

§ 440 Package **pstricks**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg pstricks pstricks is patched for use by lwarp.

 **use pspicture** All pstricks content should be contained inside a pspicture environment.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{pstricks}[2018/01/06]

2 \BeforeBeginEnvironment{pspicture}{%
3 \begin{lateximage}[pspicture]%
4 }
5 \AfterEndEnvironment{pspicture}{\end{lateximage}}

```

---

File 339 **lwarp-pxatbegshi.sty**

§ 441 Package **pxatbegshi**

Pkg pxatbegshi pxatbegshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxatbegshi}[2017/11/04]

2 \LWR@origRequirePackage{lwarp-atbegshi}

```

---

File 340 **lwarp-pxeveryshi.sty**

§ 442 Package **pxeveryshi**

Pkg pxeveryshi pxeveryshi is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pxeveryshi}[2012/05/19]

2 \LWR@origRequirePackage{lwarp-everyshi}

```

File 341 **lwarp-pxftnright.sty**

§ 443 Package **pxftnright**

Pkg pxftnright pxftnright is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxftnright}[2017/02/28]

2 \LWR@origRequirePackage{lwarp-ftnright}

File 342 **lwarp-pxjahyper.sty**

§ 444 Package **pxjahyper**

Pkg pxjahyper pxjahyper is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pxjahyper}[2018/07/15]

File 343 **lwarp-quotchap.sty**

§ 445 Package **quotchap**

*(Emulates or patches code by KARSTEN TINNEFELD, JAN KLEVER.)*

Pkg quotchap quotchap is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{quotchap}[2019/07/09]

```
2 \newcommand{\@quotchap}{}
3 \newlength{\LWR@quotchapwidth}
4
5 \let\@printcites\relax
6
7 \newcommand*{\@iprintcites}{%
```

Place the quotes inside a <div> of class quotchap, of the maximum selected width:

```
8 \begin{BlockClass}[max-width: \LWR@printlength{\LWR@quotchapwidth}]{quotchap}
9 %\begin{minipage}{\LWR@quotchapwidth}
10 \@quotchap
11 %\end{minipage}
12 \end{BlockClass}
```

Deactivate the quote printing:

```
13 \global\let\@printcites\relax
14 }
15
16 \NewEnviron{savequote}[1][\linewidth]{%
```

Remember the width, adjusted for HTML, and make the length assignment global, per:

<https://tex.stackexchange.com/questions/300823/>

[why-is-setlength-ineffective-inside-a-tabular-environment](#)

```
17 \setlength{\LWR@quotchapwidth}{#1*2}%
18 \global\LWR@quotchapwidth=\LWR@quotchapwidth%
```

Remember the body, and activate the quote printing:

```
19 \global\let\@quotchap\BODY
20 \global\let\@printcites\@iprintcites%
21 }
```

The quotation author is placed inside a <div> of class qauthor:

```
22 \newcommand{\qauthor}[1]{%
23 \LWR@stoppars%
24 \begin{BlockClass}{qauthor}%
25 {#1}%
26 \end{BlockClass}%
27 \LWR@startpars%
28 }
```

Fonts are ignored. Use css.

```
29 \newcommand{\qsetcnfont}[1]{}
30 \providecommand*\quotefont{}
31 \providecommand*\qauthorfont{}
```

File 344 **lwarp-quoting.sty**

§ 446 Package **quoting**

*(Emulates or patches code by THOMAS TITZ.)*

Pkg quoting quoting is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{quoting}[2014/01/28]

```
2 \xpatchcmd{\quoting}{\quo@begintext}
3 {\begin{LWR@blocktextcurrentfont}\quo@begintext}
4 {}
5 {\LWR@patcherror{quoting}{quoting}}
6
```

```

7 \xpatchcmd{\endquoting}{\quo@endtext}
8 {\quo@endtext\end{LWR@blocktextcurrentfont}\LWR@stoppars}
9 {}
10 {\LWR@patcherror{quoting}{endquoting}}

```

---

File 345 **lwarp-ragged2e.sty**

§ 447 Package **ragged2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg ragged2e **ragged2e** is emulated.

Discard all options for lwarp-ragged2e:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ragged2e}[2009/05/21]

```

2 \LetLtxMacro\Centering\centering
3 \LetLtxMacro\RaggedLeft\raggedleft
4 \LetLtxMacro\RaggedRight\raggedright
5 \newcommand*\justifying{}
6 \newlength{\CenteringLeftskip}
7 \newlength{\RaggedLeftLeftskip}
8 \newlength{\RaggedRightLeftskip}
9 \newlength{\CenteringRightskip}
10 \newlength{\RaggedLeftRightskip}
11 \newlength{\RaggedRightRightskip}
12 \newlength{\CenteringParfillskip}
13 \newlength{\RaggedLeftParfillskip}
14 \newlength{\RaggedRightParfillskip}
15 \newlength{\JustifyingParfillskip}
16 \newlength{\CenteringParindent}
17 \newlength{\RaggedLeftParindent}
18 \newlength{\RaggedRightParindent}
19 \newlength{\JustifyingParindent}
20 \newenvironment*{Center}{\center}{\endcenter}
21 \newenvironment*{FlushLeft}{\flushleft}{\endflushleft}
22 \newenvironment*{FlushRight}{\flushright}{\endflushright}
23 \newenvironment*{justify}{\justifying}{\endjustifying}

```

---

File 346 **lwarp-realscripts.sty**

§ 448 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@ProvidesPackagePass{realscripts}[2016/02/13]

The following are copied verbatim from the original, but given new names, since xparse definitions should not be `\let`.

```

2 \ExplSyntaxOn
3
4 \DeclareDocumentCommand \LWR@print@realsubscript {m} {
5 \fontspec_if_fontspec_font:TF {
6 \fontspec_if_opentype:TF
7 { \fontspec_if_feature:nTF {+subs}
8 { {\addfontfeature{VerticalPosition=Inferior}#1} }
9 { \fontspec_if_feature:nTF {+sinf}
10 { {\addfontfeature{VerticalPosition=ScientificInferior}#1} }
11 { \fakesubscript{#1} }
12 }
13 }
14 { \fontspec_if_aat_feature:nnTF {10} {2}
15 { {\addfontfeature{VerticalPosition=Inferior}#1} }
16 { \fakesubscript{#1} }
17 }
18 }
19 { \fakesubscript{#1} }
20 }
21
22 \DeclareDocumentCommand \LWR@HTML@realsubscript {m} {
23 \LWR@HTML@textsubscript{#1}
24 }
25
26 \LWR@formatted{realsubscript}
27
28
29 \DeclareDocumentCommand \LWR@print@realsuperscript {m} {
30 \fontspec_if_fontspec_font:TF
31 {
32 \fontspec_if_opentype:TF
33 { \fontspec_if_feature:nTF {+sups}
34 { {\addfontfeature{VerticalPosition=Superior}#1} }
35 { \fakesuperscript{#1} }
36 }
37 { \fontspec_if_aat_feature:nnTF {10} {1}
38 { {\addfontfeature{VerticalPosition=Superior}#1} }
39 { \fakesuperscript{#1} }
40 }
41 }
42 { \fakesuperscript{#1} }
43 }
44
45 \DeclareDocumentCommand \LWR@HTML@realsuperscript {m} {
46 \LWR@HTML@textsuperscript{#1}
47 }
48
49 \LWR@formatted{realsuperscript}
50
51
52 \DeclareDocumentCommand \LWR@print@textsubsuperscript {s O{l} mm} {
53 \leavevmode

```

```

54 \group_begin:
55 \IfBooleanTF #1
56 {
57 \hbox_set:Nn \l_tmpa_box {\textsubscript*{#3}}
58 \hbox_set:Nn \l_tmpb_box {\textsuperscript*{#4}}
59 }
60 {
61 \hbox_set:Nn \l_tmpa_box {\textsubscript{#3}}
62 \hbox_set:Nn \l_tmpb_box {#4}
63 }
64 \hbox_set:Nn \l_tmpa_box
65 { \box_move_down:nn \subsupersep {\box_use:N \l_tmpa_box} }
66 \hbox_set:Nn \l_tmpb_box
67 { \box_move_up:nn \subsupersep {\box_use:N \l_tmpb_box} }
68 \str_case:nnF {#2}
69 {
70 {l}{\use_i:nnn}
71 {c}{\use_ii:nnn}
72 {r}{\use_iii:nnn}
73 }
74 {
75 \PackageWarning{realscripts}{
76 Unknown~alignment~option~'#2'. \MessageBreak
77 One~ of~ 'l',~ 'c',~ 'r',~ only
78 }
79 \use_i:nnn
80 }
81 {
82 \hbox_overlap_right:n { \box_use:N \l_tmpa_box }
83 \hbox_overlap_right:n { \box_use:N \l_tmpb_box }
84 \skip_horizontal:n {
85 \dim_max:nn {\box_wd:N \l_tmpa_box} {\box_wd:N \l_tmpb_box}
86 }
87 }
88 {
89 \dim_compare:nTF { \box_wd:N \l_tmpa_box > \box_wd:N \l_tmpb_box }
90 {
91 \skip_horizontal:n {
92 0.5\box_wd:N \l_tmpa_box-0.5\box_wd:N \l_tmpb_box
93 }
94 \box_use:N \l_tmpb_box
95 \skip_horizontal:n {
96 -0.5\box_wd:N \l_tmpa_box-0.5\box_wd:N \l_tmpb_box
97 }
98 \box_use:N \l_tmpa_box
99 }
100 {
101 \skip_horizontal:n {
102 0.5\box_wd:N \l_tmpb_box-0.5\box_wd:N \l_tmpa_box
103 }
104 \box_use:N \l_tmpa_box
105 \skip_horizontal:n {
106 -0.5\box_wd:N \l_tmpb_box-0.5\box_wd:N \l_tmpa_box
107 }
108 \box_use:N \l_tmpb_box

```

```

109 }
110 }
111 {
112 \skip_horizontal:n {
113 \dim_max:nn {\box_wd:N \l_tmpa_box} {\box_wd:N \l_tmpb_box}
114 }
115 \hbox_overlap_left:n { \box_use:N \l_tmpa_box }
116 \hbox_overlap_left:n { \box_use:N \l_tmpb_box }
117 }
118 \group_end:
119 }
120
121 \ExplSyntaxOff
122
123
124 \newcommand*\LWR@realscriptsalign{}
125
126 \newcommand*\LWR@setrealscriptsalign[1]{%
127 \renewcommand*\LWR@realscriptsalign{}%
128 \ifthenelse{\equal{#1}{c}}{%
129 \renewcommand*\LWR@realscriptsalign{%
130 \LWR@print@ebox{text-align:center} ; %
131 }%
132 }{}%
133 \ifthenelse{\equal{#1}{r}}{%
134 \renewcommand*\LWR@realscriptsalign{%
135 \LWR@print@ebox{text-align:right} ; %
136 }%
137 }{}%
138 }
139
140 \DeclareDocumentCommand \LWR@HTML@textsubsuperscript {s O{l} mm} {%
141 \LWR@setrealscriptsalign{#2}%
142 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
143 #4\textsubscript{#3}%
144 }%
145 }
146 \LWR@formatted{textsubsuperscript}
147
148 \FilenameNullify{%
149 \RenewDocumentCommand{\textsuperscript}{s m}{}%
150 \RenewDocumentCommand{\textsubscript}{s m}{}%
151 \renewcommand{\fakesubscript}[1]{}%
152 \renewcommand{\fakesuperscript}[1]{}%
153 \renewcommand{\realsubscript}[1]{}%
154 \renewcommand{\realsuperscript}[1]{}%
155 \renewcommand{\textsubsuperscript}[2]{}%
156 \renewcommand{\textsupersubscript}[2]{}%
157 }

```

File 347 **lwarp-refcheck.sty**

§ 449 Package **refcheck**

Pkg refcheck refcheck is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{refcheck}[2013/02/14]

```

2 \def\showrefnames{}
3 \def\norefnames{}
4 \def\showcitenames{}
5 \def\nocitenames{}
6 \def\setonmsgs{}
7 \def\setoffmsgs{}
8 \def\checkunlbd{}
9 \def\ignoreunlbd{}
10 \newcommand*\refcheckxrdoc[2][{}]
```

File 348 **lwarp-register.sty**

§ 450 Package **register**

*(Emulates or patches code by MATTHEW LOVELL.)*

Pkg register register is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{register}[2019/01/01]

```

2 \xpatchcmd{\register}
3 {\centering}
4 {%
5 \begin{center}%
6 \begin{lateximage}[-register--\PackageDiagramAltText]%
7 }
8 {}
9 {\LWR@patcherror{register}{register}}
10
11 \xpatchcmd{\endregister}
12 {\leftskip}
13 {%
14 \end{lateximage}\end{center}%
15 \leftskip%
16 }%
17 {}
18 {\LWR@patcherror{register}{endregister}}
19
20 \expandafter\xapptocmd\csname register*\endcsname
21 {%
```

```

22 \begin{center}%
23 \begin{lateximage}[-register--\PackageDiagramAltText]%
24 }
25 {}
26 {\LWR@patcherror{register}{register*}}
27
28 \expandafter\xpitchcmd\csname endregister*\endcsname
29 {\leftskip}
30 {%
31 \end{lateximage}\end{center}%
32 \leftskip%
33 }%
34 {}
35 {\LWR@patcherror{register}{endregister*}}
36
37 \setlength{\regWidth}{5in}

```

---

File 349 **lwarp-reysize.sty**

§ 451 Package **reysize**

*(Emulates or patches code by DONALD ARSENEAU, BERNIE COSELL, MATT SWIFT.)*

Pkg reysize **reysize** is patched for use by **lwarp**, and emulated for MATHJAX.

For HTML, only the inline macros are supported: `\textlarger`, `\textsmaller`, and `\textscale`. Each becomes an inline span of a modified font-size.

`\relsize`, `\larger`, `\smaller`, and `\relscale` are ignored.

While creating SVG math for HTML, the original definitions are temporarily restored, and so should work as expected.

 **not small** The HTML browser's setting for minimum font size may limit how small the output will be displayed.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{reysize}[2013/03/29]
2 \let\LWR@origreysize\relsize
3 \LetLtxMacro\LWR@origlarger\larger
4 \LetLtxMacro\LWR@origsmaller\smaller
5 \let\LWR@relscale\relscale
6 \LetLtxMacro\LWR@origtextlarger\textlarger
7 \LetLtxMacro\LWR@origtextsmaller\textsmaller
8 \let\LWR@textscale\textscale
9
10 \appto\LWR@restoreorigformatting{%
11 \let\relsize\LWR@origreysize%
12 \LetLtxMacro\larger\LWR@origlarger%
13 \LetLtxMacro\smaller\LWR@origsmaller%
14 \let\relscale\LWR@relscale%
15 \LetLtxMacro\textlarger\LWR@origtextlarger%
16 \LetLtxMacro\textsmaller\LWR@origtextsmaller%

```

```

17 \let\textscale\LWR@textscale%
18 }
19
20 \newcounter{LWR@relsize}
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@relsize}{100+(#1*20)}%
29 \InlineClass[font-size:\arabic{LWR@relsize}\%]{textlarger}{#2}%
30 }
31
32 \renewcommand*\textsmaller[2][1]{%
33 \setcounter{LWR@relsize}{100-(#1*20)}%
34 \InlineClass[font-size:\arabic{LWR@relsize}\%]{textsmaller}{#2}%
35 }
36
37 \renewcommand*\textscale[2]{%
38 \setcounter{LWR@relsize}{100*\real{#1}}%
39 \InlineClass[font-size:\arabic{LWR@relsize}\%]{textscale}{#2}%
40 }

```

For MATHJAX:

```

41 \begin{warpMathJax}
42 \CustomizeMathJax{\newcommand{\mathlarger}[1]{#1}}
43 \CustomizeMathJax{\newcommand{\mathsmaller}[1]{#1}}
44 \end{warpMathJax}

```

---

File 350 **lwarp-repeatindex.sty**

§ 452 Package **repeatindex**

Pkg repeatindex repeatindex is emulated for lwarp.

 **style file** lwarp must be used with a special style file:

```
\usepackage[makeindex,makeindexStyle={lwarp_repeatindex}]{lwarp}
```

where lwarp\_repeatindex.ist may be copied from the following modified version of lwarp.ist:

```

| preamble
| "\begin{theindex}
| \providecommand*\lettergroupDefault[1]{%
| \providecommand*\lettergroup[1]{%
| \par\textbf{#1}\par
| \nopagebreak

```

```

}
"
headings_flag 1
heading_prefix "
 \lettergroup{"
heading_suffix "}"
delim_0 "], \hyperindexref{"
delim_1 " , \hyperindexref{"
delim_2 " , \hyperindexref{"
delim_n "}, \hyperindexref{"
delim_r "} -- \hyperindexref{"
delim_t "}"
item_0 "\n \item ["

```

(The modifications are the `delim_0` and `item_0` entries.)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{repeatindex}[2001/10/13]

In the `lwarp` core, `\LWR@indexitem` is modified to accept the optional `\item` argument.

```

2 \RequirePackage{makeidx}
3 \def\entryprefix{\itshape}
4 \def\entrypostfix{\dots}

```

File 351 **lwarp-resizegather.sty**

§ 453 Package **resizegather**

Pkg `resizegather` `resizegather` is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{resizegather}[2016/05/16]

```

2 \newcommand*{\resizegathersetup}[1]{}

```

File 352 **lwarp-returntogrid.sty**

§ 454 Package **returntogrid**

Pkg `returntogrid` `returntogrid` is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{returntogrid}[2018/08/21]

```

2 \NewDocumentCommand\returntogrid{ 0 {} }{}
3 \NewDocumentCommand\returntogridsetup { m } {}
4 \NewDocumentCommand\showdebugpagegrid { } {}

```

---

File 353 **lwarp-rmathbr.sty**

§ 455 Package **rmathbr**

*(Emulates or patches code by DENIS RYABOV.)*

Pkg rmathbr rmathbr is used as-is for SVG math, and emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{rmathbr}[2016/04/10]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\def*{~}}
4 \CustomizeMathJax{\newcommand{\cdott}{\cdot}}
5 \CustomizeMathJax{\newcommand{\nobr}{}}
6 \end{warpMathJax}

```

---

File 354 **lwarp-rmpage.sty**

§ 456 Package **rmpage**

Pkg rmpage rmpage is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{rmpage}[1997/09/29]

```

---

File 355 **lwarp-romanbar.sty**

§ 457 Package **romanbar**

*(Emulates or patches code by H.-MARTIN MÜNCH.)*

Pkg romanbar romanbar is patched for use by lwarp.

An inline class with an overline and underline is used.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{romanbar}[2012/01/01]

2 \DeclareRobustCommand{\Roman@bar}[1]{% #1 is in Roman, i.e. MMXII
3 \InlineClass[%
4 text-decoration: overline underline ;
5]{romanbar}{#1}%
6 }

```

---

File 356 **lwarp-romanbarpagenumber.sty**

§ 458 Package **romanbarpagenumber**

Pkg romanbarpagenumber romanbarpagenumber is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{romanbarpagenumber}[2015/02/06]

---

File 357 **lwarp-rotating.sty**

§ 459 Package **rotating**

*(Emulates or patches code by ROBIN FAIRBAIRNS, SEBASTIAN RAHTZ, LEONOR BARROCA.)*

Pkg rotating rotating is emulated.

All rotations are ignored in HTML output.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{rotating}[2016/08/11]  
 2 \RequirePackage{graphicx}  
 3 \LetLtxMacro\sidewaystable\table  
 4 \let\endsidewaystable\endtable  
 5  
 6 \LetLtxMacro\sidewaysfigure\figure  
 7 \let\endsidewaysfigure\endfigure  
 8  
 9 \newenvironment\*{sideways}{}{}  
 10 \newenvironment\*{turn}[1]{}{}  
 11 \newenvironment\*{rotate}[1]{}{}  
 12 \NewDocumentCommand{\turnbox}{m +m}{#2}  
 13 \let\rotcaption\caption  
 14 \let\@makerotcaption\@makecaption

---

File 358 **lwarp-rotfloat.sty**

§ 460 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}  
 4 \RequirePackage{rotating}

`\newfloat`  $\langle 1: type \rangle \langle 2: placement \rangle \langle 3: ext \rangle [\langle 4: within \rangle]$

Emulates the `\newfloat` command from the `float` package. Sideways floats are `\let` to the same as regular floats.

“placement” is ignored.

```

5 \RenewDocumentCommand{\newfloat}{m m m o}{%
6 \IfValueTF{#4}%
7 {%
8 \DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}%
9 }%
10 {%
11 \DeclareFloatingEnvironment[fileext=#3]{#1}%
12 }%
13 \csletcs{sideways#1}{#1}%
14 \csletcs{endsideways#1}{end#1}%

```

Remember the float style:

```

15 \csedef{LWR@floatstyle@#1}{\LWR@floatstyle}%
16 \csedef{LWR@floatstyle@sideways#1}{\LWR@floatstyle}%

```

`newfloat` package automatically creates the `\listof` command for new floats, but `float` does not, so remove `\listof` here in case it is manually created later:

```

17 \cslet{listof#1s}\relax%
18 \cslet{listof#1es}\relax%
19 \cslet{listofsideways#1s}\relax%
20 \cslet{listofsideways#1es}\relax%
21 }

```

File 359 **lwarp-rviewport.sty**

§ 461 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 360 **lwarp-savetrees.sty**

§ 462 Package **savetrees**

Pkg `savetrees` `savetrees` is ignored.

**for HTML output:** Discard all options for lwarp-savetrees:

```
1 \LWR@ProvidesPackageDrop{savetrees}[2016/04/13]
```

---

File 361 **lwarp-scalefnt.sty**

§ 463 Package **scalefnt**

*(Emulates or patches code by D. CARLISLE.)*

Pkg scalefnt scalefnt is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{scalefnt}
2 \DeclareRobustCommand\scalegfont[1]{}

```

---

File 362 **lwarp-schemata.sty**

§ 464 Package **schemata**

*(Emulates or patches code by CHARLES P. SCHAUM.)*

Pkg schemata schemata is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{schemata}[2016/01/25]
2 \LetLtxMacro\LWR@schemata@origschema\schema
3 \LetLtxMacro\LWR@schemata@origSchema\Schema
4
5 \renewcommand{\schema}[3][open]{%
6 \begin{lateximage}%
7 \LWR@print@normalsize
8 \LWR@schemata@origschema[#1]{#2}{#3}%
9 \end{lateximage}%
10 }
11
12 \renewcommand{\Schema}[5][open]{%
13 \begin{lateximage}%
14 \LWR@print@normalsize
15 \LWR@schemata@origSchema[#1]{#2}{#3}{#4}{#5}%
16 \end{lateximage}%
17 }

```

---

File 363 **lwarp-scrextend.sty**

§ 465 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}[2020/01/24]

2 \DeclareDocumentCommand{\setkomafont}{m m}{}
3 \DeclareDocumentCommand{\addkomafont}{m m}{}
4 \DeclareDocumentCommand{\usekomafont}{m}{}
5
6 \DeclareDocumentCommand{\usefontofkomafont}{m}{}
7 \DeclareDocumentCommand{\useencodingofkomafont}{m}{}
8 \DeclareDocumentCommand{\usesizeofkomafont}{m}{}
9 \DeclareDocumentCommand{\usefamilyofkomafont}{m}{}
10 \DeclareDocumentCommand{\useseriesofkomafont}{m}{}
11 \DeclareDocumentCommand{\useshapeofkomafont}{m}{}
12
13 \providecommand*\coverpagetopmargin{}
14 \providecommand*\coverpagebottommargin{}
15 \providecommand*\coverpageleftmargin{}
16 \providecommand*\coverpagerightmargin{}
17

```

Title page:

```

18 \AtBeginDocument{
19 \let\LWR@koma@orig@maketitle\maketitle
20 \DeclareDocumentCommand{\maketitle}{o}{\LWR@koma@orig@maketitle}
21 }
22
23 \DeclareDocumentCommand{\@maketitle}{*}{%
24 \ifdefvoid{\@titlehead}{}{%
25 \begin{BlockClass}{titlehead}%
26 \@titlehead%
27 \end{BlockClass}%
28 }%
29 \ifdefvoid{\@subject}{}{%
30 \begin{BlockClass}{subject}%
31 \@subject%
32 \end{BlockClass}%
33 }%
34 \LWR@stoppars%
35 \LWR@htmltag{\LWR@tagtitle}%
36 \@title%
37 \LWR@htmltag{\LWR@tagtitleend}%
38 \ifdefvoid{\@subtitle}{}{%
39 \begin{BlockClass}{subtitle}%
40 \@subtitle%
41 \end{BlockClass}%
42 }%
43 \LWR@startpars%
44 \begin{BlockClass}{author}%

45 \renewcommand*\cr{}{}%
46 \renewcommand*\crrc{}{}%

```

```

47 \renewcommand*{\noalign}{}%
48 \renewcommand{\and}{%
49 \end{BlockClass}%
50 \begin{BlockClass}{oneauthor}%
51 }%
52 \begin{BlockClass}{oneauthor}%
53 \@author%
54 \end{BlockClass}%
55 \end{BlockClass}%
56 \begin{BlockClass}{titledate}%
57 \@date%
58 \end{BlockClass}%
59 \ifdefvoid{\@published}{}%
60 \begin{BlockClass}{published}%
61 \@published%
62 \end{BlockClass}%
63 }%
64 }
65
66 \AddSubtitlePublished
67
68 \DeclareDocumentCommand{\extratitle}{m}{}
69 \DeclareDocumentCommand{\frontispiece}{m}{}
70
71 \def\@titlehead{}%
72 \DeclareDocumentCommand{\titlehead}{m}{\gdef\@titlehead{#1}}%
73
74 \def\@subject{}%
75 \DeclareDocumentCommand{\subject}{m}{\gdef\@subject{#1}}%
76
77 % \subtitle and \published are defined by \AddSubtitlePublished
78
79 \DeclareDocumentCommand{\publishers}{m}{\published{#1}}
80
81 \DeclareDocumentCommand{\uppertitleback}{m}{}
82 \DeclareDocumentCommand{\lowertitleback}{m}{}
83 \DeclareDocumentCommand{\dedication}{m}{}
84
85 \DeclareDocumentCommand{\ifthispageodd}{m m}{#1}
86
87 \DeclareDocumentCommand{\cleardoublepageusingstyle}{m}{}
88 \DeclareDocumentCommand{\cleardoubleemptypage}{}{}
89 \DeclareDocumentCommand{\cleardoubleplainpage}{}{}
90 \DeclareDocumentCommand{\cleardoublestandardpage}{}{}
91 \DeclareDocumentCommand{\cleardoubleoddpaper}{}{}
92 \DeclareDocumentCommand{\cleardoubleoddpaperusingstyle}{m}{}
93 \DeclareDocumentCommand{\cleardoubleoddpaperemptypage}{}{}
94 \DeclareDocumentCommand{\cleardoubleoddpaperplainpage}{}{}
95 \DeclareDocumentCommand{\cleardoubleoddpaperstandardpage}{}{}
96 \DeclareDocumentCommand{\cleardoubleevenpage}{}{}
97 \DeclareDocumentCommand{\cleardoubleevenpageusingstyle}{m}{}
98 \DeclareDocumentCommand{\cleardoubleevenemptypage}{}{}
99 \DeclareDocumentCommand{\cleardoubleevenplainpage}{}{}
100 \DeclareDocumentCommand{\cleardoubleevenstandardpage}{}{}

```

```

101
102 \DeclareDocumentCommand{\multiplefootnoteseparator}{}{%
103 \begingroup\let\thefootnotemark\multfootsep\makefnmark\endgroup
104 }
105
106 \DeclareDocumentCommand{\multfootsep}{}{,}
107
108 \DeclareDocumentCommand{\footref}{m}{%
109 \begingroup
110 \unrestored@protected@xdef\thefnmark{\ref{#1}}%
111 \endgroup
112 \@footnotemark
113 }
114
115 \DeclareDocumentCommand{\deffootnote}{o m m m}{}
116 \DeclareDocumentCommand{\deffootnotemark}{m}{}
117 \DeclareDocumentCommand{\setfootnoterule}{o m}{}
118 \DeclareDocumentCommand{\raggedfootnote}{}{}

119 \DeclareDocumentCommand{\dictum}{o m}{
120 \begin{LWR@BlockClassWP}{\LWR@print@mbbox{text-align:right}}{\dictum}
121 #2
122 \IfValueT{#1}
123 {
124 \LWR@stoppars%
125 \ifbool{FormatWP}
126 {\begin{BlockClass}[\LWR@print@mbbox{border-top:} 1px solid gray]{dictumauthor}}
127 {\begin{BlockClass}{dictumauthor}}
128 \dictumauthorformat{#1}
129 \end{BlockClass}
130 }
131 \end{LWR@BlockClassWP}
132 }
133
134 \DeclareDocumentCommand{\dictumwidth}{}{}
135 \DeclareDocumentCommand{\dictumauthorformat}{m}{(#1)}
136 \DeclareDocumentCommand{\dictumrule}{}{}
137 \DeclareDocumentCommand{\raggeddictum}{}{}
138 \DeclareDocumentCommand{\raggeddictumtext}{}{}
139 \DeclareDocumentCommand{\raggeddictumauthor}{}{}
140
141 \DeclareDocumentEnvironment{Labeling}{o m}
142 {}
143 \def\sc@septext{#1}%
144 \list{}{}%
145 \let\makelabel\labelinglabel%
146 }
147 {
148 \endlist
149 }
150
151 \DeclareDocumentCommand{\labelinglabel}{m}{%
152 #1 \quad \sc@septext%
153 }
154

```

```

155 \let\addmargin\relax
156 \let\endaddmargin\relax
157 \cslet{addmargin*}{\relax}
158 \cslet{endaddmargin*}{\relax}

159 \NewDocumentEnvironment{addmargin}{s O{} m}
160 {
161 \LWR@stoppars%
162 \setlength{\LWR@templengthtwo}{#3}
163 \ifblank{#2}
164 {
165 \begin{BlockClass}[
166 \LWR@print@mbbox{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
167 \LWR@print@mbbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
168]{addmargin}
169 }
170 {
171 \setlength{\LWR@templengthone}{#2}
172 \begin{BlockClass}[
173 \LWR@print@mbbox{margin-left:\LWR@printlength{\LWR@templengthone}} ;
174 \LWR@print@mbbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
175]{addmargin}
176 }
177 }
178 {\end{BlockClass}\LWR@startpars}

Ref to create a starred environment:
https://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment

179
180 \ExplSyntaxOn
181 \cs_new:cpn {addmargin*} {\addmargin*}
182 \cs_new_eq:cN {endaddmargin*} \endaddmargin
183 \ExplSyntaxOff
184
185 \DeclareDocumentCommand{\marginline}{m}{\marginpar{#1}}

```

---

File 364 **lwarp-scrhack.sty**

§ 466 Package **scrhack**

Pkg scrhack scrhack is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrhack}[2018/03/30]

File 365 **lwarp-scrlayer.sty**

§ 467 Package **scrlayer**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrlayer scrlayer is emulated.

 **Not fully tested! Please send bug reports!**

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrlayer}[2018/03/30]

```

2 \newcommand*\DeclareSectionNumberDepth[2]{}
3 \newcommand*\DeclareLayer[2][{}
4 \newcommand*\DeclareNewLayer[2][{}
5 \newcommand*\ProvideLayer[2][{}
6 \newcommand*\RedeclareLayer[2][{}
7 \newcommand*\ModifyLayer[2][{}
8 \newcommand*\layerhalign{}
9 \newcommand*\layervalign{}
10 \newcommand*\layerxoffset{}
11 \newcommand*\layeryoffset{}
12 \newcommand*\layerwidth{}
13 \newcommand*\layerheight{}
14 \providecommand*\LenToUnit[1]{\strip@pt\dimexpr#1*\p@/\unitlength}
15 \newcommand*\putUL[1]{}
16 \newcommand*\putUR[1]{}
17 \newcommand*\putLL[1]{}
18 \newcommand*\putLR[1]{}
19 \newcommand*\putC[1]{}
20 \newcommand*\GetLayerContents[1]{}
21 \newcommand*\IfLayerExists[3]{#3}
22 \newcommand*\DestroyLayer[1]{}
23 \newcommand*\layercontentsmeasure{}
24 \newcommand*\currentpagestyle{}
25 \newcommand*\BeforeSelectAnyPageStyle[1]{}
26 \newcommand*\AfterSelectAnyPageStyle[1]{}
27 \newcommand*\DeclarePageStyleAlias[2]{}
28 \newcommand*\DeclareNewPageStyleAlias[2]{}
29 \newcommand*\ProvidePageStyleAlias[2]{}
30 \newcommand*\RedeclarePageStyleAlias[2]{}
31 \newcommand*\DestroyPageStyleAlias[1]{}
32 \newcommand*\GetRealPageStyle[1]{}
33 \newcommand*\DeclarePageStyleByLayers[3][{}
34 \newcommand*\DeclareNewPageStyleByLayers[3][{}
35 \newcommand*\ProvidePageStyleByLayers[3][{}
36 \newcommand*\RedeclarePageStyleByLayers[3][{}
37 \NewDocumentCommand\ForEachLayerOfPageStyle{s m m}{}
38 \newcommand*\AddLayersToPageStyle[2]{}
39 \newcommand*\AddLayersAtBeginOfPageStyle[2]{}
40 \newcommand*\AddLayersAtEndOfPageStyle[2]{}

```

```

41 \newcommand*{\RemoveLayersFromPageStyle}[2]{}
42 \newcommand*{\AddLayersToPageStyleBeforeLayer}[3]{}
43 \newcommand*{\AddLayersToPageStyleAfterLayer}[3]{}
44 \newcommand*{\UnifyLayersAtPageStyle}[1]{}
45 \newcommand*{\ModifyLayerPageStyleOptions}[2]{}
46 \newcommand*{\AddToLayerPageStyleOptions}[2]{}
47 \newcommand{\IfLayerPageStyleExists}[3]{#3}
48 \newcommand{\IfRealLayerPageStyleExists}[3]{#3}
49 \newcommand{\IfLayerAtPageStyle}[4]{#4}
50 \newcommand{\IfSomeLayerAtPageStyle}[4]{#4}
51 \newcommand{\IfLayersAtPageStyle}[4]{#4}
52 \newcommand*{\DestroyRealLayerPageStyle}[1]{}
53 \@ifundefined{footheight}{\newlength\footheight}{}
54 \DeclareDocumentCommand{\automark}{s o m}{}
55 \DeclareDocumentCommand{\manualmark}{}{}
56 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}

57 \newcommand{\partmarkformat}{}
58 \if@chapter
59 \newcommand{\chaptermarkformat}{}
60 \fi
61 \newcommand{\sectionmarkformat}{}
62 \DeclareDocumentCommand{\GenericMarkFormat}{m}{}

63 \newcommand*{\@mkleft}[1]{}
64 \newcommand*{\@mkright}[1]{}
65 \newcommand*{\@mkdouble}[1]{}
66 \newcommand*{\@mkboth}[2]{}
67 \newcommand*{\sclayerInitInterface}[1][{}]{
68 \newcommand{\sclayerAddToInterface}[3][{}]{
69 \newcommand{\sclayerAddCsToInterface}[3][{}]{
70 \newcommand{\sclayerOnAutoRemoveInterface}[2][{}]{

```

---

File 366 **lwarp-sclayer-notecolumn.sty**

§ 468 Package **sclayer-notecolumn**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg sclayer-notecolumn sclayer-notecolumn is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{sclayer-notecolumn}[2018/02/02]

```

2 \newcommand*{\DeclareNoteColumn}[2][{}]{
3 \newcommand*{\DeclareNewNoteColumn}[2][{}]{
4 \newcommand*{\ProvideNoteColumn}[2][{}]{
5 \newcommand*{\RedeclareNoteColumn}[2][{}]{
6 \NewDocumentCommand{\makenote}{s o m}{\marginpar{#3}}
7 \newcommand*{\syncwithnotecolumn}[1][{}]{
8 \newcommand*{\syncwithnotecolumns}[1][{}]{

```

```

9 \newcommand*\clearnotecolumn}[1][{}]{
10 \newcommand*\clearnotecolumns}[1][{}]{

```

File 367 **lwarp-scrlayer-scrpage.sty**

§ 469 Package **scrlayer-scrpage**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg scrlayer-scrpage scrlayer-scrpage is ignored.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrlayer-scrpage}[2018/03/30]

```

2 \@ifundefined{footheight}{\newlength\footheight}{}
3 \NewDocumentCommand{\lehead}{s o m}{}
4 \NewDocumentCommand{\cehead}{s o m}{}
5 \NewDocumentCommand{\rehead}{s o m}{}
6 \NewDocumentCommand{\lohead}{s o m}{}
7 \NewDocumentCommand{\cohead}{s o m}{}
8 \NewDocumentCommand{\rohead}{s o m}{}
9 \NewDocumentCommand{\lefoot}{s o m}{}
10 \NewDocumentCommand{\cefoot}{s o m}{}
11 \NewDocumentCommand{\refoot}{s o m}{}
12 \NewDocumentCommand{\lofoot}{s o m}{}
13 \NewDocumentCommand{\cofoot}{s o m}{}
14 \NewDocumentCommand{\rofoot}{s o m}{}
15 \NewDocumentCommand{\ohead}{s o m}{}
16 \NewDocumentCommand{\chead}{s o m}{}
17 \NewDocumentCommand{\ihead}{s o m}{}
18 \NewDocumentCommand{\ofoot}{s o m}{}
19 \NewDocumentCommand{\cfoot}{s o m}{}
20 \NewDocumentCommand{\ifoot}{s o m}{}
21 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
22 \newcommand*\defpairofpagestyles}[3][{}]{
23 \newcommand*\newpairofpagestyles}[3][{}]{
24 \newcommand*\renewpairofpagestyles}[3][{}]{
25 \newcommand*\providepairofpagestyles}[3][{}]{

26 \newcommand*\clearmainofpairofpagestyles}{}
27 \newcommand*\clearplainofpairofpagestyles}{}
28 \newcommand*\clearpairofpagestyles}{}
29 \newcommand*\clearscrheadings}{}
30 \newcommand*\clearscrheadfoot}{}
31 \newcommand*\clearscrplain}{}

32 \NewDocumentCommand{\deftriplepagestyle}{m o m m m m m}{}
33 \NewDocumentCommand{\newtriplepagestyle}{m o m m m m m}{}
34 \NewDocumentCommand{\renewtriplepagestyle}{m o m m m m m}{}
35 \NewDocumentCommand{\providetriplepagestyle}{m o m m m m m}{}
36 \newcommand*\defpagestyle}[3]{}

```

```

37 \newcommand*\newpagestyle}[3]{}
38 \newcommand*\providepagestyle}[3]{}
39 \newcommand*\renewpagestyle}[3]{}

```

---

File 368 **lwarp-scrpage2.sty**

§ 470 Package **scrpage2**

(Emulates or patches code by MARKUS KOHM.)

Pkg scrpage2 scrpage2 is ignored.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrpage2}[2018/03/30]

```

2 \@ifundefined{footheight}{\newlength\footheight}{}
3 \NewDocumentCommand{\lehead}{o m}{}
4 \NewDocumentCommand{\cehead}{o m}{}
5 \NewDocumentCommand{\rehead}{o m}{}
6 \NewDocumentCommand{\lohead}{o m}{}
7 \NewDocumentCommand{\cohead}{o m}{}
8 \NewDocumentCommand{\rohead}{o m}{}
9 \NewDocumentCommand{\lefoot}{o m}{}
10 \NewDocumentCommand{\cefoot}{o m}{}
11 \NewDocumentCommand{\refoot}{o m}{}
12 \NewDocumentCommand{\lofoot}{o m}{}
13 \NewDocumentCommand{\cofoot}{o m}{}
14 \NewDocumentCommand{\rofoot}{o m}{}
15 \NewDocumentCommand{\ohead}{o m}{}
16 \NewDocumentCommand{\chead}{o m}{}
17 \NewDocumentCommand{\ihead}{o m}{}
18 \NewDocumentCommand{\ofoot}{o m}{}
19 \NewDocumentCommand{\cfoot}{o m}{}
20 \NewDocumentCommand{\ifoot}{o m}{}
21 \DeclareDocumentCommand{\automark}{o m}{}
22 \DeclareDocumentCommand{\manualmark}{}{}
23 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
24 \NewDocumentCommand{\deftripstyle}{m o o m m m m m}{}
25 \NewDocumentCommand{\defpagestyle}{s m m m}{}
26 \NewDocumentCommand{\newpagestyle}{s m m m}{}
27 \NewDocumentCommand{\renewpagestyle}{s m m m}{}
28 \NewDocumentCommand{\providepagestyle}{s m m m}{}
29 \newcommand{\partmarkformat}{}
30 \if@chapter
31 \newcommand{\chaptermarkformat}{}
32 \fi
33 \newcommand{\sectionmarkformat}{}
34 \newcommand{\subsectionmarkformat}{}
35 \newcommand{\subsubsectionmarkformat}{}
36 \newcommand{\paragraphmarkformat}{}
37 \newcommand{\subparagraphmarkformat}{}
38

```

```

39 \newcommand*\clearscrheadings{}
40 \newcommand*\clearscrheadfoot{}
41 \newcommand*\clearscrplain{}

```

---

File 369 **lwarp-section.sty**

§ 471 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\hsize{\huge}\else
4 \def\chsize{\huge}\def\hsize{\Huge}
5 \fi
6 \let\ttsize\LARGE
7 \let\ausize\large
8 \let\dasize\large
9 \let\seclsize\Large
10 \let\subsize\large
11 \let\hdpos\raggedright
12 \newcounter{hddepth}
13 \let\fpind\relax
14 \def\ttfnt{}
15 \def\hdfnt{}
16 \def\fefnt{}
17 \def\thfnt{}
18 \def\pgfnt{}
19 \def\hmkfnt{}
20 \let\mkcse\uppercase
21 \def\hddot{}
22 \def\cpdot{:}
23 \def\nmdot{}
24 \ifx\secindent\undefined
25 \newdimen\secindent
26 \newskip\secpreskp
27 \newskip\secpstskp
28 \newdimen\subindent
29 \newskip\subpreskp
30 \newskip\subpstskp
31 \newskip\parpstskp
32 \newcount\c@hddepth
33 \fi

```

---

File 370 **lwarp-sectionbreak.sty**

§ 472 Package **sectionbreak**

*(Emulates or patches code by MICHAL HOFTICH.)*

Pkg sectionbreak sectionbreak is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{sectionbreak}[2018-01-03]
2 \renewcommand\asterism{\HTMLunicode{2042}}
3
4 \renewcommand\pre@sectionbreak{}
5 \renewcommand\post@sectionbreak{}
6
7 \renewcommand\print@sectionbreak[1]{%
8 \begin{center}
9 #1
10 \end{center}
11 }
12
```

---

File 371 **lwarp-sectsty.sty**

§ 473 Package **sectsty**

*(Emulates or patches code by ROWLAND McDONNELL.)*

Pkg sectsty sectsty is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{sectsty}[2002/02/25]
2 \newcommand*\partfont [1] {}
3 \newcommand*\partnumberfont [1] {}
4 \newcommand*\parttitlefont [1] {}
5 \newcommand*\chapterfont [1] {}
6 \newcommand*\chapternumberfont [1] {}
7 \newcommand*\chaptertitlefont [1] {}
8 \newcommand*\sectionfont [1] {}
9 \newcommand*\subsectionfont [1] {}
10 \newcommand*\subsubsectionfont [1] {}
11 \newcommand*\paragraphfont [1] {}
12 \newcommand*\subparagraphfont [1] {}
13 \newcommand*\minisecfont [1] {}
14 \newcommand*\allsectionsfont[1] {}
15 \newcommand{\nohang}{}

```

`\sectionrule` is only to be used in `*font` commands, thus it is ignored.

```
16 \newcommand*\sectionrule}[5]{}
17
18 \def\ulemheading#1#2{}
```

---

## File 372 **lwarp-semantic-markup.sty**

### § 474 Package **semantic-markup**

*(Emulates or patches code by ANDREW A. CASHNER.)*

Pkg semantic-markup semantic-markup is patched for use by lwarp.



If using the `endnotes` option, add `\theendnotes` where desired.

**for HTML output:** 1 \LWR@ProvidesPackagePass{semantic-markup}[2018/05/21]

The endnotes must be printed by the user before the end of the document, since the end is after the HTML footer, etc.

```
2 \ifendnotes
3 \RenewDocumentCommand{\SetupEndnotes}{}{%
4 \let\footnote=\endnote
5 % \AtEndDocument{\DoBeforeEndnotes{\EndnoteFont\theendnotes}}%
6 }
7 \fi
```

HTML unicode characters from musicography are used.

```
8 \RequirePackage{musicography}
9
10 \let\fl\musFlat
11 \let\sh\musSharp
12 \let\na\musNatural
```

The `\musfig` is placed inside a hashed image, with a simple `alt` tag.

```
13 \RequirePackage{amsmath}
14
15 \RenewDocumentCommand{\musfig}{ m m }{%
16 \LWR@subsingledollar*%
17 {#1/#2}% alt tag
18 {musfig}% addl' hashing
19 {% contents
20 \LWR@origensuredmath{%
21 \genfrac{}{}{0pt}{1}{\text{#1}}{\text{#2}}}%
22 }%
23 }%
24 }
```

The `\meter` is taken from musicography, and becomes a hashed image with a simple alt tag.

```
25 \RenewDocumentCommand{\meter}{ m m }{%
26 \musMeter{#1}{#2}%
27 }
```

---

File 373 **lwarp-setspace.sty**

§ 475 Package **setspace**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg setspace **setspace** is emulated.

Discard all options for `lwarp-setspace`:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{setspace}[2011/12/19]
2
3 \newcommand*\setstretch[1]{}
4 \newcommand*\SetSingleSpace[1]{}
5 \newcommand*\singleSpacing{}
6 \newcommand*\onehalfSpacing{}
7 \newcommand*\doubleSpacing{}
8
9 \newenvironment{singleSpace}
10 {
11 \LWR@forcenewpage
12 \BlockClass{singleSpace}
13 }
14 {\endBlockClass}
15
16 \newenvironment{singleSpace*}
17 {
18 \LWR@forcenewpage
19 \BlockClass{singleSpace}
20 }
21 {\endBlockClass}
22
23 \newenvironment{spacing}[1]{
24
25 }{
26
27 }
28
29 \newenvironment{onehalfSpace}
30 {
31 \LWR@forcenewpage
32 \BlockClass{onehalfSpace}
33 }
34 {\endBlockClass}
35
36 \newenvironment{doubleSpace}
```

---

```

37 {
38 \LWR@forcenewpage
39 \BlockClass{doublespace}
40 }
41 {\endBlockClass}

```

---

File 374 **lwarp-shadow.sty**

§ 476 Package **shadow**

*(Emulates or patches code by MAURO ORLANDINI.)*

Pkg shadow **shadow** is emulated.

**for HTML output:** Discard all options for lwarp-shadow:

```

1 \LWR@ProvidesPackageDrop{shadow}[2003/02/19]

2 \newdimen\shboxsep
3 \newdimen\shboxrule
4 \newdimen\shdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8 }

```

---

File 375 **lwarp-shapepar.sty**

§ 477 Package **shapepar**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg shapepar **shapepar** is patched for use by lwarp. Shapes appear in print mode, as well as inside a lateximage, but are ignored for HTML.

**for HTML output:** 1 \LWR@ProvidesPackagePass{shapepar}[2013/03/26]

```

2 \newcommand*{\LWR@HTML@shapepar}[2][[]]{%
3 \LWR@formatted{shapepar}
4
5 \NewDocumentCommand{\LWR@HTML@cutout}{m d()}{}
6 \LWR@formatted{cutout}

```

---

File 376 **lwarp-showidx.sty**

§ 478 Package **showidx**

Pkg showidx **showidx** is ignored.

**for HTML output:** Discard all options for lwarp-showidx:

```
1 \LWR@ProvidesPackageDrop{showidx}[2014/09/29]
```

\@wrindex is redefined \@AtBeginDocument by the lwarp core.

---

File 377 **lwarp-showkeys.sty**

§ 479 Package **showkeys**

*(Emulates or patches code by DAVID CARLISLE, MORTEN HØGHOLM.)*

Pkg showkeys showkeys is ignored.

**for HTML output:** Discard all options for lwarp-showkeys:

```
1 \LWR@ProvidesPackageDrop{showkeys}[2014/10/28]
```

```
2 \NewDocumentCommand{\showkeys}{s}{}
```

---

File 378 **lwarp-showtags.sty**

§ 480 Package **showtags**

Pkg showtags showtags is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{showtags}% no version is given

```
2 \newcommand{\thecitetag}[1]{}
```

---

File 379 **lwarp-sidecap.sty**

§ 481 Package **sidecap**

*(Emulates or patches code by ROLF NIEPRASCHK, HUBERT GÄSSLEIN.)*

Pkg sidecap sidecap is emulated.

**for HTML output:** Discard all options for lwarp-sidecap.

```
1 \LWR@ProvidesPackageDrop{sidecap}[2003/06/06]
```

See:

<http://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment> regarding the creation of starred environments with xparse.

```

2 \NewDocumentEnvironment{SCTable}{soo}
3 {\IfValueTF{#3}{\table[#3]}\table}}
4 {\endtable}
5
6 \ExplSyntaxOn
7 \cs_new:cpn {SCTable*} {\SCTable*}
8 \cs_new_eq:cN {endSCTable*} \endSCTable
9 \ExplSyntaxOff
10
11
12 \NewDocumentEnvironment{SCfigure}{soo}
13 {\IfValueTF{#3}{\figure[#3]}\figure}}
14 {\endfigure}
15
16 \ExplSyntaxOn
17 \cs_new:cpn {SCfigure*} {\SCfigure*}
18 \cs_new_eq:cN {endSCfigure*} \endSCfigure
19 \ExplSyntaxOff
20
21
22 \newenvironment*{wide}{}{}

```

---

File 380 **lwarp-sidenotes.sty**

§ 482 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}{#1}{marginblock}%
27 \renewcommand*\@capttype{#2}%
28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33 \RenewDocumentEnvironment{marginfigure}{0}
34 {\begin{KFLT@sidenotes@marginfloat}{figure}}
35 {\end{KFLT@sidenotes@marginfloat}}
36
37 \RenewDocumentEnvironment{margintable}{0}
38 {\begin{KFLT@sidenotes@marginfloat}{table}}
39 {\end{KFLT@sidenotes@marginfloat}}

```

The following were changed by sidenotes, and now are reset back to their lwarp-supported originals:

Restoring the definition from the L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> article.cls source:

```

40 \renewenvironment{figure*}
41 {\@dblfloat{figure}}
42 {\enddblfloat}
43
44 \renewenvironment{table*}
45 {\@dblfloat{table}}
46 {\enddblfloat}

```

For MATHJAX:



Note that `sidenotes` does not support `\sidenote` inside math in print mode. Use `\sidenotemark` and `\sidenotetext` instead.

```

47 \begin{warpMathJax}
48 \providecommand{\sidenotename}{sidenote}
49 \appto\LWR@synctotenumbers{\LWR@synconenotenumbers{\LWR@sidenote}{\thesidenote}}
50 \appto\LWR@synctotenames{\LWR@synconenotename{\LWR@sidenote}{\sidenotename}}
51 \CustomizeMathJax{\def\LWR@sidenote{1}}
52 \CustomizeMathJax{\newcommand{\sidenotemark}[1][\LWR@sidenote]{\mathrm{#1}}}
53 \end{warpMathJax}

```

The following is not defined since is not allowed inside math in print mode, and also would have to be modified to parse the optional offset argument:

---

```
\CustomizeMathJax{\newcommand{\sidenote}[2][\LWRsidenote]{{}^{\mathrm{#1}}}}
```

---

File 381 **lwarp-SIunits.sty**

§ 483 Package **Slunits**

*(Emulates or patches code by MARCEL HELDOORN.)*

Pkg SIunits **Slunits** is patched for use by **lwarp**.

For SVG math, it is recommended to use `\unit` where possible, which combines the entire expression into a single `lateximage`, and adds the `alt` tag containing the  $\LaTeX$  code, allowing for copy/paste. When units are used outside of the `\unit` macro, each unit macro will have its own `lateximage`, and each will have the `alt` tag set according to `\MathImageAltText`, which defaults to `(math image)`.

For **MATHJAX**, individual units used in text will appear as SVG images, since `\ensuremath` is used in the original definitions, and `\ensuremath` often has expressions which do not work well in **MATHJAX**, so it is always forced to an SVG image. If, however, `\unit` is used, the result is expressed with **MATHJAX** instead of an SVG image.

**for HTML output:** 1 `\LWR@ProvidesPackagePass{SIunits}[2007/12/02]`

Patched for copy/paste with the HTML `alt` tag:

```
2 \ifbool{mathjax}{
3 \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
4 \LWR@subsingledollar*% lwarp
5 {% alt tag
6 \textbackslash{}unit\{\LWR@HTMLsanitize{#1}\}%
7 \{\LWR@HTMLsanitize{#2}\}% extra space
8 }%
9 {SIunits}% add'l hashing
10 {%
11 #1\,{#2}%
12 }% contents
13 }
14 }{% not MathJax
15 \DeclareRobustCommand{\LWR@HTML@unit}[2]{%
16 \@inunitcommandtrue% original
17 \LWR@subsingledollar*% lwarp
18 {% alt tag
19 \textbackslash{}unit\{\LWR@HTMLsanitize{#1}\}%
20 \{\LWR@HTMLsanitize{#2}\}% extra space
21 }%
22 {SIunits}% add'l hashing
23 {%
24 \LWR@origensuredmath{% lwarp modification
25 \SI@fstyle{%
26 {#1}\@qsk\period@active{#2}%
27 }% original
28 }%

```

```

29 }% contents
30 \@inunitcommandfalse% original
31 }
32 }% not MathJax
33 \LWR@formatted{unit}

```

#### For MATHJAX:

```

34 \begin{warpMathJax}
35 \LWR@infoprocessingmathjax{SIunits}
36
37 \CustomizeMathJax{\newcommand{\one}}{}
38 \CustomizeMathJax{\newcommand{\meter}}{\metre}
39 \CustomizeMathJax{\newcommand{\deka}}{\deca}
40 \CustomizeMathJax{\newcommand{\dekad}}{\decad}
41 \CustomizeMathJax{\newcommand{\per}}{/}
42 \CustomizeMathJax{\newcommand{\usk}}{\;}
43 \CustomizeMathJax{\newcommand{\unit}[2]{#1\,#2}}
44 \CustomizeMathJax{\newcommand{\power}[2]{#1^{#2}}}
45
46 \AtBeginDocument{%
47 \if@redefsquare
48 \CustomizeMathJax{\renewcommand{\square}[1]{\power{#1}{2}}}
49 \else
50 \if@defsquaren
51 \CustomizeMathJax{\newcommand{\square}[1]{\power{#1}{2}}}
52 \else
53 \CustomizeMathJax{\renewcommand{\square}[1]{\power{#1}{2}}}
54 \fi %\if@defsquaren
55 \fi %\if@redefsquare
56 } %\AtBeginDocument
57
58 \CustomizeMathJax{\newcommand{\squared}}{^2}
59 \CustomizeMathJax{\newcommand{\cubic}[1]{\power{#1}{3}}}
60 \CustomizeMathJax{\newcommand{\cubed}}{^3}
61 \CustomizeMathJax{\newcommand{\fourth}[1]{\power{#1}{4}}}
62 \CustomizeMathJax{\newcommand{\reciprocal}[1]{\power{#1}{-1}}}
63 \CustomizeMathJax{\newcommand{\rp}}{\reciprocal}
64 \CustomizeMathJax{\newcommand{\rpsquare}[1]{\power{#1}{-2}}}
65 \CustomizeMathJax{\newcommand{\rpsquared}}{^-2}
66 \CustomizeMathJax{\newcommand{\rpcubic}[1]{\power{#1}{-3}}}
67 \CustomizeMathJax{\newcommand{\rpcubed}}{^-3}
68 \CustomizeMathJax{\newcommand{\rpfourth}[1]{\power{#1}{-4}}}
69 \CustomizeMathJax{\newcommand{\yocto}}{\mathrm{y}}
70 \CustomizeMathJax{\newcommand{\zepto}}{\mathrm{z}}
71 \CustomizeMathJax{\newcommand{\atto}}{\mathrm{a}}
72 \CustomizeMathJax{\newcommand{\femto}}{\mathrm{f}}
73 \CustomizeMathJax{\newcommand{\pico}}{\mathrm{p}}
74 \CustomizeMathJax{\newcommand{\nano}}{\mathrm{n}}
75 \CustomizeMathJax{\newcommand{\micro}}{\mathrm{\unicode{x00B5}}}
76 \CustomizeMathJax{\newcommand{\milli}}{\mathrm{m}}
77 \CustomizeMathJax{\newcommand{\centi}}{\mathrm{c}}
78 \CustomizeMathJax{\newcommand{\deci}}{\mathrm{d}}
79 \CustomizeMathJax{\newcommand{\deca}}{\mathrm{da}}
80 \CustomizeMathJax{\newcommand{\hecto}}{\mathrm{h}}

```

```

81 \CustomizeMathJax{\newcommand{\kilo}{\mathrm{k}}}
82 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
83 \CustomizeMathJax{\newcommand{\giga}{\mathrm{G}}}
84 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
85 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
86 \CustomizeMathJax{\newcommand{\exa}{\mathrm{E}}}
87 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
88 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
89 \CustomizeMathJax{\newcommand{\yoctod}{\power{10}{-24}}}
90 \CustomizeMathJax{\newcommand{\zeptod}{\power{10}{-21}}}
91 \CustomizeMathJax{\newcommand{\atod}{\power{10}{-18}}}
92 \CustomizeMathJax{\newcommand{\femtod}{\power{10}{-15}}}
93 \CustomizeMathJax{\newcommand{\picod}{\power{10}{-12}}}
94 \CustomizeMathJax{\newcommand{\nanod}{\power{10}{-9}}}
95 \CustomizeMathJax{\newcommand{\microd}{\power{10}{-6}}}
96 \CustomizeMathJax{\newcommand{\millid}{\power{10}{-3}}}
97 \CustomizeMathJax{\newcommand{\centid}{\power{10}{-2}}}
98 \CustomizeMathJax{\newcommand{\decid}{\power{10}{-1}}}
99 \CustomizeMathJax{\newcommand{\decad}{\power{10}{1}}}
100 \CustomizeMathJax{\newcommand{\hectod}{\power{10}{2}}}
101 \CustomizeMathJax{\newcommand{\kilod}{\power{10}{3}}}
102 \CustomizeMathJax{\newcommand{\megad}{\power{10}{6}}}
103 \CustomizeMathJax{\newcommand{\gigad}{\power{10}{9}}}
104 \CustomizeMathJax{\newcommand{\terad}{\power{10}{12}}}
105 \CustomizeMathJax{\newcommand{\petad}{\power{10}{15}}}
106 \CustomizeMathJax{\newcommand{\exad}{\power{10}{18}}}
107 \CustomizeMathJax{\newcommand{\zettad}{\power{10}{21}}}
108 \CustomizeMathJax{\newcommand{\yottad}{\power{10}{24}}}
109 \CustomizeMathJax{\newcommand{\gram}{\mathrm{g}}}
110 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
111 \CustomizeMathJax{\newcommand{\kilogram}{\kilo\gram}}
112 \CustomizeMathJax{\newcommand{\second}{\mathrm{s}}}
113 \CustomizeMathJax{\newcommand{\ampere}{\mathrm{A}}}
114 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}
115 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
116 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
117 \CustomizeMathJax{\newcommand{\radian}{\mathrm{rad}}}
118 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
119 \CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}
120 \CustomizeMathJax{\newcommand{\newton}{\mathrm{N}}}
121 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
122 \CustomizeMathJax{\newcommand{\joule}{\mathrm{J}}}
123 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
124 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
125 \CustomizeMathJax{\newcommand{\volt}{\mathrm{V}}}
126 \CustomizeMathJax{\newcommand{\farad}{\mathrm{F}}}
127 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
128 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
129 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
130 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
131 \CustomizeMathJax{\newcommand{\henry}{\mathrm{H}}}
132 \CustomizeMathJax{\newcommand{\degreecelsius}{\mathrm{\unicode{x2103}}}}
133 \CustomizeMathJax{\newcommand{\celsius}{\degreecelsius}}
134 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
135 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}

```

```
136 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
137 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
138 \CustomizeMathJax{\newcommand{\katal}{\mathrm{kat}}}
139
140 \ifdef{\radianbase}{
141 \CustomizeMathJax{\newcommand{\radianbase}%
142 {\metre\usk\reciprocal\metre}}
143 \CustomizeMathJax{\newcommand{\steradianbase}%
144 {\squaremetre\usk\rpsquare\metre}}
145 \CustomizeMathJax{\newcommand{\hertzbase}%
146 {\reciprocal\second}}
147 \CustomizeMathJax{\newcommand{\newtonbase}%
148 {\metre\usk\kilogram\usk\second\rpsquared}}
149 \CustomizeMathJax{\newcommand{\pascalbase}%
150 {\reciprocal\metre\usk\kilogram\usk\second\rpsquared}}
151 \CustomizeMathJax{\newcommand{\joulebase}%
152 {\squaremetre\usk\kilogram\usk\second\rpsquared}}
153 \CustomizeMathJax{\newcommand{\wattbase}%
154 {\squaremetre\usk\kilogram\usk\rpcubic\second}}
155 \CustomizeMathJax{\newcommand{\coulombbase}%
156 {\ampere\usk\second}}
157 \CustomizeMathJax{\newcommand{\voltbase}%
158 {\squaremetre\usk\kilogram\usk\rpcubic\second\usk\reciprocal\ampere}}
159 \CustomizeMathJax{\newcommand{\faradbase}%
160 {\rpsquare\metre\usk\reciprocal\kilogram\usk\fourth\second\usk\ampere\squared}}
161 \CustomizeMathJax{\newcommand{\ohmbase}%
162 {\squaremetre\usk\kilogram\usk\rpcubic\second\usk\rpsquare\ampere}}
163 \CustomizeMathJax{\newcommand{\siemensbase}%
164 {\rpsquare\metre\usk\reciprocal\kilogram\usk\cubic\second\usk\ampere\squared}}
165 \CustomizeMathJax{\newcommand{\weberbase}%
166 {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
167 \CustomizeMathJax{\newcommand{\teslabase}%
168 {\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
169 \CustomizeMathJax{\newcommand{\henrybase}%
170 {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\rpsquare\ampere}}
171 \CustomizeMathJax{\newcommand{\celsiusbase}%
172 {\kelvin}}
173 \CustomizeMathJax{\newcommand{\lumenbase}%
174 {\candela\usk\squaremetre\usk\rpsquare\metre}}
175 \CustomizeMathJax{\newcommand{\luxbase}%
176 {\candela\usk\squaremetre\usk\rpfourth\metre}}
177 \CustomizeMathJax{\newcommand{\becquerelbase}%
178 {\hertzbase}}
179 \CustomizeMathJax{\newcommand{\graybase}%
180 {\squaremetre\usk\second\rpsquared}}
181 \CustomizeMathJax{\newcommand{\sievertbase}%
182 {\graybase}}
183 \CustomizeMathJax{\newcommand{\katalbase}%
184 {\rp\second\usk\mole }}
185 }{ }
186
187 \ifdef{\derradian}{
188 \CustomizeMathJax{\newcommand{\derradian}%
189 {\metre\usk\reciprocal\metre}}
190 \CustomizeMathJax{\newcommand{\dersteradian}%
```

```

191 {\squaremetre\usk\rpsquare\metre}}
192 \CustomizeMathJax{\newcommand{\derhertz}%
193 {\reciprocal\second}}
194 \CustomizeMathJax{\newcommand{\dernewton}%
195 {\metre\usk\kilogram\usk\second\rpsquared}}
196 \CustomizeMathJax{\newcommand{\derpascal}%
197 {\newton\usk\rpsquare\metre}}
198 \CustomizeMathJax{\newcommand{\derjoule}%
199 {\newton\usk\metre}}
200 \CustomizeMathJax{\newcommand{\derwatt}%
201 {\joule\usk\reciprocal\second}}
202 \CustomizeMathJax{\newcommand{\dercoulomb}%
203 {\ampere\usk\second}}
204 \CustomizeMathJax{\newcommand{\dervolt}%
205 {\watt\usk\reciprocal\ampere}}
206 \CustomizeMathJax{\newcommand{\derfarad}%
207 {\coulomb\usk\reciprocal\volt}}
208 \CustomizeMathJax{\newcommand{\derohm}%
209 {\volt\usk\reciprocal\ampere}}
210 \CustomizeMathJax{\newcommand{\dersiemens}%
211 {\ampere\usk\reciprocal\volt}}
212 \CustomizeMathJax{\newcommand{\derweber}%
213 {\squaremetre\usk\kilogram\usk\second\rpsquared\usk\reciprocal\ampere}}
214 \CustomizeMathJax{\newcommand{\dertesla}%
215 {\weber\usk\rpsquare\metre}}
216 \CustomizeMathJax{\newcommand{\derhenry}%
217 {\weber\usk\reciprocal\ampere}}
218 \CustomizeMathJax{\newcommand{\dercelsius}%
219 {\kelvin}}
220 \CustomizeMathJax{\newcommand{\derlumen}%
221 {\candela\usk\steradian}}
222 \CustomizeMathJax{\newcommand{\derlux}%
223 {\lumen\usk\rpsquare\metre}}
224 \CustomizeMathJax{\newcommand{\derbecquerel}%
225 {\derhertz}}
226 \CustomizeMathJax{\newcommand{\dergray}%
227 {\joule\usk\reciprocal\kilogram}}
228 \CustomizeMathJax{\newcommand{\dersievert}%
229 {\dergray}}
230 \CustomizeMathJax{\newcommand{\derkatal}%
231 {\katalbase}}
232 }{}
233
234 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}
235 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}
236 \CustomizeMathJax{\newcommand{\dday}{\mathrm{d}}}
237 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}
238 \CustomizeMathJax{\newcommand{\pminute}{^\prime}}
239 \CustomizeMathJax{\newcommand{\arcminute}{^\prime}}
240 \CustomizeMathJax{\newcommand{\pasecond}{^\prime\prime}}
241 \CustomizeMathJax{\newcommand{\arcsecond}{^\prime\prime}}
242 \CustomizeMathJax{\newcommand{\ton}{\mathrm{t}}}
243 \CustomizeMathJax{\newcommand{\tonne}{\mathrm{t}}}
244 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
245 \CustomizeMathJax{\newcommand{\litre}{\mathrm{L}}}

```

```
246 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}
247 \CustomizeMathJax{\newcommand{\bel}{\mathrm{B}}}
248 \CustomizeMathJax{\newcommand{\curie}{\mathrm{Ci}}}
249 \CustomizeMathJax{\newcommand{\rad}{\mathrm{rad}}}
250 \CustomizeMathJax{\newcommand{\rad}{\mathrm{rd}}}
251 \CustomizeMathJax{\newcommand{\rem}{\mathrm{rem}}}
252 \CustomizeMathJax{\newcommand{\roentgen}{\mathrm{R}}}
253 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{\mathrm{eV}}}}
254 \CustomizeMathJax{\newcommand{\atomicmass}{\mathrm{u}}}
255 \CustomizeMathJax{\newcommand{\atomicmassunit}{\mathrm{u}}}
256 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{Da}}}
257 \CustomizeMathJax{\newcommand{\are}{\mathrm{a}}}
258 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{\hecto\are}}}
259 \CustomizeMathJax{\newcommand{\barn}{\mathrm{b}}}
260 \CustomizeMathJax{\newcommand{\bbar}{\mathrm{\bar{b}}}}
261 \CustomizeMathJax{\newcommand{\gal}{\mathrm{Gal}}}
262 \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\unicode{x00C5}}}}
263 \CustomizeMathJax{\newcommand{\rperminute}{\mathrm{r}\per\minute}}
264 \CustomizeMathJax{\newcommand{\rpersecond}{\mathrm{r}\per\second}}
265 \CustomizeMathJax{\newcommand{\squaremetre}{\power{\metre}{2}}}
266 \CustomizeMathJax{\newcommand{\cubicmetre}{\cubic\metre}}
267 \CustomizeMathJax{\newcommand{\graypersecond}{\gray\per\second}}
268 \CustomizeMathJax{\newcommand{\graypersecondnp}{\gray\usk\reciprocal\second}}
269 \CustomizeMathJax{\newcommand{\metrepersquaresecond}{\metre\per\second\squared}}
270 \CustomizeMathJax{\newcommand{\metrepersquaresecondnp}{\metre\usk\second\rpsquared}}
271 \CustomizeMathJax{\newcommand{\joulepermole}{\joule\per\mole}}
272 \CustomizeMathJax{\newcommand{\joulepermolenp}{\joule\usk\reciprocal\mole}}
273 \CustomizeMathJax{\newcommand{\molepercubicmetre}{\mole\per\cubic\metre}}
274 \CustomizeMathJax{\newcommand{\molepercubicmetrenp}{\mole\usk\rpcubic\metre}}
275 \CustomizeMathJax{\newcommand{\radianpersquaresecond}{\radian\per\second\squared}}
276 \CustomizeMathJax{\newcommand{\radianpersquaresecondnp}{\radian\usk\second\rpsquared}}
277 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecond}{\kilogram\usk\squaremetre\per\second}}
278 \CustomizeMathJax{\newcommand{\kilogramsquaremetrepersecondnp}{\kilogram\usk\squaremetre\usk\reciproca}}
279 \CustomizeMathJax{\newcommand{\radianpersecond}{\radian\per\second}}
280 \CustomizeMathJax{\newcommand{\radianpersecondnp}{\radian\usk\reciprocal\second}}
281 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetre}{\squaremetre\per\cubic\metre}}
282 \CustomizeMathJax{\newcommand{\squaremetrepercubicmetrenp}{\squaremetre\usk\rpcubic\metre}}
283 \CustomizeMathJax{\newcommand{\katalpercubicmetre}{\katal\per\cubic\metre}}
284 \CustomizeMathJax{\newcommand{\katalpercubicmetrenp}{\katal\usk\rpcubic\metre}}
285 \CustomizeMathJax{\newcommand{\coulombpermol}{\coulomb\per\mole}}
286 \CustomizeMathJax{\newcommand{\coulombpermolnp}{\coulomb\usk\reciprocal\mole}}
287 \CustomizeMathJax{\newcommand{\amperepersquaremetre}{\ampere\per\squaremetre}}
288 \CustomizeMathJax{\newcommand{\amperepersquaremetrenp}{\ampere\usk\rpsquare\metre}}
289 \CustomizeMathJax{\newcommand{\kilogrampercubicmetre}{\kilogram\per\cubic\metre}}
290 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrenp}{\kilogram\usk\rpcubic\metre}}
291 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecond}{\squaremetre\per\newton\usk\second}}
292 \CustomizeMathJax{\newcommand{\squaremetrepernewtonsecondnp}{\squaremetre\usk\reciprocal\newton\usk\re}}
293 \CustomizeMathJax{\newcommand{\pascalsecond}{\pascal\usk\second}}
294 \CustomizeMathJax{\newcommand{\coulombpercubicmetre}{\coulomb\per\cubic\metre}}
295 \CustomizeMathJax{\newcommand{\coulombpercubicmetrenp}{\coulomb\usk\rpcubic\metre}}
296 \CustomizeMathJax{\newcommand{\ampere\metre\second}{\ampere\usk\metre\usk\second}}
297 \CustomizeMathJax{\newcommand{\voltpermetre}{\volt\per\metre}}
298 \CustomizeMathJax{\newcommand{\voltpermetrenp}{\volt\usk\reciprocal\metre}}
299 \CustomizeMathJax{\newcommand{\coulombpersquaremetre}{\coulomb\per\squaremetre}}
300 \CustomizeMathJax{\newcommand{\coulombpersquaremetrenp}{\coulomb\usk\rpsquare\metre}}
```

```

301 \CustomizeMathJax{\newcommand{\faradpermetre}{\farad\per\metre}}
302 \CustomizeMathJax{\newcommand{\faradpermetrenp}{\farad\usk\reciprocal\metre}}
303 \CustomizeMathJax{\newcommand{\ohmmetre}{\ohm\usk\metre}}
304 \CustomizeMathJax{\newcommand{\kilowatthour}{\kilo\watt\hour}}
305 \CustomizeMathJax{\newcommand{\wattpersquaremetre}{\watt\per\squaremetre}}
306 \CustomizeMathJax{\newcommand{\wattpersquaremetrenp}{\watt\usk\rpsquare\metre}}
307 \CustomizeMathJax{\newcommand{\joulepersquaremetre}{\joule\per\squaremetre}}
308 \CustomizeMathJax{\newcommand{\joulepersquaremetrenp}{\joule\usk\rpsquare\metre}}
309 \CustomizeMathJax{\newcommand{\newtonpercubicmetre}{\newton\per\cubic\metre}}
310 \CustomizeMathJax{\newcommand{\newtonpercubicmetrenp}{\newton\usk\rcubic\metre}}
311 \CustomizeMathJax{\newcommand{\newtonperkilogram}{\newton\per\kilogram}}
312 \CustomizeMathJax{\newcommand{\newtonperkilogramnp}{\newton\usk\reciprocal\kilogram}}
313 \CustomizeMathJax{\newcommand{\jouleperkelvin}{\joule\per\kelvin}}
314 \CustomizeMathJax{\newcommand{\jouleperkelvinnp}{\joule\usk\reciprocal\kelvin}}
315 \CustomizeMathJax{\newcommand{\jouleperkilogram}{\joule\per\kilogram}}
316 \CustomizeMathJax{\newcommand{\jouleperkilogramnp}{\joule\usk\reciprocal\kilogram}}
317 \CustomizeMathJax{\newcommand{\coulombperkilogram}{\coulomb\per\kilogram}}
318 \CustomizeMathJax{\newcommand{\coulombperkilogramnp}{\coulomb\usk\reciprocal\kilogram}}
319 \CustomizeMathJax{\newcommand{\squaremetrepersecond}{\squaremetre\per\second}}
320 \CustomizeMathJax{\newcommand{\squaremetrepersecondnp}{\squaremetre\usk\reciprocal\second}}
321 \CustomizeMathJax{\newcommand{\squaremetreppersquaresecond}{\squaremetre\per\second\squared}}
322 \CustomizeMathJax{\newcommand{\squaremetreppersquaresecondnp}{\squaremetre\usk\second\rpsquared}}
323 \CustomizeMathJax{\newcommand{\kilogrammetrepersecond}{\kilogram\usk\metre\per\second}}
324 \CustomizeMathJax{\newcommand{\kilogrammetrepersecondnp}{\kilogram\usk\metre\usk\reciprocal\second}}
325 \CustomizeMathJax{\newcommand{\candelapersquaremetre}{\candela\per\squaremetre}}
326 \CustomizeMathJax{\newcommand{\candelapersquaremetrenp}{\candela\usk\rpsquare\metre}}
327 \CustomizeMathJax{\newcommand{\amperepermetre}{\ampere\per\metre}}
328 \CustomizeMathJax{\newcommand{\amperepermetrenp}{\ampere\usk\reciprocal\metre}}
329 \CustomizeMathJax{\newcommand{\joulepertesla}{\joule\per\tesla}}
330 \CustomizeMathJax{\newcommand{\jouleperteslanp}{\joule\usk\reciprocal\tesla}}
331 \CustomizeMathJax{\newcommand{\henrypermetre}{\henry\per\metre}}
332 \CustomizeMathJax{\newcommand{\henrypermetrenp}{\henry\usk\reciprocal\metre}}
333 \CustomizeMathJax{\newcommand{\kilogrampersecond}{\kilogram\per\second}}
334 \CustomizeMathJax{\newcommand{\kilogrampersecondnp}{\kilogram\usk\reciprocal\second}}
335 \CustomizeMathJax{\newcommand{\kilogrampersquaremetresecond}{\kilogram\per\squaremetre\usk\second}}
336 \CustomizeMathJax{\newcommand{\kilogrampersquaremetresecondnp}{\kilogram\usk\rpsquare\metre\usk\recipr}}
337 \CustomizeMathJax{\newcommand{\kilogrampersquaremetre}{\kilogram\per\squaremetre}}
338 \CustomizeMathJax{\newcommand{\kilogrampersquaremetrenp}{\kilogram\usk\rpsquare\metre}}
339 \CustomizeMathJax{\newcommand{\kilogrampermetre}{\kilogram\per\metre}}
340 \CustomizeMathJax{\newcommand{\kilogrampermetrenp}{\kilogram\usk\reciprocal\metre}}
341 \CustomizeMathJax{\newcommand{\joulepermolekelvin}{\joule\per\mole\usk\kelvin}}
342 \CustomizeMathJax{\newcommand{\joulepermolekelvinnp}{\joule\usk\reciprocal\mole\usk\reciprocal\kelvin}}
343 \CustomizeMathJax{\newcommand{\kilogramperkilomole}{\kilogram\per\kilo\mole}}
344 \CustomizeMathJax{\newcommand{\kilogramperkilomolenp}{\kilogram\usk\kilo\reciprocal\mole}}
345 \CustomizeMathJax{\newcommand{\kilogramsquaremetre}{\kilogram\usk\squaremetre}}
346 \CustomizeMathJax{\newcommand{\kilogramsquaremetrenp}{\kilogramsquaremetre}}
347 \CustomizeMathJax{\newcommand{\kilogrammetreppersquaresecond}{\kilogram\usk\metre\per\second\squared}}
348 \CustomizeMathJax{\newcommand{\kilogrammetreppersquaresecondnp}{\kilogram\usk\metre\usk\second\rpsquare}}
349 \CustomizeMathJax{\newcommand{\newtonpersquaremetre}{\newton\per\squaremetre}}
350 \CustomizeMathJax{\newcommand{\newtonpersquaremetrenp}{\newton\usk\rpsquare\metre}}
351 \CustomizeMathJax{\newcommand{\persquaremetresecond}{1\per\squaremetre\usk\second}}
352 \CustomizeMathJax{\newcommand{\persquaremetresecondnp}{\rpsquare\metre\usk\reciprocal\second}}
353 \CustomizeMathJax{\newcommand{\wattperkilogram}{\watt\per\kilogram}}
354 \CustomizeMathJax{\newcommand{\wattperkilogramnp}{\watt\usk\reciprocal\kilogram}}
355 \CustomizeMathJax{\newcommand{\wattpercubicmetre}{\watt\per\cubic\metre}}

```

```

356 \CustomizeMathJax{\newcommand{\wattpercubicmetrenp}{\watt\usk\rpcubic\metre}}
357 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradian}{\watt\per\squaremetre\usk\steradian}}
358 \CustomizeMathJax{\newcommand{\wattpersquaremetresteradiannp}{\watt\usk\rpsquare\metre\usk\rp\steradia}}
359 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvin}{\joule\per\kilogram\usk\kelvin}}
360 \CustomizeMathJax{\newcommand{\jouleperkilogramkelvinnp}{\joule\usk\reciprocal\kilogram\usk\reciprocal}}
361 \CustomizeMathJax{\newcommand{\squaremetreperkilogram}{\squaremetre\per\kilogram}}
362 \CustomizeMathJax{\newcommand{\rpsquaremetreperkilogram}{\squaremetre\usk\reciprocal\kilogram}}
363 \CustomizeMathJax{\newcommand{\cubicmetreperkilogram}{\cubic\metre\per\kilogram}}
364 \CustomizeMathJax{\newcommand{\rpcubicmetreperkilogram}{\cubic\metre\usk\reciprocal\kilogram}}
365 \CustomizeMathJax{\newcommand{\newtonpermetre}{\newton\per\metre}}
366 \CustomizeMathJax{\newcommand{\newtonpermetrenp}{\newton\usk\reciprocal\metre}}
367 \CustomizeMathJax{\newcommand{\Celsius}{\unicode{x2103}}}
368 \CustomizeMathJax{\newcommand{\wattpermetrekelvin}{\watt\per\metre\usk\kelvin}}
369 \CustomizeMathJax{\newcommand{\wattpermetrekelvinnp}{\watt\usk\reciprocal\metre\usk\reciprocal\kelvin}}
370 \CustomizeMathJax{\newcommand{\newtonmetre}{\newton\usk\metre}} \CustomizeMathJax{\newcommand{\newtonmetrenp}{\newton\usk\reciprocal\metre}}
371 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecond}{\squaremetre\per\cubic\second}}
372 \CustomizeMathJax{\newcommand{\squaremetrepercubicsecondnp}{\squaremetre\usk\rpcubic\second}}
373 \CustomizeMathJax{\newcommand{\metrepersecond}{\metre\per\second}}
374 \CustomizeMathJax{\newcommand{\metrepersecondnp}{\metre\usk\reciprocal\second}}
375 \CustomizeMathJax{\newcommand{\joulepercubicmetre}{\joule\per\cubic\metre}}
376 \CustomizeMathJax{\newcommand{\joulepercubicmetrenp}{\joule\usk\rpcubic\metre}}
377 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulomb}{\kilogram\per\cubic\metre\usk\coulomb}}
378 \CustomizeMathJax{\newcommand{\kilogrampercubicmetrecoulombnp}{\kilogram\usk\rpcubic\metre\usk\reciprocal\coulomb}}
379 \CustomizeMathJax{\newcommand{\cubicmetrepersecond}{\cubic\metre\per\second}}
380 \CustomizeMathJax{\newcommand{\rpcubicmetrepersecond}{\cubic\metre\usk\reciprocal\second}}
381 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetre}{\kilogram\per\second\usk\cubic\metre}}
382 \CustomizeMathJax{\newcommand{\kilogrampersecondcubicmetrenp}{\kilogram\usk\reciprocal\second\usk\rpcubic\metre}}
383 \end{warpMathJax}

```

---

File 382 **lwarp-siunitx.sty**

§ 484 Package **siunitx**

(Emulates or patches code by JOSEPH WRIGHT.)

Pkg siunitx siunitx is patched for use by lwarp.

**fractions** Due to *pdftotext* limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

 **math mode required** Some units will require that the expression be placed inside math mode.

 **tabular** Tabular S columns are rendered as simple c columns, and tabular s columns are not supported. These may be replaced by c columns with each cell contained in \num or \si.

For math mode with svg display, the original siunitx code is used while generating the svg image. For text mode, lwarp uses an emulation which provides a very effective HTML interpretation of siunitx. For math expressions while using MATHJAX, a limited emulation is used. Most functions work reasonably well, but many options cannot be emulated. siunitx macros with more than one optional value cannot absorb the second optional value, and complicated parsing such as for \ang is not supported. The result usually looks fine, and otherwise is enough to get the meaning across.

lwarp's MATHJAX emulation for siunitx is meant to be a stop-gap measure until an extension is included in MATHJAX. As of this writing, the third-party siunitx extension for MATHJAX is not currently hosted at any public CDN, thus siunitx is not usable with this extension unless a local copy of this extension is created first. See `\MathJaxFilename` to select a custom MathJax script, but lwarp's emulation would have to be disabled as well.

Document modifications required for MATHJAX:

#### custom units

- Custom units may be added with `\CustomizeMathJax`. See the `lwarp-siunitx` code for examples.

#### ⚠ unit spacing

- Units work better using `~` between units instead of using periods.

#### ⚠ `\square`, `\cubic`

- To square or cube compound units, enclose the following compound units in braces:

```
\cubic{\centi\meter}
```

Single units do not require braces.

Also see [MATHJAX option](#), section 8.7.4.

#### for HTML output:

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{siunitx}[2018/05/17]

4 \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 {

```

For parse-numbers=false:

```

80 __siunitx_unit_output_pre_print:
81 \begingroup% lwarp
82 \boolfalse{mathjax}% lwarp
83 % __siunitx_print:nn { number } { \ensuremath {#1} }
84 \LWR@subsingledollar{% lwarp
85 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
86 }{siunitx}{%
87 __siunitx_print:nn { number } {%
88 \LWR@origensuredmath{#1}%
89 }%
90 }% lwarp
91 \endgroup% lwarp
92 __siunitx_unit_output_print:
93 }
94 \group_end:% lwarp
95 }

```

For parse-numbers=false:

```

96 \cs_set_protected:Npn __siunitx_range_numbers_aux:n #1
97 {
98 \bool_if:NTF \l__siunitx_number_parse_bool
99 {
100 \tl_clear:N \l__siunitx_number_out_tl
101 \tl_clear:N \l__siunitx_number_out_saved_tl
102 \bool_set_false:N \l__siunitx_number_compound_bool
103 __siunitx_number_output_parse:n {#1}
104 \bool_if:NT \l__siunitx_number_compound_bool
105 { \msg_error:nx { siunitx } { multi-part-range } {#1} }
106 }
107 {
108 __siunitx_unit_output_pre_print:
109 \begingroup% lwarp
110 \boolfalse{mathjax}% lwarp
111 % __siunitx_print:nn { number } {#1}
112 \LWR@subsingledollar{% lwarp
113 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
114 }{siunitx}{%
115 __siunitx_print:nn { number } {
116 \LWR@origensuredmath{#1}%
117 } % lwarp
118 }% lwarp
119 \endgroup% lwarp
120 __siunitx_unit_output_print:
121 }
122 }

```

For parse-numbers=false:

```

123 \cs_set_protected:Npn __siunitx_angle_print_direct_aux:nn #1#2 {
124 \tl_if_empty:nF {#1}
125 {
126 \tl_set:Nn \l__siunitx_unit_tl {#2}
127 \begingroup% lwarp
128 \boolfalse{mathjax}% lwarp
129 __siunitx_print:nn { number } {#1}
130 \LWR@subsingledollar{% lwarp
131 \textbackslash(\LWR@HTMLSanitize{#1} \textbackslash)% lwarp
132){siunitx}{%
133 __siunitx_print:nn { number } {
134 \LWR@origensuredmath{#1}%
135 } % lwarp
136 }% lwarp
137 \endgroup% lwarp
138 __siunitx_unit_output_print:
139 }
140 }
141 %

```

For quotients, the fraction code is replaced by the symbol code:

```

142 \cs_undefine:N __siunitx_number_output_quotient_fraction:
143 \cs_new_protected:Npn __siunitx_number_output_quotient_fraction: {
144 \bool_set_true:N \l__siunitx_number_compound_bool
145 __siunitx_number_output_quotient_aux_i:
146 \tl_set_eq:NN \l__siunitx_number_out_tl
147 \l__siunitx_number_numerator_tl
148 \tl_put_right:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
149 \tl_put_right:NV \l__siunitx_number_out_tl
150 \l__siunitx_number_denominator_tl
151 __siunitx_number_output_single_aux:
152 }

```

For units, the fraction code is replaced by the symbol code:

```

153 \cs_undefine:N __siunitx_unit_format_fraction_fraction:
154 \cs_new_protected:Npn __siunitx_unit_format_fraction_fraction: {
155 __siunitx_unit_format_fraction_symbol_aux:
156 \int_compare:nNnT { \l__siunitx_unit_denominator_int } > { 1 }
157 {
158 \bool_if:NT \l__siunitx_unit_denominator_bracket_bool
159 {
160 \tl_put_left:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_open_tl
161 \tl_put_right:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_close_tl
162 }
163 }
164 \tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
165 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
166 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_unit_denominator_tl
167 }

```

```

168 \cs_undefine:N __siunitx_angle_print_astronomy_aux:
169 \cs_new_protected:Npn __siunitx_angle_print_astronomy_aux: {
170 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer }

```

```

171 \l__siunitx_tmpa_tl
172 { \l__siunitx_print:nV { number } \l__siunitx_tmpa_tl }
173 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
174 {% lateximage
175 \hbox_set:Nn \l__siunitx_angle_marker_box
176 {
177 \l__siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
178 }
179 \hbox_set:Nn \l__siunitx_angle_unit_box
180 {
181 \l__siunitx_print:nV { unit } \l__siunitx_unit_tl
182 \skip_horizontal:n { -\scriptspace }
183 }
184 \l__siunitx_angle_print_astronomy_aux:n { marker }
185 \l__siunitx_angle_print_astronomy_aux:n { unit }
186 \hbox_set:Nn \l__siunitx_angle_marker_box
187 {
188 \box_use:N \l__siunitx_angle_marker_box
189 \box_use:N \l__siunitx_angle_unit_box
190 }
191 \dim_compare:nNnTF
192 { \l__siunitx_angle_marker_dim } > { \l__siunitx_angle_unit_dim }
193 { \l__siunitx_angle_print_astronomy_marker: }
194 { \l__siunitx_angle_print_astronomy_unit: }
195 }% lateximage
196 {% not a lateximage
197 \l__siunitx_print:nV { unit } \l__siunitx_unit_tl
198 \l__siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
199 }% not a lateximage
200 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-decimal }
201 \l__siunitx_tmpa_tl
202 { \l__siunitx_print:nV { number } \l__siunitx_tmpa_tl }
203 }

204 \cs_undefine:N \l__siunitx_textsuperscript:n
205 \cs_new_protected:Npn \l__siunitx_textsuperscript:n #1 {#1}

206 \RenewDocumentCommand \num { o m } {
207 \leavevmode
208 \group_begin:% lwarp
209 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
210 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
211 \bool_set_false:N \l__siunitx_font_set_bool
212 \IfNoValueF {#1}
213 { \keys_set:nn { siunitx } {#1} }
214 \l__siunitx_number_output:n {#2}
215 \group_end:% lwarp
216 }
217
218 \RenewDocumentCommand \numrange { o m m } {
219 \leavevmode
220 \group_begin:% lwarp
221 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
222 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
223 \bool_set_false:N \l__siunitx_font_set_bool

```

```

224 \IfNoValueF {#1}
225 { \keys_set:nn { siunitx } {#1} }
226 __siunitx_range_numbers:nn {#2} {#3}
227 \group_end:% lwarp
228 }
229
230 \RenewDocumentCommand \ang { o > { \SplitArgument { 2 } { ; } } m } {
231 \group_begin:% lwarp
232 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
233 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
234 \IfNoValueF {#1}
235 { \keys_set:nn { siunitx } {#1} }
236 __siunitx_angle_output:nnn #2
237 \group_end:% lwarp
238 }
239
240 \RenewDocumentCommand \si { o m } {
241 \leavevmode
242 \group_begin:% lwarp
243 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
244 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
245 \bool_set_false:N \l__siunitx_font_set_bool
246 \IfNoValueTF {#1}
247 { __siunitx_unit_output:nn {#2} { } }
248 {
249 \keys_set:nn { siunitx } {#1}
250 __siunitx_unit_output:nn {#2} {#1}
251 }
252 \group_end:% lwarp
253 }
254
255
256 \RenewDocumentCommand{\SIrange}{o m m m}
257 {%
258 \leavevmode
259 \group_begin:% lwarp
260 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
261 \LetLtxMacro\mbox\LWR@print@mbox% lwarp
262 \bool_set_false:N \l__siunitx_font_set_bool
263 \IfNoValueTF {#1}
264 { __siunitx_range_unit:nnnn {#4} { } {#2} {#3} }
265 {
266 \keys_set:nn { siunitx } {#1}
267 __siunitx_range_unit:nnnn {#4} {#1} {#2} {#3}
268 }
269 \group_end:% lwarp
270 }
271
272 \ExplSyntaxOff

```

For MATHJAX. (The following runs much faster as separate `\CusomizeMathJax` calls instead of one single call.)

```

273 \begin{warpMathJax}
274 \LWR@infoprocessingmathjax{siunitx}

```

```
275
276 \CustomizeMathJax{\newcommand{\ang}[2][]{(\mathrm{#2})\degree}}
277 \CustomizeMathJax{\newcommand{\num}[2][]{\mathrm{#2}}}
278 \CustomizeMathJax{\newcommand{\si}[2][]{\mathrm{#2}}}
279 %
280 % \SI[opt]{num}[preunit]{unit}
281 \CustomizeMathJax{\newcommand{\LWRSI}[2][]{\mathrm{#1\LWRSInumber\, #2}}}
282 \CustomizeMathJax{\newcommand{\SI}[2][]{\def\LWRSInumber{#2}\LWRSI}}
283 %
284 \CustomizeMathJax{\newcommand{\numlist}[2][]{\mathrm{#2}}}
285 \CustomizeMathJax{\newcommand{\numrange}[3][]{\mathrm{#2-- #3}}}
286 \CustomizeMathJax{\newcommand{\SIlist}[3][]{\mathrm{#2\, #3}}}
287 \CustomizeMathJax{\newcommand{\SIrange}[4][]{\mathrm{#2\, #4-- #3\, #4}}}
288 \CustomizeMathJax{\newcommand{\tablenum}[2][]{\mathrm{#2}}}
289 %
290 \CustomizeMathJax{\newcommand{\ampere}{\mathrm{A}}}
291 \CustomizeMathJax{\newcommand{\candela}{\mathrm{cd}}}
292 \CustomizeMathJax{\newcommand{\kelvin}{\mathrm{K}}}
293 \CustomizeMathJax{\newcommand{\kilogram}{\mathrm{kg}}}
294 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
295 \CustomizeMathJax{\newcommand{\mole}{\mathrm{mol}}}
296 \CustomizeMathJax{\newcommand{\second}{\mathrm{s}}}
297 %
298 \CustomizeMathJax{\newcommand{\becquerel}{\mathrm{Bq}}}
299 \CustomizeMathJax{\newcommand{\degreeCelsius}{\unicode{x2103}}}
300 \CustomizeMathJax{\newcommand{\coulomb}{\mathrm{C}}}
301 \CustomizeMathJax{\newcommand{\farad}{\mathrm{F}}}
302 \CustomizeMathJax{\newcommand{\gray}{\mathrm{Gy}}}
303 \CustomizeMathJax{\newcommand{\hertz}{\mathrm{Hz}}}
304 \CustomizeMathJax{\newcommand{\henry}{\mathrm{H}}}
305 \CustomizeMathJax{\newcommand{\joule}{\mathrm{J}}}
306 \CustomizeMathJax{\newcommand{\katal}{\mathrm{kat}}}
307 \CustomizeMathJax{\newcommand{\lumen}{\mathrm{lm}}}
308 \CustomizeMathJax{\newcommand{\lux}{\mathrm{lx}}}
309 \CustomizeMathJax{\newcommand{\newton}{\mathrm{N}}}
310 \CustomizeMathJax{\newcommand{\ohm}{\mathrm{\Omega}}}
311 \CustomizeMathJax{\newcommand{\pascal}{\mathrm{Pa}}}
312 \CustomizeMathJax{\newcommand{\radian}{\mathrm{rad}}}
313 \CustomizeMathJax{\newcommand{\siemens}{\mathrm{S}}}
314 \CustomizeMathJax{\newcommand{\sievert}{\mathrm{Sv}}}
315 \CustomizeMathJax{\newcommand{\steradian}{\mathrm{sr}}}
316 \CustomizeMathJax{\newcommand{\tesla}{\mathrm{T}}}
317 \CustomizeMathJax{\newcommand{\volt}{\mathrm{V}}}
318 \CustomizeMathJax{\newcommand{\watt}{\mathrm{W}}}
319 \CustomizeMathJax{\newcommand{\weber}{\mathrm{Wb}}}
320 \CustomizeMathJax{\newcommand{\day}{\mathrm{d}}}
321 \CustomizeMathJax{\newcommand{\degree}{\mathrm{^\circ}}}
322 \CustomizeMathJax{\newcommand{\hectare}{\mathrm{ha}}}
323 \CustomizeMathJax{\newcommand{\hour}{\mathrm{h}}}
324 \CustomizeMathJax{\newcommand{\litre}{\mathrm{l}}}
325 \CustomizeMathJax{\newcommand{\liter}{\mathrm{L}}}
326 \CustomizeMathJax{\newcommand{\arcminute}{\mathrm{^\prime}}}
327 \CustomizeMathJax{\newcommand{\minute}{\mathrm{min}}}
328 \CustomizeMathJax{\newcommand{\arcsecond}{\mathrm{^\prime\prime}}}
329 \CustomizeMathJax{\newcommand{\tonne}{\mathrm{t}}}
```

```

330 \CustomizeMathJax{\newcommand{\astronomicalunit}{au}}
331 \CustomizeMathJax{\newcommand{\atomicmassunit}{u}}
332 \CustomizeMathJax{\newcommand{\bohr}{\mathit{a}_0}}
333 \CustomizeMathJax{\newcommand{\clight}{\mathit{c}_0}}
334 \CustomizeMathJax{\newcommand{\dalton}{\mathrm{D}_\mathrm{a}}}
335 \CustomizeMathJax{\newcommand{\electronmass}{\mathit{m}_\mathrm{e}}}
336 \CustomizeMathJax{\newcommand{\electronvolt}{\mathrm{eV}}}
337 \CustomizeMathJax{\newcommand{\elementarycharge}{\mathit{e}}}
338 \CustomizeMathJax{\newcommand{\hartree}{\mathit{E}_\mathrm{h}}}
339 \CustomizeMathJax{\newcommand{\planckbar}{\mathit{\unicode{x0127}}}}
340 \CustomizeMathJax{\newcommand{\angstrom}{\mathrm{\unicode{x00C5}}}}
341 \CustomizeMathJax{\let\LWRorigbar\bar}
342 \CustomizeMathJax{\newcommand{\bar}{\mathrm{bar}}}
343 \CustomizeMathJax{\newcommand{\barn}{\mathrm{b}}}
344 \CustomizeMathJax{\newcommand{\bel}{\mathrm{B}}}
345 \CustomizeMathJax{\newcommand{\decibel}{\mathrm{dB}}}
346 \CustomizeMathJax{\newcommand{\knot}{\mathrm{kn}}}
347 \CustomizeMathJax{\newcommand{\mmHg}{\mathrm{mmHg}}}
348 \CustomizeMathJax{\newcommand{\nauticalmile}{\mathrm{M}}}
349 \CustomizeMathJax{\newcommand{\neper}{\mathrm{Np}}}
350 %
351 \CustomizeMathJax{\newcommand{\yocto}{\mathrm{y}}}
352 \CustomizeMathJax{\newcommand{\zepto}{\mathrm{z}}}
353 \CustomizeMathJax{\newcommand{\atto}{\mathrm{a}}}
354 \CustomizeMathJax{\newcommand{\femto}{\mathrm{f}}}
355 \CustomizeMathJax{\newcommand{\pico}{\mathrm{p}}}
356 \CustomizeMathJax{\newcommand{\nano}{\mathrm{n}}}
357 \CustomizeMathJax{\newcommand{\micro}{\mathrm{\unicode{x00B5}}}}
358 \CustomizeMathJax{\newcommand{\milli}{\mathrm{m}}}
359 \CustomizeMathJax{\newcommand{\centi}{\mathrm{c}}}
360 \CustomizeMathJax{\newcommand{\deci}{\mathrm{d}}}
361 \CustomizeMathJax{\newcommand{\deca}{\mathrm{da}}}
362 \CustomizeMathJax{\newcommand{\hecto}{\mathrm{h}}}
363 \CustomizeMathJax{\newcommand{\kilo}{\mathrm{k}}}
364 \CustomizeMathJax{\newcommand{\mega}{\mathrm{M}}}
365 \CustomizeMathJax{\newcommand{\giga}{\mathrm{G}}}
366 \CustomizeMathJax{\newcommand{\tera}{\mathrm{T}}}
367 \CustomizeMathJax{\newcommand{\peta}{\mathrm{P}}}
368 \CustomizeMathJax{\newcommand{\exa}{\mathrm{E}}}
369 \CustomizeMathJax{\newcommand{\zetta}{\mathrm{Z}}}
370 \CustomizeMathJax{\newcommand{\yotta}{\mathrm{Y}}}
371 %
372 \CustomizeMathJax{\newcommand{\percent}{\mathrm{\%}}}
373 %
374 \CustomizeMathJax{\newcommand{\meter}{\mathrm{m}}}
375 \CustomizeMathJax{\newcommand{\metre}{\mathrm{m}}}
376 %
377 \CustomizeMathJax{\newcommand{\gram}{\mathrm{g}}}
378 \CustomizeMathJax{\newcommand{\kg}{\kilo\gram}}
379 \CustomizeMathJax{\newcommand{\of}[1]_{\mathrm{\#1}}}
380 \CustomizeMathJax{\newcommand{\squared}{^2}}
381 \CustomizeMathJax{\newcommand{\square}[1]{\mathrm{\#1}^2}}
382 \CustomizeMathJax{\newcommand{\cubed}{^3}}
383 \CustomizeMathJax{\newcommand{\cubic}[1]{\mathrm{\#1}^3}}
384 \CustomizeMathJax{\newcommand{\per}{/}}

```

```
385 \CustomizeMathJax{\newcommand{\celsius}{\unicode{x2103}}}
386 %
387 \CustomizeMathJax{\newcommand{\fg}{\femto\gram}}
388 \CustomizeMathJax{\newcommand{\pg}{\pico\gram}}
389 \CustomizeMathJax{\newcommand{\ng}{\nano\gram}}
390 \CustomizeMathJax{\newcommand{\ug}{\micro\gram}}
391 \CustomizeMathJax{\newcommand{\mg}{\milli\gram}}
392 \CustomizeMathJax{\newcommand{\g}{\gram}}
393 \CustomizeMathJax{\newcommand{\kg}{\kilo\gram}}
394 %
395 \CustomizeMathJax{\newcommand{\amu}{\mathrm{u}}}
396 %
397 \CustomizeMathJax{\newcommand{\pm}{\pico\metre}}
398 \CustomizeMathJax{\newcommand{\nm}{\nano\metre}}
399 \CustomizeMathJax{\newcommand{\um}{\micro\metre}}
400 \CustomizeMathJax{\newcommand{\mm}{\milli\metre}}
401 \CustomizeMathJax{\newcommand{\cm}{\centi\metre}}
402 \CustomizeMathJax{\newcommand{\dm}{\deci\metre}}
403 \CustomizeMathJax{\newcommand{\m}{\metre}}
404 \CustomizeMathJax{\newcommand{\km}{\kilo\metre}}
405 %
406 \CustomizeMathJax{\newcommand{\as}{\atto\second}}
407 \CustomizeMathJax{\newcommand{\fs}{\femto\second}}
408 \CustomizeMathJax{\newcommand{\ps}{\pico\second}}
409 \CustomizeMathJax{\newcommand{\ns}{\nano\second}}
410 \CustomizeMathJax{\newcommand{\us}{\micro\second}}
411 \CustomizeMathJax{\newcommand{\ms}{\milli\second}}
412 \CustomizeMathJax{\newcommand{\s}{\second}}
413 %
414 \CustomizeMathJax{\newcommand{\fmol}{\femto\mol}}
415 \CustomizeMathJax{\newcommand{\pmol}{\pico\mol}}
416 \CustomizeMathJax{\newcommand{\nmol}{\nano\mol}}
417 \CustomizeMathJax{\newcommand{\umol}{\micro\mol}}
418 \CustomizeMathJax{\newcommand{\mmol}{\milli\mol}}
419 \CustomizeMathJax{\newcommand{\mol}{\mol}}
420 \CustomizeMathJax{\newcommand{\kmol}{\kilo\mol}}
421 %
422 \CustomizeMathJax{\newcommand{\pA}{\pico\ampere}}
423 \CustomizeMathJax{\newcommand{\nA}{\nano\ampere}}
424 \CustomizeMathJax{\newcommand{\uA}{\micro\ampere}}
425 \CustomizeMathJax{\newcommand{\mA}{\milli\ampere}}
426 \CustomizeMathJax{\newcommand{\A}{\ampere}}
427 \CustomizeMathJax{\newcommand{\kA}{\kilo\ampere}}
428 %
429 \CustomizeMathJax{\newcommand{\ul}{\micro\litre}}
430 \CustomizeMathJax{\newcommand{\ml}{\milli\litre}}
431 \CustomizeMathJax{\newcommand{\l}{\litre}}
432 \CustomizeMathJax{\newcommand{\hl}{\hecto\litre}}
433 \CustomizeMathJax{\newcommand{\uL}{\micro\liter}}
434 \CustomizeMathJax{\newcommand{\mL}{\milli\liter}}
435 \CustomizeMathJax{\newcommand{\L}{\liter}}
436 \CustomizeMathJax{\newcommand{\hL}{\hecto\liter}}
437 %
438 \CustomizeMathJax{\newcommand{\mHz}{\milli\hertz}}
439 \CustomizeMathJax{\newcommand{\Hz}{\hertz}}
```

```
440 \CustomizeMathJax{\newcommand{\kHz}{\kilo\hertz}}
441 \CustomizeMathJax{\newcommand{\MHz}{\mega\hertz}}
442 \CustomizeMathJax{\newcommand{\GHz}{\giga\hertz}}
443 \CustomizeMathJax{\newcommand{\THz}{\tera\hertz}}
444 %
445 \CustomizeMathJax{\newcommand{\mN}{\milli\newton}}
446 \CustomizeMathJax{\newcommand{\N}{\newton}}
447 \CustomizeMathJax{\newcommand{\kN}{\kilo\newton}}
448 \CustomizeMathJax{\newcommand{\MN}{\mega\newton}}
449 %
450 \CustomizeMathJax{\newcommand{\Pa}{\pascal}}
451 \CustomizeMathJax{\newcommand{\kPa}{\kilo\pascal}}
452 \CustomizeMathJax{\newcommand{\MPa}{\mega\pascal}}
453 \CustomizeMathJax{\newcommand{\GPa}{\giga\pascal}}
454 %
455 \CustomizeMathJax{\newcommand{\mohm}{\milli\ohm}}
456 \CustomizeMathJax{\newcommand{\kohm}{\kilo\ohm}}
457 \CustomizeMathJax{\newcommand{\Mohm}{\mega\ohm}}
458 %
459 \CustomizeMathJax{\newcommand{\pV}{\pico\volt}}
460 \CustomizeMathJax{\newcommand{\nV}{\nano\volt}}
461 \CustomizeMathJax{\newcommand{\uV}{\micro\volt}}
462 \CustomizeMathJax{\newcommand{\mV}{\milli\volt}}
463 \CustomizeMathJax{\newcommand{\V}{\volt}}
464 \CustomizeMathJax{\newcommand{\kV}{\kilo\volt}}
465 %
466 \CustomizeMathJax{\newcommand{\W}{\watt}}
467 \CustomizeMathJax{\newcommand{\uW}{\micro\watt}}
468 \CustomizeMathJax{\newcommand{\mW}{\milli\watt}}
469 \CustomizeMathJax{\newcommand{\kW}{\kilo\watt}}
470 \CustomizeMathJax{\newcommand{\MW}{\mega\watt}}
471 \CustomizeMathJax{\newcommand{\GW}{\giga\watt}}
472 %
473 \CustomizeMathJax{\newcommand{\J}{\joule}}
474 \CustomizeMathJax{\newcommand{\uJ}{\micro\joule}}
475 \CustomizeMathJax{\newcommand{\mJ}{\milli\joule}}
476 \CustomizeMathJax{\newcommand{\kJ}{\kilo\joule}}
477 %
478 \CustomizeMathJax{\newcommand{\eV}{\electronvolt}}
479 \CustomizeMathJax{\newcommand{\meV}{\milli\electronvolt}}
480 \CustomizeMathJax{\newcommand{\keV}{\kilo\electronvolt}}
481 \CustomizeMathJax{\newcommand{\MeV}{\mega\electronvolt}}
482 \CustomizeMathJax{\newcommand{\GeV}{\giga\electronvolt}}
483 \CustomizeMathJax{\newcommand{\TeV}{\tera\electronvolt}}
484 %
485 \CustomizeMathJax{\newcommand{\kWh}{\kilo\watt\hour}}
486 %
487 \CustomizeMathJax{\newcommand{\F}{\farad}}
488 \CustomizeMathJax{\newcommand{\fF}{\femto\farad}}
489 \CustomizeMathJax{\newcommand{\pF}{\pico\farad}}
490 %
491 \CustomizeMathJax{\newcommand{\K}{\mathrm{K}}}
492 %
493 \CustomizeMathJax{\newcommand{\dB}{\mathrm{dB}}}
494 %
```

---

```

495 \CustomizeMathJax{\newcommand{\kibi}{\mathrm{Ki}}}
496 \CustomizeMathJax{\newcommand{\mebi}{\mathrm{Mi}}}
497 \CustomizeMathJax{\newcommand{\gibi}{\mathrm{Gi}}}
498 \CustomizeMathJax{\newcommand{\tebi}{\mathrm{Ti}}}
499 \CustomizeMathJax{\newcommand{\pebi}{\mathrm{Pi}}}
500 \CustomizeMathJax{\newcommand{\exbi}{\mathrm{Ei}}}
501 \CustomizeMathJax{\newcommand{\zebi}{\mathrm{Zi}}}
502 \CustomizeMathJax{\newcommand{\yobi}{\mathrm{Yi}}}
503 \end{warpMathJax}

```

---

File 383 **lwarp-slantsc.sty**

§ 485 Package **slantsc**

*(Emulates or patches code by HARALD HARDERS.)*

Pkg slantsc slantsc is emulated for HTML, and used as-is for print output.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{slantsc}[2012/01/01]

2 \newcommand*{\LWR@HTML@noscsshape}{}
3 \LWR@formatted{noscsshape}
4
5 \FilenameNullify{%
6 \LetLtxMacro\noscsshape\@empty%
7 }

```

---

File 384 **lwarp-slashed.sty**

§ 486 Package **slashed**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg slashed slashed works as-s for HTML SVG math. For MATHJAX, emulation is provided.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{slashed}[1997/01/16]

2 \begin{warpMathJax}
3 \CustomizeMathJax{\newcommand{\slashed}[1]{\cancel{#1}}}
4 \end{warpMathJax}

```

---

File 385 **lwarp-soul.sty**

§ 487 Package **soul**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg soul soul is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{soul}[2003/11/17]  
2 \RequirePackage{xcolor}% for \convertcolorspec

Storage for the colors to use:

```
3 \newcommand*\LWR@soululcolor{}
4
5 \newcommand*\LWR@soulstcolor{}
6
7 % \definecolor{LWR@soulhlcolordefault}{HTML}{F8E800}
8 % \newcommand*\LWR@soulhlcolor{LWR@soulhlcolordefault}
9 \newcommand*\LWR@soulhlcolor{}
```

\so {<text>}

Basic markup with css:

```
10 \newcommand{\so}[1]{%
11 \InlineClass(letter-spacing:.2ex){letterspacing}{#1}%
12 }
```

\caps {<text>}

```
13 \newcommand{\caps}[1]{%
14 \InlineClass%
15 (font-variant:small-caps;letter-spacing:.1ex)%
16 {capsspacing}{#1}%
17 }
```

\LWR@soulcolor {<text>}{<color>}{<class>}{<colorstyle>}{<FormatWPstyle>}

Add colors if not empty:

```
18 \newcommand{\LWR@soulcolor}[5]{%
19 \ifcsemt{#2}%
20 {%
21 \InlineClass(#5){#3}{#1}%
22 }%
23 {%
24 \convertcolorspec{named}{\@nameuse{#2}}{HTML}\LWR@tempcolor%
25 \LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}%
26 }%
27 }
```

```
28 \newcommand{\ul}[1]{%
29 \LWR@soulcolor{#1}{LWR@soululcolor}{uline}{text-decoration-color}%
30 {text-decoration:underline; text-decoration-skip: auto;}%
31 }
32
33 \newcommand{\st}[1]{
34 \LWR@soulcolor{#1}{LWR@soulstcolor}{sout}{text-decoration-color}%
35 {text-decoration:line-through}%
36 }
```

```

37
38 \newcommand{\hl}[1]{
39 \LWR@soulcolor{#1}{\LWR@soulhlcolor}{highlight}{background-color}%
40 {background:\LWR@origpound{ }F8E800}
41 }

```

#### Nullified:

```

42 \newcommand*\soulaccent}[1]{}
43 \newcommand*\soulregister}[2]{}
44 \newcommand*\sloppyword}[1]{#1}
45 \newcommand*\sodef}[5]{\DeclareRobustCommand*#1[1]{\so{#1}}}
46 \newcommand*\resetso{}
47 \newcommand*\capsdef}[5]{}
48 \newcommand*\capsreset{}
49 \newcommand*\capssave}[1]{}
50 \newcommand*\capsselect}[1]{}
51 \newcommand*\setul}[2]{}
52 \newcommand*\resetul{}
53 \newcommand*\setuldepth}[1]{}
54 \newcommand*\setuloverlap}[1]{}
55 \newcommand*\<{}{}

```

#### Set colors:

```

56 \newcommand*\setulcolor}[1]{\renewcommand{\LWR@soululcolor}{#1}}
57 \newcommand*\setstcolor}[1]{\renewcommand{\LWR@soulstcolor}{#1}}
58 \newcommand*\sethlcolor}[1]{\renewcommand{\LWR@soulhlcolor}{#1}}

```

#### Long versions of the user-level macros:

```

59 \let\textso\so
60 \let\textul\ul
61 \let\texthl\hl
62 \let\textcaps\caps

```

File 386 **lwarp-soulpos.sty**

§ 488 Package **soulpos**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg soulpos soulpos is emulated.

**for HTML output:**

```

1 \RequirePackage{soul}
2 \RequirePackage{soulutf8}
3 \LWR@ProvidesPackageDrop{soulpos}[2012/02/25]

4 \NewDocumentCommand{\ulposdef}{m o m}{}
5
6 \newdimen\ulwidth
7

```

```

8 \newcommand\ifulstarttype[1]{%
9 \expandafter\@secondoftwo%
10 }
11
12 \newcommand\ifulendtype[1]{%
13 \expandafter\@secondoftwo%
14 }
15
16 \newcommand{\ulstarttype}{0}
17 \newcommand{\ulendtype}{0}
18 \newcommand\ulpostolerance{0}%

```

---

File 387 **lwarp-soulutf8.sty**

§ 489 Package **soulutf8**

Pkg soulutf8 soulutf8 is emulated.

lwarp's HTML output naturally supports UTF-8 encoding.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{soulutf8}[2016/05/16]
2 \RequirePackage{soul}

```

---

File 388 **lwarp-splitidx.sty**

§ 490 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 593.17 in the `lwarp-patch-memoir` package for the `\@wrsplindexhyp` macro as an example.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{splitidx}[2016/02/18]

```

```

2 \catcode'_ =12%
3 \xpatchcmd{\newindex}
4 {\jobname-#2.idx}
5 {\jobname-#2_html.idx}
6 {}
7 {\LWR@patcherror{splitidx}{@newindex}}
8 \catcode'_ =8%

```

Patched to use `lwarp`'s automatic indexing counter instead of `\thepage`:

```

9 \renewcommand*\@wrsindex}[2][]{%
10 \ifx\relax#1\relax
11 \if@splitidx
12 \@wrsindex[idx]{#2}%
13 \else
14 \def\@tempa{#2}%
15 \if@verbindindex\@onelevel@sanitize\@tempa\fi
16 \wrindex{\@tempa}%
17 \fi
18 \else
19 \def\@tempa{#2}%
20 \csname index@#1@hook\endcsname
21 % \expandafter\ifx\csname @@wrsindex\endcsname\relax
22 \addtocounter{LWR@autoindex}{1}% lwarp
23 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}% lwarp
24 % \@@wrsindex{#1}{\@tempa}{\thepage}%
25 \@@wrsindex{#1}{\@tempa}{\arabic{LWR@autoindex}}%
26 % \else
27 % \def\@tempb{\@wrsindex{#1}}%
28 % \expandafter\@tempb\@tempa||\%
29 % \fi
30 \endgroup
31 \esphack
32 \fi
33 }

```

`lwarp` defines sectioning commands with `xparse`, so the below patches are done as temporary redefinitions instead of being `\let`.

```

34 \xpatchcmd{\printsubindex}
35 {\let\section\subsection}
36 {\renewcommand*\section}{\subsection}}
37 {}
38 {\LWR@patcherror{splitidx}{printsubindex-section}}
39
40 \xpatchcmd{\printsubindex}
41 {\let\chapter\section}
42 {\renewcommand*\chapter}{\section}}
43 {}
44 {\LWR@patcherror{splitidx}{printsubindex-chapter}}
45
46 \xpatchcmd{\printsubindex}
47 {\let\@makechapterhead\section}
48 {\def\@makechapterhead{\section}}
49 {}

```

---

```
50 {\LWR@patcherror{splitidx}{printsubindex-chapter}}
```

---

File 389 **lwarp-srcltx.sty**

§ 491 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 390 **lwarp-srctex.sty**

§ 492 Package **srctex**

Pkg srctex srctex is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{srctex}[2006/11/12]  
2 \LWR@origRequirePackage{lwarp-srcltx}

---

File 391 **lwarp-stabular.sty**

§ 493 Package **stabular**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg stabular stabular is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{stabular}[2014/03/20]

Env stabular [*vpos*] {*colspec*}

```
2 \newenvironment{stabular}[2][c]
3 {
4 \begin{tabular}[#1]{#2}
5 \renewcommand{\noalign}[1]{}
6 }
7 {\end{tabular}}
```

Env `stabular` `{\width} [\vpos] {\colspec}`

```

8 \NewDocumentEnvironment{stabular*}{m o m}
9 {
10 \begin{tabular}[\#2]{\#3}
11 \renewcommand{\noalign}[1]{}
12 }
13 \end{tabular}}

```

File 392 **lwarp-stackengine.sty**

§ 494 Package **stackengine**

*(Emulates or patches code by STEVEN B. SEGLETES.)*

Pkg `stackengine` `stackengine` is patched for use by `lwarp`.

**for HTML output:** 1 \LWR@ProvidesPackagePass{stackengine}[2017/02/13]

The original version is necessary for the patched `\@stack` and `\stackanchor`, where nesting `lateximages` does not work:

```

2 \LetLtxMacro\LWR@orig@stackengine\stackengine

3 \renewcommand*\stackengine[8]{%
4 \ifstrequal{\#4}{0}%
5 {\begin{lateximage}[\ImageAltText]}%
6 {\begin{lateximage}[\ImageAltText][][vertical-align:top]}%
7 \LWR@orig@stackengine{\#1}{\#2}{\#3}{\#4}{\#5}{\#6}{\#7}{\#8}%
8 \end{lateximage}%
9 }

```

`\@stack` uses a `lateximage` with a vertical alignment:

```

10 \LetLtxMacro\LWR@orig@@stack\@stack
11
12 \xpatchcmd{\LWR@orig@@stack}{\stackengine}{\LWR@orig@stackengine}
13 {}
14 {\LWR@patcherror{stackengine}{\LWR@orig@@stack}}
15
16 \renewcommand*\@stack[4]{%
17 \ifstrequal{\#3}{0}%
18 {\begin{lateximage}[\ImageAltText]}%
19 {\begin{lateximage}[\ImageAltText][][vertical-align:top]}%
20 \LWR@orig@@stack{\#1}{\#2}{\#3}{\#4}%
21 \end{lateximage}%
22 }

```

The lapping macros are disabled for HTML:

```

23 \newcommand*\LWR@HTML@@stacklap[4]{\#3}
24 \LWR@formatted{@stacklap}

```

`\stackanchor` is patched for two instances of `\stackengine`. A `lateximage` with vertical alignment is used.

```

25 \xpatchcmd{\stackanchor}{\stackengine}{\LWR@orig@stackengine}
26 {}
27 {\LWR@patcherror{stackengine}{stackanchor patch 1}}
28
29 \xpatchcmd{\stackanchor}{\stackengine}{\LWR@orig@stackengine}
30 {}
31 {\LWR@patcherror{stackengine}{stackanchor patch 2}}
32
33 \xpretocmd{\stackanchor}
34 {\begin{lateximage}[\ImageAltText][][vertical-align:middle]}
35 {}
36 {\LWR@patcherror{stackengine}{stackanchor pre}}
37
38 \xapptocmd{\stackanchor}{\end{lateximage}}
39 {}
40 {\LWR@patcherror{stackengine}{stackanchor app}}

```

`\Centerstack` is simply placed inside a `lateximage` with a vertical alignment:

```

41 \xpretocmd{\Centerstack}
42 {\begin{lateximage}[\ImageAltText][][vertical-align:middle]}
43 {}
44 {\LWR@patcherror{stackengine}{Centerstack pre}}
45
46 \xapptocmd{\Centerstack}{\end{lateximage}}
47 {}
48 {\LWR@patcherror{stackengine}{Centerstack app}}

```

`\savestack` reverts to print mode while saving the box, then places it inside a `lateximage` when used:

```

49 \renewcommand*\savestack[2]{%
50 \xdef\sv@name{\stack@macro@name{#1}}%
51 \ifundefined{sv@name content}{%
52 \expandafter\newsavebox\expandafter{\csname\sv@name content\endcsname}%
53 }{}%
54 \begingroup% lwarp
55 \LWR@restoreorigformatting% lwarp
56 \RenewDocumentEnvironment{lateximage}{s o s o o}{\}{}% lwarp: inside group
57 \expandafter\LWR@gsavebox\csname\sv@name content\endcsname{#2}%
58 \expandafter\gdef\expandafter#1\expandafter{%
59 \expandafter\begin\expandafter{lateximage\expandafter}% lwarp
60 \expandafter\usebox\expandafter%
61 {\csname\sv@name content\endcsname}%
62 \expandafter\end\expandafter{lateximage\expandafter}% lwarp
63 }%
64 \endgroup% lwarp
65 }

```

---

File 393 **lwarp-stackrel.sty**

§ 495 Package **stackrel**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg stackrel stackrel is used as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{stackrel}[2016/05/16]
2 \begin{warpMathJax}
3 \CustomizeMathJax{\renewcommand{\stackrel}[3][[]]{%
4 \mathrel{\mathop{#3}\limits_{#1}^{#2}}}%
5 }}
6
7 \CustomizeMathJax{\newcommand{\stackbin}[3][[]]{%
8 \mathbin{\mathop{#3}\limits_{#1}^{#2}}}%
9 }}
10 \end{warpMathJax}

```

---

File 394 **lwarp-statex2.sty**

§ 496 Package **statex2**

*(Emulates or patches code by RODNEY A SPARAPANI.)*

Pkg statex2 statex2 is patched for use by lwarp, and emulated for MATHJAX.

 As of this version, option autobold does not appear to work for PDF output.

 For MATHJAX, the tilde character ~ does not create \sim. Use \sim directly.

 Because MATHJAX has limited conditional processing:

- \wrap only creates square braces, no matter what its optional arguments.
- \P, \pCau, \pN, and \pU do not handle special cases.

 **\and** To have \and work if using \maketitle, place the following after the start of the document:

```

\newcommand*{\and}{%
 \relax\ifmmode%
 \expandafter\;\mb{\mathrm{and}}\;%
 \else%
 \expandafter\STATEXand%
 \fi%
}

```

for HTML output:

```

1 \LWR@ProvidesPackagePass{statex2}[2011/09/14]
2 \newcommand*\LWR@HTML@Alpha[1][]{%
3 \fcolorbox{black}{ForestGreen}{\textcolor{white}{\textsf{ALPHA}}}%
4 \textbf{\textcolor{ForestGreen}{\textsf{#1}}}%
5 }
6 \LWR@formatted{Alpha}
7
8 \newcommand*\LWR@HTML@List[1]{%
9 \textbf{\textcolor{Dandelion}{\textsf{L}\textsubscript{\textit{#1}}}}%
10 }
11 \LWR@formatted{List}
12
13 \newcommand*\LWR@HTML@Snd[1][]{%
14 \fcolorbox{black}{Dandelion}{\textcolor{white}{\textsf{2nd}}}%
15 \textbf{\textcolor{Dandelion}{\textsf{#1}}}%
16 }
17 \LWR@formatted{Snd}
18
19 \begin{warpMathJax}
20 \LWR@infoprocessingmathjax{statex2}
21
22 \CustomizeMathJax{\newcommand{\cpi}{\boldsymbol{\pi}}}
23 \CustomizeMathJax{\newcommand{\c}[1]{\boldsymbol{\mathrm{#1}}}}
24 \CustomizeMathJax{\newcommand{\sfs}[1]{\mathsf{#1}}}% not slanted
25
26 \if@manualbold
27 \CustomizeMathJax{\newcommand{\mb}[1]{#1}}
28 \else
29 \CustomizeMathJax{\newcommand{\mb}[1]{\boldsymbol{#1}}}
30 \fi
31
32 \CustomizeMathJax{\newcommand{\diag}{\mb{\mathrm{diag}}}}
33 \CustomizeMathJax{\newcommand{\blockdiag}{\mb{\mathrm{blockdiag}}}}
34 \CustomizeMathJax{\newcommand{\erf}{\mb{\mathrm{erf}}}}
35 \CustomizeMathJax{\newcommand{\logit}{\mb{\mathrm{logit}}}}
36 \CustomizeMathJax{\newcommand{\trace}{\mb{\mathrm{trace}}}}
37
38 \CustomizeMathJax{\newcommand{\chisq}{\mb{\chi^2}}}
39 \CustomizeMathJax{\newcommand{\deriv}[2]{\mb{\frac{d}{d{#1}}}\wrap{\mb{#2}}}}
40 \CustomizeMathJax{\newcommand{\deriv}[2]{\mb{\frac{d}{d{#2}}}\wrap{\mb{#1}}}}
41 \CustomizeMathJax{\newcommand{\e}[1]{\mb{\mathrm{e}^{#1}}}}
42 \CustomizeMathJax{\newcommand{\E}[2][]{\mb{\mathrm{E}}_{\mb{#1}} \wrap{\mb{#2}}}}
43 \CustomizeMathJax{\newcommand{\ha}{\mb{\frac{\alpha}{2}}}}
44 \CustomizeMathJax{\newcommand{\I}[2][]{%
45 \mb{\mathrm{I}}_{\mb{#1}} \LWRwrapparen{\mb{#2}}%
46 }}
47 \CustomizeMathJax{\newcommand{\IBeta}[2]{%
48 \mb{\frac{\Gamma[#+#2]}{\Gamma[#+1]\Gamma[#+2]}}%
49 }}
50 \CustomizeMathJax{\newcommand{\If}{\; \mb{\mathrm{if}} \; ;}}
51 \CustomizeMathJax{\newcommand{\im}{\mb{\mathrm{i}}}}
52 \CustomizeMathJax{\newcommand{\ol}{\overline{}}}
53 \CustomizeMathJax{\newcommand{\ow}{\; \mb{\mathrm{otherwise}} \; ;}}
54 \CustomizeMathJax{\newcommand{\pderiv}[2]{%

```

```

55 \mb{\frac{\partial}{\partial #1}}\wrap{\mb{#2}}%
56 }}
57 \CustomizeMathJax{\newcommand{\pderivf}[2]{%
58 \mb{\frac{\partial}{\partial #2}}\wrap{\mb{#1}}%
59 }}
60 \CustomizeMathJax{\newcommand{\sd}{\mb{\sigma}}}
61 \CustomizeMathJax{\newcommand{\ul}{\underline}}
62 \CustomizeMathJax{\newcommand{\V}[2][\mb{\mathrm{V}}_{\mb{#1}}}\wrap{\mb{#2}}}}
63 \CustomizeMathJax{\newcommand{\vs}{\; \mb{\mathrm{vs.}} \;};}
64 \CustomizeMathJax{\newcommand{\where}{\; \mb{\mathrm{where}} \;};}
65 \CustomizeMathJax{\newcommand{\wrap}[2][\left[#2 \right]]% only []
66 \CustomizeMathJax{\newcommand{\LWRwrapparen}[1][\left(#1 \right)]}% lwarp
67
68 % \CustomizeMathJax{\renewcommand{\sim}{\mb{\sim}}}% doesn't work,
69 % replace <space>~<space> with <space>\sim<space>
70
71 \CustomizeMathJax{\newcommand{\iid}{\; \stackrel{\mb{\mathrm{iid}}}{\sim}};}
72 \CustomizeMathJax{\newcommand{\ind}{\; \stackrel{\mb{\mathrm{ind}}}{\sim}};}
73 \CustomizeMathJax{\newcommand{\indpr}{%
74 \; \stackrel{\mb{\mathrm{ind}}}{\stackrel{\mb{\mathrm{prior}}}{\sim}} \; %
75 }}
76 \CustomizeMathJax{\newcommand{\post}{\; \stackrel{\mb{\mathrm{post}}}{\sim}};}
77 \CustomizeMathJax{\newcommand{\prior}{\; \stackrel{\mb{\mathrm{prior}}}{\sim}};}
78
79 \CustomizeMathJax{\let\STEXGamma=\Gamma}
80 \CustomizeMathJax{\renewcommand{\Gamma}[1][\mb{\STEXGamma}\LWRwrapparen{\mb{#1}}}}
81 %
82 \CustomizeMathJax{\renewcommand{\and}{\; \mb{\mathrm{and}} \;};}
83 %
84 \CustomizeMathJax{\newcommand{\H}{\mb{\mathrm{H}}}}
85 %
86 \CustomizeMathJax{\newcommand{\P}[2][\mb{\mathrm{P}}_{\mb{#1}}}\wrap{\mb{#2}}}}
87 %
88 \CustomizeMathJax{\newcommand{\|}{\mb{\mid}}}}
89
90 \CustomizeMathJax{\newcommand{\B}[1][\mb{\mathrm{B}}]\LWRwrapparen{\mb{#1}}}}
91 \CustomizeMathJax{\newcommand{\BB}[1][\mb{\mathrm{BetaBin}}]\LWRwrapparen{\mb{#1}}}}
92 \CustomizeMathJax{\newcommand{\Bin}[2][\mb{\mathrm{Bin}}]\LWRwrapparen{\mb{#1}, \ #2}}}}
93 \CustomizeMathJax{\newcommand{\Dir}[1][\mb{\mathrm{Dirichlet}}]\LWRwrapparen{\mb{#1}}}}
94 \CustomizeMathJax{\newcommand{\HG}[3]{%
95 \mb{\mathrm{Hypergeometric}}\LWRwrapparen{\mb{#1}, \ #2, \ #3}}%
96 }}
97 \CustomizeMathJax{\newcommand{\M}[2]{%
98 \mb{\mathrm{Multinomial}}\LWRwrapparen{\mb{#1}, \ #2}}%
99 }}
100 \CustomizeMathJax{\newcommand{\NB}[2][\mb{\mathrm{NegBin}}]\LWRwrapparen{\mb{#1}, \ #2}}}}
101 \CustomizeMathJax{\newcommand{\Poi}[1][\mb{\mathrm{Poisson}}]\LWRwrapparen{\mb{#1}}}}
102 \CustomizeMathJax{\let\Poisson=\Poi}
103
104 \CustomizeMathJax{\newcommand{\pBB}[4][x]{%
105 \mb{\frac{\Gamma[#+1]\Gamma[#+1]\Gamma[#+4-#1]\Gamma[#+4]}{\Gamma[#+1]\Gamma[#+1]\Gamma[#+3+#+4]\Gamma[#+3]\Gamma[#+4]}}%
106 \I[#1][\{0, 1, \dots, #2\}], \where #3>0, \; #4>0 \and n=1, 2, \dots}%
107
108 }}
109 \CustomizeMathJax{\newcommand{\pBin}[3][x]{%

```

```

110 \mb{\binom{#2}{#1}#3^#1} \LWRwrapparen{\mb{{1-#3}^{#2-#1}}}%
111 \mb{\I[#1]{\{0,1,\.,#2\}}, \where p \in (0, 1) \and n=1, 2,\.%}
112 }}
113 \CustomizeMathJax{\newcommand{\pPoi}[2][x]{%
114 \mb{\frac{1}{#1!}#2^{#1}e^{-#2}\I[#1]{\{0, 1,\.\}}, \where #2>0}%
115 }}
116
117 \CustomizeMathJax{\newcommand{\Cau}[2]{\mb{\mathrm{Cauchy}}\LWRwrapparen{\mb{#1, \ #2}}}}
118 \CustomizeMathJax{\let\Cauchy=\Cau}
119 \CustomizeMathJax{\newcommand{\Chi}[2][x]{%
120 \chisq_{\mb{#1}}\LWRwrapparen{\mb{#2}}}%
121 }}
122 \CustomizeMathJax{\let\Chisq=\Chi}
123 \CustomizeMathJax{\newcommand{\Bet}[2]{\mb{\mathrm{Beta}}\LWRwrapparen{\mb{#1, \ #2}}}}
124 \CustomizeMathJax{\let\Beta=\Bet}
125 \CustomizeMathJax{\newcommand{\Exp}[1]{\mb{\mathrm{Exp}}\LWRwrapparen{\mb{#1}}}}
126 \CustomizeMathJax{\newcommand{\F}[2]{\mb{\mathrm{F}}\LWRwrapparen{\mb{#1, \ #2}}}}
127 \CustomizeMathJax{\newcommand{\Gam}[2]{\mb{\mathrm{Gamma}}\LWRwrapparen{\mb{#1, \ #2}}}}
128 \CustomizeMathJax{\newcommand{\IC}[1]{\mb{\mathrm{\chi^{-2}}}\LWRwrapparen{\mb{#1}}}}
129 \CustomizeMathJax{\newcommand{\IG}[2]{%
130 \mb{\mathrm{Gamma}^{-1}}\LWRwrapparen{\mb{#1, \ #2}}}%
131 }}
132 \CustomizeMathJax{\newcommand{\IW}[2]{%
133 \mb{\mathrm{Wishart}^{-1}}\LWRwrapparen{\mb{#1, \ #2}}}%
134 }}
135 \CustomizeMathJax{\newcommand{\Log}[2]{%
136 \mb{\mathrm{Logistic}}\LWRwrapparen{\mb{#1, \ #2}}}%
137 }}
138 \CustomizeMathJax{\newcommand{\LogN}[2]{%
139 \mb{\mathrm{Log\!-\!N}}\LWRwrapparen{\mb{#1, \ #2}}}%
140 }}
141 \CustomizeMathJax{\newcommand{\N}[3][x]{%
142 \mb{\mathrm{N}}_{\mb{#1}}\LWRwrapparen{\mb{#2, \ #3}}}%
143 }}
144 \CustomizeMathJax{\newcommand{\Par}[2]{\mb{\mathrm{Pareto}}\LWRwrapparen{\mb{#1, \ #2}}}}
145 \CustomizeMathJax{\let\Pareto=\Par}
146 \CustomizeMathJax{\newcommand{\Tsq}[2]{\mb{\mathrm{T}^2}\LWRwrapparen{\mb{#1, \ #2}}}}
147 \CustomizeMathJax{\newcommand{\U}[1]{\mb{\mathrm{U}}\LWRwrapparen{\mb{#1}}}}
148 \CustomizeMathJax{\newcommand{\W}[2]{\mb{\mathrm{Wishart}}\LWRwrapparen{\mb{#1, \ #2}}}}
149
150 \CustomizeMathJax{\renewcommand{\t}[1]{\mb{\mathrm{t}}\LWRwrapparen{\mb{#1}}}}
151
152 \CustomizeMathJax{\newcommand{\pBet}[3][x]{%
153 \IBeta{#2}{#3}%
154 #1^{#2-1}\LWRwrapparen{1-#1}^{#3-1}\I[#1]{0, \ 1}, \where #2>0 \and #3>0%
155 }}
156 \CustomizeMathJax{\newcommand{\pCau}[3][x]{%
157 % \ifthenelse{\equal{#2, #3}{0, 1}}{\frac{1}{\cpi}\LWRwrapparen{1+#1}^2}}%
158 {\frac{1}{#3\cpi}\left\{1+\wrap{\LWRwrapparen{x-#2}/#3}^2\right\}}, \where #3>0}%
159 }}% no special case for 0,1
160 \CustomizeMathJax{\newcommand{\pChi}[2][x]{%
161 \frac{2^{-#2/2}}{\Gamma[#2/2]}#1^{#2/2-1}e^{-#1/2}}%
162 \I[#1]{0, \infty}, \where #2>0%
163 }}
164 \CustomizeMathJax{\newcommand{\pExp}[2][x]{%

```

```

165 \frac{1}{#2}\e^{-#1/#2}\I[#1]{0,\infty},%
166 \where #2>0%
167 }}
168 \CustomizeMathJax{\newcommand{\pGam}[3][x]{%
169 \frac{#3^{#2}}{\Gamma[#2]}#1^{#2-1}\e^{-#3#1}%
170 \I[#1]{0,\infty}, \where #2>0 \and #3>0%
171 }}
172 \CustomizeMathJax{\newcommand{\pN}[3][x]{%
173 % \ifthenelse{equal{#2, #3}{0, 1}}%
174 % {\frac{1}{\sqrt{2\cpi}}\e^{-#1^2/2}}%
175 % {\frac{1}{\sqrt{2\cpi \cdot #3}}\e^{-\LWRwrapparen{#1-#2}^2/2 \cdot #3}}%
176 }}% no test for 0,1, must add \cdot
177 \CustomizeMathJax{\newcommand{\pPar}[3][x]{%
178 \frac{#3}{#2\LWRwrapparen{1+#1/#2}^{#3+1}}\I[#1]{0,\infty},%
179 \where #2>0 \and #3>0%
180 }}
181 \CustomizeMathJax{\newcommand{\pU}[3][x]{%
182 % \ifthenelse{equal{#2, #3}{0, 1}}{\I[#1]{0, \ 1}}%
183 % {\frac{1}{#3-#2}\I[#1]{#2, \ #3}, \where #2<#3}%
184 }}% no special case for 0,1
185
186 \CustomizeMathJax{\newcommand{\=} [1]{\bar{#1}}}
187 \CustomizeMathJax{\let\^{\widehat}}
188 \CustomizeMathJax{\let\~{\widetilde}}
189 \CustomizeMathJax{\newcommand{\'} [1]{\LWRwrapparen{\mb{#1}}}}
190 \CustomizeMathJax{\newcommand{\b} [1]{\bar{#1}}}
191 \CustomizeMathJax{\newcommand{\c} [1]{\mb{\mathrm{#1}}}}
192 \CustomizeMathJax{\newcommand{\d} [1]{\, \mb{\mathrm{d}}{#1}}}
193 \CustomizeMathJax{\newcommand{\.} {\mb{\ldots}}}
194 \end{warpMathJax}

```

---

File 395 **lwarp-statmath.sty**

§ 497 Package **statmath**

(Emulates or patches code by SEBASTIAN ANKARGREN.)

Pkg statmath statmath is used as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:** 1 \LWR@ProvidesPackagePass{statmath}[2018/03/08]

```

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{statmath}
4
5 \CustomizeMathJax{\let\abcbf\mathbf}
6 \CustomizeMathJax{\newcommand{\greekbf}[1]{\boldsymbol{#1}}}
7 \CustomizeMathJax{\newcommand{\bfA}{\abcbf A}}
8 \CustomizeMathJax{\newcommand{\bfB}{\abcbf B}}
9 \CustomizeMathJax{\newcommand{\bfC}{\abcbf C}}
10 \CustomizeMathJax{\newcommand{\bfD}{\abcbf D}}
11 \CustomizeMathJax{\newcommand{\bfE}{\abcbf E}}
12 \CustomizeMathJax{\newcommand{\bfF}{\abcbf F}}
13 \CustomizeMathJax{\newcommand{\bfG}{\abcbf G}}

```

```

14 \CustomizeMathJax{\newcommand{\bfH}{\abcbf H}}
15 \CustomizeMathJax{\newcommand{\bfI}{\abcbf I}}
16 \CustomizeMathJax{\newcommand{\bfJ}{\abcbf J}}
17 \CustomizeMathJax{\newcommand{\bfK}{\abcbf K}}
18 \CustomizeMathJax{\newcommand{\bfL}{\abcbf L}}
19 \CustomizeMathJax{\newcommand{\bfM}{\abcbf M}}
20 \CustomizeMathJax{\newcommand{\bfN}{\abcbf N}}
21 \CustomizeMathJax{\newcommand{\bfO}{\abcbf O}}
22 \CustomizeMathJax{\newcommand{\bfP}{\abcbf P}}
23 \CustomizeMathJax{\newcommand{\bfQ}{\abcbf Q}}
24 \CustomizeMathJax{\newcommand{\bfR}{\abcbf R}}
25 \CustomizeMathJax{\newcommand{\bfS}{\abcbf S}}
26 \CustomizeMathJax{\newcommand{\bfT}{\abcbf T}}
27 \CustomizeMathJax{\newcommand{\bfU}{\abcbf U}}
28 \CustomizeMathJax{\newcommand{\bfV}{\abcbf V}}
29 \CustomizeMathJax{\newcommand{\bfW}{\abcbf W}}
30 \CustomizeMathJax{\newcommand{\bfX}{\abcbf X}}
31 \CustomizeMathJax{\newcommand{\bfY}{\abcbf Y}}
32 \CustomizeMathJax{\newcommand{\bfZ}{\abcbf Z}}
33 \CustomizeMathJax{\newcommand{\bfa}{\abcbf a}}
34 \CustomizeMathJax{\newcommand{\bfb}{\abcbf b}}
35 \CustomizeMathJax{\newcommand{\bfc}{\abcbf c}}
36 \CustomizeMathJax{\newcommand{\bfd}{\abcbf d}}
37 \CustomizeMathJax{\newcommand{\bfe}{\abcbf e}}
38 \CustomizeMathJax{\newcommand{\bff}{\abcbf f}}
39 \CustomizeMathJax{\newcommand{\bfg}{\abcbf g}}
40 \CustomizeMathJax{\newcommand{\bfh}{\abcbf h}}
41 \CustomizeMathJax{\newcommand{\bfi}{\abcbf i}}
42 \CustomizeMathJax{\newcommand{\bfj}{\abcbf j}}
43 \CustomizeMathJax{\newcommand{\bfk}{\abcbf k}}
44 \CustomizeMathJax{\newcommand{\bfl}{\abcbf l}}
45 \CustomizeMathJax{\newcommand{\bfm}{\abcbf m}}
46 \CustomizeMathJax{\newcommand{\bfn}{\abcbf n}}
47 \CustomizeMathJax{\newcommand{\bfo}{\abcbf o}}
48 \CustomizeMathJax{\newcommand{\bfp}{\abcbf p}}
49 \CustomizeMathJax{\newcommand{\bfq}{\abcbf q}}
50 \CustomizeMathJax{\newcommand{\bfr}{\abcbf r}}
51 \CustomizeMathJax{\newcommand{\bfs}{\abcbf s}}
52 \CustomizeMathJax{\newcommand{\bft}{\abcbf t}}
53 \CustomizeMathJax{\newcommand{\bfu}{\abcbf u}}
54 \CustomizeMathJax{\newcommand{\bfv}{\abcbf v}}
55 \CustomizeMathJax{\newcommand{\bfw}{\abcbf w}}
56 \CustomizeMathJax{\newcommand{\bfx}{\abcbf x}}
57 \CustomizeMathJax{\newcommand{\bfy}{\abcbf y}}
58 \CustomizeMathJax{\newcommand{\bfz}{\abcbf z}}
59 \CustomizeMathJax{\newcommand{\bfalpha}{\greekbf \alpha}}
60 \CustomizeMathJax{\newcommand{\bfbeta}{\greekbf \beta}}
61 \CustomizeMathJax{\newcommand{\bfdelta}{\greekbf \delta}}
62 \CustomizeMathJax{\newcommand{\bfepsilon}{\greekbf \epsilon}}
63 \CustomizeMathJax{\newcommand{\bfvarepsilon}{\greekbf \varepsilon}}
64 \CustomizeMathJax{\newcommand{\bfzeta}{\greekbf \zeta}}
65 \CustomizeMathJax{\newcommand{\bfeta}{\greekbf \eta}}
66 \CustomizeMathJax{\newcommand{\bftheta}{\greekbf \theta}}
67 \CustomizeMathJax{\newcommand{\bfvartheta}{\greekbf \vartheta}}
68 \CustomizeMathJax{\newcommand{\bfgamma}{\greekbf \gamma}}

```

```

69 \CustomizeMathJax{\newcommand{\bfkappa}{\greekbf \kappa}}
70 \CustomizeMathJax{\newcommand{\bflambda}{\greekbf \lambda}}
71 \CustomizeMathJax{\newcommand{\bfmu}{\greekbf \mu}}
72 \CustomizeMathJax{\newcommand{\bfnu}{\greekbf \nu}}
73 \CustomizeMathJax{\newcommand{\bfxi}{\greekbf \xi}}
74 \CustomizeMathJax{\newcommand{\bfpi}{\greekbf \pi}}
75 \CustomizeMathJax{\newcommand{\bfvarpi}{\greekbf \varpi}}
76 \CustomizeMathJax{\newcommand{\bfrho}{\greekbf \rho}}
77 \CustomizeMathJax{\newcommand{\bfvarrho}{\greekbf \varrho}}
78 \CustomizeMathJax{\newcommand{\bfsigma}{\greekbf \sigma}}
79 \CustomizeMathJax{\newcommand{\bfvarsigma}{\greekbf \varsigma}}
80 \CustomizeMathJax{\newcommand{\bftau}{\greekbf \tau}}
81 \CustomizeMathJax{\newcommand{\bfupsilon}{\greekbf \upsilon}}
82 \CustomizeMathJax{\newcommand{\bfphi}{\greekbf \phi}}
83 \CustomizeMathJax{\newcommand{\bfvarphi}{\greekbf \varphi}}
84 \CustomizeMathJax{\newcommand{\bfchi}{\greekbf \chi}}
85 \CustomizeMathJax{\newcommand{\bfpsi}{\greekbf \psi}}
86 \CustomizeMathJax{\newcommand{\bfomega}{\greekbf \omega}}
87 \CustomizeMathJax{\newcommand{\bfiota}{\greekbf \iota}}
88 \CustomizeMathJax{\newcommand{\bfGamma}{\greekbf \Gamma}}
89 \CustomizeMathJax{\newcommand{\bfDelta}{\greekbf \Delta}}
90 \CustomizeMathJax{\newcommand{\bfTheta}{\greekbf \Theta}}
91 \CustomizeMathJax{\newcommand{\bfLambda}{\greekbf \Lambda}}
92 \CustomizeMathJax{\newcommand{\bfXi}{\greekbf \Xi}}
93 \CustomizeMathJax{\newcommand{\bfPi}{\greekbf \Pi}}
94 \CustomizeMathJax{\newcommand{\bfSigma}{\greekbf \Sigma}}
95 \CustomizeMathJax{\newcommand{\bfUpsilon}{\greekbf \Upsilon}}
96 \CustomizeMathJax{\newcommand{\bfPhi}{\greekbf \Phi}}
97 \CustomizeMathJax{\newcommand{\bfPsi}{\greekbf \Psi}}
98 \CustomizeMathJax{\newcommand{\bfOmega}{\greekbf \Omega}}
99 \CustomizeMathJax{\newcommand{\bfzero}{\greekbf \emptyset}}
100 \CustomizeMathJax{\DeclareMathOperator{\cov}{Cov}}
101 \CustomizeMathJax{\DeclareMathOperator{E}{E}}
102 \CustomizeMathJax{\DeclareMathOperator{V}{V}}
103 \CustomizeMathJax{\newcommand{\inas}{\overset{a. s.}{\to}}}
104 \CustomizeMathJax{\newcommand{\indist}{\overset{d}{\to}}}
105 \CustomizeMathJax{\newcommand{\inprob}{\overset{p}{\to}}}
106 \CustomizeMathJax{\DeclareMathOperator{\plim}{plim}}
107 \CustomizeMathJax{\DeclareMathOperator{\tr}{tr}}
108 \CustomizeMathJax{\DeclareMathOperator{\vc}{vec}}
109 \CustomizeMathJax{\DeclareMathOperator{\vcs}{vecs}}
110 \CustomizeMathJax{\DeclareMathOperator{\vch}{vech}}
111 \CustomizeMathJax{\DeclareMathOperator{\diag}{diag}}
112 \CustomizeMathJax{\DeclareMathOperator{\argmin}{arg\,min}}
113 \CustomizeMathJax{\DeclareMathOperator{\argmax}{arg\,max}}
114 \end{warpMathJax}

```

---

File 396 **lwarp-steinmetz.sty**

§ 498 Package **steinmetz**

(Emulates or patches code by ENRICO GREGORIO.)

Pkg steinmetz steinmetz is patched for use by lwarp. Emulation is provided for MATHJAX

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{steinmetz}[2009/06/14]

2 \begin{warpHTML}
3 \renewcommand{\phase}[2][]{%
4 \begin{lateximage}*{steinmetz\{\detokenize{#2}\}}
5 \ensuremath{\underline{/#2}}
6 \end{lateximage}
7 }
8 \end{warpHTML}
9
10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\phase}[2][]{\underline{/#2}}}
12 \end{warpMathJax}

```

---

File 397 **lwarp-stfloats.sty**

§ 499 Package **stfloats**

Pkg stfloats stfloats is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{stfloats}[2017/03/27]

```

stfloats may have been preloaded by a ltj\* class.

The following are provided in case they have not yet been defined:

```

2 \providecommand*\fnbelowfloat{}
3 \providecommand*\fnunderfloat{}
4 \providecommand*\setbaselinefloat{}
5 \providecommand*\setbaselinefixed{}

```

Nullified for HTML:

```

6 \renewcommand*\fnbelowfloat{}
7 \renewcommand*\fnunderfloat{}
8 \renewcommand*\setbaselinefloat{}
9 \renewcommand*\setbaselinefixed{}

```

---

File 398 **lwarp-struktex.sty**

§ 500 Package **struktex**

*(Emulates or patches code by JOBST HOFFMANN.)*

Pkg struktex struktex is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{struktex}[2018/06/04]

```

```

2 \BeforeBeginEnvironment{struktogramm}{%
3 \begin{lateximage}[-struktex--\PackageDiagramAltText]%
4 }
5 \AfterEndEnvironment{struktogramm}{\end{lateximage}}
6
7 \newenvironment{LWR@HTML@centernss}{\begin{center}}{\end{center}}
8 \LWR@formattedenv{centernss}
9
10 \newcommand{\LWR@HTML@CenterNssFile}[1]{%
11 \begin{center}
12 \input{#1.nss}
13 \end{center}
14 }
15 \LWR@formatted{CenterNssFile}
16
17 \newcommand{\LWR@HTML@centernssfile}{\LWR@HTML@CenterNssFile}
18 \LWR@formatted{centernssfile}

```

---

File 399 **lwarp-subcaption.sty**

§ 501 Package **subcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg subcaption **subcaption** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{subcaption}[2018/05/01]

Tells **lwarp** to ignore minipage widths inside a subfigure or subtable. In print mode the minipages are used to place the items next to each other. In **HTML** they are placed side-by-side automatically.

```

2 \xpretocmd{\subcaption@iiminipage}
3 {\minipagefullwidth}
4 {}
5 {\LWR@patcherror{subcaption}{subcaption@iiminipage}}

```

Likewise for a `\subcaptionbox`:

```

6 \xpretocmd{\subcaptionbox}
7 {\minipagefullwidth}
8 {}
9 {\LWR@patcherror{subcaption}{subcaptionbox}}

```

---

File 400 **lwarp-subfig.sty**

§ 502 Package **subfig**

*(Emulates or patches code by STEVEN DOUGLAS COCHRAN.)*

Pkg subfig subfig is supported and patched by lwarp.

⚠ **lof/lotdepth** At present, the package options for lofdepth and lotdepth are not working. These counters must be set separately after the package has been loaded.

In the document source, use `\hfill` and `\hspace* subfig>inline` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

**for HTML output:** Accept all options for lwarp-subfig:

```
1 \LWR@ProvidesPackagePass{subfig}[2005/06/28]
```

```
\sf@@@subfloat {<1 type>} [<2 LOF entry>] [<3 caption>] {<4 contents>}
```

The outer minipage allows side-by-side subfloats with `\hfill` between.

```
2 \long\def\sf@@@subfloat#1[#2][#3]#4{%
3 \begin{minipage}{\linewidth}% lwarp
```

```
4 \IfValueTF{#2}{%
```

```
5 \LWR@setlatestname{#2}%
```

```
6 }{%
```

```
7 \IfValueTF{#3}{%
```

```
8 \LWR@setlatestname{#3}%
```

```
9 }{%
```

```
10 }%
```

```
11 \LWR@stoppars% lwarp
```

```
12 \@ifundefined{FBsc@max}{}%
```

```
13 {\FB@readaux{\let\FBsuboheight\relax}}%
```

```
14 \@tempcnta=\@ne
```

```
15 \if@minipage
```

```
16 \@tempcnta=\z@
```

```
17 \else\ifdim \lastskip=\z@ \else
```

```
18 \@tempcnta=\tw@
```

```
19 \fi\fi
```

```
20 \ifmaincaptiontop
```

```
21 \sf@top=\sf@nearskip
```

```
22 \sf@bottom=\sf@farskip
```

```
23 \else
```

```
24 \sf@top=\sf@farskip
```

```
25 \sf@bottom=\sf@nearskip
```

```
26 \fi
```

```
27 \leavevmode
```

```
28 % \setbox\@tempboxa \hbox{#4}%
```

```
29 % \@tempdima=\wd\@tempboxa
```

```
30 % \@ifundefined{FBsc@max}{}%
```

```
31 % {\global\advance\Xhsize-\wd\@tempboxa
```

```
32 % \dimen@=\ht\@tempboxa
```

```
33 % \advance\dimen@\dp\@tempboxa
```

```
34 % \ifdim\dimen@>\FBso@max
```

```
35 % \global\FBso@max\dimen@
```

```
36 % \fi}%
```

Do not use boxes, which interfere with lateximages:

```

37 % \vtop%
38 \bgroup
39 % \vbox%
40 \bgroup
41 \ifcase\@tempcnta
42 \@minipagefalse
43 \or
44 % \vskip\sf@top
45 \or
46 \ifdim \lastskip=\z@ \else
47 % \@tempskipb\sf@top\relax\@xaddvskip
48 \fi
49 \fi
50 \sf@ifpositiontop{%
51 \ifx \@empty#3\relax \else
52 \sf@subcaption{#1}{#2}{#3}%
53 % \vskip\sf@capskip
54 % \vskip\sf@captopadj
55 \fi\egroup
56 % \hrule width0pt height0pt depth0pt
57 \LWR@startpars% lwarp
58 % \box\@tempboxa
59 #4
60 \LWR@stoppars% lwarp
61 }{%
62 \LWR@startpars% lwarp
63 \@ifundefined{FBsc@max}%
64 {
65 % \box\@tempboxa
66 #4
67 }%
68 {\ifx\FBsuboheight\relax
69 % \box\@tempboxa
70 #4
71 \else
72 % \vbox to \FBsuboheight{\FBafil\box\@tempboxa\FBbfil}%
73 #4
74 \fi}%
75 \LWR@stoppars% lwarp
76 \egroup
77 \ifx \@empty#3\relax \else
78 % \vskip\sf@capskip
79 % \hrule width0pt height0pt depth0pt
80 \sf@subcaption{#1}{#2}{#3}%
81 \fi
82 }%
83 % \vskip\sf@bottom
84 \egroup
85 \@ifundefined{FBsc@max}{%
86 {\addtocounter{FRobj}{-1}%
87 \ifnum\c@FRobj=0\else
88 \subfloatrowsep
89 \fi}%
90 \ifmaincaptiontop\else

```

```

91 \global\advance\@nameuse{c@\@capttype}\m@ne
92 \fi
93 \end{minipage}% lwarp
94 \LWR@startpars% lwarp
95 \endgroup\ignorespaces%
96 }%

```

\sf@subcaption {<1 type>} {<2 LOF entry>} {<3 caption>}

```

97 \long\def\sf@subcaption#1#2#3{%
98 \LWR@stoppars% lwarp
99 \ifx \relax#2\relax \else
100 \bgroup
101 \let\label=\@gobble
102 \let\protect=\string
103 \def\@subcaplabel{%
104 \caption@lstfmt{\@nameuse{p@#1}}{\@nameuse{the#1}}}%
105 \sf@updatecaptionlist{#1}{#2}{\the\value{\@capttype}}{\the\value{#1}}%
106 \egroup
107 \fi
108 \bgroup
109 \ifx \relax#3\relax
110 \let\captionlabelsep=\relax
111 \fi
112 % \setbox0\vbox{%
113 % \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`     $\{ \langle label \rangle \}$

The unstarred version uses a `\ref` link whose printed text comes from the `sub@<label>`:

```

182 \renewcommand{\sf@subref}[1]{%
183 \LWR@subnewref{#1}{sub#1}%
184 }

```

`\sf@@subref`     $\{ \langle label \rangle \}$

The starred version uses the printed `sub@<label>` which is stored as if it were a page number:

```
185 \renewcommand{\sf@@subref}[1]{\LWR@orig@pageref{sub@#1}}
```

Defining new subfloats. The `l@sub<type>` for each is redefined.

```
\@newsubfloat [⟨keys/values⟩] {⟨float name⟩}
186 \LetLtxMacro\LWR@orig@newsubfloat\@newsubfloat
187
188 \def\@newsubfloat[#1]#2{%
189 \LWR@orig@newsubfloat[#1]{#2}%
190 \renewcommand{\l@sub#2}[2]{\hypertocfloat{2}{sub#2}{\ext@sub#2}{##1}{##2}}%
191 }
```

Pre-defined for figures and tables:

```
\l@subfigure {⟨text⟩} {⟨pagenum⟩}
192 \renewcommand{\l@subfigure}[2]{\hypertocfloat{2}{subfigure}{lof}{#1}{#2}}

\l@subtable {⟨text⟩} {⟨pagenum⟩}
193 \renewcommand{\l@subtable}[2]{\hypertocfloat{2}{subtable}{lot}{#1}{#2}}
```

File 401 **lwarp-subfigure.sty**

§ 503 Package **subfigure**

Pkg subfigure subfigure is emulated by subfig.

```
for HTML output: 1 \LWR@ProvidesPackageDrop{subfigure}[2002/03/15]
2 \RequirePackage{subfig}

3 \LetLtxMacro\subfigure\subfloat
4 \LetLtxMacro\subtable\subfloat
5 \LetLtxMacro\Subref\subref
6 \@ifundefined{figuretopcaptrue}{\newif\iffiguretopcap}{}
7 \newif\ifsubfiguretopcap
8 \newif\ifsubcaphang
9 \newif\ifsubcapcenter
10 \newif\ifsubcapcenterlast
11 \newif\ifsubcapnooneline
12 \newif\ifsubcapraggedright
13 \newskip\subfigtopskip
14 \newskip\subfigcapskip
15 \newdimen\subfigcaptopadj
16 \newskip\subfigbottomskip
17 \newdimen\subfigcapmargin
18 \newskip\subfiglabelskip
19 \newcommand*{\subcapsize}{}

```

```
20 \newcommand*{\subcaplabelfont}{}
21 \newcommand*{\subcapfont}{}

```

---

File 402 **lwarp-subsubscripts.sty**

§ 504 Package **subsubscripts**

*(Emulates or patches code by RICCARDO BRESCIANI.)*

Pkg subsubscripts **subsubscripts** is used as-is for SVG math, and is emulated for MATHJAX.

**for HTML output:** 1 \LWR@ProvidesPackagePass[subsubscripts][2009/10/27]

The larger skips are used here.

```
2 \begin{warpMathJax}
3 \CustomizeMathJax{%
4 \newcommand{\fourscriptsC}[7]{%
5 {}^{#2}_{#3}\hspace{#6}#1\hspace{#7}}^{#4}_{#5}%
6 }
7 }
8 \CustomizeMathJax{%
9 \newcommand{\lrsubscriptsC}[5]{%
10 \fourscriptsC{#1}{#2}{#3}{#4}{#5}%
11 }
12 }
13 \CustomizeMathJax{%
14 \newcommand{\lrsuperscriptsC}[5]{%
15 \fourscriptsC{#1}{#2}{#3}{#4}{#5}%
16 }
17 }
18 \CustomizeMathJax{%
19 \newcommand{\fourscripts}[5]{%
20 \fourscriptsC{#1}{#2}{#3}{#4}{#5}{0ex}{0ex}%
21 }
22 }
23 \CustomizeMathJax{%
24 \newcommand{\lrsubscripts}[3]{\fourscripts{#1}{#2}{#3}}
25 }
26 \CustomizeMathJax{%
27 \newcommand{\lrsuperscripts}[3]{\fourscripts{#1}{#2}{#3}}
28 }
29 \CustomizeMathJax{%
30 \newcommand{\twoscripts}[4][-.16ex]{{}^{#3}_{#4}\hspace{#1}#2}
31 }
32 \CustomizeMathJax{%
33 \newcommand{\twoscripts}[4][-.07ex]{#2\hspace{#1}}^{#3}_{#4}}
34 }
35 \CustomizeMathJax{%
36 \newcommand{\lsubscript}[3][-.16ex]{\twoscripts[#1]{#2}{#3}}
37 }
38 \CustomizeMathJax{%
39 \newcommand{\lsuperscript}[3][-.16ex]{\twoscripts[#1]{#2}{#3}}

```

```

40 }
41 \CustomizeMathJax{%
42 \newcommand{\rsubscript}[3][-.07ex]{\tworscripts[#1]{#2}{#3}}
43 }
44 \CustomizeMathJax{%
45 \newcommand{\rsuperscript}[3][-.07ex]{\tworscripts[#1]{#2}{#3}}
46 }
47 \end{warpMathJax}

```

File 403 **lwarp-supertabular.sty**

§ 505 Package **supertabular**

*(Emulates or patches code by JOHANNES BRAAMS, THEO JURRIENS.)*

Pkg supertabular **supertabular** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{supertabular}[2004/02/20]

⚠ Misplaced alignment tab character & For `\tablefirsthead`, etc., enclose them as follows:

```

\StartDefiningTabulars
\tablefirsthead
. . .
\StopDefiningTabulars

```

See section 8.10.1.

⚠ **lateximage** **supertabular** and **xtab** are not supported inside a **lateximage**.

```

2 \newcommand{\LWRST@firsthead}{}
3
4 \newcommand{\tablefirsthead}[1]{%
5 \long\gdef\LWRST@firsthead{#1}%
6 }
7
8 \newcommand{\tablehead}[1]{}
9 \newcommand{\tabletail}[1]{}
10
11 \newcommand{\LWRST@lasttail}{}
12
13 \newcommand{\tablelasttail}[1]{%
14 \long\gdef\LWRST@lasttail{#1}%
15 }

16 \newcommand{\tablecaption}[2][]{%
17 \long\gdef\LWRST@caption{%
18 \ifblank{#1}%
19 {\caption{#2}}%
20 {\caption[#1]{#2}}%
21 }%
22 }
23

```

```

24 \let\topcaption\tablecaption
25 \let\bottomcaption\tablecaption

26 \newcommand*\LWRST@caption{}
27
28 \newcommand*\shrinkheight}[1]{}
29
30 \NewDocumentEnvironment{supertabular}{s o m}
31 {%
32 \LWR@traceinfo{supertabular}%
33 \begin{table}%
34 \LWRST@caption%
35 \begin{tabular}{#3}%
36 \TabularMacro\ifdefvoid{\LWRST@firsthead}%
37 {\LWR@getmynexttoken}%
38 {\expandafter\LWR@getmynexttoken\LWRST@firsthead}%
39 }%
40 {%
41 \ifdefvoid{\LWRST@lasttail}%
42 {}%
43 {%
44 \TabularMacro\ResumeTabular%
45 \LWRST@lasttail%
46 }%
47 \end{tabular}%
48 \end{table}%

49 \gdef\LWRST@caption{}%

50 \LWR@traceinfo{supertabular done}%
51 }
52
53 \NewDocumentEnvironment{mpsupertabular}{s o m}
54 {\minipage{\linewidth}\supertabular{#3}}
55 {\endsupertabular\endminipage}

```

---

File 404 **lwarp-svg.sty**

§ 506 Package **svg**

(Emulates or patches code by PHILIP ILTEN, FALK HANISCH.)

Pkg svg **svg** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{svg}[2019/10/22]

2 \xpretocmd{\includesvg}%
3 {\begin{lateximage}}%
4 {}%
5 {\LWR@patcherror{svg}{includesvg}}
6

```

```

7 \xapptocmd{\includesvg}%
8 {\end{lateximage}}%
9 {}%
10 {\LWR@patcherror{svg}{includesvg}}
11
12 \xpretocmd{\includeinkscape}%
13 {\begin{lateximage}}%
14 {}%
15 {\LWR@patcherror{svg}{includeinkscape}}
16
17 \xapptocmd{\includeinkscape}%
18 {\end{lateximage}}%
19 {}%
20 {\LWR@patcherror{svg}{includeinkscape}}

```

---

File 405 **lwarp-syntonly.sty**

§ 507 Package **syntonly**

(Emulates or patches code by FRANK MITTELBACH, RAINER SCHÖPF.)

Pkg syntonly syntonly is ignored.

**for HTML output:** Discard all options for lwarp-syntonly:

```

1 \LWR@ProvidesPackageDrop{syntonly}[2017/06/30]

2 \newif\ifsyntax@
3 \syntax@false
4
5 \newcommand*{\syntonly}{}
6
7 \@onlypreamble\syntonly

8 \def\nopages@{}

```

---

File 406 **lwarp-tabfigures.sty**

§ 508 Package **tabfigures**

Pkg tabfigures tabfigures is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tabfigures}[2012/01/24]

File 407 **lwarp-tablefootnote.sty**

§ 509 Package **tablefootnote**

Pkg tablefootnote tablefootnote is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tablefootnote}[2014/01/26]

This works because in HTML tables are no longer floats.

2 \LetLtxMacro\tablefootnote\footnote

File 408 **lwarp-tables.sty**

§ 510 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 409 **lwarp-tabularx.sty**

§ 511 Package **tabularx**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg tabularx tabularx is emulated by lwarp.

**for HTML output:** Discard all options for lwarp-tabularx:

1 \LWR@ProvidesPackageDrop{tabularx}[2016/02/03]  
2 \RequirePackage{array}

3 \DeclareDocumentEnvironment{tabularx}{m o m}  
4 {\tabular{#3}}  
5 {\endtabular}  
6  
7 \DeclareDocumentEnvironment{tabularx\*}{m o m}

---

```
8 {\tabular{#3}}
9 {\endtabular}
```

---

File 410 **lwarp-tabulary.sty**

§ 512 Package **tabulary**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg tabulary **tabulary** is emulated by lwarp.

**for HTML output:** Discard all options for lwarp-tabulary.

Column types L, C, R, and J are emulated by lwarp core code.

```
1 \LWR@ProvidesPackageDrop{tabulary}[2014/06/11]
2 \RequirePackage{array}

3 \NewDocumentEnvironment{tabulary}{m o m}
4 {\tabular{#3}}
5 {\endtabular}
6
7 \NewDocumentEnvironment{tabulary*}{m o m}
8 {\tabular{#3}}
9 {\endtabular}
10
11 \newdimen\tymin
12 \newdimen\tymax
13 \def\tyformat{}
```

---

File 411 **lwarp-tagpdf.sty**

§ 513 Package **tagpdf**

Pkg tagpdf **tagpdf** is mostly ignored, but emulates alt text, for images only. (HTML only has alternate text for images.)

(If left enabled for HTML output, tagpdf errors when producing HTML, somehow due to the HTML page numbers.)

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{tagpdf}[2019/07/02]

2 \ExplSyntaxOn
3
4 \tl_new:N \l__uftag_mc_key_label_tl
5
6 \keys_define:nn { uftag / mc }
7 {
8 tag .code:n = % the name (H,P,Span etc
9 {},
```

```

10 raw .code:n =
11 {}
12 ,
13 alttext .code:n = % Alt property
14 {
15 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
16 },
17 alttext-o .code:n = % Alt property
18 {
19 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
20 },
21 actualtext .code:n = % ActualText property
22 {},
23 actualtext-o .code:n = % ActualText property
24 {},
25 label .tl_set:N = \l__uftag_mc_key_label_tl,
26 artifact .code:n = {},
27 artifact .default:n = {notype}
28 }
29
30 \keys_define:nn { uftag / struct }
31 {
32 label .tl_set:N = \l__uftag_struct_key_label_tl,
33 stash .bool_set:N = \l__uftag_struct_elem_stash_bool,
34 tag .code:n = % S property
35 {},
36 title .code:n = % T property
37 {},
38 title-o .code:n = % T property
39 {},
40 alttext .code:n = % Alt property
41 {
42 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
43 },
44 alttext-o .code:n = % Alt property
45 {
46 \gdef\LWR@ThisAltText{\detokenize\expandafter{#1}}%
47 },
48 actualtext .code:n = % ActualText property
49 {},
50 actualtext-o .code:n = % ActualText property
51 {},
52 }
53
54 \NewDocumentCommand \tagpdfsetup { m }{}
55
56 \cs_set_eq:NN\tagpdfifluatexTF \sys_if_engine_luatex:TF
57 \cs_set_eq:NN\tagpdfifluatexT \sys_if_engine_luatex:T
58 \cs_set_eq:NN\tagpdfifpdfTeXT \sys_if_engine_pdfTeX:T
59 \cs_new:Npn \tagpdfget #1 {}
60 \cs_new:Npn \uftag_get:n #1 {}
61
62 \NewDocumentCommand \tagmcifinTF { m m }{}
63
64 \NewDocumentCommand \tagmcbegin { m }{\uftag_mc_begin:n {#1}\ignorespaces}

```

```

65 \cs_new_protected:Nn \uftag_mc_begin:n {
66 \group_begin:
67 \keys_set:nn { uftag / mc } {#1}
68 \group_end:
69 }
70
71 \NewDocumentCommand \tagmccend {}{\ThisAltText{}}
72
73 \cs_new_protected:Nn \uftag_mc_end: {\ThisAltText{}}
74
75 \NewDocumentCommand \tagmccuse { m }{}
76
77 \cs_new_protected:Nn \uftag_mc_use:n {}
78
79 \NewDocumentCommand \tagstructbegin { m }{
80 \uftag_struct_begin:n {#1}
81 }
82
83 \cs_new_protected:Nn \uftag_struct_begin:n
84 {
85 \group_begin:
86 \keys_set:nn {uftag / struct} { #1 }
87 \group_end:
88 }
89
90 \NewDocumentCommand \tagstructend { }{\ThisAltText{}}
91
92 \cs_new_protected:Nn \uftag_struct_end: {\ThisAltText{}}
93
94 \NewDocumentCommand \tagstructuse { m }{}
95
96 % \NewDocumentCommand\showtagpdfmccdata { 0 { __uftag_get_mc_abs_cnt: } }{}
97 % What is the second argument?
98
99 \NewDocumentCommand\showtagpdfattributes { }{}
100
101 \sys_if_engine_luatex:T
102 {
103 \NewDocumentCommand\pdffakespace { }
104 {
105 __uftag_fakespace:
106 }
107 }
108
109 \ExplSyntaxOff

```

---

File 412 **lwarp-tascmac.sty**

§ 514 Package **tascmac**

Pkg tascmac tascmac is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tascmac}[2018/03/09]

```
2 \newenvironment*{boxnote}
3 {
4 \BlockClass[
5 padding: .5ex ;
6 border: 1px solid black ;
7 border-top: 1px dashed black ;
8]{boxnote}
9 }
10 {\endBlockClass}
11
12 \newenvironment*{screen}[1][]
13 {
14 \BlockClass[
15 padding: .5ex ;
16 border: 1px solid gray ;
17 border-radius: 8pt
18]{boxnote}
19 }
20 {\endBlockClass}
21
22 \newenvironment*{itembox}[2][]
23 {
24 \BlockClass[
25 padding: .5ex ;
26 border: 1px solid gray ;
27 border-radius: 8pt
28]{boxnote}
29 \InlineClass{itemboxtitle}{#2}\par
30 }
31 {\endBlockClass}
32
33 \newenvironment*{shadebox}
34 {
35 \BlockClass[
36 padding: .5ex ;
37 border: 1px solid black ;
38 box-shadow: 3px 3px 3px \#808080 ;
39]{boxnote}
40 }
41 {\endBlockClass}
42
43 \newcommand*{\mask}[2]{%
44 \InlineClass[background: lightgray]{mask}{#1}%
45 }
46
47 \newcommand*{\maskbox}[5]{%
48 \InlineClass[background: lightgray]{mask}{#5}%
49 }
50
51 \newcommand*{\Maskbox}[6]{%
52 \InlineClass[
53 background: lightgray ;
54 border: #5 solid black
55]{mask}{#6}%
56 }
```

```

57
58 \newcommand*{\keytop}[2][]{%
59 \InlineClass[%
60 padding: .2ex ;
61 border: 1px solid black ;
62 border-radius: .7ex ;
63]{keytop}{#2}%
64 }
65
66 \def\yen{\HTMLUnicode{00A5}}
67
68 \def\return{\HTMLUnicode{23CE}}
69
70 \def\Return{\HTMLUnicode{23CE}}
71
72 \def\ascii{ASCII Corporation}
73
74 \def\Ascii{ASCII Corporation}
75
76 \def\ASCII{ASCII Corporation}

```

---

File 413 **lwarp-textarea.sty**

§ 515 Package **textarea**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg `textarea` `textarea` is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{textarea}[2005/12/26]

```

2 \newcommand\StartFromTextArea{}
3 \newcommand\StartFromHeaderArea{}
4 \newcommand*\RestoreTextArea{}
5 \newcommand*\ExpandTextArea[1][*]{}
6 \let\NCC@restorettextarea\@empty

```

---

File 414 **lwarp-textcomp.sty**

§ 516 Package **textcomp**

*(Emulates or patches code by FRANK MITTELBACH, ROBIN FAIRBAIRNS, WERNER LEMBERG.)*

Pkg `textcomp` `textcomp` is patched for use by `lwarp`.

### § 516.1 Limitations

Some textcomp symbols do not have Unicode equivalents, and thus are not supported.

 **missing symbols** Many textcomp symbols are not supported by many system / browser fonts. In the css try referencing fonts which are more complete, but expect to see gaps in coverage.

### § 516.2 Package loading

**for HTML output:** `1 \LWR@ProvidesPackagePass{textcomp}[2017/04/05]`

### § 516.3 HTML symbols

For HTML, use HTML entities or direct Unicode, depending on the engine.

`\AtBeginDocument` improves support for Lua<sup>A</sup>T<sub>E</sub>X and X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X.

#### § 516.3.1 pdf<sup>A</sup>T<sub>E</sub>X symbols

```

2 \AtBeginDocument{
3 \ifPDFTeX% pdflatex or dvi latex
4 \newcommand*\LWR@HTML@textdegree{\HTMLentity{deg}}
5 \newcommand*\LWR@HTML@textcelsius{\HTMLUnicode{2103}}
6 \newcommand*\LWR@HTML@textohm{\HTMLUnicode{2126}}
7 \newcommand*\LWR@HTML@textmu{\HTMLUnicode{00B5}}
8 \newcommand*\LWR@HTML@textlquill{\HTMLUnicode{2045}}
9 \newcommand*\LWR@HTML@textrquill{\HTMLUnicode{2046}}
10 \newcommand*\LWR@HTML@textcircledP{\HTMLUnicode{2117}}
11 \newcommand*\LWR@HTML@texttwelveudash{\HTMLUnicode{2014}}% emdash
12 \newcommand*\LWR@HTML@textthreequartersemdash{\HTMLUnicode{2014}}% emdash
13 \newcommand*\LWR@HTML@textmho{\HTMLUnicode{2127}}
14 \newcommand*\LWR@HTML@textnaira{\HTMLUnicode{20A6}}
15 \newcommand*\LWR@HTML@textpeso{\HTMLUnicode{20B1}}
16 \newcommand*\LWR@HTML@textrecipe{\HTMLUnicode{211E}}
17 \newcommand*\LWR@HTML@textinterrobang{\HTMLUnicode{203D}}
18 \newcommand*\LWR@HTML@textinterrobangdown{\HTMLUnicode{2E18}}
19 \newcommand*\LWR@HTML@textperthousand{\HTMLUnicode{2030}}
20 \newcommand*\LWR@HTML@textpertenthousand{\HTMLUnicode{2031}}
21 \newcommand*\LWR@HTML@textbaht{\HTMLUnicode{0E3F}}
22 \newcommand*\LWR@HTML@textdiscount{\%}
23 \newcommand*\LWR@HTML@textservicemark{\HTMLUnicode{2120}}
24 \else

```

#### § 516.3.2 X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X and Lua<sup>A</sup>T<sub>E</sub>X symbols

NOTE: Some of the following do not print well in the listing. Consult the .dtx or .sty file for the actual characters.

```

25 \newcommand*\LWR@HTML@textdegree{\°}
26 \newcommand*\LWR@HTML@textcelsius{\C}
27 \newcommand*\LWR@HTML@textohm{\Ω}
28 \newcommand*\LWR@HTML@textmu{\μ}

```

```

29 \newcommand*\LWR@HTML@textlquill}{\l}
30 \newcommand*\LWR@HTML@textrquill}{\r}
31 \newcommand*\LWR@HTML@textcircledP}{\textcircled{P}}
32 \newcommand*\LWR@HTML@texttwelveudash}{\texttwelveudash}
33 \newcommand*\LWR@HTML@textthreequartersemdash}{\textthreequartersemdash}
34 \newcommand*\LWR@HTML@textmho}{\textmho}
35 \newcommand*\LWR@HTML@textnaira}{\textnaira}
36 \newcommand*\LWR@HTML@textpeso}{\textpeso}
37 \newcommand*\LWR@HTML@textrecipe}{\textrecipe}
38 \newcommand*\LWR@HTML@textinterrobang}{\textinterrobang}
39 \newcommand*\LWR@HTML@textinterrobangdown}{\textinterrobangdown}
40 \newcommand*\LWR@HTML@textperthousand}{\textperthousand}
41 \newcommand*\LWR@HTML@textpertenthousand}{\textpertenthousand}
42 \newcommand*\LWR@HTML@textbaht}{\textbaht}
43 \newcommand*\LWR@HTML@textdiscount}{\textdiscount}
44 \newcommand*\LWR@HTML@textservicemark}{\textservicemark}
45 \fi
46
47 \LWR@formatted{textdegree}
48 \LWR@formatted{textcelsius}
49 \LWR@formatted{textohm}
50 \LWR@formatted{textmu}
51 \LWR@formatted{textlquill}
52 \LWR@formatted{textrquill}
53 \LWR@formatted{textcircledP}
54 \LWR@formatted{texttwelveudash}
55 \LWR@formatted{textthreequartersemdash}
56 \LWR@formatted{textmho}
57 \LWR@formatted{textnaira}
58 \LWR@formatted{textpeso}
59 \LWR@formatted{textrecipe}
60 \LWR@formatted{textinterrobang}
61 \LWR@formatted{textinterrobangdown}
62 \LWR@formatted{textperthousand}
63 \LWR@formatted{textpertenthousand}
64 \LWR@formatted{textbaht}
65 \LWR@formatted{textdiscount}
66 \LWR@formatted{textservicemark}

```

#### § 516.4 HTML diacritics

For HTML, Unicode diacritical marks are used:

```

67 \newcommand*\LWR@HTML@capitalcedilla}[1]{\#1\HTMLUnicode{0327}}
68 \newcommand*\LWR@HTML@capitalogonek}[1]{\#1\HTMLUnicode{0328}}
69 \newcommand*\LWR@HTML@capitalgrave}[1]{\#1\HTMLUnicode{0300}}
70 \newcommand*\LWR@HTML@capitalacute}[1]{\#1\HTMLUnicode{0301}}
71 \newcommand*\LWR@HTML@capitalcircumflex}[1]{\#1\HTMLUnicode{0302}}
72 \newcommand*\LWR@HTML@capitaltilde}[1]{\#1\HTMLUnicode{0303}}
73 \newcommand*\LWR@HTML@capitaldieresis}[1]{\#1\HTMLUnicode{0308}}
74 \newcommand*\LWR@HTML@capitalhungarumlaut}[1]{\#1\HTMLUnicode{30B}}
75 \newcommand*\LWR@HTML@capitalring}[1]{\#1\HTMLUnicode{30A}}
76 \newcommand*\LWR@HTML@capitalcaron}[1]{\#1\HTMLUnicode{30C}}
77 \newcommand*\LWR@HTML@capitalbreve}[1]{\#1\HTMLUnicode{306}}
78 \newcommand*\LWR@HTML@capitalmacron}[1]{\#1\HTMLUnicode{304}}

```

```
79 \newcommand*\LWR@HTML@capitaldotaccent}[1]{#1\HTMLUnicode{307}}
```

`\textcircled` becomes a span with a rounded border. `\providecommand` is used to avoid conflict with `xunicode`.

```
80 \providecommand*\LWR@HTML@textcircled}[1]{%
81 \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
82 }
83
84 \LWR@formatted{capitalcedilla}
85 \LWR@formatted{capitalogonek}
86 \LWR@formatted{capitalgrave}
87 \LWR@formatted{capitalacute}
88 \LWR@formatted{capitalcircumflex}
89 \LWR@formatted{capitaltilde}
90 \LWR@formatted{capitaldieresis}
91 \LWR@formatted{capitalhungarumlaut}
92 \LWR@formatted{capitalring}
93 \LWR@formatted{capitalcaron}
94 \LWR@formatted{capitalbreve}
95 \LWR@formatted{capitalmacron}
96 \LWR@formatted{capitaldotaccent}
97
98 \LWR@formatted{textcircled}
```

Nullify `textcomp` macros when generating filenames:

```
99 \FilenameNullify{%
100 \renewcommand*\textdegree}{}%
101 \renewcommand*\textcelsius}{}%
102 \renewcommand*\textohm}{}%
103 \renewcommand*\textmu}{}%
104 \renewcommand*\textlquill}{}%
105 \renewcommand*\textrquill}{}%
106 \renewcommand*\textcircledP}{}%
107 \renewcommand*\texttwelveudash}{}%
108 \renewcommand*\textthreequartersemdash}{}%
109 \renewcommand*\textmho}{}%
110 \renewcommand*\textnaira}{}%
111 \renewcommand*\textpeso}{}%
112 \renewcommand*\textrecipe}{}%
113 \renewcommand*\textinterrobang}{}%
114 \renewcommand*\textinterrobangdown}{}%
115 \renewcommand*\textperthousand}{}%
116 \renewcommand*\textpertenthousand}{}%
117 \renewcommand*\textbaht}{}%
118 \renewcommand*\textdiscount}{}%
119 \renewcommand*\textservicemark}{}%
120 \renewcommand*\textcircled}[1]{#1}%
121 \renewcommand*\capitalcedilla}[1]{#1}%
122 \renewcommand*\capitalogonek}[1]{#1}%
123 \renewcommand*\capitalgrave}[1]{#1}%
124 \renewcommand*\capitalacute}[1]{#1}%
125 \renewcommand*\capitalcircumflex}[1]{#1}%
126 \renewcommand*\capitaltilde}[1]{#1}%
```

```

127 \renewcommand*\capitaldieresis[1]{#1}%
128 \renewcommand*\capitalhungarumlaut[1]{#1}%
129 \renewcommand*\capitalring[1]{#1}%
130 \renewcommand*\capitalcaron[1]{#1}%
131 \renewcommand*\capitalbreve[1]{#1}%
132 \renewcommand*\capitalmacron[1]{#1}%
133 \renewcommand*\capitaldotaccent[1]{#1}%
134 }% FilenameNullify
135
136 }% AtBeginDocument

```

---

File 415 **lwarp-textfit.sty**

§ 517 Package **textfit**

Pkg textfit textfit is emulated.

Text is placed into a <span> of class textfit. Sizes are approximated, and also limited by browser min/max font-size settings.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{textfit}[1994/04/15]

2 \newsavebox{\LWR@textfitbox}
3
4 \newcommand*\LWR@textfitscale[2]{%
5 \setlength{\LWR@templengthone}{#1}%
6 \setlength{\LWR@templengthtwo}{%
7 1em*\ratio{\LWR@templengthone}{\LWR@templengthtwo}%
8 }%
9 \InlineClass[font-size:\LWR@printlength{\LWR@templengthone}]{textfit}{#2}%
10 }
11
12 \newcommand*\scaletowidth[2]{%
13 \sbox{\LWR@textfitbox}{#2}%
14 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
15 \LWR@textfitscale{#1}{#2}%
16 }
17
18 \newcommand*\scaletohight[2]{%
19 \sbox{\LWR@textfitbox}{#2}%
20 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
21 \LWR@textfitscale{#1}{#2}%
22 }

```

---

File 416 **lwarp-textpos.sty**

§ 518 Package **textpos**

*(Emulates or patches code by NORMAN GRAY.)*

Pkg textpos **textpos** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{textpos}[2019/04/15]

```

2 \NewDocumentEnvironment{textblock}{m o r()}{}{}
3 \NewDocumentEnvironment{textblock*}{m o r()}{}{}
4 \newcommand*\TPGrid[3]{}{}
5 \NewDocumentCommand{\TPMargin}{s o}{}
6 \newcommand*\textblockcolour[1]{}
7 \newcommand*\textblockrulecolour[1]{}
8 \newcommand*\textblockcolor[1]{}
9 \newcommand*\textblockrulecolor[1]{}
10 \newcommand*\tekstblokkulur[1]{}
11 \newcommand*\tekstblokrulekulur[1]{}
12 \newlength{\TPHorizModule}
13 \newlength{\TPVertModule}
14 \newlength{\TPboxrulesize}
15 \newcommand{\textblocklabel}[1]{}
16 \newcommand*\showtextsize{}
17 \newcommand{\textblockorigin}[2]{}
18 \newcommand*\TPoptions[1]{}
19 \newcommand*\TPReferencePosition[1]{}

```

---

File 417 **lwarp-theorem.sty**

§ 519 Package **theorem**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg theorem **theorem** is patched for use by **lwarp**.

---

Table 18: Theorem package — css styling of theorems and proofs

**Theorem:** <div> of class theorembody<theoremstyle>

**Theorem Header:** <span> of class theoremheader

where <theoremstyle> is plain, break, etc.

---

**for HTML output:** 1 \LWR@ProvidesPackagePass{theorem}[2014/10/28]

### § 519.1 Remembering the theorem style

Storage for the style being used for new theorems:

```
2 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```
3 \gdef\theoremstyle#1{%
4 \ifundefined{th@#1}{\@warning
5 {Unknown theoremstyle ‘#1’. Using ‘plain’}%
6 \theorem@style{plain}%
7 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
8 }%
9 {%
10 \theorem@style{#1}%
11 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
12 }%
13 \begingroup
14 \csname th@the\theorem@style \endcsname
15 \endgroup}
```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```
16 \gdef\xnthm#1#2[#3]{%
17 \expandafter\ifdefinable\csname #1\endcsname
18 {%
19 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
20 \definecounter{#1}\newctr{#1}[#3]%
21 \expandafter\xdef\csname the#1\endcsname
22 {\expandafter \noexpand \csname the#3\endcsname
23 \@thmcountersep \@thmcounter{#1}}}%
24 \def\@tempa{\global\@namedef{#1}}%
25 \expandafter \@tempa \expandafter{%
26 \csname th@the \theorem@style
27 \expandafter \endcsname \the \theorem@bodyfont
28 \@thm{#1}{#2}}%
29 \global \expandafter \let \csname end#1\endcsname \@endtheorem
30 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
31 }}
32
33 \gdef\ynthm#1#2{%
34 \expandafter\ifdefinable\csname #1\endcsname
35 {
36 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
37 \definecounter{#1}%
38 \expandafter\xdef\csname the#1\endcsname{\@thmcounter{#1}}%
39 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
40 \expandafter{\csname th@the \theorem@style \expandafter
41 \endcsname \the\theorem@bodyfont \@thm{#1}{#2}}%
42 \global \expandafter \let \csname end#1\endcsname \@endtheorem
43 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
44 }}
45
```

```

46 \gdef\@thm#1[#2]#3{%
47 \expandafter\ifx\csname c@#2\endcsname\relax
48 \@nocounterr{#2}%
49 \else
50 \expandafter\ifdefinable\csname #1\endcsname
51 {
52 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
53 \expandafter \xdef \csname the#1\endcsname
54 {\expandafter \noexpand \csname the#2\endcsname}%
55 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
56 \expandafter{\csname th@the \theoremstyle \expandafter
57 \endcsname \the\theorem@bodyfont \@thm{#2}{#3}}%
58 \global \expandafter \let \csname end#1\endcsname \@endtheorem
59 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\@nameuse{LWR@thmstyle#1}}}% lwarp
60 }%
61 \fi}

```

## § 519.2 **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 418 **lwarp-thinsp.sty**

§ 520 Package **thinsp**

Pkg thinsp thinsp is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{thinsp}[2016/10/02]

```

2 \AtBeginDocument{
3 \let\thinthinspace\relax% defined by some packages
4 \newcommand*{\thinthinspace}{\thinspace}
5 }
6
7 \newcommand*{\stretchthinspace}{\thinspace}
8 \newcommand*{\stretchthinthinspace}{\thinthinspace}
9 \newcommand*{\stretchnegthinspace}{\negthinspace}

```

---

File 419 **lwarp-threadcol.sty**

§ 521 Package **threadcol**

Pkg threadcol threadcol is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{threadcol}[2013/01/06]

```

2 \newcommand{\setthreadname}[1]{}

```

---

File 420 **lwarp-threeparttable.sty**

§ 522 Package **threeparttable**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg threeparttable threeparttable is emulated.

Table note are contained inside a css <div> of class tnotes. If enumitem is used, the note item labels are also individually highlighted with an additional css <span> of class tnoteitemheader, otherwise they are plain text.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{threeparttable}[2003/06/13]

Env threeparttable [*<alignment>*]

```
2 \newenvironment*{threeparttable}[1][b]
3 {\def\@capttype{table}}
4 {}
```

Env tablenotes [*<options>*]

```
5 \newenvironment*{tablenotes}[1][[]
6 {}
7 \LWR@forcenewpage
8 \BlockClass{tnotes}%

9 \description%
10 }
11 {%
12 \enddescription%
13 \endBlockClass%
14 }
```

```
\tnote {\langle text \rangle}

15 \newcommand{\tnote}[1]{\LWR@htmlspan{sup}{#1}}
```

Env measuredfigure [*<alignment>*]

```
16 \newenvironment*{measuredfigure}[1][t]
17 {\def\@capttype{figure}}
18 {}
```

---

File 421 **lwarp-threeparttablex.sty**

§ 523 Package **threeparttablex**

Pkg threeparttablex threeparttablex is patched for use by lwarp.

threeparttablex is used with longtable and booktabs as follows:

```

\begin{longtable}{ [column specifiers] }
[. . .] \endfirsthead % or \endhead, for print and HTML
\warpprintonly{ % not used in HTML
[. . .] \endhead % or \endfirsthead
[. . .] \endfoot
\bottomrule \insertTableNotes \endlastfoot
}
. . . table contents . . .
\warpHTMLonly{ % HTML last footer
\bottomrule
\UseMinipageWidths % optional
\insertTableNotes
\endlastfoot
}
\end{longtable}

```

**table width** The table notes are created using a `\multicolumn`. By default the width is not specified to the browser, so long table notes can cause the table to be spread out horizontally. For HTML output, `lwarp` guesses the width of the table depending on the number of columns, then restricts its guess to a min/max range. To use this guess for the width of the table notes, use `\UseMinipageWidths` before `\insertTableNotes`. The width is then specified, and in many cases the result is an improvement in overall table layout.

**for HTML output:** 1 `\LWR@ProvidesPackagePass{threeparttablex}[2013/07/23]`

The width is guessed depending on the number of columns, then limited to a min/max.

```

2 \renewcommand\insertTableNotes{%
3 \setlength{\LWR@templengthone}{.375in*\value{LWR@tabletotalLaTeXcols}}%
4 \setlength{\LWR@templengthone}{\minof{\textwidth}{\LWR@templengthone}}%
5 \setlength{\LWR@templengthone}{\maxof{2.5in}{\LWR@templengthone}}%
6 \multicolumn{\value{LWR@tabletotalLaTeXcols}}{c}{%
7 \parbox{\LWR@templengthone}{%
8 \begin{tablenotes}[\TPTL@optarg]%
9 \TPTL@font%
10 \TPTL@body%
11 \end{tablenotes}%
12 }%
13 }%
14 }
15
16 \renewcommand\TPTL@tnotex[2]{\tnote{\nameref{#2}}}

```

---

File 422 **lwarp-thumb.sty**

§ 524 Package **thumb**

Pkg thumb thumb is ignored.

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{thumb}[1997/12/24]`

```

2 \newcommand*{\Overviewpage}{}
3 \newlength{\thumbheight}
4 \newlength{\thumbwidth}

```

---

File 423 **lwarp-thumbs.sty**

§ 525 Package **thumbs**

Pkg thumbs thumbs is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{thumbs}[2014/03/09]

```

2 \newcommand{\addthumb}[4]{}
3 \newcommand{\addtitlethumb}[5]{}
4 \newcommand{\stopthumb}{}
5 \newcommand{\continuethumb}{}
6 \newcommand{\thumbsoverview}[1]{}
7 \newcommand{\thumbsoverviewback}[1]{}
8 \newcommand{\thumbsoverviewverso}[1]{}
9 \newcommand{\thumbsoverviewdouble}[1]{}
10 \newcommand{\thumbnewcolumn}{}
11 \newcommand{\addthumbsoverviewtocontents}[2]{}
12 \newcommand{\thumbsnophantom}{}

```

---

File 424 **lwarp-tikz.sty**

§ 526 Package **tikz**

*(Emulates or patches code by TILL TANTAU.)*

Pkg tikz tikz is supported.

 **displaymath and matrices** If using display math with tikzpicture or \tikz, along with matrices with the & character, the document must be modified as follows:

```

\usepackage{tikz}
\tikzset{every picture/.style={ampersand replacement=\&}}

```

and each instance of & in the tikz expression must be replaced with \&.

Accept all options for lwarp-tikz:

```

1 \LWR@ProvidesPackagePass{tikz}[2015/08/07]

```

**catcodes** lwarp changes the catcode of \$ for its own use. The Tikz babel library temporarily changes catcodes back to normal for Tikz's use. tikz v3.0.0 introduced the babel library which handles catcode changes. For older versions, lwarp must change \$'s catcode itself.

Also see:

<https://tex.stackexchange.com/questions/16199/test-if-a-package-or-package-option-is-loaded>

```

2 \newbool{LWR@tikzbabel}
3
4 \@ifpackagelater{tikz}{2013/12/20}% Test for Tikz version v3.0.0
5 {\usetikzlibrary{babel}\booltrue{LWR@tikzbabel}}
6 {\boolfalse{LWR@tikzbabel}}

```

Env `pgfpicture` The `\pgfpicture` environment is enclosed inside a `\lateximage`. Enclose the low-level `\pgfpicture` in a `lateximage`. This is also used by the higher-level `\tikz` and `tikzpicture`.

```

7 \preto\pgfpicture{%
8 \begin{lateximage}[-tikz-~\PackageDiagramAltText]%
9 \ifbool{LWR@tikzbabel}% Test for Tikz version v3.0.0
10 {}%
11 {\catcode'\$=3}% dollar sign is math shift
12 }
13
14 \appto\endpgfpicture{\end{lateximage}}

```

`Tikz` is placed inside an `svg` image, so use the original meanings of the following:

```

15 \LetLtxMacro\pgfutil@minipage\LWR@print@minipage
16 \let\pgfutil@endminipage\endLWR@print@minipage
17
18 \let\pgfutil@raggedleft\LWR@print@raggedleft
19 \let\pgfutil@raggedright\LWR@print@raggedright
20
21 \def\pgfutil@font@tiny{\LWR@printtiny}
22 \def\pgfutil@font@scriptsize{\LWR@printscriptsize}
23 \def\pgfutil@font@footnotesize{\LWR@printfootnotesize}
24 \def\pgfutil@font@small{\LWR@printsmall}
25 \def\pgfutil@font@normalsize{\LWR@printnormalsize}
26 \def\pgfutil@font@large{\LWR@printlarge}
27 \def\pgfutil@font@Large{\LWR@printLarge}
28 \def\pgfutil@font@huge{\LWR@printhuge}
29 \def\pgfutil@font@Huge{\LWR@printHuge}
30
31 \def\pgfutil@font@itshape{\LWR@origitshape}
32 \def\pgfutil@font@bfseries{\LWR@origbfseries}
33
34 \def\pgfutil@font@normalfont{\LWR@originormalfont}

```

---

File 425 **lwarp-titleps.sty**

§ 527 Package **titleps**

(Emulates or patches code by JAVIER BEZOS.)

Pkg titlesps titlesps is loaded and used by lwarp during HTML output. All user options and macros are ignored and disabled.

Discard all options for lwarp-titlesps:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titlesps}[2016/03/15]

\pagestyle and \thispagestyle are already disabled in the lwarp code.

\newpagestyle    {<name> [<style>] {<commands>}}  
2 \NewDocumentCommand{\newpagestyle}{m o m}{}

\renewpagestyle  {<name> [<style>] {<commands>}}  
3 \NewDocumentCommand{\renewpagestyle}{m o m}{}

\sethead        [<el>] [<ec>] [<er>] {<ol>} {<oc>} {<or>}}  
4 \NewDocumentCommand{\sethead}{o o o m m m}{}

\setfoot        [<el>] [<ec>] [<er>] {<ol>} {<oc>} {<or>}}  
5 \NewDocumentCommand{\setfoot}{o o o m m m}{}

\settitlemarks  \* {<names>}}  
6 \NewDocumentCommand{\settitlemarks}{s m}{}

\headrule  
7 \newcommand\*{\headrule}{}

\footrule  
8 \newcommand\*{\footrule}{}

\setheadrule    {<length>}}  
9 \newcommand\*{\setheadrule}[1]{}

\setfootrule    {<length>}}  
10 \newcommand\*{\setfootrule}[1]{}

\makeheadrule  
11 \newcommand\*{\makeheadrule}{}

\makefootrule  
12 \newcommand\*{\makefootrule}{}

|                               |                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------------|
| <code>\setmarkboth</code>     | <code>{\code}</code>                                                                      |
|                               | 13 <code>\newcommand{\setmarkboth}[1]{}</code>                                            |
| <code>\widenhead</code>       |                                                                                           |
|                               | 14 <code>\NewDocumentCommand{\widenhead}{s o o m m}{}</code>                              |
| <code>\bottitlemarks</code>   |                                                                                           |
|                               | 15 <code>\newcommand*{\bottitlemarks}{}</code>                                            |
| <code>\toptitlemarks</code>   |                                                                                           |
|                               | 16 <code>\newcommand*{\toptitlemarks}{}</code>                                            |
| <code>\firsttitlemarks</code> |                                                                                           |
|                               | 17 <code>\newcommand*{\firsttitlemarks}{}</code>                                          |
| <code>\nexttitlemarks</code>  |                                                                                           |
|                               | 18 <code>\newcommand*{\nexttoptitlemarks}{}</code>                                        |
| <code>\outertitlemarks</code> |                                                                                           |
|                               | 19 <code>\newcommand*{\outertitlemarks}{}</code>                                          |
| <code>\innertitlemarks</code> |                                                                                           |
|                               | 20 <code>\newcommand*{\innertitlemarks}{}</code>                                          |
| <code>\newtitlemark</code>    | <code>* {\name}</code>                                                                    |
|                               | 21 <code>\NewDocumentCommand{\newtitlemark}{s m}{}</code>                                 |
| <code>\pretitlemark</code>    | <code>* {\section} {\text}</code>                                                         |
|                               | 22 <code>\NewDocumentCommand{\pretitlemark}{s m m}{}</code>                               |
| <code>\ifsamemark</code>      | <code>{\group} {\command} {\true} {\false}</code>                                         |
|                               | 23 <code>\newcommand{\ifsamemark}[4]{}</code>                                             |
| <code>\setfloathead</code>    | <code>* [(&lt;.)] [&lt;.)] [&lt;.)] {\&lt;.)} {\&lt;.)} {\&lt;.)} {\extra} [which]</code> |
|                               | 24 <code>\NewDocumentCommand{\setfloathead}{s o o o m m m m m}{}</code>                   |
| <code>\setfloatfoot</code>    | <code>* [(&lt;.)] [&lt;.)] [&lt;.)] {\&lt;.)} {\&lt;.)} {\&lt;.)} {\extra} [which]</code> |
|                               | 25 <code>\NewDocumentCommand{\setfloatfoot}{s o o o m m m m m}{}</code>                   |

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| <code>\nextfloathead</code>   | <code>* [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]</code> |
|                               | 26 <code>\NewDocumentCommand{\nextfloathead}{s o o m m m m m}{}</code> |
| <code>\nextfloatfoot</code>   | <code>* [⟨.⟩] [⟨.⟩] [⟨.⟩] {⟨.⟩} {⟨.⟩} {⟨.⟩} {⟨extra⟩} [⟨which⟩]</code> |
|                               | 27 <code>\NewDocumentCommand{\nextfloatfoot}{s o o m m m m m}{}</code> |
| <code>\newmarkset</code>      | <code>{⟨markset⟩}</code>                                               |
|                               | 28 <code>\newcommand{\newmarkset}[1]{}</code>                          |
| <code>\newextramark</code>    | <code>* {⟨markset⟩} {⟨macro-name⟩}</code>                              |
|                               | 29 <code>\NewDocumentCommand{\newextramarkset}{s m m}{}</code>         |
| <code>\botextramarks</code>   | <code>{⟨markset⟩}</code>                                               |
|                               | 30 <code>\newcommand{\botextramarks}[1]{}</code>                       |
| <code>\topextramarks</code>   | <code>{⟨markset⟩}</code>                                               |
|                               | 31 <code>\newcommand{\topextramarks}[1]{}</code>                       |
| <code>\firstextramarks</code> | <code>{⟨markset⟩}</code>                                               |
|                               | 32 <code>\newcommand{\firstextramarks}[1]{}</code>                     |
| <code>\nextextramarks</code>  | <code>{⟨markset⟩}</code>                                               |
|                               | 33 <code>\newcommand{\nexttopextramarks}[1]{}</code>                   |
| <code>\outerextramarks</code> | <code>{⟨markset⟩}</code>                                               |
|                               | 34 <code>\newcommand{\outerextramarks}[1]{}</code>                     |
| <code>\innerextramarks</code> | <code>{⟨markset⟩}</code>                                               |
|                               | 35 <code>\newcommand{\innerextramarks}[1]{}</code>                     |

---

File 426 **lwarp-titleref.sty**

§ 528 Package **titleref**

Pkg titleref titleref is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{titleref}[2001/04/05]
2
3 \LetLtxMacro\titleref\nameref
```

```

4
5 \providecounter{LWR@currenttitle}
6
7 \newcommand*{\currenttitle}{%
8 \addtocounter{LWR@currenttitle}{1}%
9 \label{currenttitle\arabic{LWR@currenttitle}}%
10 \nameref{currenttitle\arabic{LWR@currenttitle}}%
11 }
12
13 \newcommand*{\theTitleReference}[2]{}
```

---

File 427 **lwarp-titlesec.sty**

§ 529 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 \PackageInfo{lwarp}{Using the lwarp version of package 'titlesec'.}%
2 \ProvidesPackage{lwarp-titlesec}[2016/03/21]
3
4 \newbool{LWR@loadtitleps}
5 \boolfalse{LWR@loadtitleps}
6
7 \DeclareOption{pagestyles}{
8 \booltrue{LWR@loadtitleps}
9 }
10
11 \DeclareOption*{}
12
13 \ProcessOptions\relax
14
15 \ifbool{LWR@loadtitleps}{
16 \RequirePackage{lwarp-titleps}
17 }{}
```

```

\titlelabel {<label-format>}
18 \newcommand*{\titlelabel}[1]{}
```

```

\titleformat* {<command>} {<format>}
```

```

\titleformat {<command>} [<shape>] {<format>} {<label>} {<sep>} {<before>} [<after>]
19 \newcommand\titleformat{%
20 \ifstar{\ttl@format@s}%
21 {\ttl@format@i}}
22 \newcommand{\ttl@format@s}[1]{}
23 \NewDocumentCommand{\ttl@format@i}{m o m m m o}{}
```

```

\chaptertitlename
24 \ifundefined{@chapapp}{\let\@chapapp\chaptername}{}
25 \newcommand\chaptertitlename{\@chapapp}

\titlespacing * {<command>} {<left>} {<before>} {<after>} [<right>]
26 \NewDocumentCommand{\titlespacing}{s m m m o}{}

\filright
27 \newcommand*\filright{}

\filcenter
28 \newcommand*\filcenter{}

\filleft
29 \newcommand*\filleft{}

\fillast
30 \newcommand*\fillast{}

\filinner
31 \newcommand*\filinner{}

\filouter
32 \newcommand*\filouter{}

\wordsep
33 \newcommand\wordsep{\fontdimen\tw@\font \@plus
34 \fontdimen\thr@\font \@minus \fontdimen4\font}

\titleline * [<align>] {<material>}
35 \NewDocumentCommand{\titleline}{s o m}{}

\titlerule [<height>]
36 \providecommand*\titlerule{\@ifstar{\ttl@row}{\ttl@rule}}
37 \newcommand*\ttl@rule[1]{}
38 \newcommand*\ttl@row[2]{}

\iftitlemeasuring {<true>} {<>false>}
39 \newcommand{\iftitlemeasuring}[2]{#2}

```

```

\assignpagestyle {<command>} {<pagestyle>}
 40 \newcommand{\assignpagestyle}[2]{#2}

\titleclass {<name>} [<startlevel>] {<class>} [<cmd>]
 41 \NewDocumentCommand{\titleclass}{m o m o}{}
```

---

File 428 **lwarp-titletoc.sty**

§ 530 Package **titletoc**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg titletoc titletoc is emulated. All user options and macros are ignored and disabled.

Discard all options for lwarp-titletoc:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titletoc}[2011/12/15]

```

\dottedcontents {<section>} [<left>] {<above>} {<label>} {<leader>}
 2 \NewDocumentCommand{\dottedcontents}{m o m m m}{}
```

```

\titlecontents * {<section>} [<left>] {<above>} {<numbered>} {<numberless>} {<filler>} [<below or
 begin>] [<separator>] [<end>]
 3 \newcommand{\titlecontents}{\ifstar\ttl@tcstar{\ttl@tcnostar}}
 4 \NewDocumentCommand{\ttl@tcstar}{m o m m m m o o o}{}
```

```

\contentsmargin [<correction>] {<right>}
 6 \newcommand{\contentsmargin}[2][{}]
```

```

\thecontentslabel
 7 \newcommand*\thecontentslabel{\thecontentslabel}
```

```

\thecontentspage
 8 \newcommand*\thecontentspage{\thecontentspage}
```

```

\contentslabel [<format>] {<space>}
 9 \newcommand{\contentslabel}[2][{}]{\thecontentslabel}
```

```

\contentspage [<format>]
 10 \newcommand{\contentspage}[1][{}]{\thecontentspage}
```

|                              |                                                                                                             |                                                      |
|------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <code>\contentspush</code>   | <code>{\langle text \rangle}</code>                                                                         | 11 <code>\newcommand{\contentspush}[1]{}</code>      |
| <code>\contentsuse</code>    | <code>{\langle name \rangle} {\langle text \rangle}</code>                                                  | 12 <code>\newcommand{\contentsuse}[2]{}</code>       |
| <code>\startcontents</code>  | <code>[\langle name \rangle]</code>                                                                         | 13 <code>\newcommand*{\startcontents}[1][{}]</code>  |
| <code>\stopcontents</code>   | <code>[\langle name \rangle]</code>                                                                         | 14 <code>\newcommand*{\stopcontents}[1][{}]</code>   |
| <code>\resumecontents</code> | <code>[\langle name \rangle]</code>                                                                         | 15 <code>\newcommand*{\resumecontents}[1][{}]</code> |
| <code>\printcontents</code>  | <code>[\langle name \rangle] {\langle prefix \rangle} {\langle start \rangle} {\langle code \rangle}</code> | 16 <code>\newcommand{\printcontents}[4][{}]</code>   |
| <code>\startlist</code>      | <code>[\langle name \rangle] {\langle list \rangle}</code>                                                  | 17 <code>\newcommand{\startlist}[2][{}]</code>       |
| <code>\stoplist</code>       | <code>[\langle name \rangle] {\langle list \rangle}</code>                                                  | 18 <code>\newcommand{\stoplist}[2][{}]</code>        |
| <code>\resumelist</code>     | <code>[\langle name \rangle] {\langle list \rangle}</code>                                                  | 19 <code>\newcommand{\resumelist}[2][{}]</code>      |
| <code>\printlist</code>      | <code>[\langle name \rangle] {\langle list \rangle} {\langle prefix \rangle} {\langle code \rangle}</code>  | 20 <code>\newcommand{\printlist}[4][{}]</code>       |

---

File 429 **lwarp-titling.sty**

§ 531 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

 **load order** `authblk` and `titling`. If both are used, `authblk` should be loaded before `titling`.

`\published` and `\subtitle` If using the `titling` package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 66.8.

The various `titling` footnote restyling commands have no effect.

Pass all options to `lwarp-titling`:

**for HTML output:** `1 \LWR@ProvidesPackagePass{titling}[2009/09/04]`

`\@bsmtitleempty` Patch `\@bsmtitleempty`:

```
2 \let\LWR@orig@bsmtitleempty\@bsmtitleempty
3 \renewcommand*{\@bsmtitleempty}{%
4 \LWR@orig@bsmtitleempty%
5 }
```

`\keepthetitle` Patch `\keepthetitle`:

```
6 \let\LWR@origkeepthetitle\keepthetitle
7 \renewcommand*{\keepthetitle}{%
8 \LWR@orig@keepthetitle%
9 }
```

`\killtitle` Patch `\killtitle`:

```
10 \let\LWR@origkilltitle\killtitle
11 \renewcommand*{\killtitle}{%
12 \LWR@orig@killtitle%
13 }
```

Env `titlingpage`

```
14 \renewenvironment*{titlingpage}
15 {%
```

Start an HTML titlepage div:

```
16 \LWR@printpendingfootnotes
17 \begin{titlepage}
```

Prepare for a custom version of `\maketitle` inside the `titlingpage`:

```
18 \LWR@maketitlesetup
19 \let\maketitle\LWR@titlingmaketitle
20 }
21 {
```

At the end of the environment, end the HTML titlepage div:

```
22 \end{titlepage}
23 }
```

Patch the pre/post title/author/date to add HTML tags, then initialize:

```

24 \AtBeginDocument{
25 \pretitle{}
26 \posttitle{}
27
28 \preauthor{}
29 \postauthor{}
30
31 \predate{}
32 \postdate{}
33 }

```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```

34 \renewcommand*{\LWR@maketitlesetup}{%

```

Redefine the footnote mark:

```

35 \def\@makefnmark{\@thefnmark}%

 \thefootnote ⇒ \nameuse{arabic}{footnote}, or
 \thefootnote ⇒ \nameuse{fnsymbol}{footnote}

```

Redefine the footnote text:

```

36 \long\def\@makefntext##1{%

```

Make the footnote mark and some extra horizontal space for the tags:

```

37 \makethanksmark~%

 \makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
 \@thefnmark ⇒ \itshape a (or similar)

```

Print the text:

```

38 ##1%
39 }% \@makefntext
40 }

```

`\thanksfootmark`

```

41 \renewcommand{\thanksfootmark}{%
42 % \hb@xt@\thanksmarkwidth{\hfil\normalfont%
43 \thanksscript{%
44 \thanksfootpre \tamark \thanksfootpost%
45 }%
46 % }%
47 }

```

`\maketitle` HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the titling package is adapted, simplified, and modified for HTML output.

```
48 \renewcommand*\maketitle{%
```

An HTML titlepage `<div>` is used for all classes.

```
49 \begin{titlepage}
```

Select which kind of footnote marks to use:

```
50 \@bsmarkseries
```

Set up special patches:

```
51 \LWR@maketitlesetup
```

Typeset the title, etc:

```
52 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
53 \LWR@stoppars\@thanks\LWR@startpars
```

Close the HTML titlepage div:

```
54 \end{titlepage}
```

Reset the footnote counter:

```
55 \@bscontmark
56 }
```

`\@maketitle` Typesets the title, etc. Patched for HTML.

```
57 \DeclareDocumentCommand{\@maketitle}{}{%
58 \maketitlehooka
59 {
60 \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}%
61 \@bsprefix \title \@bsprefix
62 \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars%
63 }
64 \maketitlehookb
65 {
66 \begin{BlockClass}{author}
67 \renewcommand{\and}{%
68 \end{BlockClass}%
69 \begin{BlockClass}{oneauthor}%
70 }
71 \begin{BlockClass}{oneauthor}%
```

```

72 \@bspreadauthor \@author \@bspreadauthor%
73 \end{BlockClass}%
74 \end{BlockClass}%
75 }
76 \maketitlehookc
77 {
78 \begin{BlockClass}{titledate}%
79 \@bspreadate \@date \@bspreadate%
80 \end{BlockClass}%
81 }
82 \maketitlehookd
83 }

```

`\LWR@titlingmaketitle` \maketitle for use inside an HTML titlingpage environment.

```
84 \renewcommand*{\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
85 \LWR@stoppars\@thanks\LWR@startpars
```

Select which kind of footnote marks to use:

```
86 \@bsmarkseries
```

Set up special patches:

```
87 \LWR@maketitlesetup
```

Typeset the title, etc:

```
88 \@maketitle
```

Immediately generate any \thanks footnotes:

```
89 \LWR@stoppars\@thanks\LWR@startpars
```

Reset the footnote counter:

```
90 \@bscontmark
```

```
91 }
```

`\thanksmarkseries`  $\langle series \rangle$

Sets the type of footnote marks used by \thanks, where type is ‘arabic’, ‘roman’, ‘fn-symbol’, etc.

```
92 \renewcommand{\thanksmarkseries}[1]{%
```

```
93 \def\@bsmarkseries{\renewcommand{\thefootnote}{\@nameuse{#1}{footnote}}}%
```

```
94 }
```

Set default titlepage thanks footnote marks. See section [66.7](#).

```

95 \@ifclassloaded{memoir}{
96 \thanksmarkseries{arabic}
97 }{% not memoir
98 \if@titlepage
99 \thanksmarkseries{arabic}
100 \else
101 \thanksmarkseries{fnsymbol}
102 \fi
103 }% not memoir

```

---

File 430 **lwarp-tocbasic.sty**

§ 532 Package **tocbasic**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg tocbasic tocbasic is nullified for lwarp.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. `\DeclareDocumentCommand` is used to overwrite the koma-script definitions.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{tocbasic}[2018/12/30]

2 \DeclareDocumentCommand{\usetocbasicnumberline}{o}{}
3 \DeclareDocumentCommand{\DeclareTOCStyleEntry}{o m}{}
4 \DeclareDocumentCommand{\DeclareTOCStyleEntries}{o m m}{}
5 \DeclareDocumentCommand{\DeclareTOCEntryStyle}{m o m}{}
6 \DeclareDocumentCommand{\DefineTOCEntryOption}{m o m}{}
7 \DeclareDocumentCommand{\DefineTOCEntryBooleanOption}{m o m m}{}
8 \DeclareDocumentCommand{\DefineTOCEntryCommandOption}{m o m m}{}
9 \DeclareDocumentCommand{\DefineTOCEntryIfOption}{m o m m}{}
10 \DeclareDocumentCommand{\DefineTOCEntryLengthOption}{m o m m}{}
11 \DeclareDocumentCommand{\DefineTOCEntryNumberOption}{m o m m}{}
12 \DeclareDocumentCommand{\CloneTOCEntryStyle}{m m}{}
13 \DeclareDocumentCommand{\TOCEntryStyleInitCode}{m m}{}
14 \DeclareDocumentCommand{\TOCEntryStyleStartInitCode}{m m}{}

```

---

File 431 **lwarp-tocbibind.sty**

§ 533 Package **tocbibind**

*(Emulates or patches code by PETER WILSON.)*

Pkg tocbibind tocbibind is patched for use by lwarp.

[placement and toc options](#) An index may be placed inline with other HTML text, or on its own HTML page:

Pkg makeidx **Inline, with a manual toc entry:**

A commonly-used method to introduce an index in a L<sup>A</sup>T<sub>E</sub>X document:

```
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\printindex
```

Pkg `makeidx` **On its own HTML page, with a manual toc entry:**

```
\begin{warpprint}
\cleardoublepage
\phantomsection
\addcontentsline{toc}{section}{\indexname}% or chapter
\end{warpprint}
\ForceHTMLPage
\ForceHTMLTOC
\printindex
```

Pkg `tocbibind` **Inline, with an automatic toc entry:**

The `tocbibind` package may be used to automatically place an entry in the toc.

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\printindex
```

Pkg `tocbibind` **On its own HTML page, with an automatic toc entry:**

```
\usepackage[nottoc]{tocbibind}
...
\cleardoublepage
\phantomsection % to fix print-version index link
\ForceHTMLPage
\printindex
```

Opt [tocbibind] `numindex` Use the `tocbibind` `numindex` option to generate a numbered index. Without this option, the index heading has no number.

[numbered index section](#)

Other packages, such as `imakeidx`, may also have options for including the index in the Table of Contents.

**for HTML output:**

```
1 \let\simplechapterdelim\relax
2
3 \LWR@ProvidesPackagePass{tocbibind}[2010/10/13]

4 \renewenvironment{theindex}%
5 {%
6 \if@bibchapter
7 \if@donumindex
8 \chapter{\indexname}
9 \else
10 \if@dotocind
11 \chapter*{\indexname}
12 \addcontentsline{toc}{chapter}{\LWR@isolate{\indexname}}
13 \else
14 \chapter*{\indexname}
```

```

15 \fi
16 \fi
17 \else
18 \if@donumindex
19 \section{\indexname}
20 \else
21 \if@dotocind
22 \section*{\indexname}
23 \addcontentsline{toc}{\@tocextra}{\LWR@isolate{\indexname}}
24 \else
25 \section*{\indexname}
26 \fi
27 \fi
28 \fi
29 \let\item\LWR@indexitem%
30 \let\subitem\LWR@indexsubitem%
31 \let\subsubitem\LWR@indexsubsubitem%
32 }{}

```

The following code is shared by anonchap.

```

33 \DeclareDocumentCommand{\simplechapter}{0{\@empty}}{%
34 \def\@chapcntformat##1{%
35 #1~\csname the##1\endcsname\simplechapterdelim\quad%
36 }%
37 }
38
39 \DeclareDocumentCommand{\restorechapter}{}{%
40 \let\@chapcntformat\@secntformat%
41 }

```

---

File 432 **lwarp-tocdata.sty**

§ 534 Package **tocdata**

*(Emulates or patches code by BRIAN DUNN.)*

Pkg tocdata **tocdata** is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{tocdata}[2019/07/06]

```

2 \renewcommand*{\LWR@maybetocdata}{%
3 \ifdefempty{\TD@thistocdata}}{%
4 \qqquad \InlineClass{authorartist}{\tocdataformat{\TD@thistocdata}}%
5 \def\TD@thistocdata{}
6 }
7 }

8 \renewrobustcmd{\tocdatapartprint}[4]
9 {%
10 \InlineClass{authorartist}{%

```

```

11 \quad --- %
12 \TDoptionalnameprint{#1}\TDoptionalnameprint{#2}#3#4%
13 }%
14 }
15
16 \ifundefined{chapter}{}{
17 \let\tocdatachapterprint\tocdatapartprint
18 }
19 \let\tocdatasectionprint\tocdatapartprint
20 \let\tocdatasubsectionprint\tocdatapartprint
21
22 \newcommand*{\LWR@TD@settetalign}[1]{%
23 \def\LWR@TD@textalign{justify}%
24 \ifcsstring{TD@#1align}{\centering}%
25 {\def\LWR@TD@textalign{center}}%
26 {}%
27 \ifcsstring{TD@#1align}{\raggedleft}%
28 {\def\LWR@TD@textalign{right}}%
29 {}%
30 \ifcsstring{TD@#1align}{\raggedright}%
31 {\def\LWR@TD@textalign{left}}%
32 {}%
33 }
34
35 \renewcommand{\TDartistauthorprint}[5]{%
36 \LWR@TD@settetalign{#1}%
37 \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
38 \InlineClass{authorartist}{\TDoptionalnameprint{#2}\TDoptionalnameprint{#3}#4#5}%
39 \end{BlockClass}%
40 }
41
42 \newcommand*{\LWR@TD@setnamealign}[1]{%
43 \def\LWR@TD@textalign{justify}%
44 \ifcsstring{TD@#1textalign}{\centering}%
45 {\def\LWR@TD@textalign{center}}%
46 {}%
47 \ifcsstring{TD@#1textalign}{\raggedleft}%
48 {\def\LWR@TD@textalign{right}}%
49 {}%
50 \ifcsstring{TD@#1textalign}{\raggedright}%
51 {\def\LWR@TD@textalign{left}}%
52 {}%
53 }
54
55 \renewcommand{\TDartistauthortextprint}[2]{%
56 \LWR@TD@setnamealign{#1}%
57 \begin{BlockClass}[text-align:\LWR@TD@textalign]{floatnotes}%
58 #2%
59 \end{BlockClass}%
60 }

```

---

File 433 **lwarp-tocenter.sty**

§ 535 Package **tocenter**

Pkg tocenter tocenter is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{tocenter}[2004/12/09]

2 \NewDocumentCommand{\ToCenter}{s o m m}{ }
3 \NewDocumentCommand{\FromMargins}{s o m m m m}{ }
```

---

File 434 **lwarp-tocloft.sty**

§ 536 Package **tocloft**

*(Emulates or patches code by PETER WILSON.)*

Pkg tocloft tocloft is emulated. Most user options and macros are ignored and disabled. `\newlistof` and `\cftchapterprecis` are supported.

Pkg tocloft If using tocloft with tocbibind, anonchap, fncychap, or other packages which change chapter title formatting, load tocloft with its `titles` option, which tells tocloft to use standard L<sup>A</sup>T<sub>E</sub>X commands to create the titles, allowing other packages to work with it.

 **tocloft & other packages**

Discard all options for `lwarp-tocloft`:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{tocloft}[2017/08/31]
```

```
\tocloftpagestyle {<style>}
2 \newcommand{\tocloftpagestyle}[1]{ }
```

```
\cftmarktoc
3 \newcommand*{\cftmarktoc}{ }
```

```
\cfttoctitlefont
4 \newcommand*{\cfttoctitlefont}{ }
```

```
\cftaftertocitle
5 \newcommand*{\cftaftertocitle}{ }

6 \newlength{\cftbeforetoctitleskip}
7 \newlength{\cftaftertocitleskip}
```

---

|                                |                                                                |
|--------------------------------|----------------------------------------------------------------|
| <code>\cftmarklof</code>       |                                                                |
|                                | 8 <code>\newcommand*\cftmarklof{}</code>                       |
| <code>\cftloftitlefont</code>  |                                                                |
|                                | 9 <code>\newcommand*\cftloftitlefont{}</code>                  |
| <code>\cftafterloftitle</code> |                                                                |
|                                | 10 <code>\newcommand*\cftafterloftitle{}</code>                |
|                                | 11 <code>\newlength{\cftbeforeloftitleskip}</code>             |
|                                | 12 <code>\newlength{\cftafterloftitleskip}</code>              |
| <code>\cftmarklot</code>       |                                                                |
|                                | 13 <code>\newcommand*\cftmarklot{}</code>                      |
| <code>\cftlottitlefont</code>  |                                                                |
|                                | 14 <code>\newcommand*\cftlottitlefont{}</code>                 |
| <code>\cftafterlottitle</code> |                                                                |
|                                | 15 <code>\newcommand*\cftafterlottitle{}</code>                |
|                                | 16 <code>\newlength{\cftbeforelottitleskip}</code>             |
|                                | 17 <code>\newlength{\cftafterlottitleskip}</code>              |
| <code>\cftdot</code>           |                                                                |
|                                | 18 <code>\providecommand*\cftdot{.}</code>                     |
| <code>\cftdotsep</code>        |                                                                |
|                                | 19 <code>\providecommand*\cftdotsep{1}</code>                  |
| <code>\cftnodots</code>        |                                                                |
|                                | 20 <code>\providecommand*\cftnodots{5000}</code>               |
| <code>\cftdotfill</code>       | <code>{\sep}</code>                                            |
|                                | 21 <code>\providecommand{\cftdotfill}[1]{}</code>              |
| <code>\cftsetpnumwidth</code>  | <code>{\length}</code>                                         |
|                                | 22 <code>\DeclareDocumentCommand{\cftsetpnumwidth}{m}{}</code> |

```
\cftsetrmarg {<length>}
 23 \DeclareDocumentCommand{\cftsetrmarg}{m}{}

```

```
\cftpnumalign {<alignment>}
 24 \DeclareDocumentCommand{\cftpnumalign}{m}{}

 25 \LWR@providelength{\cftparskip}

```

The part-related items are also provided by memoir:

```
26 \LWR@providelength{\cftbeforepartskip}
27 \LWR@providelength{\cftpartindent}
28 \LWR@providelength{\cftpartnumwidth}
29 \providecommand*\cftpartfont{}
30 \providecommand*\cftpartpresnum{}
31 \providecommand*\cftpartaftersnum{}
32 \providecommand*\cftpartaftersnumb{}
33 \providecommand*\cftpartleader{}
34 \providecommand*\cftpartdotsep{1}
35 \providecommand*\cftpartpagefont{}
36 \providecommand*\cftpartafterpnum{}

```

memoir uses the full name “chapter” instead of “chap”:

```
37 \LWR@providelength{\cftbeforechapskip}
38 \LWR@providelength{\cftchapindent}
39 \LWR@providelength{\cftchapnumwidth}
40 \newcommand*\cftchapfont{}
41 \newcommand*\cftchappresnum{}
42 \newcommand*\cftchapaftersnum{}
43 \newcommand*\cftchapaftersnumb{}
44 \newcommand*\cftchapleader{}
45 \newcommand*\cftchapidotsep{1}
46 \newcommand*\cftchappagefont{}
47 \newcommand*\cftchapafterpnum{}

```

The following do not appear in memoir:

```
48 \LWR@providelength{\cftbeforesecskip}
49 \LWR@providelength{\cftsecindent}
50 \LWR@providelength{\cftsecnumwidth}
51 \newcommand*\cftsecfont{}
52 \newcommand*\cftsecpresnum{}
53 \newcommand*\cftsecaftersnum{}
54 \newcommand*\cftsecaftersnumb{}
55 \newcommand*\cftsecleader{}
56 \newcommand*\cftsecdotsep{1}
57 \newcommand*\cftsecpagefont{}
58 \newcommand*\cftsecafterpnum{}

59 \LWR@providelength{\cftbeforesubsecskip}

```

```
60 \LWR@providelength{\cftsubsecindent}
61 \LWR@providelength{\cftsubsecnumwidth}
62 \newcommand*\cftsubsecfont{}
63 \newcommand*\cftsubsecpresnum{}
64 \newcommand*\cftsubsecaftersnum{}
65 \newcommand*\cftsubsecaftersnumb{}
66 \newcommand*\cftsubsecleader{}
67 \newcommand*\cftsubsecdotsep}{1}
68 \newcommand*\cftsubsecpagefont{}
69 \newcommand*\cftsubsecafterpnum{}

70 \LWR@providelength{\cftbeforesubsubsecskip}
71 \LWR@providelength{\cftsubsubsecindent}
72 \LWR@providelength{\cftsubsubsecnumwidth}
73 \newcommand*\cftsubsubsecfont{}
74 \newcommand*\cftsubsubsecpresnum{}
75 \newcommand*\cftsubsubsecaftersnum{}
76 \newcommand*\cftsubsubsecaftersnumb{}
77 \newcommand*\cftsubsubsecleader{}
78 \newcommand*\cftsubsubsecdotsep}{1}
79 \newcommand*\cftsubsubsecpagefont{}
80 \newcommand*\cftsubsubsecafterpnum{}

81 \LWR@providelength{\cftbeforeparaskip}
82 \LWR@providelength{\cftparaindent}
83 \LWR@providelength{\cftparanumwidth}
84 \newcommand*\cftparafont{}
85 \newcommand*\cftparapresnum{}
86 \newcommand*\cftparaaftersnum{}
87 \newcommand*\cftparaaftersnumb{}
88 \newcommand*\cftparaleader{}
89 \newcommand*\cftparadotsep}{1}
90 \newcommand*\cftparapagefont{}
91 \newcommand*\cftparaafterpnum{}

92 \LWR@providelength{\cftbeforesubparaskip}
93 \LWR@providelength{\cftsubparaindent}
94 \LWR@providelength{\cftsubparanumwidth}
95 \newcommand*\cftsubparafont{}
96 \newcommand*\cftsubparapresnum{}
97 \newcommand*\cftsubparaaftersnum{}
98 \newcommand*\cftsubparaaftersnumb{}
99 \newcommand*\cftsubparaleader{}
100 \newcommand*\cftsubparadotsep}{1}
101 \newcommand*\cftsubparapagefont{}
102 \newcommand*\cftsubparaafterpnum{}

103 \LWR@providelength{\cftbeforefigskip}
104 \LWR@providelength{\cftfigindent}
105 \LWR@providelength{\cftfignumwidth}
106 \newcommand*\cftfigfont{}
107 \newcommand*\cftfigpresnum{}
108 \newcommand*\cftfigaftersnum{}
109 \newcommand*\cftfigaftersnumb{}
110 \newcommand*\cftfigleader{}

```

```

111 \newcommand*\cftfigdotsep}{1}
112 \newcommand*\cftfigpagefont}{}
113 \newcommand*\cftfigafterpnum}{}

114 \LWR@providelength{\cftbeforesubfigskip}
115 \LWR@providelength{\cftsubfigindent}
116 \LWR@providelength{\cftsubfignumwidth}
117 \newcommand*\cftsubfigfont}{}
118 \newcommand*\cftsubfigpresnum}{}
119 \newcommand*\cftsubfigaftersnum}{}
120 \newcommand*\cftsubfigaftersnumb}{}
121 \newcommand*\cftsubfigleader}{}
122 \newcommand*\cftsubfigdotsep}{1}
123 \newcommand*\cftsubfigpagefont}{}
124 \newcommand*\cftsubfigafterpnum}{}

125 \LWR@providelength{\cftbeforetabskip}
126 \LWR@providelength{\cfttabindent}
127 \LWR@providelength{\cfttabnumwidth}
128 \newcommand*\cfttabfont}{}
129 \newcommand*\cfttabpresnum}{}
130 \newcommand*\cfttabaftersnum}{}
131 \newcommand*\cfttabaftersnumb}{}
132 \newcommand*\cfttableader}{}
133 \newcommand*\cfttabdotsep}{1}
134 \newcommand*\cfttabpagefont}{}
135 \newcommand*\cfttabafterpnum}{}

136 \LWR@providelength{\cftbeforesubtabskip}
137 \LWR@providelength{\cftsubtabindent}
138 \LWR@providelength{\cftsubtabnumwidth}
139 \newcommand*\cftsubtabfont}{}
140 \newcommand*\cftsubtabpresnum}{}
141 \newcommand*\cftsubtabaftersnum}{}
142 \newcommand*\cftsubtabaftersnumb}{}
143 \newcommand*\cftsubtableader}{}
144 \newcommand*\cftsubtabdotsep}{1}
145 \newcommand*\cftsubtabpagefont}{}
146 \newcommand*\cftsubtabafterpnum}{}

147 \DeclareDocumentCommand{\cftsetindents}{m m m}{}

148 \newcommand{\pagenumbersoff}[1]{}
149 \newcommand{\pagenumberson}[1]{}

\newlistentry [⟨within⟩] {⟨counter⟩} {⟨ext⟩} {⟨level-1⟩}

150 \DeclareDocumentCommand{\newlistentry}{o m m m}
151 {}
152 \LWR@traceinfo{newlistentry #2 #3 #4}%
153 \IfValueTF{#1}%
154 {}%
155 \@ifundefined{c@#2}{%
156 \newcounter{#2}[#1]%

```

```

157 \expandafter\edef\csname the#2\endcsname{%
158 \expandafter\noexpand\csname the#1\endcsname.\noexpand\arabic{#2}%
159 }%
160 }{}%
161 }%
162 {%
163 \@ifundefined{c@#2}{%
164 \newcounter{#2}%
165 }{}%
166 }%
167 \@namedef{l@#2}##1##2{%
168 \hypertocfloat{1}{#2}{#3}{##1}{##2}%
169 \def\cftwhatismyname{#2}% from memoir
170 }%
171 \expandafter\newlength\csname cftbefore#2skip\endcsname%
172 \expandafter\newlength\csname cft#2indent\endcsname%
173 \expandafter\newlength\csname cft#2numwidth\endcsname%
174 \@namedef{cft#2font}{}%
175 \@namedef{cft#2presnum}{}%
176 \@namedef{cft#2aftersnum}{}%
177 \@namedef{cft#2aftersnumb}{}%
178 \@namedef{cft#2leader}{}%
179 \@namedef{cft#2dotsep}{1}%
180 \@namedef{cft#2pagefont}{}%
181 \@namedef{cft#2afterpnum}{}%
182 \@namedef{toclevel@#2}{#4}%
183 \@namedef{cft#2fillnum}##1{}%
184 \LWR@traceinfo{newlistentry done}%
185 }

```

`\newlistof` [*<within>*] [*<type>*] [*<ext>*] [*<listofname>*]

Emulated through the `\newfloat` mechanism.

```

186 \DeclareDocumentCommand{\newlistof}{o m m}
187 {%
188 \IfValueTF{#1}%
189 {\newlistentry[#1]{#2}{#3}{0}}%
190 {\newlistentry{#2}{#3}{0}}%
191 \@namedef{ext@#2}{#3}%
192 \ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
193 \setcounter{#3depth}{1}%
194 \@namedef{cftmark#3}{}%
195 \@namedef{listof#2}{\listof{#2}{#4}}%
196 \@namedef{@cftmake#3title}{}%
197 \expandafter\newlength\csname cftbefore#3titleskip\endcsname%
198 \expandafter\newlength\csname cftafter#3titleskip\endcsname%
199 \@namedef{cft#3titlefont}{}%
200 \@namedef{cftafter#3title}{}%
201 \@namedef{cft#3prehook}{}%
202 \@namedef{cft#3posthook}{}%
203 }

```

`\cftchapterprecis` [*<text>*]

```

204 \newcommand{\cftchapterprecis}[1]{%

```

```

205 \cftchapterprecishere{#1}
206 \cftchapterprecistoc{#1}}
207 \newcommand{\cftchapterprecishere}[1]{%
208 \begin{quote}\textit{#1}\end{quote}}
209 \newcommand{\cftchapterprecistoc}[1]{
210 \addtocontents{toc}{%
211 {
212 \protect\begin{quote}#1\protect\end{quote}}
213 }
214 }

```

---

File 435 **lwarp-tocstyle.sty**

§ 537 Package **tocstyle**

Pkg tocstyle tocstyle is ignored.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tocstyle}[2017/02/23]

```

2 \newcommand*\usetocstyle[2][{}
3 \newcommand*\deactivatetocstyle[1][{}
4 \newcommand*\reactivatetocstyle[1][{}
5 \NewDocumentCommand{\settocfeature}{o o m m}{
6 \NewDocumentCommand{\settocstylefeature}{o m m}{
7 \NewDocumentCommand{\newtocstyle}{o o m m}{
8 \newcommand*\aliastoc[2]{
9 \newcommand*\showtoc[2][{}
10 \newcommand{\iftochasdepth}[4]{

```

---

File 436 **lwarp-todo.sty**

§ 538 Package **todo**

*(Emulates or patches code by FEDERICO GARCIA.)*

Pkg todo todo is patched for use by lwarp.

**for HTML output:** 1 \LWR@ProvidesPackagePass{todo}[2010/03/31]

```

2 \renewcommand\todoitem[2]{%
3 \refstepcounter{todo}%
4 \item[%
5 \HTMLUnicode{2610} \quad
6 \ref{todopage:\thetodo}
7] : {\todoformat\ifx#1\todotmark\else\textbf{#1} \fi}#2%
8 \label{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\todotoc\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 437 **lwarp-todonotes.sty**

§ 539 Package **todonotes**

*(Emulates or patches code by HENRIK SKOV MIDTBY.)*

Pkg todonotes **todonotes** is emulated.

The documentation for **todonotes** and **luatodonotes** have an example with a **todo** inside a caption. If this example does not work it will be necessary to move the **todo** outside of the caption.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{todonotes}[2012/07/25]
2 \if@todonotes@disabled
3 \else
4
5 \newcommand{\ext@todo}{tdo}
6
7 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{todo}{ldo}{#1}{#2}}
8
9 \let\LWRTODONOTES@orig@todotoc\todotoc
10 \renewcommand*\l@todotoc}{%

```

```

11 \phantomsection%
12 \LWRTODONOTES@orig@todotoc%
13 }
14
15 \renewcommand{\@todonotes@drawMarginNoteWithLine}{
16 \fcolorbox
17 {\@todonotes@currentbordercolor}
18 {\@todonotes@currentbackgroundcolor}
19 {\arabic{\@todonotes@numberoftodonotes}}
20 \marginpar{\@todonotes@drawMarginNote}
21 }
22
23 \renewcommand{\@todonotes@drawInlineNote}{%
24 \fcolorboxBlock%
25 {\@todonotes@currentbordercolor}%
26 {\@todonotes@currentbackgroundcolor}%
27 {%
28 \if@todonotes@authorgiven%
29 {\@todonotes@author:\,}%
30 \fi%
31 \@todonotes@text%
32 }%
33 }
34
35 \renewcommand{\@todonotes@drawMarginNote}{%
36 \if@todonotes@authorgiven%
37 \@todonotes@author\par%
38 \fi%
39 \arabic{\@todonotes@numberoftodonotes}: %
40 \fcolorbox%
41 {\@todonotes@currentbordercolor}%
42 {\@todonotes@currentbackgroundcolor}%
43 {%
44 \@todonotes@sizecommand%
45 \@todonotes@text %
46 }%
47 }%
48
49 \renewcommand{\@todonotes@drawLineToRightMargin}{ }
50
51 \renewcommand{\@todonotes@drawLineToLeftMargin}{ }
52
53 \renewcommand{\missingfigure}[2][]{%
54 \setkeys{todonotes}{#1}%
55 \addcontentsline{tdo}{\todo}{\@todonotes@MissingFigureText: #2}%
56 \fcolorboxBlock%
57 {\@todonotes@currentbordercolor}%
58 {\@todonotes@currentfigcolor}%
59 {%
60 \setlength{\fboxrule}{4pt}%
61 \fcolorbox{red}{white}{Missing figure} \quad #2%
62 }
63 }
64
65 \LetLtxMacro\LWRTODONOTES@orig@todo\@todo

```

```

66
67 \RenewDocumentCommand{\@todo}{o m}{%
68 \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 438 **lwarp-topcapt.sty**

§ 540 Package **topcapt**

Pkg topcapt topcapt is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{topcapt}[2004/12/11]

2 \LetLtxMacro\topcaption\caption

---

File 439 **lwarp-tram.sty**

§ 541 Package **tram**

Pkg tram tram is emulated.

 **block only** The HTML emulation uses a <div>, which must not appear inside an HTML <span> or an HTML paragraph. For this reason, the tram environment should only be used to contain paragraphs inside a \parbox or minipage. tram should not be used to mark up inline text.

To disable tram, allowing source compatibility with inline uses:

```

\begin{warpHTML}
\renewenvironment{tram}[1][{}]{%
\end{warpHTML}

```

**for HTML output:** 1 \LWR@ProvidesPackageDrop{tram}[2013/04/04]

```

2 \newenvironment{tram}[1][%
3 {\BlockClass[background:lightgray]{tram}}
4 {\endBlockClass}

```

---

File 440 **lwarp-transparent.sty**

§ 542 Package **transparent**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg transparent transparent is emulated. \texttransparent works for inline objects. \transparent only works for \includegraphics.

 **Not X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X!** Note that transparent does not work with X<sub>Y</sub>L<sup>A</sup>T<sub>E</sub>X.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{transparent}[2019/11/29]
2 \newcommand*\LWR@HTML@transparent}[1]{\edef\LWR@opacity{#1}}
3
4 \LWR@formatted{transparent}
5
6
7 \newcommand*\LWR@HTML@texttransparent}[2]{%
8 \begingroup%
9 \transparent{#1}%
10 \InlineClass[opacity: #1]{transparent}{#2}%
11 \endgroup%
12 }
13
14 \LWR@formatted{texttransparent}

```

---

File 441 **lwarp-trimclip.sty**

§ 543 Package **trimclip**

Pkg trimclip trimclip is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{trimclip}[2018/04/08]

```

The third argument, the text, is not touched. This allows \bgroup / \egroup, and verbatim content.

```

2 \csdef{trimbox}{\@ifstar@gobble@gobble}
3 \csletcs{trimbox*}{trimbox}
4 \def\endtrimbox{}
5 \csletcs{endtrimbox*}{endtrimbox}
6
7 \csletcs{clipbox}{trimbox}
8 \csletcs{clipbox*}{trimbox}
9 \csletcs{endclipbox}{endtrimbox}
10 \csletcs{endclipbox*}{endtrimbox}
11

```

```

12 \csletcs{marginbox}{trimbox}
13 \csletcs{marginbox*}{trimbox}
14 \csletcs{endmarginbox}{endtrimbox}
15 \csletcs{endmarginbox*}{endtrimbox}

```

File 442 **lwarp-trivfloat.sty**

§ 544 Package **trivfloat**

*(Emulates or patches code by JOSEPH WRIGHT.)*

Pkg trivfloat trivfloat is forced to use the built-in lwarp emulation for floats.

To create a new float type and change its name:

---

```

\trivfloat{example}
\renewcommand{\examplename}{Example Name}
\crefname{example}{example}{examples}
\Crefname{example}{Example}{Examples}

```

---

Discard all options for lwarp-trivfloat. This tells trivfloat not to use floatrow or memoir.

```

1 \LWR@ProvidesPackageDrop{trivfloat}[2009/04/23]
2 \LWR@origRequirePackage{trivfloat}

```

\tfl@chapter@fix Nullified at the beginning of the document. Is used by trivfloat to correct float chapter numbers, but is not needed for lwarp.

**for HTML output:** 3 \begin{warpHTML}

```
4 \AtBeginDocument{\DeclareDocumentCommand{\tfl@chapter@fix}{m m}{}}
```

```
5 \end{warpHTML}
```

§ 544.1 **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 443 **lwarp-truncate.sty**

§ 545 Package **truncate**

Pkg truncate truncate is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{truncate}[2001/08/20]
2 \providecommand{\TruncateMarker}{}
3 \newcommand{\truncate}[3][\TruncateMarker]{#3}
```

---

File 444 **lwarp-turnthepage.sty**

§ 546 Package **turnthepage**

Pkg turnthepage turnthepage is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{turnthepage}[2011/03/24]
2 \newcommand{\turnthepage}{}
```

---

File 445 **lwarp-twoup.sty**

§ 547 Package **twoup**

Pkg twoup twoup is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{twoup}[2007/02/26]
2 \newcommand{\cleartolastpage}{}
```

---

File 446 **lwarp-typearea.sty**

§ 548 Package **typearea**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg typearea **typearea** is emulated.

This package may be loaded standalone, but is also loaded automatically if koma-script classes are in use. `\DeclareDocumentCommand` is used to overwrite the koma-script definitions.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{typearea}[2018/03/30]

2 \DeclareDocumentCommand{\typearea}{o m}{}
3 \DeclareDocumentCommand{\reca\lctypearea}{}{}
4 \@ifundefined{footheight}{\newlength\footheight}{}
5 \DeclareDocumentCommand{\areaset}{o m m}{}
6 \DeclareDocumentCommand{\activateareas}{}{}
7 \DeclareDocumentCommand{\storeareas}{m}{}
8 \DeclareDocumentCommand{\BeforeRestoreareas}{s m}{}
9 \DeclareDocumentCommand{\AfterRestoreareas}{s m}{}
10 \DeclareDocumentCommand{\AfterCalculatingTypearea}{s m}{}
11 \DeclareDocumentCommand{\AfterSettingArea}{s m}{}

```

---

File 447 **lwarp-typicons.sty**

§ 549 Package **typicons**

*(Emulates or patches code by ARTHUR VIGIL, XAVIER DANAUX.)*

Pkg typicons **typicons** is patched for use by lwarp.

If `\ticon` is used, the name of the icon is used in the `alt` tag. Otherwise, for each of the individual icon macros, a generic `alt` tag is used.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{typicons}[2015/05/20]

2 \LetLtxMacro\LWR@orig@symbol\symbol
3
4 \let\LWR@orig@typicon@TI\TI
5
6 \newcommand*{\LWR@typicon@symbol}[1]{%
7 \begin{lateximage}*[typicon][typicon#1]%
8 \begingroup%
9 \LWR@orig@typicon@TI%
10 \LWR@orig@symbol{#1}%
11 \endgroup%
12 \end{lateximage}%
13 }
14
15 \renewcommand*{\TI}{%
16 \LetLtxMacro\symbol\LWR@typicon@symbol%
17 }
18
19 \renewcommand*{\ticon}[1]
20 {%
21 \begin{lateximage}*[#1 icon][typicon#1]%

```

```

22 \TI\csname ticon@#1\endcsname%
23 \end{lateximage}%
24 }

```

---

File 448 **lwarp-ulem.sty**

§ 550 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 \LWR@formatted{xout}
42
43 \NewDocumentCommand{\LWR@HTML@dashuline}{+m}{%
44 \InlineClass%
45 (%
46 text-decoration:underline;%
47 text-decoration-skip: auto;%
48 text-decoration-style:dashed%
49)%
50 {dashuline}{\LWR@isolate{#1}}%
51 }
52 \LWR@formatted{dashuline}
53
54 \NewDocumentCommand{\LWR@HTML@dotuline}{+m}{%
55 \InlineClass%
56 (%
57 text-decoration:underline;%
58 text-decoration-skip: auto;%
59 text-decoration-style: dotted%
60)%
61 {dotuline}{\LWR@isolate{#1}}%
62 }
63 \LWR@formatted{dotuline}

```

Nullified/emulated macros:

```

64 \NewDocumentCommand{\LWR@HTML@markoverwith}{m}{}
65 \LWR@formatted{markoverwith}
66
67 \NewDocumentCommand{\LWR@HTML@ULon}{+m}{\uline{#1}\egroup}
68 \LWR@formatted{ULon}

```

---

File 449 **lwarp-umoline.sty**

§ 551 Package **umoline**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg umoline umoline is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{umoline}[2000/07/11]
2 \newcommand*{\LWR@HTML@Underline}[1]{%
3 \InlineClass{uline}{#1}%
4 }
5 \LWR@formatted{Underline}
6
7 \newcommand*{\LWR@HTML@Midline}[1]{%
8 \InlineClass{sout}{#1}%

```

```

9 }
10 \LWR@formatted{Midline}
11
12 \newcommand*\LWR@HTML@Overline[1]{%
13 \InlineClass{oline}{#1}%
14 }
15 \LWR@formatted{Overline}
16
17 \newcommand*\LWR@HTML@UMoline[2]{%
18 \InlineClass{uline}{#2}%
19 }
20 \LWR@formatted{UMoline}
21
22 \NewDocumentCommand{\LWR@HTML@UMospace}{s m o}{\hspace*{#2}}
23 \LWR@formatted{UMospace}
24
25 \NewDocumentCommand{\LWR@HTML@UMonewline}{s}{\newline}
26 \LWR@formatted{UMonewline}

```

---

File 450 **lwarp-underscore.sty**

§ 552 Package **underscore**

Pkg underscore underscore is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{underscore}[2006/09/13]

---

File 451 **lwarp-unicode-math.sty**

§ 553 Package **unicode-math**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg unicode-math unicode-math is supported as-is for HTML with svgnmath.

For MATHJAX, many characters may not be read correctly, such as bold letters, and so are not read correctly by *pdftotext* for HTML. Symbol font commands are emulated, but not all combinations are supported by MathJax.

**for HTML output:** 1 \LWR@ProvidesPackagePass{unicode-math}[2019/09/26]

```

2 \begin{warpMathJax}
3 \LWR@infoprocessingmathjax{unicode-math}
4
5 % Not all are possible in MathJax.
6 \CustomizeMathJax{\let\symnormal\mathit}
7 \CustomizeMathJax{\let\symliteral\mathrm}
8 \CustomizeMathJax{\let\symbb\mathbb}
9 \CustomizeMathJax{\let\symbbit\mathbb}% not italic
10 \CustomizeMathJax{\let\symcal\mathcal}

```

```

11 \CustomizeMathJax{\let\symscr\mathscr}
12 \CustomizeMathJax{\let\symfrac\mathfrak}
13 \CustomizeMathJax{\let\symsfup\mathsf}
14
15 % \CustomizeMathJax{\let\symsfit\mathit}% not sans
16 \CustomizeMathJax{\newcommand{\symsfit}[1]{%
17 \mmlToken{mi}[mathvariant="sans-serif-italic"]{#1}}%
18 }
19
20 % \CustomizeMathJax{\let\symsfbsf\mathbf}% not sans
21 \CustomizeMathJax{\newcommand{\symsfbsf}[1]{%
22 \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}%
23 }
24
25 \CustomizeMathJax{\let\symsfbfup\mathbf}
26 \CustomizeMathJax{\newcommand{\symsfbfit}[1]{\boldsymbol{#1}}}
27 \CustomizeMathJax{\let\symsfbfcal\mathcal}% not bold
28
29 \CustomizeMathJax{\let\symsfbfscr\mathscr}% not bold
30 % \CustomizeMathJax{\newcommand{\symsfbfscr}[1]{
31 % \mmlToken{mi}[mathvariant="math-bold-script"]{#1}}
32 % }
33
34 \CustomizeMathJax{\let\symsfbffrak\mathfrak}% not bold
35 % \CustomizeMathJax{\newcommand{\symsfbffrak}[1]{%
36 % \mmlToken{mi}[mathvariant="math-bold-fraktur"]{#1}}%
37 % }
38
39 % \CustomizeMathJax{\let\symsfbfsfup\mathbf}% not sans
40 \CustomizeMathJax{\newcommand{\symsfbfsfup}[1]{%
41 \mmlToken{mi}[mathvariant="bold-sans-serif"]{#1}}%
42 }
43
44 % \CustomizeMathJax{\let\symsfbfsfit\mathit}% not bold nor sans
45 \CustomizeMathJax{\newcommand{\symsfbfsfit}[1]{%
46 \mmlToken{mi}[mathvariant="sans-serif-bold-italic"]{#1}}%
47 }
48
49 % Duplicates below are commented out.
50 \CustomizeMathJax{\let\symup\mathrm}
51 \CustomizeMathJax{\let\symsfbf\mathbf}% \symsfbfup defined above
52 \CustomizeMathJax{\let\symsfit\mathit}
53 % \CustomizeMathJax{\let\symsfbfit\mathit}% not bold
54 \CustomizeMathJax{\let\symsf\mathsf}
55 % \CustomizeMathJax{\let\symsfbfsfup\mathbf}% not sans
56 % \CustomizeMathJax{\let\symsfbfsfit\mathit}% not sans
57 % \CustomizeMathJax{\let\symsfbfsfit\mathit}% not bold nor sans
58 \CustomizeMathJax{\let\symsf\mathsf}
59 % \CustomizeMathJax{\let\symsfbb\mathbb}
60 % \CustomizeMathJax{\let\symsfbb\mathbb}% not italic
61 % \CustomizeMathJax{\let\symscr\mathscr}
62 % \CustomizeMathJax{\let\symsfbfscr\mathscr}% not bold
63 % \CustomizeMathJax{\let\symfrac\mathfrak}
64 \CustomizeMathJax{\let\symsfbfrac\mathbfrac}
65 \end{warpMathJax}

```

File 452 **lwarp-units.sty**

§ 554 Package **units**

*(Emulates or patches code by AXEL REICHERT.)*

Pkg units units is patched for use by lwarp.

Values are not styled by CSS, and take the style of the surrounding HTML text.

Units are styled according to the print version, so they will be forced to upright roman in HTML if the print version does so. It may be necessary to adjust the document's body CSS to match the print version.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{units}[1998/08/04]

2 \DeclareRobustCommand*\LWR@HTML@unit}[2][]{%
3 \ifblank{#1}%
4 {\LWR@textcurrentfont{#2}}%
5 {%
6 #1%
7 \ifthenelse{\boolean{B@UnitsLoose}}{~}{\,%
8 \LWR@textcurrentfont{#2}}%
9 }%
10 }
11 \LWR@formatted{unit}

12 \DeclareRobustCommand*\LWR@HTML@unitfrac}[3][]{%
13 \ifblank{#1}%
14 {%
15 \nicefrac{#2}{#3}%
16 }%
17 {%
18 #1%
19 \ifthenelse{\boolean{B@UnitsLoose}}{~}{\,%
20 \nicefrac{#2}{#3}}%
21 }%
22 }
23
24 \LWR@formatted{unitfrac}

```

For Mathjax:

```

25 \begin{warpMathJax}
26 \CustomizeMathJax{\newcommand{\unit}[2][]{#1 #2}}
27 \CustomizeMathJax{\newcommand{\unitfrac}[3][]{#1 #2/#3}}
28 \end{warpMathJax}

```

---

File 453 **lwarp-unitsdef.sty**

§ 555 Package **unitsdef**

*(Emulates or patches code by PATRICK HAPPEL.)*

Pkg unitsdef unitsdef is patched for use by lwarp.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{unitsdef}[2005/01/04]
2 \renewcommand{\unitvaluesep}{\,}
3
4 \renewcommand{\unittimes}{\@@setunitsepfalse\HTMLUnicode{22c5}}% \cdot
5
6 \renewunit{\arcmin}{%
7 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8 {\ensuremath{{}^{\prime}}}%
9 {\HTMLUnicode{2032}}% prime
10 }
11
12 \renewunit{\arcsec}{%
13 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
14 {\ensuremath{{}^{\prime\prime}}}%
15 {\HTMLUnicode{2033}}% dbl prime
16 }
17
18 \renewrobustcmd{\SI}[2]{%
19 \begingroup%
20 \let\unit@@xspace\relax%
21 \unitSIdef\selectfont%
22 \LWR@textcurrentfont{#1#2}% lwarp
23 \endgroup%
24 }
```

---

File 454 **lwarp-upref.sty**

§ 556 Package **upref**

Pkg upref upref is ignored.

**for HTML output:** Discard all options for lwarp-upref:

```

1 \LWR@ProvidesPackageDrop{upref}[2007/03/14]
```

File 455 **lwarp-url.sty**

§ 557 Package **url**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg url url is patched for use by lwarp.

**for HTML output:**

```

1 \LetLtxMacro\LWR@url@orig@url\url
2
3 \LWR@ProvidesPackagePass{url}[2013/09/16]

4 \newcommand*{\LWR@HTML@Url@FormatString}{%
5 \expandafter\LWR@url@orig@url\expandafter{\Url@String}%
6 }
7 \LWR@formatted{Url@FormatString}
```

File 456 **lwarp-ospace.sty**

§ 558 Package **ospace**

Pkg ospace ospace is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{ospace}[2016/11/06]
```

File 457 **lwarp-verse.sty**

§ 559 Package **verse**

*(Emulates or patches code by PETER WILSON.)*

Pkg verse verse is supported and patched by lwarp.

**for HTML output:** Pass all options for lwarp-verse:

```

1 \LWR@ProvidesPackagePass{verse}[2009/09/04]
```

When using verse or memoir, always place a \\ after each line.

\attrib The documentation for the verse and memoir packages suggest defining an \attrib command, which may already exist in current documents, but it will only work for print output. lwarp provides \attribution, which works for both print and HTML output. To combine the two so that \attrib is used for print and \attribution is used for HTML:

```

\begin{warpHTML}
\let\attrib\attribution
\end{warpHTML}

```

Len `\vleftskip` These lengths are used by `verse` and `memoir` to control the left margin, and they may already be set by the user for print output. New lengths `\HTMLvleftskip` and `\HTMLleftmargin` are provided to control the margins in HTML output. These new lengths may be set by the user before any verse environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargin` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargin` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

⚠ **spacing** Horizontal spacing relies on *pdftotext*’s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargin` or `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

⚠ **verse margin** During translation to HTML, the stanza numbers are kept out of the left margin, which would have caused *pdftotext* to shift everything over.

Env `verse` The verse environment will be placed inside a HTML `<pre>`.

```

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching verse.}

```

At the beginning of the verse environment:

```

4 \AtBeginEnvironment{verse}
5 {%

```

Use the original list environment inside a `<pre>` to attempt to preserve formatting.

```

6 \LWR@restoreoriglists%

```

Pkg `verse` The `verse` or `memoir` packages can place stanza numbers to the left with their `\flagverse` command. The following does not allow them to go into the left margin, which would cause *pdfcrop* to crop the entire page further to the left.

```

Cls memoir
\flagverse
Len \vleftskip
7 \ifdef{\vleftskip}{%
8 \setlength{\vleftskip}{\HTMLvleftskip}
9 \setlength{\leftmargin}{\HTMLleftmargin}
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 458 **lwarp-versednotes.sty**

§ 560 Package **versednotes**

*(Emulates or patches code by NORMAN GRAY.)*

Pkg versednotes **versednotes** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{versednotes}[2019/07/06]

```

2 \newcommand{\versednote}[1]{\marginpar{#1}}
3 \newdimen\versotextwidth
4 \newdimen\versoleftmargin
5 \newcommand*\versolayout{}

```

In case the user changed the page number before loading versednotes:

```
6 \setcounter{page}{1}
```

---

File 459 **lwarp-vertbars.sty**

§ 561 Package **vertbars**

*(Emulates or patches code by PETER WILSON.)*

Pkg vertbars **vertbars** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{vertbars}[2010/11/27]

```

2 \newlength{\barwidth}
3 \setlength{\barwidth}{0.4pt}
4 \newlength{\barspace}
5 \setlength{\barspace}{1em}
6
7 \newenvironment{vertbar}{
8 \LWR@forcenewpage

```

```

9 \LWR@forceminwidth{\barwidth}
10 \begin{BlockClass}[%
11 border-left: \LWR@printlength{\LWR@atleastonept} solid black ; %
12 padding-left: \LWR@printlength{\barspace}%
13]{vertbar}
14 }{
15 \end{BlockClass}
16 }

```

---

File 460 **lwarp-vmargin.sty**

§ 562 Package **vmargin**

Pkg vmargin vmargin is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{vmargin}[2004/07/15]

```

2 \newcommand*\LWRVM@customsize[2]{}
3 \newcommand*\setpapersize[2][\ifstrequal{#2}{custom}{\LWRVM@customsize}{}
4 \newcommand*\setmargins[8]{}
5 \newcommand*\setmarginsrb[8]{}
6 \newcommand*\setmargnohf[4]{}
7 \newcommand*\setmargnohfrb[4]{}
8 \newcommand*\setmarg[4]{}
9 \newcommand*\setmargrb[4]{}
10 \newlength{\PaperWidth}
11 \setlength{\PaperWidth}{8.5in}
12 \newlength{\PaperHeight}
13 \setlength{\PaperHeight}{11in}
14 \newif\ifLandscape

```

---

File 461 **lwarp-vowel.sty**

§ 563 Package **vowel**

*(Emulates or patches code by FUKUI REI.)*

Pkg vowel vowel is patched for use by lwarp.

This package has been tested with *pdf<sub>l</sub>atex* and the Type 1 TIPA fonts using the following package load sequence:

```

\usepackage[T3,T1]{fontenc}
\usepackage[utf8]{inputenc}
\usepackage[noenc]{tipa}
\usepackage{vowel}

```

**for HTML output:** 1 \LWR@ProvidesPackagePass{vowel}[2002/08/08]

```

2 \renewenvironment{vowel}[1][]
3 {%
4 \begin{lateximage}[-vowel~\PackageDiagramAltText]%
5 \@vowel[#1]%
6 }
7 {%
8 \@@vowel%
9 \end{lateximage}%
10 }

```

---

File 462 **lwarp-vpe.sty**

§ 564 Package **vpe**

Pkg vpe vpe is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{vpe}[2012/04/18]

---

File 463 **lwarp-vwcol.sty**

§ 565 Package **vwcol**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg vwcol vwcol is patched for use with lwarp.

The width option is ignored. All vwcol environments adjust to 1–3 equal-width columns, depending on the width of the browser window.

The remaining options are supported, except for lines and maxrecursion.

**for HTML output:** 1 \LWR@ProvidesPackagePass{vwcol}[2015/02/10]

Factored from \vwcol. Each is given a style tag to append to the final style.

```

\LWR@vwcol@addrule {<style tag>}
2 \newcommand*{\LWR@vwcol@addrule}[1]{%
3 \appto{\LWR@vwcolstyle}{%
4 #1: %
5 \LWR@printlength{\vwcol@rule} solid \LWR@origpound\LWR@vwcol@rulecolor ; %
6 }%
7 }

```

```

\LWR@vwcol@addrule {<style tag>}
8 \newcommand*{\LWR@vwcol@addgap}[1]{%
9 \appto{\LWR@vwcolstyle}{%
10 #1: %

```

```

11 \LWR@printlength{\vwcol@sep} ; %
12 }%
13 }

```

Env vwcol *{(key/values)}*

Redefine the environment to add a HTML style. The style is built depending on the required options.

```
14 \renewenvironment*{vwcol}[]{}%
```

New paragraph, and process the options:

```
15 \LWR@stoppars%
16 \vwcolsetup{#1}%

```

Begin with no style:

```
17 \newcommand*{\LWR@vwcolstyle}{}

```

presep and postsep are created with HTML margins:

```

18 \if@vwcol@presep
19 \appto{\LWR@vwcolstyle}{margin-left: 1em ; padding-left: .5em ; }
20 \fi
21 \if@vwcol@postsep
22 \appto{\LWR@vwcolstyle}{margin-right: 1em ; padding-right: .5em ; }
23 \fi

```

sep becomes column-gap:

```

24 \ifdimgreater{\vwcol@sep}{1sp}{
25 \LWR@vwcol@addgap{column-gap}
26 \LWR@vwcol@addgap{-moz-column-gap}
27 \LWR@vwcol@addgap{-webkit-column-gap}
28 }{}

```

rule become column-rule, while prerule and postrule become HTML borders:

```

29 \convertcolorspec{named}{\vwcol@rulecol}{HTML}\LWR@vwcol@rulecolor%
30 \ifdimgreater{\vwcol@rule}{0pt}{
31 \ifdimless{\vwcol@rule}{1pt}{
32 \setlength{\vwcol@rule}{1pt}
33 }{}
34 \LWR@vwcol@addrule{column-rule}
35 \LWR@vwcol@addrule{-moz-column-rule}
36 \LWR@vwcol@addrule{-webkit-column-rule}
37 \if@vwcol@prerule\LWR@vwcol@addrule{border-left}\fi
38 \if@vwcol@postrule\LWR@vwcol@addrule{border-right}\fi
39 }{}

```

Each of the justify options becomes a text-align. Indentation is added where appropriate.

```

40 \ifdefequal{\vwcol@justify}{\RaggedRight}{
41 \appto{\LWR@vwcolstyle}{text-align: left ; }
42 \ifdimgreater{\vwcol@parindent}{0pt}{
43 \appto{\LWR@vwcolstyle}{%
44 text-indent: \LWR@printlength{\vwcol@parindent} ; %
45 }
46 }{}

```

```

47 }{}

48 \ifdefequal{\vwcol@justify}{\RaggedLeft}{
49 \appto{\LWR@vwcolstyle}{text-align: right ; }
50 }{}

51 \ifdefequal{\vwcol@justify}{\Centering}{
52 \appto{\LWR@vwcolstyle}{text-align: center ; }
53 }{}

54 \ifdefequal{\vwcol@justify}{\justifying}{
55 \appto{\LWR@vwcolstyle}{text-align: justify ; }
56 \ifdimgreater{\vwcol@parindent}{0pt}{
57 \appto{\LWR@vwcolstyle}{%
58 text-indent: \LWR@printlength{\vwcol@parindent} ; %
59 }
60 }{}
61 }{}

```

Create the <div> with the assembled style:

```

62 \BlockClass[\LWR@vwcolstyle]{multicols}
63 }

```

When the environment ends:

```

64 {
65 \endBlockClass
66 \LWR@startpars
67 }

```

---

File 464 **lwarp-wallpaper.sty**

§ 566 Package **wallpaper**

*(Emulates or patches code by MICHAEL H.F. WILKINSON.)*

Pkg wallpaper **wallpaper** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{wallpaper}[2005/01/18]

```

2 \newcommand*{\CenterWallPaper}[2]{}
3 \newcommand*{\ThisCenterWallPaper}[2]{}
4 \newcommand*{\TileWallPaper}[3]{}
5 \newcommand*{\ThisTileWallPaper}[3]{}
6 \newcommand*{\TileSquareWallPaper}[2]{}
7 \newcommand*{\ThisTileSquareWallPaper}[2]{}
8 \newcommand*{\ULCornerWallPaper}[2]{}
9 \newcommand*{\ThisULCornerWallPaper}[2]{}
10 \newcommand*{\LLCornerWallPaper}[2]{}
11 \newcommand*{\ThisLLCornerWallPaper}[2]{}
12 \newcommand*{\URCornerWallPaper}[2]{}
13 \newcommand*{\ThisURCornerWallPaper}[2]{}
14 \newcommand*{\LRCornerWallPaper}[2]{}
15 \newcommand*{\ThisLRCornerWallPaper}[2]{}

```

```

16 \newcommand*\ClearWallPaper{}
17 \newlength{\wpXoffset}
18 \newlength{\wpYoffset}

```

---

File 465 **lwarp-watermark.sty**

§ 567 Package **watermark**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg watermark watermark is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{watermark}[2004/12/09]

```

2 \newcommand{\watermark}[1]{}
3 \newcommand{\leftwatermark}[1]{}
4 \newcommand{\rightwatermark}[1]{}
5 \newcommand{\thiswatermark}[1]{}
6 \newcommand{\thispageheading}[1]{}

```

---

File 466 **lwarp-widetable.sty**

§ 568 Package **widetable**

*(Emulates or patches code by CLAUDIO BECCARI.)*

Pkg widetable widetable is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{widetable}[2019-06-25]

```

2 \newenvironment{widetable}{\begin{tabular*}}{\end{tabular*}}

```

---

File 467 **lwarp-widows-and-orphans.sty**

§ 569 Package **widows-and-orphans**

Pkg widows-and-orphans widows-and-orphans is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{widows-and-orphans}[2018/09/01]

```

2 \NewDocumentCommand\Wa0setup{m}{}
3 \NewDocumentCommand\Wa0parameters{}{}
4 \NewDocumentCommand\Wa0ignorenext{}{}

```

File 468 **lwarp-witharrows.sty**

§ 570 Package **witharrows**

*(Emulates or patches code by F. PANTIGNY.)*

Pkg witharrows **witharrows** is patched for use by **lwarp**. Emulation is provided for **MATHJAX**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{witharrows}[2019/12/27]

2 \begin{warpHTML}
3 \makeatletter
4 \ifbool{mathjax}{
5 % For the hidden print version in the HTML:
6 \newcommand{\Arrow}[2][{}]{
7 \newcommand{\unicode}[1]{
8 \NewDocumentEnvironment { DispWithArrows } { ! d < > ! 0 { } +b}
9 {
10 \IfValueTF{#1}{
11 \begin{displaymath}
12 #1 \left\lbrace
13 \begin{align}
14 #3
15 \end{align}
16 \right .
17 \end{displaymath}
18 }{
19 \begin{displaymath}
20 \begin{align}
21 #3
22 \end{align}
23 \end{displaymath}
24 }
25 }
26 {}
27 \NewDocumentEnvironment { DispWithArrows* } { ! d < > ! 0 { } +b}
28 {
29 \IfValueTF{#1}{
30 \begin{displaymath}
31 #1 \left\lbrace
32 \begin{align*}
33 #3
34 \end{align*}
35 \right .
36 \end{displaymath}
37 }{
38 \begin{displaymath}
39 \begin{align*}
40 #3
41 \end{align*}
42 \end{displaymath}

```

```

43 }
44 }
45 {}
46 }{
47 % If not MathJax, use SVG images.
48 \BeforeBeginEnvironment{WithArrows}{\global\booltrue{LWR@unknownmathsize}}
49 \BeforeBeginEnvironment{DispWithArrows}{%
50 \begin{BlockClass}{displaymathnumbered}%
51 \begin{lateximage}%
52 }
53 \AfterEndEnvironment{DispWithArrows}{\end{lateximage}\end{BlockClass}}
54 \BeforeBeginEnvironment{DispWithArrows*}{%
55 \begin{BlockClass}{displaymath}%
56 \begin{lateximage}%
57 }
58 \AfterEndEnvironment{DispWithArrows*}{\end{lateximage}\end{BlockClass}}
59 }
60 \makeatother
61 \end{warpHTML}
62
63 \begin{warpMathJax}
64 \CustomizeMathJax{\newenvironment{WithArrows}[1][[]]{\begin{aligned}}{\end{aligned}}}{%
65 % Unable to make a sized box.
66 \CustomizeMathJax{\newcommand{\Arrow}[2][[]]{&{\Large\unicode{x2938}}~\textit{#2}}}{%
67 \end{warpMathJax}

```

---

File 469 **lwarp-wrapfig.sty**

§ 571 Package **wrapfig**

(Emulates or patches code by DONALD ARSENEAU.)

Pkg wrapfig **wrapfig** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{wrapfig}[2003/01/31]
2 \newcommand*{\LWR@wrapposition}{}
3
4 \newcommand*{\LWR@subwrapfigure}[2]{%
5 \renewcommand*{\LWR@wrapposition}{}%
6 \ifthenelse{%
7 \equal{#1}{r}\OR\equal{#1}{R}\OR%
8 \equal{#1}{o}\OR\equal{#1}{O}%
9 }%
10 {\renewcommand*{\LWR@wrapposition}{float:right}}%
11 {\renewcommand*{\LWR@wrapposition}{float:left}}%
12 \setlength{\LWR@templengthone}{#2}%
13 \LWR@BlockClassWP{%
14 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
15 margin:10pt%
16 }%
17 {%
18 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %

```

```

19 }%
20 {marginblock}%

21 \setlength{\linewidth}{\LWR@templengthone}%
22 }
23
24
25 \NewDocumentEnvironment{wrapfigure}{o m o m}
26 {%
27 \begin{LWR@setvirtualpage}*%
28 \LWR@subwrapfigure{#2}{#4}%
29 \renewcommand*\@capttype{figure}%
30 }
31 {%
32 \endLWR@BlockClassWP%
33 \end{LWR@setvirtualpage}%
34 }
35
36
37 \NewDocumentEnvironment{wraptable}{o m o m}
38 {%
39 \begin{LWR@setvirtualpage}*%
40 \LWR@subwrapfigure{#2}{#4}%
41 \renewcommand*\@capttype{table}%
42 }
43 {%
44 \endLWR@BlockClassWP%
45 \end{LWR@setvirtualpage}%
46 }
47
48
49 \NewDocumentEnvironment{wrapfloat}{m o m o m}
50 {%
51 \begin{LWR@setvirtualpage}*%
52 \LWR@subwrapfigure{#3}{#5}%
53 \renewcommand*\@capttype{#1}%
54 }
55 {%
56 \endLWR@BlockClassWP%
57 \end{LWR@setvirtualpage}%
58 }
59
60 \newlength{\wrapoverhang}

```

---

File 470 **lwarp-xbmks.sty**

§ 572 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 471 **lwarp-xcolor.sty**

§ 573 Package **xcolor**

*(Emulates or patches code by DR. UWE KERN.)*

Pkg xcolor xcolor is supported by lwarp.

### § 573.1 Limitations

`\colorboxBlock` and `\fcolorboxBlock` are provided for increased HTML compatibility, and they are identical to `\colorbox` and `\fcolorbox` in print mode. In HTML mode they place their contents into a `<div>` instead of a `<span>`. These `<div>`s are set to display: `inline-block` so adjacent `\colorboxBlocks` appear side-by-side in HTML, although text is placed before or after each.

Print-mode definitions for `\colorboxBlock` and `\fcolorboxBlock` are created by 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.

### § 573.2 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 cre-

ated for `\textcolor`, `\pagecolor`, `\nopagecolor`, `\colorbox`, `\colorboxBlock`, `\fcolorbox`, `\fcolorboxBlock`, and `fcolorminipage`.

**\AtBeginDocument in print or HTML mode:** See Section 86. 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 514.

#### **\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 1105.  
**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 1106.  
**HTML `lateximage`:** Remembers and reuses the print version.

#### **\colorboxBlock:**

**Print:** Becomes `\colorbox`.  
**HTML:** Newly defined by `lwarp-xcolor` to use a `<div>`, page 1106.  
**HTML `lateximage`:** Remembers and reuses the print version `\colorbox`.

**\fcolorbox:**

**Print:** Modified to allow a background of none.

`\LWR@print@fcolorbox` at section 86

**HTML:** Redefined by `lwarp-xcolor`, page 1107.

**HTML lateximage:** Remembers and reuses the print version.

**\fcolorboxBlock:**

**Print:** Becomes `\fcolorbox`. Section 86

**HTML:** Newly defined by `lwarp-xcolor` to use a `<div>`, page 1107.

**HTML lateximage:** Remembers and reuses the print version `\fcolorbox`.

**fcolorminipage:**

**Print:** Newly defined in the `lwarp` core.

`LWR@print@fcolorminipage` at section 86

**HTML:** Newly defined by `lwarp-xcolor`, page 1108.

**HTML lateximage:** Uses the print version.

**\boxframe:**

**Print:** Used as-is.

**HTML:** Redefined by `lwarp-xcolor`, page 1109.

**HTML lateximage:** Remembers and reuses the print version.

### § 573.3 Package loading

**for HTML output:** `1 \LWR@ProvidesPackagePass{xcolor}[2016/05/11]`

`2 \begin{warpHTML}`

### § 573.4 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 }`

§ 573.5 **\normalcolor**`\normalcolor`

```

9 \DeclareRobustCommand{\LWR@HTML@normalcolor}{\color{black}}%
10
11 \LWR@formatted{normalcolor}

```

§ 573.6 **HTML color style**`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```

12 \renewcommand*{\LWR@findcurrenttextcolor}{%
13 \protect\colorlet{\LWR@current@color}{.}%
14 \protect\convertcolorspec{named}{\LWR@current@color}{HTML}\LWR@tempcolor%
15 }

```

Prints a color style for the current color.

`\LWR@currenttextcolorstyle`

```

16 \newcommand*{\LWR@currenttextcolorstyle}{%
17 \LWR@findcurrenttextcolor%
18 \ifdefstring{\LWR@tempcolor}{000000}%
19 {}%
20 {color: \LWR@origpound\LWR@tempcolor ; }%
21 }

```

`\LWR@textcurrentcolor` `{<text>}` Like `\textcolor` but uses the current `\color` instead.

```

22 \DeclareDocumentCommand{\LWR@textcurrentcolor}{m}{%
23 \begingroup%
24 \LWR@FBcancel%
25 \LWR@findcurrenttextcolor%
26 \InlineClass[color:\LWR@origpound\LWR@tempcolor]{textcolor}{%
27 \renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
28 #1%
29 }%
30 \endgroup%
31 }

```

`\LWR@colorstyle` `{<2: model>} {<3: color>}`

For a color style, prints the color converted to HTML colors.

```

32 \NewDocumentCommand{\LWR@colorstyle}{m m}{%
33 \begingroup%
34 \LWR@FBcancel%

```

Use the `xcolor` package to convert to an HTML color space:

```

35 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%

```

Print the converted color:

```

36 \LWR@origpound\LWR@tempcolor%
37 \endgroup%
38 }

```

`\LWR@backgroundcolor` [*model*] {*color*} {*text*}

Similar to `\textcolor`, but prints black text against a color background.

Converted into an HTML hex color span.

```
39 \NewDocumentCommand{\LWR@backgroundcolor}{O{named} m m}{%
40 \begingroup%
41 \LWR@FBcancel%
42 \InlineClass[background:\LWR@colorstyle{#1}{#2}]{backgroundcolor}{%
43 #3%
44 }%
45 \endgroup%
46 }
```

### § 573.7 HTML border

`\LWR@borderpadding` {*colorstyle*} {*color*} Prints the HTML attributes for a black border and padding.

`\LWR@forceminwidth` must be used first in order to set the border width.

```
47 \newcommand*{\LWR@borderpadding}[2]{%
48 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@colorstyle{#1}{#2} ; %
49 padding:\LWR@printlength{\fboxsep}%
50 }
```

### § 573.8 High-level macros

`\color` [*model*] {*color*}



The current `\color` is used by HTML rules and frames, but does not affect the current HTML text output, due to the lack of HTML states and scoping limitations. Use `\textcolor` if possible.

```
51 \NewDocumentCommand{\LWR@HTML@color}{o m}{%
52 \IfValueTF{#1}{%
53 \LWR@print@color[#1]{#2}%
54 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
55 }{%
56 \LWR@print@color{#2}%
57 \convertcolorspec{named}{#2}{HTML}\LWR@tempcolor%
58 }%
59 \edef\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
60 }
61
62 \LWR@formatted{color}
```

`\textcolor` [*model*] {*color*} {*text*}

Converted into an HTML hex color span.

```
63 \NewDocumentCommand{\LWR@HTML@textcolor}{o m m}{%
64 \begingroup%
65 \IfValueTF{#1}{%
```

```

66 \color[#1]{#2}%
67 }{%
68 \color{#2}%
69 }%
70 \InlineClass[color:\LWR@currenttextcolor]{textcolor}{#3}%
71 \endgroup%
72 }%
73
74 \LWR@formatted{textcolor}

```

`\pagecolor` [*model*] {*color*}

Ignored. Use css instead.

```
75 \renewcommand*{\pagecolor}[2][named]{}
```

`\nopagecolor` Ignored.

```
76 \renewcommand*{\nopagecolor}{}

```

`\colorbox` [*model*] {*color*} {*text*}

Converted into an HTML hex background color `<span>`.

```

77 \NewDocumentCommand{\LWR@HTML@colorbox}{O{named} m +m}{%
78 \begingroup%
79 \LWR@FBcancel%
80 \InlineClass[%
81 background:\LWR@colorstyle{#1}{#2} ; %
82 padding:\LWR@printlength{\fboxsep}%
83]{colorbox}{#3}%
84 \endgroup%
85 }
86
87 \AtBeginDocument{
88 \LWR@formatted{colorbox}
89 }

```

`\colorboxBlock` [*model*] {*color*} {*text*}

Converted into an HTML hex background color `<div>`.

```

90 \NewDocumentCommand{\LWR@HTML@colorboxBlock}{O{named} m +m}{%
91 \begingroup%
92 \LWR@FBcancel%
93 \LWR@stoppars%
94 \begin{BlockClass}[%
95 background:\LWR@colorstyle{#1}{#2} ; %

```

```

96 padding:\LWR@printlength{\fboxsep}%
97]{colorboxBlock}
98 #3
99 \end{BlockClass}%
100 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

101 \global\booltrue{LWR@minipagethispar}%
102 }
103
104 \AtBeginDocument{
105 \LWR@formatted{colorboxBlock}
106 }

```

`\fcolorbox` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```

107 \NewDocumentCommand{\LWR@HTML@fcolorbox}{O{named} m O{named} m +m}{%
108 \LWR@traceinfo{HTML fcolorbox #2 #4}%
109 \begingroup%
110 \LWR@FBcancel%
111 \LWR@forceminwidth{\fboxrule}%
112 \ifthenelse{\equal{#4}{none}}{%
113 {% no background color
114 \InlineClass[%
115 \LWR@borderpadding{#1}{#2}%
116]{fcolorbox}{#5}%
117 }%
118 {% yes background color
119 \InlineClass[%
120 \LWR@borderpadding{#1}{#2} ; %
121 background:\LWR@colorstyle{#3}{#4}%
122]{fcolorbox}{#5}%
123 }%
124 \endgroup%
125 }
126
127 \AtBeginDocument{
128 \LWR@formatted{fcolorbox}
129 }

```

`\fcolorboxBlock` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

Converted into a framed HTML hex background color span.

A background color of none creates a colored frame without a background color.

```

130 \NewDocumentCommand{\LWR@HTML@fcolorboxBlock}{O{named} m O{named} m +m}{%
131 \LWR@traceinfo{HTML fcolorboxBlock #2 #4}%
132 \begingroup%
133 \LWR@FBcancel%
134 \LWR@forceminwidth{\fboxrule}%

135 \LWR@stoppars%

136 \ifthenelse{\equal{#4}{none}}{%
137 {% no background color
138 \begin{BlockClass}[%
139 \LWR@borderpadding{#1}{#2}%
140]{fcolorboxBlock}
141 #5
142 \end{BlockClass}%
143 }%
144 {% yes background color
145 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
146 \begin{BlockClass}[%
147 background:\LWR@origpound\LWR@tempcolortwo\ ; %
148 \LWR@borderpadding{#1}{#2}%
149]{fcolorboxBlock}
150 #5
151 \end{BlockClass}%
152 }%
153 \endgroup%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

154 \global\booltrue{LWR@minipagethispar}%
155 \LWR@traceinfo{HTML fcolorboxBlock done}%
156 }
157
158 \AtBeginDocument{
159 \LWR@formatted{fcolorboxBlock}
160 }

```

Creates a framed HTML <div> around its contents.

A print-output version is defined in the lwarp core: [section 86](#)

```

\LWR@subfcolorminipage {<framemodel>} {<framecolor>} {<background tag>} {<height>}

161 \NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%

162 \LWR@stoppars%

163 \begin{BlockClass}[%
164 #3%
165 \LWR@borderpadding{#1}{#2} ; %
166 \IfValueT{#4}{height:\LWR@printlength{\LWR@tempheight} ; }%
167 width:\LWR@printlength{\LWR@tempwidth}%
168]{fcolorminipage}%

```

169 }

Env fcolorminipage [*1:frame*model] {*2:frame*color} [*3:box*model] {*4:box*color} [*5:align*] [*6:height*] [*7:inner-align*] {*8:width*}

```

170 \NewDocumentEnvironment{LWR@HTML@fcolorminipage}{0{named} m 0{named} m 0{c} o o m}
171 {%
172 \LWR@FBcancel%
173 \setlength{\LWR@tempwidth}{#8}%
174 \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}}%
175 \LWR@forceminwidth{\fboxrule}%
176 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
177 \ifthenelse{\equal{#4}{none}}%
178 {\LWR@subfcolorminipage{#1}{#2}{#6}}%
179 {%
180 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
181 \LWR@subfcolorminipage{#1}{#2}%
182 {background:\LWR@origpound\LWR@tempcolortwo\ ; }%
183 {#6}%
184 }%
185 }%
186 {%
187 \end{BlockClass}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

188 \global\booltrue{LWR@minipagethispar}%
189 }
190
191 \AtBeginDocument{
192 \LWR@formattedenv{fcolorminipage}
193 }

```

\boxframe {*width*} {*height*} {*depth*}

The depth is added to the height, but the box is not decended below by the depth. \textcolor is honored.

```

194 \newcommand*{\LWR@HTML@boxframe}[3]{%
195 {%
196 \setlength{\LWR@tempwidth}{#1}%
197 \setlength{\LWR@tempheight}{#2}%
198 \addtolength{\LWR@tempheight}{#3}%
199 \LWR@forceminwidth{\fboxrule}%
200 \LWR@findcurrenttextcolor%
201 \InlineClass[%
202 display:inline-block ; %
203 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@currenttextcolor{} ; %
204 width:\LWR@printlength{\LWR@tempwidth} ; %
205 height:\LWR@printlength{\LWR@tempheight}%
206]{boxframe}{}%

```

```

207 }%
208 }
209
210 \LWR@formatted{boxframe}

```

### § 573.9 Row colors

```

\rowcol@l@rs [⟨cmds⟩] {⟨startrow⟩} {⟨odd color⟩} {⟨even color⟩}

211 \newcommand*{\LWR@xcolortempcolor}{}
212
213 \def\rowcol@l@rs[#1]#2#3#4%
214 {
215 \rownum=1%
216 \@rowcolorstrue%
217 \@ifxempty{#3}%
218 {\def\@oddrowcolor{\@norowcolor}}%
219 {%
220 \convertcolorspec{named}{#3}{HTML}\LWR@xcolortempcolor%
221 \edef\@oddrowcolor{%
222 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
223 }%
224 }%
225 \@ifxempty{#4}%
226 {\def\@evenrowcolor{\@norowcolor}}%
227 {%
228 \convertcolorspec{named}{#4}{HTML}\LWR@xcolortempcolor%
229 \edef\@evenrowcolor{%
230 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
231 }%
232 }%
233 \if@rowcmd
234 \def\@rowcolors
235 {%
236 % #1%
237 \if@rowcolors
238 % \noalign{%
239 \relax\ifnum\rownum<#2\@norowcolor\else
240 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi\fi%
241 % }%
242 \fi%
243 }%
244 \else
245 \def\@rowcolors
246 {%
247 \if@rowcolors
248 \ifnum\rownum<#2%
249 % \noalign{%
250 \@norowcolor
251 % }
252 \else
253 % #1%
254 % \noalign{%
255 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi%
256 % }%
257 \fi

```

```

258 \fi%
259 }%
260 \fi
261 \ignorespaces%
262 }

```

`\@norowcolor` Turns off color for this row.

```

263 \def\@norowcolor{%
264 \renewcommand{\LWR@xcolorrowHTMLcolor}{}}%
265 }

```

`\@rowcol@lors` Executed at the end of each row.

```

266 \def\@rowcol@lors{%
267 % \noalign{%
268 \advance\rownum\@ne%
269 % }%
270 \@rowcolors%
271 }

```

```

272 \end{warpHTML}

```

---

## File 472 **lwarp-xexchangebar.sty**

§ 574 Package **xexchangebar**

Pkg xexchangebar xexchangebar is ignored

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xexchangebar}[2017/08/03]  
 2 \LWR@origRequirePackage{lwarp-changebar}

---

## File 473 **lwarp-xellipsis.sty**

§ 575 Package **xellipsis**

*(Emulates or patches code by DONALD P. GOODMAN III.)*

Pkg xellipsis xellipsis is patched for use by lwarp.

When non-zero, each of the spaces is converted to an HTML thin unbreakable space.

**for HTML output:** 1 \LWR@ProvidesPackagePass{xellipsis}[2015/11/01]  
 2 \newcommand\*\LWR@xellipsispace[1]{%
 3 \ifdim#1=0pt\else%
 4 \ifdim#1<\fontdimen2\font%
 5 \,%
 6 \else%

```

7 ~%
8 \fi%
9 \fi%
10 }
11
12 \def\xelip{%
13 \mbox{%
14 \LWR@xellipsespace{\xelipprebef}%
15 \xelipprechar%
16 \LWR@xellipsespace{\xelippreaft}%
17 \LWR@xellipsespace{\xelipbef}%
18 \xelipchar%
19 \xel@loopi = 1%
20 \loop\ifnum\xelipnum>\xel@loopi%
21 \advance\xel@loopi by1%
22 \LWR@xellipsespace{\xelipgap}%
23 \xelipchar%
24 \repeat%
25 \LWR@xellipsespace{\xelipaft}%
26 \LWR@xellipsespace{\xelippostbef}%
27 \xelippostchar%
28 \LWR@xellipsespace{\xelippostaft}%
29 }%
30 }%

```

---

File 474 **lwarp-xetexko-vertical.sty**

§ 576 Package **xetexko-vertical**

*(Emulates or patches code by DOHYUN KIM.)*

Pkg xetexko-vertical **xetexko-vertical** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@loadbefore{xetexko-vertical}
2
3 \LWR@ProvidesPackagePass{xetexko-vertical}[2018/04/06]

4 \renewcommand{\verticaltypesetting}{}
5 \renewenvironment{vertical}[1]{\BlockClass{verticalrl}}{\endBlockClass}
6 \renewenvironment{horizontal}[1]{\BlockClass{horizontaltb}}{\endBlockClass}
7 \renewcommand{\vertlatin}[1]{#1}

```

---

File 475 **lwarp-xfakebold.sty**

§ 577 Package **xfakebold**

*(Emulates or patches code by HERBERT VOSS.)*

Pkg xfakebold **xfakebold** is patched for use by **lwarp**, and additional underlying support is found in the **lwarp** core.

 **page breaks** Note that the print version resets to unbold at each page break, whereas the HTML version maintains the bold state until it is undone.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xfakebold}[2018/07/25]
2 \let\LWR@orig@setBold\setBold
3 \let\LWR@orig@unsetBold\unsetBold
4 \renewcommand*\setBold{\booltrue\LWR@xfakebold}
5 \renewcommand*\unsetBold{\boolfalse\LWR@xfakebold}
6
7 \renewcommand*\LWR@applyxfakebold{%
8 \ifbool\LWR@xfakebold{\LWR@orig@setBold}{\LWR@orig@unsetBold}%
9 }

```

For MATHJAX, xfakebold is ignored.

```

10 \begin{warpMathJax}
11 \CustomizeMathJax{\newcommand{\setBold}[1][{}]}
12 \CustomizeMathJax{\newcommand{\unsetBold}{}]}
13 \end{warpMathJax}

```

---

File 476 **lwarp-xfrac.sty**

§ 578 Package **xfrac**

(Emulates or patches code by THE L<sup>A</sup>T<sub>E</sub>X3 PROJECT.)

Pkg xfrac Supported by adding xfrac instances, and emulated for MATHJAX.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{xfrac}[2018-08-23]

```

 **font size** In the user's document preamble, lwarp should be loaded after font-related setup. During HTML conversion, this font is used by lwarp to generate its initial PDF output containing HTML tags, later to be converted by *pdftotext* to a plain text file. While the text may be in any font which *pdftotext* can read, the math is directly converted into SVG images using this same user-selected font. xfrac below is set for the Latin Modern (lmr) font. If another font is used, it may be desirable to redefine \xfracHTMLfontsize with a different em size.

\sfrac [*instance*] {<num>} [*sep*] {<denom>}

A text-mode instance for the default font is provided below. The numerator and denominator formats are adjusted to encase everything in HTML tags. \scalebox is made null inside the numerator and denominator, since the HTML tags should not be scaled, and we do not want to introduce additional HTML tags for scaling.

In math mode, which will appear inside a lateximage, no adjustments are necessary.

**for HTML & PRINT:**

```

2 \begin{warpall}

```

\xfracHTMLfontsize User-redefinable macro which controls the font size of the fraction.

```
3 \newcommand*\xfracHTMLfontsize{.6em}
```

```
4 \end{warpall}
```

for HTML output: 

```
5 \begin{warpHTML}
```

instances Instances of xfrac for various font choices:

Produce css for a small raised numerator and a small denominator.

Scaling is turned off so that *pdftotext* correctly reads the result.

```
6 \DeclareInstance{xfrac}{default}{text}{
7 numerator-format = {%
8 \begingroup%
9 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
10 \InlineClass{numerator}{#1}\,%
11 \endgroup%
12 },
13 denominator-format = {%
14 \begingroup%
15 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
16 \InlineClass{denominator}{#1}%
17 \endgroup%
18 },
```

For *pdftotext*, do not scale the text:

```
19 scaling = false
20 }
21
22 \DeclareInstance{xfrac}{lmr}{text}{
23 numerator-format = {%
24 \begingroup%
25 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
26 \InlineClass{numerator}{#1}\,%
27 \endgroup%
28 },
29 denominator-format = {%
30 \begingroup%
31 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
32 \InlineClass{denominator}{#1}%
33 \endgroup%
34 },
```

For *pdftotext*, do not scale the text:

```
35 scaling = false
36 }
37
38 \DeclareInstance{xfrac}{lmss}{text}{
39 numerator-format = {%
40 \begingroup%
41 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
```

```

42 \InlineClass{numerator}{#1}\,%
43 \endgroup%
44 },
45 denominator-format = {%
46 \begingroup%
47 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
48 \InlineClass{denominator}{#1}%
49 \endgroup%
50 },

```

For *pdftotext*, do not scale the text:

```

51 scaling = false
52 }
53
54 \DeclareInstance{xfrac}{lmtt}{text}{
55 numerator-format = {%
56 \begingroup%
57 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
58 \InlineClass{numerator}{#1}\,%
59 \endgroup%
60 },
61 denominator-format = {%
62 \begingroup%
63 \RenewDocumentCommand{\scalebox}{m o m}{##3}%
64 \InlineClass{denominator}{#1}%
65 \endgroup%
66 },

```

For *pdftotext*, do not scale the text:

```

67 scaling = false
68 }

```

For MATHJAX:

```

69 \begin{warpMathJax}
70 \CustomizeMathJax{\newcommand{\LWRsfrac}[2][\LWRsfracnumerator\!#1_{#2}]}
71 \CustomizeMathJax{\newcommand{\sfrac}[2][\LWRsfracnumerator\!#2]{\LWRsfrac}}
72 \end{warpMathJax}

73 \end{warpHTML}

```

File 477 **lwarp-xltabular.sty**

§ 579 Package **xltabular**

(Emulates or patches code by ROLF NIEPRASCHK, HERBERT VOSS.)

Pkg xltabular xltabular is emulated by lwarp.

for HTML output: Relies on tabularx.

 **table numbering** At present, an `xltabular` without a caption or with only a `\caption*` may be misnumbered in HTML, so it may be necessary to place at the end of the table:

```
\warpHTMLonly{\addtocounter{table}{-1}}
```

```
1 \RequirePackage{tabularx}
2 \RequirePackage{ltablex}
3
4 \LWR@ProvidesPackageDrop{xltabular}[2018/05/23]
5
6 \DeclareDocumentEnvironment{xltabular}{o m m}
7 {\longtable{#3}}
8 {\endlongtable}
```

File 478 **lwarp-xltextra.sty**

§ 580 Package **xltextra**

*(Emulates or patches code by WILL ROBERTSON, JONATHAN KEW.)*

Pkg xltextra xltextra is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{xltextra}[2016/01/21]
2 \RequirePackage{realscripts}
3 \RequirePackage{metalogo}
4 \newcommand*\TeX@logo@spacing[6]{}
5
6 \newcommand*\vfrac[2]{%
7 #1/\textsubscript{#2}%
8 }
9
10 \newcommand\namedglyph[1]{%
11 \@tempcnta=\XeTeXglyphindex "#1"\relax
12 \ifnum\@tempcnta>0
13 \XeTeXglyph\@tempcnta
14 \else
15 \xxt@namedglyph@fallback{#1}%
16 \fi}
17
18 \newcommand\xxt@namedglyph@fallback[1]{[#1]}
19
20 \DeclareDocumentCommand{\showhyphens}{m}{}

```

File 479 **lwarp-xmpincl.sty**

§ 581 Package **xmpincl**

*(Emulates or patches code by MAARTEN SNEEP.)*

Pkg xmpincl xmpincl is ignored.

**for HTML output:** Discard all options for lwarp-xmpincl:

```
1 \LWR@ProvidesPackageDrop{xmpincl}[2008/05/10]
2 \newcommand*\includemp}[1]{}

```

---

File 480 **lwarp-xpiano.sty**

§ 582 Package **xpiano**

*(Emulates or patches code by ENRICO GREGORIO.)*

Pkg xpiano xpiano is patched for use by lwarp.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{xpiano}
2 \ExplSyntaxOn
3 \NewDocumentCommand{\LWR@print@keyboard}{ O{}m }
4 {
5 \xpiano_keyboard:nn { #1 } { #2 }
6 }
7
8 \NewDocumentCommand{\LWR@HTML@keyboard}{ O{}m }
9 {
10 \begin{lateximage}*
11 [%
12 -xpiano--\PackageDiagramAltText{}: \detokenize\expandafter{#2}%
13]
14 [\detokenize\expandafter{#1}]
15 \xpiano_keyboard:nn { #1 } { #2 }
16 \end{lateximage}
17 }
18 \ExplSyntaxOff
19
20 \LWR@formatted{keyboard}

```

---

File 481 **lwarp-xpinyin.sty**

§ 583 Package **xpinyin**

*(Emulates or patches code by SOBEN LEE.)*

Pkg xpinyin xpinyin is supported.

Pinyin is disabled for file names, the sideroc, and regular footnotes, but is left enabled for minipage footnotes, as per the print mode.

**for HTML output:** 1 \LWR@ProvidesPackagePass{xpinyin}[2019-04-07]

The original's boxes are not used, instead the contents are used with <ruby>, <rb>, and <rt> tags per modern HTML. Color is detected. ratio is ignored for *pdftotext* to work correctly. Extra spaces are placed inside the tags to allow line breaks in the HTML text.

```

2 \ExplSyntaxOn
3 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_make_pinyin_box:nnn #1#2#3
4 {
5 \color_group_begin: \color_ensure_current:
6 \l__xpinyin_pinyin_box_hook_tl
7 \renewcommand*{\l__xpinyin_ratio_tl}{1}% for pdftotext
8 __xpinyin_select_font:
9 \clist_if_exist:cTF { c__xpinyin_multiple_ #1 _clist }
10 { \l__xpinyin_multiple_tl \l__xpinyin_format_tl }
11 { \l__xpinyin_format_tl }
12 \ifdefempty{\l__xpinyin_format_tl}
13 {#3}
14 {\LWR@textcurrentcolor{#3}}
15 \color_group_end:
16 }
17 \LWR@formatted{__xpinyin_make_pinyin_box:nnn}
18
19 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_CJKsymbol:nn #1#2
20 {
21 __xpinyin_leavevmode:
22 \LWR@htmltagc{ruby}
23 \LWR@htmltagc{rb}
24 __xpinyin_save_CJKsymbol:n {#2}\null% \null removes extra space
25 \LWR@htmltagc{/rb\space}
26 \LWR@htmltagc{rp}{\LWR@htmltagc{/rp\space}
27 \LWR@htmltagc{rt}
28 __xpinyin_make_pinyin_box:nnn {#1} {#2} { \use:c { c__xpinyin_ #1 _tl } }
29 \LWR@htmltagc{/rt\space}
30 \LWR@htmltagc{rp}}\LWR@htmltagc{/rp\space}
31 \LWR@htmltagc{/ruby\space}\null
32 }
33 \LWR@formatted{__xpinyin_CJKsymbol:nn}
34
35 \cs_new_protected_nopar:Npn \LWR@HTML@__xpinyin_single_CJKsymbol:nn #1#2
36 {
37 __xpinyin_leavevmode:
38 \LWR@htmltagc{ruby}
39 \LWR@htmltagc{rb}
40 __xpinyin_save_CJKsymbol:n {#1}\null% \null removes extra space
41 \LWR@htmltagc{/rb\space}
42 \LWR@htmltagc{rp}{\LWR@htmltagc{/rp\space}
43 \LWR@htmltagc{rt}
44 __xpinyin_make_pinyin_box:xnn
45 { __xpinyin_to_unicode:n {#1} } {#1} { __xpinyin_pinyin:n {#2} }
46 \LWR@htmltagc{/rt\space}
47 \LWR@htmltagc{rp}}\LWR@htmltagc{/rp\space}
48 \LWR@htmltagc{/ruby\space}\null
49 }
50 \LWR@formatted{__xpinyin_single_CJKsymbol:nn}
51

```

```
52 \ExplSyntaxOff
```

The **lwarp** core uses the following to disable CJK xpinyin for filenames, sideroc, and footnotes.

```
53 \renewcommand*\LWR@disablepinyin{\disablepinyin}
54
55 \FilenameNullify{\LWR@disablepinyin}
```

File 482 **lwarp-xr.sty**

§ 584 Package **Xr**

*(Emulates or patches code by JEAN-PIERRE DRUCBERT, DAVID CARLISLE.)*

Pkg xr xr is patched for use by **lwarp**. The `*_html.aux` file is used. `\externaldocument` is modified to also accept the optional arguments for `xr-hyper`, which currently uses `xr` for HTML output.

See section 5.17.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{xr}[2019/07/22]%
2 \LetLtxMacro\LWR@orig@externaldocument\externaldocument
3
4 \RenewDocumentCommand{\externaldocument}{0{} 0{} m 0{}}{%
5 \ifblank{#1}{%
6 \LWR@orig@externaldocument{#3_html}%
7 }{%
8 \LWR@orig@externaldocument[#1]{#3_html}%
9 }%
10 }
```

File 483 **lwarp-xr-hyper.sty**

§ 585 Package **xr-hyper**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg xr-hyper `xr-hyper` is replaced by `xr`, which is modified to accept the optional arguments for `\externaldocument`. So far, no hyperlinks are provided for citations.

See section 5.17.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{xr-hyper}[2019/10/03]%
2
3 \LWR@origRequirePackage{lwarp-xr}
```

File 484 **lwarp-xtab.sty**

§ 586 Package **xtab**

*(Emulates or patches code by PETER WILSON.)*

Pkg xtab **xtab** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xtab}[2011/07/31]

⚠ Misplaced alignment tab character & For \tablefirsthead, etc., enclose them as follows:

```
\StartDefiningTabulars
\tablefirsthead
. . .
\StopDefiningTabulars
```

See section 8.10.1.

⚠ lateximage supertabular and xtab are not supported inside a lateximage.

```
2 \newcommand{\LWRXT@firsthead}{}
3
4 \newcommand{\tablefirsthead}[1]{%
5 \long\gdef\LWRXT@firsthead{#1}%
6 }
7
8 \newcommand{\tablehead}[1]{}
9
10 \newcommand{\tablelasthead}[1]{}
11
12 \newcommand{\notablelasthead}{}
13
14 \newcommand{\tabletail}[1]{}
15
16 \newcommand{\LWRXT@lasttail}{}
17
18 \newcommand{\tablelasttail}[1]{%
19 \long\gdef\LWRXT@lasttail{#1}%
20 }

21 \newcommand{\tablecaption}[2][]{%
22 \long\gdef\LWRXT@caption{%
23 \ifblank{#1}%
24 {\caption{#2}}%
25 {\caption[#1]{#2}}%
26 }%
27 }
28
29 \let\topcaption\tablecaption
30 \let\bottomcaption\tablecaption
```

```

31 \newcommand*\LWRXT@caption{}
32
33 \newcommand*\shrinkheight[1]{}
34
35 \newcommand*\xentrystretch[1]{}
36
37 \NewDocumentEnvironment{xtabular}{s o m}
38 {%
39 \LWR@traceinfo{xtabular}%
40 \table%
41 \LWRXT@caption%
42 \begin{tabular}{#3}%
43 \TabularMacro\ifdefvoid{\LWRXT@firsthead}%
44 {\LWR@getmynexttoken}%
45 {\expandafter\LWR@getmynexttoken\LWRXT@firsthead}%
46 }%
47 {%
48 \ifdefvoid{\LWRXT@lasttail}%
49 }%
50 {%
51 \TabularMacro\ResumeTabular%
52 \LWRXT@lasttail%
53 }%
54 \end{tabular}%
55 \endtable%

56 \gdef\LWRXT@caption{}%

57 \LWR@traceinfo{xtabular done}%
58 }
59
60 \NewDocumentEnvironment{mpxtabular}{s o m}
61 {\minipage{\linewidth}\xtabular{#3}}
62 {\endxtabular\endminipage}

```

---

File 485 **lwarp-xunicode.sty**

§ 587 Package **xunicode**

Pkg xunicode Error if xunicode is loaded after lwarp.

Patch lwarp-xunicode, but also verify that it was loaded before lwarp:

**for HTML output:**

```

1 \LWR@loadbefore{xunicode}%
2
3 \LWR@ProvidesPackagePass{xunicode}[2011/09/09]

```

`\textcircled` becomes a span with a rounded border. `\providecommand` is used to avoid conflict with `textcomp`.

```

4 \providecommand*\LWR@HTML@textcircled[1]{}
5 \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%

```

```

6 }
7
8 \LWR@formatted{textcircled}

```

Nullify xunicode macros when generating filenames:

```

9 \FilenameNullify{%
10 \renewcommand*\textdegree{}%
11 \renewcommand*\textcelsius{}%
12 \renewcommand*\textohm{}%
13 \renewcommand*\textmu{}%
14 \renewcommand*\textlquill{}%
15 \renewcommand*\textrquill{}%
16 \renewcommand*\textcircledP{}%
17 \renewcommand*\texttwelveudash{}%
18 \renewcommand*\textthreequartersemdash{}%
19 \renewcommand*\textmho{}%
20 \renewcommand*\textnaira{}%
21 \renewcommand*\textpeso{}%
22 \renewcommand*\textrecipe{}%
23 \renewcommand*\textinterrobang{}%
24 \renewcommand*\textinterrobangdown{}%
25 \renewcommand*\textperthousand{}%
26 \renewcommand*\textpertenthousand{}%
27 \renewcommand*\textbaht{}%
28 \renewcommand*\textdiscount{}%
29 \renewcommand*\textservicemark{}%
30 \renewcommand*\textcircled[1]{#1}%
31 \renewcommand*\capitalcedilla[1]{#1}%
32 \renewcommand*\capitalogonek[1]{#1}%
33 \renewcommand*\capitalgrave[1]{#1}%
34 \renewcommand*\capitalacute[1]{#1}%
35 \renewcommand*\capitalcircumflex[1]{#1}%
36 \renewcommand*\capitaltilde[1]{#1}%
37 \renewcommand*\capitaldieresis[1]{#1}%
38 \renewcommand*\capitalhungarumlaut[1]{#1}%
39 \renewcommand*\capitalring[1]{#1}%
40 \renewcommand*\capitalcaron[1]{#1}%
41 \renewcommand*\capitalbreve[1]{#1}%
42 \renewcommand*\capitalmacron[1]{#1}%
43 \renewcommand*\capitaldotaccent[1]{#1}%
44 }% FilenameNullify

```

---

File 486 **lwarp-xurl.sty**

§ 588 Package **xurl**

Pkg xurl xurl is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{xurl}[2020/01/14]
2
3 \def\useOriginalUrlSetting{}

```

File 487 **lwarp-xy.sty**

§ 589 Package **XY**

(Emulates or patches code by KRISTOFFER H. ROSE, ROSS MOORE.)

Pkg xy xy is patched for use by lwarp.

for HTML output: 1 \LWR@ProvidesPackagePass{xy}[2013/10/06]

After xy modules have been loaded:

```
2 \AtBeginDocument{
```

The original definitions without a lateximage:

```
3 \LetLtxMacro\LWR@orig@xy\xy
4 \LetLtxMacro\LWR@orig@endxy\endxy
```

The outer-most xy environment is placed in a lateximage, but not more than one level deep, which would conflict with xy:

```
5 \renewcommand*{\xy}{%
6 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7 {\addtocounter{LWR@lateximagedepth}{1}}%
8 {\begin{lateximage}[-xy-~\PackageDiagramAltText]}%
9 \LWR@orig@xy%
10 }
11
12 \renewcommand*{\endxy}{%
13 \LWR@orig@endxy%
14 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%
15 {\addtocounter{LWR@lateximagedepth}{-1}}%
16 {\end{lateximage}}%
17 }
```

The \xybox must use the original definitions of \xy, \endxy:

```
18 \def\xybox#1{%
19 \LWR@orig@xy#1\LWR@orig@endxy%
20 \Edge@c={\rectangleEdge}\computeLeftUpness@%
21 }
```

If \xygraph is used, it is placed inside a lateximage:

```
22 \@ifundefined{xygraph}{}{
23
24 \LetLtxMacro\LWR@origxygraph\xygraph
25
26 \renewcommand{\xygraph}[1]{%
```

```

27 \begin{lateximage}[-xy- xygraph \PackageDiagramAltText]
28 \LWR@origxygraph{#1}
29 \end{lateximage}
30 }
31
32 }% xygraph defined
33
34 }% AtBeginDocument

```

---

File 488 **lwarp-zhlineskip.sty**

§ 590 Package **zhlineskip**

Pkg zhlineskip zhlineskip is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{zhlineskip}[2019/05/15]

2 \newcommand*\SetTextEnvironmentSinglespace[1]{}
3 \newcommand*\RestoreTextEnvironmentLeading[1]{}
4 \newcommand*\SetMathEnvironmentSinglespace[1]{}
5 \newcommand*\RestoreMathEnvironmentLeading[1]{}

```

---

File 489 **lwarp-zwpagelayout.sty**

§ 591 Package **zwpagelayout**

*(Emulates or patches code by ZDENĚK WAGNER.)*

Pkg zwpagelayout zwpagelayout is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{zwpagelayout}[2013/01/13]

2 \def\noBboxes{}
3 \@onlypreamble\noBboxes
4
5 \expandafter\ifx\csname definecolor\endcsname\relax \else
6 \definecolor{cmykblack}{cmyk}{0,0,0,1}
7 \definecolor{grblack}{gray}{0}
8 % \ifzwpl@redefineblack
9 % \definecolor{black}{cmyk}{0,0,0,1}\color{black}
10 % \fi
11 \definecolor{cmykred}{cmyk}{0,1,1,0}
12 \definecolor{cmykgreen}{cmyk}{1,0,1,0}
13 \definecolor{cmykblue}{cmyk}{1,1,0,0}
14 \definecolor{rgbred}{rgb}{1,0,0}
15 \definecolor{rgbgreen}{rgb}{0,1,0}
16 \definecolor{rgbblue}{rgb}{0,0,1}
17 % \ifzwpl@redefinetcmyk
18 % \definecolor{red}{cmyk}{0,1,1,0}

```

```

19 % \definecolor{green}{cmyk}{1,0,1,0}
20 % \definecolor{blue}{cmyk}{1,1,0,0}
21 % \fi
22 \fi
23
24 \let\OverprintXeTeXExtGState\relax
25
26 \DeclareRobustCommand\SetOverprint{\ignorespaces}
27 \DeclareRobustCommand\SetKnockout{\ignorespaces}
28 \DeclareRobustCommand\textoverprint[1]{\SetOverprint#1}
29 \DeclareRobustCommand\textknockout[1]{\SetKnockout#1}
30
31 \def\SetPDFminorversion#1{}
32 \@onlypreamble\SetPDFminorversion
33
34 \newcommand*\Vcorr{}
35
36 \DeclareRobustCommand\vb[1][1]{}
37 \NewDocumentCommand{\NewOddPage}{* o}{}
38 \NewDocumentCommand{\NewEvenPage}{* o}{}
39 \def\SetOddPageMessage#\gdef\ZW@oddwarning}
40 \def\SetEvenPageMessage#\gdef\Z@evenwarning}
41 \def\ZW@oddwarning{Empty page inserted}\let\ZW@evenwarning\ZW@oddwarning
42
43 \def\clap#1{#1}
44
45 \def\CropFlap{2in}
46 \def\CropSpine{1in}
47 \def\CropXSpine{1in}
48 \def\CropXtrim{.25in}
49 \def\CropYtrim{.25in}
50 \def\UserWidth{5in}
51 \def\UserLeftMargin{1in}
52 \def\UserRightMargin{1in}
53 \def\UserTopMargin{1in}
54 \def\UserBotMargin{1in}
55 \def\thePageNumber{\LWR@origpound\, \arabic{page}}
56 \ifXeTeX
57 \def\ifcaseZWdriver{\ifcase2}
58 \else
59 \def\ifcaseZWdriver{\ifcase1}
60 \fi
61 \DeclareRobustCommand\ZWifdriver[2]{}

```

---

File 490 **lwarp-patch-komascript.sty**

§ 592 Package **patch-komascript**

Pkg lwarp-patch-komascript Patches for komascript classes.

lwarp loads this package when scrbook, scartcl, or screprt classes are detected.

Many features are ignored during the HTML conversion. The goal is source-level compatibility.

`\captionformat`, `\figureformat`, and `\tableformat` are not yet emulated.

 **Not fully tested!** [Please send bug reports!](#)

Some features have not yet been tested. Please contact the author with any bug reports.

**for HTML output:** 1 `\ProvidesPackage{lwarp-patch-komascript}`

`typearea` is emulated.

2 `\RequirePackage{lwarp-typearea}`

`tocbasic` is emulated.

3 `\RequirePackage{lwarp-tocbasic}`

`scrextend` patches most of the new macros.

4 `\RequirePackage{lwarp-scrextend}`

Indexing macros, simplified for `lwarp`:

```

5 \AtBeginDocument{
6
7 \renewcommand*{\idx@heading}{%
8 \idx@@heading{\indexname}%
9 }
10
11 \renewenvironment{theindex}{%
12 \idx@heading%
13 \index@preamble\par\nobreak
14 \let\item\LWR@indexitem%
15 \let\subitem\LWR@indexsubitem%
16 \let\subsubitem\LWR@indexsubsubitem%
17 }
18 {}
19
20 \renewcommand*\indexspace{}
21
22 }% AtBeginDocument

```

The `\minisec` is placed inside a `<div>` of class `minisec`.

```

23 \renewcommand*{\minisec}[1]{
24 \begin{BlockClass}{minisec}
25 #1
26 \end{BlockClass}
27 }

```

The part and chapter preambles are placed as plain text just after each heading.

```

28 \@ifundefined{setpartpreamble}{}{
29 \RenewDocumentCommand{\setpartpreamble}{o o +m}{%
30 \renewcommand{\part@preamble}{#3}%
31 }
32 }
33
34 \@ifundefined{setchapterpreamble}{}{
35 \RenewDocumentCommand{\setchapterpreamble}{o o +m}{%
36 \renewcommand{\chapter@preamble}{#3}%
37 }
38 }

```

Simple captions are used in all cases.

```

39 \AtBeginDocument{
40 \AtBeginDocument{
41 \LetLtxMacro\captionbelow\caption
42 \LetLtxMacro\captionabove\caption
43
44 \LetLtxMacro\captionofbelow\captionof
45 \LetLtxMacro\captionofabove\captionof
46 }
47 }
48
49 \RenewDocumentEnvironment{captionbeside}{o m o o o s}
50 {}
51 {%
52 \IfValueTF{#1}%
53 {\caption[#1]{#2}}%
54 {\caption{#2}}%
55 }
56
57 \RenewDocumentEnvironment{captionofbeside}{m o m o o o s}
58 {}
59 {%
60 \IfValueTF{#2}%
61 {\captionof{#1}[#2]{#3}}%
62 {\captionof{#1}{#3}}%
63 }
64
65 \RenewDocumentCommand{\setcapindent}{s m}{}
66 \renewcommand*\setcaphanging{}
67 \renewcommand*\setcapwidth}[2][{}]{
68 \renewcommand*\setcapdynwidth}[2][{}]{
69 \RenewDocumentCommand{\setcapmargin}{s o m}{}

```

---

File 491 **lwarp-patch-memoir.sty**

§ 593 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.

⚠ **captions** lwarp uses `caption`, which causes a warning from memoir. This is normal. Adjust captions via `caption`, instead of memoir.

⚠ **options clash** While emulating memoir, lwarp pre-loads a number of packages (section 593.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading lwarp:

```
\documentclass{memoir}
...
\PassOptionsToPackage{options_list}{package_name}
...
\usepackage{lwarp}
...
\usepackage{package_name}
```

⚠ **version numbers** memoir emulates a number of packages, and declares a version date for each which often does not match the date of the corresponding freestanding package. This can cause warnings about incorrect version numbers. Since lwarp is intended to support the freestanding packages, which are often newer than the date declared by memoir, it is hoped that memoir will update and change its emulated version numbers to match.

`\label{bookmark}{tag}` `\label` accepts an optional (bookmark) argument, but this is ignored in HTML.

⚠ **comment** The `comment` environment is from the `comment` package, and thus requires that the `\begin` and `\end` each be on its own line:

```
\begin{comment}
This is a comment.
\end{comment}
```

`\newcomment` Comments defined with `\newcomment` use memoir's definitions, and behave as expected, where the `\begin` and `\end` do have to each be on its own line.

⚠ **verbatim footnotes** `\verbfootnote` is not supported.

⚠ **\newfootnoteseries** `\newfootnoteseries`, etc. are not supported.

⚠ **page notes** lwarp loads `pagenote` to perform memoir's `pagenote` functions, but there are minor differences in `\pagenotesubhead` and related macros.

`page notes with cleveref` To add support for pagenotes with `cleveref`, add:

```
\crefname{pagenote}{page note}{page notes}
\Crefname{pagenote}{Page note}{Page notes}
```

`page note \nameref` Note that for print mode, `\nameref` print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

⚠ **poems** Poem numbering is not supported.

⚠ **verbatim** The `verbatim` environment does not yet support the memoir enhancements. It is currently recommended to load and use `fancyvrb` instead.

 **glossaries** The memoir glossary system is not yet supported by *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}

### § 593.1 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}% no longer 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}% no longer 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 \let\framed\relax \let\endframed\relax
14 \let\shaded\relax \let\endshaded\relax
15 \let\leftbar\relax \let\endleftbar\relax
16 \let\snugshade\relax \let\endsnugshade\relax
17 \RequirePackage{lwarp-framed}% req'd
18
19 \RequirePackage{lwarp-hanging}% req'd
20 \RequirePackage{lwarp-makeidx}% req'd
21 \DisemulatePackage{moreverb}
22 \RequirePackage{lwarp-moreverb}
23 \RequirePackage{lwarp-mparhack}
24 \RequirePackage{lwarp-needspace}% req'd
25 \RequirePackage{lwarp-nextpage}% req'd
26 \RequirePackage{lwarp-pagenote}% req'd
27 \RequirePackage{lwarp-parskip}
28 \RequirePackage{lwarp-setspace}% req'd
29 \RequirePackage{lwarp-showidx}

30 \makeindex

31 % \RequirePackage{lwarp-tabularx}% no longer req'd
32 \RequirePackage{lwarp-titling}% req'd
33 % \RequirePackage{lwarp-tocbibind}% not emulated by memoir
34 \RequirePackage{lwarp-tocloft}% req'd
35 \RequirePackage{lwarp-verse}% req'd

```

## § 593.2 Label handling

Insert the lwarp label mechanism into the memoir package mechanism:

- `\@mem@old@label` is the L<sup>A</sup>T<sub>E</sub>X definition of `\label`.
- `\LWR@orig@label` adds the memoir definition.
- lwarp's `\LWR@new@label` uses `\LWR@orig@label`.
- Want memoir's `\label` to use lwarp's `\label`, which then would use L<sup>A</sup>T<sub>E</sub>X's `\label`.
- So:
  - `\@mem@old@label` becomes `\LWR@new@label`.
  - `\LWR@orig@label` becomes `\@mem@old@label`.
- `cleveref` then encapsulates all the above.
- For a subcaption, `cleveref` modifies memoir's `\sf@memsub@label`.

```
36 \let\LWR@orig@label\@mem@old@label
37 \let\@mem@old@label\LWR@new@label
```

Patches for subfloats to support additional lwarp labels:

```
38 \AtBeginDocument{
39 \renewcommand*\sf@memsub@label}[1]{%
40 \@bsphack
41 \sf@memsub@label@hook{#1}%
42 \@memoldlabel{#1}%
43 \LWR@label@createtag{sub@#1}%
44 \protected@write\@auxout{ }{%
45 \string\newlabel{sub@#1}%
46 {{{\nameuse{@thesub\@capttype}}}%
47 {\thepage}}}%
48 \LWR@write@lwarplabel{sub@#1}%
49 \@esphack
50 }
51 }
```

## § 593.3 Page layout

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.

```
52 \setstocksize{190in}{20in}
53 \setlrmarginsandblock{2in}{2in}{*}
54 \setulmarginsandblock{1in}{1in}{*}

55 \renewcommand*\stockavi{}
56 \renewcommand*\stockav{}
```

```
57 \renewcommand*\stockaiv{}
58 \renewcommand*\stockaiii{}
59 \renewcommand*\stockavii{}
60 \renewcommand*\stockbvi{}
61 \renewcommand*\stockbv{}
62 \renewcommand*\stockbiv{}
63 \renewcommand*\stockbiii{}
64 \renewcommand*\stockbvii{}
65 % \renewcommand*\stockmetriccrownvo{}% in docs but not in the package
66 \renewcommand*\stockmlargecrownvo{}
67 \renewcommand*\stockmdemyvo{}
68 \renewcommand*\stocksmallroyalvo{}
69 \renewcommand*\pageavi{}
70 \renewcommand*\pageavii{}
71 \renewcommand*\pageav{}
72 \renewcommand*\pageaiv{}
73 \renewcommand*\pageaiii{}
74 \renewcommand*\pagebvi{}
75 \renewcommand*\pagebvii{}
76 \renewcommand*\pagebv{}
77 \renewcommand*\pagebiv{}
78 \renewcommand*\pagebiii{}
79 % \renewcommand*\pagemetriccrownvo{}% in docs but not in the package
80 \renewcommand*\pagemlargecrownvo{}
81 \renewcommand*\pagemdemyvo{}
82 \renewcommand*\pagemsmallroyalvo{}
83
84 \renewcommand*\stockdbill{}
85 \renewcommand*\stockstatement{}
86 \renewcommand*\stockexecutive{}
87 \renewcommand*\stockletter{}
88 \renewcommand*\stockold{}
89 \renewcommand*\stocklegal{}
90 \renewcommand*\stockledger{}
91 \renewcommand*\stockbroadsheet{}
92 \renewcommand*\pagedbill{}
93 \renewcommand*\pagestatement{}
94 \renewcommand*\pageexecutive{}
95 \renewcommand*\pageletter{}
96 \renewcommand*\pageold{}
97 \renewcommand*\pagelegal{}
98 \renewcommand*\pageledger{}
99 \renewcommand*\pagebroadsheet{}
100
101 \renewcommand*\stockpottvo{}
102 \renewcommand*\stockfoolscapvo{}
103 \renewcommand*\stockcrownvo{}
104 \renewcommand*\stockpostvo{}
105 \renewcommand*\stocklargecrownvo{}
106 \renewcommand*\stocklargepostvo{}
107 \renewcommand*\stocksmalldemyvo{}
108 \renewcommand*\stockdemyvo{}
109 \renewcommand*\stockmediumvo{}
110 \renewcommand*\stocksmallroyalvo{}
111 \renewcommand*\stockroyalvo{}

```

```
112 \renewcommand*\stocksuperroyalvo{}
113 \renewcommand*\stockimperialvo{}
114 \renewcommand*\pagepottvo{}
115 \renewcommand*\pagefoolscapvo{}
116 \renewcommand*\pagecrownvo{}
117 \renewcommand*\pagepostvo{}
118 \renewcommand*\pagelargecrownvo{}
119 \renewcommand*\pagelargepostvo{}
120 \renewcommand*\pagesmalldemyvo{}
121 \renewcommand*\pagedemyvo{}
122 \renewcommand*\pagenediumvo{}
123 \renewcommand*\pagesmallroyalvo{}
124 \renewcommand*\pageroyalvo{}
125 \renewcommand*\pagesuperroyalvo{}
126 \renewcommand*\pageimperialvo{}
127
128 \renewcommand*\memfontfamily{}
129 \renewcommand*\memfontenc{}
130 \renewcommand*\memfontpack{}
131
132 \renewcommand*\anyptfilebase{}
133 \renewcommand*\anyptsizesize{10}
134
135 \renewcommand*\setstocksize[2]{}
136 \renewcommand*\settrimmedsize[3]{}
137 \renewcommand*\settrims[2]{}
138
139 % \newlength{\lxvchars}
140 % \setlength{\lxvchars}{305pt}
141 % \newlength{\xlvchars}
142 % \setlength{\xlvchars}{190pt}
143 \renewcommand*\setxlvchars[1]{}
144 \renewcommand*\setlxvchars[1]{}
145
146 \renewcommand*\settypeblocksize[3]{}
147 \renewcommand*\setlrmargins[3]{}
148 \renewcommand*\setlrmarginsandblock[3]{}
149 \renewcommand*\setbinding[1]{}
150 \renewcommand*\setulmargins[3]{}
151 \renewcommand*\setulmarginsandblock[3]{}
152 \renewcommand*\setcolsepandrulere[2]{}
153
154 \renewcommand*\setheadfoot[2]{}
155 \renewcommand*\setheaderspaces[3]{}
156 \renewcommand*\setmarginnotes[3]{}
157 \renewcommand*\setfootins[2]{}
158 \renewcommand*\checkandfixthelayout[1][1]{}
159 \renewcommand*\checkthelayout[1]{}
160 \renewcommand*\fixthelayout{}
161 %
162 % \newlength{\stockheight}
163 % \newlength{\trimtop}
164 % \newlength{\trimedge}
165 % \newlength{\stockwidth}
166 % \newlength{\spinmargin}
```

```

167 % \newlength{\foremargin}
168 % \newlength{\uppermargin}
169 % \newlength{\headmargin}
170 %
171 \renewcommand*\typeoutlayout{}
172 \renewcommand*\typeoutstandardlayout{}
173 \renewcommand*\settypeoutlayoutunit[1]{}
174 \renewcommand*\fixpdflayout{}
175 \renewcommand*\fixdvipslayout{}
176
177 \renewcommand*\medievalpage[1][{}
178 \renewcommand*\isopage[1][{}
179 \renewcommand*\semiisopage[1][{}
180
181 \renewcommand{\setpagebl}[3]{}
182 \renewcommand{\setpageml}[3]{}
183 \renewcommand{\setpagetl}[3]{}
184 \renewcommand{\setpagetm}[3]{}
185 \renewcommand{\setpagetr}[3]{}
186 \renewcommand{\setpagemr}[3]{}
187 \renewcommand{\setpagebr}[3]{}
188 \renewcommand{\setpagebm}[3]{}
189 \renewcommand{\setpagecc}[3]{}

```

#### § 593.4 Text and fonts

```

190 \let\miniscule\tiny
191 \let\HUGE\Huge
192
193 \renewcommand*\abnormalparskip[1]{}
194 \renewcommand*\nonzeroparskip{}
195 \renewcommand*\traditionalparskip{}
196
197 \let\onelineskip\baselineskip
198
199 \let\OnehalfSpacing\onehalfspacing
200 \let\DoubleSpacing\doublespacing
201 \renewcommand*\setPagenoteSpacing[1]{}
202 \renewcommand*\setFloatSpacing[1]{}

203 \renewcommand{\SingleSpacing}{\@ifstar\singlespacing\singlespacing}

204 \let\setSingleSpace\SetSingleSpace
205 \let\SingleSpace\singlespace
206 \let\endSingleSpace\endsinglespace
207 \let\Spacing\spacing
208 \let\endSpacing\endspacing
209 \let\OnehalfSpace\onehalfspace
210 \let\endOnehalfSpace\endonehalfspace
211 \csletcs{OnehalfSpace*}{onehalfspace}
212 \csletcs{endOnehalfSpace*}{endonehalfspace}
213 \let\DoubleSpace\doublespace
214 \let\endDoubleSpace\enddoublespace
215 \csletcs{DoubleSpace*}{doublespace}
216 \csletcs{endDoubleSpace*}{enddoublespace}

```

```

217 \renewcommand*\setDisplayskipStretch}[1]{}
218 \renewcommand*\memdskipstretch{}
219 \renewcommand*\noDisplayskipStretch{}
220 \renewcommand*\memdskips{}
221
222 \renewcommand*\midslippy{}
223 \renewenvironment*{midslippypar}{}{}
224
225 \renewcommand*\slippybottom{}

```

### § 593.5 Titles

```

226 \csletcs{titlingpage*}{titlingpage}
227 \csletcs{endtitlingpage*}{endtitlingpage}
228 \let\titlingpageend\relax
229 \newcommand{\titlingpageend}[2]{}
230 \let\andnext\and
231 \renewcommand*\thanksmarkstyle}[1]{}
232
233 \renewcommand{\thanksfootmark}{%
234 \thanksscript{\tmark}%
235 }
236
237 % \newlength{\thanksmarksep}% already provided by memoir

238 \renewcommand\titlingpageend[2]{}

```

### § 593.6 Abstracts

```

239 % \newlength{\absindent}
240 % \newlength{\absparsep}
241 \renewcommand*\abstractcol{}
242 \renewcommand*\abstractintoc{}
243 \renewcommand*\abstractnum{}
244 \renewcommand*\abstractrunin{}

```

### § 593.7 Document divisions

```

\book * (<2:PDF name>) [<3:TOC name>] [<4:PDF name>] (<5:PDF name>) {<6:name>}

245 \DeclareDocumentCommand{\book}{s d() o o d() m}{%
246 \LWR@section{#1}{#3}{#6}{book}%
247 }

248 \def\@apppage{%
249 \part*\appendixpagename}
250 }
251 \renewcommand\mempreaddapppagetotochook{}
252 \renewcommand\mempostaddapppagetotochook{}
253
254 \def\@sapppage{%
255 \part*\appendixpagename}
256 }

```

```

257 \DeclareDocumentCommand{\mainmatter}{s}{%
258 \booltrue{LWR@mainmatter}%
259 }
260
261 \DeclareDocumentCommand{\frontmatter}{s}{%
262 \boolfalse{LWR@mainmatter}%
263 }

264 \renewcommand*{\raggedbottomsection}{}
265 \renewcommand*{\normalbottomsection}{}
266 \renewcommand*{\bottomsectionskip}{}
267 \renewcommand*{\bottomsectionpenalty}{}
268 \csletcs{appendixpage*}{appendixpage}
269 \renewcommand*{\namedsubappendices}{}
270 \renewcommand*{\unnamedsubappendices}{}
271 \renewcommand*{\beforebookskip}{}
272 \renewcommand*{\afterbookskip}{}
273 \renewcommand*{\beforepartskip}{}
274 \renewcommand*{\afterpartskip}{}
275 \renewcommand*{\midbookskip}{}
276 \renewcommand*{\midpartskip}{}
277 \renewcommand*{\printbookname}{}
278 \renewcommand*{\booknamefont}{}
279 \renewcommand*{\booknamenum}{}
280 \renewcommand*{\printbooknum}{}
281 \renewcommand*{\booknumfont}{}
282 \renewcommand*{\printpartname}{}
283 \renewcommand*{\partnamefont}{}
284 \renewcommand*{\partnamenum}{}
285 \renewcommand*{\printpartnum}{}
286 \renewcommand*{\partnumfont}{}
287 \renewcommand*{\printbooktitle}[1]{}
288 \renewcommand*{\booktitlefont}{}
289 \renewcommand*{\printparttitle}[1]{}
290 \renewcommand*{\parttitlefont}{}
291 \renewcommand*{\bookpageend}{}
292 \renewcommand*{\bookblankpage}{}
293 \renewcommand*{\nobookblankpage}{}
294 \renewcommand*{\partpageend}{}
295 \renewcommand*{\partblankpage}{}
296 \renewcommand*{\nopartblankpage}{}
297 \RenewDocumentCommand{\newleadpage}{s o m}{}% todo
298 \RenewDocumentCommand{\renewleadpage}{s o m}{}% todo
299 \renewcommand*{\leadpagetoclevel}{chapter}
300
301 \renewcommand*{\openright}{}
302 \renewcommand*{\openleft}{}
303 \renewcommand*{\openany}{}
304 \renewcommand*{\clearforchapter}{}
305 \renewcommand*{\memendofchapterhook}{}
306 \renewcommand*{\chapterheadstart}{}
307 % \newlength{\beforechapskip}
308 \renewcommand*{\afterchapternum}{}
309 % \newlength{\midchapskip}
310 \renewcommand*{\afterchaptertitle}{}

```

```
311 % \newlength{\afterchapskip}
312 \renewcommand*\printchaptername{}
313 \renewcommand*\chapnamefont{}
314 \renewcommand*\chapternamenum{}
315 \renewcommand*\printchapternum{}
316 \renewcommand*\chapnumfont{}
317 \renewcommand{\printchaptertitle}[1]{}
318 \renewcommand*\chaptitelfont{}
319 \renewcommand*\printchapternonum{}
320 \renewcommand*\indentafterchapter{}
321 \renewcommand*\noindentafterchapter{}
322 \renewcommand*\insertchapterspace{}
323
324 \renewcommand*\chapterstyle}[1]{}
325 \renewcommand{\makechapterstyle}[2]{}
326 \renewcommand*\chapindent{}
327 \let\chapterprecis\cftchapterprecis
328 \let\chapterprecishere\cftchapterprecishere
329 \let\chapterprecistoc\cftchapterprecistoc
330 \renewcommand*\precisfont{}
331 \renewcommand*\prechapterprecis{}
332 \renewcommand*\postchapterprecis{}
333 \renewcommand{\precistoc}[1]{}
334 \renewcommand*\precistocfont{}
335 \renewcommand*\precistocformat{}
336 % \newlength{\prechapterprecisshift}
337
338 \renewcommand*\setbeforesecskip}[1]{}
339 \renewcommand*\setaftersecskip}[1]{}
340 \renewcommand*\setsecindent}[1]{}
341 \renewcommand*\setsecheadstyle}[1]{}
342 \renewcommand*\setbeforesubsecskip}[1]{}
343 \renewcommand*\setaftersubsecskip}[1]{}
344 \renewcommand*\setsubsecindent}[1]{}
345 \renewcommand*\setsubsecheadstyle}[1]{}
346 \renewcommand*\setbeforesubsubsecskip}[1]{}
347 \renewcommand*\setaftersubsubsecskip}[1]{}
348 \renewcommand*\setsubsubsecindent}[1]{}
349 \renewcommand*\setsubsubsecheadstyle}[1]{}
350 \renewcommand*\setbeforeparaskip}[1]{}
351 \renewcommand*\setafterparaskip}[1]{}
352 \renewcommand*\setparaindent}[1]{}
353 \renewcommand*\setparaheadstyle}[1]{}
354 \renewcommand*\setbeforesubparaskip}[1]{}
355 \renewcommand*\setaftersubparaskip}[1]{}
356 \renewcommand*\setsubparaindent}[1]{}
357 \renewcommand*\setsubparaheadstyle}[1]{}
358 \renewcommand{\@hangfrom}[1]{#1}
359 \renewcommand{\sethangfrom}[1]{}
360 \renewcommand{\setsecnumformat}[1]{}
361
362 \renewcommand*\hangsecnum{}
363 \renewcommand*\defaultsecnum{}
364
365 \renewcommand*\sechook{}

```

```

366 \renewcommand{\setsechook}[1]{}
367 \renewcommand*\subsechook{}
368 \renewcommand{\setsubsechook}[1]{}
369 \renewcommand*\subsubsechook{}
370 \renewcommand{\setsubsubsechook}[1]{}
371 \renewcommand*\parahook{}
372 \renewcommand{\setparahook}[1]{}
373 \renewcommand*\subparahook{}
374 \renewcommand{\setsubparahook}[1]{}
375
376 \RenewDocumentCommand{\plainbreak}{s m}{\begin{center}~\end{center}}
377
378 \RenewDocumentCommand{\fancybreak}{s +m}{%
379 \begin{center}#2\end{center}%
380 }
381
382 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
383 \begin{center}#4\end{center}%
384 }
385
386 \RenewDocumentCommand{\pfbreak}{s}{%
387 \begin{center}
388 \pfbreakdisplay
389 \end{center}
390 }
391
392 % \newlength{\pfbreakskip}
393 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
394
395 \renewcommand{\makeheadstyles}[2]{}
396 \renewcommand*\headstyles[1]{}

```

## § 593.8 **Pagination and headers**

```

397 \renewcommand*\savepagenumber{}
398 \renewcommand*\restorepagenumber{}
399 \renewcommand*\uppercaseheads{}
400 \renewcommand*\nouppercaseheads{}
401
402 \renewcommand*\bookpagemark}[1]{}
403 \renewcommand*\partmark}[1]{}
404 \renewcommand*\bibmark{}
405 \renewcommand*\indexmark{}
406 \renewcommand*\glossarymark{}
407
408 \LWR@origpagestyle{empty}
409 \renewcommand*\ps@empty{}
410 \renewcommand*\makepagestyle}[1]{}
411 \renewcommand*\emptyshook{}%
412 % \renewcommand*\empty@oddhead{}
413 % \renewcommand*\empty@oddfoot{}
414 % \renewcommand*\empty@evenhead{}
415 % \renewcommand*\empty@evenfoot{}
416 \renewcommand*\@oddhead{}
417 \renewcommand*\@oddfoot{}
418 \renewcommand*\@evenhead{}

```

```

419 \renewcommand*\@evenfoot{}
420 \renewcommand*\aliaspagestyle[2]{}
421 \renewcommand*\copypagestyle[2]{}
422
423 \renewcommand*\makeevenhead[4]{}
424 \renewcommand*\makeoddhead[4]{}
425 \renewcommand*\makeevenfoot[4]{}
426 \renewcommand*\makeoddfoot[4]{}
427 \renewcommand*\makerunningwidth[3]{}
428 % \newlength{\headwidth}
429 \renewcommand*\makeheadrule[3]{}
430 \renewcommand*\makefootrule[3]{}
431 \renewcommand*\makeheadfootruleprefix[3]{}
432 % \newlength{\normalrulethickness}
433 % \setlength{\normalrulethickness}{.4pt}
434 % \newlength{\footruleheight}
435 % \newlength{\footruleskip}
436 \renewcommand*\makeheadposition[5]{}
437 \renewcommand*\makepsmarks[2]{}
438 \renewcommand*\makeheadfootstrut[3]{}

439 \renewcommand{\createmark}[5]{\csdef{#1mark}[1]{} }
440 \renewcommand{\createplainmark}[3]{\csdef{#1mark}{} }

441 \renewcommand{\memUHead}[1]{}
442 \renewcommand*\clearplainmark[1]{}
443 \renewcommand*\clearmark[1]{}
444 \renewcommand{\addtopsmarks}[3]{}
445 \renewcommand{\ifonlyfloats}[2]{#2}
446 \renewcommand*\mergepagefloatstyle[3]{}
447
448 \renewcommand*\framepichead{}
449 \renewcommand*\framepictextfoot{}
450 \renewcommand*\framepichook{}
451 \renewcommand*\showheadfootlocoff{}
452 \renewcommand*\showtextblocklocoff{}

```

### § 593.9 Paragraphs and lists

```

453 \renewcommand{\hangfrom}[1]{#1}
454 \let\centerfloat\centering
455 \renewcommand*\raggedyright[1][{}]{ }
456 % \newlength{\ragrparindent}
457 \renewcommand{\sourceatright}[2][{\attribution{#2}}]
458 \let\memorigdbs\LWR@endofline
459 \let\memorigpar\par
460 \let\atcentercr\LWR@endofline
461
462 \renewcommand*\linenottooshort[1][{}]{ }
463 \renewcommand*\russianpar{}
464 \renewcommand*\lastlinerulefill{}
465 \renewcommand*\lastlineparrule{}
466 \renewcommand*\justlastraggedleft{}
467 \renewcommand*\raggedrightthenleft{}
468 \renewcommand*\leftcenterright{}

```

```

469
470 \renewcommand{\leftspringright}[4]{%
471 \begin{minipage}{#1\linewidth}#3\end{minipage}\quad%
472 \begin{minipage}{#2\linewidth}\begin{flushright}#4\end{flushright}\end{minipage}%
473 }
474
475 \renewenvironment*{blockdescription}
476 {\LWR@descriptionstart\LWR@origdescription}
477 {\enddescription}
478
479 \renewcommand*{\blockdescriptionlabel}[1]{\textbf{#1}}
480 \renewenvironment*{labelled}[1]{\begin{description}}{\end{description}}
481 \renewenvironment*{flexlabelled}[6]{\begin{description}}{\end{description}}
482 \renewcommand*{\tightlists}{}
483 \renewcommand*{\defaultlists}{}
484 \RenewDocumentCommand{\firmlists}{s}{}
485 \renewcommand*{\firmlist}{}
486 \renewcommand*{\tightlist}{}
487 \renewcommand*{\zerotrivseps}{}
488 \renewcommand*{\savetrivseps}{}
489 \renewcommand*{\restoretrivseps}{}

```

### § 593.10 Contents lists

```

490 \csletcs{tableofcontents*}{tableofcontents}
491 \csletcs{listoffigures*}{listoffigures}
492 \csletcs{listoftables*}{listoftables}
493 \renewenvironment{KeepFromToc}{}{}
494 \renewcommand*{\onocoltocetc}{}
495 \renewcommand*{\twocoltocetc}{}
496 \renewcommand*{\ensureonocol}{}
497 \renewcommand*{\restorefromonocol}{}
498 \renewcommand*{\doccoltocetc}{}
499
500 \renewcommand{\toheadstart}{}
501 \renewcommand{\printtoctitle}[1]{}
502 \renewcommand{\tocmark}{}
503 \renewcommand{\aftertoctitle}{}
504 \renewcommand{\lofheadstart}{}
505 \renewcommand{\printloftitle}[1]{}
506 \renewcommand{\lofmark}{}
507 \renewcommand{\afterloftitle}{}
508 \renewcommand{\lotheadstart}{}
509 \renewcommand{\printlottitle}[1]{}
510 \renewcommand{\lotmark}{}
511 \renewcommand{\afterlottitle}{}
512
513 \renewcommand*{\setpnumwidth}[1]{}
514 \renewcommand*{\setrmarg}[1]{}
515 \renewcommand*{\cftbookbreak}{}
516 \renewcommand*{\cftpartbreak}{}
517 \renewcommand*{\cftchapterbreak}{}

518 % \newlength{\cftbeforebookskip}
519 % \newlength{\cftbookindent}
520 % \newlength{\cftbooknumwidth}

```

```

521 \renewcommand*\cftbookfont{}
522 \renewcommand*\cftbookname{}
523 \renewcommand*\cftbookpresnum{}
524 \renewcommand*\cftbookaftersnum{}
525 \renewcommand*\cftbookaftersnumb{}
526 \renewcommand*\cftbookleader{}
527 \renewcommand*\cftbookdotsep}{1}
528 \renewcommand*\cftbookpagefont{}
529 \renewcommand*\cftbookafterpnum{}
530 \renewcommand*\cftbookformatpnum}[1]{}
531 \renewcommand*\cftbookformatpnumhook}[1]{}

```

Part is already defined by tocloft.

```

532 % \newlength{\cftbeforechapterskip}
533 % \newlength{\cftchapterindent}
534 % \newlength{\cftchapternumwidth}
535 \renewcommand*\cftchapterfont{}
536 \renewcommand*\cftchaptername{}
537 \renewcommand*\cftchapterpresnum{}
538 \renewcommand*\cftchapteraftersnum{}
539 \renewcommand*\cftchapteraftersnumb{}
540 \renewcommand*\cftchapterleader{}
541 \renewcommand*\cftchapterdotsep}{1}
542 \renewcommand*\cftchapterpagefont{}
543 \renewcommand*\cftchapterafterpnum{}
544 \renewcommand*\cftchapterformatpnum}[1]{}
545 \renewcommand*\cftchapterformatpnumhook}[1]{}

546 % \newlength{\cftbeforesectionsip}
547 % \newlength{\cftsectionindent}
548 % \newlength{\cftsectionnumwidth}
549 \renewcommand*\cftsectionfont{}
550 \renewcommand*\cftsectionname{}
551 \renewcommand*\cftsectionpresnum{}
552 \renewcommand*\cftsectionaftersnum{}
553 \renewcommand*\cftsectionaftersnumb{}
554 \renewcommand*\cftsectionleader{}
555 \renewcommand*\cftsectiondotsep}{1}
556 \renewcommand*\cftsectionpagefont{}
557 \renewcommand*\cftsectionafterpnum{}
558 \renewcommand*\cftsectionformatpnum}[1]{}
559 \renewcommand*\cftsectionformatpnumhook}[1]{}

560 % \newlength{\cftbeforesubsectionskip}
561 % \newlength{\cftsubsectionindent}
562 % \newlength{\cftsubsectionnumwidth}
563 \renewcommand*\cftsubsectionfont{}
564 \renewcommand*\cftsubsectionname{}
565 \renewcommand*\cftsubsectionpresnum{}
566 \renewcommand*\cftsubsectionaftersnum{}
567 \renewcommand*\cftsubsectionaftersnumb{}
568 \renewcommand*\cftsubsectionleader{}
569 \renewcommand*\cftsubsectiondotsep}{1}
570 \renewcommand*\cftsubsectionpagefont{}
571 \renewcommand*\cftsubsectionafterpnum{}

```

```
572 \renewcommand*{\cftsubsectionformatpnum}[1]{
573 \renewcommand*{\cftsubsectionformatpnumhook}[1]{

574 % \newlength{\cftbeforesubsubsectionsip}
575 % \newlength{\cftsubsubsectionindent}
576 % \newlength{\cftsubsubsectionnumwidth}
577 \renewcommand*{\cftsubsubsectionfont}{}
578 \renewcommand*{\cftsubsubsectionname}{}
579 \renewcommand*{\cftsubsubsectionpresnum}{}
580 \renewcommand*{\cftsubsubsectionaftersnum}{}
581 \renewcommand*{\cftsubsubsectionaftersnumb}{}
582 \renewcommand*{\cftsubsubsectionleader}{}
583 \renewcommand*{\cftsubsubsectiondotsep}{1}
584 \renewcommand*{\cftsubsubsectionpagefont}{}
585 \renewcommand*{\cftsubsubsectionafterpnum}{}
586 \renewcommand*{\cftsubsubsectionformatpnum}[1]{
587 \renewcommand*{\cftsubsubsectionformatpnumhook}[1]{

588 % \newlength{\cftbeforeparagraphskip}
589 % \newlength{\cftparagraphindent}
590 % \newlength{\cftparagraphnumwidth}
591 \renewcommand*{\cftparagraphfont}{}
592 \renewcommand*{\cftparagraphname}{}
593 \renewcommand*{\cftparagraphpresnum}{}
594 \renewcommand*{\cftparagraphaftersnum}{}
595 \renewcommand*{\cftparagraphaftersnumb}{}
596 \renewcommand*{\cftparagraphleader}{}
597 \renewcommand*{\cftparagraphdotsep}{1}
598 \renewcommand*{\cftparagraphpagefont}{}
599 \renewcommand*{\cftparagraphafterpnum}{}
600 \renewcommand*{\cftparagraphformatpnum}[1]{
601 \renewcommand*{\cftparagraphformatpnumhook}[1]{

602 % \newlength{\cftbeforesubparagraphskip}
603 % \newlength{\cftsubparagraphindent}
604 % \newlength{\cftsubparagraphnumwidth}
605 \renewcommand*{\cftsubparagraphfont}{}
606 \renewcommand*{\cftsubparagraphname}{}
607 \renewcommand*{\cftsubparagraphpresnum}{}
608 \renewcommand*{\cftsubparagraphaftersnum}{}
609 \renewcommand*{\cftsubparagraphaftersnumb}{}
610 \renewcommand*{\cftsubparagraphleader}{}
611 \renewcommand*{\cftsubparagraphdotsep}{1}
612 \renewcommand*{\cftsubparagraphpagefont}{}
613 \renewcommand*{\cftsubparagraphafterpnum}{}
614 \renewcommand*{\cftsubparagraphformatpnum}[1]{
615 \renewcommand*{\cftsubparagraphformatpnumhook}[1]{

616 % \newlength{\cftbeforefigureskip}
617 % \newlength{\cftfigureindent}
618 % \newlength{\cftfigurenumwidth}
619 \renewcommand*{\cftfigurefont}{}
620 \renewcommand*{\cftfigurename}{}
621 \renewcommand*{\cftfigurepresnum}{}
622 \renewcommand*{\cftfigureaftersnum}{}
623 \renewcommand*{\cftfigureaftersnumb}{}

```

```
624 \renewcommand*\cftfigureleader{}
625 \renewcommand*\cftfiguredotsep{1}
626 \renewcommand*\cftfigurepagefont{}
627 \renewcommand*\cftfigureafterpnum{}
628 \renewcommand*\cftfigureformatpnum}[1]{}
629 \renewcommand*\cftfigureformatpnumhook}[1]{}

```

```
630 % \newlength{\cftbeforesubfigureskip}
631 % \newlength{\cftsubfigureindent}
632 % \newlength{\cftsubfigurenumwidth}
633 \newcommand*\cftsubfigurefont{}
634 \newcommand*\cftsubfigurename{}
635 \newcommand*\cftsubfigurepresnum{}
636 \newcommand*\cftsubfigureaftersnum{}
637 \newcommand*\cftsubfigureaftersnumb{}
638 \newcommand*\cftsubfigureleader{}
639 \newcommand*\cftsubfiguredotsep{1}
640 \newcommand*\cftsubfigurepagefont{}
641 \newcommand*\cftsubfigureafterpnum{}
642 \newcommand*\cftsubfigureformatpnum}[1]{}
643 \newcommand*\cftsubfigureformatpnumhook}[1]{}

```

```
644 % \newlength{\cftbeforetableskip}
645 % \newlength{\cfttableindent}
646 % \newlength{\cfttablenumwidth}
647 \renewcommand*\cfttablefont{}
648 \renewcommand*\cfttablename{}
649 \renewcommand*\cfttablepresnum{}
650 \renewcommand*\cfttableaftersnum{}
651 \renewcommand*\cfttableaftersnumb{}
652 \renewcommand*\cfttableleader{}
653 \renewcommand*\cfttabledotsep{1}
654 \renewcommand*\cfttablepagefont{}
655 \renewcommand*\cfttableafterpnum{}
656 \renewcommand*\cfttableformatpnum}[1]{}
657 \renewcommand*\cfttableformatpnumhook}[1]{}

```

```
658 % \newlength{\cftbeforesubtableskip}
659 % \newlength{\cftsubtableindent}
660 % \newlength{\cftsubtablenumwidth}
661 \newcommand*\cftsubtablefont{}
662 \newcommand*\cftsubtablename{}
663 \newcommand*\cftsubtablepresnum{}
664 \newcommand*\cftsubtableaftersnum{}
665 \newcommand*\cftsubtableaftersnumb{}
666 \newcommand*\cftsubtableleader{}
667 \newcommand*\cftsubtabledotsep{1}
668 \newcommand*\cftsubtablepagefont{}
669 \newcommand*\cftsubtableafterpnum{}
670 \newcommand*\cftsubtableformatpnum}[1]{}
671 \newcommand*\cftsubtableformatpnumhook}[1]{}

```

```
672 \renewcommand*\booknumberline}[1]{}
673 \renewcommand*\partnumberline}[1]{}
674 \renewcommand*\chapternumberline}[1]{}
675 \renewcommand*\numberlinehook}[1]{}

```

```

676 % \renewcommand*\cftwhatismyname}{}%
677 \renewcommand*\booknumberlinehook}[1]{%
678 \renewcommand*\partnumberlinehook}[1]{%
679 \renewcommand*\chapternumberlinehook}[1]{%
680 \renewcommand{\numberlinebox}[2]{%
681 \renewcommand{\booknumberlinebox}[2]{%
682 \renewcommand{\partnumberlinebox}[2]{%
683 \renewcommand{\chapternumberlinebox}[2]{%
684 %
685 \newlength{\cftparfillskip}
686 \renewcommand*\cftpagenumbersoff}[1]{%
687 \renewcommand*\cftpagenumberon}[1]{%
688 \renewcommand*\cftlocalchange}[3]{%
689 \renewcommand*\cftaddtitleline}[4]{%
690 \renewcommand*\cftaddnumtitleline}[4]{%
691 \renewcommand{\cftinsertcode}[2]{%
692 \renewcommand{\cftinserthook}[2]{%
693 \renewcommand{\settocpreprocessor}[2]{%
694 \DeclareRobustCommand{\cftpagenumbersoff}[1]{%
695 \DeclareRobustCommand{\cftpagenumberon}[1]{%

```

### § 593.11 Floats and captions

\xfloat

\@xdblfloat Reestablish lwarp's takeover the float handing, which memoir tried to grab:

```

696 \AtBeginDocument{
697 \def\xfloat #1[#2]{%
698 \LWR@floatbegin{#1}[#2]
699 \normalsize
700 \@nameuse{#1adjustment}%
701 \LWR@futurenonspacel\LWR@mynexttoken\LWR@floatalignment%
702 }
703 \def\@xdblfloat #1[#2]{%
704 \LWR@floatbegin{#1}[#2]
705 \normalsize
706 \@nameuse{#1adjustment}%
707 \LWR@futurenonspacel\LWR@mynexttoken\LWR@floatalignment%
708 }
709 }

```

\newfloat [*1: within*] [*2: type*] [*3: ext*] [*4: capname*]

```

710 \RenewDocumentCommand{\newfloat}{o m m m}{%
711 \def\LWR@tempone{#4}%
712 \def\LWR@temptwo{\@nameuse{#2name}}%
713 \ifdefequal{\LWR@tempone}{\LWR@temptwo}{% recursive name, already defined
714 \IfValueTF{#1}%
715 {\DeclareFloatingEnvironment[fileext=#3,within=#1]{#2}}%
716 {\DeclareFloatingEnvironment[fileext=#3]{#2}}%
717 }{% not recursive name
718 \IfValueTF{#1}%
719 {\DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
720 {\DeclareFloatingEnvironment[fileext=#3,name={#4}]{#2}}%
721 }%

```

`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.

```
722 \cslet{listof#2s}\relax%
723 \cslet{listof#2es}\relax%
724 }
```

`\newlistof` [*within*] [*type*] [*ext*] [*listofname*]

Emulated through the `\newfloat` mechanism. Note that `memoir` uses a different syntax than `tocloft` for the name.

```
725 \RenewDocumentCommand{\newlistof}{o m m m}
726 {%
727 \IfValueTF{#1}%
728 {\newlistentry[#1]{#2}{#3}{0}}%
729 {\newlistentry{#2}{#3}{0}}%
730 \@namedef{ext@#2}{#3}%
731 \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
732 \setcounter{#3depth}{1}%
733 \@namedef{#3mark}{}%
734 \@namedef{#2}{\listof{#2}{#4}}%
735 \@namedef{cftmake#3title}{}%
736 \@ifundefined{cftbefore#3titleskip}{}%
737 \expandafter\newlength\csname cftbefore#3titleskip\endcsname%
738 \expandafter\newlength\csname cftafter#3titleskip\endcsname%
739 }{}%
740 \@namedef{cft#3titlefont}{}%
741 \@namedef{cftafter#3title}{}%
742 \@namedef{cft#3prehook}{}%
743 \@namedef{cft#3posthook}{}%
744 }
```

```
745 \renewcommand{\setfloatadjustment}[2]{}%
```

Borrowed from the `lwarp` version of `keyfloat`:

```
746 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{0{-1.2ex} m}
747 {% start
748 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{}{marginblock}%
749 \renewcommand*{\@capttype}{#2}%
750 }
751 {%
752 \endLWR@BlockClassWP%
753 }
754
755 \DeclareDocumentEnvironment{marginfigure}{o}
756 {\begin{KFLTmemoir@marginfloat}{figure}}
757 {\end{KFLTmemoir@marginfloat}}
758
759 \DeclareDocumentEnvironment{margintable}{o}
760 {\begin{KFLTmemoir@marginfloat}{table}}
761 {\end{KFLTmemoir@marginfloat}}

762 \renewcommand{\setmarginfloatcaptionadjustment}[2]{}%
```

```

763 \renewcommand{\setmpjustification}[2]{}
764 \renewcommand*\mpjustification{}
765 \renewcommand*\setfloatlocations}[2]{}
766 \DeclareDocumentCommand{\suppressfloats}{o}{}
767 \renewcommand*\FloatBlock{}
768 \renewcommand*\FloatBlockAllowAbove{}
769 \renewcommand*\FloatBlockAllowBelow{}
770 \renewcommand*\setFloatBlockFor{}
771
772 \renewcommand{\captiontitlefinal}[1]{}
773
774 \renewcommand{\flegtable}{\tablename}
775 \renewcommand{\flegfigure}{\figurename}
776 \renewcommand{\flegtocable}{}
777 \renewcommand{\flegtocfigure}{}

778 \renewcommand{\@makesubfloatcaption}[2]{%
779 \minipagefullwidth
780 \begin{minipage}{\linewidth}%
781 #1 \ignorespaces #2 \unskip%
782 \end{minipage}
783 }
784
785 \renewcommand*\tightsubcaptions{}
786 \renewcommand*\loosesubcaptions{}
787
788 \renewcommand*\subcaptionsize}[1]{}
789 \renewcommand*\subcaptionlabelfont}[1]{}
790 \renewcommand*\subcaptionfont}[1]{}
791 \renewcommand*\subcaptionstyle}[1]{}
792
793 \renewcommand*\hangsubcaption{}
794 \renewcommand*\shortsubcaption{}
795 \renewcommand*\normalsubcaption{}
796
797 \RenewDocumentEnvironment{sidecaption}{o m o}
798 {}
799 {%
800 \IfValueTF{#1}{\caption[#1]{#2}}{\caption{#2}}%
801 \IfValueT{#3}{\label{#3}}%
802 }
803
804 % \newlength{\sidecapwidth}
805 % \newlength{\sidecapsep}
806 \renewcommand*\setsidecaps}[2]{}
807 \renewcommand*\sidecapmargin}[1]{}
808 % \newif\ifscapmargleft
809 \scapmargleftfalse
810 \renewcommand*\setsidecappos}[1]{}

Env sidecontcaption

811 \RenewDocumentEnvironment{sidecontcaption}{m o}
812 {}

```

```

813 {%
814 \ifdef{\ContinuedFloat}%
815 {\ContinuedFloat}%
816 {\addtocounter{\@capttype}{-1}}%
817 \caption{#1}%

```

Without `\@capttype`, the section is referred to instead.

```

818 \IfValueT{#2}{\label[\@capttype]{#2}}%
819 }

```

`\sidenamedlegend` does not appear to use the `roc` argument.

```

820 \renewenvironment{sidenamedlegend}[2][]{
821 \begin{center}
822 \nameuse{\@capttype name}\CaptionSeparator#2
823 \end{center}
824 }
825 {}
826
827 \renewenvironment{sidelegend}[1]
828 {\begin{center}
829 #1
830
831 }
832 {\end{center}}
833
834 \renewcommand*\sidecapstyle{}
835 \renewcommand*\overridescapmargin[1]{}
836 % \newlength{sidecapraise}
837 \renewcommand*\sidecapfloatwidth{\linewidth}
838
839 \LetLtxMacro\ctabular\ctabular
840 \LetLtxMacro\endctabular\endctabular
841
842 \renewcommand{\autorows}[5][]{%
843 #5%
844 }
845
846 \renewcommand{\autocol}[5][]{%
847 #5%
848 }

```

## § 593.12 Footnotes and page notes

```

849 \renewcommand*\feetabovelfloat{}
850 \renewcommand*\feetbelowfloat{}
851 \renewcommand*\feetatbottom{}
852
853 \renewcommand*\verbfootnote}[2][]{%
854 \PackageError{lwarp, memoir}%
855 {Verbatim footnotes are not yet supported by lwarp}%
856 {This may be improved some day.}%
857 }
858
859 \renewcommand*\plainfootnotes{}

```

```
860 \renewcommand*\twocolumnfootnotes{}
861 \renewcommand*\threecolumnfootnotes{}
862 \renewcommand*\paragraphfootnotes{}
863 \renewcommand*\footfudgefiddle{}
864
865 \renewcommand*\newfootnoteseries}[1]{%
866 \PackageError{lwarp, memoir}%
867 {Memoir footnote series are not yet supported by lwarp}%
868 {This may be improved some day.}%
869 }
870
871 \renewcommand*\plainfootstyle}[1]{}
872 \renewcommand*\twocolumnfootstyle}[1]{}
873 \renewcommand*\threecolumnfootstyle}[1]{}
874 \renewcommand*\paragraphfootstyle}[1]{}
875
876 \renewcommand*\footfootmark{}
877 \renewcommand*\footmarkstyle}[1]{}
878
879 % \newlength{\footmarkwidth}
880 % \newlength{\footmarksep}
881 % \newlength{\footparindent}
882
883 \renewcommand*\foottextfont{}
884
885 \renewcommand*\marginparmargin}[1]{}
886 \renewcommand*\sideparmargin}[1]{}
887
888 \LetLtxMacro\sidepar\marginpar
889 \renewcommand*\sideparfont{}
890 \renewcommand*\sideparform{}
891 \LWR@providelength{\sideparvshift}
892
893 \renewcommand*\parnopar{}
894
895 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
896 \renewcommand*\sidebarmargin}[1]{}
897 \renewcommand*\sidebarfont{}
898 \renewcommand*\sidebarform{}
899 % \newlength{\sidebarhsep}
900 % \newlength{\sidebarvsep}
901 % \newlength{\sidebarwidth}
902 % \newlength{\sidebartopsep}
903 \renewcommand{\setsidebarheight}[1]{}
904 \renewcommand*\setsidebars}[6]{}
905 \renewcommand*\footnotesatfoot{}
906 \renewcommand*\footnotesinmargin{}
907
908 \LetLtxMacro\sidefootnote\footnote
909 \LetLtxMacro\sidefootnotemark\footnotemark
910 \LetLtxMacro\sidefootnotetext\footnotetext
911
912 \renewcommand*\sidefootmargin}[1]{}
913 % \newlength{\sidefoothsep}
914 % \newlength{\sidefootvsep}
```

```

915 % \newlength{\sidefootwidth}
916 % \newlength{\sidefootadjust}
917 % \newlength{\sidefootheight}
918 \renewcommand*\setsidefootheight[1]{}
919 % \renewcommand*\sidefootfont{}% in docs but not in the package
920 \renewcommand*\setsidefeet[6]{}
921 \renewcommand*\sidefootmarkstyle[1]{}
922 \renewcommand*\sidefoottextfont{}
923 \renewcommand*\sidefootform{}

924 \renewcommand*\continuousnotenums{\pncontopttrue}% from pagenote
925 \renewcommand*\notepageref{}
926 \renewcommand*\prenotetext{}
927 \renewcommand*\postnotetext{}
928 \LetLtxMacro\printpageinnoteshyperref\printpageinnotes
929 \renewcommand*\foottopagenote{}
930 \renewcommand*\pagetofootnote{}

```

`\m@m@wrpnote`

`\startnoteentrystart` To have `cleveref` work with page note labels, the following patch writes `\thepagenote` and also adds `\arabic{pagenote}` to the first argument written to the `.ent` file:

```
\startnoteentry{\thepagenote}{\arabic{pagenote}} . . .
```

The arabic value is required for `cleveref`. `\thepagenote` becomes `\@firstoftwo#1` and the arabic value becomes `\@secondoftwo#1`.

 `\nameref` Note that for print mode, `\nameref` print the section name where the page notes are declared in the text, but for HTML it prints the name where the page notes are printed.

```

931 \xpatchcmd{\m@m@wrpnote}
932 {\string\startnoteentry{\thepagenote}}
933 {\string\startnoteentry{\thepagenote}{\arabic{pagenote}}}}
934 {}
935 {\LWR@patcherror{memoir}{m@m@wrpnote}}
936
937 \renewcommand\startnoteentrystart[4]{%
938 \prenoteinnotes%
939 \noteidinnotes{\@firstoftwo#1}{#2}%
940 \@ifmtarg{#2}{%
941 \phantomsection\def\@currentlabel{#1}% original
942 \def\@currentlabel{\@firstoftwo#1}% lwarp
943 \def\cref@currentlabel{% lwarp
944 [pagenote][\@secondoftwo#1][\@firstoftwo#1}% lwarp
945]}% lwarp
946 }{}%
947 \pagenoteanchor{#4}%
948 \pageinnotes{#3}%
949 \prenotetext%
950 }

```

### § 593.13 Decorative text

```

951 \renewcommand*\epigraphposition[1]{}
952 \renewcommand*\epigraphtextposition[1]{}

```

```

953 \renewcommand*\epigraphsourceposition}[1]{}
954 \renewcommand*\epigraphfontsize}[1]{}
955 \renewcommand*\epigraphforheader}[2][1]{}
956 \renewcommand*\epigraphpicture{}

```

### § 593.14 Poetry

```

957 \renewcommand*\vinphantom{}
958 \renewcommand*\vleftofline}[1][1]{}
959 % \let\linenumberfrequency\poemlines
960 % \renewcommand*\linenumberfont}[1]{}
961
962 \DeclareDocumentCommand{\PoemTitle}{s o m}{%
963 \IfValueTF{#2}%
964 {\poemtitle[#2][#4]}%
965 {\poemtitle{#4}}%
966 }
967
968 \renewcommand*\NumberPoemTitle{}
969 \renewcommand*\PlainPoemTitle{}
970 \renewcommand*\poemtitlepstyle{}
971 \renewcommand*\poemtitlestarmark}[1]{}
972 \renewcommand*\poemtitlestarpstyle{}
973 \renewcommand*\PoemTitleheadstart{}
974 \renewcommand*\printPoemTitlenonum{}
975 \renewcommand*\printPoemTitlenum{}
976 \renewcommand*\afterPoemTitlenum{}
977 \renewcommand*\printPoemTitletitle}[1]{}
978 \renewcommand*\afterPoemTitle{}
979 \newlength{\midpoemttitleskip}
980 \renewcommand*\PoemTitlenumfont{}
981 \renewcommand*\PoemTitlefont{}

```

### § 593.15 Boxes, verbatims and files

```

982 \renewenvironment{qframe}{\framed}{\endframed}
983 \renewenvironment{qshade}{\shaded}{\endshaded}

984 \renewcommand*\setverbatimfont}[1]{}
985 \renewcommand*\tabson}[1]{}
986 \renewcommand*\tabsoff{}
987 \renewcommand*\wrappingon{}
988 \renewcommand*\wrappingoff{}
989 \renewcommand*\verbatimindent{}
990 \renewcommand*\verbatimbreakchar}[1]{}

991 \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.

```

992 \renewcommand*\bvbox{}
993 \renewcommand*\bvtopandtail{}
994 \renewcommand*\bvside{}
995 \renewcommand*\nobvbox{}

```

```

996 % \newlength\bvboxsep
997 \renewcommand*\bvtoprulehook{}
998 \renewcommand*\bvtopmidhook{}
999 \renewcommand*\bvendrulehook{}
1000 \renewcommand*\bvleftsidehook{}
1001 \renewcommand*\bvrightsidehook{}
1002 \renewcommand*\bvperpagetrue{}
1003 \renewcommand*\bvperpagefalse{}
1004 \renewcommand{\bvtopofpage}[1]{}
1005 \renewcommand{\bvendofpage}[1]{}
1006 \renewcommand*\linenumberfrequency[1]{}
1007 \renewcommand*\resetbvlinenumber{}
1008 \renewcommand*\setbvlinenums[2]{}
1009 \renewcommand*\linenumberfont[1]{}
1010 \renewcommand*\bvnumbersinside{}
1011 \renewcommand*\bvnumbersoutside{}

```

### § 593.16 Cross referencing

```

1012 \renewcommand*\fref[1]{\cref{#1}}
1013 \renewcommand*\tref[1]{\cref{#1}}
1014 \renewcommand*\pref[1]{\cpageref{#1}}
1015 \renewcommand*\Aref[1]{\cref{#1}}
1016 \renewcommand*\Bref[1]{\cref{#1}}
1017 \renewcommand*\Pref[1]{\cref{#1}}
1018 \renewcommand*\Sref[1]{\cref{#1}}
1019 \renewcommand*\figurerefname}{Figure}
1020 \renewcommand*\tablerefname}{Table}
1021 \renewcommand*\pagerefname}{page}
1022 \renewcommand*\bookrefname}{Book~}
1023 \renewcommand*\partrefname}{Part~}
1024 \renewcommand*\chapterrefname}{Chapter~}
1025 \renewcommand*\sectionrefname}{\S}
1026 \renewcommand*\appendixrefname}{Appendix~}
1027 \LetLtxMacro\titleref\nameref
1028 \renewcommand*\headnameref{}
1029 \renewcommand*\tocnameref{}
1030
1031 \providecounter{LWR@currenttitle}
1032
1033 \renewcommand*\currenttitle}{%
1034 \addtocounter{LWR@currenttitle}{1}%
1035 \label{currenttitle\arabic{LWR@currenttitle}}%
1036 \nameref{currenttitle\arabic{LWR@currenttitle}}%
1037 }
1038
1039 \renewcommand*\theTitleReference}[2]{}
1040 \renewcommand*\namerefon{}
1041 \renewcommand*\namerefoff{}

```

### § 593.17 Back matter

`\@wrindexhyp` Redefined to write the LWR@autoindex counter instead of page. Note that memoir has two versions, depending on the use of hyperref.

```

1042 \AtBeginDocument{

```

```

1043
1044 \def\@wrindexhyp#1||\{\%
1045 \addtocounter{LWR@autoindex}{1}%
1046 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
1047 % \ifshowindexmark\@showidx{#1}\fi
1048 \protected@write\@auxout{\%
1049 % {\string\@wrindexm@m{\@idxfile}{#1}{\thepage}}%
1050 % {\string\@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%
1051 \endgroup
1052 \@esphack}%

```

`\@wrspindexhyp` `\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.

```

1053 \def\@wrspindexhyp#1||\{\%
1054 \addtocounter{LWR@autoindex}{1}%
1055 \LWR@new@label{LWRindex-\arabic{LWR@autoindex}}%
1056 % \ifshowindexmark\@showidx{#1}\fi
1057 \protected@write\@auxout{\%
1058 % {\string\@wrindexm@m{\@idxfile}{#1}{\@nameuse{the\@sptheid}}}%
1059 % {\string\@wrindexm@m{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%
1060 \endgroup
1061 \@esphack}%
1062
1063 }% \AtBeginDocument

```

`\@spindex` Patched to append `_html` to the file:

```

1064 \renewcommand{\@spindex}[2]{%
1065 \@ifundefined{#1@idxfile}%
1066 {\ifreportnoidxfile
1067 \@memwarn{Undefined index file #1}%
1068 \fi
1069 \begingroup
1070 \@sanitize
1071 \@nowrindex}%
1072 {\def\@idxfile{#1_html}%
1073 \def\@sptheid{#2}%
1074 \begingroup
1075 \@sanitize
1076 \@wrspindex}}

```

`\makeindex` Patched to use `_html` filename and `\BaseJobname`:

```

1077 \catcode'_ =12%
1078 \renewcommand*\makeindex[1][\BaseJobname]{%
1079 \if@filesw
1080 \def\gindex{\@bsphack%
1081 \@ifnextchar [{\@index}{\@index[\BaseJobname]}}
1082 \def\specialindex{\@bsphack\@spindex}%
1083 \makememindexhook
1084 \expandafter\newwrite\csname #1@idxfile\endcsname
1085 \expandafter\immediate\openout \csname #1@idxfile\endcsname #1_html.idx\relax
1086 \typeout{Writing index file #1_html.idx }%

```

```
1087 \fi}
1088 \catcode'_ =8%
```

`\printindex` Patched to use `_html` filename and `\BaseJobname`. This will later be patched by the **lwarp** core.

```
1089 \catcode'_ =12%
1090 \renewcommand{\printindex}[1][\BaseJobname]{\@input@{#1_html.ind}}
1091 \catcode'_ =8%
```

```
1092 \DeclareDocumentCommand{\newblock}{}{}
1093 %
1094 \renewcommand*\showindexmarks{}
1095 \renewcommand*\hideindexmarks{}
1096
1097 \renewcommand*\xindyindex{}
```

### § 593.18 Miscellaneous

```
1098 \renewcommand*\changemarks{}
1099 \renewcommand*\nochangemarks{}
1100 \renewcommand*\added[1]{}
1101 \renewcommand*\deleted[1]{}
1102 \renewcommand*\changed[1]{}
1103
1104 \renewcommand*\showtrimsoff{}
1105 \renewcommand*\showtrimson{}
1106 \renewcommand*\trimXmarks{}
1107 \renewcommand*\trimLmarks{}
1108 \renewcommand*\trimFrame{}
1109 \renewcommand*\trimNone{}
1110 \renewcommand*\trimmarkscolor{}
1111 \renewcommand*\trimmarks{}
1112 \renewcommand*\tmarktl{}
1113 \renewcommand*\tmarktr{}
1114 \renewcommand*\tmarkbr{}
1115 \renewcommand*\tmarkbl{}
1116 \renewcommand*\tmarktm{}
1117 \renewcommand*\tmarkmr{}
1118 \renewcommand*\tmarkbm{}
1119 \renewcommand*\tmarkml{}
1120 \renewcommand*\trimmark{}
1121 \renewcommand*\quarkmarks{}
1122 \renewcommand*\registrationColour[1]{}
1123
1124 \renewcommand*\leavespergathering[1]{}
1125
1126 \renewcommand*\noprelistbreak{}
1127
1128 \renewcommand*\cleartorecto{}
1129 \renewcommand*\cleartoverso{}
1130
1131 \renewenvironment{vplace}[1][1]{}{}
```

§ 593.19 **ccaption emulation**

```

1132 \renewcommand*{\captiondelim}[1]{\renewcommand*{\CaptionSeparator}{#1}}
1133 \renewcommand*{\captionnamefont}[1]{}
1134 \renewcommand*{\captiontitlefont}[1]{}
1135 \renewcommand*{\flushleft}{\flushright}{}
1136 \renewcommand*{\centerlastline}{}
1137 \renewcommand*{\captionstyle}[2][1]{}
1138 \DeclareDocumentCommand{\captionwidth}{m}{}
1139 \renewcommand*{\changecaptionwidth}{}
1140 \renewcommand*{\normalcaptionwidth}{}
1141 \renewcommand*{\hangcaption}{}
1142 \renewcommand*{\indentcaption}[1]{}
1143 \renewcommand*{\normalcaption}{}
1144 \renewcommand{\precaption}[1]{}
1145 \renewcommand{\postcaption}[1]{}
1146 \renewcommand{\midbicapTION}[1]{}
1147 \renewcommand{\contcaption}[1]{}%
1148 % \ContinuedFloat%
1149 % \caption{#1}%
1150 \begin{LWR@figcaption}% later becomes \caption*
1151 \LWR@isolate{\@nameuse{\@capttype name}}~%
1152 \thechapter.\the\value{\@capttype}\CaptionSeparator\LWR@isolate{#1}%
1153 \end{LWR@figcaption}%
1154 }

1155 \newlength{\aboveLegendskip}
1156 \setlength{\aboveLegendskip}{0.5\baselineskip}
1157 \newlength{\belowLegendskip}
1158 \setlength{\belowLegendskip}{\aboveLegendskip}

```

The extra `\\` here forces a `<br>` in HTML when `\legend` is used in a `\marginpar`.

```

1159 \renewcommand{\legend}[1]{\begin{center}#1\\end{center}}
1160
1161 \renewcommand{\namedlegend}[2][1]{}%
1162 \begin{center}
1163 \@nameuse{fleg\@capttype}\CaptionSeparator#2\\
1164 \end{center}
1165 \@nameuse{flegtoc\@capttype}{#1}
1166 }
1167
1168 \renewcommand{\newfixedcaption}[3][\caption]{}%
1169 \renewcommand{#2}{\def\@capttype{#3}#1}
1170 \renewcommand{\renewfixedcaption}[3][\caption]{}%
1171 \renewcommand{#2}{\def\@capttype{#3}#1}
1172 \renewcommand{\providefixedcaption}[3][\caption]{}%
1173 \providecommand{#2}{\def\@capttype{#3}#1}
1174
1175 \renewcommand{\bitwonumcaption}[6][1]{}%
1176 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1177 \addtocounter{\@capttype}{-1}%
1178 \begin{group}
1179 \csdef{\@capttype name}{#4}%
1180 \ifblank{#5}{\caption{#6}}{\caption[#5]{#6}}%
1181 \end{group}%

```

```

1182 \ifblank{#1}{\label{#1}}%
1183 }
1184
1185 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo
1186
1187 \renewcommand{\bication}[5][\%
1188 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
1189 \begin{LWR@figcaption}% later becomes \caption*
1190 \LWR@isolate{#4} % space
1191 \thechapter.\the\value{\@capttype}\CaptionSeparator\LWR@isolate{#5}%
1192 \end{LWR@figcaption}%
1193 \ifblank{#1}{\label{#1}}%
1194 }
1195
1196 \renewcommand{\bicontcaption}[3]{%
1197 \contcaption{#1}%
1198 \begingroup%
1199 \csdef{\@capttype name}{#2}%
1200 \contcaption{#3}%
1201 \endgroup%
1202 }

1203 % only in ccaption, not in memoir:
1204 % \LetLtxMacro\longbitwonumcaption\bitwonumcaption%
1205 % \LetLtxMacro\longbionenumcaption\bitwonumcaption%
1206 % \LetLtxMacro\longbication\bication%

```

#### Patches for subfloats to support additional lwarp labels:

```

1207 \renewcommand{\@memsubbody}{%
1208 \bgroup
1209 \let\label=\memsub@label
1210 \ifdonemaincaption\else
1211 \advance\cscname c@\@capttype\endcscname\@ne
1212 \fi
1213 % \refstepcounter{sub\@capttype}\@contkeep%
1214 % \leavevmode% lwarp
1215 \@ifnextchar [%
1216 {\@memsubfig}%
1217 {\@memsubfig[\@empty]}}
1218
1219 \renewcommand{\@memcontsubbody}{%
1220 \bgroup
1221 \let\label=\memsub@label
1222 \@contset
1223 % \refstepcounter{sub\@capttype}\@contkeep%
1224 % \leavevmode% lwarp
1225 \@ifnextchar [%
1226 {\@memsubfig}%
1227 {\@memsubfig[\@empty]}}
1228
1229
1230 \long\def\@memsubfloat#1[#2][#3]#4{%
1231 % \@tempcnta=\@ne
1232 % \if@tightsubcap
1233 % \if@minipage

```

```

1234 % \@tempcnta=\z@
1235 % \else
1236 % \ifdim\lastskip=\z@
1237 % \@tempcnta=\@ne
1238 % \else
1239 % \@tempcnta=\tw@
1240 % \fi
1241 % \fi
1242 % \fi
1243 % \if@contbotsub
1244 % \def\subfig@top{\subfloattopskip}%
1245 % \def\subfig@bottom{\subfloatbottomskip}%
1246 % \else
1247 % \def\subfig@top{\subfloatbottomskip}%
1248 % \def\subfig@bottom{\subfloattopskip}%
1249 % \fi
1250 % \setbox\@tempboxa \hbox{#4}%
1251 % \@tempdima=\wd\@tempboxa
1252 % \vbox
1253 % \bgroup%
1254 % \mem@step@subcounter%
1255 % \vbox
1256 % \LWR@stoppars%
1257 % \minipagefullwidth% lwarp
1258 % \begin{minipage}{\linewidth}% lwarp
1259 % \bgroup
1260 % \ifcase\@tempcnta
1261 % \@minipagefalse
1262 % \or
1263 % \vspace{\subfig@top}
1264 % \or
1265 % \ifdim \lastskip=\z@ \else
1266 % \@tempskipb\subfig@top\@xaddvskip
1267 % \fi
1268 % \fi
1269 % \if@contbotsub
1270 % #4% \box\@tempboxa
1271 % \egroup
1272 % \ifx \@empty#3\relax \else
1273 % \vskip\subfloatcapskip
1274 % \@memsubcaption{#1}{#2}{#3}%
1275 % \fi
1276 % \else
1277 % \ifx \@empty#3\relax \else
1278 % \@memsubcaption{#1}{#2}{#3}%
1279 % \vskip\subfloatcapskip
1280 % \vskip\subfloatcaptopadj
1281 % \fi\egroup
1282 % #4% \box\@tempboxa
1283 % \fi
1284 % \vspace{\subfig@bottom}
1285 % \end{minipage}% lwarp
1286 % \LWR@startpars% lwarp
1287 % \egroup
1288 % \egroup

```

1289 }

## § 593.20 Final patchwork

1290 \newlistof{tableofcontents}{toc}{\contentsname}

1291 \newlistof{listoffigures}{lof}{\listfigurename}

1292 \newlistof{listoftables}{lot}{\listtablename}

---

File 492 **lwarp-common-multimedia.sty**

## § 594 Package **common-multimedia**

Pkg lwarp-common-multimedia Common code for multimedia, movie15, and media9.

The packages multimedia, movie15, and media9 are supported.

HTML5 `<audio>` and `<video>` objects are created for .mp3 and .mp4 files.

HTML5 `<embed>` objects are created for http and ftp links.

`\href` links are created for other media types. (Unfortunately, there is not much overlap between the file types supported for print output and the file types supported by HTML5.)

For media9, a multimedia object is inserted for each `addressource=`, as well as each `flashvars source=` and `src=`. This may result in duplicate objects.

Undesired objects may be nullified by placing them inside `\warpprintonly` or the `warpprint` environment.

Each HTML multimedia object includes the poster text, except for `<embed>` objects. For movie15, the `text` option is supported to specify the poster text.

The `width`, `height`, and `totalheight` options are supported. The HTML object is scaled according to the display width, correctly compensating for either tall or wide viewports.

Other options are ignored.

media9 `\addmediapath` is supported. It is assumed that the same path structure will exist for the HTML document.

HTML5 media controls are always specified for each `<audio>` and `<video>` object.

media9 slideshows are not supported.

`\hyperlinkmovie`, `\movieref`, and `\mediabutton` are not supported.

3D objects are not supported.

If using a YOUTUBE™ video, use an “embedded” URL with `.../embed/...` instead of `.../v/...`

**for HTML output:** 1 \ProvidesPackage{lwarp-common-multimedia}[2019/04/22]

```

2 \RequirePackage{xkeyval}
3
4 \define@key{LWR@multimedia}{width}{\setlength{\LWR@multimedia@width}{#1}}
5 \define@key{LWR@multimedia}{height}{\setlength{\LWR@multimedia@height}{#1}}
6 \define@key{LWR@multimedia}{totalheight}{\setlength{\LWR@multimedia@height}{#1}}

7 \newlength{\LWR@multimedia@width}
8 \newlength{\LWR@multimedia@height}
9 \newlength{\LWR@multimedia@maxdimension}

```

`\LWR@multimedia@printsiz` Proportional to `\linewidth` and the viewport's smaller dimension. This scales each object such that it will always fit on the screen, even if a tall or wide object inside a tall or wide viewport.

```

10 \newcommand*{\LWR@multimedia@printsiz}{%
11 \setlength{\LWR@multimedia@maxdimension}{%
12 \maxof%
13 {\linewidth}%
14 {\maxof{\LWR@multimedia@width}{\LWR@multimedia@height}}%
15 }%
16 \setlength{\LWR@multimedia@maxdimension}{1.1\LWR@multimedia@maxdimension}%
17 \ifdimgreater{\LWR@multimedia@width}{0pt}{%
18 width:%
19 \LWR@printpercentlength%
20 {\LWR@multimedia@width}%
21 {\LWR@multimedia@maxdimension}vmin ; % space
22 }{}%
23 \ifdimgreater{\LWR@multimedia@height}{0pt}{%
24 height:%
25 \LWR@printpercentlength%
26 {\LWR@multimedia@height}%
27 {\LWR@multimedia@maxdimension}vmin ; % space
28 }{}%
29 }

```

`\LWR@multimedia@fileAV` `{\langle poster text \rangle}{\langle filename \rangle}{\langle audio/video \rangle}{\langle mimetype \rangle}`

Creates a video or audio from a file. The 2019/10 update of the L<sup>A</sup>T<sub>E</sub>X kernel may cause extra quotes to be added in the filenames. They are removed here.

```

30 \newcommand*{\LWR@multimedia@fileAV}[4]{%
31 \IfFileExists{#2}{% also sets \@filef@und
32 \StrSubstitute[100]{\@filef@und}{"}{ }[\LWR@parsedfilename}%

```

The container `<div>` is sized as desired.

```

33 \ifstrequal{#3}{audio}{%
34 \begin{BlockClass}{AVviewport}
35 }{%
36 \begin{BlockClass}[\LWR@multimedia@printsiz\ margin:auto]{AVviewport}
37 }

```

Paragraph tags are unnecessary for the A/V tags.

```

38 \LWR@stoppars

```

The A/V element is 100% of the container.

```

39 \LWR@htmltag{%
40 #3\ % space
41 \ifstrequal{#3}{audio}{}{%
42 width=\textquotedbl{}100%\textquotedbl\ % space
43 height=\textquotedbl{}100%\textquotedbl\ % space
44 }%
45 controls%
46 }\LWR@orignewline

```

The file source and type:

```

47 \LWR@htmltag{%
48 source % space
49 src=\textquotedbl%
50 \LWR@parsedfilename\unskip\textquotedbl\ % space
51 type=\textquotedbl{}#4\textquotedbl}

```

The poster text inside paragraph tags, along with a reference to the file.

```

52 \LWR@startpars
53 \href{\LWR@parsedfilename}{#1}
54 \LWR@stoppars

```

Finish.

```

55 \LWR@htmltag{/#3}\LWR@orignewline
56 \end{BlockClass}
57 }{%
58 \PackageError{lwarp-common-multimedia}
59 {File '#2' not found}
60 {Perhaps an incorrect path?}
61 }%
62 }

```

`\LWR@multimedia@httpAV` {<poster text>} {<filename>} {<audio/video>} {<mime type>}

Creates a video or audio from a URL link.

```
63 \newcommand*\LWR@multimedia@httpAV[4]{%
```

The container <div> is sized as desired.

```

64 \ifstrequal{#3}{audio}{}%
65 \begin{BlockClass}{AVviewport}
66 }{%
67 \begin{BlockClass}[\LWR@multimedia@printsize\ margin:auto]{AVviewport}
68 }

```

Paragraph tags are unnecessary for the A/V tags.

```
69 \LWR@stoppars
```

The A/V element is 100% of the container.

```

70 \LWR@htmltag{%
71 #3\ % space
72 \ifstrequal{#3}{audio}{}{%
73 width=\textquotedbl{}100%\textquotedbl\ % space
74 height=\textquotedbl{}100%\textquotedbl\ controls%
75 }%
76 }\LWR@orignewline

```

The file source and type:

```
77 \LWR@htmltag{%
78 source % space
79 src=\textquotedbl#2\textquotedbl\ % space
80 type=\textquotedbl#4\textquotedbl}
```

The poster text inside paragraph tags, along with a reference to the URL.

```
81 \LWR@startpars
82 \href{#2}{#1}
83 \LWR@stoppars
```

Finish.

```
84 \LWR@htmltag{/#3}\LWR@orignewline
85 \end{BlockClass}
86 }
```

`\LWR@multimedia@AV`    *{(poster text)} {(filename)} {(audio/video)} {(mimetype)}*

Creates an audio or video from a file or a URL.

```
87 \newcommand*\LWR@multimedia@AV[4]{%
88 \IfBeginWith{#2}{http}%
89 {\LWR@multimedia@httpAV{#1}{#2}{#3}{#4}}%
90 {%
91 \IfBeginWith{#2}{HTTP}%
92 {\LWR@multimedia@httpAV{#1}{#2}{#3}{#4}}%
93 {\LWR@multimedia@fileAV{#1}{#2}{#3}{#4}}%
94 }%
95 }
```

`\LWR@multimedia@embed`    *{(poster text)} {(URL or filename)} {(mime type)}*

Embeds multimedia of an arbitrary type. The poster text is not used, as it would appear along with the video if the <embed> element is supported.

```
96 \newcommand*\LWR@multimedia@embed[3]{%
97 \begin{BlockClass}[width:100\%]{AVviewport}%
98 \LWR@stoppars
99 \LWR@htmltag{%
100 embed % space
101 \ifblank{#3}{\type=\textquotedbl#3\textquotedbl\ }%
102 style=\textquotedbl\LWR@multimedia@printsize\ margin:auto\textquotedbl\ % space
103 src=\textquotedbl#2\textquotedbl\ % space
104 }%
105 \LWR@startpars
106 \end{BlockClass}
107 }
```

Error message if the comment character is used among the arguments of `\LWR@multimedia@b`.

`\LWR@multimedia@percenterror`

```
108 \newcommand*\LWR@multimedia@percenterror}{%
109 \PackageError{lwarp-media9}
110 {%
111 Do not use a percent comment between\MessageBreak
112 \protect\includemedia\space arguments%
```

```

113 }
114 {%
115 Percent is changed to a regular character\MessageBreak
116 to allow its use inside a URL.%
117 }
118 }

```

`\LWR@multimediab` [*<options>*] [*<poster text>*] [*<filename>*]

Creates multimedia. Examines the file extension to determine the type. If not a supported type, creates an embedded object if it has a URL. If neither, create a link to the unsupported object.

```
119 \newcommand*{\LWR@multimediab}[3][[]]{%
```

Error if the percent character appears among the arguments. This could happen since the comment character has been temporarily disabled, for use in a URL.

```

120 \if#1\@percentchar\LWR@multimedia@percenterror\fi%
121 \if#2\@percentchar\LWR@multimedia@percenterror\fi%
122 \if#3\@percentchar\LWR@multimedia@percenterror\fi%

```

Paragraph handling:

```
123 \LWR@stoppars%
```

Record the desired size.

```

124 \setlength{\LWR@multimedia@width}{0pt}%
125 \setlength{\LWR@multimedia@height}{0pt}%
126 \setkeys*{\LWR@multimedia}{#1}%

```

If a known A/V type, create an HTML5 `<video>` or `<audio>`.

```

127 \IfEndWith{#3}{.mp4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
128 \IfEndWith{#3}{.MP4}{\LWR@multimedia@AV{#2}{#3}{video}{video/mp4}}{%
129 \IfEndWith{#3}{.mp3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%
130 \IfEndWith{#3}{.MP3}{\LWR@multimedia@AV{#2}{#3}{audio}{audio/mpeg}}{%

```

If an arbitrary URL, embed it.

```

131 \IfBeginWith{#3}{http}{\LWR@multimedia@embed{#2}{#3}{}}{%
132 \IfBeginWith{#3}{HTTP}{\LWR@multimedia@embed{#2}{#3}{}}{%
133 \IfBeginWith{#3}{ftp}{\LWR@multimedia@embed{#2}{#3}{}}{%
134 \IfBeginWith{#3}{FTP}{\LWR@multimedia@embed{#2}{#3}{}}{%

```

If unknown, create a link to it.

```

135 \href{#3}{#2}% unknown format
136 }}}}}}}}%

```

Paragraph handling:

```

137 \LWR@startpars%
138 \endgroup%
139 }

```

Catcodes which may appear in a URL.

```

140 \newrobustcmd*{\LWR@multimedia}{%
141 \begingroup%

```

```
142 \LWR@linkmediacatcodes%
143 \LWR@multimediab%
144 }
```

# Change History

## § 595 Chg Hist

For the most recent changes, see page 1195.

|       |                                                                                    |                                                              |
|-------|------------------------------------------------------------------------------------|--------------------------------------------------------------|
| v0.10 | General: 2016/03/08 Initial version . . . 1                                        | Test Suite: Assigned cleveref name for Test Float. . . . . 1 |
| v0.11 | General: 2016/03/11 . . . . . 1                                                    | Test Suite: Floatrow . . . . . 1                             |
|       | Added section: Operating-System portability. . . . . 214                           |                                                              |
|       | Added section: Selecting the operating system. . . . . 112                         |                                                              |
|       | Test Suite: MS-WINDOWS in README.txt . . . . . 1                                   |                                                              |
|       | Test Suite: limages and index in README.txt . . . . . 1                            |                                                              |
| v0.12 | \LWR@newhtmlfile: Bugfix: toc with numbered files. . . . . 373                     |                                                              |
|       | General: 2016/03/14 . . . . . 1                                                    |                                                              |
|       | Global: Uses \p@(type) in float captions. . . . . 1                                |                                                              |
|       | Test Suite: Sub-figures . . . . . 1                                                |                                                              |
| v0.13 | \CaptionSeparator: Fix for newer babel package. . . . . 497                        |                                                              |
|       | \LWR@LwarpStart: \up and \fup . . . 392                                            |                                                              |
|       | General: 2016/03/24 . . . . . 1                                                    |                                                              |
|       | Fix dollar-redefined bug for newer package. . . . . 1054                           |                                                              |
|       | Removed package: subfig . . . . . 1                                                |                                                              |
|       | Test Suite: Ordinals, Subcaption . . . 1                                           |                                                              |
| v0.14 | \LWR@htmlsectionfilename: Fix: Links to home page. . . . . 327                     |                                                              |
|       | General: 2016/03/31 . . . . . 1                                                    |                                                              |
|       | floatrow: Added. . . . . 764                                                       |                                                              |
|       | Docs: Commands for a successful HTML conversion. . . . . 116                       |                                                              |
|       | Docs: Commands into a warpprint environment. . . . . 113                           |                                                              |
|       | Docs: Newclude limitations. . . . 165                                              |                                                              |
|       | Docs: Table: Cross-referencing data structures. . . . . 481                        |                                                              |
|       | Docs: Table: Float data structures. 493                                            |                                                              |
|       | Docs: Trademarks section. . . . . 191                                              |                                                              |
|       | Docs: Troubleshooting cross-references. . . . . 186                                |                                                              |
|       | Test Suite: Assigned cleveref name for Test Float. . . . . 1                       |                                                              |
|       | Test Suite: Floatrow . . . . . 1                                                   |                                                              |
| v0.15 | General: 2016/04/06 . . . . . 1                                                    |                                                              |
|       | Added. . . . . 769                                                                 |                                                              |
|       | Ampersand (&): Fixed handling when passed as an argument. . . 427                  |                                                              |
|       | Docs: Added warning icons for items needing special attention. 194                 |                                                              |
|       | Docs: Clarify print/HTML output. 112                                               |                                                              |
|       | Docs: Moved the supported features table to the introduction. 61                   |                                                              |
|       | Files: lwarp_formal.css added. . . . 1                                             |                                                              |
|       | Fix: steps counter . . . . . 768                                                   |                                                              |
|       | Fixed & handling. . . . . 767                                                      |                                                              |
|       | Test Suite: test_suite_formal.css file added. . . . . 1                            |                                                              |
| v0.16 | General: 2016/04/11 . . . . . 1                                                    |                                                              |
|       | \titlingpage: Improved print-output spacing. . . . . 400                           |                                                              |
|       | xfrac: Adjusted for the use of any font: . . . . . 1114                            |                                                              |
|       | Added XeLaTeX, LuaLaTeX support. . . . . 195                                       |                                                              |
|       | Docs: Font and UTF-8 support. . . 95                                               |                                                              |
|       | Docs: Moved location of \usepackage{lwarp}. . . . . 98                             |                                                              |
|       | Docs: Text not converting. . . . . 186                                             |                                                              |
|       | Lwarp no longer selects fonts. 95, 224                                             |                                                              |
|       | Removed package: suffix . . . . . 1                                                |                                                              |
|       | Test Suite: Improved titlingpage. 400                                              |                                                              |
|       | Test Suite: Lwarp no longer selects fonts. . . . . 1                               |                                                              |
|       | Test Suite: Supports XeLaTeX, LuaLaTeX. . . . . 1                                  |                                                              |
| v0.17 | \LWR@htmlsectionfilename: Fix: Links when entire doc is one HTML page. . . . . 327 |                                                              |
|       | General: 2016/04/14 . . . . . 1                                                    |                                                              |
|       | mdframed: Added. . . . . 864                                                       |                                                              |

|                                                                               |      |                                                                                  |               |
|-------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------|---------------|
| Test Suite: Fix: Print-version front-matter page numbers. . . . .             | 1    | \LWR@filestart: lwrap_mathjax.txt loaded. . . . .                                | 388           |
| Test Suite: Mdfamed . . . . .                                                 | 1    | \LWR@minipagestartpars: Suppresses paragraph tags between minipages. . . . .     | 591           |
| v0.18                                                                         |      | \LWR@subsingledollar: MATHJAX support. . . . .                                   | 528           |
| \LWR@myshorttoc: Reorganize \HomeHTMLfilename logic. . . . .                  | 502  | \LateximageFontSizeName: Add: User-adjustable math/lateximage font size. . . . . | 546           |
| \LWR@newhtmlfile: sideroc after title, improving responsive design. . .       | 372  | \hspace: Fix: \hspace length computations. . . . .                               | 593           |
| \LWR@requesttoc: Reorganize \HomeHTMLfilename logic. . . . .                  | 394  | \minipagefullwidth: Added: No width tag for the next minipage in HTML. . . . .   | 571           |
| \LWR@subhyperref: Improved HTML output linebreaks. . . . .                    | 490  | \warpHTMLonly: Added. . . . .                                                    | 223           |
| \LWR@subhyperrefclass: Improved HTML output linebreaks. . . . .               | 490  | \warpprintonly: Replaces \rowprintedonly. . . . .                                | 223           |
| \LWR@subinlinelimage: Suppress extra space. . . . .                           | 492  | \xfracHTMLfontsize: Added. . . . .                                               | 1113          |
| \hspace: \hspace supported. . . . .                                           | 593  | General: 2016/06/08 . . . . .                                                    | 1             |
| General: 2016/05/19 . . . . .                                                 | 1    | css for table note item. . . . .                                                 | 1051          |
| graphics: Add: svgz file extension. . . . .                                   | 795  | MATHJAX support added. . . . .                                                   | 533, 540, 542 |
| graphics: Fix: \linewidth, \textwidth, \textheight inside a minipage. . . . . | 795  | multirow: Added optional args. . . . .                                           | 894           |
| graphics: Improved HTML output linebreaks. . . . .                            | 795  | Adapts to tikz version. . . . .                                                  | 1054          |
| graphics: em, ex, %, px dimensions preserved. . . . .                         | 795  | Avoids MATHJAX. . . . .                                                          | 521           |
| File: lwrap.css: Improved toc outline display. . . . .                        | 1    | cleveref: Loaded \AtEndPreamble. . . . .                                         | 566           |
| Files: lwrap.css and lwrap_formal.css: Improved responsive design. . . . .    | 1    | Docs: Math options. . . . .                                                      | 98            |
| Microtype disabled during HTML generation . . . . .                           | 224  | Docs: Table: Cross-referencing data structures, updated. . . . .                 | 481           |
| PDF Unicode input characters. . . . .                                         | 210  | File: lwrap.css: tnoteitemheader added. . . . .                                  | 1             |
| Test Suite: Verse package . . . . .                                           | 1    | File: lwrap_mathjax.txt added. . . . .                                           | 1             |
| lateximage: pdfcrop: --hires added. . . . .                                   | 549  | Introduction: MATHJAX support mentioned. . . . .                                 | 58            |
| Reorganize \HomeHTMLfilename logic. . . . .                                   | 549  | Options: mathsvg and mathjax . . . . .                                           | 217           |
| Suppress extra space. . . . .                                                 | 549  | Supports colored \rule. . . . .                                                  | 1104          |
| verse: Supports verse, memoir packages. . . . .                               | 1091 | titles: null \pagestyle and \thispagestyle for HTML. . . . .                     | 1055          |
| minipage: Fix: \linewidth, \textwidth, \textheight inside a minipage. . . . . | 571  | v0.20                                                                            |               |
| v0.19                                                                         |      | \BlockClassSingle: Renamed from "LWR@htmldivclassline". . . . .                  | 342           |
| \HTMLfilename: Docs: Escape filename underscores. . . . .                     | 326  | \HTMLDescription: Added \NewHTMLdescription. (Renamed in v0.30.) . . . . .       | 353           |
| \HomeHTMLfilename: Docs: Escape filename underscores. . . . .                 | 326  | \HTMLfilename: No longer escape underscores. . . . .                             | 326           |
| \LWR@LwrapStart: Enabled \ equal to \newline. . . . .                         | 391  | \HomeHTMLfilename: No longer escape underscores. . . . .                         | 326           |
| \LWR@doequation: MATHJAX support. . . . .                                     | 536  | \InlineClass: Renamed from "inlineclass". . . . .                                | 342           |
| \LWR@doubledollar: MATHJAX support. . . . .                                   | 530  | \LWR@LwrapStart: Fix: math cross references. . . . .                             | 392           |
|                                                                               |      | \LWR@closeparagraph: \unskip extra spaces. . . . .                               | 346           |

|                                                                                                          |          |                                                                              |      |
|----------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------|------|
| No break tags in the start/end of a tabular. . . . .                                                     | 346      | keyfloat: Added. . . . .                                                     | 822  |
| \LWR@endofline: Fix: \\ . . . . .                                                                        | 591      | letterspace: User-interface emulated. . . . .                                | 832  |
| \LWR@filestart: Adds meta description. . . . .                                                           | 388      | listings: Added. . . . .                                                     | 836  |
| \LWR@htmldivclass: Added optional style. . . . .                                                         | 340      | lrcaption: Added. . . . .                                                    | 845  |
| \LWR@htmlElementclass: Added optional style. . . . .                                                     | 340      | lwarp-newproject: Added. . . . .                                             | 250  |
| \LWR@htmlsectionfilename: HTMLFilename: removed additional trailing '-', and may be empty. . . . .       | 327      | microtype: User-interface emulated. . . . .                                  | 880  |
| Sections called "Index" or "index" have an underscore prepended to their filenames if no prefix. . . . . | 327      | needspace: Added. . . . .                                                    | 905  |
| \LWR@longtabledatacaptiontag: Fix: Pars in captions. . . . .                                             | 464      | nowidow: Added. . . . .                                                      | 916  |
| \LWR@section: Combined higher-level sections together into files. . . . .                                | 379      | placeins: Added. . . . .                                                     | 956  |
| \LWR@setOSWindows: Auto-detects operating system. . . . .                                                | 216      | ragged2e: Added. . . . .                                                     | 964  |
| \LWR@subhtmlElementclass: Factored code. . . . .                                                         | 340      | setspace: Improved support. . . . .                                          | 987  |
| \SetHTMLFileNumber: Add: Control file numbers. . . . .                                                   | 326      | textpos: Added. . . . .                                                      | 1045 |
| \cpagerefFor: User-redefinable word for page references. . . . .                                         | 567      | titles: Added. . . . .                                                       | 1055 |
| \dotfill: Inserts an ellipsis. . . . .                                                                   | 591      | titlesec: Added. . . . .                                                     | 1058 |
| \hfill: Inserts a \quad. . . . .                                                                         | 591      | titletoc: Added. . . . .                                                     | 1060 |
| \hrulefill: Inserts a short rule. . . . .                                                                | 591      | titling: Improved compatibility. . . . .                                     | 1062 |
| \hspace: Add: Supports HTML thin breakable space. . . . .                                                | 593      | tocloft: Added. . . . .                                                      | 1070 |
| \hyperindexref: Print mode provided in case hyperref not used. . . . .                                   | 512      | wallpaper: Added. . . . .                                                    | 1096 |
| \pageref: Added. . . . .                                                                                 | 488      | wrapfig: Added. . . . .                                                      | 1099 |
| \tracinglwarp: Added. . . . .                                                                            | 238      | xetexko-vertical: Added. . . . .                                             | 1112 |
| General: 2017/02/09 . . . . .                                                                            | 1        | Added @, <, > columns. . . . .                                               | 420  |
| afterpage: Added. . . . .                                                                                | 612, 618 | Added single-expansion data arrays. . . . .                                  | 322  |
| alltt: Added. . . . .                                                                                    | 623      | Code factored into independent lwarp_html files. . . . .                     | 607  |
| bookmark: Added. . . . .                                                                                 | 658      | Docs: Examples for generating HTML file names. . . . .                       | 109  |
| caption and subcaption supported. . . . .                                                                | 1        | Docs: Improved index. . . . .                                                | 1    |
| cleveref and referencing patches: Applied \AfterEndPreamble. . . . .                                     | 566      | Enhanced titling support. . . . .                                            | 398  |
| draftwatermark: Added. . . . .                                                                           | 717      | File: lwarp.css: Minor fixes for validation. . . . .                         | 1    |
| eso-pic: Added. . . . .                                                                                  | 738      | File: lwarpmk used to compile print, HTML, indexes, and lateximages. . . . . | 1    |
| everypage: Added. . . . .                                                                                | 742      | Fix: \linewidth in a floatrow. . . . .                                       | 767  |
| extramarks: Added. . . . .                                                                               | 743      | Moved sidebar and example code to test suite. . . . .                        | 1    |
| fancyhdr: Added. . . . .                                                                                 | 749      | Page geometry set to 6in wide with large margins. . . . .                    | 225  |
| float: Improved float caption type handling. . . . .                                                     | 761      | Parallel versions of aux files for print/HTML. . . . .                       | 1    |
| graphics: Fix: Expands filename. . . . .                                                                 | 795      | Removed reliance on make, grep, gawk. . . . .                                | 1    |
| graphics: Fix: \linewidth in a floatrow. . . . .                                                         | 795      | Tabular: \unskip extra spaces. . . . .                                       | 420  |
| hyperref: Additional user macros. . . . .                                                                | 806      | Test Suite: HTML meta descriptions. . . . .                                  | 1    |
|                                                                                                          |          | verbatim: Added. . . . .                                                     | 410  |
|                                                                                                          |          | BlockClass: Added optional style. . . . .                                    | 342  |
|                                                                                                          |          | Renamed from "blockclass". . . . .                                           | 342  |
|                                                                                                          |          | LWR@nestspan: Fix: Minipages inside a span. . . . .                          | 337  |
|                                                                                                          |          | v0.21                                                                        |      |
|                                                                                                          |          | \LWR@LwarpStart: Changed lateximages to a .txt file. . . . .                 | 391  |

|                                                                                                  |      |       |                                                                                                                                                        |          |
|--------------------------------------------------------------------------------------------------|------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| \LWR@filestart: Skip title if not given. . . . .                                                 | 388  | v0.24 | \LWR@htmlfileref: Fix: Index links while \tracinglwrap. . . . .                                                                                        | 484      |
| \LWR@newhtmlfile: Skip title if not given. . . . .                                               | 372  |       | \hspace: Add: \hspace \fill converts to 2em . . . . .                                                                                                  | 593      |
| \marginpar: Fixed source listing. . .                                                            | 360  |       | \hypertocfloat: List of floats responds to lofdepth, lotdepth. . . . .                                                                                 | 508      |
| \marginparBlock: Fixed source listing. . . . .                                                   | 361  |       | General: 2017/03/15 . . . . .                                                                                                                          | 1        |
| General: 2017/02/23 . . . . .                                                                    | 1    |       | floatrow: Support for subfig. . . . .                                                                                                                  | 764      |
| fontenc: Added. . . . .                                                                          | 774  |       | subfig: Added. . . . .                                                                                                                                 | 1027     |
| <i>lwarpmk</i> : Fix: <b>lwarpmk</b> again for WINDOWS. . . . .                                  | 302  |       | tikz: For tikz v3.0.0 or later, auto-loads tikz babel library if necessary. . . . .                                                                    | 1053     |
| <i>lwarpmk</i> : Fix: <b>lwarpmk</b> limages for WINDOWS. . . . .                                | 302  |       | Docs: Filename underscore. . . . .                                                                                                                     | 103, 118 |
| <i>lwarpmk</i> : Fix: <i>lwarpmk</i> uses lateximages text file instead of shell script. . . . . | 302  |       | Fix for inline images. . . . .                                                                                                                         | 1054     |
| Add: Errors for misplaced packages. . . . .                                                      | 195  |       | No longer preloads subcaption; conflicted with subfig. . . . .                                                                                         | 229      |
| Docs: Added internet class. . . . .                                                              | 67   |       | picture: Fix for inline images. . . . .                                                                                                                | 568      |
| Docs: Added TeX2page, GladTeX. . .                                                               | 67   | v0.25 |                                                                                                                                                        |          |
| Docs: Installing on WINDOWS. . . . .                                                             | 73   |       | \LWR@loadnever: Added the ability to prevent conflicting packages. . . . .                                                                             | 197      |
| File: <i>lwrap_tutorial.txt</i> added. . . . .                                                   | 77   |       | \addcontentsline: Handles theorems. . . . .                                                                                                            | 500      |
| v0.22                                                                                            |      |       | General: 2016/03/22 . . . . .                                                                                                                          | 1        |
| \LWR@parseDcolumn: Added tabular D column. . . . .                                               | 436  |       | amsthm: Added. . . . .                                                                                                                                 | 627      |
| \LWR@parsebangcolumn: Added tabular ! column. . . . .                                            | 432  |       | ellipsis: Added. . . . .                                                                                                                               | 724      |
| \LWR@parsetablecols: Unknown table column types become l. Added tabular D, !, X columns. . . . . | 440  |       | emptypage: Added. . . . .                                                                                                                              | 725      |
| \LWR@printmccoldata: Added tabular D, !, and X columns. . . . .                                  | 459  |       | framed: Added. . . . .                                                                                                                                 | 779      |
| General: 2017/03/02 . . . . .                                                                    | 1    |       | lips: Added. . . . .                                                                                                                                   | 835      |
| abstract: Added. . . . .                                                                         | 609  |       | mdframed: Help avoid hyphenation. . . . .                                                                                                              | 866      |
| change page: Added. . . . .                                                                      | 671  |       | ntheorem: Added. . . . .                                                                                                                               | 916      |
| dcolumn: Added. . . . .                                                                          | 712  |       | showidx: Added. . . . .                                                                                                                                | 988      |
| ftnright: Added. . . . .                                                                         | 781  |       | theorem: Added. . . . .                                                                                                                                | 1046     |
| geometry: Nullified commands. . . . .                                                            | 783  |       | Basic L <sup>A</sup> T <sub>E</sub> X theorems: improved css. . . . .                                                                                  | 411      |
| layout: Added. . . . .                                                                           | 828  |       | Docs: Adds credits for patched code. . . . .                                                                                                           | 1        |
| lscap: Added. . . . .                                                                            | 844  |       | Docs: Testing <i>lwrap</i> . . . . .                                                                                                                   | 182      |
| mcaption: Added. . . . .                                                                         | 864  |       | Fix: Allows XE <sup>L</sup> A <sub>T</sub> E <sub>X</sub> and Lua <sup>L</sup> A <sub>T</sub> E <sub>X</sub> to preload graphics and graphicx. . . . . | 199      |
| nameref: Added. . . . .                                                                          | 901  | v0.26 |                                                                                                                                                        |          |
| nextpage: Added. . . . .                                                                         | 905  |       | General: 2017/03/31 . . . . .                                                                                                                          | 1        |
| parskip: Added. . . . .                                                                          | 937  |       | <i>lwrap.css</i> : Improved responsive marginpar and marginblock. . . . .                                                                              | 258      |
| showkeys: Added. . . . .                                                                         | 989  |       | cutwin: Added. . . . .                                                                                                                                 | 711      |
| sidecap: Added. . . . .                                                                          | 989  |       | endnotes: Added. . . . .                                                                                                                               | 727      |
| tabularx: Added. . . . .                                                                         | 1036 |       | floatflt: Added. . . . .                                                                                                                               | 763      |
| varioref: Supported. . . . .                                                                     | 124  |       | footmisc: Added. . . . .                                                                                                                               | 774      |
| verse: Added. . . . .                                                                            | 1090 |       | footnotehyper: Added. . . . .                                                                                                                          | 777      |
| v0.23                                                                                            |      |       | footnote: Added. . . . .                                                                                                                               | 776      |
| \LWR@parsetablecols: Fix for vert bar column type. . . . .                                       | 440  |       | marginfix: Added. . . . .                                                                                                                              | 856      |
| \LWR@printmccoldata: Fix for vert bar column type. . . . .                                       | 459  |       | marginnote: Added. . . . .                                                                                                                             | 857      |
| General: 2017/03/02 . . . . .                                                                    | 1    |       | mparhack: Added. . . . .                                                                                                                               | 889      |
|                                                                                                  |      |       | pagenote: Supported as-is. . . . .                                                                                                                     | 931      |

|                                                                                                    |        |                                                                                                                                   |      |
|----------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------|------|
| sidenotes: Added. . . . .                                                                          | 990    | tabularx: Fix for optional pos. . .                                                                                               | 1036 |
| Docs: Improved MiKTeX install instructions. . . . .                                                | 72, 74 | tabulary: Added. . . . .                                                                                                          | 1037 |
| Dollar span avoided in a lateximage. . . . .                                                       | 521    | <i>lwarpmk</i> : Add: <b>printglossary</b> and <b>htmlglossary</b> commands. . . . .                                              | 302  |
| Footnotes now are L <sup>A</sup> T <sub>E</sub> X boxes instead of pagenotes. . . . .              | 355    | Added boolean FormatEpub. . . . .                                                                                                 | 244  |
| lateximage: Labels track page numbers of lateximages. . . . .                                      | 549    | Added boolean FormatWP. . . . .                                                                                                   | 244  |
| Print mode now uses a minipage of \linewidth. . . . .                                              | 549    | Added boolean HTMLDebugComments. . . . .                                                                                          | 239  |
| picture: Fix for \makebox in picture. . . . .                                                      | 568    | Added boolean HTMLMarkFloats, changed to WPMarkFloats as of v0.42. . . . .                                                        | 244  |
| v0.27                                                                                              |        | Docs: Modifying lwarpmk and index processing. . . . .                                                                             | 182  |
| \LWR@footnotetext: Fix for table footnote par tags. . . . .                                        | 356    | File: <i>lwrap_mathjax.txt</i> : Updated CDN repository. . . . .                                                                  | 299  |
| General: 2017/04/04 . . . . .                                                                      | 1      | Forced oneside to maintain large right margin. . . . .                                                                            | 225  |
| lettrine: Added. . . . .                                                                           | 832    | v0.29                                                                                                                             |      |
| microtype: Fix with XeL <sup>A</sup> T <sub>E</sub> X, LuaL <sup>A</sup> T <sub>E</sub> X. . . . . | 880    | General: 2017/04/15 . . . . .                                                                                                     | 1    |
| soul: Added. . . . .                                                                               | 1011   | *.lwarpmkconf: Add: language option for config files. . . . .                                                                     | 257  |
| ulem: Added. . . . .                                                                               | 1084   | <i>lwarpmk.conf</i> : Add: language option for config files. . . . .                                                              | 257  |
| Docs: Installing utilities for MACOS. . . . .                                                      | 75     | graphics: Fix: Error when no optional arguments. . . . .                                                                          | 795  |
| Docs: Limitations of saveboxes. . . . .                                                            | 119    | <i>lwarpmk</i> : Add: language option for config files. . . . .                                                                   | 302  |
| Page geometry modified to reduce line overflow. . . . .                                            | 225    | Add: <i>lwrapmkLang</i> option for <i>lwrap</i> . . . . .                                                                         | 219  |
| v0.28                                                                                              |        | Docs: Using a glossary . . . . .                                                                                                  | 88   |
| \@wrindex: Improved indexing. . . . .                                                              | 511    | v0.30                                                                                                                             |      |
| \HTMLAuthor: Added \HTMLauthor. (Renamed in v0.30.) . . . . .                                      | 353    | \CSSFilename: Renamed from \NewCSS. . . . .                                                                                       | 352  |
| \LWR@LwrapEnd: If FormatEpub or FormatWP, no bottom nav. . . . .                                   | 394    | \HTMLAuthor: Renamed from \HTMLauthor. . . . .                                                                                    | 353  |
| \LWR@LwrapStart: FormatWordProcessor forces single-file output. . . . .                            | 391    | \HTMLDescription: Renamed from \NewHTMLdescription. . . . .                                                                       | 353  |
| \LWR@filestart: Adds HTML meta author. . . . .                                                     | 388    | \HTMLFirstPageTop: Renamed from \SetFirstPageTop. . . . .                                                                         | 351  |
| \LWR@forcenewpage: Forces new PDF page before major environments. . . . .                          | 333    | \HTMLLanguage: Renamed from \MetaLanguage. . . . .                                                                                | 387  |
| \LWR@htmlcomment: Breaks ligatures in HTML comments. . . . .                                       | 339    | \HTMLPageBottom: Renamed from \SetPageBottom. . . . .                                                                             | 351  |
| \LWR@newhtmlfile: If FormatEpub or FormatWP: skips headers, footers, nav. . . . .                  | 372    | \HTMLPageTop: Renamed from \SetPageTop. . . . .                                                                                   | 351  |
| \LWR@parsetablecols: Added L, C, R, J column types. . . . .                                        | 440    | General: 2017/04/29 . . . . .                                                                                                     | 1    |
| \LWR@startref: Removed space. . . . .                                                              | 486    | <i>lwrap-newproject</i> removed, and combined with <i>lwrap</i> . . . . .                                                         | 250  |
| \chapter: If EPUB, prints footnotes before each section. . . . .                                   | 386    | <i>lwarpmk</i> : Add: <i>xdyfile</i> configuration option. . . . .                                                                | 302  |
| \hyperindexref: Improved indexing. . . . .                                                         | 512    | <i>lwarpmk</i> : Fix: <i>xindy</i> and <i>texindy</i> adjusted for <i>pdflatex</i> , <i>xelatex</i> and <i>lualatex</i> . . . . . | 302  |
| \textup: Fixed span class. . . . .                                                                 | 582    |                                                                                                                                   |      |
| General: 2017/04/14 . . . . .                                                                      | 1      |                                                                                                                                   |      |
| glossaries: Added. . . . .                                                                         | 786    |                                                                                                                                   |      |
| graphics: Adapts to graphics syntax. . . . .                                                       | 795    |                                                                                                                                   |      |
| graphics: Added. . . . .                                                                           | 788    |                                                                                                                                   |      |

|                                                                                                                     |     |                                                                           |          |
|---------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------|----------|
| <i>lwarpmk</i> : Fix: <i>xindy</i> now used for print index generation with <i>latexmk</i> . . . . .                | 302 | Add: Tabular at and bang columns now have their own HTML columns. . . . . | 420      |
| <i>lwarpmk</i> : language now used for both index and glossary generation. . . . .                                  | 302 | cleveref: Fix: Loaded \AtEndPreamble. . . . .                             | 566      |
| File: <i>lwrap_html</i> .xdy renamed to <i>lwrap</i> .xdy. . . . .                                                  | 298 | Fix: Incorrectly-inline math environments. . . . .                        | 542      |
| Fix: *.css files only written in print mode. . . . .                                                                | 258 | New handling of & to localize catcode changes. . . . .                    | 420      |
| Fix: <i>lwrap</i> .xdy only written in print mode. . . . .                                                          | 298 | v0.34                                                                     |          |
| Fix: <i>lwrap_mathjax</i> .txt: Only written in print mode. . . . .                                                 | 299 | \@fnsymbol: Text symbols instead of math. . . . .                         | 401      |
| Option <i>lwrapmklang</i> changed to <i>IndexLanguage</i> . . . . .                                                 | 219 | \InlineClass: Moved optional argument in front of mandatory. . . . .      | 342      |
| Option <i>OSWindows</i> replaces macro \warpOSWindows. . . . .                                                      | 219 | \LWRhtmldivclass: Moved optional argument in front of mandatory. . . . .  | 340      |
| Option <i>xdyFilename</i> added. . . . .                                                                            | 218 | \LWRhtmlclass: Moved optional argument in front of mandatory. . . . .     | 340      |
| Option <i>latexmk</i> replaces macro \UseLatexmk. . . . .                                                           | 220 | \LWRhtmlclassline: Moved optional argument in front of mandatory. . . . . | 341      |
| Options <i>HomeHTMLFilename</i> and <i>HTMLFilename</i> replace macros \HomeHTMLFilename and \HTMLFilename. . . . . | 219 | \LWRhtmlspanclass: Moved optional argument in front of mandatory. . . . . | 338      |
| v0.31                                                                                                               |     | \LWRnullfont: Improved font control. . . . .                              | 516      |
| General: 2017/05/15 . . . . .                                                                                       | 1   | \LWR@restoreorigformatting: booktabs: Works inside lateximage. . . . .    | 514      |
| keyfloat: Improved compatibility. . . . .                                                                           | 822 | Improved font control. . . . .                                            | 514      |
| v0.32                                                                                                               |     | \LWR@subhtmlclass: Moved optional argument in front of mandatory. . . . . | 340      |
| \RequirePackage: Fix: Ignores blanks in package list. . . . .                                                       | 233 | \LWR@tabledatacolumnntag: booktabs: Works inside lateximage. . . . .      | 471      |
| General: 2016/06/09 . . . . .                                                                                       | 1   | \fboxBlock: Added. . . . .                                                | 577      |
| glossaries: Prevent error with \glo@name not defined. . . . .                                                       | 513 | \makebox: Fix: Handles paren arg. . . . .                                 | 575      |
| <i>lwarpmk</i> : Fix: <i>io.lines()</i> changed to <i>file:lines()</i> due to <i>luatex</i> changes. . . . .        | 302 | General: 2017/08/08 . . . . .                                             | 1        |
| v0.33                                                                                                               |     | babel-french: Adds fixed-width HTML spaces to punctuation. . . . .        | 334      |
| \HTMLAuthor: Fix: Provides empty default author if none given. . . . .                                              | 353 | balance: Added. . . . .                                                   | 647      |
| \LWR@loadbefore: Fix: No \PackageError if already loaded. . . . .                                                   | 197 | booktabs: Works inside lateximage. . . . .                                | 474, 658 |
| \LWR@parseatcolumn: Fix: Column alignment with leftmost @. . . . .                                                  | 431 | boxedminipage2e: Added. . . . .                                           | 661      |
| \LWR@tabledatasinglecolumnntag: Fix: Macros in tabular could cause extra data cell. . . . .                         | 447 | crop: Added. . . . .                                                      | 707      |
| \LWR@vspace: Add: \vspace nullified. . . . .                                                                        | 594 | enumerate: Added. . . . .                                                 | 732      |
| \StartDefiningTabulars: Add: Avoids error: Misplaced alignment tab character &. . . . .                             | 323 | enumitem: Added, no longer required. . . . .                              | 732      |
| General: 2017/07/10 . . . . .                                                                                       | 1   | everyshi: Added. . . . .                                                  | 742      |
| amsmath: Removed <i>fleqn</i> option. . . . .                                                                       | 624 | fancybox: Added. . . . .                                                  | 745      |
| <i>fancyhdr</i> : Fix: Optional args for \thead, etc. . . . .                                                       | 749 | <i>fancyvrb</i> : Added, no longer required. . . . .                      | 751      |
|                                                                                                                     |     | figcaps: Added. . . . .                                                   | 757      |
|                                                                                                                     |     | filecontents: Fix: Required. Patched for morewrites. . . . .              | 228      |

|                                             |      |                                                         |      |
|---------------------------------------------|------|---------------------------------------------------------|------|
| floatpag: Added. . . . .                    | 764  | \LWR@closeparagraph: Extra HTML                         |      |
| flushend: Added. . . . .                    | 770  | source space after paragraphs. . . . .                  | 346  |
| fullpage: Added. . . . .                    | 782  | \LWR@currenttextcolor: Fix for                          |      |
| hyperxmp: Added. . . . .                    | 811  | \rule when xcolor not loaded. . . . .                   | 589  |
| idxlayout: Added. . . . .                   | 812  | \LWR@nullfont: Fix: Filenames while                     |      |
| marginfit: Added. . . . .                   | 856  | using MATHJAX. . . . .                                  | 516  |
| mdframed: Improved mdtheorem                |      | \LWR@restoreorigformatting:                             |      |
| patch. . . . .                              | 871  | siunitx: Improved                                       |      |
| moreverb: Added. . . . .                    | 886  | super/subscripts in a                                   |      |
| paralist: Added. . . . .                    | 931  | lateximage. . . . .                                     | 514  |
| pdfscape: Added. . . . .                    | 941  | \LWR@section: Improved spacing. . . . .                 | 379  |
| pdfsync: Added. . . . .                     | 944  | \LWR@stoppars: Extra HTML source                        |      |
| prelim2e: Added. . . . .                    | 958  | space after paragraphs. . . . .                         | 349  |
| rotfloat: Added. . . . .                    | 973  | \LWR@subHTMLsanitize: Fix for                           |      |
| savetrees: Added. . . . .                   | 974  | babel-french. . . . .                                   | 367  |
| shadow: Added. . . . .                      | 988  | \fbox: Fix: Uses \fboxrule and                          |      |
| syntonly: Added. . . . .                    | 1035 | \fboxsep. . . . .                                       | 576  |
| titles: No longer required. . . . .         | 1055 | \framebox: Fix: Handles width and                       |      |
| titleref: Prevented. . . . .                | 1057 | horiz position. . . . .                                 | 576  |
| xmpincl: Added. . . . .                     | 1117 | \makebox: Fix: Handles width and                        |      |
| Added. . . . .                              | 1108 | horiz position. . . . .                                 | 575  |
| Docs: Horizontal space limitations. . . . . | 1    | General: 2017/08/17 . . . . .                           | 1    |
| Docs: Misplaced alignment                   |      | babel-french: Adjustements for                          |      |
| character. . . . .                          | 186  | French variants, load order,                            |      |
| File: lwarp_mathjax.txt: Version            |      | footnotes, ellipses. . . . .                            | 334  |
| change. . . . .                             | 299  | footnote: Extra HTML source space                       |      |
| File: README.txt: updated. . . . .          | 1    | after paragraphs. . . . .                               | 776  |
| Fix: Added the eqnarray                     |      | siunitx: Fix for babel-french. . . . .                  | 559  |
| environments. . . . .                       | 542  | siunitx: Improved symbol                                |      |
| Improved font control. . . . .              | 580  | support. . . . .                                        | 1000 |
| Lists refactored to remove                  |      | transparent: Added. . . . .                             | 1080 |
| enumitem requirement. . . . .               | 412  | upref: Added. . . . .                                   | 1089 |
| Verbatim refactored to remove               |      | xcolor: Added \fcolorboxBlock,                          |      |
| fancyvrb requirement. . . . .               | 408  | \colorboxBlock. . . . .                                 | 1101 |
| tabular: booktabs: Works inside             |      | xcolor: Fix: Background none in                         |      |
| lateximage. . . . .                         | 476  | print mode. . . . .                                     | 1101 |
| lateximage: Fix: lateximage with            |      | xcolor: Refactored                                      |      |
| minipage, \parbox, \makebox,                |      | \LWR@colorstyle. . . . .                                | 1104 |
| \fbox, \framebox, \raisebox,                |      | xcolor: Uses \fboxrule and                              |      |
| \scalebox, \reflectbox. . . . .             | 549  | \fboxsep. . . . .                                       | 1101 |
| BlockClass: Moved optional                  |      | xcolor: \fcolorbox etc. now work                        |      |
| argument in front of mandatory. . . . .     | 342  | inside lateximage. . . . .                              | 1101 |
| fminipage: Added. . . . .                   | 577  | Docs: Reorganized: Special cases                        |      |
| \LWR@nestspan: Fix: Minipages,              |      | and limitations. . . . .                                | 116  |
| BlocksClass, and lists inside a             |      | Source: Improved formatting. . . . .                    | 1    |
| span. . . . .                               | 337  | tabular: Fix for babel-french. . . . .                  | 476  |
| v0.35                                       |      | lateximage: Footnotes appear in                         |      |
| General: 2017/08/08 . . . . .               | 1    | regular text instead of the                             |      |
| Fix: \textbf and related. . . . .           | 580  | lateximage minipage. . . . .                            | 549  |
| v0.36                                       |      | v0.37                                                   |      |
| \LWR@footnotetext: Extra HTML               |      | \@include: Maintains independent                        |      |
| source space after paragraphs. . . . .      | 356  | aux files for HTML. . . . .                             | 237  |
| Force HTML superscripts. . . . .            | 356  | General: 2017/08/19 . . . . .                           | 1    |
| \LWR@HTMLsanitizeexpand: Fix for            |      | L <sup>A</sup> T <sub>E</sub> X accents: Added. . . . . | 248  |
| babel-french. . . . .                       | 368  |                                                         |      |

|                                                                        |           |                                                                                             |           |
|------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------|-----------|
| babel-french: Adjustment for load order. . . . .                       | 334       | Supports authblk with <div>s of class oneauthor instead of tabular. . . . .                 | 402, 1064 |
| color: Prevented. . . . .                                              | 704       | \AddSubtitlePublished: Added. . . . .                                                       | 404       |
| siunitx: Improved symbol support. . . . .                              | 1000      | \LWR@domulticolumn: Add: Optional vpos and # rows. . . . .                                  | 462       |
| textcomp: Improved support. . . . .                                    | 1042      | \LWR@restoreorigformatting: Appended with \appto instead of calling various macros. . . . . | 514       |
| <i>lwarpmk</i> : Removes additional HTML aux files. . . . .            | 302       | \LWR@tabledatacolumnntag: Don't start a data cell if see \TabularMacro. . . . .             | 471       |
| File handles reorganized. . . . .                                      | 236       | \ResumeTabular: Added. . . . .                                                              | 470       |
| v0.38                                                                  |           | \TabularMacro: Added. . . . .                                                               | 470       |
| \@seccntformat: Added for appendix. . . . .                            | 378       | \multicolumnrow: Added. . . . .                                                             | 468, 895  |
| \ForceHTMLPage: Added. . . . .                                         | 376       | \printauthor: Removed minipages. . . . .                                                    | 399       |
| \ForceHTMLTOC: Added. . . . .                                          | 376       | Supports authblk with <div>s of class oneauthor instead of tabular. . . . .                 | 399       |
| \LWR@section: \part* starts a new HTML page, for appendix. . . . .     | 379       | \thanksmarkseries: Removed minipage footnotes. . . . .                                      | 1065      |
| Modified spacing, uses \numberline. . . . .                            | 379       | General: 2017/09/05 . . . . .                                                               | 1         |
| \numberline: Added trailing \quad. . . . .                             | 507       | a4wide: Added. . . . .                                                                      | 609       |
| \part: Fix with article class. . . . .                                 | 385       | a4: Added. . . . .                                                                          | 608       |
| General: 2017/08/27 . . . . .                                          | 1         | a5comb: Added. . . . .                                                                      | 609       |
| appendix: Added. . . . .                                               | 632       | addlines: Added. . . . .                                                                    | 618       |
| arabicfront: Added. . . . .                                            | 634       | anyssize: Added. . . . .                                                                    | 632       |
| chappg: Added. . . . .                                                 | 674       | authblk: Added. . . . .                                                                     | 641       |
| color: Forces xcolor as well. . . . .                                  | 704       | bigdelim: Added. . . . .                                                                    | 654       |
| fix2col: Added. . . . .                                                | 759       | bigstrut: Added. . . . .                                                                    | 656       |
| fncychap: Added. . . . .                                               | 770       | ebook: Added. . . . .                                                                       | 719       |
| grffile: Added. . . . .                                                | 801       | fullwidth: Added. . . . .                                                                   | 782       |
| metalogo: Added. . . . .                                               | 876       | midpage: Added. . . . .                                                                     | 881       |
| nonumonpart: Added. . . . .                                            | 914       | multirow: Add: New optional vpos argument. . . . .                                          | 894       |
| nopageno: Added. . . . .                                               | 915       | multirow: Add: Supports left/right border for bigdelim. . . . .                             | 894       |
| pagenote: Option page disabled. . . . .                                | 931       | multirow: Fix: Long text argument. . . . .                                                  | 894       |
| realscripts: Added. . . . .                                            | 964       | supertabular: Added. . . . .                                                                | 1033      |
| relsize: Added. . . . .                                                | 969       | textarea: Added. . . . .                                                                    | 1041      |
| romanbarpagenumber: Added. . . . .                                     | 973       | titling: Improved compatibility. . . . .                                                    | 1062      |
| romanbar: Added. . . . .                                               | 972       | titling: Removed extraneous center environments. . . . .                                    | 1063      |
| scalefnt: Added. . . . .                                               | 975       | typearea: Added. . . . .                                                                    | 1083      |
| siunitx: Removed from lwrap core. . . . .                              | 1000      | xtabular: Added. . . . .                                                                    | 1120      |
| textcomp: Removed from lwrap core. . . . .                             | 1042      | zwpagelayout: Added. . . . .                                                                | 1124      |
| tocbibind: Added. . . . .                                              | 1067      | Docs: Reorganized tabular discussion. . . . .                                               | 155       |
| xltxtra: Added. . . . .                                                | 1116      | Titlepage \published and \subtitle removed. . . . .                                         |           |
| <i>lwarpmk</i> : Added <b>print1</b> and <b>html1</b> actions. . . . . | 302       | \AddSubtitlePublished restores. . . . .                                                     | 403       |
| Added \markboth, \sloppy, etc. . . . .                                 | 333       | titlepage: Clear pending footnotes. . . . .                                                 | 398       |
| Docs: Enhanced <i>Supported Features</i> table. . . . .                | 61        | Removed minipages. . . . .                                                                  | 398       |
| Docs: Index, tocbibind. . . . .                                        | 131       | titlingpage: Clear pending footnotes. . . . .                                               | 1062      |
| Docs: Starred sections. . . . .                                        | 127       |                                                                                             |           |
| v0.39                                                                  |           |                                                                                             |           |
| \@maketitle: titling version. . . . .                                  | 1064      |                                                                                             |           |
| Native L <sup>A</sup> T <sub>E</sub> X version. . . . .                | 402       |                                                                                             |           |
| Removed minipages. . . . .                                             | 402, 1064 |                                                                                             |           |

|                                                                                                         |                                                      |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| v0.40                                                                                                   |                                                      |
| \@chapcntformat: Added for tocibind, anonchap. . . . .                                                  | 379                                                  |
| \LWR@HTMLhline: Added. . . . .                                                                          | 475                                                  |
| \LWR@nullfonts: Fix: Long arguments for expandable command. . . . .                                     | 516                                                  |
| \LWR@restoreorigformatting: Improved L <sup>A</sup> T <sub>E</sub> X logos inside a lateximage. . . . . | 514                                                  |
| Improved symbols inside a lateximage. . . . .                                                           | 514                                                  |
| Nullified \InlineClass, etc. inside a lateximage. . . . .                                               | 514                                                  |
| \LWR@tabledatacolumnstag: Fix for bigdelim: \ldelim, \rdelim. . . . .                                   | 471                                                  |
| \chapter: Added support for quotchap. . . . .                                                           | 386                                                  |
| \multicolumnrow: Fix: Adapts to older multirow and xparse. . . . .                                      | 468                                                  |
| \simplechapterdelim: Added for tocibind, anonchap. . . . .                                              | 379                                                  |
| \underline: Added. . . . .                                                                              | 588                                                  |
| General: 2017/09/25 . . . . .                                                                           | 1                                                    |
| adjmulticol: Added. . . . .                                                                             | 617                                                  |
| anonchap: Added. . . . .                                                                                | 631                                                  |
| bigdelim: Improved documentation. . . . .                                                               | 654                                                  |
| cuted: Added. . . . .                                                                                   | 710                                                  |
| dblfnote: Added. . . . .                                                                                | 712                                                  |
| fnpos: Added. . . . .                                                                                   | 771                                                  |
| graphics: Add: Full \graphicspath support. . . . .                                                      | 795                                                  |
| graphics: Moved out of the lwarp core. . . . .                                                          | 788                                                  |
| graphics: Restores \includegraphics and \DeclareGraphicsExtensions in a lateximage. . . . .             | 788                                                  |
| graphicx: Moved out of the lwarp core. . . . .                                                          | 800                                                  |
| grffile: Directly supported. . . . .                                                                    | 801                                                  |
| midfloat: Added. . . . .                                                                                | 881                                                  |
| multirow: Improved bigdelim borders. . . . .                                                            | 894                                                  |
| pnfnote: Added. . . . .                                                                                 | 947                                                  |
| quotchap: Added. . . . .                                                                                | 962                                                  |
| sectsty: Added. . . . .                                                                                 | 985                                                  |
| stabular: Added. . . . .                                                                                | 1015                                                 |
| tabs: Added. . . . .                                                                                    | 1036                                                 |
| textcomp: Additional symbols, improved XeLaTeX and LuaLaTeX support. . . . .                            | 1042                                                 |
| tocibind: Improved for \simplechapter. . . . .                                                          | 1067                                                 |
| xfrac: No longer preloaded. . . . .                                                                     | 229                                                  |
|                                                                                                         |                                                      |
|                                                                                                         | xltextra: Fix for \showhyphens with XeLaTeX. . . . . |
|                                                                                                         | 1116                                                 |
| v0.41                                                                                                   |                                                      |
| \LWR@addcmidruletrim: Add: \cmidrule trims. . . . .                                                     | 452                                                  |
| \LWR@clearmidrules: Add: \cmidrule trims. . . . .                                                       | 449                                                  |
| \LWR@closetabledatacell: Add: Mute > for \bottomrule. . . . .                                           | 426                                                  |
| Fix: At/bang column with \multirow. . . . .                                                             | 426                                                  |
| Fix: Cancel < for \multicolumn. . . . .                                                                 | 426                                                  |
| \LWR@domulticolumn: Add: \cmidrule trims. . . . .                                                       | 462                                                  |
| Added vertical rules. . . . .                                                                           | 463                                                  |
| \LWR@nullifyNoAutoSpacing: babel-french: Fix: \NoAutoSpacing in a tabular. . . . .                      | 476                                                  |
| \LWR@parsebarcolumn: Added vertical rules. . . . .                                                      | 434                                                  |
| \LWR@printatbang: Add: \cmidrule trims. . . . .                                                         | 445                                                  |
| Add: Mute at and bang columns for \bottomrule. . . . .                                                  | 445                                                  |
| \LWR@printbartag: Added vertical rules. . . . .                                                         | 445                                                  |
| \LWR@subaddcmidruletrim: Added. . . . .                                                                 | 451                                                  |
| \LWR@subcmidrule: Add: \cmidrule trims. . . . .                                                         | 450                                                  |
| \LWR@tabledatasinglecolumnstag: Add: \cmidrule trims. . . . .                                           | 447                                                  |
| Add: Mute < for \bottomrule. . . . .                                                                    | 447                                                  |
| \LWR@tabularfinishrow: Unfinished tabular rows automatically filled. . . . .                            | 428                                                  |
| \mcolrowcell: Added for \multicolumrow cells. . . . .                                                   | 474                                                  |
| General: 2017/10/07 . . . . .                                                                           | 1                                                    |
| booktabs: Improved rules. . . . .                                                                       | 659                                                  |
| multirow: Add: \cmidrule trims. . . . .                                                                 | 894                                                  |
| Added vertical rules. . . . .                                                                           | 894                                                  |
| Fix: < spec. . . . .                                                                                    | 895                                                  |
| tabular: Fix: \NoAutoSpacing in a tabular with babel-french. . . . .                                    | 477                                                  |
| v0.42                                                                                                   |                                                      |
| \@ensuredmath: Improved \ensuremath. . . . .                                                            | 531                                                  |
| \@textsubscript: Added. . . . .                                                                         | 588                                                  |
| \@textsuperscript: Added. . . . .                                                                       | 588                                                  |
| \LWR@HTMLhLine: If FormatWP force explicit border. . . . .                                              | 475                                                  |
| \LWR@addformatwppalignment: If FormatWP add explicit style for cell alignment. . . . .                  | 453                                                  |
| \LWR@addrulewidth: If FormatWP force explicit border. . . . .                                           | 452                                                  |

|                                                                                                            |     |                                                                                      |      |
|------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------|------|
| <code>\LWR@amsmathbody</code> : Fix: Numbering and naming AMS math environments. . . . .                   | 548 | <code>booktabs</code> : If FormatWP force explicit border. . . . .                   | 659  |
| <code>\LWR@amsmathbodynumbered</code> : Fix: Numbering and naming AMS math environments. . . . .           | 548 | <code>epigraph</code> : If FormatWP add HTML styles. . . . .                         | 733  |
| <code>\LWR@doequation</code> : If FormatWP print LaTeX expression. . . . .                                 | 536 | <code>fancybox</code> : If FormatWP add HTML styles. . . . .                         | 745  |
| <code>\LWR@domulticolumn</code> : If FormatWP add cell alignment. . . . .                                  | 463 | <code>floatflt</code> : Added width. . . . .                                         | 763  |
| <code>\LWR@doubledollar</code> : If FormatWP print LaTeX expression. . . . .                               | 530 | <code>graphics</code> : Fix: Class key. . . . .                                      | 792  |
| Improved <code>\ensuremath</code> . . . . .                                                                | 530 | <code>graphics</code> : Fix: Filename expansion. . . . .                             | 795  |
| Improved line spacing with <code>mathjax</code> . . . . .                                                  | 530 | <code>graphics</code> : If FormatWP, use explicit size. . . . .                      | 793  |
| <code>\LWR@floatbegin</code> : If FormatWP add a text frame. . . . .                                       | 494 | <code>keyfloat</code> : If FormatWP add explicit HTML style. . . . .                 | 827  |
| <code>\LWR@floatend</code> : If FormatWP add a text frame. . . . .                                         | 495 | <code>moreverb</code> : Simplified formatting of listings. . . . .                   | 886  |
| <code>\LWR@htmlmathlabel</code> : If FormatWP print LaTeX expression. . . . .                              | 541 | <code>multirow</code> : If FormatWP add cell alignment. . . . .                      | 894  |
| <code>\LWR@remembertag</code> : Fix: Numbering and naming AMS math environments. . . . .                   | 547 | <code>overpic</code> : Added. . . . .                                                | 930  |
| <code>\LWR@restoreorigformatting</code> : Improved <code>\ensuremath</code> . . . . .                      | 515 | <code>realscripts</code> : Fix for subscripts in a <code>lateximage</code> . . . . . | 964  |
| <code>\LWR@subaddcmidruletrim</code> : Opt if no rule given. . . . .                                       | 451 | <code>sidenotes</code> : If FormatWP add explicit HTML style. . . . .                | 991  |
| <code>\LWR@subsingledollar</code> : If FormatWP print LaTeX expression. . . . .                            | 528 | <code>siunitx</code> : Improved <code>\ensuremath</code> . . . . .                   | 1000 |
| <code>\LWR@tabledatasinglecolumntag</code> : If FormatWP add cell alignment. . . . .                       | 447 | <code>soul</code> : If FormatWP, add explicit styles. . . . .                        | 1011 |
| <code>\LaTeX</code> : If FormatWP use explicit style. . . . .                                              | 599 | <code>textcomp</code> : Improved <code>\interrobangdown</code> . . . . .             | 1042 |
| <code>\TeX</code> : If FormatWP use explicit style. . . . .                                                | 599 | <code>wrapfig</code> : If FormatWP add explicit HTML style. . . . .                  | 1099 |
| <code>\hspace</code> : If FormatWP add <code>\quads</code> . . . . .                                       | 593 | Added boolean <code>WPMarkLOFT</code> . . . . .                                      | 245  |
| <code>\listoffigures</code> : Added boolean <code>WPMarkLOFT</code> . . . . .                              | 504 | Added boolean <code>WPMarkMath</code> . . . . .                                      | 245  |
| <code>\listoftables</code> : Added boolean <code>WPMarkLOFT</code> . . . . .                               | 504 | Added boolean <code>WPMarkMinipages</code> . . . . .                                 | 244  |
| <code>\marginpar</code> : If FormatWP emulate a <code>wrapfig</code> . . . . .                             | 360 | Added boolean <code>WPMarkTOC</code> . . . . .                                       | 244  |
| <code>\marginparBlock</code> : If FormatWP emulate a <code>wrapfig</code> . . . . .                        | 361 | Added boolean <code>WPTitleHeading</code> . . . . .                                  | 245  |
| <code>\rule</code> : If FormatWP add <code>\quads</code> . . . . .                                         | 597 | <code>Docs</code> : Added support page. . . . .                                      | 2    |
| <code>\tableofcontents</code> : Added boolean <code>WPMarkTOC</code> . . . . .                             | 504 | <code>Docs</code> : Improper <code>\prevdepth</code> . . . . .                       | 186  |
| <code>\underline</code> : If FormatWP, use explicit styles for <code>\underline</code> , etc. . . . .      | 588 | <code>Docs</code> : Reorganized math limitations . . . . .                           | 143  |
| General: 2017/10/30 . . . . .                                                                              | 1   | File: <code>lwrap_mathjax.txt</code> : Updated <code>siunitx</code> script. . . . .  | 299  |
| <code>\textbf</code> and related: If FormatWP, use explicit styles for <code>\textsc</code> , etc. . . . . | 580 | Fix: Numbering and naming AMS math environments. . . . .                             | 547  |
| <code>algorithmicx</code> : If FormatWP add <code>\quads</code> . . . . .                                  | 622 | If FormatWP, shift section headings. . . . .                                         | 245  |
|                                                                                                            |     | <code>tabbing</code> : Added. . . . .                                                | 410  |
|                                                                                                            |     | <code>lateximage</code> : Fix: Numbering and naming AMS math environments. . . . .   | 550  |
|                                                                                                            |     | <code>center</code> : If FormatWP use explicit <code>text-align</code> . . . . .     | 555  |
|                                                                                                            |     | <code>minipage</code> : Added boolean <code>WPMarkMinipages</code> . . . . .         | 573  |
|                                                                                                            |     | If FormatWP add a text frame. . . . .                                                | 572  |
|                                                                                                            |     | <code>eqnarray</code> : Fix: Numbering and naming AMS math environments. . . . .     | 543  |
|                                                                                                            |     | If FormatWP print LaTeX expression. . . . .                                          | 542  |

|                                                                                    |               |                                                                     |      |
|------------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------|------|
| LWR@BlockClassWP: Added to factor code. . . . .                                    | 343           | \LWR@textcurrentcolor: xcolor: Added \LWR@textcurrentcolor. . . . . | 1104 |
| LWR@figcaption: If FormatWP forces italic captions. . . . .                        | 499           | \addcontentsline: Automatic \LWR@newfloatanchor. . . . .            | 500  |
| v0.43                                                                              |               | \chapter: Add preamble for koma-script. . . . .                     | 386  |
| \LWR@domulticolumn: Fix for vertical rules. . . . .                                | 463           | \marginparBlock: Added. . . . .                                     | 361  |
| Fix: Multicolumn trim. . . . .                                                     | 462, 463      | \nopagecolor: xcolor: Fix for \nopagecolor. . . . .                 | 1106 |
| \LWR@maybepreprintpendingfootnotes: Added FootnoteDepth. . . . .                   | 359           | \part: Add preamble for koma-script. . . . .                        | 385  |
| \LWR@nullfonts: Fix: Nullify dollar inside filenames. . . . .                      | 516           | \title: Added \thetitle. . . . .                                    | 352  |
| \LWR@parsetablecols: Ignore spaces in col spec. . . . .                            | 440           | General: 2017/11/22 . . . . .                                       | 1    |
| \LWR@printmcoltype: Added vertical rules. . . . .                                  | 458           | algorithmicx: Improved comment symbol. . . . .                      | 622  |
| \LWR@section: Fix: Expansion in comparison. . . . .                                | 380           | atbegshi: Added. . . . .                                            | 638  |
| Fix: Math in section name. . . . .                                                 | 381, 384      | cancel: Added. . . . .                                              | 665  |
| Fix: Nullify fonts inside HTML comment. . . . .                                    | 381           | changeage: Additional options. . . . .                              | 672  |
| \TabularMacro: \newcommand instead of \relax to fix supertabular and xtab. . . . . | 470           | easy-todo: Added. . . . .                                           | 718  |
| \href: Made robust. . . . .                                                        | 491           | fancyref: Added. . . . .                                            | 749  |
| \nameref: Made robust. . . . .                                                     | 488           | fixmetodonotes: Added. . . . .                                      | 760  |
| \nolinkurl: Made robust. . . . .                                                   | 491           | fixme: Added. . . . .                                               | 759  |
| \url: Made robust. . . . .                                                         | 491           | fontenc: Allowed after lwarp. . . . .                               | 774  |
| General: 2017/11/08 . . . . .                                                      | 1             | hang: Added. . . . .                                                | 802  |
| LWR@currentautosec: Added. . . . .                                                 | 379           | ifoddpages: Added. . . . .                                          | 812  |
| breakurl: Added. . . . .                                                           | 662           | ltxtable: Added. . . . .                                            | 845  |
| hyperref: Made robust. . . . .                                                     | 806, 808, 809 | luatodonotes: Improved. . . . .                                     | 849  |
| hyperref: \Gauge added. . . . .                                                    | 810           | lwarp-patch-komascript: Added. . . . .                              | 1126 |
| luatodonotes: Added. . . . .                                                       | 849           | overpic: Fix: Groups for lateximages. . . . .                       | 930  |
| todonotes: Added. . . . .                                                          | 1077          | pdfsync: Fixes. . . . .                                             | 944  |
| Added FootnoteDepth. . . . .                                                       | 355           | preview: Added. . . . .                                             | 958  |
| Docs: HTML settings table. . . . .                                                 | 103           | scxextend: Added. . . . .                                           | 976  |
| Docs: Reorganized HTML customization. . . . .                                      | 103           | scrhack: Added. . . . .                                             | 979  |
| v0.44                                                                              |               | scrlayer-notecolumn: Added. . . . .                                 | 981  |
| \@currentlabelname: Adjustment for koma-script. . . . .                            | 483           | scrlayer-scrpage: Added. . . . .                                    | 982  |
| \HTMLTitle: Added. . . . .                                                         | 353           | scrlayer: Added. . . . .                                            | 980  |
| \LWR@addformatwppalignment: Fix for multicolumn alignment if FormatWP. . . . .     | 453           | section: Added. . . . .                                             | 984  |
| \LWR@backgroundcolor: Added. . . . .                                               | 1105          | soulpos: Added. . . . .                                             | 1012 |
| \LWR@filestart: Add \HTMLTitle. . . . .                                            | 390           | soulutf8: Added. . . . .                                            | 1013 |
| Fix \HTMLAuthor. . . . .                                                           | 389           | supertabular: Fix for caption. . . . .                              | 1034 |
| \LWR@listitem: Added list and trivlist. . . . .                                    | 414           | tikz: Fix: Groups for lateximages. . . . .                          | 1054 |
| \LWR@patchlists: Added list and trivlist. . . . .                                  | 417           | tocbasic: Added. . . . .                                            | 1066 |
| \LWR@strresult: Fix: \providecommand. . . . .                                      | 424           | tocloft: Added \newlistentry. . . . .                               | 1074 |
|                                                                                    |               | tocloft: Improved \newlistof. . . . .                               | 1075 |
|                                                                                    |               | tocstyle: Added. . . . .                                            | 1076 |
|                                                                                    |               | todonotes: Improved. . . . .                                        | 1077 |
|                                                                                    |               | todo: Added. . . . .                                                | 1076 |
|                                                                                    |               | typearea: Added expert commands. . . . .                            | 1083 |
|                                                                                    |               | watermark: Added. . . . .                                           | 1097 |
|                                                                                    |               | xcolor: Added \LWR@currenttextcolorstyle. . . . .                   | 1104 |
|                                                                                    |               | xcolor: Added \LWR@findcurrenttextcolor. . . . .                    | 1104 |
|                                                                                    |               | xtab: Fix for caption. . . . .                                      | 1121 |

|                                                                            |     |                                                                   |          |
|----------------------------------------------------------------------------|-----|-------------------------------------------------------------------|----------|
| Adjustment for koma-script. . . . .                                        | 207 | endfloat: Added. . . . .                                          | 725      |
| AMS environments: Fix: Groups for lateximages. . . . .                     | 624 | fancyvrb: Improvements. . . . .                                   | 751, 752 |
| If pdfLaTeX, require T1 and UTF-8 encoding. . . . .                        | 209 | flafter: Added. . . . .                                           | 761      |
| picture: overpic: Fix: Groups for lateximages. . . . .                     | 568 | fltrace: Added. . . . .                                           | 769      |
| list: Added list and trivlist. . . . .                                     | 415 | footnpag: Added. . . . .                                          | 777      |
| LWR@nestspan: Added list and trivlist. . . . .                             | 337 | fwlw: Added. . . . .                                              | 782      |
| v0.45                                                                      |     | graphics: Improved URLs with underscores. . . . .                 | 795      |
| \@currentHref: Added. . . . .                                              | 489 | hanging: Added. . . . .                                           | 803      |
| \@donoparitem: Modified for HTML. . . . .                                  | 412 | hyperref: Fix: Underscore in URL. . . . .                         | 806, 807 |
| \@item: Modified for HTML. . . . .                                         | 413 | lwarp-patch-memoir: Added. . . . .                                | 1129     |
| \@mklab: Modified for HTML. . . . .                                        | 412 | memhfix: Added. . . . .                                           | 876      |
| \CSSFilename: Improved filenames with underscores. . . . .                 | 352 | memoir: Added. . . . .                                            | 602      |
| \LWR@LwarpStart: Fix: Lateximages on incorrect pages with Mathjax. . . . . | 392 | natbib: Added. . . . .                                            | 901      |
| \LWR@label@createtag: Fix: Labels with underscores. . . . .                | 485 | pagesel: Added. . . . .                                           | 931      |
| \LWR@newautoidanchor: Fix: No anchor if frozen autoid. . . . .             | 496 | prettyref: Added. . . . .                                         | 958      |
| \LWR@notmemoirloadafter: Added. . . . .                                    | 196 | subfigure: Added. . . . .                                         | 1031     |
| \LWR@printpendingmpfootnotes: Added. . . . .                               | 360 | subfig: Fix for subcaption end tag. . . . .                       | 1029     |
| \LWR@startref: Fix: Labels with underscores. . . . .                       | 487 | subfig: Fix: Math in subcaptions. . . . .                         | 1028     |
| \LWR@subhyperref: Improved URLs with underscores. . . . .                  | 490 | textfit: Added. . . . .                                           | 1045     |
| \LWR@subhyperrefclass: Improved URLs with underscores. . . . .             | 490 | titleref: Added. . . . .                                          | 1057     |
| \LWR@tabledatacolumntag: Fix: Empty line between rows. . . . .             | 473 | turnthepage: Added. . . . .                                       | 1082     |
| \chapter: Add optional heading title for memoir. . . . .                   | 386 | Allows memoir's preloaded packages. . . . .                       | 199      |
| \newpage: Added. . . . .                                                   | 591 | Docs: xparse warnings. . . . .                                    | 167      |
| \nolinkurl: Fix: Underscore in URL. . . . .                                | 491 | Docs: Fix for double hyphens. . . . .                             | 75       |
| \normalmarginpar: Added. . . . .                                           | 361 | Docs: Improved install instructions. . . . .                      | 76       |
| \reversemarginpar: Added. . . . .                                          | 361 | Docs: Improved MiKTeX install instructions. . . . .               | 72       |
| \section: Add optional heading title for memoir. . . . .                   | 386 | Docs: Moved table so doesn't interfere with install docs. . . . . | 71       |
| \tableofcontents: Fix: Empty sidetoc. . . . .                              | 503 | File: lwarp_mathjax.txt: Allow MATHJAX inside tabbing. . . . .    | 299      |
| Fix: Patch \AtBeginDocument. . . . .                                       | 503 | File: lwarp_mathjax.txt: Allow MATHJAX inside verse. . . . .      | 299      |
| \url: Improved URLs with underscores. . . . .                              | 491 | Fix: Empty sidetoc. . . . .                                       | 503      |
| General: 2018/01/14 . . . . .                                              | 1   | Improved: Robust \, , \ , and \textellipsis commands. . . . .     | 590      |
| array: Added. . . . .                                                      | 634 | Separate LWR@thisautoidWP for word processor <div>s. . . . .      | 496      |
| babel-french: Robust commands. . . . .                                     | 334 | thebibliography: Patched to emphasize titles. . . . .             | 514      |
| backref: Added. . . . .                                                    | 646 | minipage: Fix: Improper \prevdepth. . . . .                       | 573      |
| breakurl: Fix: Underscore in URL. . . . .                                  | 662 | v0.46                                                             |          |
| changebar: Added. . . . .                                                  | 670 | \LWR@closeparagraph: Fix: Tabular empty lines. . . . .            | 347      |
| cite: Added. . . . .                                                       | 702 | \LWR@closeprevious: Fix: Stack unnesting. . . . .                 | 332      |
| continue: Added. . . . .                                                   | 706 | \LWR@forcenewpage: Fix: Improper \prevdepth. . . . .              | 333      |
|                                                                            |     | \LWR@lookforpackagename: Fix: Spaces in \usepackage. . . . .      | 233      |
|                                                                            |     | \LWR@popclose: Fix: Stack unnesting. . . . .                      | 322      |
|                                                                            |     | \LWR@providelength: Added. . . . .                                | 211      |

|                                                                                                              |            |                                                                                            |      |
|--------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------|------|
| <code>\LWR@pushclose</code> : Fix: Stack unnesting. . . . .                                                  | 321        | <code>adjmulticol</code> : Fix: Line wrap at HTML hyphen. . . . .                          | 617  |
| <code>\LWRPrintStack</code> : Name changed from <code>\PrintStack</code> . . . . .                           | 331        | <code>blowup</code> : Added. . . . .                                                       | 657  |
| General: 2018/01/23 . . . . .                                                                                | 1          | <code>caption</code> : Added. . . . .                                                      | 666  |
| <code>LWR@tabularpardepth</code> added. . . . .                                                              | 423        | <code>changeage</code> : Fix for pagecheck macros. . . . .                                 | 672  |
| <code>amsthm</code> : Adapted to <code>trivlist</code> changes. . . . .                                      | 629        | <code>endheads</code> : Added. . . . .                                                     | 726  |
| <code>mdframed</code> : Fixes for SVG math or <code>lateximage</code> in title. . . . .                      | 868        | <code>epigraph</code> : Fix: Line wrap at HTML hyphen. . . . .                             | 733  |
| <code>mdframed</code> : Fixes for footnotes. . . . .                                                         | 868        | <code>hanging</code> : Fix: Line wrap at HTML hyphen. . . . .                              | 804  |
| <code>ntheorem</code> : Adapted to <code>trivlist</code> changes. . . . .                                    | 916        | <code>hang</code> : Fix: Line wrap at HTML hyphen. . . . .                                 | 802  |
| <code>theorem</code> : Adapt to <code>trivlist</code> changes. . . . .                                       | 1048, 1049 | <code>keyfloat</code> : Fix for SVG math in captions. . . . .                              | 824  |
| <code>tabular</code> : Fix: Tabular empty lines. . . . .                                                     | 479, 480   | <code>midpage</code> : Fix: Line wrap at HTML hyphen. . . . .                              | 881  |
| <code>list</code> : Fix: Stack unnesting. . . . .                                                            | 415        | <code>multirow</code> : Fix: Line wrap at HTML hyphen. . . . .                             | 894  |
| v0.47                                                                                                        |            | <code>multitoc</code> : Added. . . . .                                                     | 896  |
| <code>\LWR@HTML@caption@begin</code> : Fix: Argument passed to <code>\LWR@origcaption@begin</code> . . . . . | 499        | <code>ntheorem</code> : Fix: Line wrap at HTML hyphen. . . . .                             | 921  |
| <code>\LWR@LwarpStart</code> : Fix for SVG math in <code>\nameref</code> . . . . .                           | 393        | <code>realscripts</code> : Fix: Line wrap at HTML hyphen. . . . .                          | 964  |
| <code>\LWR@WPcell</code> : Fix: Line wrap at HTML hyphen. . . . .                                            | 453        | <code>scrextend</code> : Fix: Line wrap at HTML hyphen. . . . .                            | 976  |
| <code>\LWR@createautosec</code> : Fix: Line wrap at HTML hyphen. . . . .                                     | 378        | <code>sectionbreak</code> : Added. . . . .                                                 | 985  |
| <code>\LWR@domulticolumn</code> : Fix: Line wrap at HTML hyphen. . . . .                                     | 463        | <code>sidenotes</code> : Fix for SVG math in captions. . . . .                             | 990  |
| <code>\LWR@floatbegin</code> : Fix: Line wrap at HTML hyphen. . . . .                                        | 494        | <code>subfig</code> : Fix for SVG math in captions. . . . .                                | 1027 |
| <code>\LWR@htmlclosecomment</code> : Add <code>\mbox</code> to prevent line breaks. . . . .                  | 339        | <code>subfig</code> : Fix: Support <code>\nameref</code> . . . . .                         | 1027 |
| <code>\LWR@label@createtag</code> : Fix: Line wrap at HTML hyphen. . . . .                                   | 485        | <code>xurl</code> : Added. . . . .                                                         | 1122 |
| <code>\LWR@newautoidanchor</code> : Fix: Line wrap at HTML hyphen. . . . .                                   | 496        | <i>lwarpmk</i> : <i>pdfcrop</i> : Removed hires option for improved crop accuracy. . . . . | 302  |
| <code>\LWR@printopenlist</code> : Fix: Line wrap at HTML hyphen. . . . .                                     | 412        | <code>lateximage</code> : Added CSS style option. . . . .                                  | 549  |
| <code>\LWR@startref</code> : Fix: Line wrap at HTML hyphen. . . . .                                          | 486        | Fix: Line wrap at HTML hyphen. . . . .                                                     | 554  |
| <code>\LWR@subsingledollar</code> : Added SVG math image baseline adjust and em sizing. . . . .              | 528        | <code>center</code> : Fix: Line wrap at HTML hyphen. . . . .                               | 555  |
| <code>\LWR@subsingledollarsvg</code> : Fix: Line wrap at HTML hyphen. . . . .                                | 526        | <code>minipage</code> : Fix: Line wrap at HTML hyphen. . . . .                             | 572  |
| <code>\captionlistentry</code> : Fix: Line wrap at HTML hyphen. . . . .                                      | 500        | <code>flushleft</code> : Fix: Line wrap at HTML hyphen. . . . .                            | 555  |
| <code>\hypertoc</code> : Fix: Line wrap at HTML hyphen. . . . .                                              | 507        | <code>flushright</code> : Fix: Line wrap at HTML hyphen. . . . .                           | 555  |
| <code>\hypertocfloat</code> : Fix: Line wrap at HTML hyphen. . . . .                                         | 508        | <code>enumerate</code> : Fix: Line wrap at HTML hyphen. . . . .                            | 416  |
| General: 2018/01/30 . . . . .                                                                                | 1          | <code>itemize</code> : Fix: Line wrap at HTML hyphen. . . . .                              | 416  |
|                                                                                                              |            | <code>LWR@BlockClassWP</code> : Fix: Line wrap at HTML hyphen. . . . .                     | 343  |
|                                                                                                              |            | v0.48                                                                                      |      |
|                                                                                                              |            | <code>\@@@setcpageref</code> : Fix for new v0.21 of <code>cleveref</code> . . . . .        | 567  |

|                                                                                                                                         |          |                                                                                                                       |               |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------|---------------|
| <code>\@@@setcref</code> : Fix for new v0.21 of <code>cleveref</code> . . . . .                                                         | 566      | <code>colortbl</code> : Added. . . . .                                                                                | 443, 454, 705 |
| <code>\@@@setcrefrange</code> : Fix for new v0.21 of <code>cleveref</code> . . . . .                                                    | 566      | <code>fancyref</code> : Now directly supported.                                                                       | 749           |
| <code>\@biblabel</code> : Improved bibliography label. . . . .                                                                          | 513      | <code>graphics</code> : Fix: Virtual page size limited to a group. . . . .                                            | 795, 796      |
| <code>\@item</code> : Honors <code>\makelabel</code> . . . . .                                                                          | 413      | <code>hypcap</code> : Added. . . . .                                                                                  | 805           |
| <code>\@maketitle</code> : Fix: Errors with <code>IEEEtran</code> class. . . . .                                                        | 402      | <code>hypernat</code> : Added. . . . .                                                                                | 805           |
| <code>\LWR@LwarpStart</code> : Adjusted space around captions. . . . .                                                                  | 392      | <code>hyperref</code> : <code>\texorpdfstring</code> now uses the <code>T<sub>E</sub>X</code> string. . . . .         | 809           |
| <code>\LWR@ProvidesPackageDropB</code> : Fix: Options with braces. . . . .                                                              | 235      | <code>luatodonotes</code> : Improved <code>\todotoc</code> . . . . .                                                  | 849           |
| <code>\LWR@addtabularhrulecolor</code> : <code>colortbl</code> : Added. . . . .                                                         | 454      | <code>siunitx</code> : Changes fraction to symbol. . . . .                                                            | 1003          |
| <code>\LWR@addtabularrulecolors</code> : <code>colortbl</code> : Added. . . . .                                                         | 455      | <code>siunitx</code> : Improved <code>svg math</code> . 1000, 1002                                                    |               |
| <code>\LWR@closetabledatcell</code> : <code>colortbl</code> : Added. . . . .                                                            | 426, 427 | <code>siunitx</code> : Improved color output. 1000                                                                    |               |
| <code>\LWR@lookforpackagename</code> : Fix: Parsing similar package names. . . . .                                                      | 232      | <code>stfloats</code> : Added. . . . .                                                                                | 1025          |
| <code>\LWR@newautopagelabel</code> : Fix: <code>TOC</code> , <code>LOF</code> , <code>LOT</code> links. . . . .                         | 367      | <code>todonotes</code> : Improved <code>\todotoc</code> . . . . .                                                     | 1077          |
| <code>\LWR@newhtmlfile</code> : Fix: <code>TOC</code> , <code>LOF</code> , <code>LOT</code> links. . . . .                              | 374      | <code>vmargin</code> : Added. . . . .                                                                                 | 1093          |
| <code>\LWR@nullfonts</code> : Fix: <code>\newline</code> in title. . . . .                                                              | 516      | <code>xfrac</code> : Fix: Added groups around super/subscripts to localize <code>LWR@nestspan</code> changes. . . . . | 1114          |
| <code>\LWR@parsedrequirepackagenames</code> : Fix: Parsing similar package names. . . . .                                               | 230      | <code>Docs</code> : Converting an existing document. . . . .                                                          | 92            |
| <code>\LWR@parsetablecols</code> : Fix: Ignore optional tabular column arguments. . . . .                                               | 441      | Improved font control. . . . .                                                                                        | 584           |
| <code>\LWR@restoreorigformatting</code> : Fix: Spacing in <code>svg math</code> , <code>lateximage</code> , <code>Tikz</code> . . . . . | 515      | <code>tabular</code> : <code>colortbl</code> : Added. . . . .                                                         | 478           |
| <code>\LWR@section</code> : Fix: <code>TOC</code> , <code>LOF</code> , <code>LOT</code> links. . . . .                                  | 384      | <code>lateximage</code> : Print mode boxed to natural width. . . . .                                                  | 554           |
| <code>\LWR@tabledatasinglecolumnntag</code> : <code>colortbl</code> : Added. . . . .                                                    | 448      | <code>abstract</code> : Allow optional name. . . . .                                                                  | 405           |
| <code>\LWR@textcurrentfont</code> : Added. Improves font control. . . . .                                                               | 584      | v0.49                                                                                                                 |               |
| <code>\bibliography</code> : Fix: <code>\BaseJobname</code> for bibliography. . . . .                                                   | 513      | <code>\LWR@addtabularcellcolor</code> : <code>xcolor</code> : Added tabular row colors. . . . .                       | 457           |
| <code>\centerline</code> : Added. . . . .                                                                                               | 556      | <code>\LWR@domulticolumn</code> : <code>xcolor</code> : Added tabular row colors. . . . .                             | 463           |
| <code>\l@part</code> : Adapts to classes without <code>\part</code> . . . . .                                                           | 509      | <code>\LWR@printlength</code> : Fix: Group <code>printlen</code> changes. . . . .                                     | 230           |
| <code>\leftline</code> : Added. . . . .                                                                                                 | 556      | <code>\affiliation</code> : Fix: Adapts to classes which already provide. . . . .                                     | 397           |
| <code>\mbox</code> : Nullified for <code>HTML</code> . . . . .                                                                          | 574      | <code>\href</code> : Fix: Adapt to classes. . . . .                                                                   | 491           |
| <code>\rightline</code> : Added. . . . .                                                                                                | 556      | <code>\noalign</code> : Fix: <code>\noalign</code> inside tabular. . . . .                                            | 475           |
| <code>\thempfootnote</code> : Removed <code>\itshape</code> . . . . .                                                                   | 359      | <code>\url</code> : Fix: Adapt to classes. . . . .                                                                    | 491           |
| General: 2018/02/14 . . . . .                                                                                                           | 1        | General: 2018/02/19 . . . . .                                                                                         | 1             |
| <code>acronym</code> : Added. . . . .                                                                                                   | 616      | <code>amsmath</code> : Fix: Patches for <code>\eqref</code> . . . . .                                                 | 624           |
| <code>acro</code> : Added. . . . .                                                                                                      | 613      | <code>eso-pic</code> : Fix for <code>\AddToShipoutPicture</code> . . . . .                                            | 739           |
| <code>chapterbib</code> : Added. . . . .                                                                                                | 675      | <code>figsize</code> : Added. . . . .                                                                                 | 758           |
|                                                                                                                                         |          | <code>fnlineno</code> : Added. . . . .                                                                                | 771           |
|                                                                                                                                         |          | <code>hypdestopt</code> : Added. . . . .                                                                              | 805           |
|                                                                                                                                         |          | <code>hyphenat</code> : Added. . . . .                                                                                | 811           |
|                                                                                                                                         |          | <code>lineno</code> : Added. . . . .                                                                                  | 833           |
|                                                                                                                                         |          | <code>luacolor</code> : Added. . . . .                                                                                | 846           |
|                                                                                                                                         |          | <code>pagegrid</code> : Added. . . . .                                                                                | 930           |
|                                                                                                                                         |          | <code>pdfrender</code> : Added. . . . .                                                                               | 944           |
|                                                                                                                                         |          | <code>resizegather</code> : Added. . . . .                                                                            | 971           |
|                                                                                                                                         |          | <code>vertbars</code> : Added. . . . .                                                                                | 1092          |

|                                                                       |           |                                                                                              |          |
|-----------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------|----------|
| vwcol: Added. . . . .                                                 | 1094      | siunitx: Improved svg math alt tags. . . . .                                                 | 1002     |
| xcolor: Added tabular row colors. . . . .                             | 443, 1110 | siunitx: Improved units. 559, 1000, 1003                                                     |          |
| Fix: Adapt to classes. . . . .                                        | 590       | xy: Added. . . . .                                                                           | 1123     |
| v0.50                                                                 |           | <i>lwarpmk</i> : Error if lateximages.txt does not exist. . . . .                            | 302      |
| \@ensuredmath: Fix: Use lateximage even if MathJax. . . . .           | 531       | <i>lwarpmk</i> : Error if lwarpmk.conf points to lwrap. . . . .                              | 302      |
| Improved svg math alt tags. . . . .                                   | 531       | <i>lwarpmk</i> : Improved error messages. . . . .                                            | 302      |
| \LWR@@footnotetext: Robustify macros. . . . .                         | 357       | <i>lwarpmk</i> : MD5 hash avoids duplicate svg math. . . . .                                 | 302      |
| \LWR@atbeginverbatim: Improved column alignment. . . . .              | 408, 409  | <i>lwarpmk</i> : Multiprocess support making lateximages. . . . .                            | 302      |
| \LWR@doequation: Improved svg math display. . . . .                   | 536       | AMS environments: Improved svg math display. . . . .                                         | 624      |
| \LWR@doubledollar: Improved svg math alt tags. . . . .                | 530       | Fix: Load fontspec if necessary. . . . .                                                     | 224      |
| Improved svg math display. . . . .                                    | 530       | Robustify macros. . . . .                                                                    | 584      |
| \LWR@htmlrefsectionfilename: Fix: SVG math in a section name. . . . . | 328       | lateximage: Fix: SVG math in a section name. . . . .                                         | 552      |
| \LWR@newhtmlfile: Fix: SVG math in a section name. . . . .            | 374       | MD5 hash avoids duplicate svg math. . . . .                                                  | 551, 554 |
| \LWR@nullfont: Fix: \underline in sectioning file name. . . . .       | 518       | eqnarray: Improved svg math display. . . . .                                                 | 543      |
| \LWR@overline: Added. . . . .                                         | 588       | v0.51                                                                                        |          |
| \LWR@subsingledollar: Fix: Use lateximage even if MathJax. . . . .    | 528       | \@ensuredmath: Hashes                                                                        |          |
| Improved svg math alt tags. . . . .                                   | 528       | \ensuremath. . . . .                                                                         | 531      |
| \LWR@subsingledollarsvg: MD5 hash avoids duplicate svg math. . . . .  | 526       | \@item: Restored list label space. . . . .                                                   | 414      |
| \LWR@vspace: Robustify macros. . . . .                                | 594       | \LWR@HTMLsanitizeexpand: Fix: Escapes double quotes. . . . .                                 | 368      |
| \newline: Robustify macros. . . . .                                   | 591       | \LWR@LwrapStart: MathJax: Nullifies \ensuremath. . . . .                                     | 393      |
| \textsubscript: Robustify macros. . . . .                             | 588       | \LWR@addbaselinemarker: Improved svg math baseline. . . . .                                  | 522      |
| \textsuperscript: Robustify macros. . . . .                           | 588       | \LWR@atbeginverbatim: Adds vertical offset. . . . .                                          | 408      |
| General: 2018/03/03 . . . . .                                         | 1         | \LWR@doequation: Fix: \addcontentsline inside svg math. Provides an autoid anchor. . . . .   | 536      |
| lwrap.css: Improved svg display math centering. . . . .               | 258       | \LWR@doubledollar: Fix: \addcontentsline inside svg math. Provides an autoid anchor. . . . . | 530      |
| lwrap_one_limage.txt: Added. . . . .                                  | 299       | \LWR@findcurrenttextcolor: Added \LWR@findcurrenttextcolor when no xcolor. . . . .           | 589      |
| amsmath: Fix: Upright tags for svgmath. . . . .                       | 624       | \LWR@newautoidanchor: Fix: No autoid is inside a lateximage. . . . .                         | 496      |
| axodraw2: Added. . . . .                                              | 646       | \LWR@singledollarmeasure: Fix: lateximage inside $\mathcal{AMS}$ \text. . . . .              | 524      |
| bytefield: Added. . . . .                                             | 665       | Fix: Honors text font around svg math. . . . .                                               | 523      |
| dblfloatfix: Added. . . . .                                           | 711       | Improved svg math baseline. . . . .                                                          | 524      |
| diagbox: Added. . . . .                                               | 713       | Typeset svg math only once during measurement. . . . .                                       | 524      |
| epstopdf: Added. . . . .                                              | 734       |                                                                                              |          |
| listings: Force flexible columns. . . . .                             | 836       |                                                                                              |          |
| morefloats: Added. . . . .                                            | 886       |                                                                                              |          |
| nonfloat: Added. . . . .                                              | 914       |                                                                                              |          |
| ntheorem: Fix: Not standard nor amsthm selected. . . . .              | 924       |                                                                                              |          |
| pbox: Added. . . . .                                                  | 937       |                                                                                              |          |
| phfquit: Added. . . . .                                               | 947       |                                                                                              |          |
| schemata: Added. . . . .                                              | 975       |                                                                                              |          |
| siunitx: Fix: Loads xcolor. . . . .                                   | 1000      |                                                                                              |          |

|                                                                                                                                          |      |                                                                                                                                                           |     |
|------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| <code>\LWR@subHTMLsanitize</code> : Fix: Escapes double quotes. . . . .                                                                  | 367  | Named HTML entity used for text dollar. . . . .                                                                                                           | 521 |
| <code>\LWR@subsingledollar</code> : Fix: <code>\ensuredmath</code> inside SVG image. . . . .                                             | 528  | <code>lateximage</code> : Added additional hashing option. . . . .                                                                                        | 549 |
| <code>\LWR@subsingledollarsvg</code> : Fix: SVG math with enclosed <code>lateximage</code> . . . . .                                     | 525  | Fix: <code>lateximage</code> inside $\mathcal{AMS}$ <code>\text</code> . . . . .                                                                          | 550 |
| SVG math baseline improved with invisible rule at corner. . . . .                                                                        | 527  | Processing for complicated display math. . . . .                                                                                                          | 553 |
| <code>\LWR@textcurrentcolor</code> : <code>xcolor</code> : <code>\LWR@textcurrentcolor</code> if <code>xcolor</code> not loaded. . . . . | 589  | <code>alignat</code> : Fix: Added. . . . .                                                                                                                | 627 |
| <code>\addcontentsline</code> : Add missing support for float mechanism if necessary. . . . .                                            | 501  | <code>eqnarray</code> : Fix: <code>\addcontentsline</code> inside SVG math. Provides an autoid anchor. . . . .                                            | 543 |
| No anchor ID if inside SVG image. . . . .                                                                                                | 501  | <code>LWR@displaymathother</code> : Processing for complicated display math. . . . .                                                                      | 533 |
| <code>\displaymathnormal</code> : Processing for complicated display math. . . . .                                                       | 539  | <code>LWR@equationother</code> : Processing for complicated display math. . . . .                                                                         | 533 |
| <code>\displaymathother</code> : Processing for complicated display math. . . . .                                                        | 540  | v0.52                                                                                                                                                     |     |
| General: 2018/03/24 . . . . .                                                                                                            | 1    | <code>\@ensuredmath</code> : Improved hashing expansion. . . . .                                                                                          | 531 |
| <code>MATHJAX</code> : Nullifies <code>\ensuremath</code> . . . . .                                                                      | 370  | <code>\@mpfootnotetext</code> : Fix: Paragraph handling. . . . .                                                                                          | 359 |
| <code>lwrap_one_limage.txt</code> : <i>pdftocairo</i> <code>-noshrink</code> added. . . . .                                              | 299  | <code>\CustomizeMathJax</code> : Added. . . . .                                                                                                           | 369 |
| <code>afterpackage</code> : No longer required. . . . .                                                                                  | 227  | <code>\LWR@footnotetext</code> : Fix: Paragraph handling. . . . .                                                                                         | 357 |
| <code>chemfig</code> : Added. . . . .                                                                                                    | 675  | <code>\LWR@addbaselinemarker</code> : Warnings if <code>lwrap_baseline_marker.png</code> is not present or if <code>graphicx/s</code> not loaded. . . . . | 522 |
| <code>chemformula</code> : Added. . . . .                                                                                                | 677  | <code>\LWR@customizedMathJax</code> : Added. . . . .                                                                                                      | 369 |
| <code>chemgreek</code> : Added. . . . .                                                                                                  | 682  | <code>\LWR@doequation</code> : Fix: <code>equation*</code> now based on <code>equation</code> instead of <code>displaymath</code> . . . . .               | 536 |
| <code>chemmacros</code> : Added. . . . .                                                                                                 | 683  | Fix: <code>equation*</code> with <code>split</code> . . . . .                                                                                             | 536 |
| <code>chemnum</code> : Added. . . . .                                                                                                    | 701  | <code>\LWR@filenamenoblanks</code> : Fix: <code>\FileDepth</code> with non-utf8 encoding. . . . .                                                         | 366 |
| <code>epstopdf-base</code> : Added. . . . .                                                                                              | 735  | <code>\LWR@nullfonts</code> : Fix: <code>\texorpdfstring</code> in section names. . . . .                                                                 | 519 |
| <code>fancybox</code> : Fix: Optional tag for <code>\item</code> in a span. . . . .                                                      | 747  | <code>\LWR@section</code> : Fix: Footnote numbering: Limited HTML comment if starred. . . . .                                                             | 381 |
| <code>grid</code> : Added. . . . .                                                                                                       | 801  | Fix: Footnote numbering: Use short toc entry for HTMLDebug comments. . . . .                                                                              | 381 |
| <code>listings</code> : Forces cleared options. . . . .                                                                                  | 836  | <code>\LWR@singledollarmeasure</code> : Added user-adjustable SVG math font scaling. . . . .                                                              | 524 |
| <code>ltxgrid</code> : Added. . . . .                                                                                                    | 845  | <code>\LateximageFontScale</code> : Added user-adjustable SVG math font scaling. . . . .                                                                  | 546 |
| <code>mhchem</code> : Added. . . . .                                                                                                     | 878  | <code>\href</code> : Fix: #, %, &, ~, _ in URL. . . . .                                                                                                   | 491 |
| <code>tikz</code> : Fix for <code>\tikz</code> macro. . . . .                                                                            | 1054 | <code>\noLinkurl</code> : Fix: #, %, &, ~, _ in URL. . . . .                                                                                              | 491 |
| <code>tikz</code> : Fix for <code>tikz</code> with optional argument. . . . .                                                            | 1054 |                                                                                                                                                           |     |
| <code>titling</code> : Fix for <code>\thanks</code> mark. . . . .                                                                        | 1063 |                                                                                                                                                           |     |
| <i>lwrapmk</i> : <i>pdftocairo</i> : Restored hires option. . . . .                                                                      | 302  |                                                                                                                                                           |     |
| <i>lwrapmk</i> : <i>pdftocairo</i> <code>-noshrink</code> added. . . . .                                                                 | 302  |                                                                                                                                                           |     |
| AMS environments: Fix: <code>\addcontentsline</code> inside SVG math. Provides an autoid anchor. . . . .                                 | 624  |                                                                                                                                                           |     |
| Docs: <code>tikz</code> limitations. . . . .                                                                                             | 152  |                                                                                                                                                           |     |
| Docs: Multiple authors and affiliations. . . . .                                                                                         | 127  |                                                                                                                                                           |     |
| Docs: Things to avoid. . . . .                                                                                                           | 116  |                                                                                                                                                           |     |
| Docs: Updated Converting an existing document. . . . .                                                                                   | 92   |                                                                                                                                                           |     |
| Fix: Remember original <code>\#</code> in case is redefined. . . . .                                                                     | 247  |                                                                                                                                                           |     |

|                                                                               |          |                                                                                           |      |
|-------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------|------|
| \theHTMLTitleSeparator: Fix:<br>\FileDepth with non-utf8<br>encoding. . . . . | 387      | \centering: Added debug comment. . . . .                                                  | 556  |
| \url: Fix: #, %, &, ~, _ in URL. . . . .                                      | 491      | \raggedleft: Added debug<br>comment. . . . .                                              | 556  |
| General: 2018/04/01 . . . . .                                                 | 1        | \raggedright: Added debug<br>comment. . . . .                                             | 556  |
| breakurl: Fix: #, %, &, ~, _ in URL. . . . .                                  | 662      | General: 2018/04/22 . . . . .                                                             | 1    |
| endfloat: Updated for v2.6. . . . .                                           | 725      | *.lwarpmkconf: Option<br>IndexLanguage changed to<br>xindyLanguage. . . . .               | 257  |
| fancyvrb: Initial support for<br>\VerbatimFootnotes. . . . .                  | 745, 751 | *.lwarpmkconf: Option<br>pdftotextEnc added. . . . .                                      | 257  |
| graphics: Added defaults. . . . .                                             | 790, 791 | *.lwarpmkconf: Option<br>xdyFilename changed to<br>xindyStyle. . . . .                    | 257  |
| graphics: Updated for v1.1a. . . . .                                          | 791      | *.lwarpmkconf: Option<br>xindyCodepage added. . . . .                                     | 257  |
| graphics: Updated for v1.1b. . . . .                                          | 791      | lwrap.css: Fix:<br>Text-decoration-skip: auto. . . . .                                    | 258  |
| hyperref: Fix: #, %, &, ~, _ in<br>URL. . . . .                               | 806–808  | lwarpmk.conf: Option<br>IndexLanguage changed to<br>xindyLanguage. . . . .                | 257  |
| nicefrac: Added. . . . .                                                      | 912      | lwarpmk.conf: Option<br>pdftotextEnc added. . . . .                                       | 257  |
| url: Added. . . . .                                                           | 1090     | lwarpmk.conf: Option<br>xdyFilename changed to<br>xindyStyle. . . . .                     | 257  |
| <i>lwarpmk</i> : Fix: Memory overflow<br>when spawning tasks. . . . .         | 302      | lwarpmk.conf: Option<br>xindyCodepage added. . . . .                                      | 257  |
| <i>lwarpmk</i> : Fix: Skip image<br>generation if from page 0. . . . .        | 302      | <i>bibunits</i> : Added. . . . .                                                          | 653  |
| Changed FootnoteDepth default to<br>\subsubsection. . . . .                   | 355      | <i>chnpage</i> : Added. . . . .                                                           | 702  |
| Docs: Improved install instructions. . . . .                                  | 73       | <i>forest</i> : Added. . . . .                                                            | 778  |
| Fix: MathJax script line wraps.<br>Reduced right margin. . . . .              | 225      | <i>glossaries</i> : Fix when not using<br>babel or polyglossia. . . . .                   | 787  |
| If pdfLaTeX, allow other input<br>encoding. . . . .                           | 209      | <i>gridset</i> : Added. . . . .                                                           | 801  |
| Restore \kill in a lateximage. . . . .                                        | 844      | <i>hyperref</i> : Fix: \hyperref and<br>\hyperlink with special chars in<br>text. . . . . | 808  |
| tabbing: Fix to allow inside<br>lateximage. . . . .                           | 410      | <i>hyperref</i> : Fix: \ref in \hyperref<br>and \hyperlink caused nested<br>link. . . . . | 808  |
| lateximage: Fix for hash expansion. . . . .                                   | 551      | <i>lwrap-patch-memoir</i> : Update for<br>v3.7g. . . . .                                  | 1134 |
| v0.53                                                                         |          | <i>magaz</i> : Added. . . . .                                                             | 853  |
| General: 2018/04/01 . . . . .                                                 | 1        | <i>ragged2e</i> : Fix: \centering, etc. . . . .                                           | 964  |
| <i>lwarpmk</i> : Added<br><i>lwarpmk cleanimages</i> . . . . .                | 302      | <i>textcomp</i> : Fix for<br>\textperthousand. . . . .                                    | 1042 |
| <i>lwarpmk</i> : Added warning for<br>corrupted images. . . . .               | 302      | <i>tikz</i> : Fixes for \pgfpicture,<br>minipages, fit, align, font. . . . .              | 1054 |
| Docs: <i>lwarpmk cleanimages</i> . . . . .                                    | 89       | <i>lwarpmk</i> : Added pdftotextenc. . . . .                                              | 302  |
| Docs: <i>lwarpmk pdftohtml</i> . . . . .                                      | 89       | <i>lwarpmk</i> : Added xindycodepage. . . . .                                             | 302  |
| v0.54                                                                         |          | <i>lwarpmk</i> : Changed language to<br>xindyLanguage. . . . .                            | 302  |
| \@xdlbfloat: Honor \centering, etc.<br>in floats. . . . .                     | 495      | <i>lwarpmk</i> : Changed xdyfile to<br>xindystyle. . . . .                                | 302  |
| \LWR@afterendverbatim: Added<br>vspace argument. . . . .                      | 409      |                                                                                           |      |
| \LWR@atbeginverbatim: Improved<br>column alignment. . . . .                   | 409      |                                                                                           |      |
| \LWR@earlyloadnever: Added. . . . .                                           | 198      |                                                                                           |      |
| \LWR@endfloatalignment: Honor<br>\centering, etc. in floats. . . . .          | 497      |                                                                                           |      |
| \LWR@floatalignment: Honor<br>\centering, etc. in floats. . . . .             | 496      |                                                                                           |      |
| \LWR@floatend: Honor \centering,<br>etc. in floats. . . . .                   | 495      |                                                                                           |      |
| \LateximageFontSizeName: Defaults<br>to normalsize. . . . .                   | 546      |                                                                                           |      |

|                                                                                                    |          |                                                                                                                    |          |
|----------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------|----------|
| <i>lwarpmk</i> : Improved error if configuration file does not exist.                              | 302      | <code>\LWR@domulticolumn</code> : Adds support for dashed vertical rules.                                          | 463      |
| <i>lwarpmk</i> : Increased prominence for error for an unknown command.                            | 302      | Adds support for double vertical rules.                                                                            | 463      |
| <i>lwarpmk</i> : Verifies HTML version exists before <code>lwarpmk</code> <code>limages</code> .   | 302      | <code>\LWR@floatbegin</code> : Adds a <code>&lt;class&gt;</code> per float package style.                          | 494      |
| <i>lwarpmk</i> : Verifies image references before <code>lwarpmk</code> <code>limages</code> .      | 302      | <code>\LWR@multicolpartext</code> : Fix: <code>\multicolumn</code> parameters.                                     | 458      |
| Add: <code>pdftotextEnc</code> .                                                                   | 219      | <code>\LWR@openparagraph</code> : Added support for <code>parnotes</code> .                                        | 346      |
| Add: <code>xindyCodepage</code> .                                                                  | 219      | <code>\LWR@parsebarcolumn</code> : Adds support for double vertical rules.                                         | 434      |
| Added early check for disallowed packages.                                                         | 198      | <code>\LWR@parsecoloncolumn</code> : Added.                                                                        | 434      |
| Docs: BibTeX.                                                                                      | 129      | <code>\LWR@parsesemicoloncolumn</code> : <code>arydshln</code> : Added.                                            | 435      |
| Docs: Macros in sectioning names.                                                                  | 116      | <code>\LWR@parsetablecols</code> : Added array W column.                                                           | 442      |
| Never load <code>aecompl</code> .                                                                  | 198      | <code>\LWR@printmccoldata</code> : Added array W column.                                                           | 460      |
| Option <code>IndexLanguage</code> changed to <code>xindyLanguage</code> .                          | 219      | Fix: <code>\multicolumn</code> parameters.                                                                         | 459      |
| Option <code>xyFilename</code> changed to <code>xindyStyle</code> .                                | 218      | <code>\LWR@printmccoltype</code> : Added array W column.                                                           | 458      |
| verse: Fix: Line spacing.                                                                          | 407      | Adds support for dashed vertical rules.                                                                            | 458      |
| v0.55                                                                                              |          | Adds support for double vertical rules.                                                                            | 458      |
| <code>\@xdlbfloat</code> : Fix: Float optional args.                                               | 495      | <code>\LWR@tabledatacolumnntag</code> : Fix: <code>\morecmidrules</code>                                           | 472      |
| <code>\LWR@LwarpStart</code> : Fix: Overfull boxes in <code>lateximages</code> .                   | 391      | <code>\LWR@textcurrentfont</code> : Added <code>span.textbf</code> , etc.                                          | 584      |
| <code>\LWR@nullfonts</code> : Removed extraneous space which appeared in file links.               | 518      | General: 2018/05/12                                                                                                | 1        |
| <code>\phantomsection</code> : Fix: <code>\ForceHTMLTOC</code> with <code>\phantomsection</code> . | 597      | <code>*.lwarpmkconf</code> : Records <code>--shell-escape</code> .                                                 | 257      |
| General: 2018/04/26                                                                                | 1        | <code>lwarp.css</code> : Added <code>div.textbf</code> , etc.                                                      | 258      |
| <code>clrdblpg</code> : Added.                                                                     | 703      | <code>lwarp.css</code> : Added <code>span.textbf</code> , etc.                                                     | 258      |
| Fix: <code>\centering</code> , etc. for <code>koma-script</code> .                                 | 494      | <code>lwarpmk.conf</code> : Records <code>--shell-escape</code> .                                                  | 257      |
| Fix: QED symbols in <code>lateximage</code> .                                                      | 630, 928 | <code>arydshln</code> : Added.                                                                                     | 420, 635 |
| v0.56                                                                                              |          | <code>lua-check-hyphen</code> : Added.                                                                             | 846      |
| <code>\LWR@addcdashline</code> : <code>arydshln</code> : Added.                                    | 453      | <code>paralist</code> : Fixes for <code>compactenum</code> , <code>compactitem</code> , <code>compactdesc</code> . | 931      |
| <code>\LWR@addmulticolvertrulecolor</code> : Adds support for dashed vertical rules.               | 461      | <code>parnotes</code> : Added.                                                                                     | 936      |
| Adds support for double vertical rules.                                                            | 461      | <code>quoting</code> : Added.                                                                                      | 963      |
| <code>\LWR@addtabularhrulecolor</code> : Adds support for <code>arydshln</code> dashed rules.      | 454      | <code>tocenter</code> : Added.                                                                                     | 1070     |
| Adds support for double <code>\hlines</code> and <code>\midrules</code> .                          | 454      | <code>underscore</code> : Added.                                                                                   | 1086     |
| <code>\LWR@addtabularrulecolors</code> : Adds support for dashed vertical rules.                   | 455      | <i>lwarpmk</i> : Added <code>lwarpmk</code> <code>pdftosvg</code> .                                                | 302      |
| Adds support for double vertical rules.                                                            | 455      | <i>lwarpmk</i> : Supports <code>--shell-escape</code> .                                                            | 302      |
| <code>\LWR@closeparagraph</code> : Added support for <code>parnotes</code> .                       | 347      | Added <code>\thinspace</code> .                                                                                    | 590      |
|                                                                                                    |          | Docs: <code>lwarpmk</code> <code>pdftosvg</code> .                                                                 | 89       |

|                                                                                        |      |                                                                                    |          |
|----------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------|----------|
| LWR@blocktextcurrentfont: Added<br>div.textbf, etc. . . . .                            | 584  | rofloat: Fix for listof sideways<br>floats. . . . .                                | 974      |
| v0.57                                                                                  |      | \parbox: Improved print/HTML<br>output selection. . . . .                          | 574      |
| \BlockClassSingle: Improved<br>print/HTML output selection. . .                        | 342  | \raisebox: Improved print/HTML<br>output selection. . . . .                        | 579      |
| \InlineClass: Improved print/HTML<br>output selection. . . . .                         | 342  | \reflectbox: Improved print/HTML<br>output selection. . . . .                      | 800      |
| \LWR@ref@ignorestar: subcaption:<br>Fix: \subref. . . . .                              | 488  | \resizebox: Improved print/HTML<br>output selection. . . . .                       | 800      |
| \LWR@singledollarmeasure: Fix:<br>Dynamic inline math expressions.                     | 524  | \rotatebox: Improved print/HTML<br>output selection. . . . .                       | 798      |
| \LWR@subhyperref: Fix: Text<br>catcodes. . . . .                                       | 490  | \rule: Fix: Colored rules. . . . .                                                 | 596      |
| \LWR@subhyperref: Fix: Text<br>catcodes. . . . .                                       | 490  | \scalebox: Improved print/HTML<br>output selection. . . . .                        | 799      |
| \LWR@subsingledollar: Fix: Dynamic<br>inline math expressions. . . . .                 | 528  | \textcolor: xcolor: New system for<br>switching print and HTML<br>outputs. . . . . | 1105     |
| \LWR@subsingledollarsvg: Fix:<br>Dynamic inline math expressions.                      | 526  | General: 2018/06/06 . . . . .                                                      | 1        |
| \LWR@vspace: Improved print/HTML<br>output selection. . . . .                          | 594  | MATHJAX: Supports \footnote,<br>\footnotemark. . . . .                             | 370      |
| \MathImageAltText: Added. . . . .                                                      | 520  | lwrap.css: Added ruled, boxed,<br>boxruled floats. . . . .                         | 258      |
| \PackageDiagramAltText: Added. .                                                       | 520  | lwrap.css: Increased float vertical<br>margins. . . . .                            | 258      |
| \StartDefiningMath: Added. . . . .                                                     | 324  | algorithm2e: Added. . . . .                                                        | 618      |
| \boxframe: xcolor: Fix: Colored<br>\boxframe. . . . .                                  | 1109 | bigdelim: Improved print/HTML<br>output selection. . . . .                         | 654      |
| \colorbox: xcolor: New system for<br>switching print and HTML<br>outputs. . . . .      | 1106 | breakurl: Fix: Text catcodes. . . . .                                              | 662      |
| \colorboxBlock: xcolor: New system<br>for switching print and HTML<br>outputs. . . . . | 1106 | colortbl: New system for switching<br>print and HTML outputs. . .                  | 705, 706 |
| \fboxBlock: Improved print/HTML<br>output selection. . . . .                           | 577  | ellipsis: Added \midwordellipsis.                                                  | 724      |
| \fcolorbox: xcolor: New system for<br>switching print and HTML<br>outputs. . . . .     | 1107 | errata: Added. . . . .                                                             | 737      |
| \framebox: Improved print/HTML<br>output selection. . . . .                            | 576  | float: Added float styles. . . . .                                                 | 762      |
| \href: Fix: Text catcodes. . . . .                                                     | 491  | float: Fix: Do not pre-define<br>\l@name. . . . .                                  | 762      |
| \inlinemathother: Added. . . . .                                                       | 324  | ltablex: Added. . . . .                                                            | 844      |
| \listof: Fix: Provide \l@name if not<br>defined. . . . .                               | 505  | marginnote: Fix: Long optional<br>argument. . . . .                                | 857      |
| \makebox: Improved print/HTML<br>output selection. . . . .                             | 575  | multirow: Improved print/HTML<br>output selection. . . . .                         | 894      |
| \mbox: Improved print/HTML output<br>selection. . . . .                                | 574  | register: Added. . . . .                                                           | 968      |
| \multicolumnrow: multirow:<br>Improved print/HTML output<br>selection. . . . .         | 895  | subcaption: Fix: \subref. . . . .                                                  | 807      |
| Improved print/HTML output<br>selection. . . . .                                       | 468  | trimclip: Added. . . . .                                                           | 1080     |
| \newfloat: rofloat: Added float<br>styles. . . . .                                     | 974  | vowel: Added. . . . .                                                              | 1093     |
|                                                                                        |      | xellipsis: Added. . . . .                                                          | 1111     |
|                                                                                        |      | xfrac: Improved print/HTML<br>\scalebox control. . . . .                           | 1114     |
|                                                                                        |      | xltabular: Added. . . . .                                                          | 1115     |
|                                                                                        |      | xpiano: Added. . . . .                                                             | 1117     |
|                                                                                        |      | lwarpmk: Improved code factoring.                                                  | 302      |
|                                                                                        |      | lwarpmk: Improved error handling.                                                  | 302      |
|                                                                                        |      | Docs: Recompiling lwarpmk or css<br>files. . . . .                                 | 182      |

|                                                                                                                                                                  |     |                                                                                                                                       |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------|------------|
| Docs: Recreating the index for <code>lwarp</code> source. . . . .                                                                                                | 179 |                                                                                                                                       |            |
| New system for switching print and HTML outputs. . . . .                                                                                                         | 242 |                                                                                                                                       |            |
| <code>minipage</code> : Improved print/HTML output selection. . . . .                                                                                            | 571 |                                                                                                                                       |            |
| <code>BlockClass</code> : Improved print/HTML output selection. . . . .                                                                                          | 342 |                                                                                                                                       |            |
| <code>fminipage</code> : Improved print/HTML output selection. . . . .                                                                                           | 577 |                                                                                                                                       |            |
| <code>LWR@BlockClassWP</code> : Improved print/HTML output selection. . .                                                                                        | 343 |                                                                                                                                       |            |
| v0.58                                                                                                                                                            |     |                                                                                                                                       |            |
| <code>\LWR@HTML@caption@begin</code> : Improved print/HTML output selection. . .                                                                                 | 499 |                                                                                                                                       |            |
| <code>\LWR@HTML@caption@end</code> : Improved print/HTML output selection. . .                                                                                   | 499 |                                                                                                                                       |            |
| <code>\LWR@HTML@ref</code> : Improved print/HTML output selection. . . . .                                                                                       | 488 |                                                                                                                                       |            |
| <code>\LWR@doindexentry</code> : Adds support for <code>\see</code> , <code>\seealso</code> , <code>\emph</code> , <code>\textbf</code> , etc. . . . .           | 512 |                                                                                                                                       |            |
| <code>\LWR@hyperindexrefnullified</code> : Adds support for <code>\see</code> , <code>\seealso</code> , <code>\emph</code> , <code>\textbf</code> , etc. . . . . | 512 |                                                                                                                                       |            |
| <code>\LWR@indexitem</code> : Accepts optional arg for <code>repeatindex</code> . . . . .                                                                        | 511 |                                                                                                                                       |            |
| <code>\dotfill</code> : Improved print/HTML output selection. . . . .                                                                                            | 591 |                                                                                                                                       |            |
| <code>\hfill</code> : Improved print/HTML output selection. . . . .                                                                                              | 591 |                                                                                                                                       |            |
| <code>\hrulefill</code> : Improved print/HTML output selection. . . . .                                                                                          | 591 |                                                                                                                                       |            |
| <code>\hyperindexref</code> : Adds support for <code>\see</code> , <code>\seealso</code> , <code>\emph</code> , <code>\textbf</code> , etc. . . . .              | 512 |                                                                                                                                       |            |
| <code>\printindex</code> : Fix: Extra <code>\newpage</code> to flush pending <code>\index</code> writes. . .                                                     | 854 |                                                                                                                                       |            |
| General: 2018/07/07 . . . . .                                                                                                                                    | 1   |                                                                                                                                       |            |
| *.lwarpmkconf: Added option <code>makeindexstyle</code> . . . . .                                                                                                | 257 |                                                                                                                                       |            |
| *.lwarpmkconf: Added options <code>makeindex</code> and <code>xindy</code> . . . . .                                                                             | 257 |                                                                                                                                       |            |
| *.lwarpmkconf: Generated <code>\AtBeginDocument</code> . . . . .                                                                                                 | 257 |                                                                                                                                       |            |
| <code>lwarp.xdy</code> : Requires <code>makeindex.xdy</code> . . . . .                                                                                           | 298 |                                                                                                                                       |            |
| <code>lwarp.xdy</code> : Supports bold, italic. . . . .                                                                                                          | 298 |                                                                                                                                       |            |
| <code>lwarp_html.ist</code> : Added. . . . .                                                                                                                     | 297 |                                                                                                                                       |            |
| <code>lwarpmk.conf</code> : Added option <code>makeindexstyle</code> . . . . .                                                                                   | 257 |                                                                                                                                       |            |
| <code>lwarpmk.conf</code> : Added options <code>makeindex</code> and <code>xindy</code> . . . . .                                                                | 257 |                                                                                                                                       |            |
| <code>lwarpmk.conf</code> : Generated <code>\AtBeginDocument</code> . . . . .                                                                                    | 257 |                                                                                                                                       |            |
|                                                                                                                                                                  |     | <code>array</code> : Improved print/HTML output selection. . . . .                                                                    | 634        |
|                                                                                                                                                                  |     | <code>attachfile2</code> : Added. . . . .                                                                                             | 639        |
|                                                                                                                                                                  |     | <code>attachfile</code> : Added. . . . .                                                                                              | 638        |
|                                                                                                                                                                  |     | <code>cases</code> : Added. . . . .                                                                                                   | 669        |
|                                                                                                                                                                  |     | <code>imakeidx</code> : Added. . . . .                                                                                                | 813        |
|                                                                                                                                                                  |     | <code>index</code> : Added. . . . .                                                                                                   | 817        |
|                                                                                                                                                                  |     | <code>intopdf</code> : Added. . . . .                                                                                                 | 819        |
|                                                                                                                                                                  |     | <code>lwarp-patch-komascript</code> : Modified indexing. . . . .                                                                      | 1126       |
|                                                                                                                                                                  |     | <code>lwarp-patch-memoir</code> : Fix for <code>\specialindex</code> . . . . .                                                        | 1151       |
|                                                                                                                                                                  |     | <code>lwarp-patch-memoir</code> : Fix for multiple indexes. . . . .                                                                   | 1151, 1152 |
|                                                                                                                                                                  |     | <code>makeidx</code> : Added. Moved from <code>lwarp</code> core. . . . .                                                             | 853        |
|                                                                                                                                                                  |     | <code>memoir</code> : Fix for <code>\firsthlline</code> , <code>\lasthlline</code> . . . . .                                          | 470        |
|                                                                                                                                                                  |     | <code>memoir</code> : Fix for <code>booktabs</code> . . . . .                                                                         | 474        |
|                                                                                                                                                                  |     | <code>pdfpages</code> : Added. . . . .                                                                                                | 941        |
|                                                                                                                                                                  |     | <code>pdfx</code> : Added. . . . .                                                                                                    | 945        |
|                                                                                                                                                                  |     | <code>repeatindex</code> : Added. . . . .                                                                                             | 971        |
|                                                                                                                                                                  |     | <code>splitidx</code> : Added. . . . .                                                                                                | 1013       |
|                                                                                                                                                                  |     | <code>textcomp</code> : Improved print/HTML output selection. . . . .                                                                 | 1042       |
|                                                                                                                                                                  |     | <code>lwarpmk</code> : Added <code>makeindex</code> and <code>xindy</code> options. . . . .                                           | 302        |
|                                                                                                                                                                  |     | <code>lwarpmk</code> : Added <code>-p</code> option for project name. . . . .                                                         | 302        |
|                                                                                                                                                                  |     | <code>lwarpmk</code> : Added optional list of names for <code>lwarpmk printindex</code> and <code>/cmdslwarpmk htмлindex</code> . . . | 302        |
|                                                                                                                                                                  |     | <code>lwarpmk</code> : Glossary generation now uses <code>makeglossaries</code> . . . . .                                             | 302        |
|                                                                                                                                                                  |     | <code>lwarpmk</code> : <code>lwarpmk clean</code> removes all <code>*.ind</code> and <code>*.idx</code> files. . . . .                | 302        |
|                                                                                                                                                                  |     | Added <code>makeindex</code> option. . . . .                                                                                          | 220        |
|                                                                                                                                                                  |     | Added <code>xindy</code> option. . . . .                                                                                              | 220        |
|                                                                                                                                                                  |     | Added option <code>makeindexstyle</code> . . .                                                                                        | 218        |
|                                                                                                                                                                  |     | Docs: Index, <code>makeindex</code> , <code>imakeidx</code> . . .                                                                     | 131        |
|                                                                                                                                                                  |     | Docs: Misplaced <code>\omit</code> . . . . .                                                                                          | 186        |
|                                                                                                                                                                  |     | Fix: <code>memoir</code> and <code>ccaption</code> . . . . .                                                                          | 199        |
|                                                                                                                                                                  |     | Improved print/HTML output selection. . . . .                                                                                         | 590        |
|                                                                                                                                                                  |     | Replaced each <code>\csuse</code> with <code>\@nameuse</code> to force error if undefined. . . . .                                    | 1          |
|                                                                                                                                                                  |     | <code>tabbing</code> : Improved print/HTML output selection. . . . .                                                                  | 410        |
| v0.59                                                                                                                                                            |     |                                                                                                                                       |            |
|                                                                                                                                                                  |     | <code>\LWR@addbaselinemarker</code> : Uses <code>.eps</code> if DVI <code>latex</code> . . . . .                                      | 522        |
|                                                                                                                                                                  |     | <code>\LWR@latexmkcmd</code> : Fix: <code>--shell-escape</code> with <code>latexmk</code> . . .                                       | 252        |

|                                                                                                                                |      |                                                                                                                      |          |
|--------------------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------|----------|
| \LWR@writeconf: Compilation<br>commands now preassigned by<br>lwarp instead of being computed<br>by <i>lwarpmk</i> . . . . .   | 256  | \LWR@parsenormalcolumn: tabular:<br>Improved memory management:<br>Not using xstring. . . . .                        | 435      |
| \[: Fix with <code>\displaymathnormal</code> . . .                                                                             | 531  | \LWR@tabledatasinglecolumn: tag:<br>tabular: Improved memory<br>management: Not using xstring. . . . .               | 447      |
| General: 2018/09/07 . . . . .                                                                                                  | 1    | \LWR@tabularendofline: Fix:<br>Slowdown for long tables. . . . .                                                     | 430      |
| Slunits: Added. . . . .                                                                                                        | 992  | General: 2018/09/19 . . . . .                                                                                        | 1        |
| accsupp: Added. . . . .                                                                                                        | 613  | tabular: Improved memory<br>management: Global<br>boolean. . . . .                                                   | 421, 422 |
| amsmath: Moved from the lwarp<br>core. . . . .                                                                                 | 624  | tabular: Improved memory<br>management: Not using<br>xstring. . . . .                                                | 423, 894 |
| asymptote: Added. . . . .                                                                                                      | 637  | 2up: Added. . . . .                                                                                                  | 608      |
| axessibility: Added. . . . .                                                                                                   | 645  | booklet: Added. . . . .                                                                                              | 657      |
| breqn: Added. . . . .                                                                                                          | 663  | bophook: Added. . . . .                                                                                              | 660      |
| bxpapersize: Added. . . . .                                                                                                    | 664  | diagbox: Fix for par tags. . . . .                                                                                   | 714      |
| canoniclayout: Added. . . . .                                                                                                  | 666  | draftfigure: Added. . . . .                                                                                          | 717      |
| chemformula: Fix for \NMR. . . . .                                                                                             | 698  | fancytabs: Added. . . . .                                                                                            | 750      |
| draftcopy: Added. . . . .                                                                                                      | 716  | fullminipage: Added. . . . .                                                                                         | 781      |
| epstopdf-base: Improved. . . . .                                                                                               | 735  | grid-system: Added. . . . .                                                                                          | 801      |
| epstopdf: Improved. . . . .                                                                                                    | 734  | layaureo: Added. . . . .                                                                                             | 828      |
| fnbreak: Added. . . . .                                                                                                        | 770  | leading: Added. . . . .                                                                                              | 831      |
| graphics: Fix: Expand filename. . . . .                                                                                        | 796  | listings: Fix for HTML entities. . . . .                                                                             | 836      |
| graphics: Now works with .pdf and<br>.eps filename extensions. . . . .                                                         | 795  | listings: Fix if inside a list. . . . .                                                                              | 837, 839 |
| nccfancyhdr: Added. . . . .                                                                                                    | 902  | thumbs: Added. . . . .                                                                                               | 1053     |
| pdftricks: Added. . . . .                                                                                                      | 945  | thumb: Added. . . . .                                                                                                | 1052     |
| pst-eps: Added. . . . .                                                                                                        | 960  | widows-and-orphans: Added. . . . .                                                                                   | 1097     |
| pstricks: Added. . . . .                                                                                                       | 961  |                                                                                                                      |          |
| units: Added support for MathJax. . . . .                                                                                      | 1088 |                                                                                                                      |          |
| xunicode: Added. . . . .                                                                                                       | 1121 |                                                                                                                      |          |
| <i>lwarpmk</i> : Added                                                                                                         |      |                                                                                                                      |          |
| <b>lwarpmk epstopdf</b> . . . . .                                                                                              | 302  |                                                                                                                      |          |
| <i>lwarpmk</i> : Consolidated compiling<br>options into <code>printlatexcmd</code> and<br><code>HTMLlatexcmd</code> . . . . .  | 302  | v0.61                                                                                                                |          |
| <i>lwarpmk</i> : Double instead of<br>single-dashed <code>--shell-escape</code><br>option. . . . .                             | 302  | \DeclareGraphicsExtensions: Fix:<br>EPS for DVI L <sup>A</sup> T <sub>E</sub> X. . . . .                             | 788      |
| <i>lwarpmk</i> : Error if <code>lwarpmk.conf</code><br>format changed. . . . .                                                 | 302  | \LWR@HTMLLatexCmd: Added<br>HTML <sub>La</sub> TeXCmd option. . . . .                                                | 256      |
| <i>lwarpmk</i> : Warning if operating<br>system changed. . . . .                                                               | 302  | Added Print <sub>La</sub> TeXCmd option. . . . .                                                                     | 256      |
| Added option <code>dvipdfmx</code> . . . . .                                                                                   | 221  | \LWR@addcompilecmd: Removed<br>spaces. . . . .                                                                       | 252      |
| Added option <code>dvipdfm</code> . . . . .                                                                                    | 220  | \LWR@closetabledatacell: Fix: Par<br>tags in tabular. . . . .                                                        | 426      |
| Added option <code>dvips</code> . . . . .                                                                                      | 220  | \LWR@hyperindexrefnullified:<br>Made robust. . . . .                                                                 | 512      |
| Docs: <b>lwarpmk epstopdf</b> . . . . .                                                                                        | 89   | \LWR@opseq: Added spaces. . . . .                                                                                    | 216      |
| File: <code>lwarp_mathjax.txt</code> : Fix:<br>Removed chapter number from<br>tagged non-numeric MathJax<br>equations. . . . . | 299  | \RequirePackage: Support up to 20<br>packages. . . . .                                                               | 233      |
| File: <code>lwarp_mathjax.txt</code> : Updated<br>to MathJax v2.7.4. . . . .                                                   | 299  | \inlinemathnormal: Changed name<br>from <code>\StopDynamicMath</code> to<br><code>\inlinemathnormal</code> . . . . . | 325      |
| picture: Added an alt tag. . . . .                                                                                             | 568  | \inlinemathother: Changed name<br>from <code>\StartDynamicMath</code> to<br><code>\inlinemathother</code> . . . . .  | 324      |
| v0.60                                                                                                                          |      | \listof: Fix: newfloat lists. . . . .                                                                                | 505      |
| \LWR@clearmidrules: tabular: Fix for<br>midrules. . . . .                                                                      | 449  | \lwarpsetup: Added. . . . .                                                                                          | 217      |
|                                                                                                                                |      | General: 2018/10/13 . . . . .                                                                                        | 1        |

|                                                                                          |          |                                                                       |            |
|------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------|------------|
| lwrap.css: Footnotes text align left. . . . .                                            | 258      | \LWR@textcurrentfont: Added print version. . . . .                    | 589        |
| lwrap.css: Minipage table and footnotes: tighter margin. . . . .                         | 258      | Tracks depth to avoid nesting repeated font changes. . . . .          | 584        |
| chkfloat: Added. . . . .                                                                 | 702      | \colorboxBlock: Fix: Horiz white space. . . . .                       | 1106, 1107 |
| cmdtrack: Added. . . . .                                                                 | 703      | \fcolorbox: Fix: No longer requires xifthen. . . . .                  | 562        |
| copyrightbox: Added. . . . .                                                             | 707      | \fcolorboxBlock: Fix: Horiz white space. . . . .                      | 1108       |
| dprogress: Added. . . . .                                                                | 716      | \l@chapter: Don't define if no \chapter. Fix for algorithm2e. . . . . | 509        |
| epsfig: Added. . . . .                                                                   | 734      | \slshape: Added. . . . .                                              | 587        |
| graphics: Fix: EPS for DVI L <sup>A</sup> T <sub>E</sub> X. . . . .                      | 793      | \textup: Fixed WP span class. . . . .                                 | 582        |
| graphics: Set keys before using filename, for epsfig. . . . .                            | 796      | \theHTMLSection: Added. . . . .                                       | 388        |
| lua-visual-debug: Added. . . . .                                                         | 846      | \theHTMLTitleSection: Added. . . . .                                  | 388        |
| pdfprivacy: Added. . . . .                                                               | 944      | \theHTMLTitleSeparator: Refactored. . . . .                           | 387        |
| psfrag: Added. . . . .                                                                   | 959      | General: 2018/11/19 . . . . .                                         | 1          |
| psfrag: Added. . . . .                                                                   | 959      | \textbf and related: Improved font detection. . . . .                 | 580        |
| pstool: Added. . . . .                                                                   | 960      | lwrap.css: Added css for xfrac, nicefrac. . . . .                     | 258        |
| refcheck: Added. . . . .                                                                 | 968      | lwrap.css: Fixed css for \textup. . . . .                             | 258        |
| srcltx: Added. . . . .                                                                   | 1015     | lwrap.css: Reduced margins in titlepage. . . . .                      | 258        |
| srctex: Added. . . . .                                                                   | 1015     | lwrap_formal.css: Fix: Font for verse. . . . .                        | 293        |
| supertabular: Fix for caption w/o opt arg. . . . .                                       | 1033     | 2in1: Added. . . . .                                                  | 608        |
| thinsp: Added. . . . .                                                                   | 1050     | CJKut8: Prevented unless xeCJK. . . . .                               | 703        |
| threadcol: Added. . . . .                                                                | 1050     | CJK: Prevented unless xeCJK. . . . .                                  | 703        |
| uspace: Added. . . . .                                                                   | 1090     | asymptote: Improved alt tags. . . . .                                 | 637        |
| vpe: Added. . . . .                                                                      | 1094     | bitpattern: Added. . . . .                                            | 656        |
| xbmks: Added. . . . .                                                                    | 1100     | calc: Fix: Required for print version. . . . .                        | 227        |
| xtab: Fix for caption w/o opt arg. . . . .                                               | 1120     | chnpage: Fix: Loads lwrap-chnpage. . . . .                            | 702        |
| Added HTMLLatexCmd option. . . . .                                                       | 220      | ctexpatch: Added patch. . . . .                                       | 604        |
| Added PrintLatexCmd option. . . . .                                                      | 220      | flippdf: Added. . . . .                                               | 761        |
| Docs: \tracinglwrap . . . . .                                                            | 238      | graphics: Fix: Filename expansion. . . . .                            | 794        |
| Docs: HTML entities. . . . .                                                             | 117      | graphics: Fix: FormatWP. . . . .                                      | 793        |
| Docs: Compiling using custom shell commands. . . . .                                     | 168      | musicography: Added. . . . .                                          | 897        |
| Docs: Fonts. . . . .                                                                     | 95       | nicefrac: Improved font control and css, honors nice, ugly. . . . .   | 912        |
| Docs: HTMLDebugComments . . . . .                                                        | 103, 238 | notespages: Added. . . . .                                            | 915        |
| Docs: Multiple indexes. . . . .                                                          | 191      | octave: Added. . . . .                                                | 928        |
| Don't write configuration files if processing pstool image. . . . .                      | 250      | pdfcomment: Added. . . . .                                            | 940        |
| Spaces redefined                                                                         |          | pdfmarginpar: Added. . . . .                                          | 941        |
| \AtBeginDocument. . . . .                                                                | 590      | register: Updated to v1.8. . . . .                                    | 968        |
| v0.62                                                                                    |          | rviewport: Added. . . . .                                             | 974        |
| \@partcntformat: Added for ctex. . . . .                                                 | 379      | semantic-markup: Added. . . . .                                       | 986        |
| \@partnameformat: Added for ctex. . . . .                                                | 379      | textcomp: Fix conflict with xunicode. . . . .                         | 1044       |
| \InlineClass: Added optional word-processing style. Replaces \LWR@HTMLtextstyle. . . . . | 342      | tram: Added. . . . .                                                  | 1079       |
| \LWR@PreloadedPackage: Added. . . . .                                                    | 557      | twoup: Added. . . . .                                                 | 1082       |
| \LWR@ProvidesPackagePass: Fix: Unknown option error. . . . .                             | 235      |                                                                       |            |
| \LWR@endofline: Extra space if optional arg. . . . .                                     | 591      |                                                                       |            |
| \LWR@filestart: Refactored. . . . .                                                      | 390      |                                                                       |            |
| \LWR@isoLate: Added. . . . .                                                             | 212      |                                                                       |            |

|                                                                          |      |                                                                                      |         |
|--------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------|---------|
| ulem: Improved compatibility with CJKulem. . . . .                       | 1084 | Added. . . . .                                                                       | 196     |
| ulem: Now works in a lateximage. . . . .                                 | 1084 | \LWR@subhtmlElementclass: Fix for xeCJK. . . . .                                     | 340     |
| unitsdef: Added. . . . .                                                 | 1089 | \LinkHome: Fix: Print version. . . . .                                               | 329     |
| units: Improved font control and css, honors loose, tight. . . . .       | 1088 | \Linkhomename: Added. . . . .                                                        | 329     |
| xexchangebar: Added. . . . .                                             | 1111 | General: 2018/12/03 . . . . .                                                        | 1       |
| xfrac: Improved css. . . . .                                             | 1114 | lwrap.css: Added css for vertical writing. . . . .                                   | 258     |
| xunicode: Fix conflict with textcomp. . . . .                            | 1121 | lwrap.css: Improved css for mdframed. . . . .                                        | 258     |
| Added early checks for CJK, CJKutf8. . . . .                             | 198  | amsthm, mdframed: Fix for enforced load order. . . . .                               | 627     |
| Docs: asymptote. . . . .                                                 | 154  | emumitem: v3.6: Nullify \DrawEnumitemLabel. . . . .                                  | 732     |
| Docs: miktex-poppler-bin-* . . . . .                                     | 76   | everyhook: Fix for bxjs* classes. . . . .                                            | 228     |
| Docs: <i>MiKTeX Console</i> . . . . .                                    | 72   | geometry: Fix for bxjs* classes. . . . .                                             | 226     |
| Docs: Improved MiKTeX install instructions. . . . .                      | 72   | mdframed: Avoid thin rules. . . . .                                                  | 866     |
| Docs: UTF-8 locale. . . . .                                              | 171  | mdframed: Improved font control. . . . .                                             | 869–871 |
| File: lwrap_mathjax.txt: Removed inoperable siunitx extension. . . . .   | 299  | stfloats: Adapted to ltj* classes. . . . .                                           | 1025    |
| Fix: Horiz white space. . . . .                                          | 1108 | xpinyin: Added. . . . .                                                              | 1117    |
| Logos: CSS instead of <sup>, <sub>. . . . .                              | 598  | zhlineskip: Added. . . . .                                                           | 1124    |
| Logos: Fix for XeTeX logo if graphics is not loaded. . . . .             | 598  | Added pTeXsupport. . . . .                                                           | 195     |
| Logos: Improved CSS. . . . .                                             | 598  | Docs: \Linkhomename. . . . .                                                         | 105     |
| Logos: Made robust. . . . .                                              | 598  | Docs: \sidetocname. . . . .                                                          | 105     |
| fcolorminipage: Fix: Horiz white space. . . . .                          | 1109 | Fix: Default \LWR@mdfive. . . . .                                                    | 209     |
| Fix: No longer requires xifthen. . . . .                                 | 564  | Improved titles. . . . .                                                             | 869     |
| fminipage: Fix: Horiz white space. . . . .                               | 579  | pTeX: Encoding. . . . .                                                              | 209     |
| LWR@blocktextcurrentfont: Added print version. . . . .                   | 589  | pTeX: Load upquote. . . . .                                                          | 211     |
|                                                                          |      | pTeX: No newunicodechar. . . . .                                                     | 210     |
|                                                                          |      | LWR@BlockClassWP: Fix for xeCJK. . . . .                                             | 343     |
| v0.63                                                                    |      | v0.64                                                                                |         |
| \LWR@HTMLLatexCmd: uarticle and related: Compile options. . . . .        | 256  | \LWR@HTMLLatexCmd: utarticle and related: Added. . . . .                             | 256     |
| \LWR@LwrapStart: Fixes for xeCJK. . . . .                                | 391  | \LWR@checkloadfilename: Prevented bitfield, doublespace, newthm, rplain, si. . . . . | 231     |
| \LWR@atbeginverbatim: Fix for xeCJK. . . . .                             | 408  | \LWR@section: Support for uarticle and related. . . . .                              | 382     |
| \LWR@checkloadbefore: Added. . . . .                                     | 197  | \enskip: Made robust. . . . .                                                        | 592     |
| \LWR@checkloadfilename: Added to reduce number of lwrap-* files. . . . . | 231  | \qqad: Made robust. . . . .                                                          | 592     |
| \LWR@checkloadnever: Added. . . . .                                      | 197  | \quad: Made robust. . . . .                                                          | 592     |
| \LWR@compileuplatex: Added. . . . .                                      | 253  | \theHTMLTitleSeparator: Added utarticle and related. . . . .                         | 387     |
| \LWR@createautosec: Fix for xeCJK. . . . .                               | 378  | General: 2018/12/08 . . . . .                                                        | 1       |
| \LWR@earlyclassloadnever: Added. . . . .                                 | 198  | addlines: Updated to v0.3. . . . .                                                   | 618     |
| \LWR@filestart: Fix: Break ligature for luatexko. . . . .                | 389  | blatex: Added patch for CTeX. . . . .                                                | 652     |
| \LWR@firstoffour: Added. . . . .                                         | 213  | bsheaders: Added. . . . .                                                            | 664     |
| \LWR@htmlclosecomment: Fix: Break ligature for luatexko. . . . .         | 339  | gmeometric: Added. . . . .                                                           | 787     |
| \LWR@isolate: Fix for xeCJK. . . . .                                     | 212  | marginal: Added. . . . .                                                             | 856     |
| \LWR@notltjloadafter: Added more classes. . . . .                        | 196  | rmpage: Added. . . . .                                                               | 972     |
|                                                                          |      | scrpage: Added. . . . .                                                              | 982     |
|                                                                          |      | scrpage2: Added. . . . .                                                             | 983     |

|                                          |                              |                                           |      |
|------------------------------------------|------------------------------|-------------------------------------------|------|
| ujarticle and related: Improved          |                              | pxjahyper: Added. . . . .                 | 962  |
| \today. . . . .                          | 602                          | tascmac: Added. . . . .                   | 1039 |
| Added utarticle and related. . . . .     | 602                          | versonotes: Added. . . . .                | 1092 |
| v0.65                                    |                              | Added early checks for jarticle,          |      |
| \LWR@LwarpEnd: Improved css for          |                              | tarticle, and related. . . . .            | 198  |
| page layout. . . . .                     | 394                          | Fix for \rensuji. . . . .                 | 602  |
| \LWR@LwarpStart: Improved css for        |                              | Fix space between class and id. . . . .   | 343  |
| page layout. . . . .                     | 393                          | tabular: Added support for plect. . . . . | 476  |
| \LWR@PreloadedPackage:                   |                              | Fix: tabular*. . . . .                    | 476  |
| \AtBeginDocument to avoid                |                              | Fix: Rule color. . . . .                  | 478  |
| option clashes. . . . .                  | 557                          | minipage: Refactored to later allow       |      |
| \LWR@hyperindexrefnullified:             |                              | Japanese <t/y> argument. . . . .          | 571  |
| Added \textsi. . . . .                   | 512                          | \LWR@figcaption: Uses                     |      |
| \LWR@newhtmlfile: Error if duplicate     |                              | <figcaption> instead of                   |      |
| file name. . . . .                       | 373                          | <figcaption>. . . . .                     | 499  |
| Improved css for page layout. . . . .    | 372, 375                     | v0.66                                     |      |
| \LWR@nullfonts: Added \textsi. . . . .   | 516                          | \@mpfootnotetext: Improved HTML           |      |
| \LWR@restoreorigformatting: Fix:         |                              | formatting. . . . .                       | 358  |
| tabular*. . . . .                        | 515                          | \IgnoreMinipageWidths: Added, . . . . .   | 571  |
| \enskip: Changed to Unicode EN           |                              | \LWR@footnotetext: Improved HTML          |      |
| SPACE. . . . .                           | 592                          | formatting. . . . .                       | 357  |
| \quad: Changed to Unicode EM             |                              | \LWR@LwarpStart: Fix: TOC, LOF, LOT       |      |
| SPACE. . . . .                           | 592                          | links. . . . .                            | 393  |
| \sisshape: Added \sisshape. . . . .      | 586                          | \LWR@checkloadfilename: Prevented         |      |
| \textsi: Added. . . . .                  | 582                          | colortab, epsf, hyper, picinpar,          |      |
| General: 2018/12/22 . . . . .            | 1                            | picins, sistyle. . . . .                  | 231  |
| lwarp.css: Added \sisshape,              |                              | \LWR@closeparagraph: Fix: Combined        |      |
| \textsi. . . . .                         | 258                          | span, tabular, and lateximage. . . . .    | 347  |
| lwarp.css: Improved css for page         |                              | Improved HTML formatting. . . . .         | 347  |
| layout. . . . .                          | 258                          | \LWR@closeparagraph@br: Factored. . . . . | 346  |
| lwarp.css: Improved css for              |                              | \LWR@fboxstyle: Use current text          |      |
| quotations. . . . .                      | 258                          | color. . . . .                            | 576  |
| lwarp.css: Siderocto left for            |                              | \LWR@filenamenoblanks: Fix: Section       |      |
| improved \marginpars. . . . .            | 258                          | names detokenized. . . . .                | 364  |
| lwarp_formal.css: Siderocto left         |                              | Fix: Section names with macros. . . . .   | 365  |
| for improved \marginpars. . . . .        | 293                          | Fix: Section names with percent. . . . .  | 365  |
| lwarp_sagebrush.css: Siderocto           |                              | Improved file name generation. . . . .    | 363  |
| left for improved \marginpars. . . . .   | 288                          | Limits filename length. . . . .           | 366  |
| bounddvi: Added. . . . .                 | 661                          | \LWR@findcurrenttextcolor: Fix:           |      |
| embrac: Added. . . . .                   | 724                          | Color if xcolor not loaded. . . . .       | 589  |
| footnoterange: Added. . . . .            | 777                          | \LWR@htmlfileref: No longer use           |      |
| gentombow: Added. . . . .                | 783                          | zref. . . . .                             | 484  |
| geometry: Fix for bxjs* classes. . . . . | 226                          | \LWR@htmlsectionfilename: Sanitize        |      |
| graphics: Added \includegraphics         |                              | underscores. . . . .                      | 327  |
| alt key. . . . .                         | 561, 789, 790, 792, 795, 796 | \LWR@indentHTML: Added. . . . .           | 336  |
| lltjtext: Added. . . . .                 | 840                          | \LWR@lateximagedepthref: No longer        |      |
| multicolrule: Added. . . . .             | 890                          | use zref. . . . .                         | 484  |
| multicol: Added \docolaction. . . . .    | 890                          | \LWR@lateximagenumberref: No              |      |
| plarydshln: Added. . . . .               | 956                          | longer use zref. . . . .                  | 484  |
| plextarydshln: Added. . . . .            | 957                          | \LWR@nameref: No longer use zref. . . . . | 484  |
| plextcolortbl: Added. . . . .            | 957                          | \LWR@nullfonts: Logos. . . . .            | 518  |
| plext: Added. . . . .                    | 956                          | \LWR@openparagraph: Improved HTML         |      |
| pxatbegshi: Added. . . . .               | 961                          | formatting. . . . .                       | 346  |
| pxeveryshi: Added. . . . .               | 961                          | \LWR@section: Fix: TOC, LOF, LOT          |      |
| pxftnright: Added. . . . .               | 962                          | links. . . . .                            | 384  |

|                                                                |          |                                                                                       |          |
|----------------------------------------------------------------|----------|---------------------------------------------------------------------------------------|----------|
| Improved HTML formatting. . . . .                              | 383, 384 | memoir: Docs re: version numbers. . . . .                                             | 162      |
| \LWR@setexparray: Fix with \par. . . . .                       | 322      | multicolrule: Updated for v1.2. . . . .                                               | 890      |
| \LWR@setref: No longer use zref. . . . .                       | 483      | nameauth: Added. . . . .                                                              | 900      |
| \LWR@simplifname: Added. . . . .                               | 362      | register: Verified for v1.9. . . . .                                                  | 968      |
| \LWR@startref: No longer use zref. . . . .                     | 486      | subcaption: Added. . . . .                                                            | 1026     |
| \LWR@stoppars: Improved HTML formatting. . . . .               | 349      | tocbasic: Updated to v3.26a. . . . .                                                  | 1066     |
| \LWR@subhtmlElementclass: Improved HTML formatting. . . . .    | 340      | truncate: Added. . . . .                                                              | 1082     |
| \LWR@subhyperrefclass: Improved HTML formatting. . . . .       | 490      | zref: No longer used. . . . .                                                         | 229      |
| \LWR@subinlineimage: Improved HTML formatting. . . . .         | 492      | <i>lwarpmk</i> : Added ImagesDirectory and ImagesName. . . . .                        | 302      |
| \LWR@write@lwarplabel: No longer use zref. . . . .             | 484      | <i>lwarpmk</i> : Fix for <b>cleanimages</b> . . . . .                                 | 302      |
| \LWR@writeconf: Added ImagesDirectory and ImagesName. . . . .  | 256      | Added early checks for colortab, epsf, hyper, picinpar, picins, sistyle, ucs. . . . . | 198      |
| \LinkHome: Fix: Document cross-references. . . . .             | 329      | Added option ImagesDirectory. . . . .                                                 | 218      |
| \UseMinipageWidths: Added, . . . . .                           | 571      | Added option ImagesName. . . . .                                                      | 218      |
| \fbox: Fix: Removed extra space. . . . .                       | 576      | Added support for indentfirst. . . . .                                                | 350      |
| \hyperindexref: Fix: Long index entries. . . . .               | 512      | Docs: Updated Converting an existing document. . . . .                                | 92       |
| \minipagefullwidth: Made \global. . . . .                      | 571      | Fix: Minipages inside multicol. . . . .                                               | 890      |
| \rotatebox: Improved HTML formatting. . . . .                  | 798      | Improved HTML formatting. . . . .                                                     | 752      |
| \rule: Improved HTML formatting. . . . .                       | 596      | Package dates added where possible. . . . .                                           | 608      |
| \scalebox: Improved HTML formatting. . . . .                   | 799      | Sanitize filenames. . . . .                                                           | 221      |
| \textgreater: Made robust. . . . .                             | 325      | tabular: Fix: Minipages inside tabular. . . . .                                       | 479      |
| \textless: Made robust. . . . .                                | 325      | lateximage: Added \BaseJobname for multiple projects. . . . .                         | 549      |
| General: 2019/02/08 . . . . .                                  | 1        | Improved HTML formatting. . . . .                                                     | 551      |
| LWR@currentautosec: Fix for LOF, LOfloat in home page. . . . . | 379      | minipage: Honor \LWR@forceminipagefullwidth. . . . .                                  | 572      |
| lwrap.css: Added niceframe. . . . .                            | 258      | v0.67                                                                                 |          |
| lwrap.css: Improved css for definition lists. . . . .          | 258      | \FilenameNullify: Added. . . . .                                                      | 519, 589 |
| lwrap_formal.css: Improved css for table notes. . . . .        | 293      | \FilenameSimplify: Added. . . . .                                                     | 363, 371 |
| lwrap_one_limage.txt: Image directory and prefix. . . . .      | 299      | \LWR@doequation: xfakebold: Added support. . . . .                                    | 537      |
| acronym: Fix for acronym in caption. . . . .                   | 616      | \LWR@doubledollar: xfakebold: Added support. . . . .                                  | 530      |
| acronym: No longer uses zref. . . . .                          | 616      | \LWR@filenamenoblanks: Improved file name generation. . . . .                         | 363      |
| ar: Added. . . . .                                             | 633      | \LWR@lookforpackagename: easyReview: Supported. . . . .                               | 232      |
| ed: Added. . . . .                                             | 723      | \LWR@nullfonts: Add'l symbols. . . . .                                                | 516      |
| extramarks: Updated to v3.10. . . . .                          | 743      | \LWR@simplifycustom: Added. . . . .                                                   | 363      |
| fancyhdr: Updated to v3.10. . . . .                            | 749      | \LWR@subsingledollar: xfakebold: Added support. . . . .                               | 528      |
| fancyvrb: Improved HTML formatting. . . . .                    | 745      | \LWR@subsingledollarsvg: xfakebold: Added support. . . . .                            | 526, 527 |
| graphics: Improved HTML formatting. . . . .                    | 795      | General: 2019/02/23 . . . . .                                                         | 1        |
| kotexutf: Patch for references. . . . .                        | 604      | academicons: Added. . . . .                                                           | 611      |
|                                                                |          | bbding: Added. . . . .                                                                | 647      |
|                                                                |          | changes: Added. . . . .                                                               | 672      |
|                                                                |          | color: Fix for version number. . . . .                                                | 704      |
|                                                                |          | dingbat: Added. . . . .                                                               | 714      |

|                                                                                     |          |                                                                                        |               |
|-------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------|---------------|
| eurosym: Added. . . . .                                                             | 741      | Prevented alg, algorithmic, fncylab,<br>pdfcpot. . . . .                               | 198           |
| fitbox: Added. . . . .                                                              | 758      | tabular: Fix: \warpprintonly inside<br>tabular. . . . .                                | 477           |
| fontawesome5: Added. . . . .                                                        | 773      |                                                                                        |               |
| fontawesome: Added. . . . .                                                         | 772      |                                                                                        |               |
| foreign: Added. . . . .                                                             | 777      | v0.69                                                                                  |               |
| gloss: Added. . . . .                                                               | 785      | \LWR@maybetocdata: Added support<br>for tocdata. . . . .                               | 507           |
| karnaugh-map: Added. . . . .                                                        | 819      | \framebox: Fix: Handle paren arg. . . . .                                              | 576           |
| marvosym: Added. . . . .                                                            | 858      | \hypertoc: Added support for<br>tocdata. . . . .                                       | 507           |
| multicap: Added. . . . .                                                            | 889      | \hypertocfloat: Added support for<br>tocdata. . . . .                                  | 509           |
| nomencl: Added. . . . .                                                             | 914      | \makebox: Fix: Handle paren arg. . . . .                                               | 575           |
| notes: Added. . . . .                                                               | 915      | \multicolumnrow: multirow: Error if<br>\multirow without \mrowcell. . . . .            | 895           |
| pifont: Added. . . . .                                                              | 955      | General: 2019/03/21 . . . . .                                                          | 1             |
| struktex: Added. . . . .                                                            | 1025     | array: Fix for<br>\tabularnewline. . . . .                                             | 635, 843      |
| textcomp: Nullify in filenames. . . . .                                             | 1044     | ctable: Added. . . . .                                                                 | 708           |
| typicons: Added. . . . .                                                            | 1083     | eqlist: Added. . . . .                                                                 | 736           |
| umoline: Added. . . . .                                                             | 1085     | eqparbox: Added. . . . .                                                               | 736           |
| xfakebold: Added support. . . . .                                                   | 520      | ftcap: Added. . . . .                                                                  | 781           |
| xfakebold: Added. . . . .                                                           | 1113     | graphics: Warning if using scale<br>option. . . . .                                    | 790           |
| xunicode: Nullify in filenames. . . . .                                             | 1122     | keyfloat: Updated for v2.00. . . . .                                                   | 822           |
| AMS environments: Added                                                             |          | listliketab: Added. . . . .                                                            | 840           |
| xfakebold support. . . . .                                                          | 624      | minitoc: Added. . . . .                                                                | 882           |
| eqnarray: xfakebold: Added<br>support. . . . .                                      | 543, 544 | multirow: Error if \multirow<br>without \mrowcell. . . . .                             | 894           |
| v0.68                                                                               |          | rotfloat: Requires graphicx. . . . .                                                   | 973           |
| \LWR@footnotetext: Factored for<br>multiple foot boxes. . . . .                     | 356      | supertabular: Fix: Clear caption<br>after use. . . . .                                 | 1034          |
| \LWR@checkloadfilename: Prevented<br>alg, algorithmic, fncylab,<br>pdfcpot. . . . . | 231      | tabularx: Require array. . . . .                                                       | 1036          |
| \LWR@printpendingfootnotes:<br>Factored for multiple footnote<br>boxes. . . . .     | 359      | tabulary: Require array. . . . .                                                       | 1037          |
| \LWR@tabular@warpprintonly:<br>Added. . . . .                                       | 475      | tocdata: Added. . . . .                                                                | 1068          |
| General: 2019/03/05 . . . . .                                                       | 1        | topcapt: Added. . . . .                                                                | 1079          |
| bigfoot: Added. . . . .                                                             | 655      | xtab: Fix: Clear caption after use. . . . .                                            | 1121          |
| fnpara: Added. . . . .                                                              | 771      | tabular: Error if \multirow without<br>\mrowcell. . . . .                              | 477, 479, 480 |
| footnotebackref: Added. . . . .                                                     | 776      | lateximage: Fix for <i>pdftotext</i> errors<br>from font size change. . . . .          | 553           |
| hyperref: Fix for options with<br>braces. . . . .                                   | 806      | fminipage: Honors<br>\minipagefullwidth. . . . .                                       | 578           |
| layouts: Added. . . . .                                                             | 828      | v0.70                                                                                  |               |
| listings: Fix for listings v1.7. . . . .                                            | 839      | \LWR@closeparagraph: Reduced<br>underfull \hbox warnings. . . . .                      | 347           |
| longtable: Improved error<br>handling. . . . .                                      | 843      | \LWR@lookforpackagename: changes:<br>Updated to v3.1.2. . . . .                        | 232           |
| manyfoot: Added. . . . .                                                            | 854      | \LWR@mathjaxfilename: Added. . . . .                                                   | 352           |
| niceframe: Added. . . . .                                                           | 913      | \LWR@restoreorigformatting: Fix:<br>\& in a lateximage. . . . .                        | 515           |
| perpage: Added. . . . .                                                             | 946      | \MathJaxFilename: Added. . . . .                                                       | 352           |
| showtags: Added. . . . .                                                            | 989      | \enddocument: If labels changed,<br>require recompile before making<br>images. . . . . | 395           |
| tablefootnote: Added. . . . .                                                       | 1036     |                                                                                        |               |
| threeparttablex: Added. . . . .                                                     | 1052     |                                                                                        |               |
| threeparttable: Fix for caption<br>type. . . . .                                    | 1051     |                                                                                        |               |
| <i>lwarpmk</i> : Improved error handling<br>if incomplete compile. . . . .          | 302      |                                                                                        |               |

|                                                               |      |                                                                    |                                |
|---------------------------------------------------------------|------|--------------------------------------------------------------------|--------------------------------|
| <code>\framebox</code> : Fix: Accept long arg. . . . .        | 576  | quotation                                                          | : Fix: blockquotation tag. 406 |
| <code>\makebox</code> : Fix: Accept long arg. . . . .         | 575  | v0.72                                                              |                                |
| Fix: Ignore width of Opt. . . . .                             | 575  | <code>\LWR@newautopagelabel</code> : Fix:                          |                                |
| Fix: No width given. . . . .                                  | 575  | References for <code>xr</code> , <code>xr-hyper</code> . . . . .   | 367                            |
| General: 2019/04/03 . . . . .                                 | 1    | <code>\LWR@printmccoldata</code> : Fix:                            |                                |
| <code>autonum</code> : Added. . . . .                         | 643  | <code>\multicolumn</code> parameters. . . . .                      | 459                            |
| <code>changelayout</code> : Added. . . . .                    | 671  | <code>\LWR@restoreorigformatting</code> : Use                      |                                |
| <code>changes</code> : Updated to v3.1.2. . . . .             | 672  | <code>\LWR@formatted</code> for <code>\bfseries</code> ,           |                                |
| <code>inputtrc</code> : Added. . . . .                        | 818  | etc. . . . .                                                       | 515                            |
| <code>mathtools</code> : Added. . . . .                       | 860  | <code>\chapter</code> : Added support for                          |                                |
| <code>metalogox</code> : Added. . . . .                       | 876  | <code>hypbmsec</code> . . . . .                                    | 386                            |
| <code>metalogo</code> : Used in print mode. . . . .           | 876  | <code>\ebweight</code> : <code>nfssect-cfr</code> : Added. . . . . | 585                            |
| <code>textcomp</code> : Fix for                               |      | <code>\hypertoc</code> : Fix: References for <code>xr</code> ,     |                                |
| <code>\textinterrobang</code> . . . . .                       | 1042 | <code>xr-hyper</code> . . . . .                                    | 507                            |
| <code>textpos</code> : Added optional arg to                  |      | <code>\hypertocfloat</code> : Fix: References for                  |                                |
| <code>textblock</code> . . . . .                              | 1045 | <code>xr</code> , <code>xr-hyper</code> . . . . .                  | 508                            |
| <code>xunicode</code> : Fix for                               |      | <code>\lgweight</code> : <code>nfssect-cfr</code> : Added. . . . . | 585                            |
| <code>\textinterrobang</code> . . . . .                       | 1122 | <code>\paragraph</code> : Added support for                        |                                |
| AMS environments: Refactored. . . . .                         | 624  | <code>hypbmsec</code> . . . . .                                    | 386                            |
| Ensure vector font. . . . .                                   | 210  | <code>\part</code> : Added support for <code>hypbmsec</code> . 385 |                                |
| File: <code>lwarp_mathjax.txt</code> : Loads                  |      | <code>\section</code> : Added support for                          |                                |
| <code>autoload-all.js</code> extension. . . . .               | 299  | <code>hypbmsec</code> . . . . .                                    | 386                            |
| File: <code>lwarp_mathjax.txt</code> : Updated                |      | <code>\subparagraph</code> : Added support for                     |                                |
| to MathJax v2.7.5. . . . .                                    | 299  | <code>hypbmsec</code> . . . . .                                    | 386                            |
| Logos: Improved for <code>metalogox</code> ,                  |      | <code>\subsection</code> : Added support for                       |                                |
| <code>lateximages</code> . . . . .                            | 598  | <code>hypbmsec</code> . . . . .                                    | 386                            |
| <code>\LWR@nestspan</code> : Improved <code>minipage</code> , |      | <code>\subsubsection</code> : Added support for                    |                                |
| <code>\parbox</code> inside a span. . . . .                   | 337  | <code>hypbmsec</code> . . . . .                                    | 386                            |
| v0.71                                                         |      | <code>\texteb</code> : <code>nfssect-cfr</code> : Added. . . . .   | 581                            |
| <code>\@mpfootnotetext</code> : Improved HTML                 |      | <code>\textlg</code> : <code>nfssect-cfr</code> : Added. . . . .   | 581                            |
| formatting. . . . .                                           | 358  | <code>\textulc</code> : <code>fontaxes</code> : Added. . . . .     | 582                            |
| Reduced underfull <code>\hbox</code> warnings. 358            |      | <code>\ulcshape</code> : <code>fontaxes</code> : Added. . . . .    | 586                            |
| <code>\LWR@closeparagraph</code> : Flush left                 |      | General: 2019/06/08 . . . . .                                      | 1                              |
| captions. . . . .                                             | 347  | <code>lwarp.css</code> : Added <code>backnaur</code> . . . . .     | 258                            |
| <code>\LWR@closetabledatcell</code> : Fix:                    |      | <code>lwarp.css</code> : Removed unneeded                          |                                |
| Tabular par tags. . . . .                                     | 426  | support for <code>\sishape</code> , <code>\textsi</code> . . . . . | 258                            |
| <code>\LWR@stoppars</code> : Reduced underfull                |      | <code>backnaur</code> : Added. . . . .                             | 646                            |
| <code>\hbox</code> warnings. . . . .                          | 350  | <code>boxedminipage2e</code> : Added support                       |                                |
| <code>\expandcolspec</code> : Added support for               |      | for <code>lateximages</code> . . . . .                             | 661                            |
| tabular ‘*’ column. . . . .                                   | 437  | <code>changes</code> : Fix references for <code>xr</code> ,        |                                |
| General: 2019/04/29 . . . . .                                 | 1    | <code>xr-hyper</code> . . . . .                                    | 672                            |
| <code>caption</code> : Reduced underfull <code>\hbox</code>   |      | <code>fontaxes</code> : Added. . . . .                             | 584, 774                       |
| warnings. . . . .                                             | 668  | <code>gloss</code> : Fix references for <code>xr</code> ,          |                                |
| <code>chemfig</code> : Updated to v1.4. . . . .               | 675  | <code>xr-hyper</code> . . . . .                                    | 785                            |
| <code>endfloat</code> : Updated for v2.7. . . . .             | 725  | <code>hypbmsec</code> : Added. . . . .                             | 805                            |
| <code>lwarp-common-multimedia</code> :                        |      | <code>minibox</code> : Added. . . . .                              | 881                            |
| Added. . . . .                                                | 1156 | <code>nfssect-cfr</code> : Added. . . . .                          | 905                            |
| <code>media9</code> : Added. . . . .                          | 874  | <code>nomencl</code> : Fix references for <code>xr</code> ,        |                                |
| <code>movie15</code> : Added. . . . .                         | 888  | <code>xr-hyper</code> . . . . .                                    | 914                            |
| <code>multimedia</code> : Added. . . . .                      | 891  | <code>pdfcrypt</code> : Added. . . . .                             | 940                            |
| <code>textpos</code> : Updated for v1.9.1. . . . .            | 1045 | <code>shapepar</code> : Added. . . . .                             | 988                            |
| <code>lwarpmk</code> : If wrong <code>lwarpmk.conf</code>     |      | <code>slantsc</code> : Added. . . . .                              | 1010                           |
| version, or wrong OS, displays the                            |      | <code>soulutf8</code> : Fix: Loads <code>soul</code> . . . . .     | 1013                           |
| print command to recompile. . . . .                           | 302  | <code>tabfigures</code> : Added. . . . .                           | 1035                           |
| Docs: Error testing. . . . .                                  | 184  | <code>xr-hyper</code> : Added. . . . .                             | 1119                           |

|                                       |           |                                        |            |
|---------------------------------------|-----------|----------------------------------------|------------|
| xr: Added. . . . .                    | 1119      | lwrap.css: Improved pkgtoadata         |            |
| zhlineskip: Updated to v1.0e. . .     | 1124      | formatting. . . . .                    | 258        |
| Use \LWR@formatted for                |           | lwrap_formal.css: Added \book          |            |
| \bfseries, etc. . . . .               | 247, 584  | for memoir. . . . .                    | 288, 293   |
| v0.73                                 |           | boxedminipage2e: Fix: Paragraph        |            |
| \@include: Fix: \newpage instead of   |           | tags. . . . .                          | 661        |
| \clearpage. . . . .                   | 237       | epigraph: Fix: Paragraph tags. . .     | 733        |
| \HTMLtitle: Added default title if    |           | fancyvrb: Fix: Nested                  |            |
| none specified. . . . .               | 353       | <div>/<pre>. . . . .                   | 753, 756   |
| \LWR@LwrapStart: Fix: Empty           |           | fancyvrb: Btrivlist: Fixed             |            |
| header/footer. . . . .                | 392       | paragraph tags. . . . .                | 747        |
| \LWR@addbaselinemarker: Improved      |           | intopdf: Updated to v0.2.1. . . .      | 819        |
| warning messages. . . . .             | 522       | listings: Fix: Paragraph tags. . . .   | 839        |
| \LWR@createfooter: Fix: Empty         |           | lwrap-common-multimedia: Fix:          |            |
| header/footer. . . . .                | 372       | No size for audio file. . . .          | 1157, 1158 |
| \LWR@dscitem: Fix: HTML tags. . . .   | 416       | lwrap-common-multimedia: Fix:          |            |
| \LWR@forceemptyline: Added. . . . .   | 213       | Paragraph tags. . . . .                | 1160       |
| \LWR@gsavebox: Added global save      |           | lwrap-patch-komascript: Fix for        |            |
| boxes. . . . .                        | 213       | captions. . . . .                      | 1127       |
| \LWR@htmlElementclass: Vertical       |           | lwrap-patch-memoir: Added              |            |
| space. . . . .                        | 340       | \book. . . . .                         | 1134       |
| \LWR@htmlElementclassline: Vertical   |           | lwrap-patch-memoir: Fix for            |            |
| space. . . . .                        | 341       | \frontmatter* and                      |            |
| \LWR@indentHTMLtwo: Added. . . . .    | 336       | \mainmatter*. . . . .                  | 1135       |
| \LWR@indexitem: Fix: Avoid empty      |           | lyluatex: Added. . . . .               | 851        |
| <span>. . . . .                       | 511       | musicography: Updated to               |            |
| \LWR@indexsubitem: Fix: Avoid empty   |           | 2019/05/28. Now supports               |            |
| <span>. . . . .                       | 511       | lateximages. . . . .                   | 897        |
| \LWR@indexsubsubitem: Fix: Avoid      |           | quotchap: Fix: Paragraph tags. . .     | 963        |
| empty <span>. . . . .                 | 511       | quotchap: Updated to v1.2. . . . .     | 962        |
| \LWR@newhtmlfile: Fix: Empty          |           | quoting: Fix: Paragraph tags. . . .    | 963        |
| header/footer. . . . .                | 375       | scrxend: Fix: Paragraph tags. 978, 979 |            |
| \LWR@nullfonts: Fix: \hspace in       |           | stackengine: Added. . . . .            | 1016       |
| sectioning file name. . . . .         | 518       | threeparttable: Added                  |            |
| \LWR@titlingmaketitle: titling: Fix:  |           | measuredfigure. . . . .                | 1051       |
| Paragraph tags. . . . .               | 403, 1065 | tocdata: Honors \tocdataformat. 1068   |            |
| Fix: Paragraph tags. . . . .          | 403       | tocdata: Improved formatting. . .      | 1068       |
| \attribution: Fix: Paragraph tags. .  | 405       | tocdata: Updated to v2.03. . . . .     | 1068       |
| \color: Added HTML support. . . . .   | 1105      | veronotes: Updated to v0.4. . . .      | 1092       |
| \fbboxBlock: Fix: Paragraph tags. . . | 577       | vwcol: Fix: Paragraph tags. . . . .    | 1095       |
| \hspace: Fix: Avoid empty <span>. .   | 593       | xy: Fix for \xybox. . . . .            | 1123       |
| \l@book: Added \book for memoir. . .  | 509       | xy: Improved xy, reverted              |            |
| \maketitle: titling: Fix: Paragraph   |           | \xymatrix, for qcicuit. . . . .        | 1123       |
| tags. . . . .                         | 1064      | Added \book for memoir. . . .          | 320, 334   |
| Fix: Paragraph tags. . . . .          | 402       | AMS environments: Fix: alt tags. 624   |            |
| \marginparBlock: Fix: Paragraph       |           | AMS environments: Fix: Paragraph       |            |
| tags. . . . .                         | 361       | tags. . . . .                          | 624, 625   |
| \postbookname: Added \book for        |           | Numbered HTML entity used for          |            |
| memoir. . . . .                       | 385       | text dollar. . . . .                   | 521        |
| \printthanks: Fix: Paragraph tags. .  | 398       | tabular: Fix and warning for tabular   |            |
| \rule: Fix: Avoid empty <span>. . .   | 597       | inside a <span>. . . . .               | 476        |
| General: 2019/07/11 . . . . .         | 1         | LWR@blocktextcurrentfont: Fix:         |            |
| lwrap.css: Added \book for            |           | Paragraph tags. . . . .                | 584        |
| memoir. . . . .                       | 258       | LWR@nestspan: Fix: quote, quotation    |            |
|                                       |           | inside a span. . . . .                 | 337        |

|                                        |                                                                     |          |
|----------------------------------------|---------------------------------------------------------------------|----------|
| v0.74                                  |                                                                     |          |
| \@ensuredmath: Add \ThisAltText.       | 532                                                                 |          |
| \AltTextClose: Added.                  | 519                                                                 |          |
| \AltTextOpen: Added.                   | 519                                                                 |          |
| \ImageAltText: Added.                  | 519                                                                 |          |
| \LWR@ThisAltText: Add                  |                                                                     |          |
| \ThisAltText.                          | 520                                                                 |          |
| \LWR@addlinktitle: Added.              | 486                                                                 |          |
| \LWR@doequation: Add                   |                                                                     |          |
| \ThisAltText.                          | 537, 538                                                            |          |
| \LWR@doubledollar: Add                 |                                                                     |          |
| \ThisAltText.                          | 530                                                                 |          |
| \LWR@lateximage@oneimage: Factored     |                                                                     |          |
| from lateximage.                       | 548                                                                 |          |
| \LWR@lateximage@oneimageb:             |                                                                     |          |
| Factored from lateximage.              | 548                                                                 |          |
| \LWR@setcurrentfont: Factored.         | 521                                                                 |          |
| \LWR@singledollar: Add                 |                                                                     |          |
| \ThisAltText.                          | 531                                                                 |          |
| \LWR@singledollarmeasure: Fix: Font    |                                                                     |          |
| control.                               | 523                                                                 |          |
| \LWR@subinlineimage: Add               |                                                                     |          |
| \ThisAltText.                          | 492                                                                 |          |
| \LWR@subsingledollar: Add              |                                                                     |          |
| \ThisAltText.                          | 529                                                                 |          |
| \LWR@subsingledollarsvg: Adds star     |                                                                     |          |
| argument for lateximage.               | 526                                                                 |          |
| \LateximageFontScale: Adjusted svg     |                                                                     |          |
| math font scaling default to 1.        | 546                                                                 |          |
| \MathImageAltText: Renamed from        |                                                                     |          |
| \mathimage.                            | 520                                                                 |          |
| \PackageDiagramAltText: Renamed        |                                                                     |          |
| from \packagediagramname.              | 520                                                                 |          |
| \ThisAltText: Add \ThisAltText.        | 520                                                                 |          |
| \hspace: Ignore negative space.        | 593                                                                 |          |
| General: 2019/09/02                    | 1                                                                   |          |
| lwrap.css: Added lyluatex.             | 258                                                                 |          |
| forest: alt text.                      | 778                                                                 |          |
| geometry: Remembers user's             |                                                                     |          |
| geometry.                              | 783                                                                 |          |
| graphics: Add                          |                                                                     |          |
| \ThisAltText.                          | 790, 796, 797                                                       |          |
| lylualatex: Adapts to user's geometry. | 852                                                                 |          |
| lylualatex: Preserves left margin.     | 852                                                                 |          |
| lylualatex: Renamef                    |                                                                     |          |
| \lylualateximagenamename.              | 851                                                                 |          |
| lylualatex: Split system images,       |                                                                     |          |
| assign class.                          | 852                                                                 |          |
| mhchem: Modified for new               |                                                                     |          |
| lateximage.                            | 878                                                                 |          |
| pdfpages: Adjust to user's paper       |                                                                     |          |
| size.                                  | 943                                                                 |          |
| stackengine: alt tags.                 | 1016                                                                |          |
| struktex: alt text.                    | 1025                                                                |          |
| tikz: Added alt text.                  | 1054                                                                |          |
|                                        |                                                                     |          |
|                                        | <i>lwrapmk: lwrapmk clean</i> removes                               |          |
|                                        | add'l files.                                                        | 302      |
|                                        | <i>lwrapmk: lwrapmk epstopdf</i> and                                |          |
|                                        | <pdftosvg directories.<="" honor="" td=""> <td>302</td> </pdftosvg> | 302      |
|                                        | Add \ThisAltText.                                                   | 625      |
|                                        | Remembers user's geometry.                                          | 225      |
|                                        | lateximage: Add \ThisAltText.                                       | 554      |
|                                        | Added second starred                                                |          |
|                                        | argument.                                                           | 549, 554 |
|                                        | Improved alt text.                                                  | 551      |
|                                        | New syntax for                                                      |          |
|                                        | \LWR@subinlineimage.                                                | 554      |
|                                        | eqnarray: Add \ThisAltText.                                         | 544      |
|                                        | LWR@displaymathother: Uses                                          |          |
|                                        | \MathImageAltText.                                                  | 533      |
|                                        | LWR@equationother: Uses                                             |          |
|                                        | \MathImageAltText.                                                  | 533      |
| v0.75                                  |                                                                     |          |
| \normalcolor: Added for HTML.          | 1104                                                                |          |
| General: 2019/09/23                    | 1                                                                   |          |
| lwrap.css: Improved                    |                                                                     |          |
| marginblock.                           | 258                                                                 |          |
| keyfloat: Fix: \normalcolor.           | 823                                                                 |          |
| wrapfig: Fix for \linewidth.           | 1100                                                                |          |
| wrapfig: Fix for width.                | 1099                                                                |          |
| minipage: Fix: \linewidth.             | 573                                                                 |          |
| v0.76                                  |                                                                     |          |
| General: 2019/10/08                    | 1                                                                   |          |
| lwrap.css: Fix for small caps.         | 258                                                                 |          |
| acro: Updated for v2.10.               | 614                                                                 |          |
| xr-hyper: Updated for v6.1.            | 1119                                                                |          |
| xr: Updated for v5.05 and xr-hyper     |                                                                     |          |
| v6.1.                                  | 1119                                                                |          |
| Docs expanded: Multiple projects.      | 89                                                                  |          |
| File: lwrap_mathjax.txt: Updated       |                                                                     |          |
| to MathJax v2.7.6.                     | 299                                                                 |          |
| v0.77                                  |                                                                     |          |
| General: 2019/10/15                    | 1                                                                   |          |
| booktabs: Updated to v1.6180339.       | 659                                                                 |          |
| chemformula: Updated to v4.15.         | 678                                                                 |          |
| v0.78                                  |                                                                     |          |
| \LWR@linkcatcodes: babel-french:       |                                                                     |          |
| Fix: Hyperlinks.                       | 489                                                                 |          |
| Factored.                              | 489                                                                 |          |
| \LWR@linkmediacatcodes:                |                                                                     |          |
| babel-french: Fix: Hyperlinks.         | 490                                                                 |          |
| Factored.                              | 489                                                                 |          |
| \LWR@nullifyNoAutoSpacing:             |                                                                     |          |
| babel-french: Fix: Hyperlinks.         | 476                                                                 |          |
| \LWR@subhyperrefclass: Remove          |                                                                     |          |
| extra space.                           | 490                                                                 |          |
| \normalfont: Uses \LWR@formatted.      | 587                                                                 |          |
| General: 2019/11/07                    | 1                                                                   |          |
| accessibility: Added.                  | 612                                                                 |          |
| babel-french: Fix: Hyperlinks.         | 335                                                                 |          |

|                                                                                           |            |                                                          |          |
|-------------------------------------------------------------------------------------------|------------|----------------------------------------------------------|----------|
| caption: Added warning regarding passing options. . . . .                                 | 666        | \multicolumnrow: multirow: Fix: Nested tabulars. . . . . | 895      |
| filecontents: Fix to overwrite existing files using new filecontents environment. . . . . | 228        | \noalign: Fix: Nested tabulars. . . . .                  | 475      |
| geometry: Cleaner option handling. . . . .                                                | 784        | General: 2020/02/01 . . . . .                            | 1        |
| graphics: Fix: alt tag expansion. . . . .                                                 | 796        | MATHJAX: Additional macros. . . . .                      | 370      |
| lwrap-common-multimedia: Fix links with new LaTeX kernel. . . . .                         | 1157, 1158 | lwrap.css: Fix: Nested tabulars. . . . .                 | 258      |
| titlesec: Fix for \titleclass. . . . .                                                    | 1060       | amsmath: Added MATHJAX emulation. . . . .                | 627      |
| v0.79                                                                                     |            | arydshln: Added MATHJAX emulation. . . . .               | 637      |
| \CustomizeMathJax: Fix: Sanitize for HTML. . . . .                                        | 369        | ar: Added MATHJAX emulation. . . . .                     | 634      |
| \LWR@HTMLsanitizeexpand: Fix: \&. . . . .                                                 | 368        | awesomebox: Added. . . . .                               | 644      |
| \LWR@ProvidesPackagePass: Fix: catoptions. . . . .                                        | 234        | babel and polyglossia: Added info messages. . . . .      | 605      |
| \LWR@checkloadfilename: Prevented bxcjkatype, hangul. . . . .                             | 231        | bigdelim: Added MATHJAX emulation. . . . .               | 655      |
| \LWR@closetabledatcell: Fix: Nested tabulars. . . . .                                     | 427        | bigstrut: Added MATHJAX emulation. . . . .               | 656      |
| \LWR@customizeMathJax: MathJax: Hide definitions. . . . .                                 | 371        | bm: Added. . . . .                                       | 657      |
| \LWR@earlyloadnever: Factored. . . . .                                                    | 198        | booktabs: Added MATHJAX emulation. . . . .               | 660      |
| \LWR@forcenewautoidanchor: Factored. . . . .                                              | 496        | booktabs: Fix for memoir with lateximage. . . . .        | 474, 659 |
| \LWR@mathjaxwarn: Warn if using packages not supported by MATHJAX. . . . .                | 606        | braket: Added. . . . .                                   | 662      |
| \LWR@parseaftercolumn: Remove outermost braces. . . . .                                   | 433        | floatflt: Improved width control. . . . .                | 763      |
| \LWR@parseatcolumn: Remove outermost braces. . . . .                                      | 432        | fontawesome5: Supports font size, color. . . . .         | 773      |
| \LWR@parsebangcolumn: Remove outermost braces. . . . .                                    | 432        | fontawesome: Refactored with fix for \Fathree. . . . .   | 772      |
| \LWR@parsebeforecolumn: Remove outermost braces. . . . .                                  | 433        | fontawesome: Supports font size, color. . . . .          | 772      |
| \LWR@setexparray: Fix: Nested tabulars. . . . .                                           | 322        | geometry: Also save \textwidth, \textheight. . . . .     | 226      |
| \LWR@singledollarmeasure: Factored. . . . .                                               | 523        | graphics: Factored from \LWR@includegraphicsb. . . . .   | 793, 794 |
| \LWR@subHTMLsanitize: Fix: \&. Factored. . . . .                                          | 367        | graphics: Fix for negative angles. . . . .               | 791      |
| \LWR@subsingledollarsvg: Adjust for unknown size. . . . .                                 | 526        | ifpdf, ifptex: Provided by iftex. . . . .                | 195      |
| Factored. . . . .                                                                         | 525        | ltablex: Fix: Require longtable. . . . .                 | 844      |
| \LWR@tabularendofline: Fix: Nested tabulars. . . . .                                      | 430        | ltxtable: Fix: Required packages. . . . .                | 845      |
| \captionlistentry: Fix: Duplicate auto-id. . . . .                                        | 500        | luatex85: Removed. . . . .                               | 195      |
| \macrotocname: Added. . . . .                                                             | 214        | mathtools: Added MATHJAX emulation. . . . .              | 860      |
| \makebox: Fix: Adjust for virtual page size. . . . .                                      | 575        | multirow: Add: MATHJAX emulation. . . . .                | 896      |
|                                                                                           |            | multirow: Fix: Centered vertical alignment. . . . .      | 894      |
|                                                                                           |            | niceframe: Fix: Adjust for virtual page size. . . . .    | 913      |
|                                                                                           |            | parallel: Added. . . . .                                 | 932      |
|                                                                                           |            | parcolumns: Added. . . . .                               | 934      |
|                                                                                           |            | pdfcolfoot: Added. . . . .                               | 938      |
|                                                                                           |            | pdfcolmk: Added. . . . .                                 | 938      |
|                                                                                           |            | pdfcolparallel: Added. . . . .                           | 939      |
|                                                                                           |            | pdfcolparcolumns: Added. . . . .                         | 939      |
|                                                                                           |            | pdfcol: Added. . . . .                                   | 938      |

|                                         |            |
|-----------------------------------------|------------|
| physics: Added. . . . .                 | 948        |
| siunitx: Fix: \square, \cubed. . .      | 1004       |
| siunitx: Improved MATHJAX. . . .        | 1002       |
| slashed: Added. . . . .                 | 1010       |
| steinmetz: Added. . . . .               | 1025       |
| svg: Added. . . . .                     | 1034       |
| transparent: Supports                   |            |
| lateximages. . . . .                    | 1080       |
| unicode-math: Added. . . . .            | 1086       |
| widetable: Added. . . . .               | 1097       |
| witharrows: Added. . . . .              | 1098       |
| xcolor: Fix: Nested                     |            |
| tabulars. . . . .                       | 1110, 1111 |
| xltabular: Fix: Require ltablex. .      | 1115       |
| xurl: Updated to v0.08. . . . .         | 1122       |
| AMS environments: Fix: Nested.          | 625        |
| Factored to                             |            |
| \LWR@setvirtualpage. 767, 795, 827      |            |
| Fix: Use newfloat instead of float.     | 768        |
| Fix: Use full \linewidth. . . . .       | 767        |
| Remember HTML font size. . . . .        | 590        |
| tabular: colortbl: Fix: Nested          |            |
| tabulars. . . . .                       | 478        |
| Fix: Nested tabulars. . . . .           | 480        |
| warpMathJax: Added. . . . .             | 224        |
| lateximage: Improved \linewidth.        | 552        |
| minipage: Fix: \linewidth frame         |            |
| padding. . . . .                        | 573        |
| Fix: Adjust for virtual page size. .    | 571        |
| fminipage: Fix: Adjust for virtual page |            |
| size. . . . .                           | 579        |
| LWR@setvirtualpage: Factored. . . .     | 570        |
| v0.80                                   |            |
| \CustomizeMathJax: Fix: Made            |            |
| \@onlypreamble. . . . .                 | 369        |
| Warn of slow compile. . . . .           | 369        |
| \LWR@checkloadfilename: Prevented       |            |
| formula, shadethm, slashbox. . .        | 231        |
| \LWR@infoprocessingmathjax: Add:        |            |
| Info message. . . . .                   | 370        |
| \LWR@restoreorigformatting:             |            |
| Improved math, displaymath. . .         | 515        |
| \fcolorbox: Made robust. . . . .        | 563        |
| \fcolorboxBlock: Made robust. . .       | 563        |
| \includegraphics: Made robust. . .      | 797        |
| General: 2020/02/19 . . . . .           | 1          |
| \textbf and related: Use HTML           |            |
| series, etc. . . . .                    | 580        |
| accessibility: Added MATHJAX            |            |
| emulation. . . . .                      | 612        |
| accsupp: Added MATHJAX                  |            |
| emulation. . . . .                      | 613        |
| autobreak: Added. . . . .               | 642        |
| biblatex: Creates hyperlinks. . . .     | 652        |
| centernot: Added. . . . .               | 670        |
| chemmacros: Updated to                  |            |
| v5.10. . . . .                          | 689, 697   |
| extarrows: Added. . . . .               | 742        |
| fewerfloatpages: Added. . . . .         | 757        |
| fouridx: Added. . . . .                 | 778        |
| gensymb: Added. . . . .                 | 783        |
| ghsystem: Added. . . . .                | 784        |
| gmeometric: Requires geometry.          | 787        |
| hline: Added. . . . .                   | 804        |
| leftidx: Added. . . . .                 | 831        |
| mathcomp: Added. . . . .                | 858        |
| mathdots: Added. . . . .                | 858        |
| mathfixs: Added. . . . .                | 859        |
| mismath: Added. . . . .                 | 883        |
| nccmath: Added. . . . .                 | 903        |
| noitcrl: Added. . . . .                 | 913        |
| pdfcomment: Added MATHJAX               |            |
| emulation. . . . .                      | 940        |
| resize: Added MATHJAX emulation.        | 970        |
| rmathbr: Added. . . . .                 | 972        |
| subsupscripts: Added. . . . .           | 1032       |
| tagpdf: Added. . . . .                  | 1037       |
| unicode-math: Improved                  |            |
| MATHJAX. . . . .                        | 1086       |
| url: Creates hyperlinks. . . . .        | 1090       |
| xfrac: Added MATHJAX emulation.         | 1115       |
| AMS environments: Fix: Centering        |            |
| starred envs. . . . .                   | 624, 625   |
| Improved math, displaymath. . .         | 532        |
| Prevented formula, shadethm,            |            |
| slashbox. . . . .                       | 198        |
| lateximage: Fix: Rule color in          |            |
| lateximage. . . . .                     | 552        |
| fcolorminipage: Made robust. . . .      | 564        |
| eqnarray: Fix: eqnarray*. . . . .       | 544        |
| v0.81                                   |            |
| \LWR@addbaselinemarker: Improved        |            |
| warning messages. . . . .               | 522        |
| \LWR@checkloadfilename: Prevented       |            |
| statex. . . . .                         | 231        |
| \LWR@replacestrings: Added. . . .       | 367        |
| \LWR@subHTMLsanitize: Faster. . . .     | 367        |
| \textcolor: xcolor: \textcolor:         |            |
| Spurious space. . . . .                 | 1105       |
| General: 2020/03/04 . . . . .           | 1          |
| lwarp.css: Added nolbreaks. . . .       | 258        |
| DotArrow: Added. . . . .                | 715        |
| Slunits: Improved \unit. Fixed in       |            |
| math mode. Added MATHJAX                |            |
| emulation. . . . .                      | 992        |
| accessibility: Added MATHJAX            |            |
| emulation. . . . .                      | 645        |
| accessibility: Updated to 2020/01/08    |            |
| version. . . . .                        | 645        |
| colonequals: Added. . . . .             | 704        |

|                                                               |            |                                                                          |            |
|---------------------------------------------------------------|------------|--------------------------------------------------------------------------|------------|
| decimal: Added. . . . .                                       | 712        | xpinyin: Added full pinyin support. . . . .                              | 1117       |
| dotless: Added. . . . .                                       | 716        |                                                                          |            |
| econometrics: Added. . . . .                                  | 719        | v0.83                                                                    |            |
| engtlc: Added. . . . .                                        | 727        | General: 2020/03/27 . . . . .                                            | 1          |
| gridset: Updated to v0.3. . . . .                             | 801        | lwarp-patch-memoir: Fixed framed. . . . .                                | 1129       |
| hyperref: Added                                               |            | lwarp-patch-memoir: Fixed: \specialindex. . . . .                        | 1151       |
| \pdfstringdefDisableCommands. . . . .                         | 809        | lwarp-patch-memoir: No longer requires subfigure. . . . .                | 1129       |
| luamplib: Added. . . . .                                      | 846        | lwarp-patch-memoir: Updated for new sizes. . . . .                       | 1130       |
| multiobjective: Added. . . . .                                | 892        | lwarp-patch-memoir: Updated. . . . .                                     | 1133, 1134 |
| nolbreaks: Added. . . . .                                     | 913        | physunits: Updated to v1.0.4. . . . .                                    | 953        |
| physunits: Added. . . . .                                     | 953        | v0.84                                                                    |            |
| returntograd: Added. . . . .                                  | 971        | \@currentHref: backref: Fixed from lwarp v0.72 changes. . . . .          | 489        |
| stackrel: Added. . . . .                                      | 1018       | \@currentlabelname: Default name for previous/next links. . . . .        | 483        |
| statex2: Added. . . . .                                       | 1019       | \@fnsymbol: \LWR@formatted, fixed double bar. . . . .                    | 401        |
| statmath: Added. . . . .                                      | 1022       | \@makecaption: caption now optional. . . . .                             | 497        |
| lwarpmk: Improved error if in lwarp source directory. . . . . | 302        | Warn inside a <span>. . . . .                                            | 497        |
| Prevented statex. . . . .                                     | 198        | \@textsubscript: Use \LWR@formatted. No longer \AtBeginDocument. . . . . | 588        |
| v0.82                                                         |            | \@textsuperscript: Use \LWR@formatted. . . . .                           | 588        |
| \LWR@disablepinyin: Added. . . . .                            | 213        | \@xdlbfloat: caption now optional. . . . .                               | 495        |
| \LWR@doequation: MATHJAX: Improved footnotes. . . . .         | 537        | \AddSubtitlePublished: Added \subtitle, \published for koma*. . . . .    | 404        |
| \LWR@synchronmathjax: Removed <par> tags. . . . .             | 534        | Fixed \subtitle, \printsubtitle if no titling. . . . .                   | 404        |
| General: 2020/03/25 . . . . .                                 | 1          | \HTMLFirstPageBottom: Added \FirstPageBottom. . . . .                    | 351        |
| MATHJAX: Improved footnotes. . . . .                          | 370, 538   | \LWR@LwarpEnd: Added prev/next links. . . . .                            | 394        |
| amsmath: Fixed: \intertext for MATHJAX. . . . .               | 627        | Fix: No footer for EPUB . . . . .                                        | 394        |
| chemfig: Updated to v1.5. . . . .                             | 675        | \LWR@LwarpStart: Added prev/next links. . . . .                          | 393        |
| draftwatermark: Updated to v2.0. . . . .                      | 717        | \LWR@createfooter: Added \FirstPageBottom. . . . .                       | 372        |
| endnotes: Added MATHJAX emulation. . . . .                    | 727        | \LWR@domulticolumn: Fix: Multicolumn style. . . . .                      | 462        |
| endnotes: Fix: Mark in print mode. . . . .                    | 727        | \LWR@excludecomment: Independent cut files. . . . .                      | 223        |
| etoc: Added. . . . .                                          | 739        | \LWR@filenamenoblanks: Fix: Dashes in filename. . . . .                  | 366        |
| luatexko: Added. . . . .                                      | 847        | \LWR@filestart: Improved HTML title. . . . .                             | 388        |
| lwarp-patch-memoir: Supports tocvsec2. . . . .                | 1135, 1139 | \LWR@floatbegin: Warn inside a <span>. . . . .                           | 493        |
| marginnote: Added MATHJAX emulation. . . . .                  | 857        |                                                                          |            |
| marginnote: Fix: Neutralize in print mode. . . . .            | 857        |                                                                          |            |
| nccfoots: Added MATHJAX emulation. . . . .                    | 903        |                                                                          |            |
| pagenote: Added MATHJAX emulation. . . . .                    | 931        |                                                                          |            |
| parnotes: Added MATHJAX emulation. . . . .                    | 937        |                                                                          |            |
| sidenotes: Added MATHJAX emulation. . . . .                   | 991        |                                                                          |            |
| soul: Fixed: \<. . . . .                                      | 1011       |                                                                          |            |
| syntonly: Added \nopages@. . . . .                            | 1035       |                                                                          |            |
| syntonly: Added to \LWR@loadafter. . . . .                    | 199        |                                                                          |            |
| ulem: Fixed: \dashuline. . . . .                              | 1084       |                                                                          |            |

|                                                         |          |                                                                  |          |
|---------------------------------------------------------|----------|------------------------------------------------------------------|----------|
| <code>\LWR@forcenewautoidanchor: &lt;par&gt;</code>     |          | <code>alltt: Added print mode.</code>                            | 623      |
| handling.                                               | 496      | <code>amsthm: Fix for \nameref.</code>                           | 629      |
| <code>\LWR@htmlsectionfilename: Fix:</code>             |          | <code>backref: Fixed from lwarp v0.72</code>                     |          |
| Sections called “Index” or “index”                      |          | changes.                                                         | 646      |
| have -0 appended to their                               |          | <code>biblatex: Fixed: Requires hyperref.</code>                 | 652      |
| filenames if no prefix.                                 | 327      | <code>boxedminipage: Renamed from</code>                         |          |
| <code>\LWR@new@label: Removed optional</code>           |          | boxedminipage2e per author.                                      | 661      |
| args.                                                   | 486      | <code>caption: Improved integration.</code>                      | 668      |
| <code>\LWR@newhtmlfile: Added prev/next</code>          |          | <code>caption: Non-width \parboxes.</code>                       | 666      |
| links.                                                  | 373, 375 | <code>caption: Simplified.</code>                                | 666      |
| <code>\LWR@nullfonts: Add'l symbols.</code>             | 516      | <code>epigraph: Added print mode.</code>                         | 733      |
| Factored out redefinitions.                             | 516      | <code>fixme: Added section name.</code>                          | 759      |
| Fix: Accents.                                           | 516      | <code>float: Fix: Recursive name.</code>                         | 762      |
| Revised <code>\texorpdfstring</code> .                  | 519      | <code>fontaxes: Moved sscshape to core.</code>                   |          |
| <code>\LWR@section: Added prev/next links.</code>       | 384      | <code>\FilenameNullify.</code>                                   | 774      |
| Warn inside a <code>&lt;span&gt;</code> .               | 379      | <code>lwarp-patch-memoir: Creates mark</code>                    |          |
| <code>\LWR@startpars: Ignore if in</code>               |          | macros.                                                          | 1138     |
| <code>lateximage</code> .                               | 348      | <code>lwarp-patch-memoir: Fix:</code>                            |          |
| <code>\LWR@stoppars: Ignore if in</code>                |          | <code>\label</code> .                                            | 1130     |
| <code>lateximage</code> .                               | 349      | <code>lwarp-patch-memoir: Fixed</code>                           |          |
| <code>\LinkNext: Added prev/next links.</code>          | 331      | pagenotes.                                                       | 1148     |
| <code>\LinkPrevious: Added prev/next</code>             |          | <code>lwarp-patch-memoir: Improved</code>                        |          |
| links.                                                  | 331      | cleveref support.                                                | 1148     |
| <code>\attribution: Added print mode.</code>            | 405      | <code>lwarp-patch-memoir: No longer</code>                       |          |
| <code>\caption@end: caption now optional.</code>        | 500      | requires subcaption.                                             | 1129     |
| <code>\captionlistentry: caption now</code>             |          | <code>lwarp-patch-memoir: No longer</code>                       |          |
| optional.                                               | 500      | uses subcaption.                                                 | 1145     |
| <code>\captionof: caption now optional.</code>          | 501      | <code>lwarp-patch-memoir: Use L<sup>A</sup>T<sub>E</sub>X</code> |          |
| <code>\end@dlbfloat: caption now</code>                 |          | captions.                                                        | 1143     |
| optional.                                               | 495      | <code>lwarp-patch-memoir: Uses</code>                            |          |
| <code>\linknextname: Added prev/next</code>             |          | memoir’s <code>\newcomment</code> ,                              |          |
| links.                                                  | 330      | <code>\commentsoff</code> , <code>\commentson</code> .           | 1149     |
| <code>\linkpreviousname: Added prev/next</code>         |          | <code>lwarp-patch-memoir: \contsubtop</code> ,                   |          |
| links.                                                  | 330      | etc. now as-is.                                                  | 1156     |
| <code>\printthanks: Fix: \printthanks in</code>         |          | <code>lwarp-patch-memoir: caption now</code>                     |          |
| print mode.                                             | 398      | optional, removed dup caption.                                   | 1145     |
| <code>\ssccshape: Moved to core.</code>                 | 587      | <code>mdframed: Warn inside a &lt;span&gt;</code> .              | 866      |
| <code>\textssc: Moved to core.</code>                   | 583      | <code>memoir: Preloads xcolor.</code>                            | 602      |
| <code>\textsubscript: Use</code>                        |          | <code>nfssect-cfr: Improved.</code>                              | 905      |
| <code>\LWR@formatted</code> . No longer                 |          | <code>nfssect-cfr:</code>                                        |          |
| <code>\AtBeginDocument</code> .                         | 588      | <code>\FilenameNullify</code> .                                  | 908, 911 |
| <code>\textsuperscript: Use</code>                      |          | <code>ntheorem: Warning if thref.</code>                         | 917      |
| <code>\LWR@formatted</code> .                           | 588      | <code>parcolumns: Fixed: Missing</code>                          |          |
| <code>\theHTMLTitleSeparator: Improved</code>           |          | <code>\colplacechunks</code> .                                   | 935      |
| spacing for <code>xeCJK</code> .                        | 387      | <code>realscripts: Added print mode.</code>                      | 964      |
| <code>\verbatiminput: Added print mode.</code>          | 409      | <code>realscripts: Fixed starred</code>                          |          |
| General: 2020/04/24                                     | 1        | <code>\textsuperscript</code> ,                                  |          |
| L <sup>A</sup> T <sub>E</sub> X accents: Add'l symbols. | 248      | <code>\textsubscript</code> .                                    | 964      |
| lwarp.css: Added koma-* subject.                        | 258      | <code>realscripts: Improved supersub</code>                      |          |
| lwarp.css: Fix: Minipage tex align.                     | 258      | scripts.                                                         | 964      |
| lwarp.css: Fix: Top nav if narrow                       |          | <code>rotfloat: Fix: Requires rotating.</code>                   | 973      |
| window.                                                 | 258      | <code>scrextend: Added \titlehead</code> ,                       |          |
| lwarp.css: Improved nfssect-cfr.                        | 258      | <code>\subject</code> , <code>\subtitle</code> ,                 |          |
| lwarp.css: Improved realscripts.                        | 258      | <code>\published</code> .                                        | 976      |
| abstract: Updated for memoir.                           | 610      | <code>scrextend: Updated to v3.29.</code>                        | 976      |

|                                      |      |                                      |          |
|--------------------------------------|------|--------------------------------------|----------|
| sidenotes: \sidecaption not long     |      | quote: Added print mode. . . . .     | 406      |
| arg. . . . .                         | 990  | LWR@nestspan: Issue warnings inside  |          |
| slantsc: \FilenameNullfiy. . . .     | 1010 | a span. . . . .                      | 337      |
| titling: \AtBeginDocument. . . .     | 1063 | Nullified minipage, \parbox inside   |          |
| xpinyin: Disables pinyin when null   |      | a span. . . . .                      | 337      |
| fonts. . . . .                       | 1119 | v0.85                                |          |
| <i>lwarpmk</i> : clean also removes  |      | \LWR@atbeginverbatim: Fix: Added     |          |
| comment_*.cut . . . . .              | 302  | print macros for fontspec. . . . .   | 409      |
| Added \FirstPageBottom. . . . .      | 351  | \LWR@htmlclosecomment: Fix: Added    |          |
| Added prev/next links. . . . .       | 327  | print macros for fontspec. . . . .   | 339      |
| Docs: JETBRAIN MONO font. . . . .    | 96   | \LWR@htmlcomment: Fix: Added print   |          |
| Docs: \linkpreviousname. . . . .     | 105  | macros for fontspec. . . . .         | 339      |
| Fix: Multirow style. . . . .         | 894  | \LWR@htmltag: Fix: Added print       |          |
| Fixed: textcomp now in kernel. . .   | 601  | macros for fontspec. . . . .         | 336      |
| Logos: Only warn about graphics if   |      | General: 2020/05/01 . . . . .        | 1        |
| actually use \Xe. . . . .            | 598  | idxlayout: Fixed:                    |          |
| tabbing: Restore spacing. . . . .    | 410  | \AtBeginDocument for load order. 812 |          |
| center: Added print mode. . . . .    | 555  | mathtools: Fixed:                    |          |
| verbatim: Added print mode. . . . .  | 410  | \shortintertext. . . . .             | 862, 904 |
| verse: Added print mode. . . . .     | 407  | titlesec: pagestyles option. . . .   | 1058     |
| flushleft: Added print mode. . . .   | 555  | url: Fixed print mode. . . . .       | 1090     |
| flushright: Added print mode. . . .  | 555  | Fix: Added print macros for          |          |
| longtable: caption now optional. . . | 842  | fontspec. . . . .                    | 584      |
| quotation: Added print mode. . . .   | 406  |                                      |          |

## Index of Objects

This is an index of macros, environments, booleans, counters, lengths, packages, classes, options, keys, files, and various other programming objects. Each is listed by itself, and also by category. In some cases, they are further subdivided by [class].

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition.

| <b>Symbols</b>                    |       |                           |
|-----------------------------------|-------|---------------------------|
| $\backslash$ \$                   | ..... | <i>521</i>                |
| $\backslash$ &                    | ..... | <i>325, 7939</i>          |
| $\backslash$ (                    | ..... | <u>10736</u>              |
| *-images.txt (file)               | ..... | <i>549</i>                |
| *_html.aux (file)                 | ..... | <i>366, 481, 483, 549</i> |
| *_html.lof (file)                 | ..... | <i>498</i>                |
| *_html.lot (file)                 | ..... | <i>498</i>                |
| *_html.tex (file)                 | ..... | <i>251</i>                |
| $\backslash$ ,                    | ..... | <i>117</i>                |
| --shell-escape (option)           | ..... | <i>95</i>                 |
| $\backslash$ @@@setcpageref       | ..... | <u>11558</u>              |
| $\backslash$ @@@setceref          | ..... | <u>11521</u>              |
| $\backslash$ @@@setcrefrange      | ..... | <u>11536</u>              |
| $\backslash$ @author              | ..... | <i>396</i>                |
| $\backslash$ @begintheorem        | ..... | <u>7572</u>               |
| $\backslash$ @biblabel            | ..... | <u>10205</u>              |
| $\backslash$ @caption             | ..... | <u>9789</u>               |
| $\backslash$ @capttype            | ..... | <u>9766</u>               |
| $\backslash$ @chacntformat        | ..... | <u>6738</u>               |
| $\backslash$ @currentHref         | ..... | <u>9583</u>               |
| $\backslash$ @currentlabelname    | ..... | <u>9418</u>               |
| $\backslash$ @date                | ..... | <i>396</i>                |
| $\backslash$ @donoparitem         | ..... | <u>7598</u>               |
| $\backslash$ @endtheorem          | ..... | <u>7584</u>               |
| $\backslash$ @ensuredmath         | ..... | <u>10746</u>              |
| $\backslash$ @fnsymbol            | ..... | <u>7324</u>               |
| $\backslash$ @footnotetext        | ..... | <u>6138</u>               |
| $\backslash$ @include             | ..... | <u>1338</u>               |
| $\backslash$ @item                | ..... | <u>7611</u>               |
| $\backslash$ @makecaption         | ..... | <u>9789</u>               |
| $\backslash$ @makefnmark          | ..... | <u>6104</u>               |
| $\backslash$ @makefntext          | ..... | <u>6103</u>               |
| $\backslash$ @maketitle           | ..... | <u>57, 7356</u>           |
| $\backslash$ @mklab               | ..... | <u>7592</u>               |
| $\backslash$ @mpfootnotetext      | ..... | <u>6140</u>               |
| $\backslash$ @nbitem              | ..... | <u>7678</u>               |
| $\backslash$ @opargbegintheorem   | ..... | <u>7578</u>               |
| $\backslash$ @partcntformat       | ..... | <u>6739</u>               |
| $\backslash$ @partnameformat      | ..... | <u>6740</u>               |
| $\backslash$ @rowcolers           | ..... | <u>8310</u>               |
| $\backslash$ @rowcolors           | ..... | <u>8309</u>               |
| $\backslash$ @secntformat         | ..... | <u>6736</u>               |
| $\backslash$ @starttoc            | ..... | <u>9932</u>               |
| $\backslash$ @textsubscript       | ..... | <u>12216</u>              |
| $\backslash$ @textsuperscript     | ..... | <u>12212</u>              |
| $\backslash$ @title               | ..... | <i>396</i>                |
| $\backslash$ @wrglossary          | ..... | <u>10145</u>              |
| $\backslash$ @wrindex             | ..... | <u>10133</u>              |
| $\backslash$ @xdlbfloat           | ..... | <u>9721</u>               |
| $\backslash$ @xfloat              | ..... | <u>9721</u>               |
| $\backslash$ [                    | ..... | <u>10736</u>              |
| $\backslash$ \                    | ..... | <i>591</i>                |
| \$                                | ..... | <i>529</i>                |
| \$\$                              | ..... | <i>529</i>                |
| 2in1 (package)                    | ..... | <i>608</i>                |
| 2up (package)                     | ..... | <i>608</i>                |
| <b>A</b>                          |       |                           |
| a4 (package)                      | ..... | <i>608</i>                |
| a4wide (package)                  | ..... | <i>609</i>                |
| a5comb (package)                  | ..... | <i>609</i>                |
| abstract (environment)            | ..... | <u>7423</u>               |
| abstract (package)                | ..... | <i>128, 609</i>           |
| $\backslash$ abstractname         | ..... | <i>106, 7422</i>          |
| academicons (package)             | ..... | <i>611</i>                |
| accessibility (package)           | ..... | <i>612</i>                |
| accsupp (package)                 | ..... | <i>613</i>                |
| acro (package)                    | ..... | <i>613</i>                |
| acronym (package)                 | ..... | <i>616</i>                |
| $\backslash$ addcontentsline      | ..... | <u>9880</u>               |
| addlines (package)                | ..... | <i>618</i>                |
| $\backslash$ AddSubtitlePublished | ..... | <u>7386</u>               |
| adjmulticol (package)             | ..... | <i>617</i>                |
| Adobe (program)                   | ..... | <i>68</i>                 |
| $\backslash$ affiliation          | ..... | <u>7224</u>               |
| afterpage (package)               | ..... | <i>612, 618</i>           |
| algorithm2e (package)             | ..... | <i>618</i>                |
| algorithmicx (package)            | ..... | <i>160, 622</i>           |
| align (environment)               | ..... | <u>83</u>                 |
| align* (environment)              | ..... | <u>86</u>                 |
| alignat (environment)             | ..... | <u>95</u>                 |
| alignat* (environment)            | ..... | <u>98</u>                 |



|                           |                |                               |           |
|---------------------------|----------------|-------------------------------|-----------|
| WPMarkTOC                 | 176, 244       | clrdblpg (package)            | 703       |
| WPTitleHeading            | 177, 245       | cm-super (package)            | 95        |
| bophook (package)         | 660            | cmap (package)                | 96        |
| bounddvi (package)        | 661            | cmdtrack (package)            | 703       |
| boxedminipage (package)   | 661            | colonequals (package)         | 704       |
| boxedminipage2e (package) | 661            | \color                        | 51        |
| \boxframe                 | 194            | color (package)               | 152, 704  |
| braket (package)          | 662            | \colorbox                     | 77        |
| breakurl (package)        | 662            | \colorboxBlock                | 90, 11420 |
| breqn (package)           | 663            | colortbl (package)            | 159, 705  |
| bsheaders (package)       | 664            | CombineHigherDepths (boolean) | 105, 362  |
| BVerbatim (environment)   | 247            | comment (package)             | 223       |
| bxpapersize (package)     | 664            | \ConTeXt                      | 12545     |
| bytefield (package)       | 665            | continue (package)            | 706       |
| <b>C</b>                  |                |                               |           |
| calc (package)            | 227            | copyrightbox (package)        | 707       |
| cancel (package)          | 665            | counter:                      |           |
| canoniclayout (package)   | 666            | FileDepth                     | 105, 362  |
| capt-of (package)         | 501            | FootnoteDepth                 | 106, 355  |
| caption (package)         | 160, 501, 666  | footnoteReset                 | 355       |
| \caption@begin            | 9848           | lofdepth                      | 508       |
| \caption@end              | 9848           | lotdepth                      | 508       |
| \captionlistentry         | 9855           | LWR@cellcolordepth            | 424       |
| \captionof                | 9896           | LWR@currentautosec            | 379       |
| \CaptionSeparator         | 9788           | LWR@externalfilecnt           | 520       |
| cases (package)           | 669            | LWR@hdashedlines              | 422       |
| center (environment)      | 11305          | LWR@hlines                    | 422       |
| \centering                | 11335          | LWR@htmlfilenumber            | 327       |
| \centerline               | 11354          | LWR@htmlseqfilenumber         | 327       |
| centernot (package)       | 670            | LWR@latestautopage            | 498       |
| changebar (package)       | 670            | LWR@lateximagedepth           | 546       |
| changeLayout (package)    | 671            | LWR@lateximagenumber          | 546       |
| changepage (package)      | 671            | LWR@Lipage                    | 546       |
| changes (package)         | 672            | LWR@midrulecounter            | 425       |
| chappg (package)          | 674            | LWR@nextautoid                | 498       |
| \chapter                  | 6946           | LWR@nextautopage              | 498       |
| chapterbib (package)      | 675            | LWR@nextequation              | 533       |
| chemfig (package)         | 675            | LWR@prevFileDepth             | 378       |
| chemformula (package)     | 677            | LWR@previousautopagelabel     | 366       |
| chemgreek (package)       | 682            | LWR@spandepth                 | 344       |
| chemmacros (package)      | 683            | LWR@splitstarcopies           | 437       |
| chemnum (package)         | 701            | LWR@splitstarindex            | 437       |
| chkfloat (package)        | 702            | LWR@starcount                 | 437       |
| chnpage (package)         | 702            | LWR@startingequation          | 547       |
| cite (package)            | 702            | LWR@tablecolspecindex         | 424       |
| CJK (package)             | 703            | LWR@tablecolspecwidth         | 424       |
| CJKutf8 (package)         | 703            | LWR@tableLaTeXcolindex        | 424       |
| class (key) [Gin]         | 792            | LWR@tabletotalLaTeXcols       | 424       |
| class:                    |                | LWR@tabletotalLaTeXcolsnext   | 424       |
| internet                  | 67             | LWR@tabularDepth              | 423       |
| komascript                | 162            | LWR@tabularpardepth           | 423       |
| memoir                    | 162, 164, 1091 | LWR@thisautoid                | 496       |
| \cleardoublepage          | 12378          | LWR@thisautoidWP              | 496       |
| \clearpage                | 12378          | LWR@virtualpagedepth          | 570       |
| cleveref (package)        | 124, 565       | SideTOCDepth                  | 105, 505  |
|                           |                | tocdepth                      | 105       |



|                              |                    |                            |                   |
|------------------------------|--------------------|----------------------------|-------------------|
| quotation                    | 7460               | *_html.lot                 | 498               |
| quote                        | 7452               | *_html.tex                 | 251               |
| tabbing                      | 7550               | glyphtounicode.tex         | 96                |
| tabular                      | 9262               | lwarp.css                  | 111, 257          |
| thebibliography              | 10206              | lwarp.ist                  | 140, 297          |
| theindex                     | 10106              | lwarp.xdy                  | 141, 298          |
| titlepage                    | 7241               | lwarp_baseline_marker.eps  | 521               |
| titlingpage                  | 14                 | lwarp_baseline_marker.png  | 521               |
| verbatim                     | 7532               | lwarp_formal.css           | 293               |
| verse                        | 2, 7470            | lwarp_mathjax.txt          | 299               |
| warpall                      | 985                | lwarp_one_limage.cmd       | 298               |
| warpHTML                     | 986                | lwarp_sagebrush.css        | 288               |
| warpMathJax                  | 992                | lwarp_tutorial.txt         | 77                |
| warpprint                    | 989                | lwarpmk.conf               | 257               |
| epigraph (package)           | 733                | lwarpmk.lua                | 182               |
| epsfig (package)             | 734                | project.css                | 111               |
| epstopdf (package)           | 153, 734           | project.lwarpmkconf        | 257               |
| epstopdf (program)           | 151, 560           | sample_project.css         | 111, 297          |
| epstopdf-base (package)      | 735                | tutorial.tex               | 77                |
| eqlist (package)             | 736                | filecontents (package)     | 228               |
| eqnarray (environment)       | 11020              | FileDepth (counter)        | 105, 362          |
| eqparbox (package)           | 736                | \FilenameLimit             | 106, 6250         |
| equation (environment)       | 10938              | \FilenameNullify           | 123, 10410, 12244 |
| equation* (environment)      | 10946              | \FilenameSimplify          | 123, 6271, 6569   |
| errata (package)             | 737                | FileSectionNames (boolean) | 106, 326          |
| eso-pic (package)            | 738                | fitbox (package)           | 758               |
| \etalchar                    | 129                | fix2col (package)          | 759               |
| etoc (package)               | 739                | fixme (package)            | 166, 759          |
| etoolbox (package)           | 195                | fixmetodonotes (package)   | 760               |
| eurosym (package)            | 741                | flafter (package)          | 761               |
| everyhook (package)          | 228                | \flagverse                 | 1091              |
| everypage (package)          | 742                | flalign (environment)      | 89                |
| everyshi (package)           | 742                | flalign* (environment)     | 92                |
| \expandcolspec               | 8195               | Flare (program)            | 68                |
| expl3 (package)              | 227                | flippdf (package)          | 761               |
| extrarrows (package)         | 742                | float (package)            | 160, 761          |
| extramarks (package)         | 743                | floatflt (package)         | 763               |
| <b>F</b>                     |                    |                            |                   |
| fancybox (package)           | 121, 743           | floatpag (package)         | 764               |
| fancyhdr (package)           | 749                | floatrow (package)         | 161, 764          |
| fancyref (package)           | 749                | fltrace (package)          | 769               |
| fancytabs (package)          | 750                | \flushbottom               | 5523              |
| fancyvrb (package)           | 751                | flushend (package)         | 770               |
| \fbox                        | 120, 11837         | flushleft (environment)    | 11325             |
| \fboxBlock                   | 120, 11846         | flushright (environment)   | 11315             |
| \fcolorbox                   | 107, 11422         | fminipage (environment)    | 120, 11866        |
| \fcolorboxBlock              | 130, 11458         | fnbreak (package)          | 770               |
| fcolorminipage (environment) | 170, 11460         | fncychap (package)         | 770               |
| fewerfloatpages (package)    | 757                | fnlineno (package)         | 771               |
| figcaps (package)            | 757                | fnpara (package)           | 771               |
| figsize (package)            | 758                | fnpos (package)            | 771               |
| file:                        |                    | fontawesome (package)      | 772               |
| *-images.txt                 | 549                | fontawesome5 (package)     | 773               |
| *_html.aux                   | 366, 481, 483, 549 | fontaxes (package)         | 774               |
| *_html.lof                   | 498                | fontenc (package)          | 96, 774           |
|                              |                    | fontspec (package)         | 96, 224           |



|                                                   |                     |                                                     |                 |
|---------------------------------------------------|---------------------|-----------------------------------------------------|-----------------|
| <code>\inlinemathother</code> .....               | 147, 5306           | <code>\LWR@tempraise</code> .....                   | 592             |
| <code>inputenc</code> (package) .....             | 96                  | <code>\LWR@tempwidth</code> .....                   | 592             |
| <code>inputenx</code> (package) .....             | 96                  | <code>\LWR@thiscmidrulewidth</code> .....           | 449             |
| <code>inputtrc</code> (package) .....             | 818                 | <code>\VerbatimHTMLwidth</code> .....               | 408             |
| <code>internet</code> (class) .....               | 67                  | <code>\vleftmargini</code> .....                    | 164, 406, 1091  |
| <code>intopdf</code> (package) .....              | 819                 | <code>\vleftskip</code> .....                       | 164, 406, 1091  |
| <code>itemize</code> (environment) .....          | 7728                | <code>letltxmacro</code> (package) .....            | 195             |
| <code>\itshape</code> .....                       | 12155               | <code>letterspace</code> (package) .....            | 832             |
| <b>K</b>                                          |                     |                                                     |                 |
| <code>karnaugh-map</code> (package) .....         | 819                 | <code>lettrine</code> (package) .....               | 832             |
| <code>\kern</code> .....                          | 117                 | <code>\lgweight</code> .....                        | 12130           |
| key:                                              |                     | <code>LibreOffice</code> (program) .....            | 68              |
| [Gin]:                                            |                     | <code>\linebreak</code> .....                       | 12371           |
| class .....                                       | 792                 | <code>lineno</code> (package) .....                 | 833             |
| <code>keyfloat</code> (package) .....             | 162, 822            | <code>\LinkHome</code> .....                        | 108, 5404, 5409 |
| <code>komascript</code> (class) .....             | 162                 | <code>\linkhomename</code> .....                    | 105, 5401       |
| <code>kotex</code> (package) .....                | 167                 | <code>\LinkNext</code> .....                        | 108, 5437, 5450 |
| <code>kvoptions</code> (package) .....            | 217                 | <code>\linknextname</code> .....                    | 105, 5433       |
| <b>L</b>                                          |                     |                                                     |                 |
| <code>\l@book</code> .....                        | 10084               | <code>\LinkPrevious</code> .....                    | 108, 5436, 5440 |
| <code>\l@chapter</code> .....                     | 10086               | <code>\linkpreviousname</code> .....                | 105, 5432       |
| <code>\l@figure</code> .....                      | 10097               | <code>Linux</code> (program) .....                  | 112, 214        |
| <code>\l@paragraph</code> .....                   | 10095               | <code>lips</code> (package) .....                   | 835             |
| <code>\l@part</code> .....                        | 10085               | <code>list</code> (environment) .....               | 7698            |
| <code>\l@section</code> .....                     | 10092               | <code>listings</code> (package) .....               | 836             |
| <code>\l@subparagraph</code> .....                | 10096               | <code>listliketab</code> (package) .....            | 840             |
| <code>\l@subsection</code> .....                  | 10093               | <code>\listof</code> .....                          | 9988            |
| <code>\l@subsubsection</code> .....               | 10094               | <code>\listoffigures</code> .....                   | 9962            |
| <code>\l@table</code> .....                       | 10098               | <code>\listoftables</code> .....                    | 9975            |
| <code>\LaTeX</code> .....                         | 12499               | <code>lltjtex</code> (package) .....                | 840             |
| <code>LaTeX2HTML</code> (program) .....           | 67                  | <code>lmodern</code> (package) .....                | 95, 96          |
| <code>\LaTeXe</code> .....                        | 12499               | <code>lofdepth</code> (counter) .....               | 508             |
| <code>lateximage</code> (environment) 544, 11163, | 11300               | <code>longtable</code> (environment) .....          | 4               |
| <code>\LateximageFontScale</code> .....           | 11093               | <code>longtable</code> (package) .....              | 158, 841        |
| <code>\LateximageFontSizeName</code> .....        | 11092               | <code>lotdepth</code> (counter) .....               | 508             |
| <code>latexmk</code> (option) .....               | 98, 103, 220        | <code>lscapex</code> (package) .....                | 844             |
| <code>latexmk</code> (program) .....              | 169                 | <code>ltablex</code> (package) .....                | 844             |
| <code>LatexmkIndexCmd</code> (option) .....       | 101, 220            | <code>ltxcaption</code> (package) .....             | 845             |
| <code>LaTeXML</code> (program) .....              | 67                  | <code>ltxgrid</code> (package) .....                | 845             |
| <code>layaureo</code> (package) .....             | 828                 | <code>ltxtable</code> (package) .....               | 845             |
| <code>layout</code> (package) .....               | 828                 | <code>lua-check-hyphen</code> (package) .....       | 846             |
| <code>layouts</code> (package) .....              | 828                 | <code>lua-visual-debug</code> (package) .....       | 846             |
| <code>leading</code> (package) .....              | 831                 | <code>luacolor</code> (package) .....               | 846             |
| <code>leftidx</code> (package) .....              | 831                 | <code>\LuaLaTeX</code> .....                        | 12528           |
| <code>\leftline</code> .....                      | 11353               | <code>LuaLaTeX</code> (program) [requirement] ..... | 71              |
| length:                                           |                     | <code>luamplib</code> (package) .....               | 846             |
| <code>\HTMLleftmargini</code> .                   | 164, 406, 407, 1091 | <code>\LuaTeX</code> .....                          | 12528           |
| <code>\HTMLvleftskip</code> ...                   | 164, 406, 407, 1091 | <code>luatexko</code> (package) .....               | 847             |
| <code>\LWR@cmidrulewidth</code> .....             | 449                 | <code>luatodonotes</code> (package) .....           | 166, 849        |
| <code>\LWR@heavyrulewidth</code> .....            | 449                 | <code>lwarp</code> (package) .....                  | 98              |
| <code>\LWR@lightrulewidth</code> .....            | 449                 | <code>lwarp-common-multimedia</code> (package) .    | 1156            |
| <code>\LWR@minipageheight</code> .....            | 569                 | <code>lwarp-patch-komascript</code> (package) .     | 1125            |
| <code>\LWR@minipagewidth</code> .....             | 569                 | <code>lwarp-patch-memoir</code> (package) .....     | 1127            |
| <code>\LWR@tempheight</code> .....                | 592                 | <code>lwarp.css</code> (file) .....                 | 111, 257        |
|                                                   |                     | <code>lwarp.ist</code> (file) .....                 | 140, 297        |
|                                                   |                     | <code>lwarp.xdy</code> (file) .....                 | 141, 298        |
|                                                   |                     | <code>lwarp_baseline_marker.eps</code> (file) ..... | 521             |

|                                              |               |                                           |       |
|----------------------------------------------|---------------|-------------------------------------------|-------|
| lwrap_baseline_marker.png (file) . . . . .   | 521           | \LWR@clearmidrules . . . . .              | 8470  |
| lwrap_formal.css (file) . . . . .            | 293           | \LWR@closeparagraph . . . . .             | 5931  |
| lwrap_mathjax.txt (file) . . . . .           | 299           | \LWR@closeparagraph@br . . . . .          | 5921  |
| lwrap_one_limage.cmd (file) . . . . .        | 298           | \LWR@closeprevious . . . . .              | 5492  |
| lwrap_sagebrush.css (file) . . . . .         | 288           | \LWR@closetabledatocell . . . . .         | 7892  |
| lwrap_tutorial.txt (file) . . . . .          | 77            | \LWR@cmidrulewidth (length) . . . . .     | 449   |
| [lwrapmk]:                                   |               | LWR@colafterspec . . . . .                | 424   |
| htmlglossary (option) . . . . .              | 130, 785      | LWR@colatspec . . . . .                   | 424   |
| printglossary (option) . . . . .             | 130, 785      | LWR@colbangspec . . . . .                 | 424   |
| lwrapmk (option) . . . . .                   | 101, 219, 301 | LWR@colbarspec . . . . .                  | 424   |
| lwrapmk (program) . . . . .                  | 182, 301      | LWR@colbeforespec . . . . .               | 424   |
| lwrapmk epstopdf (program) . . . . .         | 151, 560      | \LWR@columnHTMLcolor . . . . .            | 8312  |
| lwrapmk pdftosvg (program) . . . . .         | 151, 560      | \LWR@columnspeclookahead . . . . .        | 8023  |
| lwrapmk.conf (file) . . . . .                | 257           | \LWR@compilecmd . . . . .                 | 1722  |
| lwrapmk.lua (file) . . . . .                 | 182           | \LWR@compileuplatex . . . . .             | 1757  |
| \lwrapsetup . . . . .                        | 841           | \LWR@convertto . . . . .                  | 733   |
| \LWR@tfootnotetext . . . . .                 | 6107          | LWR@copiedsidetoc (boolean) . . . . .     | 503   |
| \LWR@makebox@align . . . . .                 | 11771         | \LWR@copyfile . . . . .                   | 1373  |
| \LWR@makebox@paren . . . . .                 | 11756         | \LWR@createautosec . . . . .              | 6720  |
| \LWR@printpendingfootnotes . . . . .         | 6174          | \LWR@createfooter . . . . .               | 6572  |
| \LWR@addbaselinemarker . . . . .             | 10450         | LWR@currentautosec (counter) . . . . .    | 379   |
| \LWR@addcdashline . . . . .                  | 8585          | \LWR@currentcss . . . . .                 | 6045  |
| \LWR@addcmidruletrim . . . . .               | 8551          | \LWR@currenttextcolor . . . . .           | 12230 |
| \LWR@addcmidrulewidth . . . . .              | 8582          | \LWR@customizedMathJax . . . . .          | 6469  |
| \LWR@addcompilecmd . . . . .                 | 1725          | \LWR@customizeMathJax . . . . .           | 6547  |
| \LWR@addformatwpaalignment . . . . .         | 8601          | \LWR@descitem . . . . .                   | 7740  |
| \LWR@addleftmostbartag . . . . .             | 8389          | \LWR@disablepinyin . . . . .              | 758   |
| \LWR@addlinktitle . . . . .                  | 9511          | LWR@displaymathnormal (environment)       |       |
| \LWR@addmathjax . . . . .                    | 10855         | . . . . .                                 | 10784 |
| \LWR@addmulticolvertrulecolor . . . . .      | 8853          | LWR@displaymathother (environment)        | 10789 |
| \LWR@addrulewidth . . . . .                  | 8556          | \LWR@docdashline . . . . .                | 8519  |
| \LWR@addtabularcellcolor . . . . .           | 8728          | \LWR@docmidrule . . . . .                 | 8503  |
| \LWR@addtabularhrulecolor . . . . .          | 8629          | \LWR@doequation . . . . .                 | 10868 |
| \LWR@addtabulararrowcolor . . . . .          | 8614          | \LWR@doindexentry . . . . .               | 10154 |
| \LWR@addtabularrulecolors . . . . .          | 8675          | LWR@doingapar (boolean) . . . . .         | 345   |
| \LWR@afterendverbatim . . . . .              | 7515          | LWR@doingcmidrule (boolean) . . . . .     | 422   |
| LWR@allowanothergeometry (boolean) . . . . . | 226           | LWR@doingstartpars (boolean) . . . . .    | 345   |
| \LWR@amsmathbody . . . . .                   | 11126         | LWR@doingtbrule (boolean) . . . . .       | 422   |
| \LWR@amsmathbodynumbered . . . . .           | 11132         | \LWR@domulticolumn . . . . .              | 8891  |
| LWR@amsmultline (boolean) . . . . .          | 540           | \LWR@doubledollar . . . . .               | 10687 |
| \LWR@applyxfakebold . . . . .                | 10432         | LWR@dynamicmath (boolean) . . . . .       | 324   |
| \LWR@atbeginverbatim . . . . .               | 7495          | \LWR@earlyclassloadnever . . . . .        | 93    |
| \LWR@avoiddupfilenames . . . . .             | 6282          | \LWR@earlyloadnever . . . . .             | 88    |
| \LWR@backgroundcolor . . . . .               | 39            | LWR@emptyatbang (boolean) . . . . .       | 422   |
| \LWR@beginhideamsmath . . . . .              | 11005         | \LWR@endfloatalignment . . . . .          | 9782  |
| LWR@BlockClassWP (environment) . . . . .     | 5831          | \LWR@endhideamsmath . . . . .             | 11013 |
| LWR@blocktextcurrentfont (environ-           |               | \LWR@endoffline . . . . .                 | 12303 |
| ment) . . . . .                              | 12106, 12243  | \LWR@ensuredoingapar . . . . .            | 5897  |
| \LWR@botnavigation . . . . .                 | 5427          | LWR@equationother (environment) . . . . . | 10803 |
| LWR@cdashlines . . . . .                     | 449           | \LWR@equationtag . . . . .                | 11112 |
| LWR@cellcolordepth (counter) . . . . .       | 424           | \LWR@excludecomment . . . . .             | 970   |
| \LWR@cellHTMLcolor . . . . .                 | 8314          | LWR@exitingtabular (boolean) . . . . .    | 423   |
| \LWR@checkloadbefore . . . . .               | 63            | \LWR@expandableformatted . . . . .        | 1435  |
| \LWR@checkloadfilename . . . . .             | 1158          | \LWR@expandableformattedenv . . . . .     | 1464  |
| \LWR@checkloadnever . . . . .                | 82            | \LWR@expcolspec . . . . .                 | 8191  |

|                                                |              |                                        |                    |
|------------------------------------------------|--------------|----------------------------------------|--------------------|
| LWR@externalfilecnt (counter) . . . . .        | <u>520</u>   | \LWR@htmlmathlabel . . . . .           | <u>10990</u>       |
| \LWR@fbboxstyle . . . . .                      | <u>11831</u> | \LWR@htmlmulticolumn . . . . .         | <u>8957</u>        |
| LWR@figcaption (environment) . . . . .         | <u>9818</u>  | \LWR@htmlopencomment . . . . .         | <u>5700</u>        |
| \LWR@filenamoblanks . . . . .                  | <u>6295</u>  | \LWR@htmlrefsectionfilename . . . . .  | <u>5391</u>        |
| \LWR@filestart . . . . .                       | <u>7011</u>  | \LWR@HTMLsanitize . . . . .            | <u>6449</u>        |
| \LWR@findcurrenttextcolor . . . . .            | <u>12233</u> | \LWR@HTMLsanitizeexpand . . . . .      | <u>6459</u>        |
| \LWR@findword . . . . .                        | <u>1155</u>  | \LWR@htmlsectionfilename . . . . .     | <u>5351</u>        |
| \LWR@firstoffour . . . . .                     | <u>763</u>   | LWR@htmlseqfilename (counter) . . .    | <u>327</u>         |
| \LWR@floatalignment . . . . .                  | <u>9768</u>  | \LWR@htmlspan . . . . .                | <u>5677</u>        |
| \LWR@floatalignmentname . . . . .              | <u>9767</u>  | \LWR@htmlspanclass . . . . .           | <u>5685</u>        |
| \LWR@floatbegin . . . . .                      | <u>9686</u>  | \LWR@htmltag . . . . .                 | <u>5695</u>        |
| \LWR@floatend . . . . .                        | <u>9731</u>  | \LWR@htmltagc . . . . .                | <u>5607</u>        |
| \LWR@floatstyle . . . . .                      | <u>2</u>     | \LWR@hyperindexrefnullified . . . .    | <u>10159</u>       |
| \LWR@footnotebox . . . . .                     | <u>6102</u>  | \LWR@includecomment . . . . .          | <u>970</u>         |
| \LWR@footnotetext . . . . .                    | <u>6137</u>  | \LWR@indentHTML . . . . .              | <u>5601</u>        |
| \LWR@forceemptyline . . . . .                  | <u>759</u>   | \LWR@indentHTMLtwo . . . . .           | <u>5604</u>        |
| LWR@forceminpagefullwidth (boolean) <i>570</i> |              | \LWR@indexitem . . . . .               | <u>10121</u>       |
| \LWR@forceminwidth . . . . .                   | <u>11820</u> | \LWR@indexnameref . . . . .            | <u>10153</u>       |
| \LWR@forcenewautoidanchor . . . . .            | <u>9754</u>  | \LWR@indexsubitem . . . . .            | <u>10125</u>       |
| \LWR@forcenewpage . . . . .                    | <u>5512</u>  | \LWR@indexsubsubitem . . . . .         | <u>10129</u>       |
| \LWR@formatted . . . . .                       | <u>1420</u>  | LWR@indisplaymathimage (boolean) . .   | <i>520</i>         |
| \LWR@formattedenv . . . . .                    | <u>1450</u>  | \LWR@infoprocessingmathjax . . . .     | <u>6506</u>        |
| \LWR@formatting . . . . .                      | <u>1419</u>  | \LWR@instertatbangcols . . . . .       | <u>7884</u>        |
| LWR@foundmrowcell (boolean) . . . . .          | <i>422</i>   | LWR@intabularmetadata (boolean) . . .  | <i>423</i>         |
| LWR@freezethisautoid (boolean) . . . .         | <i>496</i>   | \LWR@isolate . . . . .                 | <u>749</u>         |
| \LWR@futurenonospacelet . . . . .              | <u>7818</u>  | LWR@isstartingequation (boolean) . .   | <i>547</i>         |
| \LWR@FVstyle . . . . .                         | <u>56</u>    | \LWR@itemizeitem . . . . .             | <u>7721</u>        |
| \LWR@getexparray . . . . .                     | <u>5279</u>  | \LWR@label@createtag . . . . .         | <u>9465</u>        |
| \LWR@getmynexttoken . . . . .                  | <u>7828</u>  | LWR@latestautopage (counter) . . . . . | <i>498</i>         |
| LWR@glrbox (environment) . . . . .             | <u>781</u>   | \LWR@lateximage@oneimage . . . . .     | <u>11148</u>       |
| \LWR@gsavebox . . . . .                        | <u>767</u>   | \LWR@lateximage@oneimageb . . . . .    | <u>11139</u>       |
| LWR@hdashedlines (counter) . . . . .           | <i>422</i>   | LWR@lateximagedepth (counter) . . . .  | <i>546</i>         |
| \LWR@heavyrulewidth (length) . . . . .         | <i>449</i>   | \LWR@lateximagedepthref . . . . .      | <u>9440</u>        |
| \LWR@hidelatexequation . . . . .               | <u>10841</u> | LWR@lateximagenumber (counter) . . . . | <i>546</i>         |
| LWR@hlines (counter) . . . . .                 | <i>422</i>   | \LWR@lateximagenumberref . . . . .     | <u>9443</u>        |
| \LWR@HTML@caption@begin . . . . .              | <u>9828</u>  | \LWR@lateximagesfile . . . . .         | <u>1335</u>        |
| \LWR@HTML@caption@end . . . . .                | <u>9839</u>  | \LWR@latexmkcmd . . . . .              | <u>1743</u>        |
| \LWR@HTML@ref . . . . .                        | <u>9554</u>  | \LWR@latexmkdvipdfm . . . . .          | <u>1748</u>        |
| \LWR@htmlblockcomment . . . . .                | <u>5729</u>  | \LWR@latexmkvar . . . . .              | <u>1737</u>        |
| \LWR@htmlblocktag . . . . .                    | <u>5731</u>  | LWR@lightrulewidth (length) . . . . .  | <i>449</i>         |
| \LWR@HTMLcline . . . . .                       | <u>9243</u>  | \LWR@linkcatcodes . . . . .            | <u>9586</u>        |
| \LWR@htmlclosecomment . . . . .                | <u>5700</u>  | \LWR@linkmediacatcodes . . . . .       | <u>9594</u>        |
| \LWR@htmlcomment . . . . .                     | <u>5721</u>  | LWR@Lpage (counter) . . . . .          | <i>546</i>         |
| \LWR@htmldivclass . . . . .                    | <u>5768</u>  | \LWR@listitem . . . . .                | <u>7683</u>        |
| \LWR@htmldivclassend . . . . .                 | <u>5771</u>  | \LWR@loadafter . . . . .               | <u>18</u>          |
| \LWR@htmllement . . . . .                      | <u>5782</u>  | \LWR@loadbefore . . . . .              | <u>51</u>          |
| \LWR@htmllementclass . . . . .                 | <u>5754</u>  | \LWR@loadnever . . . . .               | <u>69</u>          |
| \LWR@htmllementclassend . . . . .              | <u>5760</u>  | \LWR@longtabledatacaptiontag . . . .   | <u>8966</u>        |
| \LWR@htmllementclassline . . . . .             | <u>5774</u>  | \LWR@lookforpackagename . . . . .      | <u>1208</u>        |
| \LWR@htmllementend . . . . .                   | <u>5785</u>  | \LWR@lwarpcnfversion . . . . .         | <u>1716</u>        |
| LWR@htmlfilename (counter) . . . . .           | <i>327</i>   | \LWR@LwarpEnd . . . . .                | <u>7167, 12576</u> |
| \LWR@htmlfileref . . . . .                     | <u>9437</u>  | \LWR@LwarpStart . . . . .              | <u>7099, 12576</u> |
| \LWR@HTMLhline . . . . .                       | <u>9224</u>  | \LWR@maketitlesetup . . . . .          | <u>34, 7316</u>    |
| \LWR@HTML@LatexCmd . . . . .                   | <u>1767</u>  | \LWR@mathjaxfilename . . . . .         | <u>6056</u>        |
|                                                |              | \LWR@mathjaxwarn . . . . .             | <u>12720</u>       |

|                                           |       |                                               |       |
|-------------------------------------------|-------|-----------------------------------------------|-------|
| LWR@mathmacro (boolean) . . . . .         | 323   | \LWR@patchlists . . . . .                     | 7765  |
| \LWR@maybenewtablerow . . . . .           | 8321  | \LWR@pdfencoding . . . . .                    | 659   |
| \LWR@maybeprintpendingfootnotes . . . . . | 6193  | \LWR@popclose . . . . .                       | 5243  |
| \LWR@maybetocdata . . . . .               | 10040 | \LWR@PreloadedPackage . . . . .               | 11358 |
| LWR@midrulecounter (counter) . . . . .    | 425   | LWR@prevFileDepth (counter) . . . . .         | 378   |
| LWR@midrules . . . . .                    | 448   | LWR@previousautopagelabel (counter) . . . . . | 366   |
| LWR@minipagefullwidth (boolean) . . . . . | 570   | \LWR@printatbang . . . . .                    | 8364  |
| \LWR@minipageheight (length) . . . . .    | 569   | \LWR@printbartag . . . . .                    | 8354  |
| \LWR@minipagestartpars . . . . .          | 12310 | \LWR@printcloselist . . . . .                 | 7590  |
| \LWR@minipagestoppars . . . . .           | 12313 | \LWR@PrintLatexCmd . . . . .                  | 1767  |
| LWR@minipagethispar (boolean) . . . . .   | 571   | LWR@printlength . . . . .                     | 1129  |
| \LWR@minipagewidth (length) . . . . .     | 569   | \LWR@printmccoldata . . . . .                 | 8802  |
| \LWR@multicolother . . . . .              | 8793  | \LWR@printmccoltype . . . . .                 | 8745  |
| \LWR@multicolpartext . . . . .            | 8787  | \LWR@printopenlist . . . . .                  | 7591  |
| \LWR@multicolskip . . . . .               | 8799  | \LWR@printpendingfootnotes . . . . .          | 6190  |
| \LWR@multirowborder . . . . .             | 3     | \LWR@printpendingmpfootnotes . . . . .        | 6202  |
| \LWR@mynexttoken . . . . .                | 7817  | \LWR@printpercentlength . . . . .             | 734   |
| \LWR@myshorttoc . . . . .                 | 9908  | \LWR@printthetitle . . . . .                  | 7268  |
| \LWR@nameref . . . . .                    | 9434  | \LWR@providelength . . . . .                  | 730   |
| LWR@nestspan (environment) . . . . .      | 5633  | \LWR@ProvidesPackageDrop . . . . .            | 1325  |
| \LWR@new@label . . . . .                  | 9491  | \LWR@ProvidesPackageDropA . . . . .           | 1310  |
| \LWR@newautoidanchor . . . . .            | 9761  | \LWR@ProvidesPackageDropB . . . . .           | 1319  |
| \LWR@newautopagelabel . . . . .           | 6409  | \LWR@ProvidesPackagePass . . . . .            | 1279  |
| \LWR@newhtmlfile . . . . .                | 6591  | LWR@pushclose . . . . .                       | 5216  |
| LWR@nextautoid (counter) . . . . .        | 498   | \LWR@pushhoneyclose . . . . .                 | 6726  |
| LWR@nextautopage (counter) . . . . .      | 498   | \LWR@quickfile . . . . .                      | 1332  |
| LWR@nextequation (counter) . . . . .      | 533   | \LWR@ref@ignorestar . . . . .                 | 9562  |
| \LWR@notltjloadafter . . . . .            | 38    | \LWR@remembertag . . . . .                    | 11116 |
| \LWR@notmemoirloadafter . . . . .         | 35    | \LWR@replacestrings . . . . .                 | 6417  |
| \LWR@nullfonts . . . . .                  | 10277 | \LWR@requesttoc . . . . .                     | 7160  |
| \LWR@nullifycomment . . . . .             | 1149  | \LWR@requirepackagenames . . . . .            | 1147  |
| \LWR@nullifyNoAutoSpacing . . . . .       | 9249  | \LWR@restoreorigaccents . . . . .             | 1665  |
| \LWR@nulllistfills . . . . .              | 7690  | \LWR@restoreorigformatting . . . . .          | 10229 |
| \LWR@openparagraph . . . . .              | 5903  | \LWR@restoreoriglists . . . . .               | 7793  |
| LWR@opttablecol (boolean) . . . . .       | 423   | \LWR@rowHTMLcolor . . . . .                   | 8313  |
| \LWR@orig@setBold . . . . .               | 10430 | \LWR@ruleHTMLcolor . . . . .                  | 8315  |
| \LWR@orig@unsetBold . . . . .             | 10431 | \LWR@sanitize . . . . .                       | 912   |
| \LWR@origcolspec . . . . .                | 7867  | LWR@sanitized . . . . .                       | 911   |
| LWR@origmathjax (boolean) . . . . .       | 217   | \LWR@secondoffour . . . . .                   | 763   |
| LWR@overline . . . . .                    | 12225 | \LWR@section . . . . .                        | 6743  |
| \LWR@parseaftercolumn . . . . .           | 8100  | \LWR@sectionnumber . . . . .                  | 6717  |
| \LWR@parseatcolumn . . . . .              | 8033  | \LWR@select@html@hspace . . . . .             | 12330 |
| \LWR@parsebangcolumn . . . . .            | 8062  | \LWR@select@html@nohspace . . . . .           | 12361 |
| \LWR@parsebarcolumn . . . . .             | 8112  | \LWR@select@print@hspace . . . . .            | 12364 |
| \LWR@parsebeforecolumn . . . . .          | 8088  | \LWR@setcurrentfont . . . . .                 | 10433 |
| \LWR@parsecoloncolumn . . . . .           | 8137  | \LWR@setexparray . . . . .                    | 5270  |
| \LWR@parseDcolumn . . . . .               | 8186  | \LWR@setlatestname . . . . .                  | 9420  |
| \LWR@parsedrequirepackagenames . . . . .  | 1148  | \LWR@setOSWindows . . . . .                   | 829   |
| \LWR@parsenormalcolumn . . . . .          | 8162  | \LWR@setref . . . . .                         | 9428  |
| \LWR@parsepcolumn . . . . .               | 8174  | LWR@setseqfilelabel (boolean) . . . . .       | 327   |
| \LWR@parsesemicoloncolumn . . . . .       | 8158  | LWR@setvirtualpage (environment) . . . . .    | 11626 |
| \LWR@parsestarcolumn . . . . .            | 8183  | \LWR@shellescapecmd . . . . .                 | 1717  |
| \LWR@parsetablecols . . . . .             | 8223  | \LWR@sidetoc . . . . .                        | 10014 |
| \LWR@parsewcolumn . . . . .               | 8178  | \LWR@simplifycustom . . . . .                 | 6270  |
| \LWR@patcherror . . . . .                 | 741   | \LWR@simplifyname . . . . .                   | 6259  |

|                                                    |       |                                                   |              |
|----------------------------------------------------|-------|---------------------------------------------------|--------------|
| <code>\LWR@singledollar</code>                     | 10714 | <code>\LWR@tabularendofline</code>                | 8002         |
| <code>\LWR@singledollarmeasure</code>              | 10505 | <code>\LWR@tabularfinishrow</code>                | 7953         |
| <code>LWR@skipatbang</code> (boolean)              | 422   | <code>\LWR@tabularhtmlcolumns</code>              | 9047         |
| <code>LWR@skippingmcolrowcell</code> (boolean)     | 422   | <code>\LWR@tabularleftedge</code>                 | 8394         |
| <code>LWR@skippingmrowcell</code> (boolean)        | 422   | <code>LWR@tabularmutemods</code> (boolean)        | 423          |
| <code>LWR@spandepth</code> (counter)               | 344   | <code>LWR@tabularpardepth</code> (counter)        | 423          |
| <code>\LWR@spanwarnformat</code>                   | 5617  | <code>\LWR@tdaddstyle</code>                      | 8525         |
| <code>\LWR@spanwarninvalid</code>                  | 5625  | <code>\LWR@tdendstyles</code>                     | 8531         |
| <code>\LWR@splitstarcontents</code>                | 8194  | <code>\LWR@tdstartstyles</code>                   | 8524         |
| <code>LWR@splitstarcopies</code> (counter)         | 437   | <code>\LWR@tempcolor</code>                       | 12231        |
| <code>LWR@splitstarindex</code> (counter)          | 437   | <code>\LWR@tempcolortwo</code>                    | 12231        |
| <code>LWR@starcount</code> (counter)               | 437   | <code>\LWR@tempheight</code> (length)             | 592          |
| <code>LWR@starredlongtable</code> (boolean)        | 425   | <code>\LWR@tempraise</code> (length)              | 592          |
| <code>LWR@startedrow</code> (boolean)              | 421   | <code>\LWR@tempwidth</code> (length)              | 592          |
| <code>LWR@startingequation</code> (counter)        | 547   | <code>\LWR@textcurrentcolor</code>                | 22, 12236    |
| <code>\LWR@startingequationtag</code>              | 11111 | <code>\LWR@textcurrentfont</code>                 | 12084, 12242 |
| <code>\LWR@startnewdepth</code>                    | 6730  | <code>\LWR@thirdoffour</code>                     | 763          |
| <code>\LWR@startpars</code>                        | 5973  | <code>\LWR@thisAltText</code>                     | 10419        |
| <code>\LWR@startref</code>                         | 9517  | <code>LWR@thisautoid</code> (counter)             | 496          |
| <code>\LWR@stoppars</code>                         | 5994  | <code>LWR@thisautoidWP</code> (counter)           | 496          |
| <code>\LWR@stripperperiod</code>                   | 9419  | <code>\LWR@thiscmidrulewidth</code> (length)      | 449          |
| <code>\LWR@strresult</code>                        | 7865  | <code>\LWR@thiscolspec</code>                     | 8402         |
| <code>\LWR@subaddcmidruletrim</code>               | 8538  | <code>\LWR@thisfilename</code>                    | 6253         |
| <code>\LWR@subaddtblarcellcolor</code>             | 8722  | <code>\LWR@thisnewfilename</code>                 | 6258         |
| <code>\LWR@subcdashline</code>                     | 8506  | <code>\LWR@titlingmaketitle</code>                | 84, 7378     |
| <code>\LWR@subcmidrule</code>                      | 8488  | <code>\LWR@topnavigation</code>                   | 5424         |
| <code>\LWR@subcustomizedmathjax</code>             | 6472  | <code>\LWR@traceinfo</code>                       | 1401         |
| <code>\LWR@subhtmlclass</code>                     | 5736  | <code>LWR@tracinglwrap</code> (boolean)           | 238          |
| <code>\LWR@subHTMLsanitize</code>                  | 6436  | <code>LWR@trimlrules</code>                       | 448          |
| <code>\LWR@subhyperref</code>                      | 9602  | <code>LWR@trimrrules</code>                       | 449          |
| <code>\LWR@subhyperrefclass</code>                 | 9616  | <code>\LWR@unknownengine</code>                   | 1729         |
| <code>\LWR@subhyperreftext</code>                  | 9611  | <code>LWR@unknownmathsize</code> (boolean)        | 523          |
| <code>\LWR@subinlineimage</code>                   | 9665  | <code>LWR@usedmultirow</code> (boolean)           | 422          |
| <code>\LWR@subnewref</code>                        | 9548  | <code>LWR@validtablecol</code> (boolean)          | 423          |
| <code>\LWR@subsingledollar</code>                  | 10630 | <code>LWR@verbtags</code> (boolean)               | 408          |
| <code>\LWR@subsingledollarsvg</code>               | 10551 | <code>LWR@virtualpagedepth</code> (counter)       | 570          |
| <code>\LWR@subtableofcontents</code>               | 9922  | <code>\LWR@vspace</code>                          | 12368        |
| <code>\LWR@subtabularhtmlcolumns</code>            | 9037  | <code>LWR@warnbaselinemarker</code> (boolean)     | 523          |
| <code>\LWR@syncmathjax</code>                      | 10817 | <code>LWR@warnedcustomizemathjax</code> (boolean) | 369          |
| <code>\LWR@syncnotenames</code>                    | 10931 | <code>\LWR@WPcell</code>                          | 8597         |
| <code>\LWR@syncnotenumbers</code>                  | 10925 | <code>\LWR@write@lwarplabel</code>                | 9446         |
| <code>\LWR@synconenotename</code>                  | 10926 | <code>\LWR@writeconf</code>                       | 1869         |
| <code>\LWR@synconenotenum</code>                   | 10920 | <code>\LWR@xcolorrowHTMLcolor</code>              | 8311         |
| <code>LWR@tablecolspec</code>                      | 423   | <code>LWR@xfakebold</code> (boolean)              | 520          |
| <code>LWR@tablecolspecindex</code> (counter)       | 424   | <code>LWR@createLwarpmk</code> (environment)      | 1001         |
| <code>LWR@tablecolspecwidth</code> (counter)       | 424   | <code>\LWR@opquote</code>                         | 824          |
| <code>\LWR@tabledatacolumntag</code>               | 9126  | <code>\LWR@opseq</code>                           | 825          |
| <code>\LWR@tabledatasinglecolumntag</code>         | 8403  | <code>\LWR@PrintStack</code>                      | 5470         |
| <code>LWR@tableLaTeXcolindex</code> (counter)      | 424   | <code>\LWR@setnextfloat</code>                    | 9812         |
| <code>LWR@tableparcell</code> (boolean)            | 422   | <code>lyluatex</code> (package)                   | 851          |
| <code>LWR@tabletotalLaTeXcols</code> (counter)     | 424   | <code>\LyX</code>                                 | 12572        |
| <code>LWR@tabletotalLaTeXcolsnext</code> (counter) | 424   |                                                   |              |
| <code>\LWR@tabular@warpprintonly</code>            | 9245  |                                                   |              |
| <code>LWR@tabularcelladded</code> (boolean)        | 421   | <b>M</b>                                          |              |
| <code>LWR@tabularDepth</code> (counter)            | 423   | <code>Mac OS</code> (program)                     | 112, 214     |
|                                                    |       | <code>\macrotoctname</code>                       | 793          |
|                                                    |       | <code>Madcap</code> (program)                     | 68           |



nowidow (package) ..... 916  
 ntheorem (package) ..... 147, 916  
 \numberline ..... 10035  
 numindex (option) [tocbibind] ... 143, 1067

**O**

octave (package) ..... 928  
 OpenOffice (program) ..... 68  
 option:  
 --shell-escape ..... 95  
 [lwarpmk]:  
 htmlglossary ..... 130, 785  
 printglossary ..... 130, 785  
 [tocbibind]:  
 numindex ..... 143, 1067  
 [tocloft]:  
 titles ..... 128  
 BaseJobname ..... 102, 218  
 dvipdfm ..... 98, 220  
 dvipdfmx ..... 98, 221  
 dvips ..... 98, 220  
 GlossaryCmd ..... 101, 130, 220, 785  
 HomeHTMLFilename ..... 98, 103, 219  
 HTMLFilename ..... 98, 103, 219  
 HTMLIndexCmd ..... 100, 220  
 HTMLLatexCmd ..... 98, 168, 220  
 ImagesDirectory ..... 98, 218  
 ImagesName ..... 98, 218  
 latexmk ..... 98, 103, 220  
 LatexmkIndexCmd ..... 101, 220  
 lwarpmk ..... 101, 219, 301  
 makeindex ..... 98, 103, 220  
 makeindexStyle ..... 100, 140, 218  
 mathjax ..... 98, 103, 218  
 mathsvg ..... 98, 103, 217  
 OSWindows ..... 101, 112, 214, 219  
 pdftotextEnc ..... 101, 219  
 PrintIndexCmd ..... 100, 220  
 PrintLatexCmd ..... 98, 168, 219  
 warpHTML ..... 101, 217  
 warpprint ..... 101, 217  
 xindy ..... 100, 103, 220  
 xindyCodepage ..... 100, 219  
 xindyLanguage ..... 100, 218  
 xindyStyle ..... 100, 141, 218  
 \OSPathSymbol ..... 828  
 OSWindows (option) ... 101, 112, 214, 219  
 overpic (package) ..... 154, 930

**P**

package:  
 2in1 ..... 608  
 2up ..... 608  
 a4 ..... 608  
 a4wide ..... 609  
 a5comb ..... 609

abstract ..... 128, 609  
 academicons ..... 611  
 accessibility ..... 612  
 accsupp ..... 613  
 acro ..... 613  
 acronym ..... 616  
 addlines ..... 618  
 adjmulticol ..... 617  
 afterpage ..... 612, 618  
 algorithm2e ..... 618  
 algorithmicx ..... 160, 622  
 alltt ..... 623  
 amsmath ..... 624  
 amsthm ..... 627  
 anonchap ..... 631  
 anysize ..... 632  
 appendix ..... 128, 632  
 ar ..... 633  
 arabicfront ..... 634  
 array ..... 634  
 arydashln ..... 635  
 asymptote ..... 154, 637  
 atbegshi ..... 638  
 attachfile ..... 638  
 attachfile2 ..... 639  
 authblk ..... 128, 641  
 autobreak ..... 642  
 autonum ..... 643  
 awesomebox ..... 644  
 axessibility ..... 645  
 axodraw2 ..... 646  
 babel ..... 165  
 backnaur ..... 646  
 backref ..... 646  
 balance ..... 647  
 bbding ..... 647  
 biblatex ..... 652  
 bibunits ..... 653  
 bigdelim ..... 160, 654  
 bigfoot ..... 655  
 bigstrut ..... 656  
 bitpattern ..... 656  
 blowup ..... 657  
 bm ..... 657  
 booklet ..... 657  
 bookmark ..... 658  
 booktabs ..... 658  
 bophook ..... 660  
 bounddvi ..... 661  
 boxedminipage ..... 661  
 boxedminipage2e ..... 661  
 braket ..... 662  
 breakurl ..... 662  
 breqn ..... 663  
 bsheaders ..... 664

|                |               |                 |          |
|----------------|---------------|-----------------|----------|
| bxpapersize    | 664           | ebook           | 719      |
| bytefield      | 665           | econometrics    | 719      |
| calc           | 227           | ed              | 723      |
| cancel         | 665           | ellipsis        | 724      |
| canoniclayout  | 666           | embrac          | 724      |
| capt-of        | 501           | emptypage       | 725      |
| caption        | 160, 501, 666 | endfloat        | 725      |
| cases          | 669           | endheads        | 726      |
| centernot      | 670           | endnotes        | 129, 726 |
| changebar      | 670           | engtlc          | 727      |
| changelayout   | 671           | enumerate       | 732      |
| changepage     | 671           | enumitem        | 732      |
| changes        | 672           | environ         | 229      |
| chappg         | 674           | epigraph        | 733      |
| chapterbib     | 675           | epsfig          | 734      |
| chemfig        | 675           | epstopdf        | 153, 734 |
| chemformula    | 677           | epstopdf-base   | 735      |
| chemgreek      | 682           | eqlist          | 736      |
| chemmacros     | 683           | eqparbox        | 736      |
| chemnum        | 701           | errata          | 737      |
| chkfloat       | 702           | eso-pic         | 738      |
| chnpage        | 702           | etoc            | 739      |
| cite           | 702           | etoolbox        | 195      |
| CJK            | 703           | eurosym         | 741      |
| CJKutf8        | 703           | everyhook       | 228      |
| cleveref       | 124, 565      | everypage       | 742      |
| clrdblpg       | 703           | everyshi        | 742      |
| cm-super       | 95            | expl3           | 227      |
| cmap           | 96            | extarrows       | 742      |
| cmdtrack       | 703           | extramarks      | 743      |
| colonequals    | 704           | fancybox        | 121, 743 |
| color          | 152, 704      | fancyhdr        | 749      |
| colortbl       | 159, 705      | fancyref        | 749      |
| comment        | 223           | fancytabs       | 750      |
| continue       | 706           | fancyvrb        | 751      |
| copyrightbox   | 707           | fewerfloatpages | 757      |
| crop           | 707           | figcaps         | 757      |
| ctable         | 708           | figsize         | 758      |
| cuted          | 710           | filecontents    | 228      |
| cutwin         | 711           | fitbox          | 758      |
| dblfloatfix    | 711           | fix2col         | 759      |
| dblfnote       | 712           | fixme           | 166, 759 |
| dcolumn        | 712           | fixmetodonotes  | 760      |
| decimal        | 712           | flafter         | 761      |
| dejavu         | 95            | flippdf         | 761      |
| diagbox        | 713           | float           | 160, 761 |
| dingbat        | 714           | floatflt        | 763      |
| ditaa          | 171           | floatpag        | 764      |
| DotArrow       | 715           | floatrow        | 161, 764 |
| dotlessi       | 716           | fltrace         | 769      |
| dprogress      | 716           | flushend        | 770      |
| draftcopy      | 716           | fnbreak         | 770      |
| draftfigure    | 717           | fncychap        | 770      |
| draftwatermark | 717           | fnlineno        | 771      |
| easy-todo      | 718           | fnpara          | 771      |

|                 |               |                         |                      |
|-----------------|---------------|-------------------------|----------------------|
| fnpos           | 771           | intopdf                 | 819                  |
| fontawesome     | 772           | karnaugh-map            | 819                  |
| fontawesome5    | 773           | keyfloat                | 162, 822             |
| fontaxes        | 774           | kotex                   | 167                  |
| fontenc         | 96, 774       | kvoptions               | 217                  |
| fontspec        | 96, 224       | layaureo                | 828                  |
| footmisc        | 775           | layout                  | 828                  |
| footnote        | 776           | layouts                 | 828                  |
| footnotebackref | 776           | leading                 | 831                  |
| footnotehyper   | 777           | leftidx                 | 831                  |
| footnoterange   | 777           | letltxmacro             | 195                  |
| footnpag        | 777           | letterspace             | 832                  |
| foreign         | 777           | lettrine                | 832                  |
| forest          | 778           | lineno                  | 833                  |
| fouridx         | 778           | lips                    | 835                  |
| framed          | 779           | listings                | 836                  |
| ftcap           | 781           | listliketab             | 840                  |
| ftnright        | 781           | lltjext                 | 840                  |
| fullminipage    | 781           | lmodern                 | 95, 96               |
| fullpage        | 782           | longtable               | 158, 841             |
| fullwidth       | 782           | lscope                  | 844                  |
| fwlw            | 782           | ltablex                 | 844                  |
| gensymb         | 783           | ltxcaption              | 845                  |
| gentombow       | 783           | ltxgrid                 | 845                  |
| geometry        | 225, 783      | ltxtable                | 845                  |
| getttitlestring | 227           | lua-check-hyphen        | 846                  |
| ghsystem        | 784           | lua-visual-debug        | 846                  |
| gloss           | 129, 785      | luacolor                | 846                  |
| glossaries      | 130, 785      | luamplib                | 846                  |
| gmeometric      | 787           | luatexko                | 847                  |
| graphics        | 150, 788      | luatodonotes            | 166, 849             |
| graphicx        | 150, 800      | lwarp                   | 98                   |
| grffile         | 152, 800      | lwarp-common-multimedia | 1156                 |
| grid            | 801           | lwarp-patch-komascript  | 1125                 |
| grid-system     | 801           | lwarp-patch-memoir      | 1127                 |
| gridset         | 801           | lyluatex                | 851                  |
| hang            | 802           | magaz                   | 853                  |
| hanging         | 803           | makeidx                 | 142, 853, 1066, 1067 |
| hhline          | 804           | manyfoot                | 854                  |
| hypbmsec        | 805           | marginal                | 856                  |
| hypcap          | 805           | marginfit               | 856                  |
| hypdestopt      | 805           | marginfix               | 856                  |
| hypernat        | 805           | marginnote              | 857                  |
| hyperref        | 125, 489, 806 | marvosym                | 857                  |
| hyperxmp        | 811           | mathcomp                | 858                  |
| hyphenat        | 811           | mathdots                | 858                  |
| idxlayout       | 812           | mathfixs                | 859                  |
| ifoddpag        | 812           | mathtools               | 148, 859             |
| ifplatform      | 195           | mcaption                | 864                  |
| imakeidx        | 813           | mdframed                | 122, 864             |
| indentfirst     | 350           | media9                  | 154, 873             |
| index           | 817           | memhfixc                | 876                  |
| inputenc        | 96            | metalogo                | 876                  |
| inputenx        | 96            | metalogoX               | 876                  |
| inputtrc        | 818           | mhchem                  | 877                  |

|                |          |                  |          |
|----------------|----------|------------------|----------|
| microtype      | 224, 880 | pdfcol           | 938      |
| midfloat       | 881      | pdfcolfoot       | 938      |
| midpage        | 881      | pdfcolmk         | 938      |
| minibox        | 881      | pdfcolparallel   | 939      |
| minitoc        | 882      | pdfcolparcolumns | 939      |
| mismath        | 882      | pdfcomment       | 940      |
| mmap           | 96       | pdfcrypt         | 940      |
| morefloats     | 886      | pdfscape         | 941      |
| moreverb       | 886      | pdfmarginpar     | 941      |
| movie15        | 154, 887 | pdfpages         | 941      |
| mparhack       | 889      | pdfprivacy       | 944      |
| multicap       | 889      | pdfrender        | 944      |
| multicol       | 889      | pdfsync          | 944      |
| multicolrule   | 890      | pdftricks        | 153, 944 |
| multimedia     | 154, 891 | pdfx             | 945      |
| multiobjective | 892      | perltex          | 170      |
| multirow       | 893      | perpage          | 945      |
| multitoc       | 896      | pfnote           | 947      |
| musicography   | 897      | phfqit           | 947      |
| nameauth       | 900      | physics          | 149, 947 |
| nameref        | 901      | physunits        | 953      |
| natbib         | 901      | pifont           | 955      |
| nccfancyhdr    | 902      | placeins         | 956      |
| nccfoots       | 903      | plarydshln       | 956      |
| nccmath        | 903      | plext            | 956      |
| needspace      | 905      | plextarydshln    | 957      |
| newclude       | 165      | plextcolortbl    | 957      |
| newfloat       | 229      | polyglossia      | 165      |
| newtxmath      | 150      | prelim2e         | 958      |
| newunicodechar | 96       | prettyref        | 958      |
| nextpage       | 905      | preview          | 958      |
| nfssect-cfr    | 905      | printlen         | 229      |
| nicefrac       | 149, 912 | psfrag           | 153, 959 |
| niceframe      | 913      | psfragx          | 959      |
| noitcrul       | 913      | pst-eps          | 960      |
| nolbreaks      | 913      | pstool           | 153, 960 |
| nomencl        | 131, 914 | pstricks         | 153, 961 |
| nonfloat       | 914      | pxatbegshi       | 961      |
| nonumonpart    | 914      | pxeveryshi       | 961      |
| nopageno       | 915      | pxftnright       | 962      |
| notes          | 915      | pxjahyper        | 962      |
| notespages     | 915      | pythontex        | 170      |
| nowidow        | 916      | quotchap         | 962      |
| ntheorem       | 147, 916 | quoting          | 963      |
| octave         | 928      | ragged2e         | 964      |
| overpic        | 154, 930 | realscripts      | 964      |
| pagegrid       | 930      | refcheck         | 968      |
| pagenote       | 129, 931 | refcount         | 229      |
| pagesel        | 931      | register         | 968      |
| paralist       | 931      | resize           | 118, 969 |
| parallel       | 932      | repeatindex      | 970      |
| parcolumns     | 934      | resizegather     | 971      |
| parnotes       | 936      | returntogrid     | 971      |
| parskip        | 937      | rmathbr          | 972      |
| pbox           | 937      | rmpage           | 972      |

|                     |               |                 |                      |
|---------------------|---------------|-----------------|----------------------|
| romanbar            | 972           | tablefootnote   | 1036                 |
| romanbarpagenumber  | 973           | tabls           | 1036                 |
| rotating            | 973           | tabularx        | 1036                 |
| rotfloat            | 973           | tabulary        | 1037                 |
| rterface            | 170           | tagpdf          | 1037                 |
| rviewport           | 974           | tascmac         | 1039                 |
| sagetex             | 170           | textarea        | 1041                 |
| savetrees           | 974           | textcomp        | 96, 118, 1041        |
| scaleft             | 975           | textfit         | 1045                 |
| schemata            | 975           | textpos         | 1046                 |
| scrextend           | 975           | theorem         | 1046                 |
| scrhack             | 979           | thinsp          | 1050                 |
| scrlayer            | 980           | threadcol       | 1050                 |
| scrlayer-notecolumn | 981           | threeparttable  | 1051                 |
| scrlayer-scrpage    | 982           | threeparttablex | 159, 1051            |
| scrpage2            | 983           | thumb           | 1052                 |
| section             | 984           | thumbs          | 1053                 |
| sectionbreak        | 985           | tikz            | 152, 1053            |
| sectsty             | 985           | titleps         | 1055                 |
| semantic-markup     | 986           | titleref        | 1057                 |
| setspace            | 987           | titlesec        | 1058                 |
| shadow              | 988           | titletoc        | 1060                 |
| shapepar            | 988           | titling         | 128, 1061            |
| showidx             | 988           | tocbasic        | 1066                 |
| showkeys            | 989           | tocbibind       | 142, 143, 1066, 1067 |
| showtags            | 989           | tocdata         | 1068                 |
| sidecap             | 989           | tocenter        | 1070                 |
| sidenotes           | 990           | tocloft         | 128, 143, 631, 1070  |
| SIunits             | 992           | tocstyle        | 1076                 |
| siunitx             | 148, 558, 999 | todo            | 1076                 |
| slantsc             | 1010          | todonotes       | 166, 1077            |
| slashed             | 1010          | topcapt         | 1079                 |
| soul                | 1011          | tram            | 1079                 |
| soulpos             | 1012          | transparent     | 1080                 |
| soulutf8            | 1013          | trimclip        | 1080                 |
| splitidx            | 1013          | trivfloat       | 160, 1081            |
| srcltx              | 1015          | truncate        | 1082                 |
| srctex              | 1015          | turnthepage     | 1082                 |
| stabular            | 1015          | twoup           | 1082                 |
| stackengine         | 1016          | typearea        | 1083                 |
| stackrel            | 1018          | typicons        | 1083                 |
| stax2               | 1018          | ulem            | 1084                 |
| statmath            | 1022          | umoline         | 1085                 |
| steinmetz           | 1025          | underscore      | 1086                 |
| stfloats            | 1025          | unicode-math    | 1086                 |
| struktex            | 1025          | units           | 149, 1088            |
| subcaption          | 160, 1026     | unitsdef        | 1089                 |
| subfig              | 161, 1027     | upref           | 1089                 |
| subfigure           | 1031          | url             | 125, 1090            |
| subsupscripts       | 1032          | uspace          | 1090                 |
| supertabular        | 159, 1033     | varioref        | 124                  |
| svg                 | 1034          | varwidth        | 230                  |
| sympytex            | 170           | verbatim        | 229                  |
| syntonly            | 1035          | verse           | 164, 1090, 1091      |
| tabfigures          | 1035          | versonotes      | 1092                 |

|                            |                |                                     |                 |
|----------------------------|----------------|-------------------------------------|-----------------|
| vertbars                   | 1092           | pbox (package)                      | 937             |
| vmargin                    | 1093           | pdfcol (package)                    | 938             |
| vowel                      | 1093           | pdfcolfoot (package)                | 938             |
| vpe                        | 1094           | pdfcolmk (package)                  | 938             |
| vwcol                      | 1094           | pdfcolparallel (package)            | 939             |
| wallpaper                  | 1096           | pdfcolparcolumns (package)          | 939             |
| watermark                  | 1097           | pdfcomment (package)                | 940             |
| widetable                  | 1097           | pdfcrop (program) [requirement]     | 71              |
| widows-and-orphans         | 1097           | pdfcrypt (package)                  | 940             |
| witharrows                 | 1098           | pdfLaTeX (program) [requirement]    | 71              |
| wrapfig                    | 1099           | pdfscape (package)                  | 941             |
| xbmkcs                     | 1100           | pdfmarginpar (package)              | 941             |
| xcolor                     | 152, 561, 1101 | pdfpages (package)                  | 941             |
| xexchangebar               | 1111           | pdfprivacy (package)                | 944             |
| xellipsis                  | 1111           | pdfrender (package)                 | 944             |
| xetexko-vertical           | 1112           | pdfseparate (program) [requirement] | 71, 76          |
| xfakebold                  | 1112           | pdfsync (package)                   | 944             |
| xfrac                      | 1113           | pdftocairo (program)                | 151, 560        |
| xifthen                    | 229            | pdftocairo (program) [requirement]  | 71, 76          |
| xltabular                  | 1115           | pdftotext (program) [requirement]   | 71, 76          |
| xltxtra                    | 1116           | pdftotextEnc (option)               | 101, 219        |
| xmpincl                    | 1117           | pdftricks (package)                 | 153, 944        |
| xparse                     | 167, 227       | pdfx (package)                      | 945             |
| xpatch                     | 195            | perl (program) [requirement]        | 76              |
| xpiano                     | 1117           | perltex (package)                   | 170             |
| xpinyin                    | 1117           | perpage (package)                   | 945             |
| xr                         | 1119           | pfnote (package)                    | 947             |
| xr-hyper                   | 1119           | \phantomsection                     | 12437           |
| xstring                    | 229            | phfqit (package)                    | 947             |
| xtab                       | 159, 1120      | physics (package)                   | 149, 947        |
| xunicode                   | 1121           | physunits (package)                 | 953             |
| xurl                       | 1122           | picture (environment)               | 568, 11617      |
| xy                         | 1123           | pifont (package)                    | 955             |
| zhlineskip                 | 1124           | placeins (package)                  | 956             |
| zwpagelayout               | 1124           | plarydshln (package)                | 956             |
| \PackageDiagramAltText     | 109, 10423     | Plastex (program)                   | 67              |
| \pagebreak                 | 12373          | plext (package)                     | 956             |
| \pagecolor                 | 75             | plextarydshln (package)             | 957             |
| pagegrid (package)         | 930            | plextcolortbl (package)             | 957             |
| pagenote (package)         | 129, 931       | \PN@parnotes@auto                   | 5902            |
| \pagenumbering             | 5526           | polyglossia (package)               | 165             |
| \pageref                   | 9566           | \postbookname                       | 6918            |
| \pagerefPageFor            | 9565           | \postchaptername                    | 6922            |
| pagesel (package)          | 931            | \postpartname                       | 6920            |
| \pagestyle                 | 5518           | \postsectionname                    | 6924            |
| Pandoc (program)           | 68             | \prebookname                        | 6918            |
| \paragraph                 | 6971           | \prechaptername                     | 6922            |
| paralist (package)         | 931            | prelim2e (package)                  | 958             |
| parallel (package)         | 932            | \prepartname                        | 6920            |
| \parbox                    | 11744          | \presectionname                     | 6924            |
| parcolumns (package)       | 934            | prettyref (package)                 | 958             |
| parnotes (package)         | 936            | preview (package)                   | 958             |
| \parsemulticolumnalignment | 8838           | \printauthor                        | 396, 7276, 7295 |
| parskip (package)          | 937            | \printdate                          | 396, 7287, 7297 |
| \part                      | 6938           | printglossary (option) [lwarpmk]    | 130, 785        |

|                                           |                        |                                               |                   |
|-------------------------------------------|------------------------|-----------------------------------------------|-------------------|
| <code>\printindex</code> .....            | <u>2</u>               | <code>project.css</code> (file) .....         | <u>111</u>        |
| <code>PrintIndexCmd</code> (option) ..... | <u>100, 220</u>        | <code>project.lwarpmkconf</code> (file) ..... | <u>257</u>        |
| <code>PrintLatexCmd</code> (option) ..... | <u>98, 168, 219</u>    | <code>psfrag</code> (package) .....           | <u>153, 959</u>   |
| <code>printlen</code> (package) .....     | <u>229</u>             | <code>psfragx</code> (package) .....          | <u>959</u>        |
| <code>\printthanks</code> .....           | <u>396, 7253</u>       | <code>pst-eps</code> (package) .....          | <u>960</u>        |
| <code>\printtitle</code> .....            | <u>396, 7260, 7294</u> | <code>pstool</code> (package) .....           | <u>153, 960</u>   |
| program:                                  |                        | <code>pstricks</code> (package) .....         | <u>153, 961</u>   |
| [requirement]:                            |                        | <code>pxatbegshi</code> (package) .....       | <u>961</u>        |
| LuaLaTeX .....                            | <u>71</u>              | <code>pxeveryshi</code> (package) .....       | <u>961</u>        |
| MathJax .....                             | <u>71</u>              | <code>pxftnright</code> (package) .....       | <u>962</u>        |
| pdfcrop .....                             | <u>71</u>              | <code>pxjahyper</code> (package) .....        | <u>962</u>        |
| pdfLaTeX .....                            | <u>71</u>              | <code>pythontex</code> (package) .....        | <u>170</u>        |
| pdfseparate .....                         | <u>71, 76</u>          |                                               |                   |
| pdftocairo .....                          | <u>71, 76</u>          | <b>Q</b>                                      |                   |
| pdftotext .....                           | <u>71, 76</u>          | <code>\lquad</code> .....                     | <u>592, 12321</u> |
| perl .....                                | <u>76</u>              | <code>\quad</code> .....                      | <u>592, 12316</u> |
| XeLaTeX .....                             | <u>71</u>              | <code>quotation</code> (environment) .....    | <u>7460</u>       |
| Adobe .....                               | <u>68</u>              | <code>quotchap</code> (package) .....         | <u>962</u>        |
| AsciiDoc .....                            | <u>68</u>              | <code>quote</code> (environment) .....        | <u>7452</u>       |
| AsciiDoctor .....                         | <u>68</u>              | <code>quoting</code> (package) .....          | <u>963</u>        |
| Asciidoctor-LaTeX .....                   | <u>68</u>              |                                               |                   |
| epstopdf .....                            | <u>151, 560</u>        | <b>R</b>                                      |                   |
| Flare .....                               | <u>68</u>              | <code>ragged2e</code> (package) .....         | <u>964</u>        |
| FrameMaker .....                          | <u>68</u>              | <code>\raggedbottom</code> .....              | <u>5522</u>       |
| GELLMU .....                              | <u>67</u>              | <code>\raggedleft</code> .....                | <u>11341</u>      |
| GladTeX .....                             | <u>67</u>              | <code>\raggedright</code> .....               | <u>11347</u>      |
| Hevea .....                               | <u>67</u>              | <code>\raisebox</code> .....                  | <u>11929</u>      |
| htlatex .....                             | <u>67</u>              | <code>realscripts</code> (package) .....      | <u>964</u>        |
| InDesign .....                            | <u>68</u>              | <code>\ref</code> .....                       | <u>9554</u>       |
| LaTeX2HTML .....                          | <u>67</u>              | <code>refcheck</code> (package) .....         | <u>968</u>        |
| latexmk .....                             | <u>169</u>             | <code>refcount</code> (package) .....         | <u>229</u>        |
| LaTeXML .....                             | <u>67</u>              | <code>\reflectbox</code> .....                | <u>389</u>        |
| LibreOffice .....                         | <u>68</u>              | <code>register</code> (package) .....         | <u>968</u>        |
| Linux .....                               | <u>112, 214</u>        | <code>resize</code> (package) .....           | <u>118, 969</u>   |
| lwarpmk .....                             | <u>182, 301</u>        | <code>repeatindex</code> (package) .....      | <u>970</u>        |
| lwarpmk epstopdf .....                    | <u>151, 560</u>        | [requirement]:                                |                   |
| lwarpmk pdftosvg .....                    | <u>151, 560</u>        | LuaLaTeX (program) .....                      | <u>71</u>         |
| Mac OS .....                              | <u>112, 214</u>        | MathJax (program) .....                       | <u>71</u>         |
| Madcap .....                              | <u>68</u>              | pdfcrop (program) .....                       | <u>71</u>         |
| make .....                                | <u>171</u>             | pdfLaTeX (program) .....                      | <u>71</u>         |
| makeindex .....                           | <u>140</u>             | pdfseparate (program) .....                   | <u>71, 76</u>     |
| MathJax .....                             | <u>144, 146</u>        | pdftocairo (program) .....                    | <u>71, 76</u>     |
| MS-Windows .....                          | <u>112, 214</u>        | pdftotext (program) .....                     | <u>71, 76</u>     |
| OpenOffice .....                          | <u>68</u>              | perl (program) .....                          | <u>76</u>         |
| Pandoc .....                              | <u>68</u>              | XeLaTeX (program) .....                       | <u>71</u>         |
| pdftocairo .....                          | <u>151, 560</u>        | <code>\RequirePackage</code> .....            | <u>1241</u>       |
| Plastex .....                             | <u>67</u>              | <code>\resizebox</code> .....                 | <u>398</u>        |
| TeX2page .....                            | <u>67</u>              | <code>resizegather</code> (package) .....     | <u>971</u>        |
| TeX4ht .....                              | <u>67</u>              | <code>\ResumeTabular</code> .....             | <u>9115</u>       |
| TeXMaths .....                            | <u>176</u>             | <code>returntogrid</code> (package) .....     | <u>971</u>        |
| TtH .....                                 | <u>67</u>              | <code>\reversemarginpar</code> .....          | <u>6239</u>       |
| Unix .....                                | <u>112, 214</u>        | <code>\rightline</code> .....                 | <u>11355</u>      |
| Windows .....                             | <u>112, 214</u>        | <code>rmathbr</code> (package) .....          | <u>972</u>        |
| Word .....                                | <u>68</u>              | <code>\rmfamily</code> .....                  | <u>12135</u>      |
| xindy .....                               | <u>141</u>             | <code>rmpage</code> (package) .....           | <u>972</u>        |
|                                           |                        | <code>romanbar</code> (package) .....         | <u>972</u>        |

|                                         |               |                                   |               |                              |      |
|-----------------------------------------|---------------|-----------------------------------|---------------|------------------------------|------|
| romanbarpagenumber (package) . . . . .  | 973           | srcltx (package) . . . . .        | 1015          |                              |      |
| \rotatebox . . . . .                    | 347           | srctex (package) . . . . .        | 1015          |                              |      |
| rotating (package) . . . . .            | 973           | \sscshape . . . . .               | 12187         |                              |      |
| rotfloat (package) . . . . .            | 973           | stabular (package) . . . . .      | 1015          |                              |      |
| \rowcolor . . . . .                     | 8316          | stackengine (package) . . . . .   | 1016          |                              |      |
| \rownum . . . . .                       | 8308          | stackrel (package) . . . . .      | 1018          |                              |      |
| rterface (package) . . . . .            | 170           | \StartDefiningMath . . . . .      | 5294          |                              |      |
| \rule . . . . .                         | 12380         | \StartDefiningTabulars . . . . .  | 5284          |                              |      |
| rviewport (package) . . . . .           | 974           | statex2 (package) . . . . .       | 1018          |                              |      |
| <b>S</b>                                |               |                                   |               | statmath (package) . . . . . | 1022 |
| sagetex (package) . . . . .             | 170           | steinmetz (package) . . . . .     | 1025          |                              |      |
| sample_project.css (file) . . . . .     | 111, 297      | stfloats (package) . . . . .      | 1025          |                              |      |
| savetrees (package) . . . . .           | 974           | \StopDefiningMath . . . . .       | 5298          |                              |      |
| \sb . . . . .                           | 12209         | \StopDefiningTabulars . . . . .   | 5288          |                              |      |
| \scalebox . . . . .                     | 370           | struktex (package) . . . . .      | 1025          |                              |      |
| scalegnt (package) . . . . .            | 975           | subcaption (package) . . . . .    | 160, 1026     |                              |      |
| schemata (package) . . . . .            | 975           | subfig (package) . . . . .        | 161, 1027     |                              |      |
| scrextend (package) . . . . .           | 975           | subfigure (package) . . . . .     | 1031          |                              |      |
| scrhack (package) . . . . .             | 979           | \subparagraph . . . . .           | 6974          |                              |      |
| scrlayer (package) . . . . .            | 980           | \subsection . . . . .             | 6965          |                              |      |
| scrlayer-notecolumn (package) . . . . . | 981           | \subsubsection . . . . .          | 6968          |                              |      |
| scrlayer-scrpage (package) . . . . .    | 982           | subsupscripts (package) . . . . . | 1032          |                              |      |
| scrpage2 (package) . . . . .            | 983           | supertabular (package) . . . . .  | 159, 1033     |                              |      |
| \scshape . . . . .                      | 12160         | svg (package) . . . . .           | 1034          |                              |      |
| \section . . . . .                      | 6962          | sympytex (package) . . . . .      | 170           |                              |      |
| section (package) . . . . .             | 984           | syntonly (package) . . . . .      | 1035          |                              |      |
| sectionbreak (package) . . . . .        | 985           | <b>T</b>                          |               |                              |      |
| sectsty (package) . . . . .             | 985           | tabbing (environment) . . . . .   | 7550          |                              |      |
| semantic-markup (package) . . . . .     | 986           | tabfigures (package) . . . . .    | 1035          |                              |      |
| \SetHTMLFileNumber . . . . .            | 5336          | tablefootnote (package) . . . . . | 1036          |                              |      |
| setspace (package) . . . . .            | 987           | \tableofcontents . . . . .        | 108, 9941     |                              |      |
| \sffamily . . . . .                     | 12140         | tbls (package) . . . . .          | 1036          |                              |      |
| \sfrac . . . . .                        | 1113          | tabular (environment) . . . . .   | 9262          |                              |      |
| shadow (package) . . . . .              | 988           | \TabularMacro . . . . .           | 9113          |                              |      |
| shapepar (package) . . . . .            | 988           | tabularx (package) . . . . .      | 1036          |                              |      |
| showidx (package) . . . . .             | 988           | tabulary (package) . . . . .      | 1037          |                              |      |
| showkeys (package) . . . . .            | 989           | tagpdf (package) . . . . .        | 1037          |                              |      |
| showtags (package) . . . . .            | 989           | tascmac (package) . . . . .       | 1039          |                              |      |
| sidecap (package) . . . . .             | 989           | \TeX . . . . .                    | 12486         |                              |      |
| sidenotes (package) . . . . .           | 990           | TeX2page (program) . . . . .      | 67            |                              |      |
| SideTOCDepth (counter) . . . . .        | 105, 505      | TeX4ht (program) . . . . .        | 67            |                              |      |
| \sitetocname . . . . .                  | 105, 10011    | TeXMaths (program) . . . . .      | 176           |                              |      |
| \simplechapterdelim . . . . .           | 6737          | textarea (package) . . . . .      | 1041          |                              |      |
| \sishape . . . . .                      | 12173         | \textbf . . . . .                 | 11952         |                              |      |
| SIunits (package) . . . . .             | 992           | \textcolor . . . . .              | 63            |                              |      |
| siunitx (package) . . . . .             | 148, 558, 999 | textcomp (package) . . . . .      | 96, 118, 1041 |                              |      |
| slantsc (package) . . . . .             | 1010          | \texteb . . . . .                 | 11960         |                              |      |
| slashed (package) . . . . .             | 1010          | textfit (package) . . . . .       | 1045          |                              |      |
| \sloppy . . . . .                       | 5524          | \textgreater . . . . .            | 5329          |                              |      |
| \slshape . . . . .                      | 12182         | \textit . . . . .                 | 12008         |                              |      |
| soul (package) . . . . .                | 1011          | \textless . . . . .               | 5327          |                              |      |
| soulpos (package) . . . . .             | 1012          | \textlg . . . . .                 | 11968         |                              |      |
| soulutf8 (package) . . . . .            | 1013          | \textmd . . . . .                 | 11944         |                              |      |
| \sp . . . . .                           | 12208         | \textnormal . . . . .             | 12059         |                              |      |
| splitlex (package) . . . . .            | 1013          | textpos (package) . . . . .       | 1046          |                              |      |





# 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.

| Symbols                                |          | CSS                            |          |
|----------------------------------------|----------|--------------------------------|----------|
| <code>\,</code> .....                  | 117      | <code>class</code> .....       | 111      |
| <code>~</code> .....                   | 117      | file selection .....           | 110      |
| <b>A</b>                               |          | <code>lwarp.css</code> .....   | 111      |
| accents                                |          | per HTML page .....            | 110      |
| in section & file names .....          | 376      | project-specific changes ..... | 111      |
| accessibility .....                    | 93       | <code>span</code> .....        | 111      |
| adapting                               |          | <code>ctable</code> .....      | 159      |
| class .....                            | 181      | <b>D</b>                       |          |
| document .....                         | 92       | danger icon .....              | 194      |
| package .....                          | 180      | debugging .....                | 184      |
| affiliation                            |          | HTML debug comments .....      | 238      |
| multiple authors .....                 | 127      | tracing log .....              | 238      |
| algorithmicx                           |          | Deja Vu .....                  | 95       |
| with newfloat, trivfloat .....         | 1081     | description                    |          |
| <code>alt</code> text .....            | 93       | HTML meta tag .....            | 115, 353 |
| array                                  |          | display math                   |          |
| <code>mhchem</code> .....              | 877      | complicated objects .....      | 147      |
| audio .....                            | 154      | document                       |          |
| author                                 |          | convert existing .....         | 92       |
| HTML meta tag .....                    | 115, 353 | DVI $\LaTeX$ .....             | 87, 95   |
| multiple .....                         | 127      | dynamic math .....             | 147      |
| <b>B</b>                               |          | dynamic math expressions ..... | 324      |
| baseline                               |          | <b>E</b>                       |          |
| tabular .....                          | 438      | endnotes                       |          |
| bibliography                           |          | HTML page and TOC .....        | 127      |
| HTML page and TOC .....                | 127      | EPS image                      |          |
| bitmapped fonts .....                  | 95       | converting .....               | 89       |
| bugs .....                             | 184      | using .....                    | 150, 559 |
| <b>C</b>                               |          | EPUB                           |          |
| <i>Calibre</i> .....                   | 172      | conversion software .....      | 172      |
| chemistry                              |          | HTML conversion settings ..... | 172, 244 |
| Greek symbols .....                    | 682      | error messages .....           | 184      |
| class                                  |          | export                         |          |
| modifying for <code>lwarp</code> ..... | 181      | to word processor .....        | 174      |
| code listings .....                    | 117      | <b>F</b>                       |          |
| compiling                              |          | FAQ .....                      | 184      |
| custom .....                           | 168      | filename                       |          |
| Computer Modern .....                  | 95       | accent in .....                | 376      |
| converting                             |          | hashed .....                   | 528, 549 |
| class .....                            | 181      | international languages .....  | 164      |
| document .....                         | 92       | length .....                   | 106      |
| package .....                          | 180      | simplify .....                 | 123      |



|                                                   |               |
|---------------------------------------------------|---------------|
| <b>L</b>                                          |               |
| label                                             |               |
| in HTML                                           | 392           |
| math environment                                  | 541           |
| language                                          |               |
| glossaries                                        | 130           |
| localization                                      | 93            |
| language HTML metadata                            | 387           |
| lateximage                                        |               |
| font size                                         | 144, 545      |
| processing                                        | 301           |
| Latin Modern font                                 | 95            |
| LIBREOFFICE                                       |               |
| conversion recommendations                        | 177           |
| import into                                       | 174           |
| section headings                                  | 177           |
| ligatures                                         | 96, 225       |
| line numbers                                      | 194           |
| link                                              |               |
| title text                                        | 93            |
| list                                              |               |
| empty item                                        | 412           |
| filename                                          | 118           |
| listings, program code                            | 117           |
| locale                                            | 171           |
| localization                                      | 93            |
| Lua <sup>A</sup> T <sub>E</sub> X                 |               |
| detection                                         | 195           |
| file & section names                              | 376           |
| lwarp                                             |               |
| loading                                           | 98            |
| options                                           | 98            |
| lwarp.ist                                         |               |
| customizing                                       | 140           |
| lwarp.xdy                                         |               |
| customizing                                       | 141           |
| <i>lwarpmk</i>                                    |               |
| customizing                                       | 182           |
| <b>M</b>                                          |               |
| make utility                                      | 171           |
| makeindex                                         |               |
| customizing                                       | 140           |
| margin                                            |               |
| numbers                                           | 194           |
| tags                                              | 194           |
| markup languages                                  | 68            |
| math                                              |               |
| alt text                                          | 93            |
| display with complicated objects                  | 147           |
| dynamic                                           | 147, 324      |
| font size — SVG                                   | 144, 545      |
| inline with complicated objects                   | 147           |
| MATHJAX custom functions                          | 145           |
| MATHJAX summary                                   | 144           |
| mathjax option                                    | 218           |
| mathsvg option                                    | 217           |
| mhchem                                            | 877           |
| SVG summary                                       | 144           |
| word processor conversion                         | 176           |
| <b>MATHJAX</b>                                    |               |
| accessibility                                     | 93            |
| custom functions                                  | 145           |
| custom script                                     | 299           |
| mathjax option                                    | 218           |
| summary                                           | 144           |
| $\backslash$ colrowcell                           | 157           |
| MD5 hash                                          |               |
| SVG image filename                                | 528, 549      |
| memoir                                            |               |
| framewithtitle, titledframe                       | 163           |
| meta tag, HTML                                    |               |
| author                                            | 115, 353      |
| description                                       | 115, 353      |
| generator                                         | 389           |
| title                                             | 115, 352, 353 |
| viewport                                          | 389           |
| minipage                                          |               |
| framed                                            | 120           |
| horizontal space between                          | 591           |
| modifying                                         |               |
| class                                             | 181           |
| document                                          | 92            |
| package                                           | 180           |
| $\backslash$ mrowcell                             | 157           |
| $\backslash$ multicolumn                          |               |
| with $\backslash$ multirow                        | 157           |
| multimedia                                        | 154           |
| multiple projects in a directory                  | 89            |
| $\backslash$ multirow                             |               |
| with $\backslash$ multicolumn                     | 157           |
| multirow                                          |               |
| $\backslash$ mrowcell and $\backslash$ colrowcell | 157           |
| <b>N</b>                                          |               |
| newfloat                                          |               |
| with trivfloat, algorithmicx                      | 1081          |
| nomencl                                           | 131           |
| numbers                                           |               |
| left margin                                       | 194           |
| <b>P</b>                                          |               |
| package                                           |               |
| modifying for lwarp                               | 180           |
| required                                          | 224           |
| $\backslash$ par                                  |               |
| hooks                                             | 349           |
| PDF image                                         |               |
| converting                                        | 89            |
| using                                             | 150, 559      |
| PERL                                              | 76            |
| PNG images                                        | 151, 560      |



# Troubleshooting Index

This index is a sorted reference of problems and solutions. In order to make it easier to locate a solution, the same issue may be addressed by more than one entry.

Entries with higher page numbers are often duplicates of entries with lower page numbers, as the same warning may occur within the user manual and again within the source code for a given package.

| <b>A</b>                |                     |
|-------------------------|---------------------|
| abstract                |                     |
| missing TOC             | 128, 609            |
| accents                 |                     |
| file names              | 376                 |
| acro                    | 166                 |
| acronym                 |                     |
| multiply-defined labels | 616                 |
| \AddSubtitlePublished   | 403                 |
| affiliation             | 397                 |
| alt tags                | 147, 188            |
| AMSMath                 |                     |
| ntheorem                |                     |
| numbering               | 148, 917            |
| appendix                |                     |
| incorrect TOC link      | 128, 632            |
| array                   |                     |
| chemformula             | 166                 |
| MATHJAX                 | 146                 |
| arydshln                | 635                 |
| audio                   | 154                 |
| authblk                 |                     |
| \theauthor              | 396, 397            |
| titling                 | 128, 395, 641, 1062 |
| author                  |                     |
| affiliation             | 397                 |
| formatting              | 114                 |
| autonom                 | 643                 |
| <b>B</b>                |                     |
| babel                   |                     |
| French                  | 165                 |
| backref                 | 646                 |
| backref                 | 125                 |
| bibliography            |                     |
| HTML page and TOC       | 127                 |
| bibtex                  |                     |
| \etaLchar               | 129                 |
| Improper \prevdepth     | 129                 |
| bigdelim                | 160, 654            |
| bigfoot                 | 127, 854            |
| booktabs                | 658                 |
| boxes                   | 119                 |
| breqn                   |                     |
| darray                  | 663                 |
| <b>C</b>                |                     |
| <i>Calibre</i>          |                     |
| EPUB conversion         | 172                 |
| caption                 |                     |
| numbering               | 161                 |
| options                 | 116                 |
| chemfig                 | 166                 |
| chemformula             |                     |
| MATHJAX                 | 166, 677            |
| chemgreek               |                     |
| fontspec mapping        | 682                 |
| text-mode symbols       | 682                 |
| chemmacros              |                     |
| \makepolymerdelims      | 683                 |
| redox reactions         | 683                 |
| cleveref                |                     |
| cref reference format   | 147, 917            |
| colortbl                | 159, 705            |
| comment                 | 163, 1128           |
| compiling               |                     |
| slow MATHJAX            | 145                 |
| cref reference format   | 147, 917            |
| cross reference         |                     |
| incorrect link          | 188                 |
| MATHJAX                 | 146                 |
| missing                 | 188                 |
| CSS                     | 189                 |
| ctable                  | 159                 |
| <b>D</b>                |                     |
| ditaa                   | 171                 |
| dotless j               | 96                  |
| dotlessj                | 186                 |
| duplciate filename      | 124                 |
| <b>E</b>                |                     |
| \endhead, etc.          | 158                 |

|                                                  |                        |
|--------------------------------------------------|------------------------|
| endnotes                                         |                        |
| HTML page and TOC                                | 127                    |
| numbering                                        | 129                    |
| \ensuremath                                      | 187                    |
| epstopdf                                         | 153, 735               |
| Epub                                             |                        |
| encoding                                         | 172                    |
| page order                                       | 172                    |
| search order                                     | 172                    |
| section breaks                                   | 173                    |
| error messages                                   | 184                    |
| \etalchar                                        | 129                    |
| <b>F</b>                                         |                        |
| fancybox                                         |                        |
| \VerbatimFootnotes                               | 126, 744, 751          |
| fancyvrb                                         |                        |
| \VerbatimFootnotes                               | 126, 744, 751          |
| figure                                           |                        |
| macro in name                                    | 187                    |
| file                                             |                        |
| inaccessible                                     | 105                    |
| multiple projects in directory                   | 89                     |
| File ended while scanning use of \next           | 186                    |
| filename                                         |                        |
| accents                                          | 376                    |
| corrupted                                        | 123, 164               |
| duplicate                                        | 124                    |
| international, UTF-8                             | 164                    |
| Korean                                           | 167                    |
| macro in name                                    | 123                    |
| math in                                          | 92, 124, 143           |
| Missing \$ inserted                              | 187                    |
| fixme                                            | 166, 759               |
| float                                            |                        |
| alignment                                        | 117, 160               |
| numbering                                        | 161                    |
| out of sequence                                  | 189                    |
| floatrow                                         |                        |
| \FBwidth and \FBheight                           | 161, 764               |
| with subfig                                      | 161, 764               |
| floatrow                                         |                        |
| \ttboxed                                         | 156, 419               |
| font                                             |                        |
| JETBRAIN MONO                                    | 96                     |
| ligatures                                        | 96                     |
| missing symbols                                  | 118, 1042              |
| monospace                                        | 96                     |
| package conflicts                                | 95                     |
| selection                                        | 95                     |
| UTF-8                                            | 95                     |
| fontspec                                         |                        |
| with monospaced fonts                            | 96                     |
| with Xe <sub>La</sub> TeX, Lua <sub>La</sub> TeX | 95                     |
| footmisc                                         | 126, 354               |
| footnote                                         |                        |
| displaymath                                      | 126, 744, 751          |
| in math                                          | 126                    |
| in sectioning command                            | 125                    |
| MATHJAX                                          | 125                    |
| memoir                                           | 126, 354               |
| numbering                                        | 125                    |
| paragraph tags                                   | 126, 744, 751          |
| sectioning, footmisc                             | 126, 354               |
| sectioning, verbatim                             | 126, 744, 751          |
| title                                            | 396                    |
| verbatim                                         | 126                    |
| \VerbatimFootnotes                               | 126, 744, 751          |
| forest                                           | 778                    |
| formatting                                       |                        |
| \bfseries etc.                                   | 117, 580               |
| frames                                           | 120                    |
| framewithtitle                                   | 163                    |
| <b>G</b>                                         |                        |
| gloss                                            | 129                    |
| glossaries                                       |                        |
| HTML page and TOC                                | 127                    |
| <i>makeglossaries</i> not found                  | 130, 785               |
| page numbers                                     | 130, 786               |
| style                                            | 130, 786               |
| graphics                                         |                        |
| \rotatebox, \scalebox, \reflectbox               | 152, 561               |
| image format priorities                          | 151, 560               |
| images out of order                              | 83, 189                |
| multimedia                                       | 154                    |
| optional arguments                               | 151, 560               |
| scale option                                     | 92, 150, 559           |
| scaled                                           | 789                    |
| viewport                                         | 151, 560               |
| Greek packages                                   | 682                    |
| grffile                                          | 152, 801               |
| <b>H</b>                                         |                        |
| horizontal spacing                               | 161, 1027              |
| HTML                                             |                        |
| &, <, >                                          | 117, 580               |
| alt tags                                         | 147                    |
| author                                           | 353                    |
| corrupted                                        | 96, 114, 119, 186, 189 |
| entities                                         | 117, 580               |
| image appear as HTML code                        | 83, 189                |
| inaccessible pages                               | 105, 108               |
| starred section                                  | 128                    |
| invalid                                          | 117                    |
| missing pages                                    |                        |
| filename not unique                              | 106                    |
| recompile                                        | 190                    |
| SideTOCDepth and FileDepth                       | 105                    |
| SideTOCDepth and tocdepth                        | 106                    |





|                                     |                     |                           |     |
|-------------------------------------|---------------------|---------------------------|-----|
| psfrag                              | 153                 | Syntax Warning (ligature) | 772 |
| pstool                              | 153, 960            |                           |     |
| pstricks                            | 153, 961            |                           |     |
| pythontex                           | 170                 |                           |     |
| <b>R</b>                            |                     |                           |     |
| reference                           |                     |                           |     |
| % character between arguments       | 188                 |                           |     |
| empty link                          | 124, 188            |                           |     |
| incorrect link                      | 188                 |                           |     |
| label characters                    | 124, 188            |                           |     |
| MATHJAX                             | 146                 |                           |     |
| missing or incorrect                | 188                 |                           |     |
| page number                         | 124, 188, 565       |                           |     |
| repeatindex                         | 970                 |                           |     |
| rterface                            | 171                 |                           |     |
| Runaway argument? File ended ...    | 186                 |                           |     |
| <b>S</b>                            |                     |                           |     |
| sample_projects.css                 |                     |                           |     |
| overwritten                         | 111                 |                           |     |
| \savebox                            | 119                 |                           |     |
| \sbox                               | 119                 |                           |     |
| scale (\includegraphics option)     | 92, 150, 559        |                           |     |
| sectioning                          |                     |                           |     |
| accents                             | 376                 |                           |     |
| duplicate name                      | 124                 |                           |     |
| international language              | 164                 |                           |     |
| macro in name                       | 123, 187            |                           |     |
| math in name                        | 92, 124, 143        |                           |     |
| missing                             | 105                 |                           |     |
| starred section                     | 128                 |                           |     |
| word processor import               | 177                 |                           |     |
| sidenotes                           |                     |                           |     |
| numbering                           | 125                 |                           |     |
| siunitx                             | 149, 558, 999       |                           |     |
| MATHJAX                             | 149, 558, 999       |                           |     |
| S column                            | 157, 420            |                           |     |
| tabular S and s columns             | 149, 558, 999       |                           |     |
| with <i>TeXMaths</i>                | 176                 |                           |     |
| splitidx                            |                     |                           |     |
| \thepage and \AtWriteToIndex        | 133, 1013           |                           |     |
| starred macros                      |                     |                           |     |
| MATHJAX                             | 146                 |                           |     |
| subcaption                          |                     |                           |     |
| numbering                           | 161                 |                           |     |
| subfig                              |                     |                           |     |
| options                             | 161, 1027           |                           |     |
| with floatrow                       | 161, 764            |                           |     |
| SVG image                           |                     |                           |     |
| appears as HTML code                | 83, 189             |                           |     |
| incorrect                           | 83, 189             |                           |     |
| math incorrect                      | 324                 |                           |     |
| math size and baseline              | 144                 |                           |     |
| out of order                        | 83, 189             |                           |     |
| sympytex                            | 171                 |                           |     |
| <b>T</b>                            |                     |                           |     |
| tabbing                             |                     |                           |     |
| math                                | 155, 410            |                           |     |
| table                               |                     |                           |     |
| macro in name                       | 187                 |                           |     |
| numbering                           | 845                 |                           |     |
| Table of Contents                   |                     |                           |     |
| missing                             | 108                 |                           |     |
| tabular                             |                     |                           |     |
| baselines                           | 438                 |                           |     |
| corrupt rows                        | 156, 419, 470       |                           |     |
| \endhead, \endfoot, \endlastfoot    |                     |                           |     |
|                                     | 158, 841            |                           |     |
| inside an environment               | 156, 419, 470       |                           |     |
| \kill                               | 158, 841            |                           |     |
| macro inside                        | 156, 419            |                           |     |
| Misplaced \noalign                  | 157, 420            |                           |     |
| Misplaced alignment tab character & |                     |                           |     |
| macros                              | 155, 418            |                           |     |
| rules                               | 323                 |                           |     |
| \multicolumn with \multirow         | 157                 |                           |     |
| multirow \mrowcell and \mcolrowcell |                     |                           |     |
|                                     | 157                 |                           |     |
| \newcolumntype                      | 156, 419            |                           |     |
| numbering                           | 1116                |                           |     |
| row corruption                      | 156, 419            |                           |     |
| rules                               | 157, 420            |                           |     |
| S column                            | 157, 420            |                           |     |
| TeX capacity exceeded               |                     |                           |     |
| Text input levels equals 15         | 187                 |                           |     |
| TeXMaths                            | 176                 |                           |     |
| text                                |                     |                           |     |
| &, <, >                             | 117, 580            |                           |     |
| \bfseries etc.                      | 117, 580            |                           |     |
| corrupted                           | 95                  |                           |     |
| Text input levels equals 15         | 187                 |                           |     |
| textcomp                            |                     |                           |     |
| missing symbols                     | 118, 1042           |                           |     |
| \theauthor and authblk              | 396, 397            |                           |     |
| threeparttablex                     | 159                 |                           |     |
| tikz                                |                     |                           |     |
| in math                             | 147                 |                           |     |
| matrices, &                         | 152, 1053           |                           |     |
| title                               |                     |                           |     |
| affiliation                         | 397                 |                           |     |
| newlines                            | 114                 |                           |     |
| \thanks                             | 396                 |                           |     |
| titledframe                         | 163                 |                           |     |
| titling                             |                     |                           |     |
| authblk                             | 128, 395, 641, 1062 |                           |     |
| hooks                               | 403                 |                           |     |
| tocloft                             |                     |                           |     |
| chapter titles                      | 128, 143, 631, 1070 |                           |     |
| todonotes                           | 166, 849, 1077      |                           |     |



## Index of Indexes

|                |          |      |                       |          |      |
|----------------|----------|------|-----------------------|----------|------|
|                | <b>C</b> |      |                       | <b>I</b> |      |
| Change History | .....    | 1162 | Index of Objects      | .....    | 1196 |
|                | <b>G</b> |      |                       | <b>T</b> |      |
| General Index  | .....    | 1218 | Troubleshooting Index | .....    | 1222 |